

American University in Cairo

## AUC Knowledge Fountain

---

Theses and Dissertations

Student Research

---

Winter 1-31-2021

# Pure and Fresh: A Typology of Formal Garden Scenes from Private Eighteenth Dynasty Theban Tombs Prior to the Amarna Period

Jayme Rudolf Reichart  
jrreichart@aucegypt.edu

Follow this and additional works at: <https://fount.aucegypt.edu/etds>



Part of the [Ancient, Medieval, Renaissance and Baroque Art and Architecture Commons](#)

---

## Recommended Citation

### APA Citation

Reichart, J. (2021). *Pure and Fresh: A Typology of Formal Garden Scenes from Private Eighteenth Dynasty Theban Tombs Prior to the Amarna Period* [Master's Thesis, the American University in Cairo]. AUC Knowledge Fountain.

<https://fount.aucegypt.edu/etds/1542>

### MLA Citation

Reichart, Jayme Rudolf. *Pure and Fresh: A Typology of Formal Garden Scenes from Private Eighteenth Dynasty Theban Tombs Prior to the Amarna Period*. 2021. American University in Cairo, Master's Thesis. AUC Knowledge Fountain.

<https://fount.aucegypt.edu/etds/1542>

This Master's Thesis is brought to you for free and open access by the Student Research at AUC Knowledge Fountain. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of AUC Knowledge Fountain. For more information, please contact [thesisadmin@aucegypt.edu](mailto:thesisadmin@aucegypt.edu).



The American University in Cairo

School of Humanities and Social Sciences

**Pure and Fresh: A Typology of Formal Garden Scenes from Private  
Eighteenth Dynasty Theban Tombs Prior to the Amarna Period**

A Thesis Submitted to

The Department of Sociology, Egyptology, and Anthropology

In Partial Fulfilment of the Requirements for  
The Degree of Master of Arts in Egyptology and Coptology

**By Jayme Rudolf Reichart**

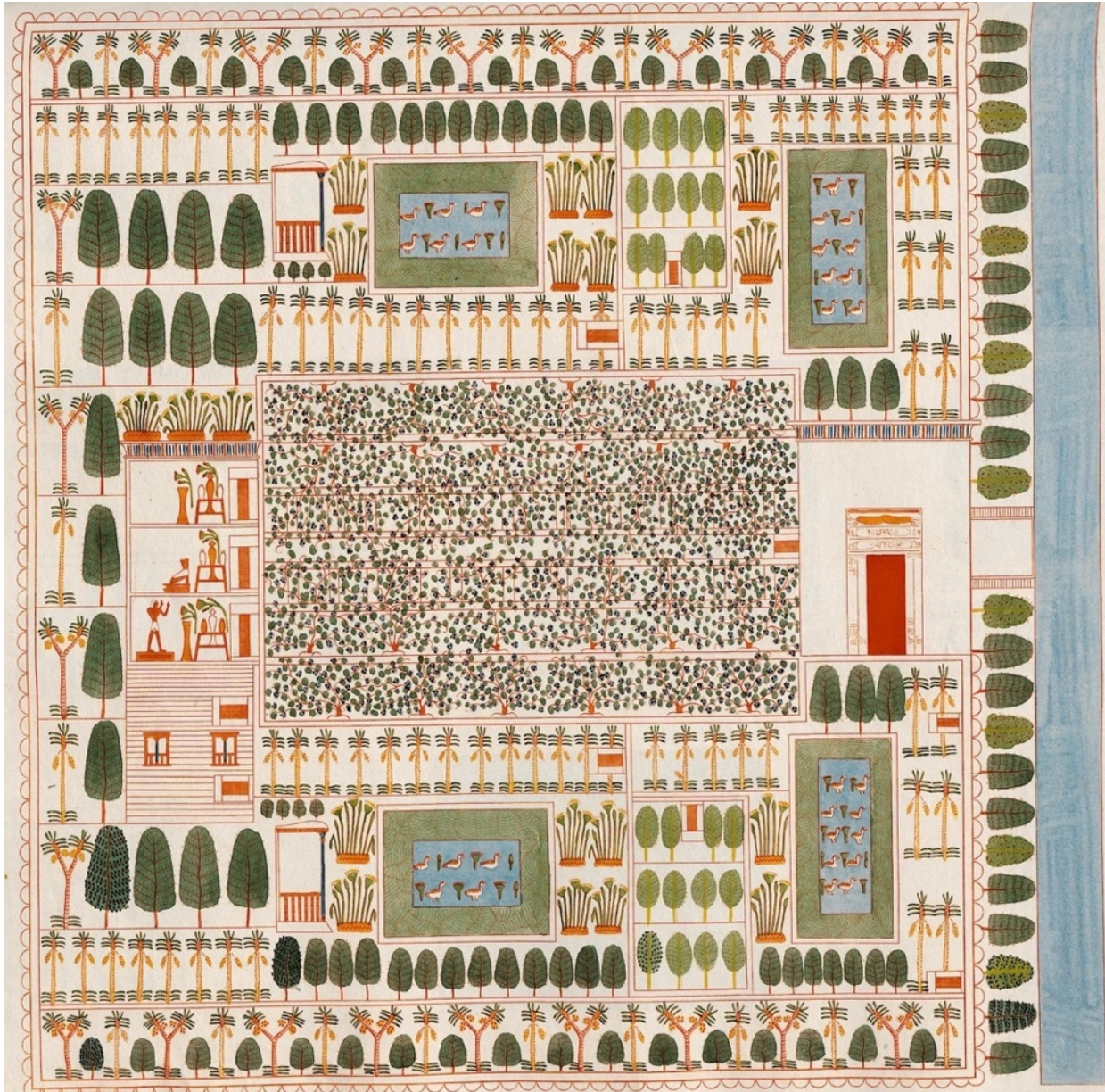
Under the Supervision of Dr. Lisa K. Sabbahy and Dr. Salima Ikram  
Second Reader: Dr. Mariam Ayad

December 2020



“Everything that slows us down and forces patience, everything that sets us back into the slow circles of nature, is a help. Gardening is an instrument of grace.”

- May Sarton, American Poet (1912-1995)



An *t-nt-ht*-formal garden of Amun-Ra in Thebes depicted in the TT 96 scene. Plate by Lasinio in Rosellini (1834). Photograph courtesy of the Public Domain Dedication of The New York Public Library Digital Collections.

## Acknowledgments

I would like to personally thank Drs. Lisa Sabbahy, Salima Ikram, and Mariam Ayad for your encouragement and support of this topic for my master's thesis at AUC. Your classes over the past three years, and your patience, comments, edits, suggestions, and insight have further inspired my love of Egyptology, and strengthened my skills in archaeology, art history, academic writing, research, and critical thinking. Also, thank you for the arrangement of so many incredible field trips throughout Egypt.

I would like to express gratitude to my other school, bachelor's, and master's professors: Maryann Labenski, Mme Florence Vach, Elizabeth Musso, Michael Curry, Colleen McCoy, and Pam Russell; and Drs. Lisa Farber, Harriet Walker, Diane Paravasian, Elizabeth Korn, Hourig Sourouzian, Fayza Haikal, Yasmin El-Shazly, and John Swanson. I cannot express how incredibly influential your passion and gusto for subjects, such as: art history, history, archaeology, heritage, literature, the fine arts, and modern and ancient languages, has instilled in me my own. I would also like to greatly thank all those across the ages who have studied and continue to enrich our understanding of gardens, flora, fauna, and the natural world.

I would like to acknowledge Dalia Edriss and Shorouk El-Sayed, as well as all of the AUC Rare Books and Special Collections Library personnel, especially Eman Morgan and Dr. Amr Omar, for their help and support during my time at AUC, especially the many hours spent on the third floor conducting research. As well as, Mahmoud Mostafa for copying and sending me myriad PDFs over the years! To friends and colleagues who permitted me to use their photographs, especially to Dr. Rients E. Niks, and to those in the Ancient Near East and Egyptology Research "Quarantine" Libraries on Facebook who kindly sent me PDFs of publications that I did not have proper access to due to the COVID-19 pandemic.

Je voudrais vous bien remercier au nom de tous/querría bien darles las gracias a todos: Drs. Hourig Sourouzian, Rainer Stadelmann, Nairy Hampikian, Armine Hayrapetyan, Alessia Amenta, Pauline Calassou, Elena Mora Ruedas, Daniela Galazzo, Linda Chapon, Benjamin Blaisot, Cindrella Fayez, Mirette El-Saied, Mariam Taha, Salma Ibrahim, Mélanie Cressent, María Antonia Moreno Cifuentes, Carmen López Roa, Ahmed Abd Elgawad Refay, Mohamed Temsah, and Odile and Antoine Chéné for their kindness, encouragement, insight, and/or expression of interest in my thesis on site at Kom el-Hettan.

I would like to thank my friends and colleagues Bianca van Sittert-Nafie, Linea Albert, Courtney McRae, Mattijas Niks, Jacqueline Gill, Tessa G. Litecky, Julia Puglisi, Nadra Zaki, Matthew Treasure, Nicholas Brown, Sara Ahmed, Nina Brûlé, and Hassan Elzawy for your encouragement and support. Particularly to Patricia Mrožek, Hamza Nahhas, Lesley O'Connor, Hayley R. Goddard, Ainhua Olaizola, Margaret Chase, Victoria Gómez, Kanan Yoshimura, Elisabeth Gniodorsch, Kaitlin Junod, Valentina Osorio, Marguerite Andrecia, Vanessa Dias, Kristen Pereira, Carris Flynn, Kacee Womak, Madison Kuchenbeisser, Katlyn Stocklosa, Anna Mickel, and Ella and Clara McCafferty-Wright, for their moral support and help in more ways than one.

To my entire family: I am truly lucky to have grown up in such a positive, encouraging, accepting, and present atmosphere. Especially to my parents and grandparents, who took us to visit parks, museums, and cultural events from a young age, as well as to my great aunt, who visited Egypt in the early 1980s – both shaping my childhood dream to become an Egyptologist. I love you all dearly. Thank you for instilling in me a love of nature and of a global outlook. To our dogs Juneau, Athena, Rosie, Roo, Rush, Rugby, Ryka, our cats Ricardo, Roxanne, Gomez and Tarot, our pigeons Cruella, Rain, Pie, Birdy, and Pidgeotto, and our fish Cairo and Neptune.

And last but not least, I must thank my own sun and moon, my cats Amun and Khonsu, for their immeasurable, inexorable, and unconditional love and support.

## ABSTRACT

Gardens in ancient Egypt are known from the Early Dynastic Period to the Graeco-Roman Period from archaeological, textual, and pictorial evidence. From this evidence, one can differentiate between simple and formal gardens. This thesis exclusively produces a typology of the š- and Domain of Amun formal garden scenes (the *hnty-š-*, *k3mw-*, *sš-*, *ʿt-nt-ht-*, and *hrrt-š-* formal gardens) represented in the early to mid-late Eighteenth Dynasty Theban private tomb art prior to the Amarna Period (TT E2, TT 39, TT 63, TT 80, TT 81, TT 85, TT 87, TT 90, TT 93, TT 96, TT 100, TT 109, TT 161, and TT 334) by their Egyptian names. These formal gardens are examined in this study through (i) visual analyses and (ii) discussions in terms of their additional extant evidence, tomb locations, flora and fauna they sustained (including their actual growth cycles, as well as use, symbolism, and significance for the ancient Egyptians in life and death found in Appendix II: Herbarium and Faunarium), and wider sociocultural significance and relevance to the tomb-owners' titles in early to mid-late Eighteenth Dynasty Thebes prior to the reign of Amenhotep IV/Akhenaten.

This study concludes that the formal gardens represented as tomb scenes, and the actual ones known from extant textual, pictorial, and/or archaeological evidence of the period, were symmetrical and even sometimes asymmetrical landscapes, that were located in proximity to either private homes and tombs, palatial residences, cult and/or memorial temples/shrines, and domains. The š-formal gardens were first constructed by the pharaohs, who sometimes gifted them to private and royal individuals, and which influenced other elite individuals, who had the power and resources, to construct ones of their own. The *hnty-š-*, *k3mw-*, *sš-*, *ʿt-nt-ht-*, and *hrrt-š-* formal gardens were principally constructed as monuments (*mnw*) by the kings for their palaces or for the gods. In the royal and private spheres, the š- and Domain of Amun formal gardens were aesthetic landscapes with numerous features used for sports, leisure, music, song, and dance performances, boat rites, meals, wakes, private banquets, and/or religious festivals and rituals, as well as provided surplus flower, herb, wine, fruit, fish, fowl, incense, and/or honey production for the institution(s) to which they were connected. Important to note is that the native and foreign flora of these formal gardens would have been purchased and/or introduced locally as seeds, fruit, and/or potted young specimens via gardeners or one's other gardens or via foreign trade. Each of the 42 floral and 11 faunal species identified in these formal gardens have a specific growth and/or development cycle, which only allows them to be in bloom and/or available for harvest during a certain time of the year for use in food, medicine, festivities, meals, banquets, offerings, and floral arrangements, *etc.* Additionally, these formal gardens and their production were established, constructed, cultivated, maintained, overseen, and administered by intricate networks of individuals who worked in and/or liaised with them directly or indirectly. This relationship was evident in terms of the relevant titles of the tomb-owners and their colleagues, as well as from the location of the formal garden scenes in the porticos, transverse halls, passages, and chapels of the tombs in proximity to other self-glorifying 'focal representations' (*Blickpunktsbilder*) that would have been regularly viewed by family and community members and ideally visited by the *b3* and *k3* of the tomb-owner after death.

## Table of Contents

Title Page.....	i
Dedication.....	ii
Acknowledgments.....	iv
Abstract.....	v
Table of Contents.....	vi
List of Tables.....	viii
List of Figures.....	ix
List of Abbreviations.....	xiii
Chapter One: Introduction	
Ancient Egyptians Gardens and Formal Gardens.....	1
Research Questions.....	1
Formal Gardens in Eighteenth Dynasty Thebes prior to the Amarna Period.....	2
Formal Garden Scenes in Private Early to Mid-Late Eighteenth Dynasty Tombs.....	6
Previous Scholarship.....	7
Methodology.....	10
How Were the Flora and Fauna Identified in the Formal Garden Scenes?.....	13
Thesis Organization.....	14
Translation Note.....	14
Chapter Two: The <i>Š</i> -Formal Garden	
Visual Descriptions.....	15
Discussions.....	32
Layouts, Architecture, Water Features in <i>Š</i> -Formal Gardens of this Period.....	32
Wider Significance of the in <i>Š</i> -Formal Gardens to the Tomb- Owners.....	39
Chapter Three: The Domain of Amun Formal Gardens	
Visual Descriptions.....	47
Discussions.....	56
The <i>Hnty-š</i> -Formal Garden: Layout, Architecture, and Water Features.....	56
Extant Evidence of <i>Hntyw-š</i> -Formal Gardens during this Period.....	59
The <i>K3mw</i> -Formal Garden: Layout, Architecture, and Water Features.....	72
Extant Evidence of <i>K3mw</i> -Formal Gardens during this Period.....	74
The <i>Sš</i> -Formal Garden: Layout, Architecture, and Water Features.....	76
Extant Evidence of <i>Sš</i> -Formal Gardens during this Period.....	78
The <i>ʿt-nt-ht</i> -Formal Garden: Layout, Architecture, and Water Features.....	79
Extant Evidence of <i>ʿt-nt-ht</i> -Formal Gardens during this Period.....	82

The <i>Hrrt</i> -š-Formal Garden: Layout, Architecture, and Water Features.....	86
Extant Evidence of <i>Hrrt</i> -š-Formal Gardens during this Period.....	88
Wider Significance of the Domain of Amun Formal Gardens to the Tomb-Owners.....	91
Chapter Four: Patterns of Flora and Fauna in Theban Formal Gardens.....	100
Growth Cycles of the Formal Gardens.....	101
Distribution in Antiquity of the Flora in the Formal Gardens.....	102
Patterns of Fauna in the Formal Gardens.....	104
Chapter Five: Conclusion.....	109
Appendices I-III	
Appendix I: Catalogue of the Formal Garden Scenes.....	122
Part I: The Š-Formal Garden Scene.....	123
Part II: The Domain of Amun Formal Garden Scene.....	143
Appendix II: Herbarium and Faunarium.....	156
Flora.....	156
<i>Argun</i> -Palm ( <i>Medemia argun</i> Württemb. ex Mart.) .....	156
<i>Atil</i> -Tree ( <i>Mærua crassifolia</i> Forssk.?).....	158
Blue Lotus and White Lotus ( <i>Nymphaea caerulea</i> L. Savigny) and ( <i>Nymphaea lotus</i> L.).....	160
Carob Tree ( <i>Ceratonia siliqua</i> L.).....	161
Christ's Thorn Tree ( <i>Ziziphus spina Christi</i> L. Desf.).....	163
Cilantro/Coriander ( <i>Coriandrum sativum</i> L.).....	164
Common Fig ( <i>Ficus carica</i> L.) .....	166
Common Reed ( <i>Phragmites australis</i> (Cav.) Trin. ex Steud.).....	167
Cos-Lettuce ( <i>Lactuca sativa</i> L.).....	168
Curled Pondweed ( <i>Potamogeton crispus</i> L.).....	170
Date Palm ( <i>Phoenix dactylifera</i> L.).....	171
<i>Doum</i> -Palm ( <i>Hyphaene thebaica</i> L. Mart.).....	172
Desert Date ( <i>Balanites aegyptiaca</i> L. Delile).....	176
Egyptian Riverhemp Tree ( <i>Sesbania sesban</i> L. Merrill?).....	177
Egyptian Walking Onion ( <i>Allium</i> × <i>proliferum</i> (Moench) Schrad. ex Willd.) and/or Bulb Onion ( <i>Allium cepa</i> L.).....	178
Egyptian Willow Tree ( <i>Salix mucronata</i> Thunb.).....	181
Grapevine ( <i>Vitis vinifera</i> L.).....	182
<i>Th</i> -Plant (?).....	183
Incense Trees ( <i>Commiphora erythraea</i> var. <i>glabrescens</i> Engler) and ( <i>Boswellia frereana</i> Birdw.).....	184
<i>Ksbt</i> -Tree (?).....	186
Low Cornflower ( <i>Centaurea depressa</i> Bieb.).....	186
Mallow Bindweed and Lesser Bindweed ( <i>Convolvulus althaeoides</i> L.) and ( <i>Convolvulus arvensis</i> L.).....	188
Mandrake ( <i>Mandragora autumnalis</i> Bertol.).....	189
Mediterranean Cypress ( <i>Cupressus sempervirens</i> L.).....	191
<i>Mnw</i> -Plant (?).....	195



<i>Mnwh</i> -Plant (?).....	195
Moringa Tree ( <i>Moringa peregrina</i> (Forssk.) Fiori).....	196
Muskmelon ( <i>Cucumis melo</i> L. spp.).....	197
Opium Poppy ( <i>Papaver somniferum</i> L.).....	199
Papyrus ( <i>Cyperus papyrus</i> L.).....	200
Persea Tree ( <i>Mimusops laurifolia</i> (Forssk.) Friis).....	203
Pomegranate Tree ( <i>Punica granatum</i> L.) .....	205
Scented Mayweed ( <i>Anthemis</i> or <i>Matricaria</i> spp.).....	206
Sycamore Fig ( <i>Ficus sycomorus</i> L.).....	207
Tamarisk ( <i>Tamarix</i> spp.).....	209
True Cardamom ( <i>Elettaria cadamomum</i> L. Maton).....	211
<i>Twn</i> -Plant (?).....	213
Fauna.....	213
Waterfowl.....	213
Egyptian Turtle Dove ( <i>Streptopelia turtur rufescens</i> Brehm).....	214
Pintail and Mallard Duck ( <i>Anas acuta</i> L. and <i>Anas platyrhynchos</i> L.).....	216
Red-Breasted Goose ( <i>Branta ruficollis</i> Pallas).....	218
<i>Hrt3</i> -Duck (?).....	220
Fish.....	221
<i>Boueza</i> - or Egyptian Trunkfish ( <i>Mormyrus niloticus</i> Bloch & Schneider).....	221
Catfish ( <i>Synodontis</i> spp.).....	223
Carp ( <i>Labeo</i> spp.).....	225
Elephantfish ( <i>Petrocephalus/Marcusenius</i> spp.).....	226
Tilapia ( <i>Tilapia</i> spp.) and Redbelly Tilapia ( <i>Tilapia</i> <i>zillii</i> Gervais).....	226
Insects.....	228
Egyptian Honey Bee ( <i>Apis mellifera lamarckii</i> Cockerell).....	228
Appendix III: List of Figures.....	231
Bibliography.....	269

## List of Tables

2.0	Possible Features of a <i>Š</i> -Formal Garden.....	32-33
2.1	Relevant Tomb-owner Titles.....	40
2.2	Location of <i>Š</i> -Formal Garden Scenes in Tombs.....	44-45
3.0	Possible Features of a <i>Hnty-š</i> -Formal Garden.....	57-58
3.1	Possible Features of a <i>K3mw</i> -Formal Garden.....	72-73
3.2	Possible Features of a <i>Sš</i> -Formal Garden.....	77
3.3	Possible Features of an <i>ʿt-nt-ht</i> -Formal Garden.....	80-81
3.4	Possible Features of a <i>Hrrt-š</i> -Formal Garden.....	86-87
3.5	Relevant Tomb-Owner Titles.....	93
3.6	Location of the Domain of Amun Formal Garden Scenes in Tombs.....	98
4.0	Growth Cycle of the Formal Gardens.....	100-101



4.1	Distribution in Antiquity of Flora in the Formal Gardens.....	102-103
4.2	Patterns of Fauna in the Formal Gardens.....	105
A3.1	Origin for Formal Garden Layouts.....	237

## List of Figures

### Appendix I

Fig. A1.1	Š-formal garden of Ineni.....	122
Fig. A1.2	Š-formal garden of Min.....	124
Fig. A1.3	Detail of the flora and fauna in the scene's pool.....	124
Fig. A1.4	Š-formal garden of Amenemhab.....	126
Fig. A1.5	Detail of the surrounding decorative schema of the TT 100 scene.....	128
Fig. A1.6	Š-formal garden of Rekhmira.....	129
Fig. A1.7	Š-formal garden of Djehutynfer with possible reconstruction.....	131
Fig. A1.8	Š-formal garden of Qenamun with possible reconstruction by author.....	133
Fig. A1.9	Possible 3D reconstruction of the š-formal garden of Qenamun based on its 2D image.....	134
Fig. A1.10	Second š-formal garden of Qenamun.....	135
Fig. A1.11	Third š-formal garden of Qenamun with possible reconstruction.....	135
Fig. A1.12	Š-formal garden of Sobekhotep.....	137
Fig. A1.13	Š-formal garden of Nebamun.....	139
Fig. A1.14	Š-formal garden of the unknown owner of TT 334.....	141
Fig. A1.15	Surrounding decorative schema of the TT 87 scene.....	144
Fig. A1.16	Thutmose III's <i>hnty</i> -š-formal garden depicted in the TT 87 scene.....	145
Fig. A1.17	The <i>k3mw</i> -formal garden depicted in the TT 90 scene.....	147
Fig. A1.18	Sš-formal garden of Puimra.....	149
Fig. A1.19	An <i>t-nt-ht</i> -formal of Amun-Ra depicted in the TT 96 scene.....	151
Fig. A1.20	3D model of the <i>t-nt-ht</i> -formal garden of the TT 96 scene.....	152
Fig. A1.21	The <i>hrrt</i> -š formal garden of Thebes depicted in the TT 161 scene.....	154

### Appendix II

Fig. A2.1	<i>Argun</i> -palm and fruit clusters.....	157
Fig. A2.2	<i>Atil</i> -tree flower clusters and fruit.....	159
Fig. A2.3	(Left) White lotuses open at mid-morning. (Right) A blue lotus opening its petals in the early morning.....	161
Fig. A2.4	Carob pods ripening in Turkey.....	162
Fig. A2.5	Christ's thorn jujube ripening in the AUC gardens.....	164
Fig. A2.6	Coriander flowers in bloom, seeding will follow, as well as cilantro leaves below.....	165
Fig. A2.7	Ripening common fig and its florets beside the Rijksmuseum van Oudheden.....	167
Fig. A2.8	Very tall common reed growing on El-Rehab Square in New Cairo.....	168
Fig. A2.9	Cos-lettuce growing in an arboreal shape and going to seed in late August in Buffalo, New York.....	169

Fig. A2.10	Curled pondweed in bloom beside white lotus in the Lower Lake of the Cassadaga Lakes in July.....	170
Fig. A2.11	Clusters of dates ripening in the AUC gardens.....	171
Fig. A2.12	<i>Doum</i> -palm, its spiked ribs and fronds, and its fruit clusters ripening in the AUC gardens.....	173
Fig. A2.13	A very tall <i>doum</i> -palm growing beside the right side of the Barbican Gate of Horemheb in front of the Second Pylon of Karnak before entering the Bubastite Portal of Shoshenq I.....	174
Fig. A2.14	Serrated fronds on the trunk of a <i>doum</i> -palm that are sharp like knives to the touch growing by the El-Rehab Souq.....	175
Fig. A2.15	(Left) A very tall desert date with (right) many fruit clusters in springtime at the Howard Carter Resthouse on the West Bank of Luxor.....	176
Fig. A2.16	An Egyptian riverhemp growing beside a canal.....	178
Fig. A2.17	(Left) Egyptian walking onion with its bolting flowers and bulblets growing and in bloom. (Right) Bulb onion harvested at its scape, just as in Egyptian tomb art.....	180
Fig. A2.18	Egyptian willows (?) near a pond by Gate Four in the AUC gardens in New Cairo.....	181
Fig. A2.19	(Left) Concord grapes ( <i>Vitis labrusca</i> L.) growing on a pergola and (right) on an arbor at Becker Farms and Vizcarra Vineyards.....	183
Fig. A2.20	(Left) Young and potted incense trees transported to Egypt from Punt in the reliefs of Hatshepsut's memorial temple at Deir el-Bahari. (Right) Incense gum and resin rolled into balls for sale in the Nubian village market in Aswan.....	185
Fig. A2.21	Low cornflower in bloom beside the Lower Lake of the Cassadaga Lakes.....	187
Fig. A2.22	Bindweed (morning glory) spp. in bloom in Buffalo, New York.....	189
Fig. A2.23	(Left) Beautiful purple mandrake flowers blossoming in fall at the Riserva naturale dello Zingano in Trapani, Sicily. (Right) Its yellow ripened fruit in spring.....	190
Fig. A2.24	Left) Avenues of Mediterranean cypresses in a vineyard at San Quirico d'Orcia. (Middle) Detail of its coniferous leaves. (Right) Wilder, cultivated form with its branches reaching outward.....	194
Fig. A2.25	Examples of the <i>Pkr</i> -tomb (cenotaph tomb mound) of Osiris at Abydos with Tamarisk spp. (left, middle) and cypress (right) from artifacts dated from the Ramesside Period to the Late Period.....	194
Fig. A2.26	(Right) The willow-like branches and leaves of the morgina tree. (Left) Its scented flowers.....	196
Fig. A2.27	(Left) Snake melon for sale in the El-Rehab Souq in the summertime. (Right) Chate melon for sale in the Nubian village market in Aswan.....	198
Fig. A2.28	Orange, white, and red poppies in bloom in the Jardin des Plantes in Paris during the spring.....	199
Fig. A2.29	(Left) Papyrus ( <i>C. papyrus</i> L.) in a water garden beside our pond in Buffalo, New York. (Middle) Papyrus umbels going to seed in late summer. (Right) Dead, inverted umbels in mid fall similar to those on Gardiner M15 (𓆎) and M215 (𓆎).....	201
Fig. A2.30	Persea leaves and fruit.....	204

Fig. A2.31	Pomegranates and their florets growing in the AUC gardens.....	206
Fig. A2.32	Scented mayweed spp. growing in the AUC gardens.....	207
Fig. A2.33	(Left) Avenues of enormous sycamore figs growing along the roads in Ma'adi in downtown Cairo. (Right) Sycamore figs growing along their immense branches.....	208
Fig. A2.34	(Left) Tamarisk spp. and oleander ( <i>Nerium oleander</i> L.) growing beside the ram-headed sphinx avenue in front of Karnak's Western Entrance, which had š-formal garden in antiquity.....	211
Fig. A2.35:	(Left) True cardamom flowers growing in India. (Right) True cardamom pods are sold in stalls in India just like in Egypt.....	212
Fig. A2.36	An Egyptian turtle dove.....	215
Fig. A2.37	Pintail swimming and a mallard walking in a clover meadow.....	217
Fig. A2.38	A red-breasted goose in a meadow.....	220
Fig. A2.38	<i>Tilapia</i> spp., <i>Labeo</i> spp., <i>Syndontis</i> spp., and Egyptian trunkfish floating and eating at white lotus in the pool of the ḥrrt-š-formal garden of Amun at Thebes from the TT 161 scene.....	220
Fig. A2.40	<i>Lotus</i> spp., red-breasted geese, <i>Tilapia</i> spp., likely <i>T. zillii</i> , Catfish spp., and Elephantfish spp. floating and eating the vegetation in the pool of Qenamun's š-formal garden (TT 93 #2 scene).....	225
Fig. A2.41	Detail of the pool in Nebamun's š-formal garden with <i>Tilapia</i> spp., redbelly tilapia as well as red-breasted goose and pintail duck.....	227
Fig. A2.42	A busy bee collection pollen from a pink dahlia ( <i>Dahlia pinnata</i> Cav.) in Monet's gardens at Giverny.....	229

### Appendix III

#### Š-Formal Gardens

Fig. A3.1	TT 81 formal garden layout.....	231
Fig. A3.2	TT 109 formal garden layout.....	231
Fig. A3.3	TT 85 formal garden layout.....	231
Fig. A3.4	TT 100 formal garden layout.....	231
Fig. A3.5	TT 80 formal garden layout.....	231
Fig. A3.6	TT 93 #1 formal garden layout.....	231
Fig. A3.7	TT 93 #2 formal garden layout.....	231
Fig. A3.8	TT 93 #3 formal garden layout.....	231
Fig. A3.9	TT 63 formal garden layout.....	231
Fig. A3.10	TT E2 formal garden layout.....	231
Fig. A3.11	TT 334 formal garden layout.....	232
Fig. A3.12	Memorial Temple of Amenhotep, Son of Hapu formal garden layout.....	232
Fig. A3.13	Memorial Temple of Hatshepsut formal garden layout.....	232
Fig. A3.14	Karnak Main (Western) Entrance formal garden layout.....	232

#### Domain of Amun Formal Gardens

Fig. A3.15	Memorial Temple of Montuhotep II formal garden layout.....	233
------------	--	-----

Fig. A3.16	Memorial Temple of Hatshepsut formal garden layout.....	233
Fig. A3.17	TT 39 formal garden layout.....	234
Fig. A3.18	TT 87 formal garden layout.....	234
Fig. A3.19	TT 90 formal garden layout.....	234
Fig. A3.20	TT 161 formal garden layout.....	234
Fig. A3.21	Middle Kingdom to Late Hyksos Period Palace F/I at Tell el-Daba'a formal garden layout.....	235
Fig. A3.22	Perunefer Thutmoside Palace Complex F, J, & G.....	235
Fig. A3.23	TT 96 formal garden layout.....	236

#### Miscellaneous Images

Fig. A3.24	The <i>hnty</i> -š-formal garden (?) of the Bent Pyramid of Sneferu of the Fourth Dynasty at Dahshur.....	238
Fig. A3.25	3D archaeological surface plot of the Queen Tetisheri Cenotaph Pyramid and Shrine Enclosure at Abydos.....	239
Fig. A3.26	Satellite image taken on November 17, 2020 of the archaeological sites of Ahmose I at Abydos.....	240
Fig. A3.27	Satellite image taken on November 17, 2020 of the archaeological sites of the Memorial Temples of Montuhotep II and Hatshepsut, and the Thutmose III Shrine at Deir el-Bahari.....	241
Fig. A3.28	Satellite image taken on November 17, 2020 of the archaeological sites of the Memorial Temple of Thutmose III.....	242
Fig. A3.29	Satellite image taken on November 17, 2020 of the archaeological sites of the Memorial Temple of Amenhotep III.....	243
Fig. A3.30	Wall reliefs depicting the š-formal gardens of the Memorial Temple of Hatshepsut.....	244
Fig. A3.31	Reconstruction of the Memorial Temple of Amenhotep, Son of Hapu with its š-formal garden.....	245
Fig. A3.32	Š-formal garden of the Karnak's main (western) entrance, depicted in Neferhotep (TT 49).....	246
Fig. A3.33	Panorama view of Thutmose III's inscriptions and the flora and fauna from across the empire depicted in the 'botanical garden' reliefs).....	247
Fig. A3.34	Satellite image taken on November 17, 2020 of the archaeological site of the Karnak Temple Complex).....	248
Fig. A3.35	The Amun cult at Karnak Temple during the reigns of Thutmose III and Amenhotep II.....	249
Fig. A3.36	Archaeological map of Tell el-Daba'a/Ezbet Helmi/Qantir (Avaris/Perunefer/Per-Ramesses).....	250
Fig. A3.37	Archaeological plan of the Perunefer Thutmoside Palace Complex F, J, and G).....	251
Fig. A3.38	Detail of archaeological remains of Palace F of the Perunefer Thutmoside Palace Complex).....	252
Fig. A3.39	Possible reconstruction of the Perunefer Thutmoside Palace Complex G with the outlines of the archaeological remains of F and J.....	253

Fig. A3.40	Archaeological plan of the Middle Kingdom to Late Hyksos Period Palace F/I, Stratum d/1, at Avaris (Tell el-Daba'a).....	254
Fig. A3.41	3D reconstruction of the Middle Kingdom to Late Hyksos phase of the Tell el-Daba'a Palace F/I at Avaris.....	255
Fig. A3.42	3D reconstruction of the Middle Kingdom to Late Hyksos <i>ḥrrt-š</i> -formal garden at the Tell el-Daba'a Palace F/I.....	256
Fig. A3.43	3D reconstruction of the Middle Kingdom to Late Hyksos <i>ḥrrt-š</i> -formal garden at the Tell el-Daba'a Palace F/I at Avaris.....	257
Fig. A3.44	Reconstruction of Djehuty's <i>ḥsp</i> -plot, discovered in 2017 by the Joint Spanish-Egyptian Mission at his tomb (TT 11).....	258
Fig. A3.45	One of the human-headed sphinxes (MMA 31.3.166) that lined the processional way of Hatshepsut's <i>ḥnty-š</i> -formal garden at her memorial temple.....	259
Fig. A3.46	One of the granite kneeling statues of Hatshepsut in the White Crown (MMA 30.3.1) called 'Ma'atkara-who-Offers-Fresh-Produce-to-Amun' from her memorial temple at Deir el-Bahari.....	260
Fig. A3.47	One of the granite kneeling statues of Hatshepsut in the nemes-headdress (MMA 30.2.1) from her memorial temple at Deir el-Bahari.....	261
Fig. A3.48	A granite striding statue of Thutmose III called 'Menkheperra-who-Offers-Fresh-Produce-to-Amun-from-Karnak' (JE 42056) found in proximity to Hatshepsut's obelisk at the Karnak Temple Complex.....	262
Fig. A3.49	Detail of the tripartite shrine in the ' <i>t-nt-ḥt</i> '-formal garden of Amun depicted in TT 96 scene.....	263
Fig. A3.50	A wall relief of Puntite luxuries being weighted and collected by workmen from the Second Terrace of the Memorial Temple of Hatshepsut.....	264
Fig. A3.51	A wall relief of Egyptian expeditionary vessels in Punt being loaded with luxury items from the Middle Colonnade of the Memorial Temple of Hatshepsut at Deir el-Bahari.....	265
Fig. A3.52	A wall relief of Egyptian expeditionary vessels outbound from Punt to Egypt from the Middle Colonnade of the Memorial Temple of Hatshepsut at Deir el-Bahari.....	266
Fig. A3.53	Facsimile (MMA 30.4.152) by Nina de Garis-Davies of Nubians carrying a small, young, and potted incense tree.....	267
Fig. A3.54	A wall relief from the Second Terrace of the Memorial Temple of Hatshepsut, which shows her in kingly regalia, performing a ritual on the incense trees planted in her <i>ḥnty-š</i> -formal garden at Deir el-Bahari.....	268

### List of Abbreviations

A1 = (Djeserkara) Amenhotep I; Appendix I  
 A2 = (A'akheperura) Amenhotep II; Appendix II  
 A3 = (Nebma'atra) Amenhotep III; Appendix III  
 ABSA = *The Annual of the British School at Athens*  
 ACE = The Australian Centre for Egyptology, Macquarie University  
 ADAIK = *Abhandlungen des Deutschen Archäologischen Instituts, Abteilung Kairo*  
 Ägyptische Gärten = *Ägyptische Gärten: Eine Ausstellung im Römisch-Germanischen Museum der Stadt Köln vom 27. Mai bis zum 6. November 2011*

*A History of Garden Art* = *A History of Garden Art: From the Earliest Times to the Present Day*,  
 vol. 1: *From Egypt to the Renaissance in Italy, Spain and Portugal*  
*AJPH* = *American Journal of Public Health*  
*AJPS* = *African Journal of Plant Science*  
*Altägyptische Totenliturgien* = *Altägyptische Totenliturgien, Band 2: Totenliturgien und Totensprüche in Grabinschriften des Neuen Reiches*  
*ARAST* = *Atti della reale accademia delle scienze di Torino*  
*Arbres et arbustes* = *Arbres et arbustes de l’Égypte ancienne : La liste de la tombe thébaine d’Ineni (no. 81)*  
*ARCE* = The American Research Center in Egypt  
*ARCE Bulletin* = *The American Research Center in Egypt Bulletin*  
*AM* = Ashmolean Museum of Art and Archaeology  
*Ancient Egypt* = *Ancient Egypt: Anatomy of a Civilization*  
*Ancient Egyptian Literature I* = *Ancient Egyptian Literature: Old and Middle Kingdom, vol. I*  
*ASAE* = *Annales du service des antiquités d’Égypte*  
*AT* = Amarna Tomb  
*AUCES* = Assiut University Center for Environmental Studies  
*AUC Press* = The American University in Cairo Press  
*A-V* = Akademie-Verlag/Arcus-Verlag  
*BACE* = *Bulletin of the Australian Centre for Egyptology*  
*BAR Series* = British Archaeological Reports International Series  
*BBM* = Botanischen Museum Berlin-Dahlem  
*Between Heaven and Earth* = *Between Heaven and Earth: Birds in Ancient Egypt*  
*BIE* = *Bulletin de l’Institut d’Égypte*  
*BIEg* = *Bulletin de l’Institut égyptien*  
*BIFAO* = *Bulletin d’Institut français d’archéologie orientale du Caire*  
*BMMA* = *The Metropolitan Museum of Art Bulletin*  
*BM Press* = British Museum Press  
*BSA* = British School at Athens  
*BoD* = *Book of the Dead (Book of Coming Forth by Day)*  
*BWZKM* = *Beihefte zur Wiener Zeitschrift für die Kunde des Morgenlandes*  
*CAJ* = *Cambridge Archaeological Journal*  
*CASAE* = *Cahiers supplémentaires des annales des services des antiquités de l’Égypte*  
*cf.* = *confer* = compare to  
*CGC* = *Catalogue général des antiquités égyptiennes du musée du Caire*  
*Chronologie des pharaonischen Ägypten* = *Chronologie des pharaonischen Ägypten: Die Zeitbestimmung der ägyptischen Geschichte von der Vorzeit bis 332 v. Chr.*  
*CM* = Cairo Museum  
*Codex* = *Codex of ancient Egyptian plant remains*  
*CNRS Éditions* = Éditions du Centre national de la recherche scientifique à Paris  
*CSAE* = Conseil suprême des antiquités de l’Égypte  
*CT* = *Coffin Texts*  
*CUP* = Cambridge University Press  
*DBH* = Druck von Breitkopf and Härtel  
*DE* = *Discussions in Egyptology*

*Deir el Médineh II = Rapport sur les fouilles de Deir el Médineh (1934-1935) : Deuxième partie : La nécropole de l'Est*  
*Dendérah IV = Dendérah : Description générale du grand temple de cette ville, vol. IV*  
*Deir el-Bahari III = Der Tempel des Königs Mentuhotep von Deir el-Bahari, Band III: Die königlichen Beigaben*  
*Die Gartenpflanzen = Die Gartenpflanzen im alten Ägypten: Ägyptologische Studien*  
*Domestic Plants and Animals = Domestic Plants and Animals: The Egyptian Origins*  
 EA = Egyptian Artefacts, British Museum  
*EA = Egyptian Archaeology: Bulletin of The Egypt Exploration Society*  
*EB = Encyclopædia Britannica*  
*Egyptian Grammar = Egyptian Grammar: Being an introduction to the study of hieroglyphs*  
 EES = Egypt Exploration Society  
*Encyclopédie religieuse de l'univers végétal II = Encyclopédie religieuse de l'univers végétal II : Croyances phytoreligieuses de l'Égypte ancienne*  
*Enquiry into plants = Theophrastus: Enquiry into plants and minor works on odours and weather signs*  
*ePSD = Electronic Pennsylvania Sumerian Dictionary*  
*et al. = et alii/alice/alia = and all*  
*etc. = et cetera = and other similar things*  
 EUT = Edizioni Università di Trieste  
 FAO/UN = Food and Agriculture Organization of the United Nations  
 FERE/FerE = Fondation égyptologique reine Elisabeth  
*Flora of Egypt Ia/Ia/IIa/IVa = Flora of Egypt, vol. I-IV (Boulos)*  
*Flora of Egypt Ib/IIb/IIIb/IVb = Flora of Egypt, vol. I-IV (Täckholm, et al.)*  
*Five Years' Explorations at Thebes = Five Years' Explorations at Thebes: A Record of Work done 1907-1911*  
*Following Osiris = Following Osiris: Perspectives on the Osirian Afterlife from Four Millennia*  
 FM = Fouad I Agricultural Museum  
 GI = Griffith Institute, University of Oxford  
*GM = Göttingen Miszellen*  
 GT = Giza Tomb  
 GOV = Georg Olms Verlagsbuchhandlung  
*GR = Geographical Review*  
 H = (Ma'atkara) Hatshepsut  
*Handbuch = Handbuch der altägyptischen Heilpflanzen*  
*Hidden fields of Tutankhamun = Hidden fields of Tutankhamun: From identification to interpretation of newly discovered plant material from the pharaoh's grave.*  
*Histoire économique et sociale = Histoire économique et sociale de l'ancienne Égypte : De Nârmér à Alexandre le Grand I : Les fondements de l'économie, Tome 1 : Les bases structurelles de l'économie*  
*Historisch-Biographische = Historisch-Biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie*  
 IFAO/Ifao = Institut français d'archéologie orientale du Caire  
 IUCN = The International Union for Conservation of Nature Programme  
*JAMT = Journal of Archaeological Method and Theory*  
*JARCE = Journal of the American Research Center in Egypt*

*JEA* = *Journal of Egyptian Archaeology*  
*JE* = *Journal d'entrée du musée du Caire*  
*JEE* = *Journal of Ethnobiology and Ethnomedicine*  
*JIA* = *Journal of Intercultural and Interdisciplinary Archaeology*  
*JNES* = *Journal of Near Eastern Studies*  
*JRHS* = *Journal of the Royal Horticultural Society*  
 KG = Royal Botanical Gardens, Kew  
 KPI Ltd. = Kegan Paul International Limited Company  
*LdÄ* = *Lexikon der Ägyptologie*  
*Le cabinet de curiosités de Thoutmosis III* = *Le cabinet de curiosités de Thoutmosis III : Plantes et animaux du « Jardin botanique » de Karnak*  
 LM = Musée du Louvre  
 l.p.h. = life, power, and health  
 L→R = Read left to right  
 L←R = Read right to left  
*MEJAR* = *Middle Eastern Journal of Agriculture Research*  
*OBO* = *Orbis Biblicus et Orientalis*  
*ÖAW* = *Anzeiger der philosophisch-historischen Klasse der Österreichischen Akademie der Wissenschaften*  
 OI = Oriental Institute, University of Chicago  
 OUP = Oxford University Press  
 M2 = (Nebhepetra) Montuhotep II  
*Manuel IV* = *Manuel d'égyptologie égyptienne IV : Bas-reliefs et peintures et scènes de la vie quotidienne*  
*MDAIK* = *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo*  
*Mémoires publiés* = *Mémoires publiés par les membres de la Mission archéologique française au Caire V, fascicule 1 et 2*  
 MIPBA = Ministre de l'instruction publique et des beaux-arts  
 MK = Middle Kingdom  
 MMA = The Metropolitan Museum of Art, New York  
 MüM = Staatliches Museum Ägyptischer Kunst, München  
 MM = Manchester Museum  
*MMS* = *Metropolitan Museum Studies*  
 NN = Name of individual  
 NK = New Kingdom  
 PAF = Paul Åströms Förlag  
 pBM = British Museum Papyrus  
 pEb = Ebers Papyrus  
 pTurin = Turin Papyrus  
*Pharaoh's Flowers* = *Pharaoh's Flowers: The Botanical Treasures of Tutankhamun*  
*PMMA* = *Publications of The Metropolitan Museum of Art*  
*PMMAEE* = *Publications of The Metropolitan Museum of Art, Egyptian Expedition*  
*PROTA* = *Plant Resources of Tropical Africa – Ressources végétales de l'Afrique tropicale*  
 PROTA Foundation = Plant Resources of Tropical Africa Foundation  
*PT* = *Pyramid Texts*  
 PvZ = Philipp von Zabern Verlag



*Ramesside Inscriptions VI* = *Ramesside Inscriptions: Historical and Bibliographical*, vol. VI  
*RdE* = *Revue d'égyptologie*  
*SAE* = Service des antiquités égyptiennes du musée du Caire  
*Stèles du Nouvel Empire I* = *Catalogue général des antiquités égyptiennes du musée du Caire n° 34001-34064 : Stèles du Nouvel Empire I*  
*Stil der Grabmalereien in der Zeit Amenophis II'* = *Stil der Grabmalereien in der Zeit Amenophis II': Untersucht an den thebanische Gräbern Nr. 104 und Nr. 80*  
*s. v.* = *sub verbo* = under the word  
*RSUE* = *Revista de la Sociedad uruguaya de egiptología*  
*T1* = (A'akheperkara) Thutmose I  
*T2* = (A'akheperenra) Thutmose II  
*T3* = (Menkheperra) Thutmose III  
*T4* = (Menkheperura) Thutmose IV  
*TLA* = *Thesaurus Linguae Aegyptiae*  
*T* = Tomb  
*The Complete Papyrus of Ani* = *The Egyptian Book of the Dead: The Book of Going Forth by Day: The Complete Papyrus of Ani*, 3<sup>rd</sup> edition  
*The Painted Tomb-Chapel of Nebamun* = *The Painted Tomb-Chapel of Nebamun: Masterpieces of Ancient Egyptian Art in the British Museum*  
*The Pharaoh's Kitchen* = *The Pharaoh's Kitchen: Recipes from Ancient Egypt's Enduring Food Traditions*  
*The unbroken reed* = *The unbroken reed: Studies in the culture and heritage of ancient Egypt in honor of A. F. Shore*  
*The Tomb in Ancient Egypt* = *The Tomb in Ancient Egypt: Royal and Private Sepulchres from the Early Dynastic Period to the Romans*  
*Tombs of Two Officials* = *Tombs of Two Officials of Tuthmosis The Fourth (nos. 75 and 90)*  
*Topographical Bibliography I* = *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, 2<sup>nd</sup> edition  
*Trees and Flowers of Egypt* = *Trees and Flowers of Egypt: A Guide to Popular Ornamental Egyptian Plants*  
*TT* = Theban Tomb  
*UCLAEE* = *University of California, Los Angeles, Encyclopedia of Egyptology*  
*UCL* = University College London  
*UNESCO* = United Nations Educational, Scientific, and Cultural Organization  
*UNESCO-EOLSS* = United Nations Educational, Scientific, and Cultural Organization, Encyclopedia of Life Support Systems  
*UFSVRG* = Universitätsverlag Freiburg Schweiz Vandenhoeck und Ruprecht Göttingen  
*Urkunden IV* = *Urkunden der 18. Dynastie: Historisch-Biographische*, vol. IV, pt. 1-4  
*Urkunden 17-22* = *Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22*, vol. IV  
*Urkunden 18* = *Urkunden der 18. Dynastie 18: Biographischen Inschriften von Zeitgenossen Thutmosis' III und Amenophis' II,*  
*UWH* = Universitätsverlag Winter Heidelberg  
*VdDB* = Verlag der Dürschens Buchhandlung  
*VJJA* = Verlag J. J. Augustin  
*WB I-IV* = *Wörterbuch der ägyptischen Sprache*, vols. I-IV  
*ZÄS* = *Zeitschrift für ägyptische Sprache und Altertumskunde*

# Chapter One

## Introduction

Evidence of gardens in ancient Egypt exists in various forms, including archaeological, textual, and pictorial, dating from the Early Dynastic through the Graeco-Roman Period. From these sources, one can differentiate between a ‘garden’ and a ‘formal garden.’ The former is a simple piece of land established to cultivate trees and plants while the latter is a distinct, landscaped area, built on a symmetrical and geometrical plane, and incorporating trees, plants, water features, and/or architecture. Evidence show that in ancient Egypt, a variety of gardens and formal gardens appear from the Early Dynastic Period onwards in the vicinity of homes, tombs, temples, and palaces, being used for pleasure, aesthetics, and practicality.<sup>1</sup> This thesis exclusively examines the 3- and Domain of Amun formal gardens represented in the private Theban funerary art of the Eighteenth Dynasty prior to the Amarna Period. In doing so, the aim of this thesis is to expand our understanding of their layouts, water and architectural features, flora and fauna, and overall function and significance of the actual formal gardens in early to mid-late Eighteenth Dynasty Theban society by means of extant textual, archaeological, and/or pictorial evidence. Amenhotep IV/Akhenaten and his late Eighteenth Dynasty successors are excluded due to the profound changes that occurred under his leadership: (i) the rise of Atenism; (ii) the *damnatio memoriae* of Amun and the closure of his cult at Thebes; and (iii) the shift of the capital to Akhetaten (Amarna).

## Research Questions

The following research questions form the focus of this study:

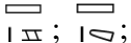
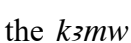

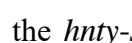
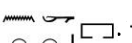


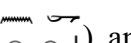
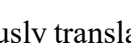

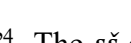
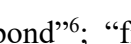

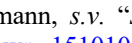
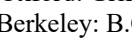
1. What do the images and the Egyptian names of the formal garden scenes found in Theban private tombs reveal about actual formal gardens existing during this period?

---

<sup>1</sup> Alix Wilkinson, *The garden in ancient Egypt*, (London: Rubicon Press, 1998), pp. 2-3.

2. To what extent does the location of the formal garden scene in the tomb and its relationship to the surrounding decorative schema and texts indicate its function and significance?
3. What information can be deduced from the tomb-owners' and their families' titles in relation to the type(s) of formal garden scene(s) found within their tombs?
4. In what ways do the formal garden scenes function for the deceased?
5. Which species of flora and fauna are present in these formal garden scenes and their additional, extant archaeological and textual evidence? What did these formal gardens have in bloom or harvestable each season? What were their symbolism and significance in life and in death? To what extent do they reflect Eighteenth Dynasty Theban society?

### Formal Gardens in Eighteenth Dynasty Thebes prior to the Amarna Period

The ancient Egyptians had many words for gardens, allowing them to be categorized.<sup>2</sup> The following examples of formal gardens will serve as the main focus of the thesis: the *š* (  ;  ;  ), the *sš* (  ;  ;  ), the *hnty-š* (  ;  ;  ), the *k3mw* (  ), the *t-nt-ht* (  ;  ;  ), and the *hrrt-š* (  ;  ). The *š* is known from the Old Kingdom onward, variously translated from the Egyptian, as “garden (with a pool)”<sup>3</sup> and “garden/pool/pond/lake.”<sup>4</sup> The *sš* occurs from the Old Kingdom onward and has been interpreted as “pond”<sup>5</sup>; “bird pond”<sup>6</sup>; “fish pond”<sup>7</sup>; and “an outdoor

<sup>2</sup> Jean-Claude Hugonot, *Le jardin dans l'Égypte ancienne*, (New York: PUE, 1989), pp. 3-19.

<sup>3</sup> Adolf Erman and Hermann Grapow, *Wörterbuch der ägyptische Sprache* IV (Berlin: Akademie-Verlag, 1926-1961), nos. 397.1-398.9, 14-17; Stephan Seidlmayer and Ingelore Hafemann, s.v. “š,” in *Thesaurus Linguae Aegyptiae*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=151010&db=0>.

<sup>4</sup> Raymond O. Faulkner, *A Concise Dictionary of Middle Egyptian*, (Oxford: Griffith Institute, 1981), p. 260; Leonard H. Lesko. and Barbara S. Lesko, *A Dictionary of Late Egyptian II*, (Berkeley: B.C. Scribes, 1982), p. 105.

<sup>5</sup> Erman and Grapow, *WB* III, nos. 483.12-485.2; Seidlmayer and Hafemann, s.v. “sš,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/s0?f=0&l=0&ff=14&hc=G49&l1=0>; Dilywn Jones, *An index of ancient Egyptian titles, epithets and phrases of the Old Kingdom*, (Oxford: Archaeopress, 2000), nos. 767, 816-817; Eberhard Dziobek, *Das Grab des Ineni: Theben Nr. 81*, (Mainz am Rhein: PzV, 1992), pp. 88-90, 2d, 20a-b.

<sup>6</sup> Erman and Grapow, *WB* III, nos. 483.12-485.2.

<sup>7</sup> Erman and Grapow, *WB* III, nos. 483.12-485.2.

enclosure”<sup>8</sup>; and “marshland/thicket.”<sup>9</sup> The *hnty-š* is known since the Old Kingdom and has been interpreted as “arable land”<sup>10</sup>; “a plantation”<sup>11</sup>; “an orchard”<sup>12</sup>; “terraces”<sup>13</sup>; “a Lebanese orchard”<sup>14</sup>; “a tree orchard”<sup>15</sup>; “a garden with trees”<sup>16</sup>; and “a pond.”<sup>17</sup> The *k3mw* is attested from the Old Kingdom onward and has been interpreted as “a vineyard”<sup>18</sup>; “wine-garden”<sup>19</sup>; “temple garden”<sup>20</sup>; “an orchard.”<sup>21</sup> The *‘t-nt-ht* is mentioned in various texts from the Old Kingdom onward and has been translated as “a garden”<sup>22</sup>; “an orchard”<sup>23</sup>; and “an arbor.”<sup>24</sup> The *hrrt-š*<sup>25</sup> first occurs in the New Kingdom and has been interpreted as “garden (at a temple)”<sup>26</sup> or an “utilitarian garden.”<sup>27</sup> These translations demonstrate how multifaceted a formal garden could be in ancient Egyptian society. Their layouts, water features, architecture, the flora and fauna they sustained,

<sup>8</sup> Hartwig Altenmüller and Ahmed M. Moussa, „Des Inschrift Amenemhets’ II,“ *SAK* 18 (1991): p. 7.

<sup>9</sup> Erman and Grapow, *WB* III, nos. 483.12-485.2; Naguib Kanawati, *The Rock Tombs of El-Hawawish: The Cemetery of Akhmim V*, (Sydney: ACE, 1982), pp. 18-21, 24-25, pls. 1-4, figs. 1, 7-9.

<sup>10</sup> Erman and Grapow, *WB* III, nos. 311.6-7; Kurt Sethe, *Urkunden des Alten Reichs* I.I, (Leipzig: Akademie-Verlag, 1932-1933), no. 140.10; Lesko and Lesko, *A Dictionary of Late Egyptian* II, 186; Seidlmayer and Hafemann, s.v. “*hntiw-š*,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=119280&db=0>.

<sup>11</sup> Erman and Grapow, *WB* III, no. 310.11.

<sup>12</sup> Erman and Grapow, *WB* III, nos. 310.11, 311.8; Hugonot, *Le jardin dans l’Égypte ancienne*, p. 17.

<sup>13</sup> Sir William Flinders Petrie, *Tarkhan I and Memphis V*, (London: Hazell, Watson, and Viney, Ltd., 1913), p. 34.

<sup>14</sup> Erman and Grapow, *WB* III, no. 310.12.

<sup>15</sup> Faulkner, *A Concise Dictionary of Middle Egyptian*, pp. 194-195.

<sup>16</sup> Sethe, *Urkunden* IV, no. 353.4.

<sup>17</sup> Via the epithet *hntyw-š.f* or “who is in front of his pond(s).” See Christian Leitz, *Lexikon der ägyptischen Götter und Götterbezeichnungen* V, (Dudley: Peeters, 2002), p. 864.

<sup>18</sup> Erman and Grapow, *WB* V, nos. 106.4-9, 107.6-7; Seidlmayer and Hafemann, s.v. “*k3mw*,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=163530&db=0>; Lesko and Lesko, *A Dictionary of Late Egyptian* IV, p. 34.

<sup>19</sup> James H. Breasted, *Ancient records of Egypt* IV, (Chicago: University of Chicago Press, 1906), p. 121, §215.

<sup>20</sup> Hugonot, *Le jardin dans l’Égypte ancienne*, p. 19.

<sup>21</sup> Hugonot, *Le jardin dans l’Égypte ancienne*, p. 19.

<sup>22</sup> Erman and Grapow, *WB* I, no. 160.13; *WB* III, nos. 341.4-5; Seidlmayer and Hafemann, s.v. “*‘t-nt-ht*,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=34660&db=0>.

<sup>23</sup> Erman and Grapow, *WB* I, no. 160.13; *WB* III, nos. 341.4-5; Seidlmayer and Hafemann, s.v. “*‘t-nt-ht*,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=34660&db=0>.

<sup>24</sup> Erman and Grapow, *WB* I, no. 160.13; *WB* III, nos. 341.4-5; Seidlmayer and Hafemann, s.v. “*‘t-nt-ht*,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=34660&db=0>.

<sup>25</sup> It should not be confused with another type of (formal?) garden that is placed in the vicinity of a tomb: *š-hrt* (𓆎𓅓𓅓), written with Gardiner N1 (𓅓). See Hugonot, *Le jardin dans l’Égypte ancienne*, p. 18.

<sup>26</sup> Erman and Grapow, *WB* III, nos. 341.4-5; Seidlmayer and Hafemann, s.v. “*hrrt-š*,” in *TLA*, <http://aaw.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=108840&db=0>.

<sup>27</sup> Erman and Grapow, *WB* III, no. 310.11.

<sup>27</sup> Hugonot, *Le jardin dans l’Égypte ancienne*, p. 15.

and other functions, however, remain less understood. This is where archaeological and pictorial evidence becomes vital to this study.

The main archaeological evidence for ancient Egyptian formal gardens from the Old Kingdom until before the Amarna Period has been found in the following locations: the valley temple garden enclosure beside the Bent Pyramid at Dahshur, dating to the reign of Sneferu of the Fourth Dynasty<sup>28</sup>; the Middle Kingdom Memorial Temple of Montuhotep II at Deir el-Bahari<sup>29</sup>; the Middle Kingdom mayor's mansion in Senwosret III's memorial cult town of Wahsut in South Abydos<sup>30</sup>; the Middle Kingdom to Late Hyksos and New Kingdom palaces constructed at Avaris/Perunefer/Per-Ramesses (Tell el-Daba'a/Qantir) in the Eastern Delta<sup>31</sup>; the First Court of the Memorial Temple of Hatshepsut<sup>32</sup>; and the Memorial Temple of Amenhotep, Son of Hapu on the West Bank of Thebes.<sup>33</sup> Although these excavated remains and material culture have added to our knowledge of the layout and functions of formal gardens, many archaeological sites that might

---

<sup>28</sup> "Remains of 80 m long and 55 m wide...with a 5 m thick brick walls surrounding the remains of a garden. More than 350 plants were arranged in long, parallel rows...palm and sycamore trees were planted here...several cypress trees that must have been imported from the Levant. In the spaces between these plants lay flower beds. Inside the garden stood a solitary building, either a royal rest house or a temple." See the DAI Kairo - German Archaeological Institute Cairo Facebook Page Post from April 11, 2020, "Extensive garden of King Sneferu (4th Dynasty)," (accessed May 4, 2020), <https://facebook.com/DAINST.Kairo/posts/2861983523922430>; and also see Felix Arnold, "Cult Buildings of the Bent Pyramid at Dahshur," *Archaeology in Egypt: Magazine of the German Archaeological Institute in Cairo* 5 (Nov. 2019): p. 49; as well as Nicole Alexanian and Felix Arnold, *The Necropolis of Dahshur*, (Cairo: DAI, 2015), pp. 2, 8-10.

<sup>29</sup> Dieter Arnold, *Der Tempel des Königs Mentuhotep von Deir el-Bahari I*, (Mainz am Rhein: PöZ, 1981), pp. 22-24, pls. 1a, 15-17, 19a, 23-27, 38, 42-43, 49-51; Hugonot, *Le jardin dans l'Égypte ancienne*, p. 64, fig. 49.


<sup>30</sup> "An intriguing addition to the front part of the building was the removal of the original architecture and its replacement with a walled garden courtyard. The actual floor level of this garden is not preserved but we have a 3 x 4 grid of 12 brick tree planters. Remnants of bark and leaves suggest this was a garden of ficus trees (*Ficus sycamorus*), which were frequently favored by Egyptians in formal garden settings." See Josef Wegner, "Museum Excavations at Abydos: Modeling the Mayor's House at South Abydos: The Palatial Residence at *Wah-Sut*," *Expedition* 56.1 (Spring 2014), pp. 24, 28, 30.

<sup>31</sup> Hugonot, *Le jardin dans l'Égypte ancienne*, p. 93, fig. 72; Manfred Bietak, „Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab'a)," *ÖAW* 121 (1984): 314-328, Tafel XI, fig. 7; Manfred Bietak, "Rich beyond the Dreams of Avaris," *ABSA* 95 (2000): p. 187, fig. 2; also, see the flower gardens and pool surrounded by palm trees in Edeltraud Aspöck, "Tell el-Dabaa: Palace Area F/I - Phase Model and Wooden Model," *Tell el Dabaa Puzzle in 4D*, [https://4dpuzzle.orea.oeaw.ac.at/reconstruct\\_phaseModel/](https://4dpuzzle.orea.oeaw.ac.at/reconstruct_phaseModel/) and [https://4dpuzzle.orea.oeaw.ac.at/reconstruct\\_phaseModel/](https://4dpuzzle.orea.oeaw.ac.at/reconstruct_phaseModel/).

<sup>32</sup> Hebert E. Winlock, *Excavations at Deir el-Bahari 1911-1931*, (New York: Macmillan, 1942), fig. 12, p. 213.

<sup>33</sup> Clément Robichon and Alexandre Varille, *Le temple du scribe royal Amenhotep, fils de Hapou*, (Cairo: IFAO, 1936), pp. 28, 35, 37, pls. III-V, X-XI; Hugonot, *Le jardin dans l'Égypte ancienne*, p. 75, figs. 56-57.

have evidence of them before the New Kingdom have still not been found, excavated, or studied.

Therefore, the study of ancient Egyptian formal gardens still strongly relies on pictorial evidence from elite tombs.<sup>34</sup> Pictorial evidence from palaces, temples,<sup>35</sup> and royal tombs exists; however, they do not provide much evidence for formal gardens. Information can be derived from the floor paintings of formal gardens from Amenhotep III's Malkata Palace Complex,<sup>36</sup> although, pictorial evidence for ancient Egyptian simple and formal gardens still largely derive from private New Kingdom tombs in Thebes<sup>37</sup> and in Saqqara.<sup>38</sup> Old Kingdom and Middle Kingdom scenes from private tombs in Asyut,<sup>39</sup> Beni Hasan,<sup>40</sup> Deir el-Bersha,<sup>41</sup> Meir,<sup>42</sup> Saqqara,<sup>43</sup> and Thebes<sup>44</sup> do not depict formal gardens, only simple gardens like the *hsp*-plot () , grapevines on arbors or pergolas, or small groupings of one or more trees. In Thebes, Middle Kingdom and Second Intermediate Period formal garden scenes might have been present. It is difficult, however, to ascertain their existence because many private Theban tombs, particularly in the necropolis district of Sheikh Abd el-Qurna, were reused by the early to late New Kingdom elite.<sup>45</sup>

A problem with using tomb scenes to interpret actual formal gardens is whether these tomb

---

<sup>34</sup> Daines, "Egyptian Gardens," p. 15.

<sup>35</sup> Wayshrines of Amun-Min and even the Red Chapel of Hatshepsut had *hsp*-plots, but these are not formal gardens. See Hugonot, *Le jardin dans l'Égypte ancienne*, figs. 24-26; Wilkinson, *The garden in ancient Egypt*, fig. 70.

<sup>36</sup> Wilkinson, *The garden in ancient Egypt*, fig. 80.

<sup>37</sup> Such as: TT 6, TT 15, TT 19, TT 21, TT 39, TT 41, TT 49, TT 51, TT 53, TT 60, TT 63, TT 80, TT 81, TT 82, TT 85, TT 87, TT 90, TT 93, TT 96, TT 100, TT 103, TT 109, TT 110, TT 112, TT 120, TT 123, TT 125, TT 138, TT 158, TT 161, TT 179, TT 201, TT 217, TT 222, TT 224, TT 296, TT 334, and TT 392.

<sup>38</sup> From the New Kingdom tombs of Neferhotep, Apuia and Mes in Saqqara, as well as from the private tomb fragments Louvre B 40 and CM 22.5.25.7 from Saqqara. See Beatrix Geßler-Löhr, "Die Totenfeier im Gärten," in *Das Grab des Amenemope, TT 41*, eds. by Jan Assmann, et al., (Mainz am Rhein: PöZ, 1991), pp. 168-180.

<sup>39</sup> See the Middle Kingdom tomb of Djefhaihapi in Mahmoud El-Khadragy, "Fishing, fowling, and animal-handling in the tomb of Djefhaihapi at Asyut," *BACE* 17 (2007): pp. 131, 137.

<sup>40</sup> See the Middle Kingdom tomb of Khnumhotep III in Porter and Moss, *Topographical Bibliography IV*, p. 145.

<sup>41</sup> See the Middle Kingdom tomb of Djehutyhotep II in Porter and Moss, *Topographical Bibliography IV*, p. 180.

<sup>42</sup> See the Old Kingdom tomb of Pepyankh in Porter and Moss, *Topographical Bibliography IV*, p. 247.

<sup>43</sup> See the Old Kingdom tombs of Mereruka, Neferseshemtah, Mehu, Neferherenptah, Niankhkhnum and Khnumhotep, and Niankhunesut in Porter and Moss, *Topographical Bibliography III.2*, pp. 527, 616, 622, 637-638, 642, 694.

<sup>44</sup> See the Middle Kingdom *saff*-tomb of Intefiqer and Senet (TT 60) in Porter and Moss, *Topographical Bibliography I*, p. 121.

<sup>45</sup> Dodson and Ikram, *The Tomb in Ancient Egypt*, p. 214.

scenes are idealized or realistic. To use the term ‘idealized’ suggests that one believes that these tomb scenes are conceptual<sup>46</sup>; conversely, the term ‘realistic’<sup>47</sup> suggests truth and accuracy.<sup>48</sup> In essence, scholars believe tomb scenes can be interpreted on several levels: the ‘real’ or what was once real, and the ‘ideal,’ as well as a symbolic meaning that goes beyond their depiction.<sup>49</sup> For example, agriculture, horticulture, viticulture, apiculture, and/or other daily life scenes might depict reality while also metaphorically evoking ideas of rebirth, resurrection, and sustenance after death.<sup>50</sup> This can be deduced from the placement of some scenes in the wider dialogue or narrative, occurring in the surrounding scenes and texts on the same wall or pillar.<sup>51</sup>

### **Formal Garden Scenes in Private Early to Mid-Late Eighteenth Dynasty Tombs**

Formal garden scenes are characterized by central water feature(s) with plants, waterfowl, and fish, and bordered by trees, plants, and architectural features.<sup>52</sup> Based on these characteristics, 16 formal garden scenes are found in private Eighteenth Dynasty Theban tombs prior to the Amarna Period. These scenes will form the focus of this thesis’s study: TT E2, TT 39, TT 63, TT 80, TT 81, TT 85, TT 87, TT 90, TT 93 (#1-3), TT 96, TT 100, TT 109, TT 161, and TT 334. A review of the previous scholarship will demonstrate that a chronological and comprehensive study of these scenes has yet to be conducted and that a typology can address the gaps in information their layouts, water features, architecture, flora and fauna, and functions prior to the Amarna Period.

---

<sup>46</sup> *Merriam-Webster’s Collegiate Dictionary*, s.v. “ideal,” accessed December 17, 2019, <https://www.merriam-webster.com/dictionary/ideals>.

<sup>47</sup> Typically, one uses the term ‘naturalistic’ instead of ‘realistic’ in art history because to employ ‘realistic’ refers to Realism, an artistic movement that developed in response to Romanticism during the Nineteenth and Twentieth Centuries in Europe. This study, however, will use the latter because of its common use still in archaeology.

<sup>48</sup> *Merriam-Webster’s Collegiate Dictionary*, s.v. “realistic,” accessed December 17, 2019, <https://www.merriam-webster.com/dictionary/realistic>.

<sup>49</sup> Dodson and Ikram, *The Tomb in Ancient Egypt*, pp. 77, 80.

<sup>50</sup> Dodson and Ikram, *The Tomb in Ancient Egypt*, pp. 77, 80.

<sup>51</sup> Dodson and Ikram, *The Tomb in Ancient Egypt*, p. 83.

<sup>52</sup> “All exemplars of a single [formal garden] category do not necessarily have [to have all the same] attributes...in common...[it is more about]...[the] principle of [a] family resemblance.” See Bernard St-Denis, “Just what is a garden?,” *Studies in the History of Gardens and Landscape Design* 27.1 (2007): p. 63.

## Previous Scholarship

Schröter-Gothein's (1928; trans. into English 1966) two-volume publication remains until today one of the most respected, early accounts of garden art from the ancient world to the modern era.<sup>53</sup> She describes and reviews the evidence for ancient Egyptian gardens in general from the Old to the New Kingdoms based on the pictorial and textual evidence that was available in the 1920s. Her study, however, does not include the textual evidence of the garden names in Egyptian. Schröter-Gothein describes various formal garden scenes from private Theban tombs dating from the early to late Eighteenth Dynasty and briefly mentions the elements that constitute them: architectural features and plants.<sup>54</sup> Due to the early date of the publication, evidence of formal gardens was somewhat meager and a comprehensive study was not possible.

Hugonot's work on gardens (1989) importantly surveys Egyptian vocabulary for types of gardens dated from Old Kingdom to Graeco-Roman Period sources.<sup>55</sup> He provides considerable archaeological, textual, and pictorial evidence for his examination of gardens in temple, palatial, domestic, and funerary contexts from the Early Dynastic to the Ptolemaic Era.<sup>56</sup> He describes formal garden scenes from private Theban tombs ranging in date from the Eighteenth to Nineteenth Dynasties, but does not use ancient Egyptian names to categorize them.<sup>57</sup> Although his study is informative, it remains incomplete because the tomb scenes were neither examined chronologically nor were the flora and fauna, layouts, and architectural features fully identified.

Wilkinson's (1998) monograph is analogous to Hugonot's, offering an updated overview of Egyptian gardens from the Early Dynastic onwards based various forms of evidence.<sup>58</sup>

---

<sup>53</sup> Marie-Luise Schröter-Gothein, *A History of Garden Art*, (Cambridge: Cambridge University Press, 1928/1966), p. i.

<sup>54</sup> Schröter-Gothein, *A History of Garden Art*, pp. 8-10.

<sup>55</sup> Hugonot, *Le jardin dans l'Égypte ancienne*, pp. 3-19.

<sup>56</sup> Hugonot, *Le jardin dans l'Égypte ancienne*, pp. 21-82; 86-125; 129-162; 169-294.

<sup>57</sup> Hugonot, *Le jardin dans l'Égypte ancienne*, pp. 157-168.

<sup>58</sup> Wilkinson, *The garden in ancient Egypt*, pp. 1-5.



Wilkinson defines a formal garden as one “that is displaying symmetry, geometry, and pattern in their design.”<sup>59</sup> She examines the types of trees and flowers that grew in pharaonic Egypt using archaeological, pictorial, and textual evidence. She certainly acknowledges that the Egyptians had terms and locations for their types of gardens and formal gardens,<sup>60</sup> but does not use this as a nexus for her classification of them. She identifies the genus and Egyptian names of the plants and trees in the formal garden scenes, but she does not do this for the waterfowl, fish, or insects.<sup>61</sup> Wilkinson does not look at the formal garden scenes chronologically and broadly defines them as funerary because of their location in tombs.<sup>62</sup>

Daines (2008) argues that from the Old Kingdom to the Middle Kingdom, gardens were primarily focused around the gods and that in general “important questions about the evolution of the [Egyptian] gardens ha[ve] yet to be asked.”<sup>63</sup> She argues that it was not until the New Kingdom that the idea of the garden as a tradition and as vehicle to display elite power came to pass,<sup>64</sup> focusing primarily around the Amarna formal gardens. One of the aims of the present thesis is to demonstrate that that ‘tradition’ began far earlier than the reign of Amenhotep IV/Akhenaten.

Karelin and Kulikova (2010) resolve that the flora and architecture of ancient Egyptian gardens were imbued with symbolism, metaphor and allegory.<sup>65</sup> Karelin and Kulikova acknowledge that many words for gardens existed in Egyptian but they do not use this as a crux to group them.<sup>66</sup> They acknowledge that the Egyptians constructed both simple and complex formal

---

<sup>59</sup> Wilkinson, *The garden in ancient Egypt*, p. 7.

<sup>60</sup> Wilkinson, *The garden in ancient Egypt*, p. 8; Alix Wilkinson, “Gardens in ancient Egypt: their location and symbolism,” *The Journal of Garden History* 10.4 (1990): pp. 199-208; Alix Wilkinson, “Symbolism and Design in Ancient Egyptian Gardens,” *Garden History* 22.1 (1994): pp. 1-17.

<sup>61</sup> Wilkinson, *The garden in ancient Egypt*, pp. 39-62; Wilkinson, “Gardens in ancient Egypt,” pp. 199-208.

<sup>62</sup> Wilkinson, *The garden in ancient Egypt*, pp. 97-113.

<sup>63</sup> Daines, “Egyptian Gardens,” p. 16.

<sup>64</sup> Daines, “Egyptian Gardens,” p. 16.

<sup>65</sup> Dimitry Karelin and Irina Kulikova, “Сады в Древнем Египте (Gardens in ancient Egypt),” in *Сад: Символы Метафоры Аллегорий* ed. by E. D. Fedotova, (Moscow: Russian Academy of Arts, 2010), p. 31.

<sup>66</sup> Karelin and Kulikova, “Сады в Древнем Египте,” pp. 17-18.

gardens.<sup>67</sup> They handpick archaeological, pictorial, and textual examples of palace, house, temple, and tomb gardens from the Old to New Kingdom, exploring their architecture, flora, and use.<sup>68</sup>

El-Saddik (2011) examines eight formal garden scenes.<sup>69</sup> These formal garden scenes are studied synchronically and range in date from the Eighteenth to Twentieth Dynasty.<sup>70</sup> El-Saddik describes their architectural features, plants, and animals but their unique layouts, architectural features, and flora and fauna are not fully observed. The inscriptions of some of the formal garden scenes are included; however, neither the names of the gardens in Egyptian are considered nor are the relevant surrounding scenes.

Tietze (2011) resolves that formal garden scenes in private tombs are idealized representations and, as such, does not attempt to categorize them, not even by their Egyptian names.<sup>71</sup> He examines the same formal garden scenes that Hugonot (1989) did synchronically and speculates that there is no need for a typology because, in his view, Egypt was considered a garden in its entirety.<sup>72</sup> Tietze describes the 15 formal garden scenes in the same fashion as El-Saddik. He examines their layouts and architecture but does not identify all of their flora and fauna.

Wolff and Felber (2016) collaborated on the most recent publication, focusing on the role of gardens in ancient Egyptian society.<sup>73</sup> The selected examples generally come from late Eighteenth Dynasty Thebes and the Amarna Period and are referred to as ‘temple gardens,’

---

<sup>67</sup> Karelin and Kulikova, “Сады в Древнем Египте,” p. 30.

<sup>68</sup> Karelin and Kulikova, “Сады в Древнем Египте,” pp. 25, 28-30.

<sup>69</sup> Wafaa El-Saddik, „Gärtendarstellungen in Gräbern,“ in *Ägyptische Gärten*, ed. by Christian Tietze, (Weimar: Akademie-Verlag, 2011), pp. 90-99.

<sup>70</sup> El-Saddik, „Gärtendarstellungen in Gräbern,“ pp. 90-100.

<sup>71</sup> Christian Tietze, „Gärten in der Stadt,“ in *Ägyptische Gärten*, ed. by Christian Tietze, (Weimar: Akademie-Verlag, 2011), pp. 205-212.

<sup>72</sup> “First of all, there is no need to define the term garden and its background. What do we understand – or better understood of the ancient Egyptians in regard to gardens? Is not the entire Nile Basin a single garden? And can the economy of the country be separated from the aesthetic, religious, and cultic aspects of a garden? Is not the Fayyum Oasis still today called the garden of the capital Cairo?” See Tietze, „Gärten in der Stadt,“ p. 204.

<sup>73</sup> Esther Wolff and François Felber, *Le jardin des pharaons*, (Lausanne: Musée et jardins botaniques cantonaux vaudois, 2016).

‘pleasure gardens,’ ‘offering gardens,’ and ‘afterlife gardens.’ They do not consider the Egyptian names for simple and/or formal gardens as essential aspects for their classifications possibly because it was written as a museum catalogue of a special exhibition for the general public.

## **Methodology**

Overall, Schröter-Gothein (1928/1966), Hugonot (1989), Wilkinson (1998), Daines (2008), Karelin and Kulikova (2010), Tietze, *et al.* (2011), and Wolff and Felber (2016) produced enriching studies. The formal garden scenes in private Theban tombs still require an additional investigation in order to advance our understanding of the layouts, water features, architecture, flora and fauna, and sociocultural significance of the actual formal gardens in Eighteenth Dynasty Thebes prior to the Amarna Period. It is the author’s hope that this study will ultimately assist those in identifying both simple or formal gardens from either textual, pictorial, or archaeological forms of an earlier or later date or ones that might be discovered in the future, as well as to further demonstrate how reexaminations of older material in concert with more recent evidence can garner nuanced results. This section outlines the methodology used to study the 16 formal garden scenes.

In order to conduct a comprehensive case study of these formal garden scenes, a typology is essential. Typologies are used in archaeology and art history to organize artifacts, material culture, and even architecture into groups.<sup>74</sup> When an artwork is studied, whether it is in two- or three-dimensions, all of its aspects must be considered. The formal garden scenes are often labeled as a specific type of formal garden in Egyptian and are located within a particular decorative schema of the tomb. So, one must take into consideration their Egyptian name, their physical location and orientation within the tomb, and their relationship to one another. In doing so, this reveals for us the formal garden scene’s ‘setting,’ which is defined here as how they function

---

<sup>74</sup> Merriam-Webster’s Collegiate Dictionary, s.v. “typology,” accessed December 17, 2019, <https://www.merriam-webster.com/dictionary/typology>.

within the decorative schema. A survey of the formal gardens' layouts, architectural features, and flora and fauna will likewise be included to collect any important information. The catalogue of the 16 formal garden scenes are organized into entries with the following information:

1. Theban tomb number
2. Tomb-owner(s)
3. Type of formal garden scene
4. Date and location in the Theban Necropolis
5. Physical location and orientation within the tomb
6. Facsimile of the wall narrative and the 'setting' of the formal garden scene within it
7. Facsimile of the formal garden scene itself
8. Formal analysis or 'visual description' of the formal garden scene and the identification of its layout, water and architectural features, and flora and fauna
9. Main literature
10. Materials and techniques
11. Relevant tomb-owner and family titles

The relevant information for the entries of the formal garden scenes was collected from (a) first-hand observation of the scene and the surrounding scenes on the wall; (b) relevant inscriptions beside or in proximity to the scene; (c) relevant titles of the tomb-owner; (d) plates and photographs of the scene and its surrounding scenes archived in Das Digital Schott-Archiv (DSA), The Oriental Institute's Records of The Epigraphic Survey Online (OIESO), or taken by past or current scholars who visited/worked in the tombs; (e) the scene's description published in Porter and Moss (1970) and Kampp (1991); (f) studies on private Eighteenth Dynasty Theban tomb wall orientations in Manniche (1988); (g) individual tomb publications; and (h) other scholars who studied ancient

Egyptian formal gardens. As a result, certain types of formal garden scenes can be identified:

1. The š-formal garden scene (11 examples)

Scholars have classified this scene as “garden”<sup>75</sup>; “garden with trees and pool”<sup>76</sup>; “pleasure garden”<sup>77</sup>; “private home gardens”<sup>78</sup>; “gardens of private tombs”<sup>79</sup>; and “a city garden.”<sup>80</sup> The creation of a standardized term for this formal garden scene is justifiable. In fact, the ancient Egyptians had a standardized term for it: š (𓂏; 𓂏; 𓂏) and its plural šw (𓂏𓂏𓂏). There are 11 š-formal garden scenes that occur in the Theban Necropolis during this period in: TT 81, TT 109, TT 85, TT 100, TT 80, TT 93 #1, TT 93 #2, TT 93 #3, TT 63, TT E2, and TT 334.

2. The Domain of Amun formal garden scenes (five examples)

These formal garden scenes are defined by their mutual relationship to the Domain of Amun in the capital city of Thebes. The Domain of Amun or *pr Imn* (𓂏𓂏𓂏) refers to all the lands, mundane and sacred, controlled by the Amun cult on the East and West Banks of Thebes.<sup>81</sup> Unlike the š-formal garden scenes, these formal garden scenes have individual names and to categorize them as simply a ‘temple formal garden scene’ would not adequately express their distinctiveness. As a result, the scenes are referred to by their distinct names: the *hnty*-š-formal garden (𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏), the *k3mw*-formal garden (𓂏𓂏𓂏𓂏), the *sš*-formal garden (𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏), the *t-nt-ht*-formal garden (𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏) and the *hrrt*-š-formal garden (𓂏𓂏𓂏𓂏; 𓂏𓂏𓂏𓂏). Five Domain of Amun formal garden

<sup>75</sup> Schröter-Gothein, *A History of Garden Art*, pp. 8-10

<sup>76</sup> Porter and Moss, *Topographical Bibliography I*, p. 466.

<sup>77</sup> Ellen Churchill Semple, “Ancient Mediterranean Pleasure Gardens,” *GR* 19.3 (1929): 428; Dodson and Ikram, *The Tomb in Ancient Egypt*, p. 92.

<sup>78</sup> Hugonot, *Le jardin dans l’Égypte ancienne*, p. 129.

<sup>79</sup> Wilkinson, *The garden in ancient Egypt*, p. 97.

<sup>80</sup> Tietze, „Gärten in der Stadt,” p. 204.

<sup>81</sup> Barry Kemp, “New Kingdom Egypt: a mature state,” in *Ancient Egypt*, (London; New York: Routledge, 2006), p. 266, fig. 97; Brian Muhs, *The Ancient Egyptian Economy: 3000 – 30 BCE*, (Cambridge: CUP, 2016), pp. 124-125; and Bernadette Menu, *Histoire économique et sociale*, (Paris: CNRS Éditions, 2018), pp. 250-251.

scenes occur during this period in: TT 39, TT 87, TT 90, TT 96, and TT 161.

### **How Were the Flora and Fauna Identified in the Formal Garden Scenes?**

Identifying the flora and fauna in pictorial representations can be difficult because the ancient Egyptians showed them in profile, frontal and/or in aerial perspective, as well as in ways that can look hieroglyphic, standardized, or realistic.<sup>82</sup> In addition, the paint of the flora and fauna has not always survived, making it sometimes difficult to identify a species. The Egyptians were committed to “striking a balance between the ideal and the actual when carving representations of plants, animals, and objects,”<sup>83</sup> so they would forever be of use to the tomb-owner after death.<sup>84</sup>

The flora and fauna in the formal garden scenes were identified in this thesis by examining:

- i. The rendering of their pictorial representation in the formal garden scene proper
- ii. Their written mention in the formal garden scene’s texts
- iii. The rendering of their pictorial representation or written mention in the scenes and texts beside the formal garden scene. The most common surrounding scenes are of rows of offering-bearers or of family members shown and/or mentioned as carrying baskets/bundles/bouquets of the flora and/or fauna from the formal gardens

Information about the flora and fauna’s representation in tomb art, names, archaeological remains, use, and significance to the Egyptians were gleaned from secondary source material, such as, for flora: Schweinfurth (1882); Moldenke (1886), Täckholm, *et al.* (1969/1974); Keimer and Germer (1961); Germer (1985/1988/2008); Hugonot (1989); Schoske, *et al.* (1992); Boutros (1999-2005); Manniche (2006); Hepper (2009); de Vartavan, *et al.* (2010); Kappel, *et al.* (2011); Tietze, *et al.* (2011); Greco, *et al.* (2012), Wiese, *et al.* (2014), and Gamal (2018); and for fauna: Bree and

---

<sup>82</sup> Heinrich Schäfer, *Principles of Egyptian Art*, (Oxford: Griffith Institute, 2002), pp. 247-250, 260, 262; Wilkinson, *The garden in ancient Egypt*, p. 16.

<sup>83</sup> Kent Weeks, *Egyptology and Social Sciences*, (Cairo: AUC Press, 1979), p. 69.

<sup>84</sup> Wilkinson, *The garden in ancient Egypt*, p. 16; Dodson and Ikram, *The Tomb in Ancient Egypt*, p. 77.

Fawcett (1859), Boulenger and Loat (1907), Meinertzhagen (1930), Gamer-Wallert (1970), Brewer and Freidman (1990), Bailleul-LeSuer, *et al.* (2012), and Kritsky (2015).

## **Thesis Organization**

There are 16 formal garden scenes examined in the following chapters. Chapter Two begins with formal analyses or ‘visual descriptions’ of the 3-formal garden scenes while Chapter Three starts with ones of the Domain of Amun formal garden scenes. These descriptions include abbreviated information from the entries found in the full typology of the formal garden scenes located in Appendix I. This is followed by an examination of each formal garden’s layouts, water and architectural features, and wider sociocultural significance in early to mid-late Eighteenth Dynasty Theban society, using extant textual, pictorial, and archaeological evidence. Chapter Four is a synthesized discussion of the patterns of the flora and fauna from Chapters Two and Three. Chapter Five summarizes the conclusions of this study and is followed by the Appendices I, II, and III, and the Bibliography. The scientific names of the flora and fauna are only provided at first mention while their full taxonomic descriptions, uses, and symbolism to the Egyptians are available in Appendix II: Herbarium and Faunarium. Appendix III offers the List of Figures.

## **Translation Note**

Many of the texts have been reevaluated by the author in this thesis in order to validate and substantiate the usage of the formal garden terms therein. The translations were rendered through reexamining the hieroglyphic, transliterated, and/or previous modern language texts (English, French, or German) by other archaeologists, philologists, art historians, and/or Egyptologists. If the translation is by the author, only the hieroglyphic text will have a footnote beside it, giving credit to those who published it. If the transliteration or English translation have footnotes, this indicates that these are not the author’s transliterations and/or translations but another’s.

## Chapter Two

### The Š-Formal Garden

There are 11 š-formal garden scenes found in the Theban Necropolis from the Eighteenth Dynasty prior to the Amarna Period: TT 81, TT 109, TT 85, TT 100, TT 80, TT 93, TT 63, TT E2, and TT 334. This chapter is comprised of ‘visual descriptions’ of the 11 š-formal garden scenes followed by a discussion, examining the layouts, architecture, water features, and flora and fauna, and wider significance of š-formal gardens in Thebes at this time. This is complemented by extant archaeological, textual, and/or pictorial evidence. The flora and fauna identified in all the formal gardens scenes as well as from the extant evidence in the current and following chapter are discussed alone in Chapter Four in order to be more succinct and useful for the reader.

#### TT 81 (Ineni)<sup>85</sup>

*Date:* Amenhotep I to Thutmose III

*Location:* Sheikh Abd el-Qurna Cemetery

West – left rear wall of pillar 4 in the portico

*Wall Narrative:* Inspecting setting

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Text:*

Two avenues of *doum*-palm (*Hyphaene thebaica* L. Mart.) begin this wall narrative. Ineni and his wife sit in a pavilion while a gardener carries water jugs. The text above this scene reads:



hns š.f n imntt skbb hr nhw[t].f m33 mnw[.f ipw ʿ3w]nfrw iri.n.f tp t3  
hr ḥswt ntr pn šps [I]mn [nb nswt t3wy]

Inspecting his [š-formal garden] in the west,<sup>86</sup> refreshing himself under

Isis-frieze		
List of trees (L-R)		Tree avenues
Ineni and wife inspect formal garden in pavilion (L-R)	Tree avenues	
Tree avenues		
Tree avenues		
Tree avenues		
Trees	Pool	Trees
House, enclosure wall, granary and trees		
Dado		


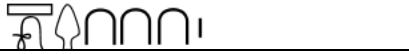





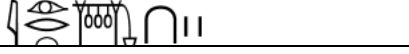
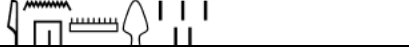

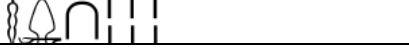
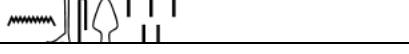
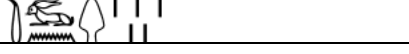
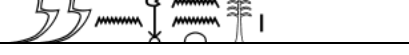
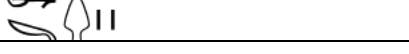
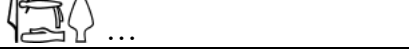

<sup>85</sup> The full entries of the š-formal garden scenes are located in Appendix I: Part I with images, titles, and bibliographies.

<sup>86</sup> It is better to translate this as “in the west” than “of the west” because “of the west” implies a different formal garden all together. However, this is not the case, as it is Ineni’s earthly formal garden perpetuated into the hereafter.



his sycamore fig trees, seeing [those great] and beautiful trees that he planted on earth under the praises of that noble god [A]mun, [Lord of Thrones of the Two Lands].<sup>87</sup>

The plant varieties of Ineni's formal garden are then listed:

	<i>nh(š)t(i)</i> 73	73 sycamore figs ( <i>Ficus sycomorus</i> L.)
	<i>šwšb</i> 31	31 persea trees ( <i>Mimusops laurifolia</i> (Forssk.) Friis)
	<i>bnr(i)t</i> 170	170 date palms ( <i>Phoenix dactylifera</i> L.)
	<i>mšmš</i> 120	120 doum-palms
	<i>nh(š)t(i) nt d(š)b</i> 5	Five common figs ( <i>Ficus carica</i> L.)
	<i>ht n šni(-tš)</i> <sup>88</sup> 3	Three <i>mnwh</i> -plants
	<i>b(š)k</i> 2	Two morgina trees ( <i>Moringa peregrina</i> (Forssk.) Fiori) <sup>89</sup>
	<i>išrrt</i> 12	12 grapevines ( <i>Vitis vinifera</i> L.)
	<i>inh(r)m(š)</i> 5	Five pomegranate trees ( <i>Punica granatum</i> L.)
	<i>ksb[t]</i> 8	Eight <i>ksbt</i> -trees
	<i>ndm</i> [16]	16 carob trees ( <i>Ceratonia siliqua</i> L.)
	<i>nb[s]</i> 5	Five Christ's thorn trees ( <i>Ziziphus spina Christi</i> L. Desf.)
	<i>ī</i> <sup>90</sup> <i>wn</i> 5	Five <i>twn</i> -plants
	<i>mšmš n hšnnt</i> [1]	One argun-palm ( <i>Medemia argun</i> Württemb. ex Mart.)
	<i>ht-ds</i> 2	Two Egyptian riverhemp trees ( <i>Sesbania sesban</i> L. Merrill?) <sup>91</sup>
	<i>i[šd]...</i>	...Desert date trees ( <i>Balanites aegyptiaca</i> L. Delile) <sup>92</sup>
	<i>ih...</i>	... <i>ih</i> -plant <sup>93</sup>

<sup>87</sup> Eberhard Dziobek, *Das Grab des Ineni: Theben Nr. 81*, (Mainz am Rhein: PvZ, 1992), p. 61, Texte 13a; also see Sethe, *Urkunden* IV, p. 73.

<sup>88</sup> *šni-tš* is the name of the fruit and/or seed that the *mnwh*-plant produces. It is likely a medicinal plant and the name of its fruit means "hair of the earth," according to Germer, *Handbuch*, pp. 78, 113.

<sup>89</sup> Germer, *Handbuch*, p. 56.

<sup>90</sup> Germer, *Handbuch*, p. 158.

<sup>91</sup> Aufrère concludes that it remains impossible to identify with certainty the *ht-ds*. She does suggest Egyptian riverhemp tree as a possibility. See Sydney Aufrère, « Remarques au sujet des végétaux interdits dans le temple d'Isis à Philæ, » *BIFAO* 86 (1986): p. 24.

<sup>92</sup> For the reconstruction of the lacuna as *išd*, see Henrich Brugsch, *Recueil de monuments égyptiens* I, (Leipzig: Librarie J. C. Hinrichs, 1862), pl. 36, p. 50; and the discussions in Natalie Baum, *Arbres et arbustes*, (Leuven: Peeters, 1988), p. 183; and in Germer, *Handbuch*, p. 37.

<sup>93</sup> No conclusive evidence exists currently to identify this species according to Germer, *Handbuch*, pp. 33-34.

	<i>i[mz 3]</i>	Three <i>atil</i> -trees <sup>94</sup> ( <i>Mærua crassifolia</i> Forssk. <sup>?95</sup> )
	<i>t[rt 9]</i>	Nine Egyptian willow trees ( <i>Salix mucronata</i> Thunb.) <sup>96</sup>
	<i>isr [10]</i>	Ten tamarisk trees ( <i>Tamarix</i> spp.) <sup>97</sup>

An avenue of date palms, an outer avenue of sycamore figs, *Tamarix* spp.,<sup>98</sup> two Egyptian riverhemp trees, and two Egyptian willow trees border the pool. The middle avenue might have depicted the other flora mentioned in Ineni's list.<sup>99</sup> The pool has traces of *Lotus* spp. and a gardener collects water from it. Ineni's house, double-granary, and a large sycamore fig (?) are beside the formal garden, which are enclosed by a wall with wavy merlons and two gates.

### TT 109 (Min)

*Date:* Thutmose III

*Location:* Sheikh Abd el-Qurna Cemetery

South – left rear wall of transverse hall

*Wall Narrative*<sup>100</sup>: Inspecting setting

Doorway		Min offers to Thutmose III (L→R)		Temple offerings	Min censsing temple offerings (L→R)	2 registers of workmen who build a <i>nimit-bark</i>		3 registers of servants w/ formal garden's produce (L→R)		Min inspects formal garden's produce (L→R)
	3 registers of seated relatives (L→R)					(L→R)				
						3 registers of musicians (L→R)	Tree avenue	Sobekmose (L→R) offers formal garden's produce to Min and Mother (L→R)		
							Tree avenue			
		Tree avs.		Tree avs.	Min teaches Prince Amenhotep archery (L→R)					
		Tree avs.	Pool	Tree avs.		Min with Prince Amenhotep on lap (L→R)				
	Dado? (damaged)									

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Texts:*

This wall narrative begins with three registers of relatives seated behind Min who censures and offers

<sup>94</sup> Baum, *Arbres et arbustes*, pp. 183-195.

<sup>95</sup> A review of the medical uses of *imz* contradicts its identification with *Mærua crassifolia* Forssk., suggested by Baum. See Germer, *Handbuch*, pp. 26-27.

<sup>96</sup> See its identification by Charles E. Moldenke, *Ueber die in den altägyptischen Texten erwähnten Bäume und deren Verwertung*, (Leipzig: DBH, 1886): pp. 126-127; and this is further proven by Ludwig Keimer, « L'arbre *trt* est-il réellement le saule égyptien (*Salix safsaf* Forssk.) ? », » *BIFAO* 31 (1931): pp. 177-234; and also by Baum, *Arbres et arbustes*, pp. 196-199.

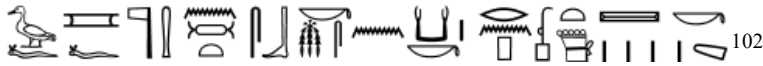
<sup>97</sup> The ancient Egyptians did not differentiate between tamarisk varieties, according to Baum, *Arbres et arbustes*, p. 200; and Germer, *Handbuch*, pp. 34-35.

<sup>98</sup> Compare to the tamarisk depicted in TT 49 in the El-Khokha Cemetery, dated to the end of the Eighteenth Dynasty. See Lise Manniche, *An Ancient Egyptian Herbal*, (London: BM Press; Cairo: AUC Press, 1989/2006), p. 157.

<sup>99</sup> There is extreme paint deterioration on all of the trees depicted in this scene.

<sup>100</sup> This wall narrative is based on Schott Photographs 5764-5769, 5577-5588, and 8585; also see Porter and Moss, *Topographical Bibliography* I, p. 226, see esp. walls (3-5).

to Thutmose III. The narrative continues with three registers of temple musicians and offerings censured by Min. The formal garden scene follows with a pool full of blue lotus, (*Nymphaea caerulea* L. Savigny), white lotus (*Nymphaea lotus* L.), pintail duck (*Anas acuta* L.), *Tilapia* spp., likely *T. zillii* Gervais 1848, and catfish (*Synodontis* spp.). Two avenues of sycamore figs and persea surround the pool while an outer avenue of date palms and *doum*-palms enclose the formal garden. Two registers of workmen building a *nšmt*-bark<sup>101</sup> are shown above the formal garden scene. To the right of this scene is Min's son, Sobekmose, reciting a prayer to his parents:



*s3.f mr(w).f ḥm ntr n Nit Sbkms n k3.k rnp(w)t šw.k*

His son, his beloved, priest of Neith, Sobekmose, to your *k3* the fresh flowers, fruits and vegetables<sup>103</sup> from your *š*-formal gardens.

Sobekmose offers the formal garden's produce to Min and his mother, seated and inspecting their formal garden and the building on a *nšmt*-bark for the pool. The text in front of the couple reads:



*ḥtp m š imnty m33 rnp(w)t nb(w)t*

Enjoying (his) *š*-formal garden in the west (and) inspecting all the fresh flowers, fruits and vegetables.

The narrative continues with three registers of the formal garden's produce,<sup>105</sup> inspected and counted by Min seated in the upper righthand corner. The narrative ends with Min who sits and

<sup>101</sup> The bark is labeled *nšmt*. See Virey, « Tombeau de Khem, » p. 366, fig. 2.

<sup>102</sup> Virey, « Tombeau de Khem, » p. 367.

<sup>103</sup> The term *rnpwt* has been translated as "fruit and vegetables" in Faulkner and Saba, *Egyptian Grammar*, p. 480; and "green plants/fresh flowers" due to its closeness to the verb *rnpī* "to be young," see El-Maenshawy, "Aspects of the office of temple gardener in ancient Egypt," p. 53. Thus, I have decided to translate the term throughout this thesis as the phrase "fresh flowers, fruits, and vegetables" in order to synthesize these interpretations. It is reasonable given the *rnpwt* labeled in the paintings includes flowers, fruits, vegetables, and even sometimes fauna.

<sup>104</sup> Virey, « Tombeau de Khem, » p. 366.

<sup>105</sup> This formal garden's produce cannot be identified because the scenes are badly damaged.

teaches archery to the young Prince Amenhotep II in the courtyard of a royal palace (*pr-ḥ3*).<sup>106</sup>

**TT 85 (Amenemhab called Mahu)**

*Date:* Thutmose III to Amenhotep II

*Location:* Sheikh Abd el-Qurna Cemetery

East – right side wall of chapel

*Wall Narrative*<sup>107</sup>: Inspecting setting

<i>hkr</i> -frieze						
Min and wife receive the formal garden's produce (L→R)	Servants w/ formal garden's produce (L←R)	Tree avenue			Min and wife inspect the formal garden (L←R)	
		Tree avenue				
		Tree avenue				
	Servants w/ formal garden's produce (L←R)	Tree avenue	Pool		Tree avenue	
		Tree avenue			Tree avenue	
		Tree avenue				
		Tree avenue				
		Tree avenue				
Servants w/ formal garden's produce (L←R)						
Dado						

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Texts:*

This wall narrative begins with Amenemhab and his wife, who are seated (far right proper) and inspect their š-formal garden. The formal garden scene has a pool with white lotus. The inner avenues consist of persea and pomegranate, the middle ones consist of date and *doum*-palms, and the outer ones are likely sycamore and common figs.

Three registers of servants carry the formal garden's produce, such as blue and white lotus blossoms, papyrus umbels, low cornflower (*Centaurea depressa* Bieb.), dates, *doum*-fruit, muskmelon, persea fruit, pomegranates, and Christ's thorn fruit (jujube) follow. The narrative ends with Amenemhab and his wife, seated and receiving the formal garden's produce.

<sup>106</sup> Peter der Manuelian, "Archery," in *Studies in the Reign of Amenophis II* (Hildesheim: Hildesheimer Ägyptologische Beiträge Verlag, 1987), p. 202, fig. 42.

<sup>107</sup> This wall narrative is based on Epigraphic Survey Negatives 2927, 2929, and 2932; Schott Photographs 3993-3394; 4131-4132; 7008-7014; and 8940-8943; and the wall's description in Porter and Moss, *Topographical Bibliography* I, p. 175.

## TT 100 (Rekhmira)

*Date:* Thutmose III to Amenhotep II

*Location:* Sheikh Abd el-Qurna Cemetery

East – right side wall of passage

*Wall Narrative:* Festival setting

hkr-piece

Rekhmira and wife seated (L→R)	Son (unknown) offers to Rekhmira and wife (L→R)							
Rekhmira and wife seated (L→R)	Son Senwaset offers to Rekhmira and wife (L→R)	Phases of the Opening of the Mouth ritual on the statue (L→R)						
Rekhmira and wife seated (L→R)	Son Menkheperu offers to Rekhmira and wife (L→R)							
Rekhmira and wife seated (L→R)	Son Amenhotep offers the formal garden's produce to Rekhmira and wife (L→R)	Offering-bearers w/formal garden's produce (L→R)	Tree avenues			Rekhmira feasting inside his home (L→R)	Festival feast brought for Rekhmira and guests (L→R)	
			Tree avenues				Feast given to Rekhmira (L→R)	Festival food preparation on Rekhmira's estate (L→R)
		Domestic Shrine	Pool with festival rites	Tree avenue	Tree avenue			
							Tree avenues	
		Tree avenues						
		Festival guests receiving feast (near formal garden/home?) (L→R)						
Dado								

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Text:*

This wall narrative begins with two registers of food preparation on Rekhmira's estate (bottom righthand corner). The narrative continues with the feast brought to Rekhmira and the guests seated in the audience hall of his home (See the house column in the wall narrative). The feast celebrates the Beautiful Festival of the Valley,<sup>108</sup> as the composition and text suggest:



ḥmsit m ḥ3 ḥ3 wr ḥft iit m ḥwt-nṯr Imn [m ṯpt-swt]  
 ḥr irit ḥswt ḥm n nṯr pn ḥr imy ḥrwt n ity...

<sup>108</sup> The Beautiful Festival of the Valley is proposed by Wilkinson, *The garden in ancient Egypt*, p. 97; while Rekhmira's funeral feast is proposed by Gefšler-Löhr, „Die Totenfeier im Gärten,“ p. 166. The dilemma is both celebrations honor the dead and have similar rituals. As a caveat, the funeral feast is typically depicted on the west (left) side of a wall while this scene is on the east (right) side. Thus, the Beautiful Festival of the Valley seems more likely.

Sitting by the thousands [in] the great hall (audience hall) upon returning from the Temple of Amun [at Karnak] [and] upon making blessings to the majesty of this god who is in the affairs of the [sovereign]...<sup>109</sup>

Beside the guests is the formal garden scene that has a pool full of blue and white lotus, curled pondweed (*Potamogeton crispus* L.), *Tilapia* spp., likely *T. zillii*, and elephantfish (*Petrocephalus/Marcusenius* spp.). A *nšmt*-barque carries a statue that is censed and pulled across the pooled garden by six men towards a man with a papyrus bouquet standing in front of the garden shrine (far left). Three avenues flank the pooled garden. The inner avenue likely depicted low-growing vegetation.<sup>110</sup> Three gardeners attend to the middle avenue of *doum*-palm, date palm, *argun*-palm, and mandrake.<sup>111</sup> The outer avenue consists of sycamore figs, common figs, unidentifiable trees,<sup>112</sup> and possibly mandrakes and grapes.<sup>113</sup>

Two registers follow that depict rites performed on the same statue from the *nšmt*-bark now shown inside the garden shrine.<sup>114</sup> On the second register, offering-bearers carry the formal garden's produce to the statue, such as blue and white lotus blossoms, Christ's thorn fruit, persea fruit and/or mandrakes, papyrus blossoms, muskmelon, honey (Egyptian honey bees or *Apis mellifera lamarckii* Cockerell), and dates. The offering-bearers say:



<sup>109</sup> See the reconstruction of the text in Sethe, *Urkunden* IV, no. 1158; and its translation in Philippe Virey, « Le jardin de Rekhmara. La réception des invités. Les apprêts du festin, » in *Mémoires publiés*, (Paris: Mipba, 1891), p. 157.

<sup>110</sup> When low-growing vegetation is shown stylized, it resembles Gardiner M (𓄎) but smaller in scale. This composition is comparable to the low-growing (albeit realistic) vegetation around the formal gardens in the TT E2 scene, and TT 96 scene described in Chapter Three.

<sup>111</sup> Take note of the right side and bottom right side of the middle tree avenue. There are four low-growing plants with fruit in upward clusters, not downward clusters, as with *Palmae*. The style of foliage is comparable to the mandrake and grapes in the TT E2 scene.

<sup>112</sup> The paint is too deteriorated, but they were likely identifiable in antiquity.

<sup>113</sup> See the bottom left side of the outer avenue. The last plant has remains of fruit.

<sup>114</sup> This register is framed by a column and roof suggesting the interior of a building, likely the domestic shrine.



*mn n.k styw [šz̄w] inn n.k m tp[y]...imy [š.k]...  
fzy n.[k] hnkyt nbt rnp(w)t nb(w)t ht nb bnr  
htp.k m df̄z̄w.s b̄h̄i.k m htp.s smz-ib.k m rnp(w)t.s  
ir.k mr̄rt k̄z.k im.s n-dt dt*

Presenting to you the statue offering-stands of fruits and flowers, bringing to you the choicest picks... from those, that are in [your š-formal garden]...Carrying to you every gift of every fruit and vegetable and every sweet-scented flower. Be content from its produce, be fully satisfied from its provisions, be overjoyed from its fruit and vegetables, [and] do what your *ka* loves in it forever and ever.<sup>115</sup>

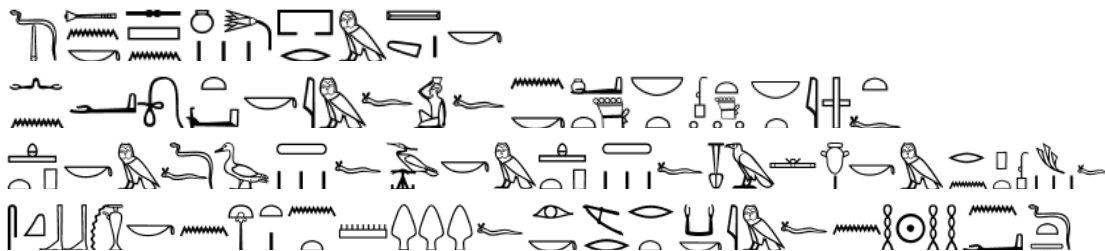
Next is Rekhmira's son Amenhotep presenting the formal garden's produce to his father and mother who are seated at a table. These include blue and white lotus blossoms, dates, pintail duck, muskmelon, and other offerings that are listed above the scene:



*nbs(w)...išd(w)...sht̄i(w)t w̄z̄d(w)t...h̄d(w)...īz̄rrt...d̄z̄b(w)...*

Christ's thorn fruit...desert date fruit...herbs...Egyptian walking onion (*Allium × proliferum* (Moench) Schrad. ex Willd.?) and/or bulb onion (*Allium cepa* L.?)...grapes...common figs...

Five priests (*hm-ntr*) cense and libate the garden produce and feast food while Amenhotep recites a prayer:



*dd mdw mn n.k sšn pr(w) m š.k  
nn ʿw̄z̄t.k im.f f̄zy.f n.k hnkyt nbt rnp(w)t nbt imyt.f  
htp.k m df̄z̄w.s b̄h̄i.k m htp.k smz-ib.k m rnp(w)t.f  
sk̄bb.k n šwt nt mnw.f ir.k mr̄rt k̄z.k im.f r nh̄h hn̄ dt*

<sup>115</sup> See Sethe, *Urkunden* IV, no. 1167; and Virey, « Le jardin de Rekhmara, » p. 156.

Words spoken: presenting to you lotus blossoms that grew forth from your [š-formal garden]. You do not harvest [them] from it...because its yield is for you [and] every gift of every fruit and vegetable that are in it. Be pleased from its produce, be fully satisfied from its provisions, be overjoyed from its fruit and vegetables, be refreshed in the shade of its [tree groves], [and] do what your *ka* loves in it forever and ever.<sup>116</sup>

Rekhmira and his wife Meryt happily receive the formal garden's produce, responding:



*šhmḥ ib ḥ'it m ršwt*  
*sm3 m nfrt sšn <n> š r fnd 'ntyw*  
*m ỉry wpt n k3 n...Rh-mi-r' m3'-(t)-hrw...Mryt m3'(t)-hrw*

What pleasure and happiness from joy! Enjoying the beauty of the lotus blossoms from the [š-formal garden] and smelling [their] perfume, fitting to the delight of the *ka*...of Rekhmira justified...[and] Meryt justified.<sup>117</sup>

The narrative ends with a large section dedicated to the Opening of the Mouth Ritual performed on the statue and three more vignettes where additional sons offer to Rekhmira and Meryt seated.

## TT 80 (Djehutynefer)

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna Cemetery  
 East – right side wall of chapel

*Wall Narrative:* Funeral procession setting

<i>hkr-frieze</i>					
Sister offers to Djehutynefer and wife (L←R)	Funeral rituals (L←R)				
	Funeral rituals (L←R)		Vineyard on pergola		Funeral rituals leaving the home (L←R)
	Off-bearers with formal garden produce (L←R)	Tree Avenue	Tree avenue Pool? Tree avenue	House	Funeral ritual preparations (L→R)
Dado					

<sup>116</sup> See the reconstruction of the text in Sethe, *Urkunden* IV, nos. 1158-1165; and its translation in Virey, « Le jardin de Rekhmara, » p. 160.


<sup>117</sup> See the reconstruction of the text in Sethe, *Urkunden* IV, no. 1168; and its translation in Virey, « Le jardin de Rekhmara, » p. 160.



*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Texts:*

The garden scene is the focus of this wall narrative. The formal garden scene has a house with a pool (damaged) with three tree avenues of *argun*-palm, *doum*-palm, date palm persea (?), sycamore figs (?),<sup>118</sup> and grapevines on a pergola.

A *nšmt*-bark and the wake at the house before the funeral cortège sails to the Necropolis on the West Bank are depicted in two registers to the right of the formal garden scene. Next are offering-bearers carrying the formal garden's produce, such as papyrus blossoms, dates, grapes, *Tilapia* spp., and pintail duck to Djehutynefer, his wife, and his sister all seated. The narrative ends with Djehutynefer's daughter offering the formal garden's produce: "... .... n k3.k... to your ka..."<sup>119</sup>

### TT 93 #1 (Qenamun)

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna Cemetery

Northeast – right front wall and right rear wall of transverse hall

*Wall Narrative #1:* Theophanic setting

West wall					North wall				
hkr-frieze					hkr-frieze				
Doorway	Text A (L←R)				Relevant Text B (L←R)		Text about Ennead. (L→R)		Stela
	Tree avenue				Qenamun seated under sycamore fig tree (L→R)	Tree-goddess (L←R)			
	Tree av.	Vineyard on pergola					Tree avenue		
	Domestic shrine	Pergola	Pool	Pergola					
	Tree av.	Vineyard on pergola							
	Tree avenue								
	Off-bearers w/formal garden's produce and "garlanded oxen and gazelle" (L←R)								
					Dado				

*Formal Garden Scene:* See Appendix I Part II

*Description and Relevant Texts #1:*

<sup>118</sup> These trees, like other sections of the tomb, are unfinished and/or deteriorated. Persea and sycamore fig are suggested because they are comparable to those depicted in the TT 85 scene.

<sup>119</sup> The text is very damaged. See Abdel Ghaffar Shedid, *Stil der Grabmalereien in der Zeit Amenophis' II*, (Mainz am Rhein: PvZ, 1988), p. 159, Texte 80.19.

This wall narrative<sup>120</sup> begins with a tree-goddess who stands in front of Qenamun seated under a large sycamore fig protected by two *w3dt*-eyes. The tree-goddess says (relevant Text B):



*dd mdw in nh(3)t(i) Nwt ink Nwt k3t wr(t) m 3ht...*  
*hri skbb.k hr sm3w.i htp.k m htp...*  
*i'i.i hr.k tp-dw3yt m bw nb nfr iwt n.k H'py hr htp...*  
*h3 m ht...mn n.k t.i...hkt.i...irtt.i...nk'wt. <i>...</i>*  
*k3yw.i...htp...df3w...rnp(w)t...ht nbt nftr w'bt*  
*nh.k im.sn sbd.k imn.sn šsp.k im.sn skb-ib.k hr.s <n> dt*

Words spoken by the tree-goddess Nut: I am Nut, high and great on the horizon...Sit under me, cool yourself under my branches, please yourself with my offerings. I satisfy you at dawn with every good thing. Hapy is coming to you with offerings...thousands of things...offering to you my bread...my beer...my milk...[my] notched sycamore figs...my ripened sycamore figs...bundles of herbs...produce...fruits and vegetables...[and] all good and pure things...so that you may live off them, may be nourished from them, may receive them, [and] may be refreshed by them eternally.<sup>121</sup>

The formal garden scene follows and has a pooled garden with *Lotus* spp.; red-breasted geese (*Branta ruficollis* Pallas); *Tilapia* spp., likely *T. zillii*; catfish; and elephantfish. The pooled garden is surrounded by grapevines on a pergola. Avenues of *doum*-palm, date palm, sycamore fig, papyrus, desert date (?), and Christ's thorn<sup>122</sup> surround the pool, as well as the formal garden's shrine. Text A is associated with the formal garden scene and reads:

<sup>120</sup> A stela with an autobiographical text and three registers of offering-bearers faces the center of the north wall and are not associated with this formal garden scene.

<sup>121</sup> For the reconstruction of the hieroglyphs, see Norman de Garis-Davies, *et al.*, *The Tomb of Khen-Amun at Thebes*, (New York: MMA, 1930), p. 46, pl. XLVa.

<sup>122</sup> See the list of offerings to Geb and the newly planted sycamore figs painted above the formal garden scene.



*h̥tp di n̥iswt Gb n nh(ṣ)t(i)w m̥ṣwt n š pn mr pr n Prw-nfr [K̥n-Imn]  
h̥ṣ.tn...išdw...nbs(w)...ṣpdw...h̥tīt w̥ṣdt...rnp(w)t nb(w) <t> ...*

A ritual offering to Geb and to the newly planted sycamore fig trees of this [š-formal garden] of the Chief Steward in the Peru-nefer, Qenamun, thousands of desert date fruit...Christ's thorn fruit...fowl...plucked green plants...[and all fresh flowers, fruits and vegetables]...<sup>123</sup>

The wall narrative ends with “offering-bearers and garlanded oxen and gazelle.”<sup>124</sup>

## TT 93 #2 (Qenamun)

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna Cemetery

North – left rear side of column towards the left front wall  
of transverse hall

*Wall Narrative #2:* Fishing setting

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Texts #2:*

This wall narrative shows Qenamun and his wife fishing in a pooled garden full of curled pondweed, *Lotus* spp., *Tilapia* spp., likely *T. zillii*, carp (*Labeo* spp.), catfish, and elephantfish. The text in front of the couple reads:



*sd̥ṣ m-hr š.f nty hr imnt nt niwt*

Having fun in his [š-formal] garden that is on the west bank  
of the city.<sup>125</sup>

Below the scene are men who lead fattened cattle across fields.

<i>hkr-frieze?</i>
Qenamun and wife fishing (L←R)
Pool
Herdsman leading cattle
Dado?

<sup>123</sup> For reconstruction of the hieroglyphs and translation, see Davies, *et al.*, *The Tomb of Ken-Amun at Thebes*, p. 46, pl. XLVb.

<sup>124</sup> Davies did not make a facsimile of this scene. It is possible that formal garden's produce is depicted here, but the MMA T Series Photographs housed at the Griffith Institute have yet to be digitalized. This description comes from Porter and Moss, *Topographical Bibliography I*, p. 192.

<sup>125</sup> For the reconstruction of the hieroglyphs, see Helck, *Urkunden 17-22*, no. 1397.

### TT 93 #3 (Qenamun)

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna Cemetery

West – halfway to the left rear and left front walls of the transverse hall

*Wall Narrative #3:* Inspecting setting

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Texts #3:*

Three registers of collars and bracelets<sup>126</sup> are placed above this scene.

Qenamun is seated below and inspects a table of the formal garden's produce with persea fruit, mandrakes, and dates beside the formal garden. A gardener collects water from a pool full of *Lotus* spp.; *Tilapia* spp., likely *T. zillii*; and catfish. Around the pool are papyrus, scented mayweed (*Anthemis* or *Matricaria* spp.),<sup>127</sup> and common reed (*Phragmites australis* (Cav.) Trin. ex Steud.). Avenues of *doum*-palm, date palm, and persea (?) flank the sides of the pooled garden.

<i>hkr</i> -frieze?		
Collars and bracelets		
Collars and bracelets		
Collars and bracelets		
Qenamun seated? by table of formal garden's produce (L←R)		
Tree av.?	Water garden	Tree av.
	Pool	
Tree av.?	Water garden	Tree av.
Dado?		

### TT 63 (Sobekhotep)

*Date:* Thutmose IV

*Location:* Sheikh Abd el-Qurna Cemetery

North – right side wall of passage

*Wall Narrative:* Theophanic setting

hkr-frieze												
Sobekhotep, wife, and princess Tia seated (L→R)	Son offers to his father and mother (L→R)	Servants w/ formal garden's produce for feast (L→R)	Tree avenue		Servant w/ fish (L→R)	Double scene of Sobekhotep fishing and fowling (L→R); (L→R)				Sobekhotep oversees grain production (L→R)	Destroyed	
			Tree avenue									
		Servants w/ formal garden's produce for feast (L→R)	Tree-goddess and seated couple	Sobekhotep and wife drink from pool	Tree-goddess and seated couple						Servant w/ fish (L→R)	Grain threshing (L→R)
			Tree avenue		Servant w/ fish (L→R)						Grain harvest (L→R)	
		Servants w/ formal garden's produce for feast (L→R)	Tree avenue									Grain planting (L→R)
			Tree avenue									
Guests receive feast food (L→R)		Butchery scene? (destroyed) (L→R)	House? (destroyed)		Sobekhotep and wife seated in pavilion (L→R)	Wine production (L→R)		Marsh fishing (L→R)				
						Destroyed	Riverine fishing (L→R)					
Dado												

*Formal Garden Scene:* See Appendix I Part I

*Description and Relevant Texts:*

<sup>126</sup> Perhaps they are made out of vegetation? A copy or photograph of these three registers does not exist.

<sup>127</sup> The foliage is comparable to the scented mayweed depicted in TT E2.

This wall narrative begins with Sobekhotep and his wife inspecting grain, wine and fish production and then hunting in the marshes. The formal garden scene follows, consisting of a large house or manor<sup>128</sup> beside a pool with blue and white lotus and *Tilapia* spp., likely *T. zillii*. Sobekhotep and his wife drink from the pool bordered by five rows of persea, sycamore figs, common figs, *doum*-palm, date palm, and *argun*-palm. Two tree-goddesses emerge from sycamore figs on the right and left sides of the pool, offering their protection and nourishment to Sobekhotep and his wife seated:

Tree-goddess on viewer's right:



*ḏd mdw in Nh(3)tī nty ḥr kꜥḥ izb š.f...rn.s mkt nb.s...Sbk-ḥtp...iw inḏ ḥr.k in Rꜥ ii.n.[i] stp-s3 ḥ3 nb.i...*

Words spoken by the tree-goddess on the eastern side of his [š-formal garden]...She is called “She-who-protects-her-lord” ...Sobekhotep... “Be grateful for Ra, I have come as protection, O my lord...”<sup>129</sup>

Tree-goddess on viewer's left:



*ḏd mdw in Nh(3)tī nty ḥr kꜥḥ imnty š.f rn.s snmt nb.s... Sbk-ḥtp...iw inḏ ḥr.k in Rꜥ...tw m [iht nbt nfrt wꜥbt imy.i]...*

Words spoken by the tree-goddess on the western side of his [š-formal garden]. She is called “She-who-nourishes-her-lord”...Sobekhotep...“Be grateful for Ra...you will be nourished with [all good and pure things, that are in me]”...<sup>130</sup>

<sup>128</sup> A small section of structure's cavetto is visible in the upper left-hand corner below the fourth tree avenue. This section of the wall was destroyed by an intrusive tunnel. See Dziobek and Abd el-Raziq, *Das Grab des Sobekhotep: Theben Nr. 63*, Tafel 40.

<sup>129</sup> Dziobek and Abd el-Raziq, *Das Grab des Sobekhotep: Theben Nr. 63*, 66, Texte 19a.

<sup>130</sup> Dziobek and Abd el-Raziq, *Das Grab des Sobekhotep: Theben Nr. 63*, 66, Texte 19b.



*dd mdw in Nh(ṣ)t(i) Nwt n nb n š pn...Nb-Imn...*

Words spoken by the tree-goddess Nut to the lord of this š-formal garden...Nebamun... The formal garden scene follows and shows a pool with blue and white lotus, red-breasted geese,<sup>134</sup> and pintail duck. Around the pool are papyrus, scented mayweed, opium poppy (*Papaver somniferum* L.), and low cornflower. Two avenues of persea, sycamore figs, common figs,<sup>135</sup> doum-palm, mandrakes, and grapevines also border the pool.

A second tree-goddess emerges from a sycamore fig on the top right and possibly offered her food and drink to another scene Nebamun and his wife seated.<sup>136</sup> On the far-right side of the bottom tree avenue, a third tree-goddess might have existed to balance the scene's composition.<sup>137</sup> Two registers of offering-bearers with the formal garden's produce likely ended the narrative.<sup>138</sup>

#### TT 334 (Unknown)

*Date:* Amenhotep III

*Location:* Dra'a Abu el-Naga Cemetery

West – right front wall of transverse hall

*Wall Narrative*<sup>139</sup>: Inspecting setting

*Description and Relevant Text:*

This wall narrative begins with the tomb-owner's daughter offering to her parents. Next are two registers of the formal garden's produce inspected by tomb-owner shown seated twice:

one with him under a sycamore fig. The remains of the text read:



<sup>134</sup> The red feathers of the head and neck and white and black tail feathers allow this identification. See John Wyatt, "Bird Identification from Art, Artifacts, and Hieroglyphs: An Ornithologist's Viewpoint," in *Between Heaven and Earth*, ed. by Rozenn Bailleul-Lesuer, *et al.*, (Chicago: Oriental Institute, 2012), p. 87.

<sup>135</sup> Four other trees are present, but they cannot be identified because of the paint deterioration. The two registers with servants who carry the formal garden's produce, possibly still present in the tomb, would aid in their identification in the future.

<sup>136</sup> The text in front of this tree-goddess was destroyed when the painting was removed from the wall.

<sup>137</sup> A pattern of four trees with three palms is depicted in the top tree avenue. Due to fragmentation, the bottom tree avenue is missing its fourth tree at the far-right end of the scene. Is the fourth tree another tree-goddess?

<sup>138</sup> "If the decorated area of the wall was similar in height to the walls of the outer chamber, there were probably two registers beneath the [formal] garden scene." See Parkinson, *The Painted Tomb-Chapel of Nebamun*, p. 137.

<sup>139</sup> This wall narrative is based on "Four registers. I, Daughter with others, offers to deceased and wife. II, Deceased seated in front of house. III, Deceased seated in... garden. IV, Harvest brought before deceased," in Porter and Moss, *Topographical Bibliography I*, p. 401; and Norman de Garis-Davies, "The Town House in Ancient Egypt," *MMS* 1.2 (1929): fig. 9.

<sup>140</sup> Davies, "The Town House in Ancient Egypt," fig. 9.

*m33t šmw ḥry iḥwtyw [n 'Imn?]*

Inspecting the harvest, Chief of Herdsmen [of Amun?].

The produce is difficult to identify because the depiction is very damaged; however, pintail duck, *Tilapia* spp., likely *T. zillii*, dates, and persea fruit remain visible. The formal garden scene is divided between the second and third registers. It begins with a house and large tree adjacent to the pooled garden flanked by two avenues of trees. A walled tripartite garden shrine is beside the pool with a courtyard and a double row of tree avenues leading to the shrine. Rows of trees entirely surround the shrine. On the fourth register, the sequence ends with the formal garden's produce carried to the tomb-owner.<sup>141</sup>

<i>hkr-frieze?</i>						
"Daughter, with others, offer to deceased and wife"						
Large tree			House		Tomb-owner inspects formal garden's produce (L→R)	Formal garden's produce (damaged) (L←R)
Tree avenue			Gate & Stairs	Tree avenue		Formal garden's produce (damaged) (L←R)
Tree avenue	Domestic shrine	Tree avenue				
		Pool				
		Tree avenue				
Tree avenue						
"[Garden produce] brought beford deceased"						
Dado?						

*Formal Garden Scene:* See Appendix I Part I

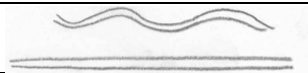
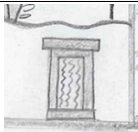
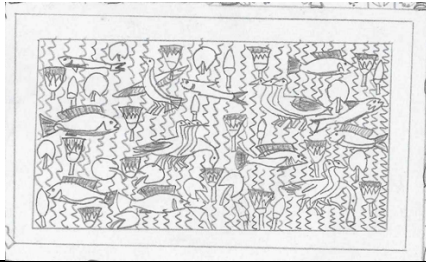

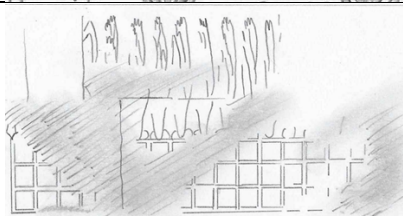
<sup>141</sup> The formal garden's produce in this register cannot be identified because there is no known photograph and the tomb is "blocked up." See Reginald Engelbach, *A Supplement to the Topographical Catalogue*, (Cairo: IFAO, 1924), pp. 26-27, 31.



## Discussion

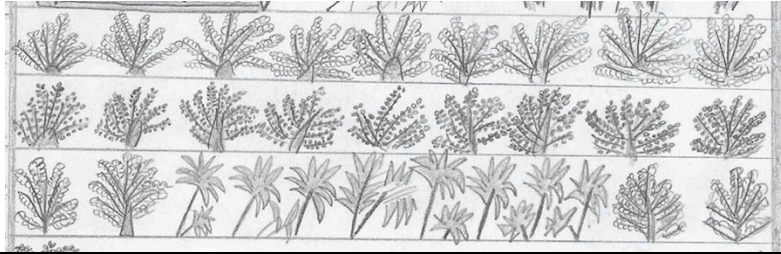
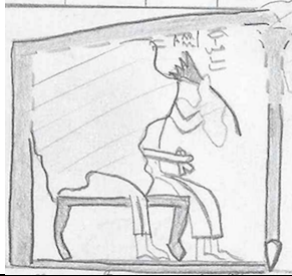

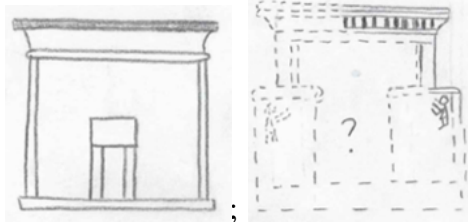


### Layouts, Architecture and Water Features in the Š-Formal Gardens of this Period

This type of formal garden could be laid out in various forms. The enclosure walls range from high straight walls, top undulating walls, or low straight walls. The formal garden might have one to two gates as front entrances. From the pictorial evidence, as well as from extant archaeological evidence from Amenhotep, Son of Hapu's Memorial Temple, a š-formal garden could range from a small plot with a central water feature bordered by one tree avenue to a large plot surrounded by six tree avenues (See Figs. A3.1-A3.14). A š-formal garden further might include several types of

Table 2.0: Possible Features of a Š-Formal Garden <sup>142</sup>	
Enclosure walls ( <i>pr</i> )	
Gates ( <i>sbꜣ</i> )	
Pools (š)	
Water gardens <sup>143</sup>	
Hsp-plots (planting beds)	 (H)

<sup>142</sup> Drawings by author © 2020, after Davies (1923, 1935, and 1944), Hugonot (1989), Dziobek (1991), and Parkinson (2008), and the drawing of the gathering honey facsimile in Rekhmira (TT 100) based on de Garis-Davies's: <https://www.metmuseum.org/art/collection/search/544626>.

<sup>143</sup> In garden history, a 'water garden' describes a type of garden that is either (i) planted not in but along the edge of a water feature or (ii) comprised of predominately aquatic species but not planted beside a water feature. For examples, see Fig. A1.8 and Fig. A1.13 in Appendix I. See *Merriam-Webster's Collegiate Dictionary*, s.v. "water garden," accessed June 14, 2020, <https://www.merriam-webster.com/dictionary/watergarden>.

Tree avenues ( <i>ht</i> ) and/or groves ( <i>mnw</i> )	
Seated pavilions ( <i>m3rw</i> )	
Libation basins in the form of pools ( <i>šw</i> )	 (H)
Garden shrines ( <i>hwt</i> )	
Arbors and pergolas ( <i>k3mw</i> )	
Apiaries ( <i>ʕty</i> ? <sup>144</sup> )	 (TT 100 – T3/A2)

<sup>144</sup> The word for an apiary in Egyptian is unclear. Honey bee was called *ʕi-n-bit* (𓆎𓅓𓏏𓏏) or *ʕi* (𓆎𓅓), coming from the same root as *ʕi* (𓆎𓅓) or ‘to squeeze out.’ It seems possible then that an apiary was called something along the lines of *ʕty*, which as a *nisba*, would literally mean ‘the location/place of the honey bees/squeezing out.’ For more information, see Erman and Grapow, *WB* I, nos. 41.3.-4., 182.1-11. Apiaries in modern Egypt continue to be fabricated similar to those of the New Kingdom with long conical honey pots called in ancient times: *mnt*- or *mdkt*-jars. Compare to the image of an apiary in Rekhmira’s tomb (TT 100) in Porter and Moss, *Topographical Bibliography* I, p. 206 and to the de Garis-Davies’s gathering honey facsimile <https://www.metmuseum.org/art/collection/search/544626>. For more information on its ethnography in modern Egypt, see Gene Kritsky, *Tears of Re: Beekeeping in ancient Egypt*, (Oxford: Oxford University Press, 2015), p. 85.

simple gardens into its layout, such as a water garden, *hsp*-plot, or grape arbor. A *š*-garden's pool could be rectangular, elongated, square, or T-shaped. A pool might have edging stones or one to two descending steps to facilitate access to the water, plants, fish, and waterfowl. The water gardens (see footnote 143) typically surround the pool; however, they might also be placed as separate plots fronting a pool, garden shrine, or as an additional feature beside a tree avenue. The *hsp*-plots (planting beds) are arranged into grids and planted with a variety of vegetables and herbs. Arbors and/or pergolas are supported by papyriform columns and roofed with latticework that act as peristyles, either around a pool or as a separate part of the formal garden all together (See Fig. A3.6-.7). One to seven types of trees are planted in contrasting, opposing, or randomized patterns. Architecture, such as pavilions with seats might be placed among the tree avenues for relaxation as well as places from which to inspect the *š*-formal garden's produce, as seen in TT 81. In the wall narratives of the TT E2, TT 63, TT 80, TT 85, TT 93 #3, TT 100, TT 109, and TT 334 *š*-formal garden scenes, the tomb-owners and/or family members are seated beside their formal gardens, which could be interpreted as them sitting in pavilions or chairs. Libation basins in the form of pools might be placed beside the actual pool (See Fig. A3.13). Garden shrines are never located in the center of this type of formal garden but always at its terminus, as seen in TT 93 #1, TT 100, and TT 334. The shrine could be built quadrilateral with a cavetto cornice and/or torus moulding. To balance the *š*-formal garden's layout, the pool is typically placed in the center, creating a symmetrical or focused landscape (See Figs. A3.1-.2, A3.4-.11, A3.13). However, it might also be placed asymmetrically closer to the entrance, as with TT 109 and TT 334 (See Figs. A3.3, A3.11). Apiaries are not shown in the *š*-formal garden scene but could have been present, as honey is sometimes included in their produce depicted beside the scene.<sup>145</sup> Sometimes part of

---

<sup>145</sup> See the TT 100 wall narrative and the entry of the Egyptian honey bee in Appendix II.

the formal garden might be placed higher than the other parts. In TT 334, for example, the shrine is located at a higher elevation than the pool (See Fig. A1.14).

### Extant Evidence of Š-Formal Gardens during this Period

Extant archaeological, textual, and pictorial evidence indicates royal and private š-gardens were built during this period. From the royal sphere, a stela from the Egyptian Museum, Cairo (JE 34002) erected by Ahmose I in honor of his grandmother Queen Tetisheri, states that the pharaoh constructed a cenotaph pyramid-shrine enclosure with a š-formal garden at Abydos for her:



...wnn is m<sup>c</sup>h<sup>t</sup>.s m ty 3t hr s3wt W3st 3bdw dd.n nn hrt iw 3b.n hm<.i> dit irt n.s mr-  
hwt m t3-dsr m-s3ht mnw nw hm<.i> šdi š.f wdī hwt.f smn p3 3wt.f grg m rmtw nḥbw  
m 3hwt ḥmw-k3 ḥnsbw...

...(Although) her tomb and cenotaph are at this moment on the soil of Thebes and Abydos, I have said this (to you): My Majesty desired to have made for her (also) a pyramid-shrine enclosure in the necropolis close to the monument of My Majesty. Its š-formal garden will be dug, its trees will be planted, its offerings will be founded, equipped with people, endowed with fields, presented with herds, k3-priests, and ritual priests...<sup>147</sup>

Magnetometry surveys conducted by the Ahmose and Tetisheri Project discovered the enclosure (hwt), described in the Egyptian Museum stela, was considerably large (68.5 m x 85.5 m or 225 ft x 280.5 ft), dwarfing the cenotaph pyramid-shrine (5 m x 8 m or 16.5 ft x 26 ft) in the center.<sup>148</sup>

Therefore, Tetisheri's š-formal garden described in the Egyptian Museum stela was likely

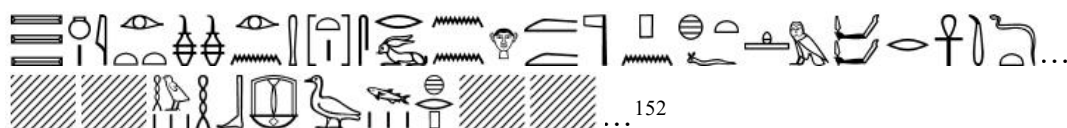
<sup>146</sup> Pierre Lacau, *Catalogue général des antiquités égyptiennes du musée du Caire n° 34001-34064 : Stèles du Nouvel Empire I*, (Cairo: IFAO, 1909), p. 6; Sethe, *Urkunden IV*, no. 28.

<sup>147</sup> Based on the translation in Breasted, *Ancient Records of Egypt II*, pp. 15-16, §36-37; and the translation commentary in Stephen Harvey, "The Cults of the King Ahmose at Abydos," PhD dissertation, (Philadelphia: University of Pennsylvania, 1998), pp. 107-108.

<sup>148</sup> Stephen Harvey, "New evidence at Abydos for Ahmose's funerary cult," *EA* 24 (2004): p. 6.

extensive, as it must have been planted within the large enclosure in the vicinity of her pyramid-shrine (*mr-ḥwt*) and cenotaph (*mḥt*)<sup>149</sup> (See Fig. A3.25). The shrine stood on a processional way that was equidistant from Ahmose I's pyramid and memorial temple to the east and the terraced cenotaph temple to the west; however, excavations have yet to yield any archaeobotanical evidence of formal gardens in proximity to his Abydene monuments<sup>150</sup> (See Fig. A3.26).

The Amun sanctuary reliefs and inscriptions in Hatshepsut's memorial temple at Deir el-Bahari attest to the construction of š-formal gardens with libation altars, water gardens of papyrus, elongated pools full of lotus, pintail duck, *Tilapia* spp., and *Syndontis* spp., and ḥsp-plots of cos-lettuce, which might have been in the upper court of the sanctuary<sup>151</sup> (See Figs. A3.27, A3.30):



šw nw irtt ir.n ḥmt.s r wnn ḥr gswy ntr pn ḥtf ḥtp m Dsr Dsr(w) r ḥḥ.ti dt...ḥw ḥb(w)  
 3pd(w) 3bdw ḥrp...

Š-formal gardens of milk<sup>153</sup> made by Her Majesty, that they may be close to this god when he rests in the Holy-of-Holies in order that she may live eternally...festival food, fowl, fish brought (?)...

Hatshepsut also built a shrine called 'Rising-of-the-Horizon-of-Amun' that had a š-formal garden.<sup>154</sup> It is attested from a wall fragment (Block 243) of her Red Chapel, discovered south of the Third Pylon of Karnak.<sup>155</sup> Interestingly, the texts are inscribed in front of a pair of fecundity

<sup>149</sup> See the map reconstruction of the 'Tetisheri Shrine' and 3D surface plot in Stephen Harvey, "New evidence at Abydos for Ahmose's funerary cult," pp. 4, 6.

<sup>150</sup> Harvey, "The Cults of the King Ahmose at Abydos," pp. 96-102, 103-104; Harvey, "New evidence at Abydos for Ahmose's funerary cult," pp. 4-5.

<sup>151</sup> Perhaps evidence of the pools and ḥsp-plots was not found because they had been made of mudbrick and elevated like the ḥnty-š-formal garden in the temple's first court examined in Chapter Three. For example, see Édouard Naville, *The Temple of Deir el Bahari V: Upper Court and Sanctuary*, (London, EES, 1899), p. 10, see esp. pl. CXLII.

<sup>152</sup> Naville, *The Temple of Deir el Bahari V: Upper Court and Sanctuary*, p. 10, pl. CXLII.

<sup>153</sup> Likely referring to the cos-lettuce in its ḥsp-plots or to the ritual pouring of libations into its pool-shaped basins, see Figs. A3.27, A3.30 in Appendix III.

<sup>154</sup> Pierre Lacau and Henri Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, (Cairo: SAE/IFAO, 1977), pp. 74-75.

<sup>155</sup> Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, p. xxvi.

figures: a female one personified as the shrine and a male one personified as the shrine's š-formal garden:

Female fecundity figure with a *ḥwt*-ideogram above her head, saying:



*ḥwt M3<sup>c</sup>t-k3-R<sup>c</sup> Imn ḥ<sup>c</sup> 3ḥt*

The shrine of Ma'atkara (called) 'Rising-of-the-Horizon-of-Amun.'

Male fecundity figure holding a š-ideogram, saying:



*Imn š w<sup>c</sup>b ḳbb ḏd mdw ini n.k rnpwt nb(w)t ḳbb(wt) w<sup>c</sup>b(wt) imi*

The š-formal garden of Amun (called) 'Pure-and-Fresh.' Words spoken: I bring to you all the fresh and pure flowers, fruits, and vegetables that are in me.

Based on textual evidence in Djehuty's tomb (TT 110), scholars believe this particular shrine was located somewhere in the vicinity of the memorial temples and tombs in Deir el-Bahari.<sup>158</sup>

A right granite doorjamb found in the backfill of the Second Pylon attests that Amenhotep II built a š-formal garden in the Karnak precinct as a monumental donation to Amun:



<sup>156</sup> Note how the text is enclosed in an ideogram for shrine with an enclosure (*ḥwt*). See the text and translation in Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, p. 75.

<sup>157</sup> See the text and translation in Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, p. 75, footnote 7.

<sup>158</sup> Djehuty (TT110), who was an 'Overseer of Construction Works' under Hatshepsut, boasts in his tomb that he assisted in the construction of Hatshepsut's memorial temple ('Holy-of-Holies-of-Amun') and a shrine called 'Rising-of-the-Horizon-of-Amun.' Text from his deeds: "'Rising-of-the-Horizon-of-Amun,' the great temple of Amun, his horizon, is found in the Western Hills." Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, pp. 74-75; Sethe, *Urkunden IV*, nos. 422-423.

[The Good God], King of Upper and Lower Egypt, A'akheperura, he has made as his monument for his father Amun-Ra, the making for him a holy place of refreshment [called] 'A'akheperura-satisfies-Amun' by decorating [it] with his [š-formal garden called] 'Libation-of-Amun' of beautiful sandstone, a granite gateway, and copper door leaves. It is His Majesty who sanctifies this [š-formal] garden, who adorned [it] with reeds, and who planted papyrus, lotuses, [fresh flowers, fruits and vegetables], rushes, and lotus buds, that he might make all life-giving like Ra forever.<sup>159</sup>

... ... 161

...I crafted the Sekhmet bark in the š-formal garden of the pharaoh's palace, child of the royal nursery, Iuna...

<sup>159</sup> Charles C. van Siclen III, *Two Theban Monuments from the Reign of Amenhotep II*, (San Antonio: Van Siclen Books, 1982), see the hieroglyphs in fig. 10 and the translation, p. 16; also see Wolfgang Helck, *Historisch-Biographische*, (Wiesbaden: Harrassowitz, 1975), p. 134, no. 43. Van Siclen and Wilkinson think this text refers to the *ḥt-nt-ḥt*-formal garden in TT 96. However, the text beside the TT 96 scene in Chapter Three explicitly states that Amenhotep II renewed the *ḥt-nt-ḥt*-formal garden built by his ancestors, while this doorjamb text suggests the construction of a whole new formal garden during the pharaoh's reign.

<sup>161</sup> Iorwerth E. S. Edwards, *Hieroglyphic texts from Egyptian stelae, etc. in the British Museum VIII*, (London: Harrison and Sons, Ltd., 1939), p. 40, pl. XXXIII.

38

garden with pomegranate and sycamore fig trees and grapes growing on papyriform pergolas beside its harem.<sup>163</sup> Yet, this is likely another garden in the palace, as the š-formal garden mentioned in the British Museum stela had to have had a pool to float boats and barks.

Although there is no archaeological evidence of š-formal gardens built by Amenhotep III in Thebes, the paintings from his Malkata Palace and Harem might indirectly reflect š-formal gardens that were once part of the palace grounds.<sup>164</sup> Furthermore in TT 49, there is depiction of Karnak's main (western) entrance: a large š-formal garden with water gardens of papyrus, double trees avenues, grapevines, and a stepped pool full of lotus, leading to a quay in front of the Second Pylon built by Amenhotep III<sup>165</sup> (See Fig. A3.32). Based on texts reinscribed near the Second Pylon by Ramesses II, some scholars believe this š-formal garden might have been the one called 'Glory-of-the-Trees-Beloved-of-Thebes-upon-the-Way-of-the-Ram-Headed-Sphinxes.'<sup>166</sup>

An examination of the relevant titles of the tomb-owners with š-formal garden scenes demonstrates they held positions in various institutions related to the Amun cult, such as: the double-granaries, double-treasuries, scribal and accounting work for divine offerings, or supervising priests, construction projects, or cattle herdsmen, which is enumerated into Table 2.1 on the following page. The tomb-owners' titles suggest direct or indirect contact with the royal š-formal gardens because as endowments to palaces, funeral monuments, or to memorial or cult temples they yielded surplus produce. This meant labor acquisition for their construction and upkeep, recordkeeping, storage, transportation, and presentation of their crop each day. Rekhmira (TT 100), for example, was the 'Chief Scribe of the Divine Offerings of Amun' and 'Administrator

---

<sup>163</sup> Norman de Garis-Davies, *The Tomb of Nefer-hotep at Thebes II*, (New York: MMA, 1933), pl. I.

<sup>164</sup> Georges Daressy, « Le palais d'Aménophis III et le Birket Habu, » *ASAE* 4 (1903): pp. 165-166 ; David O'Connor, "The King's Palace at Malkata and the Purpose of the Royal Harem," in *Millions of Jubilees: Studies in Honor of David P. Silverman*, ed. by Zahi Hawass and Jennifer Houser Wegner, (Cairo: CSAE, 2010), p. 70.

<sup>165</sup> de Garis-Davies, *The Tomb of Nefer-hotep at Thebes II*, pl. III.


<sup>166</sup> Sir Alan Gardiner, *Late-Egyptian Miscellanies*, (Brussels: FERE, 1937), p. 10; Charles Nims, "Places about Thebes," *JNES* 14.2 (1955): p. 112; Wilkinson, *The garden in ancient Egypt*, p. 134.



Table 2.1: Relevant Tomb-owner Titles			
<i>Theban Tomb</i>	<i>Scene</i>	<i>Years Active</i>	<i>Relevant Titles</i>
TT 81	š-formal garden	A1-T3	‘Overseer of All Offices in the Domain of Amun’ ‘Overseer of Construction Works at Karnak’ ‘Controller of All Construction Works at Karnak’ ‘Overseer of the Double-granary and Double-treasury of Amun’
TT 109	š-formal gardens	T3	‘Overseer of the Priests of Onuris’ ‘Overseer of the Priests of Osiris’
TT 85	š-formal gardens	T3-A2	‘Overseer of the Double-granary of Amun’
TT 100	š-formal garden	T3-A2	‘Chief Scribe of the Divine Offerings of Amun’ ‘Administrator of All Construction Works at Karnak’ ‘Overseer of Every Department’
TT 80	š-formal garden	A2	‘Overseer of the Treasury’
TT 93	š-formal gardens	A2	‘Overseer of the Cattle of Amun-Ra’
TT 63	š-formal garden	T4	‘Overseer of the Priests of Sobek’ ‘Overseer of the Treasury of Sobek’
TT E2	š-formal garden	T4-A3	‘Scribe and Grain Account in the Granary of the Divine Offerings of Amun’
TT 334	š-formal garden	A3	‘Chief of the Herdsmen [of Amun?]’

of All Construction Works at Karnak’ from the reign of Thutmose III to Amenhotep II. The construction of the š-formal garden of Amenhotep II named ‘Libation-of-Amun’ at Karnak might have even been supervised by Rekhmira because formal gardens were construction works.

These individuals’ positions likely influenced them to construction š-formal gardens of their own beside their homes, as symbols of power and status. Some individuals, for example, such as Min (TT 109) and Qenamun (TT 93) are even attested as having multiple š-formal gardens.<sup>167</sup> A š-formal garden’s construction would have been prestigious in itself, as it must have been

<sup>167</sup> See the surrounding texts of the TT 109 scene on p. 18 of this work. Min’s son Sobekmose states his father had multiple š-formal gardens: šw.k () . Qenamun (TT 93) had three š-formal gardens, see pp. 24-27 of this work.

resource-intensive and costly to build, even if it was small. The supervisors and workmen had to clear the land and lay the formal garden's plan and the pools, water gardens, and *hsp*-plots had to be dug and assembled. Pools were fitted with stone and/or mudbrick and properly irrigated to allow the fish and fowl to be introduced. The flora had to be bought, transported, resown, and watered. *Shadufs* occur after the Amarna Period, as seen in Neferhotep (TT 49), dated to Ay, and Ipuuy (TT 217), dated to the Ramesside Period, while waterwheels only occur by the Graeco-Roman Period. Thus, the flora at this time had to be watered by gardeners carrying yokes with buckets.<sup>168</sup> The pergolas, garden shrines, enclosure walls, gates, and other architectural features also had to be constructed, which would have been costly. Although a *š*-formal garden would have been expensive to construct, kings might gift them to private individuals, as in the story of Sinuhe:

I was given a house and [*š*-formal garden] that had belonged to a courtier...as is done for a Companion of the first rank...It was his majesty who ordered it made.<sup>169</sup>

Likewise, Amenhotep III permitted the architect Amenhotep, Son of Hapu to place statues of himself at Karnak and to build and establish his own memorial temple with a *š*-formal garden and cult at Thebes-West, as is proven from extant archaeological<sup>170</sup> (See Fig. A3.31) as well as textual evidence inscribed on a British Museum stela (BM EA 138), and on his two seated scribal statues (JE 44861; JE 44862) in the Egyptian Museum, Cairo.<sup>171</sup> Royal individuals could also be gifted *š*-formal gardens. For example, Ahmose I gifted one to his grandmother Queen Tetisheri for her pyramid-shrine enclosure at Abydos because he “so greatly loved her beyond everything.”<sup>172</sup>

<sup>168</sup> See the gardeners in the TT 81 and TT 100 scenes. They carry yokes with buckets and collect water from the pools to water the flora.

<sup>169</sup> Mariam Lichtheim, *Ancient Egyptian Literature I*, (Berkeley: University of California Press, 2006), p. 233; also see the transliteration by Jon J. Hirst, *Study guide for the story of Sinuhe*, (London: UCL, 2007), pp. 54-55.

<sup>170</sup> Robichon and Varille, *Le temple du scribe royal Amenhotep, fils de Hapou*, pp. 28, 35, 37, pls. III-V, X-XI.

<sup>171</sup> See Robichon and Varille, *Le temple du scribe royal Amenhotep, fils de Hapou*, p. 28; William J. Murane, “Servant, seer, saint, son of Hapu, Amenhotep called Huy,” *Kmt* 2.2 (1991): p. 58; and Eleanor B. Simmance, “Amenhotep son of Hapu: Self-presentation through statues and their texts in pursuit of semi-divine intermediary status,” MPhil thesis, (Birmingham: University of Birmingham, 2014), pp. 12-13.

<sup>172</sup> Breasted, *Ancient Records of Egypt II*, p. 16, §37; also see p. 35 of this work.

The texts beside the TT 81,<sup>173</sup> TT 109,<sup>174</sup> TT 100,<sup>175</sup> TT 93 #1,<sup>176</sup> TT 63,<sup>177</sup> and TT E2<sup>178</sup> scenes further mention the *bꜣ* and/or *kꜣ* of the tomb-owners desired to visit their š-formal garden(s) each day. This is clear from additional tomb texts in TT 82, TT 85, TT 87, TT 91/99, TT 110, and TT 112 that mention but do not depict a š-formal garden beside the inscriptions. These individuals were active from the reign of Hatshepsut to Amenhotep III, such as the ‘Grain Account of Amun’ Amenemhat (TT 82), the ‘Overseer of the Treasuries of Amun’ Senneferi (TT 91/99), and the ‘Overseer of the Construction Works’ Djehuty (TT 110):

May you go as you please to the beautiful shore of your [pool]. May your heart rejoice in your wooded [š-formal garden], when you cool yourself under the sycamores. May your heart take satisfaction in the Nun in the fountain you have created, forever and ever. Transforming into a living ba, oh, may he glide down onto his grove, may he enjoy the shadow of his sycamores, may he rest at the corner of his [š-formal garden]...<sup>179</sup>

The ‘High Priest of Amun’ Amenemhat (TT 85):

...going into and out of the [š-formal garden] with its [pool] to cool the heart under its trees. Performing (?) the work of the goddess of the fields...of her flower, drinking water from his pond, smelling lotus blossoms and plucking buds by NN.<sup>180</sup>

The ‘Chief Servant and the Overseer of the Double-granary of Amun’ Minnakht (TT 87) and the ‘High Priest of Amun’ Menkheperaseneb II (TT 112):

Going into and out of my tomb to refresh myself in its shadow, to drink water from my pond daily, that all my limbs may flourish. May Hapi supply me with nourishment and offerings, and vegetables in their season. May I stroll at the edge of my pond daily, without cease, may my ba alight on the branches of the trees I have planted, may I refresh myself under the branches of my sycamores and eat the bread that they give.<sup>181</sup>

---

<sup>173</sup> See the scene’s texts on pp. 15-16.

<sup>174</sup> See the scene’s texts on p. 18.

<sup>175</sup> See the scene’s texts on pp. 21-23.

<sup>176</sup> See the scene’s texts on p. 25.

<sup>177</sup> See the scene’s texts on p. 28.

<sup>178</sup> See the scene’s texts on p. 29.

<sup>179</sup> See the reconstruction of these textual variants from each tomb in Assmann, *Death and Salvation in Ancient Egypt*, pp. 222, 451.

<sup>180</sup> See the reconstruction of these textual variants from each tomb in Assmann, *Death and Salvation in Ancient Egypt*, pp. 222, 451.

<sup>181</sup> Heike Guksch, *Die Gräber des Nacht-Min und des Men-cheper-Ra-seneb*, (Mainz am Rhein: PvZ, 1995), p. 152.

All of these texts imply that the tomb-owners' *bꜣ* and/or *kꜣ* wanted to maintain,<sup>182</sup> relax, drink, and smell the flora from their *š*-formal gardens, as well as inspect and be nourished by their produce, personified as tree-goddesses. The value of a *š*-formal garden to the Egyptians is evident from the fourth book of the Papyrus of Nesmin (pBM 10188)<sup>183</sup> called the 'Book of Knowing the Creations of Ra and Felling of Apep (Apophis),' detailing what would happen to evildoers after death:

The tears which came forth from m[y] Eye are against you, [you] are made impotent because of this his evil character. The gods behold you...You will have no *ba*, no *akh*, no corpse, no shadow, no magic power, no bones, no hair, no magic, no saying (and) no words (anymore)! You will have no grave, no household...no grave chapel (anymore)! You will have no [*š*-formal garden], no trees (and) no bushes (anymore)! You will have no children, no family, no heir (and) no family clan (tribe) (anymore)! You will have no head, no arms, no legs, no walking ability (and) no semen (anymore) You will no longer have a place on earth!<sup>184</sup>

From this spell, it is clear the ancient Egyptians considered their *š*-formal garden with trees and plants to be just as significant as their family, clan, body parts, soul(s), house, tomb, and even ability to walk, procreate, and perform magic. Therefore, it is curious why the tomb-owners of TT 82, TT 85, TT 87, TT 91/99, TT 110, and TT 112 did not depict their *š*-formal gardens beside their abovementioned tomb texts. Indeed, it is particularly surprising that Djehuty (TT 110) did not depict *š*-formal garden scenes in his tomb because he assisted in the construction of Hatshepsut's memorial temple and 'Rising-of-the-Horizon-of-Amun' shrine, which both had *š*-formal gardens.<sup>185</sup> Perhaps a *š*-formal garden did not have to always be shown, as the written word alone would have been sufficient due to the pictorial nature of the hieroglyphic script.

---

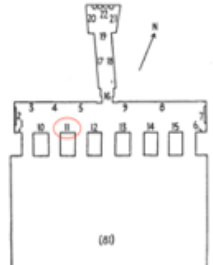

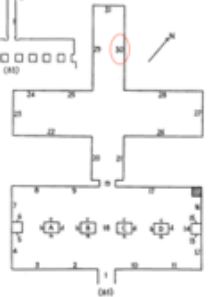
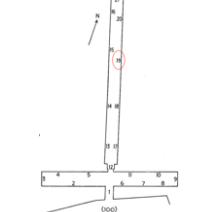
<sup>182</sup> Described as "performing the work of the field-goddess." See the text from TT 85 on p. 42 of this work.

<sup>183</sup> Although the Bremner-Rhind Papyrus (pBM 10188) dates to the Ptolemaic Era, earlier parallels of these spells are known from the *recto* of an Eighteenth Dynasty papyrus (pBM 9997) from Thebes, a prophylactic statue of Ramesses III (JE 69771), a magical statue base in Leiden, and a Ramesside magical papyrus (pTurin CGT 54065). See Seidlmayer and Hafemann, *s.v.* "Parallels of Papyrus of Nesmin from Thebes," *TLA*, <http://aaew.bbaw.de/tla/servlet/GetTextDetails?u=guest&f=0&l=0&db=0&tc=19935>.

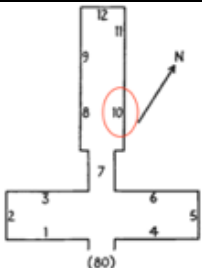
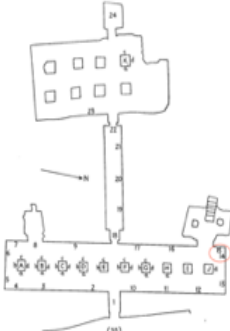
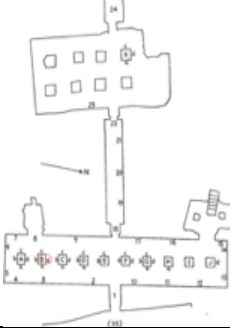
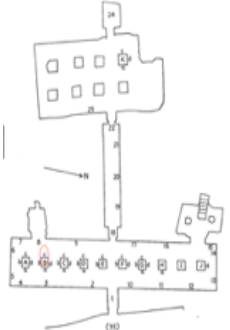
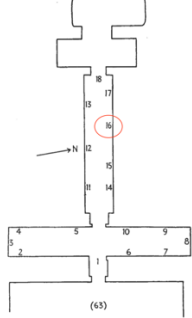
<sup>184</sup> Raymond O. Faulkner, "The Bremner-Rhind Papyrus III: D. The Book of Overthrowing 'Apep,'" *JEA* 23.2 (1937): pp. 173-174; Seidlmayer and Hafemann, *s.v.* "Papyrus Nesmin from Thebes," *TLA*, <http://aaew.bbaw.de/tla/servlet/GetCtxt?u=guest&f=0&l=0&db=0&tc=19935&ws=6212&mv=3>.

<sup>185</sup> See the Djehuty's deeds on p. 36, footnote 154.

The significance of a š-formal garden to the Theban elite can further be surmised from the location of the tomb scenes in Table 2.2 below based on the information Appendix I: Catalogue. The š-formal garden scenes in these tombs are not the main feature of the large rooms in which they are placed. However, they do play a part in the wider decorative schema of the room, focused around illustrating the tomb-owner's unique, sociocultural experience as a member of the Theban elite.<sup>186</sup> The š-formal garden scenes occur on the pillars or walls in the porticos, transverse

Table 2.2: Location of Š-Formal Garden Scenes in Tombs				
<i>Theban Tomb</i>	<i>Location</i>			<i>Plan</i>
	<i>Room</i>	<i>Architecture</i>	<i>Orientation</i>	
TT 81	Portico	Pillar	W	
TT 109	Transverse Hall	Wall	S	
TT 85	Chapel	Wall	E	
TT 100	Passage	Wall	E	

<sup>186</sup> John Baines, *High culture and experience in ancient Egypt*, (Sheffield: Equinox Publishing, 2013), pp. 76-82.

TT 80	Chapel	Wall	E	
TT 93 #1	Transverse Hall	Wall	NE	
TT 93 #2	Transverse Hall	Pillar	N	
TT 93 #3	Transverse Hall	Pillar	W	
TT 63	Passage	Wall	N	
TT E2	Chapel	Wall	W	?
TT 334	Transverse Hall	Wall	W	?

halls, passages, or chapels that feature daily life ‘focal representations’ (also often referred to as *Blickpunktbilder* by Egyptian art historians).<sup>187</sup> For example, š-formal gardens scenes are found in proximity to: ‘fish and fowl icons,’<sup>188</sup> ‘natural resource/inspecting icons,’<sup>189</sup> ‘banqueting icons,’<sup>190</sup> ‘gift to pharaoh icons,’<sup>191</sup> and ‘offering table icons.’<sup>192</sup> Porticos, transverse halls, passages, or chapels were the areas of the tomb available for family and community members to view during funerals, festival, and feast days.<sup>193</sup> Thus, the š-formal garden scenes could be interpreted as a type of ‘natural resource/inspecting icon,’ celebrating the tomb-owner’s achievement of having his own š-formal garden in life and perpetuating it for his *bʿ* and *kʿ*’s use after death.

---

<sup>187</sup> Hartwig terms focal representations as ‘icons.’ See their discussions in Melina Hartwig, *Tomb Painting and Identity in Ancient Thebes, 1419-1372 BCE* (Brussels: FERE, 2004): for ‘gift (to pharaoh) icons’, pp. 79-81; ‘offering table icons,’ pp. 89-97; for ‘banqueting icons,’ pp. 98-103; for ‘fish and fowl icons,’ pp. 103-106; and for ‘natural resource/inspecting icons,’ pp. 106-111.

<sup>188</sup> See the wall narratives of TT 63 and TT 93 #2.

<sup>189</sup> See the wall narratives of TT 63, TT 93 #3, TT 100, TT 109, and TT 334.

<sup>190</sup> See the wall narratives of TT 63 and TT 100.

<sup>191</sup> See the wall narratives of TT 109.

<sup>192</sup> See the wall narratives of TT 63, TT 80, TT 85, TT E2.

<sup>193</sup> Hartwig, *Tomb Painting and Identity in Ancient Thebes, 1419-1372 BCE*, p. 49.

## Chapter Three

### The Domain of Amun Formal Gardens

There are five Domain of Amun formal garden scenes found in the Theban Necropolis from the early Eighteenth Dynasty prior to the Amarna Period: TT 87, TT 90, TT 39, TT 96, and TT 161. Although the formal gardens are mutually related to the Domain of Amun in Thebes, they are studied individually due to their distinct names in Egyptian: (i) the *hnty-š*-formal garden, (ii) the *k3mw*-formal garden, (iii) the *sš*-formal garden, (iv) the *ʿt-nt-ḥt*-formal garden, and (v) the *ḥrrt-š*-formal garden. The chapter begins with ‘visual descriptions’ of Domain of Amun formal garden scenes. This is followed by a discussion that examines the layouts, architecture, and water features for each particular formal garden in Thebes during this period via extant archaeological, textual, or pictorial evidence. The wider significance of these formal gardens is synthesized in order to emphasize their overarching roles, functions, and implications in Eighteenth Dynasty Thebes.

#### TT 87 (Minnakht) – *hnty-š*-formal garden

*Date:* Thutmose III

*Location:* Sheikh Abd el-Qurna

Southwest – left rear wall of chapel

*Wall Narrative:* Festival Setting

hkr-frieze									
Priests carry portable shrine from the nšmt-bark towards Minnakht's statue in a pavilion being censed and given offerings (L→R)							Menkheper offers Ra-Horakhety and Osiris bouquets to his parents (L→R)	Minnakht and wife seated at feast (L←R)	
Tree avenue and priests offering and censing formal garden's produce (L→R)									
Lake with deified Thutmose III's nšmt-bark	Grape arbors and pergolas	Enclosure wall			Priests in procession carry portable shrine from the nšmt-bark towards the memorial temple (L←R)				
	Processional ramp	Pylon	Tree grove	Pylon		Shrine			
						Shrine			
						Shrine			
	Grape arbors and pergolas					Enclosure wall			
Tree avenue and priests offering and censing formal garden's produce (L→R)									
Mourners and celebrants (L→R)			Servants w/ festival food (L→R)				Festival feast (L←R)		
Dado?									



*Formal Garden Scene:* See Appendix I: Part II

*Description and Relevant Text:*

The wall narrative begins with rites of the Beautiful Festival of the Valley<sup>194</sup> in the *hnty-š*-formal garden of the Memorial Temple of Thutmose III on the West Bank of Thebes.<sup>195</sup> A *nšmt*-bark with the statue of the deified Thutmose III hidden in a portable shrine is sailed across the lake with blue and white lotuses while mourners or celebrants lament and witness the ceremony on the third register. Two priests with papyrus bouquets stand on the opposite side of the lake at the end of the processional ramp, leading to the memorial temple with two pylons, a courtyard with a tree grove, and the sanctuary with ambulatory shrines. To the right on the same register, a priest with two papyrus bouquets and another priest who incenses and libates, lead more priests who are carrying the portable shrine from the pharaoh's *nšmt*-bark towards the memorial temple. On the register above, the portable shrine is carried towards a statue suggested to be of Minnakht<sup>196</sup> in a pavilion in the formal garden.<sup>197</sup> The statue is censed and given offerings for the Beautiful Festival of the Valley by his son Menkheper.

The second and fourth registers frame the formal garden scene, each consisting of two avenues of date palm, *doum*-palm, and sycamore figs as priests tend to the formal garden's produce

---

<sup>194</sup> Wilkinson, *The garden in ancient Egypt*, p. 103; Geßler-Löhr, „Die Totenfeier im Garten,“ pp. 164-166.

<sup>195</sup> The structure is likened to a tomb-chapel, see Wilkinson, *The garden in ancient Egypt*, p. 103; and Heike Guksch, *Die Gräber des Nacht-Min und des Men-cheper-Ra-seneb*, (Mainz am Rhein: PvZ, 1995), p. 66. The first register definitely depicts rites on Minnakht's statue. However, Minnakht's son Menkheper was 'Scribe of the Divine Offerings of Amun in the Memorial Temple of Thutmose III' and the composition of the formal garden scene certainly mimics the architecture of the Memorial Temple of Thutmose III located in front of the Sheikh Abd el-Qurna, see Jancito Antón, "La gloria de Tutmosis III," *El País Seminal* (Dec. 6, 2012): fig. 1, (accessed July, 10 2019), [https://elpais.com/cultura/2012/12/07/actualidad/1354879058\\_090754.html](https://elpais.com/cultura/2012/12/07/actualidad/1354879058_090754.html); and "The temple", *Thutmose III Temple Project*, <https://thutmosisiitempleproject.org/index.php/en/thutmosis-iii/the-temple>, (accessed July 10, 2019).

<sup>196</sup> See Geßler-Löhr, „Die Totenfeier im Gärten,“ p. 163. From the surrounding decorative schema, one could interpret this as statue as one placed by Minnakht in one of the memorial temple's shrines, as private individuals could be granted permission to do so in sanctuaries.

<sup>197</sup> This seems possible. For example, Amenhotep, Son of Hapu was granted permission to place scribal statues of himself in the grounds of Karnak Temple. Mayor Sennefer was also granted permission by Amenhotep II to place one of him and his wife and daughter at Karnak (CG 42126) as well as at the Temple of Seth at Naqada (UC 14639). While, a scribal statue of another individual named Amenhotep, who was 'Overseer of the Construction Works' in Memphis, mentions he was granted permission to place the vary statue in the grounds of the Lower Egyptian version of Amenhotep III's memorial temple that he helped construct. See Petrie, *Tarkhan I and Memphis V*, p. 33.

and pergolas with amphorae of wine, various types of bread, and incense resins (myrrh and frankincense or *Commiphora erythraea* var. *glabrescens* Engler and *Boswellia frereana* Birdw.). The narrative continues with servants preparing and carrying festival food to guests seated for one of the Beautiful Festival of the Valley feasts. It ends with Menkheper, the son of Minnakht, offering dates, cos-lettuce, and Ra-Horakhety and Osiris bouquets of lotus, papyrus, and mallow bindweed (*Convolvulus althæoides* L.) to his parents seated at a festival feast in the formal garden:



*n k3.k ʿnh n Rʿw-Hr-[zhty] n Wsir ntr ʿ3 [hft] htp.k m is  
in sš htp ntr n Imn m Hnkt-ʿnh Mn-hpr*

For your *ka*, a bouquet of Ra-Horakhety and Osiris, the great god, when you go to rest in your tomb, by the ‘Scribe of the Divine Offerings of Amun in the Memorial Temple of Thutmose III,’ Menkheper.<sup>198</sup>

#### TT 90 (Nebamun) – *k3mw*-formal garden

*Date:* Thutmose IV to Amenhotep III

*Location:* Sheikh Abd el-Qurna

North – right rear wall of transverse hall

*Wall Narrative*<sup>199</sup>: Festival setting

hkr-frize									
Thutmose III enthroned in a pavilion (L→R)	Nebamun offers tribute to Thutmose III (L→R)	Tribute carried by Nebamun (L→R)	Offering-bearers with bread and fowl (L→R)	Two men sacrifice a bovine beside the vineyard (L→R)	Grape arbors on pergolas Gardeners harvest grapes Grape arbors on pergolas	Tree avenue T-Shaped pool Tree avenue	Nebamun and priest offer at shrine (L→R)	Tree avenue	Shrine of Amenhotep III (L→R)
		Tribute carried by Nebamun (L→R)	Gardeners carry grapes (L→R)	Vintners tread grapes (L→R) and offer to Renenutet (L→R)	Two rows of wine jars (L→R)		Nebamun inspects vintage from the k3mw-formal garden (L→R)		House (L→R)
		Tribute carried by Nebamun (L→R)	Servants w/ foodstuffs (L→R)	Guests arrive for the Harvest Festival banquet (L→R)			Wife and daughter receive and welcome guests in front of house (L→R)		
		Military guests arrive (L→R)	Butchery scenes (L→R)					Seated Nebamun receives feast and two servants (L→R)	
		Dado?							

*Formal Garden Scene:* See Appendix I Part II

*Description and Relevant Texts:*

<sup>198</sup> For the German translation see Guksch, *Die Gräber des Nacht-Min und des Men-cheper-Ra-seneb*, p. 64; and for the hieroglyphic text, see Sethe, *Urkunden* IV, nos. 1177-1778.

<sup>199</sup> Hartwig, *Tomb Painting and Identity in Ancient Thebes*, fig. 30.

This wall narrative begins with scenes of Nebamun offering tribute to Thutmose III standing and then enthroned in a pavilion. The narrative transitions to a number of scenes centered around Nebamun making offerings in the formal garden of an Amenhotep III shrine.<sup>200</sup> Offering-bearers carry bread and fowl towards two men who sacrifice a bovine beside the formal garden's entrance, likely to Renenutet for the Harvest Festival.<sup>201</sup> The formal garden proper follows: a gated enclosure with a central path leading to grapevines on pergolas, being harvested by two gardeners. The path continues on a central axis to a T-shaped pool<sup>202</sup> bordered by two tree avenues.<sup>203</sup> At the terminus of the formal garden is the Amenhotep III shrine flanked by a pair of trees. At the shrine's entrance, Nebamun libates into a lotus-shaped vase and a priest offers pintail duck and *Lotus* spp. while reciting a prayer that alludes to the *k3mw*-formal garden's abundance:



*wdn ht nbt nfrt w<sup>c</sup>bt h3 ihw wt 3pd sšn*  
*inh3s hnm nb hsty [n 'Imn-R']...in t3ty sryt Nb-Imn...*

Offering good and pure things, a thousand oxen, goats, fowl, fragrant lotus blossoms and lotus buds, [and] all favored herbs [to Amun-Ra<sup>204</sup>]...by the standard-bearer Nebamun...<sup>205</sup>

The narrative continues with gardeners carrying grapes from the formal garden's pergolas to six vintners treading grapes in an ornately carved and gilded press with a papyrus column pavilion.

<sup>200</sup> The doorjambs of the shrine bare a dedication with his praenomen.

<sup>201</sup> "[Renenutet] is mostly represented in harvest or in wine making, filling wine jar scenes, control of the assets to be stored," see Paolo Marini, "Renenutet: Worship and Popular Piety at Thebes in the New Kingdom," *JIA* 2 (2015): p. 77; also see Henri Wild, « Contributions à l'iconographie et à la titulature de Qen-amon, » *BIFAO* 56 (1956): p. 213.

<sup>202</sup> The pool appears empty due to paint deterioration but likely had *Lotus* spp.

<sup>203</sup> The trees cannot be identified because of the paint deterioration.

<sup>204</sup> To evoke Amun-Ra here is to also evoke Renenutet because the goddess was "the guardian of the granary and protector of the fields [and estates linked to] the temple of Amun, as well as, protector of food." See Marini, "Renenutet: Worship and Popular Piety at Thebes in the New Kingdom," p. 73.

<sup>205</sup> See the reconstruction of the text in Helck, *Urkunden* 17-22, no. 1625; and its translation in Norman de Garis-Davies, *et al.*, *The Tombs of Two Officials*, (London: EES, 1923), p. 30.

The vintners ritually say to an image of the cobra-goddess Renenutet for the Harvest Festival:



*n k3.t Rnnwtt imi df3w*

For your *ka*, Renenutet, giving produce.

While, Nebamun inspects to two rows of wine amphorae:



*ỉry-pꜣt ftiw p3 k3mw*

Hereditary nobleman, the one who causes the grapevines to be pressed.

The wall narrative now transitions to Nebamun's house where a banquet occurs for the Harvest Festival. Servants bring festival food and produce, such as: cos-lettuce, grapes, *Lotus* spp. blossoms, muskmelon, Christ's thorn fruit, persea fruit and/or mandrake, and honey (= honey bees). Nebamun ushers military and high-ranking guests to his wife and daughter who greet them in front of their house. Meal preparation and Nebamun enjoying the feast ends the narrative.

### TT 39 (Puimra) – sš-formal garden

*Date:* Hatshepsut-Thutmose III

*Location:* El-Khokha

North – left rear wall of transverse hall

*Wall Narrative* (See the next page)<sup>208</sup>: Inspecting setting

*Description and Relevant Text:*

This wall narrative begins with Puimra who inspects six registers of food offerings and a cattle yard. The sš-formal garden scene follows, containing a duck and fish pond (sš) with *Lotus* spp., pintail ducks, and *Tilapia* spp. Avenues of *doum*- and date palms and sycamore figs and

<sup>206</sup> See the reconstruction of the text in Helck, *Urkunden* 17-22, no. 1625; and its translation in Davies, *et al.*, *The Tombs of Two Officials*, p. 31.

<sup>207</sup> See the reconstruction of the text in Helck, *Urkunden* 17-22, no. 1625; and its translation in Davies, *et al.*, *The Tombs of Two Officials*, p. 31.

<sup>208</sup> Based on plate XVIII in Norman de Garis-Davies and Mahmoud Saba, *The Tomb of Puyemrê at Thebes*, (New York: MMA, 1922), p. 55; and the wall's description in Porter and Moss, *Topographical Bibliography* I, p. 71.

common figs border the pond.<sup>209</sup> Three registers of servants who carry the formal garden's produce, such as: white lotus blossoms; papyrus blossoms, mandrakes, persea fruit,<sup>210</sup> muskmelon, and *Tilapia* spp. follow. Puimra sits and inspects the produce from his *sš*-formal garden:



*m33 nfr n sš.f in...*

Inspecting the abundance of his *sš*-formal garden by...

The wall narrative ends with Puimra standing and inspecting six registers of Domain of Amun workshops<sup>212</sup> and agricultural scenes.

hkr-frieze?								
Doorway			Puimra seated inspects cattleyard and food (badly damaged) (L←R)		Tree avenues			
	3 registers of food offerings (L→R)	3 registers of cattleyard and cattle offerings (L→R)			Tree avenues	Fish and bird pond	Tree avenues	3 registers of servants w/ formal garden's produce (L→R)
					Tree avenues			
	Puimra seated inspects formal garden's produce (L←R)					Standing Puimra inspects harvest (L←R)		
		3 registers of Domain of Amun workshop scenes (L→R)	3 registers of argicultral scenes (L→R)					
	Dado							

*Formal Garden Scene: See Appendix I Part II*

## TT 96 (Sennefer) – *t-nt-ht*-formal garden

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna

East – Left front wall of transverse hall

*Wall Narrative:* Festival setting

<sup>209</sup> Due to paint deterioration, only the sycamore fig is identifiable. Other species were likely present because of the diversity of formal garden's produce carried by the servants.

<sup>210</sup> Mandrakes and persea fruit are often indistinguishable in Egyptian art. This is noted in their pictorial study by Keimer and Germer, *Die Gartenpflanzen* I, pp. 172-173, 176-177.

<sup>211</sup> Davies and Saba, *The Tomb of Puyemrê at Thebes*, p. 55, pl. XXI.2.

<sup>212</sup> Louant, *Comment Pouiemrê triompha de la mort*, pp. 38, 42-43.

bkr-fence?															
Enclosure wall	Enclosure wall								Tree avenue	Canal	Sennefer presents formal garden's produce and wares to Amenhotep II for New Year's Festival (L→R)	Offerings of formal garden's produce (L→R)	Sennefer presents the offerings to Amenhotep II for New Year's Festival (L→R)	Amenhotep II receives formal garden's produce and wares enthroned in kiosk (L→R)	
	Tree avenue														
	Tree avenue		Tree avenue		Walled tree grove	Water garden	Tree avenue								Gate: Tree av. Gate:
	Pavilion	Pool	Water garden	Gate			Tree avenue								
					Shrubbery		Gate								Water garden
	Tree avenue		Tree avenue		Tree av.										
	Four tree avenues	Water garden	3 pergolas with grapevines				Gate of Amenhotep II								
		Shrine	Pathway			Gate									
		Shrine	3 pergolas with grapevines												
		Florist workshop													
Tree avenue	Tree avenue		Gate	Tree avenue		Tree av.									
	Shrubbery	Pool		Water garden	Walled tree grove	Water garden	Pool	Gate an.							
	Tree avenue		Pavilion						Tree avenue						
	Tree avenue			Tree avenue		Tree avenue									
Tree avenue								Enclosure wall	Tree avenue						
Enclosure wall															
Date?															

*Garden Scene:* see Appendix I Part II

*Description and Relevant Text:*

An *ṯ-nt-ḥt*-formal garden in the Domain of Amun begins the wall narrative. The formal garden is fronted by a canal with a quay, a propylon gate dedicated by Amenhotep II, an enclosure wall, and avenues of sycamore figs and two other types of trees. An avenue of date palm, *doum*-palm, and trees border four walled *š*-formal gardens within the enclosure. The first two walled gardens are symmetrically planned on either side of the Amenhotep II gate. Their pools contain *Lotus* spp., curled pondweed, and pintail duck. Avenues of date palms, papyrus, and deciduous trees flank the pool. Beyond are two walled tree groves (*wṯb-ḥt*).

A large walled *k3mw*-formal garden of six pergolas with grapevines is in the center of the *ṯ-nt-ḥt*-formal garden, leading to a water garden with papyrus, a tripartite Amun shrine with three statuary groups<sup>213</sup> with bouquet and offering tables, a florist workshop and a storehouse. Two additional walled *š*-formal gardens are adjacent to the tripartite shrine. Their pools have lotus, curled pondweed, and pintail duck and are surrounded by two water gardens of papyrus and avenues of date palm and deciduous trees. Pavilions with shrubs are adjacent to the pools along

<sup>213</sup> The first statue shows Amenhotep II striding in prayer. The second statue shows Amenhotep II kneeling with *nw*-jars (?) in front of a seated image of a god, possibly Amun-Ra (?). Cf. to the granite kneeling dyad of Horemheb and Atum seated in the Luxor Museum (JE 37394/CG 42052). The third statue is destroyed but the offering tables remain.

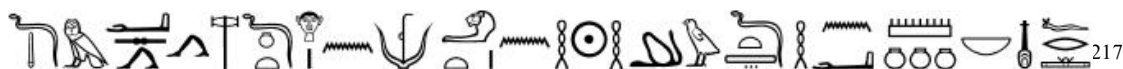
with three more avenues of date palm, *doum*-palm, and trees. Next is Sennefer who presents the produce from the *ʿt-nt-ḥt*-formal garden to Amenhotep II for the New Year's Festival:



*m ʿ{š} st šzw sʿrt rnp(w)t nb(w)t m tpy nt tw ʿt-nt-ḥt  
 ir.n ḥm.f m3wt n it.f ʿImn...Sn-nfr m3ʿ-ḥrw...  
 sʿr(w) ḥ3t rnp(w)t nb(w)t n <t> tw ʿt-nt-ḥt n ḥm.f  
 m ḥrt-ḥrw nt rʿw-nb r ḥrp st r ḥwt-ntr n <t> ʿImn rʿw-nb*

Commanding the plucking<sup>215</sup> of the trees and flowers<sup>216</sup> and presenting every fresh flower, fruit and vegetable from the finest of it, the *ʿt-nt-ḥt*-formal garden, which His Majesty made anew for his father Amun-Ra...Sennefer, justified...who presents all the finest fresh flowers, fruits and vegetables of it, the *ʿt-nt-ḥt*-formal garden, to His Majesty daily [and] in order to offer them to the Temple of Amun every day.

Sennefer presents the *ʿt-nt-ḥt*-formal garden's produce such as: papyrus, blue and white lotus, mallow bindweed, dates, *doum*-fruit, grapes, sycamore figs, common figs, pomegranates, persea fruit, mandrakes, Christ's thorn fruit, and incense (incense trees). The narrative ends with an additional three registers of New Year's Festival gifts: statues and wares, followed by Sennefer who stands in front of Amenhotep II enthroned in one of the formal garden's pavilions, saying:



*dd mdw n ʿ{š} ndt-ḥr n wpt-rnpt ḥ3t n nhḥ pḥw dt ḥnʿ mnw nb(w) nfr(w)*

Words spoken: summoning gifts for the New Year's Festival – the beginning of eternity, which reach out forever together with every kind of beautiful portable gift.

<sup>214</sup> See the hieroglyphs in Helck, *Urkunden* IV, nos. 1417-1418.

<sup>215</sup> Lesko and Lesko, *A Dictionary of Late Egyptian* II, p. 96.

<sup>216</sup> Lesko and Lesko, *A Dictionary of Late Egyptian* II, p. 105.

<sup>217</sup> Helck, *Urkunden* 17-22, nos. 1417-1418.

## TT 161 (Nakht) – *ḥrrt-š*-formal garden

Date: Amenhotep III

Location: Dra'a Abu el-Naga

West – left side wall of passage

Wall Narrative: Festival setting

Left rear wall		Left side wall												
		ḥkr-frieze												
Nakht and his wife Tahmet offer to statues of Amun-Ra and Mut for the Beautiful Festival of the Valley (L←R)		Four sons bring floral offerings from the formal garden (L←R)		Text about festival banquet to the right	Sons and daughters bring floral offerings and formal garden produce to their parents for the festival (L→R)						Nakht and wife receive formal garden's produce (L←R)			
					10 male guests served festival food (L→R)		Festival food	Musicians (L→R)		Nakht and wife seated for meal (L←R)				
		Four daughters bring floral offerings from the formal garden (L←R)			10 female guests served festival food (L→R)			Musicians (L→R)						
					Water garden	Hsp-garden	Hsp-garden and gardeners	Nakht inspects garden (L←R)	Florist workshop (?) and hsp-garden	Tree grove and gardener (L→R)	Hsp-garden	Tree grove and gardener (L→R)	Sons and daughters served festival food (L←R)	
					Hsp-garden	Pond	Hsp-garden and gardeners		Florist workshop (?) and hsp-garden		Hsp-garden			
Dado?														

Garden Scene: see Appendix I Part III

Description and Relevant Text:

The *ḥrrt-š*-formal garden scene is the focus of this wall narrative. The garden scene begins with a water garden of papyrus beside arbors and a pond with *Lotus* spp., *Tilapia* spp., *Labeo* spp., *Syndontis* spp., and Egyptian trunkfish (*Mormyrus niloticus* Bloch & Schneider).<sup>218</sup> An additional five *hsp*-plots with flowers and trees are tended by nine gardeners and inspected by Nakht. Two storehouses and/or florist workshops, date palms, and persea are located adjacent to the third and sixth *hsp*-plots. Two registers with Nakht's sons and daughters carrying bouquets and produce from the formal garden follow. The flora and fauna species include blue and white lotus blossoms, papyrus blossoms, *doum*-fruit, pomegranates, *doum*-fronds, persea fruit, mandrakes, cos-lettuce, mallow bindweed, grapes, honey (= honey bees), pintail duck, and mallard duck. Nakht and his wife Tahemet offer bouquets and produce from the *ḥrrt-š*-formal garden to statues of Amun-Ra and Mut for the Beautiful Festival of the Valley saying:



<sup>218</sup> “The Egyptian vernacular *boueza*, refers to t[he] characteristic...[of] an elongated...straight snout,” according to Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, pp. 51-52.



*prrt nbt hr wḏhw n 'Imn...*

Everything that comes forth from the offering place that bares fruit/is planted/is ripened<sup>219</sup> for Amun...<sup>220</sup>

The next phase of the narrative is the Beautiful Festival of the Valley feast with Nakht and Tahemet as participants. Nakht and Tahemet receive the formal garden's bouquets and produce from their sons and daughters, these include: Amun bouquets<sup>221</sup> made of white and blue lotus blossoms, papyrus blossom, mallow bindweed, *doum*-fruit and *doum*-fronds, opium poppy, low cornflower, mandrakes, persea fruit, and produce, such as: grapes, muskmelon, Christ's thorn fruit, cos-lettuce, and dates. The end of the narrative depicts a Beautiful Festival of the Valley feast taking place with many guests, who enjoy food and music alongside amphorae and bouquets of blue and white lotus, papyrus, and lesser bindweed blossoms (*Convolvulus arvensis* L.).

## Discussion

The layouts, architecture, water features, and evidence of these five types of Domain of Amun formal gardens are discussed in order of their appearance: (i) the *ḥnty-š*-formal garden, (ii) the *kṣmw*-formal garden, (iii) the *sš*-formal garden, (iv) the *ʿt-nt-ḥt*-formal garden, and (v) the *ḥrrt-š*-formal garden. While, the discussion of the flora and fauna and significance of these five Domain of Amun formal gardens are synthesized together for a more comprehensive and concise analysis.

### The *Ḥnty-š*-Formal Garden: Layouts, Architecture, and Water Features

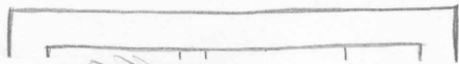

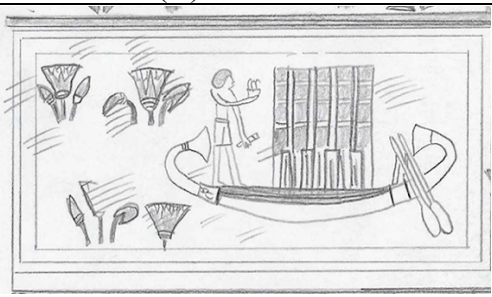
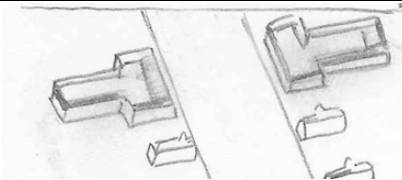
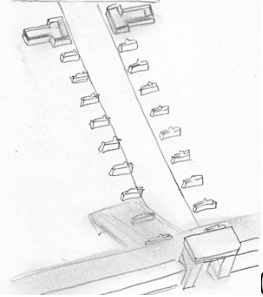


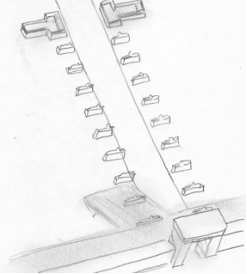

By examining the TT 87 scene, as well as extant archaeological, textual, and pictorial evidence, a *ḥnty-š*-formal garden was constructed in various layouts during this period. The formal garden

---

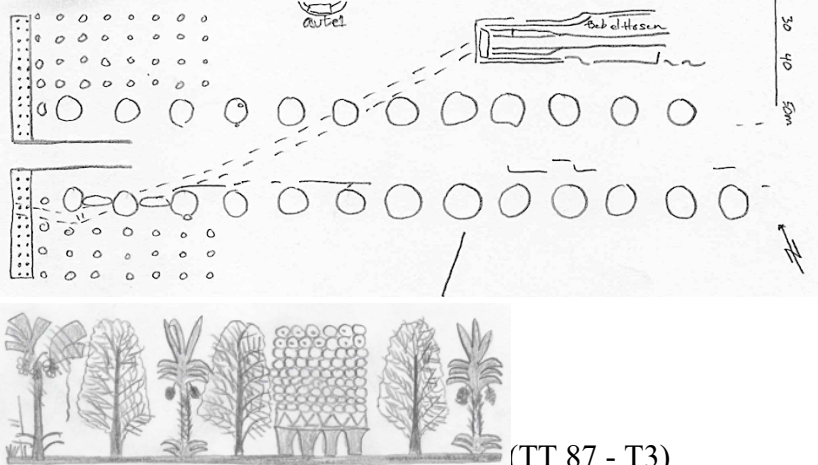
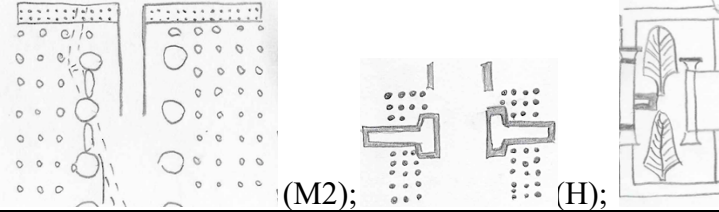
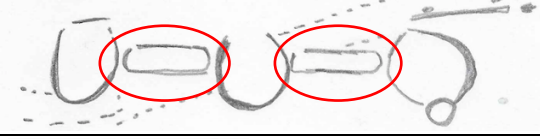

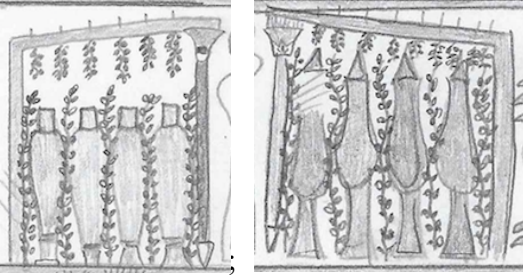

<sup>219</sup> Manniche translates this as “offering table” in “The Tomb of Nakht, The Gardener, at Thebes (no. 161) as Copied by Robert Hay,” *JEA* 72 (1986): p. 58, inscription 13. The translation could be more specific as *wḏhw* due to the fruit on the table in the palaeography and the formal garden's function as an offering place to Amun. Also, *wḏh* as a verb means “to bear fruit; to ripen; to be planted,” according to Erman and Grapow, *WB* I, no. 410.

<sup>220</sup> This text alludes to the formal garden and Nakht and his sons' roles in its cultivation.

<sup>221</sup> The inscription above the siblings reads, “coming with bouquets of Amun when he rests in his temple. May he praise you and love you. To your *ka*...Nakht...Tahemet, justified.” See Manniche, “The Tomb of Nakht,” p. 59, inscription 14.


Table 3.0: Possible Features of a <i>Hnty-š</i> -Formal Garden <sup>222</sup>	
Enclosure walls ( <i>pr</i> )	 (T3)
Propylon gates ( <i>sbꜣ</i> )	 (H)
Lakes ( <i>mr</i> ) and quays ( <i>dm̄t</i> ; <i>mryt</i> )	 (TT 87 - T3)
Pools ( <i>š</i> )	 (H)
Processional ways ( <i>st-sw̄wt</i> )	 (H);  (TT 87 - T3)
Pavilions ( <i>mꜣrw</i> )	 (TT 87 - T3); also see the Qenamun text on pp. 74-75 (A2)
Statuary: sphinxes ( <i>mꜣi</i> ; <i>sšp</i> ) and striding figures ( <i>hnty</i> )	 (H);  (TT 87 - T3)

<sup>222</sup> Photographs by author and drawings by author © 2020, after the Charles K. Wilkinson (1921) facsimile (MMA 30.4.56), Hugonot (1989), Geßler-Löhr (1991), and/or the 3D model reconstructions by Altair4 Multimedia (2020).


Tree avenues ( <i>ht</i> )	 <p>(M2);</p> <p>(TT 87 - T3)</p>
Tree groves ( <i>mnw</i> )	 <p>(M2); (H); (TT 87 - T3)</p>
<i>hsp</i> -plots (planting beds; circled in red)	 <p>(M2)</p>
Garden altars ( <i>h</i> ) <i>z</i> w(y) <i>t</i> ; w <i>d</i> <i>h</i> w; <i>ʿb</i> <i>z</i> )	 <p>(M2)</p>
Arbors and/or pergolas ( <i>kzmw</i> )	 <p>(TT 87 - T3)</p>
Memorial temple ( <i>hwt nt h</i> <i>h</i> w n rnpwt)	 <p>(TT 87 - T3)</p>

might range from a large enclosure with a central pathway bordered by small pools, tree avenues and groves (See A3.16) to one focused around a rectangular lake, bordered by tree avenues, arbors, and pavilions (See A3.18). If the layout had a pool, it might be T-shaped and among tree groves (See A3.16) while those with lakes had edging-stone, quay access, and tree avenues (See A3.18). Lakes of *hntyw-š*-formal gardens could be named.<sup>223</sup> The layout could include straight and medium to high mudbrick or limestone enclosure walls, which were entered through a small propylon gate or one placed between a set of pylons (See A3.16, A3.18). Architecture, such as processional ways, quays, porticos, arbors, pergolas, and garden altars might be featured in the layout (See A3.15, A3.18). Light-rooted pavilions with wooden and painted papyriform columns were placed among the rows of trees with seating, and tables for food and drinks for festivals. Statuary, such as human-headed sphinxes might line pathways while private striding statuary<sup>224</sup> could be showcased in pavilions (See A3.16, A3.18). Avenues were placed beside the pools/lakes while pairs of trees or groves flanked the entrance of a processional way or memorial temple proper (See A3.16, A3.18). Sometimes groves had *hsp*-plots or altars set in between them (See A3.15).







### **Extant Evidence of *Hntyw-š*-Formal Gardens during this Period**

From the Old to Middle Kingdom, the term *hntyw-š* was used in relation to inundated land, pyramid-temple cults, and tenant farming, not developing a context associated with gardening on a large scale until the New Kingdom.<sup>225</sup> The singular is *hnt(y)-š* () while the plural

<sup>223</sup> See pp. 62, 67 of this work.

<sup>224</sup> It is intriguing that striding statues with sticks or staves were called *hnty* () in Egyptian. The placement of such a statue in a *hntyw-š*-formal garden aligns well with the formal garden's philological significance described on pp. 59-60 of this work.

<sup>225</sup> Rainer Stadelmann, „Die *hntyw-š*, der Königsbezirk SNPR und die Namen der Graben Langen der Frühzeit,“ *BIFAO* 81 (1981): p. 154; Rainer Stadelmann, « La ville de pyramide à l'Ancien Empire, » *RdÉ* 33 (1981): pp. 74-75; Christopher J. Eyre, “The water regime for orchards and plantations in pharaonic Egypt,” *JEA* 80 (1994): p. 69; Hugonot, *Le jardin dans l’Egypte ancienne*, p. 247; Hassan Selim, “Two unpublished Eighteenth Dynasty stelae from the reign of Thutmose III at the Cairo Museum TN 20.3.25.3 and TN 21.3.25.14 (pl. I-II),” in *Studies in honor of Ali Radwan II*, eds. by Khaled A. Daoud, *et al.*, (Cairo: CSAE, 2005), p. 331; El-Maenshaw, “Aspects of the office of temple gardener in ancient Egypt,” pp. 58-59.

is *hnt(y)w-š* (). It is the author's opinion that in a gardening context, an updated, literal translation from the Egyptian could be 'the foremost of the *š*-formal garden(s),' as both *hnt* () and *hnty* () were used as prepositions to mean "foremost of."<sup>226</sup> The term is further related to the verbal root *hnt*, such as: *hnti* () or "to be pleased, to be glad"<sup>227</sup>; *hntš* () or "to have enjoyment"<sup>228</sup>; and *hntš* () to walk about freely, to stroll,"<sup>229</sup> alluding to how formal gardens – as a tangible, living offerings – would be pleasurable, relaxing, and enjoyable to the gods and visitors. This interpretation has premise because the following archaeological, textual, and pictorial evidence indicates that *hntyw-š*-formal gardens were built in palace complexes for pleasure, and more notably, in the memorial temples of pharaohs (Temples-of-Millions-of-Years), which were located in inundated fertile land (*bḥ*) and were the seats of the cult of the glorified king and Amun in his form as Osiris the 'Foremost of Westerners' (*hnty-imnt*).

The earliest archaeological evidence of a *hnty-š*-formal garden in Thebes comes from the Middle Kingdom memorial temple of Montuhotep II at Deir el-Bahari, dated to the Eleventh Dynasty (See A3.15). The idea of a *hnty-š*-formal garden in a memorial temple of a pharaoh might have even become fashionable because of Montuhotep II. His *hnty-š*-formal garden was planted in the enclosure of the first court of his memorial temple on either side of a central processional way lined with avenues of 22 sycamore figs (See Table 3.0). Before the processional ramp and lower porticos of the temple were: a double grove of 55 tamarisk varieties, such as *farash*-tamarisk (*Tamarix articulata* Vahl) and *athel*-tamarisk (*Tamarix aphylla* L. Karst.), which were medium in

<sup>226</sup> Seidlmayer and Hafemann, s.v. "*hnt* and *hnty*," in *TLA*,  
[http://aaew.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=119040&db=0](http://aaew.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=119040&db=0;);  
<http://aaew.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=119130&db=0>.

<sup>227</sup> Seidlmayer and Hafemann, s.v. "*hnti*," in *TLA*,  
<http://aaew.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=118850&db=0>.

<sup>228</sup> Faulkner, *A Concise Dictionary of Middle Egyptian*, p. 195.

<sup>229</sup> Faulkner, *A Concise Dictionary of Middle Egyptian*, p. 195.

size (10 cm or 4 in in diameter); rectangular *ḥsp*-plots full of flowers (1.75-1.85 m x 6.80 m or 5.7-6.1 ft x 22 ft)<sup>230</sup> planted in between the groves; and a large individual sycamore fig with a sizable mudbrick altar beneath it<sup>231</sup> (See Table 3.0). The formal garden was likely dedicated to Amun, as one of the temple's names was 'Transfigured-are-the-Places-of-Amun.'<sup>232</sup>

The earliest textual evidence of a *ḥnty-š*-formal garden linked to the Amun cult at Thebes comes from Ahmose I's ancestors of the Seventeenth Dynasty. Tetiky (TT 15), who was 'King's Son' and 'Mayor of Thebes' from the reign of Ahmose I to Amenhotep I, declares on an inscribed offering table in his tomb that his father Rahotep was an 'Overseer of the *Ḥntyw-š*-Formal Gardens of Amun.'<sup>233</sup> Rahotep likely worked in the *ḥntyw-š*-formal gardens of Thebes-West under Seqenera Ta'a, Kamose the Brave, and Ahmose I due to their short reigns.<sup>234</sup> Rahotep's position implies that *ḥntyw-š*-formal gardens existed in the Theban landscape during the kings' reigns, although, their archaeological and/or archaeobotanical remains have yet to be discovered. From textual evidence, Seqenera Ta'a, Kamose, and Ahmose I certainly had funerary monuments in Thebes-West that could have had the formal gardens overseen by Rahotep, as they and even Montuhotep II's memorial temple, were among the monuments inspected for looting in the Abbott Hieratic Papyrus (pBM EA 10221) or 'Royal Tomb Robbers Papyrus' dated to Ramesses IX.<sup>235</sup>

Amenhotep I was the first Eighteenth Dynasty pharaoh to build his tomb separately in the

---

<sup>230</sup> Flower stems and roots were found but have yet to be identified, unfortunately. See Arnold, *Der Tempel des Königs Mentuhotep von Deir el-Bahari* I, pp. 22-24, pls. 15a, 19a; Hugonot, *Le jardin dans l'Égypte ancienne*, p. 65.

<sup>231</sup> Arnold, *Der Tempel des Königs Mentuhotep von Deir el-Bahari* I, pp. 22-24, pls. 15a, 19a, 49, 50; Hugonot, *Le jardin dans l'Égypte ancienne*, pp. 64-65, fig. 49.

<sup>232</sup> Arnold, *Der Tempel des Königs Mentuhotep von Deir el-Bahari* II, p. 90.

<sup>233</sup> Georges Legrain, "The Paintings and Inscriptions of the Painted Vaulted Chamber of Teta-Ky," in *Five Years' Explorations at Thebe*, by Howard Carter, *et al.*, (London; New York: H. Frowde, 1912), p. 19.

<sup>234</sup> The length of Ahmose I's reign is disputed; however, he is generally given a 25-year reign. His predecessor and brother Kamose is given a five-year reign; and their father Seqenenra Ta'a is given a possible two to three-year reign. See Janine Bourriau, "The Second Intermediate Period," in *The Oxford History of Ancient Egypt*, ed. by Ian Shaw, (Oxford: OU Press, 2000), pp. 197-206, and the chronology of kings, p. 484.

<sup>235</sup> See Breasted, *Ancient Records of Egypt* IV, p. 256, §518-520; also note the mention of *Dsrt*, which is a toponym for the Theban Necropolis on the West Bank of Luxor.

Valley of the Kings (KV 36?), as well as have a memorial temple for his deified cult on the West Bank of Thebes.<sup>236</sup> Any evidence of a *hnty-š*-garden there from the time of Amenhotep I has likely been concealed and/or has been demolished, as Hatshepsut built her own memorial temple's first terrace above his own.<sup>237</sup> Like his grandfather (Seqenenra Ta'a), uncle (Kamose), and father (Ahmose I), it is possible Amenhotep I had planted a *hnty-š*-formal garden at his temple.

Regarding Thutmose I, a *hnty-š*-formal garden was likely planted at his memorial temple, as the temple and the formal garden's lake (*mr*) are personified as a pair of fecundity figures on the Red Chapel of Hatshepsut (Block 290):

Female fecundity figure with a text in a *hwt*-ideogram above her head:



*hwt ʿz-hpr-k3-rʿ hnmt-ʿnh(t)*<sup>239</sup>

The Temple of A'akheperkara (called) 'The-One-United-with-the-West (Necropolis).'

Male fecundity figure holding a *mr*-ideogram beside her, saying:



*mr nīswt ʿz-hpr-k3-rʿ dd mdw inī n.k ht nb(t) rnpwt mnwt nb(wt) kbb(wt) wʿb(w)t imī*

The lake of the king (called) 'Great-is-the-Manifestation-of-the-*k3*-of-Ra.'

Words spoken: I bring to you everything, all the fresh and pure offerings that are in me.

Ineni (owner of the TT 81 scene) might have assisted in the memorial temple and *hnty-š*-formal garden's construction, as he was an 'Architect' during the pharaoh's reign. Archaeological evidence of the lake and the rest of *hnty-š*-formal garden has yet to be found. This is likely because

<sup>236</sup> Betsy M. Bryan, "The 18th Dynasty before the Amarna Period (c. 1550-1352 BC)," in *The Oxford History of Ancient Egypt*, ed. by Ian Shaw, (Oxford: Oxford University Press, 2000), p. 226.

<sup>237</sup> Bryan, "The 18th Dynasty before the Amarna Period (c. 1550-1352 BC)," p. 226.

<sup>238</sup> Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, p. 79.

<sup>239</sup> See the use and translation of *hnmt-ʿnh(t)* in Erman and Grapow, *WB III*, no. 379.1.

<sup>240</sup> Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak I*, p. 80.

the temple is located in inundated land (*bꜥh*) that flooded and silted up each year prior to the High Aswan Dam’s construction in the 1960s.<sup>241</sup>

Thutmose II might have intended to plant a *hnty-š*-formal garden in his memorial temple on the West Bank had he not died young, only reigning for 13 to 14 years.<sup>242</sup> Scholars have proposed that Hatshepsut’s memorial temple initially began as Thutmose II’s and that she later converted it to her own temple following her ascension to the throne as coregent and pharaoh.<sup>243</sup>

Concerning Hatshepsut, the half-sister and a great wife (queen) of Thutmose II and coregent and stepmother of Thutmose III, there is archaeological evidence for a *hnty-š*-formal garden in the first court of her memorial temple at Deir el-Bahari with two T-shaped pools (*š*), two groves of around 42 Puntite incense trees, date palms, human-headed sphinxes (MMA 31.3.166), and two pairs of persea in front of the propylon gate and first processional stairway.<sup>244</sup> Textual evidence of her *hnty-š*-formal garden also exists from the Punt Expedition reliefs on the Second Terrace and the Amun sanctuary reliefs on the Third Terrace that mentions it as an offering:

Punt Expedition reliefs:



*srd.tn M3ꜥt-k3-rꜥ m [hnt(y)-š.f hr gswy] hwt-ntr.f mi ḥd.t n it. <t>*<sup>245</sup>

Your planting of trees, Ma’atkara in his *hnt(y)-š*-formal garden on the two sides of his temple, is like your brightness to your father.

Amun sanctuary reliefs:

<sup>241</sup> Jadwiga Iwaszczuk, “Temple of Thutmose I – *Hnmt-ꜥnh*,” in *Sacred Landscapes of Thebes during the Reign of Hatshepsut: Royal Construction Projects I: Topography of the West Bank*, (Warsaw: IKŚiO PAN, 2017), p. 137.

<sup>242</sup> Jürgen von Beckerath, *Chronologie des pharaonischen Ägypten*, (Mainz am Rhein: PvZ, 1997).

<sup>243</sup> Zygmont Wysocki, “The temple of queen Hatshepsut at Deir el-Bahari: Its original form,” *MIDAIK* 42 (1986): pp. 213–228; Bryan, “The 18th Dynasty before the Amarna Period (c. 1550-1352 BC),” p. 226.

<sup>244</sup> Winlock, *Excavations at Deir el-Bahari 1911-1931*, fig. 12, p. 213.

<sup>245</sup> Sethe, *Urkunden* IV, no. 328.

<sup>246</sup> A mixture of suffix pronouns is used in Hatshepsut’s texts. Sethe put *it.s* but *it.t* agrees more with the preceding *ḥd.t*. See Sethe, *Urkunden* IV, no 328.



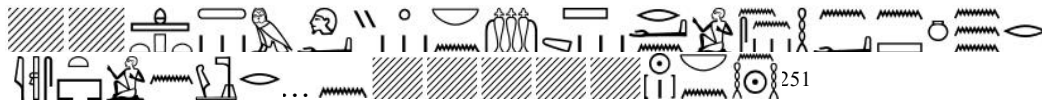


wdt mnw...hr gswy hwt-ntr.f m hnt(y)-š.f...r smnh bw šwt n š n [nb ntrw]

The installation of tree groves...upon the two sides of his temple in his hnt(y)-š-formal garden<sup>248</sup>...in order to embellish and purify the reeds in the pool of [the Lord of the Gods.]

There is even a granite kneeling statue of Hatshepsut (MMA 30.3.1) with nw-jars as ‘Ma’atkara-who-Offers-Fresh-Produce-to-Amun’ that was placed with others (MMA 30.3.2; 29.3.1) on the processional way or sometimes within the Amun sanctuary at Deir el-Bahari (See Table 3.0).<sup>249</sup>

A quartzite statue of her ‘Chief Architect’ Senenmut from Karnak Temple further confirms the continued presence of the other hntyw-š-formal gardens, as one of his titles was an ‘Overseer of the Hntyw-š-Formal Gardens of Amun’ during the reign of Hatshepsut.<sup>250</sup> Senenmut even listed in his tomb (TT 71) that he desired three bundles of offerings arranged in the hntyw-š-formal gardens presented to him daily, as well as a water vessel for them:



...hptw m tpy-(wi) 3 nb n hnt(y)w-š r.n. i n.sn hn nšw r is. i n hrt-ntr r...n...r-nb n nhh

...3 bundles of offerings, each of the best quality, from the hntyw-š-formal gardens. I will be given them together with a water vessel for my tomb in the necropolis, for...of...every day forever.

For Thutmose III, a hmst-nšwt or “Sitting of the King Announcement”<sup>252</sup> on the Sixth

Pylon of Karnak details he continued to administer the hntyw-š-formal gardens of Amun at Thebes:

<sup>247</sup> Sethe, *Urkunden* IV, nos. 352-353.

<sup>248</sup> The use of “his” here is likely referring to Amun.

<sup>249</sup> Cathleen A. Keller, “The Statuary of Hatshepsut,” in *Hatshepsut, from Queen to Pharaoh*, eds. by Catherine H. Roehrig, et al., (New York; New Haven: MMA, 2005), p. 169.

<sup>250</sup> Margaret Benson and Janet Gourlay, *The Temple of Mut in Asher*, (Cambridge: CUP, 1899/2014), pp. 300, 306.

<sup>251</sup> Wolfgang Helck, „Die Opferstiftung des Šn.mwt,“ *ZÄS* 85 (1960): pp. 25, 32.

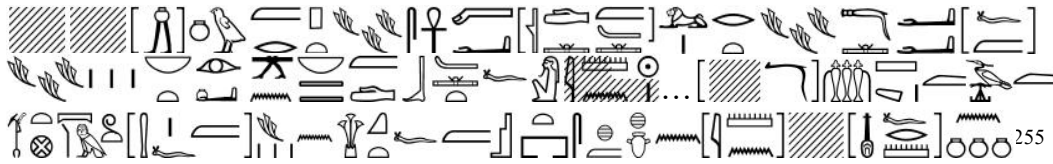
<sup>252</sup> Donald Redford, “Sittings of the King,” in Donald Redford, et al., *The Akhenaten Temple Project* IV, (Warminster: Aris and Phillips, 1988), p. 101.



*iw hnb.n.i n.f nhbt hnt(y)w-š hbsw ššw r hrp...[r htp ntr n r'-nb]...m grt rnpt...3pdw  
ntrw irp dkr ht nbt nftr m htr n tnw rnpt*

I requisitioned for Him many fields, [*hntyw-š*-formal gardens], and ploughlands...to provide...[for the daily divine offerings]...on a yearly basis...including fowl, incense, wine, fruit, and all good things from a tax quota of each year.<sup>254</sup>

Furthermore, a limestone stela (TN.20.3.25.3) discovered in Sheikh Abd el-Qurna and erected by Nefermenu (TT 138) during the reign of Thutmose III, suggests that the king constructed a *hnty-š*-formal garden and continued to maintain those of his predecessors' for Amun's enjoyment:



*...[i]nw m rnpwt s'nh [kd m h]rrt mh'wy.f m rnpwt nbt ir(.w) msw n nb-tzwy m-d bh it.f  
Imn-R'...[imy-rz] hnt(yw)-š m b'h m Wst hry kmzwt [hm.f m] rnpwt n hzkt.f m st shmh-  
ib n [Imn-R']...[Nfr-m]nw*

...bringing fresh flowers, fruits, and vegetables (*rnpwt*), the florist (*s'nh*)<sup>256</sup> [who forms with] fresh flowers (*hrrt*), who fills [his] two arms [with] all fresh flowers, fruits, and vegetables (*rnpwt*), who makes the bouquets of the Lord of the Two Lands as per the requirement by his father Amun-Ra...Overseer of the *Hntyw-š*-Formal Gardens in the inundated land (*b'h*) of Thebes, Chief of what [His Majesty has created from] fresh flowers, fruits, and vegetables (*rnpwt*)<sup>257</sup> of His plunder<sup>258</sup> in the recreation place<sup>259</sup> of [Amun-Ra]...[Neferme]nu.

Interestingly, according to the text, Nefermenu was a 'Florist,' a 'Chief of the Royal Florists,' and

<sup>253</sup> Sethe, *Urkunden* IV, no. 746; Redford, "Sittings of the King," p. 140.

<sup>254</sup> Sethe, *Urkunden* IV, no. 746; Redford, "Sittings of the King," p. 140.

<sup>255</sup> Selim, "Two unpublished Eighteenth Dynasty stelae from the reign of Thutmose III at the Cairo Museum TN 20.3.25.3 and TN 21.3.25.14 (pl. I-II)," pp. 329-330, fig. 1.

<sup>256</sup> Florists like sculptors were called *s'nh(w)* or literally 'those who cause/form life.'

<sup>257</sup> That is to say: the 'Chief of the Royal Florists.'

<sup>258</sup> This suggests that some of the bouquets arranged by Nefermenu and his colleagues in the *hntyw-š*-formal gardens of Thebes were created from the foreign flora that was brought back to Egypt from abroad.

<sup>259</sup> 'Recreation place' might be referring to the *hntyw-š*-formal gardens themselves or their pavilions (*mzrw*), see the text on the following pages from Qenamun (TT 93) about the harem pavilion in the *hnty-š*-formal garden of the Perunefer Palace, p. 68 of this work.

an ‘Overseer of the *Hntyw-š*-Formal Gardens in the Inundated Land (*bꜥh*) of Thebes,’ who created floral bouquets made of the foreign flora brought by Thutmose III from abroad. This ‘plunder’ is likely referring to the flora and fauna that were bought back by the Thutmose III as offerings to Amun from Syro-Palestine during his tour of the empire<sup>260</sup> in his Year 25 as per the *ꜥh-mnw*-temple’s inscriptions at Karnak:

Year 25 of the King of Upper and Lower Egypt, Menkheperra, may he be given life forever, plants were found by his Majesty in Syro-Palestine (*Rtnw*)...All sorts of beautiful and extraordinary plants were found in the God’s Land by his Majesty...in the northern lands under his authority.<sup>261</sup>

It is then evident that the foreign flora and fauna transported by Thutmose III from the Levant was disseminated for planting and cultivation in various formal gardens in Thebes proper and its West Bank, such as the *hntyw-š*-formal gardens that Nefermenu oversaw and made bouquets of foreign flora, as well as the other Domain of Amun gardens mentioned in this Chapter. In terms of pictorial evidence from the TT 87 scene, the *hntyw-š*-formal garden of Thutmose III’s memorial temple had a central rectangular lake and a quay with two tree avenues on each side, pavilions, a tree grove in front of the sanctuary and shrines, and statuary erected by private individuals and the king (See Fig. A1.16). The Spanish mission conserved the court depicted in the TT 87 scene of his memorial temple, which had eight trees planted in pits lined with limestone.<sup>262</sup> Minnakht seems to have been given permission to erect a striding statue of himself in one of the pavilions of the formal garden.<sup>263</sup> The date palms of the formal garden would have been maintained for a time by Samut who recorded on his statuary group in Paris (Louvre A. 53) that he was a ‘Chief Guardian of the Date

---

<sup>260</sup> This is often termed the ‘Third Military Campaign.’ However, it is a misnomer, as it was not military in nature, but was “an inspection tour” of the Northern Empire in the Levant, see Natalie Beaux, *Le cabinet des curiosités de Thoutmosis III*, (Leuven: Oriëntalistiek, 1990), p. 42.

<sup>261</sup> Beaux, *Le cabinet des curiosités de Thoutmosis III*, p. 40.

<sup>262</sup> See the photograph of the pits lined with limestone and the recently reintroduced trees on their Facebook page: <https://www.facebook.com/templofunerariodetutmosisIII/photos/pcb.2847920512153218/2847911892154080>.

<sup>263</sup> See the wall narrative of the TT 87 scene.

Palms in the Memorial Temple of Thutmose III<sup>264</sup> during the reign of Amenhotep II. The memorial temple and the lake (*mr*) of the *hnty*-š-formal garden are further personified as a pair of fecundity figures on the Red Chapel of Hatshepsut (Block 290):

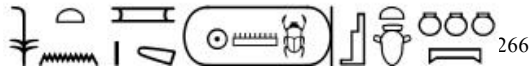
Female fecundity figure with a text in a *hwt*-ideogram above her head:



*hwt Mn-hpr-r Hnkt-nh*

The Temple of Menkheperra (called) ‘He-who-Offers-Life.’

Male fecundity figure holding a *mr*-ideogram beside her, saying:



*mr nswt Mn-hpr-r st ib Nwn*

The lake of the king Menkheperra (called) ‘The-Seat-of-the-Heart-of-Nun.’

The name of the formal garden’s lake recalls the Hermopolitan creation myth in which the Ogdoad joined together as frogs and snakes in the *primaeval* waters of Nun to form the mound of creation from which all life sprang forth. Diwya further recorded on his black granite statuette (JE 42122) that he was an ‘Overseer of the Construction Works of Amun in the Memorial Temple of Thutmose III,’<sup>267</sup> suggesting that he could have assisted in the formal garden’s construction. Archaeological evidence of the lake and the rest of the formal garden in the enclosure has not been discovered yet<sup>268</sup> This is likely due to the silting up of the inundated land (*bḥ*) on which it is located, the rui-

<sup>264</sup> Legrain, « Notes d’inspection sur le temple Manakhpri-henq-anh, » p. 187; Wilkinson, *The garden in ancient Egypt*, pp. 87-88.

<sup>265</sup> Lacau and Chevalier, *Une chapelle d’Hatchepsout à Karnak I*, p. 80.

<sup>266</sup> Lacau and Chevalier, *Une chapelle d’Hatchepsout à Karnak I*, p. 81.

<sup>267</sup> Legrain, *Statues et statuettes des rois et de particuliers I*, p. 72, left inscription (d); Legrain, « Notes d’inspection sur le temple Manakhpri-henq-anh, » p. 183.

<sup>268</sup> Iwaszczuk, “Temple of Thutmose III – *Hnkt-nh*,” in *Sacred Landscapes of Thebes during the Reign of Hatshepsut*, pp. 162-163.

-nous state of the structure, and the fact that a modern road runs through the enclosure.<sup>269</sup>

Amenhotep II's memorial temple located in proximity to the Ramesseum on the West Bank is poorly preserved with only parts of its stone wall foundations and colonnades intact.<sup>270</sup> A limestone stela of Nebwawy, who was a 'High Priest of Osiris' at Abydos (JE 34018) does detail that the pharaoh donated to the Memorial Temple of Thutmose III's "divine offerings, fields and a [single *hnty-š*-formal garden]."<sup>271</sup> Thus, if the Memorial Temple of Amenhotep II had had a *hnty-š*-formal garden, the Architect and Overseer Minmose likely assisted in its construction, as he is recorded on a statuary group dedicated by his father Minmose in the British Museum (BM EA 2200) as being an 'Overseer of Construction Works in the Temples of Upper and Lower Egypt' during the pharaoh's reign.<sup>272</sup> Moreover, Qenamun (owner of the TT 93 scenes), who was also an 'Overseer of the Perunefer Palace,' has a tomb scene that depicts him, officials, a young prince Amenhotep II, and the prince's tutor seated. According to the scene's texts, they are meant to be seated in the harem pavilion in the *hnty-š*-formal garden of one of the palaces at Perunefer in order to watch a performance of singers, dancers, and musicians:



*šhmh-ib m3 bw nfr hsi(wt) htbi(wt) šm<sup>c</sup>(wt) h<sup>c</sup>t ršwt m [bnr] ib m3(r)w [n ipt n] hm.f m hn[t](y)-š n Prw-nfr*

Enjoying the view of the beautiful place (and) the singers, dancers, (and) musicians, rejoicing with joy from the sweetness of heart (in) His Majesty's harem pavilion (*m3rw*)<sup>274</sup> in the *hnty-š*-formal garden of the Perunefer Palace.

<sup>269</sup> See the aerial view of the temple ruins in Antón, "La gloria de Tutmosis III," fig. 1, [https://elpais.com/cultura/2012/12/07/actualidad/1354879058\\_090754.html](https://elpais.com/cultura/2012/12/07/actualidad/1354879058_090754.html).

<sup>270</sup> Petrie, "The temple of Amenhotep II," in *Six temples at Thebes*, pp. 4-6, pls. XXII-XXIII.

<sup>271</sup> Lacau, *Stèles du Nouvel Empire* I, pp. 37-38.

<sup>272</sup> der Manuelian, *Studies in the Reign of Amenophis II*, p. 106.

<sup>273</sup> Wolfgang Helck, *Urkunden der 18. Dynastie 18: Biographischen Inschriften von Zeitgenossen Thutmosis' III und Amenophis' II*, (Berlin: Akademie-Verlag, 1956), nos. 1395-1396.

<sup>274</sup> Or quite literally 'the viewing place,' see Lesko and Lesko, *A Dictionary of Late Egyptian* I, p. 207.

Perunefer is thought to have been an important naval base with harbors, dockyards, multiple large palace complexes, army camps, and a town located in between the nearby sites of Tell el-Daba'a and Qantir in the Eastern Delta.<sup>275</sup> Following Ahmose I's ultimate defeat of the Hyksos, whose 'Fifteenth Dynasty' ruled Lower Egypt as a sovereign kingdom for one-hundred years, the important royal base of Perunefer was established and administered by Ahmose and his Thutmoside successors in the vicinity of the former Hyksos capital of Avaris. Thutmoside kings possibly frequented the palaces of Perunefer several times per year when they were on business in Lower Egypt. For example, although little remains of the Perunefer Palace Complex of Thutmose III and Amenhotep II dated to the Eighteenth Dynasty, archaeologists did discover beside its Palaces F, G, and J a large New Kingdom lake with a garden built beside it, which might be the *hnty-š*-formal garden that Qenamun mentions.<sup>276</sup> Likewise, another palace at Perunefer was located near the town center dated to the late Eighteenth to Nineteenth Dynasties where archaeologists found the remains of a garden.<sup>277</sup> The remains are centrally situated between the palace proper, an additional small temple or palace wing, and the living quarters of elite individuals who were working in and/or visiting the naval base.<sup>278</sup>

---

<sup>275</sup> For more information, Manfred Bietak, "Perunefer: The principal New Kingdom naval base," *EA* 26 (2009), pp. 15, 16, see. esp. fig. 1: the ancient location of Avaris and Per-Ramesses; as well as Manfred Bietak, "Minoan presence in the pharaonic naval base of *Peru-nefer*," in *Cretan Offerings: Studies in Honour of Peter Warren*, ed. by Olga Krzyszkowska, (London: BSA, 2010), pp. 18-20, figs. 2.3 and 2.7; and Manfred Bietak, „Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab'a)," pp. 314-328, Tafel XI, fig. 7; and finally, Manfred Bietak, "Rich beyond the Dreams of Avaris," p. 187, fig. 2.

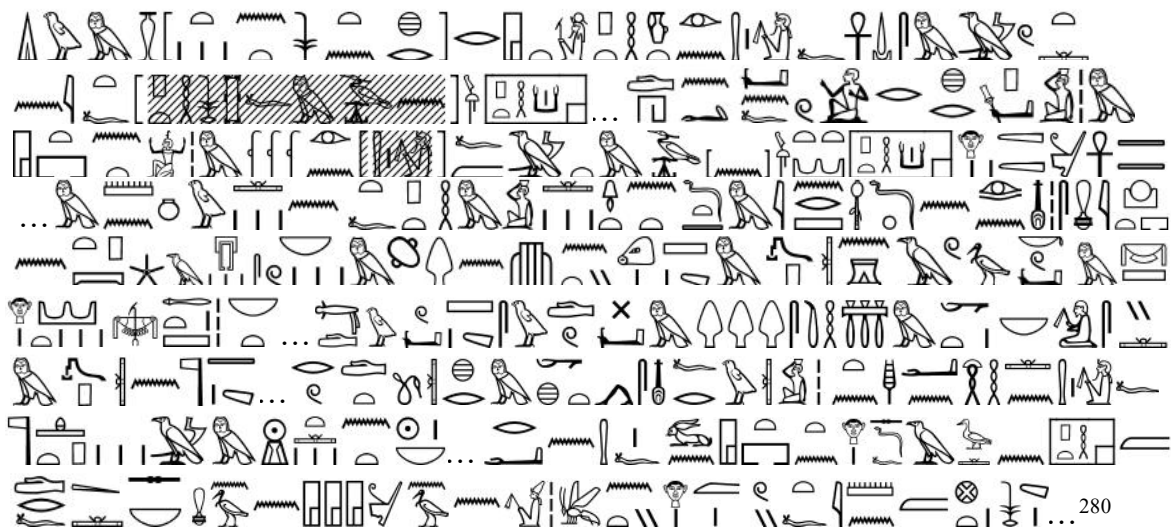
<sup>276</sup> See the maps of the palaces and the large lake and (formal) gardens in "The Palatial Precinct at the Nile Branch (Area H)," fig. 1; "The Late Hyksos Period," fig. 2; and "The Palace District of the Thutmoside Period," fig. 2 in Manfred Bietak, *Tell el-Dab'a – Elzabet Helmi - Ancient Avaris*, [http://www.avaris.at/html/ez\\_helmi\\_en.html](http://www.avaris.at/html/ez_helmi_en.html).

<sup>277</sup> Manfred Bietak, "Perunefer: The principal New Kingdom naval base," p. 17 and fig. 2: Avaris and Per-Ramesses in the late Eighteenth Dynasty and Nineteenth Dynasties; Bietak, "Minoan presence in the pharaonic naval base of *Peru-nefer*," fig. 2.7.

<sup>278</sup> Manfred Bietak, "Perunefer: The principal New Kingdom naval base," p. 17 and esp. fig. 2: Avaris and Per-Ramesses in the late Eighteenth Dynasty and Nineteenth Dynasties; Bietak, "Minoan presence in the pharaonic naval base of *Peru-nefer*," p. 19, esp. fig. 2.7; Manfred Bietak, „Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab'a)," pp. 314-328, Tafel XI, fig. 7; Manfred Bietak, "Rich beyond the Dreams of Avaris," p. 187, fig. 2.

Based on archaeological excavations, Thutmose IV's memorial temple is believed to have been organized similarly to that of Thutmose III's: two courts fronted by a pair of large and small pylons, leading to a terraced portico with an inner peristyle court, sanctuary, and the ambulatory shrines.<sup>279</sup> The site is poorly preserved but a *hnty-š*-formal garden with a lake likely existed, as Ipy (TT C6) was an 'Overseer of the Boats in the Memorial Temple of Thutmose IV.'

In regard to Amenhotep III, textual evidence from a scribal statue of a private individual named Amenhotep, who was 'Royal Scribe' and 'Overseer of Construction Works in the Temple-of-Millions-of-Years (called) 'United-with-Ptah', states the king personally asked him to direct the construction of his Memphite memorial temple situated in inundated land (*bḥ*), which had a *hnty-š*-formal garden with a pool (*š*) and groves of foreign trees that provided divine offerings:



*di.w m ḥs[wt nt nīswt ḥr] r ḥwt Nb-m3ṯ-t-rḥ ḥnmt Pth ir.n ḥm.f ʿnh(.w) wd3(.w) snb(.w) m m3wt n it.f P[th rsy-inb.f m bḥ n imnt] ḥk3 Pth...dhn.n.f wī r ḥrp k3t m ḥwt.f nt ḥḥw m rnpwt ir.n ḥm.f m m3wt m bḥ [n] imnt ḥk3 Pth ḥr ibdbwy n ʿnh-t3wy...m mnw n (i)t.f Pth m k3t mnḥt dt m inr ḥd n ʿiwn nfrw.s mī 3ḥt n pt sb3w.s nbw m ʿš n hnty-š m stp m G3w b3k m nbw ḥr ḥ3swt nbw ʿ3wt-nb(w)t...šdi wdi š.s wdi mnw.s ṯḥnt m ḥt nb špsy stp n*

<sup>279</sup> Sir William Flinders Petrie, "The temple of Tahutmes IV," in *Six temples at Thebes*, (London: Bernard Quaritch, 1897), pp. 7-8, pls. XXII, XXIV; Betsy M. Bryan, *The Reign of Thutmose IV*, (Baltimore; London: Johns Hopkins University Press, 1991), p. 174.

<sup>280</sup> See the hieroglyphic text in Georg Steindorff, *Urkunden des ägyptischen Altertums XX: Historische Inschriften Amenophis' III*, (Berlin: Akademie-Verlag, 1957), nos. 1793-1796; and its early translation in Petrie, *Tarkhan I and Memphis V*, pp. 33-34, pls. LXXVIII-LXXX.

*t3-ntr...rwdt hr mht.s nfrw k3t tn ḥḥ.n w3h.n hm.f htp-ntr m3w m hrt-hrw nt rḥ-nb...r ḥ.n hm.f wn hwt tn hr sdf3 n hwt Pth m drf.s nb mī-n-b3 n hwwt n b3(w) n nīswt bity nty hr gswy (i)t.f Imn m nīwt rsy(t)...*

(This statue was) given as a favor from the king and placed in the Temple of Nebma'atra 'United-with-Ptah,' which His Majesty, may he be given l.p.h., made anew for his father Ptah-South-of-His-Wall in his inundated land west of the Temple-of-the-*k3*-of-Ptah...He (the king) appointed me to direct the construction works in his Temple-of-Millions-of-Years, which His Majesty made anew in his inundated land west of the Temple-of-the-*k3*-of-Ptah on the two banks of Memphis (*ḥh-t3wy*)...as a monument to his father Ptah, a brilliant enduring structure (made) from the fine white limestone of Turah. Its beauty was like the horizon of heaven. Its doors were (made) from the Mediterranean cypress (*ḥ* or *Cupressus sempervirens* L.<sup>281</sup>) of (its) *hnty-ḥ*-formal garden.<sup>282</sup> The choicest things from Gau Harbor,<sup>283</sup> fashioned with gold from the foreign lands, fine gold, and precious stones...Its pool (*ḥ*) was dug and established, its tree groves (*mnw*) planted and made dazzling with every kind of noble tree from the finest of Punt (*t3-ntr*)...These construction works were made beautifully (and) His Majesty established new divine offerings in the course of every day...and His Majesty caused this temple to provide provisions in the Ptah enclosure in all its decrees, just as the Temples-of-the-*b3w*-of-the-Kings-of-Upper-and-Lower-Egypt, which are located beside his father Amun in the Southern City (Thebes)...

It is believed the temple described by Overseer Amenhotep was the Memphite equivalent of the well-documented memorial temple of Amenhotep III at Kom el-Hettan on the West Bank of Thebes.<sup>284</sup> A similar *hnty-ḥ*-formal garden likely existed at Kom el-Hettan, as the *recto* of the granite 'Israel Stela' (JE 31408/CG 34025) initially erected by Amenhotep III in his Theban memorial temple concerning his construction works and later reused by Merneptah, states that the

<sup>281</sup> This is not referring to Lebanese cedar (*Cedrus libani* Loud.), as it was called *mrw* (𓆎𓅓𓏏𓏏). It is another coniferous species that was also imported from Syro-Palestine and Turkey, likely the Mediterranean cypress (*Cupressus sempervirens* L.) more than the Cilician or Taurus conifer (*Abies cilicica* Carr.). The Mediterranean cypress is more probable because Old Kingdom archaeobotanical evidence of it has actually been found in the formal garden of the Bent Pyramid's temple at Dahshur dated to the reign of Sneferu of the Fourth Dynasty. See the identification, s.v. "ḥ," in Germer, *Handbuch*, pp. 47-49; and also see "There were over 260 trees, including palms and sycamores, as well as cypresses imported from the Levant," in Arnold, "Cult Buildings of the Bent Pyramid at Dahshur," *Archaeology in Egypt: Magazine of the German Archaeological Institute in Cairo* 5 (Nov. 2019): p. 49.

<sup>282</sup> Wood from *hntyw-ḥ*-formal gardens was used not only for temple doors, but also for sacred barks, see the entry on the term "*hnt-ḥ*" in Hugonot, *Le jardin dans l'Égypte ancienne*, p. 17.

<sup>283</sup> According to scholars, Gau was likely a port settlement opposite of Old Cairo at the beginning of the western part of the Nile Delta. See Sir Alan Gardiner's *Notes on the story of Sinuhe*, (Chalon-sur-Saône: Imprimerie française et orientale E. Bertrand, 1916), pp. 17, 166; Farouk Gomaa, *Die Besiedlung Ägyptens während des Mittleren Reiches II*, (Reichert Verlag: Wiesbaden, 1986), p. 59f.

<sup>284</sup> The statue was unfortunately not found *in situ* and "we lack any direct archaeological evidence as to the location of the sanctuary." See Petrie, *Tarkhan I and Memphis V*, p. 35.



enclosure had a lake (*mr*) with fish, fowl, and flowers for offerings:




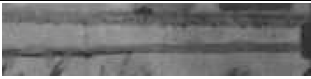


...*mr.s mḥ.w m Hpy wr nb 3bdw 3pdw ḥtpw wꜥb(w)*...

...Its lake is full of the Great Hapy, the master of fish, birds, and pure floral offerings...

The name of the formal garden's lake remains unknown. Archaeobotanical evidence has been discovered at Kom el-Hettan; however, due to the salinization of the soil over the past century, it was impossible to identify the species of flora found.<sup>286</sup>

### The *K3mw*-Formal Garden: Layouts, Architecture, and Water Features

From an examination the TT 90 scene, as well as extant textual evidence, a *k3mw*-formal garden could be surrounded by a rectangular wall entered through a gate with wooden doors that led to a central pathway flanked by pergolas,<sup>287</sup> tree avenues, and ending with a T-shaped pool beside a shrine fronted by a lotus-shaped libation basin, a pair of trees, and an ornate winepress (See Fig. A1.17). The pool seems lined with stone, either evoking the Nile and its Delta or perhaps the Egy-

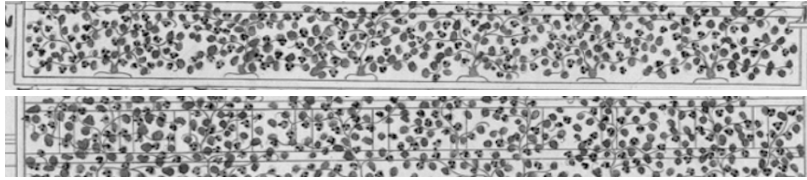

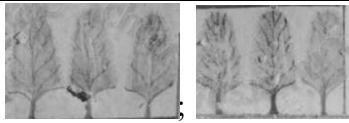



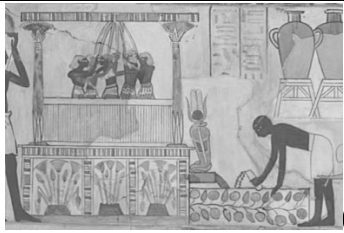

Table 3.1: Possible Features of a <i>K3mw</i> -Formal Garden <sup>288</sup>	
Enclosure walls ( <i>pr</i> )	 (A2);  (A3)
Gates ( <i>sb3</i> )	 (A2);  (A3)

<sup>285</sup> Lacau, *Stèles du Nouvel Empire*, p. 49; Steindorff, *Urkunden des ägyptischen Altertums* XX, no. 1649; mentioned in Hugonot, *Le jardin dans l'Égypte ancienne*, p. 75.


<sup>286</sup> I was kindly informed of this evidence by word of mouth from Dr. Hourig Sourouizian on site at Kom el-Hettan this past February 2020.

<sup>287</sup> "Although the terms often are used interchangeably, trellises, arbors, and pergolas are distinctly different structures...An arbor usually incorporates a trellis into its structure, creating a tunnel-like passageway of climbing plants. Arbors have a continuous run of latticework from one side of the "tunnel" to the other, often in an arched shape. Pergolas, too, are designed to support climbing plants. Unlike arbors, though, pergolas have posts supporting an open, roof-like structure. They're most commonly used to shade a walkway..." See Robyn Doyon-Aitken and Chip Harley, "What's the Difference: Trellis, Arbor, and Pergola," *Fine Home Building Magazine* (April/May 2009): <https://www.finehomebuilding.com/2009/05/01/whats-the-difference-between-a-trellis-an-arbor-and-a-pergola>.


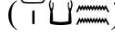
<sup>288</sup> Drawings by author, after Schott Photographs nos. 6824-6830, Wilkinson (1998), fig. 44, and the photographs of de Garis-Davies's facsimiles (1930): <https://www.metmuseum.org/art/collection/search/544626>.

Arbors and pergolas ( <i>k3mw</i> )	 
Tree avenues ( <i>ht</i> )	
Pools ( <i>š</i> )	
Statuary ( <i>twt</i> ; <i>šps</i> ; <i>sšmw</i> )	Statue of ‘Amenhotep-of-the- <i>K3mw</i> -Formal-Garden’ (A1)
Lotus-shaped libation basins ( <i>sšn</i> )	
Shrines ( <i>hwt</i> )	
Ornate wine press ( <i>nm</i> )	
Apiaries ( <i>fy</i> ? <sup>289</sup> )	

<sup>289</sup> See the discussion of the possibility of this term on p. 33, footnote 144.

-ptian word for floral offerings: *ḥtpw* (). The *k3mw*-formal garden can also be a large, gated, and square enclosure with a central pathway flanked by rows of pergolas (See Fig. A3.19). Its shrine might be made of stone with a painted cavetto cornice, dedication inscriptions, and wooden flag poles while the columns of the pergolas might be carved in the form of papyrus. Apiaries must have been present too since the produce from the *k3mw*-formal garden scene includes honey.<sup>290</sup> Statuary showing the king could be placed in the formal garden, as is evident from the textual evidence dated to Amenhotep I described in the following section.

### Extant Evidence of *K3mw*-Formal Gardens during this Period

Ancient Egyptian grape wine could be made from and/or include the addition of various fruits and/or flora so it should not be assumed that a *k3mw*-formal garden only had vineyards for grape production.<sup>291</sup> The *k3mw*-formal garden in the TT 90 scene, for example, seems to have raised grapes, pomegranates, as well as white lotus and pintail duck. Interestingly, the term *k3mw* () was further used for the New Kingdom “gardener and/or vintner.”<sup>292</sup> Thus, a *k3mw*-formal garden must have been closely linked to those skilled in horticulture and viticulture, and could be interpreted literally as ‘the one that creates liquid (*mw*) provisions (*k3*)’<sup>293</sup> or *k3 mw* () in Egyptian. Evidence of *k3mw*-formal gardens in Thebes during this period comes from the time of Amenhotep I, Amenhotep II, and Amenhotep III. The Abbott Hieratic Papyrus (pBM EA 10221) or ‘Royal Tomb Robbers Papyrus’ dated to Ramesses IX mentions that his officials inspected for looting a temple called ‘Temple-of-Amenhotep-I.p.h.-of-the-*K3mw*-Formal-Garden’:

<sup>290</sup> See the TT 90 wall narrative and the entry for the Egyptian honey bee in Appendix II.

<sup>291</sup> Grape wine might include the addition of dates, figs, and even lotus varieties. See. D. J. Counsell, “Blue lotus: ancient Egyptian narcotic and aphrodisiac?,” in *Pharmacy and medicine in ancient Egypt: Proceedings of the Conference held in Cairo (2007) and Manchester (2008)*, eds. by Rosalie David, *et al.*, (Oxford: Archaeopress, 2010), pp. 51-52; and Eva-Lena Wahlberg, “The mysterious beverage called *šdh*,” *GM* 230 (2011): p. 73.

<sup>292</sup> See Erman and Grapow, *WB* V, nos. 106.10-11; and Seidlmayer, *s.v.*, “*k3mw*,” in *TLA*, <http://aaww.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=163560&db=0>.

<sup>293</sup> See the use of *k3* used as ‘food/provisions’ in Erman and Grapow, *WB* V, nos. 91.3-13; and Seidlmayer, *s.v.* “*k3*,” in *TLA*, <http://aaww.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=162890&db=0>.

The eternal horizon of [Djeserkara], l.p.h. son of Ra, Amenhotep (I), l.p.h., which is 120 cubits deep measured from its superstructure [*ḥꜥꜥ*],<sup>294</sup> which is called ‘The-High-Ascent’ [or ‘The-Height’] north of the ‘Temple-of-Amenhotep-l.p.h.-of-the-*Kꜣmw*-Formal-Garden],’ concerning which the mayor of the city Paser, had reported to the governor of the city and vizier Kha[e]mw[as]...saying: “The thieves have broken into it.” Inspected on this day, it was found uninjured by the inspectors.<sup>295</sup>

Based on the depth of the passage (120 cubits = 62 meters or 206 feet) described above and archaeological evidence examined in the late 1890s,<sup>296</sup> scholars believed this temple fronted a rock-cut sepulcher in the cliffs of Deir el-Bahari.<sup>297</sup> This *kꜣmw*-formal garden then likely abutted the temple and while its layout, water features, and flora and fauna are not certain; it apparently had statuary showing the king as ‘Amenhotep-of-the-*Kꜣmw*-Formal-Garden,’ which was later moved by Hatshepsut into the ancestor shrine on the upper third terrace of her memorial temple.<sup>298</sup>

Amenhotep II incorporated a *kꜣmw*-formal garden into the center of his expansive *ḥt-nt-ḥt*-formal garden depicted in Sennefer’s tomb (TT 96) (See Fig. A3.23). The formal garden was a large square enclosure with a central path bordered by six long rows of grape arbors and pergolas fronted by a gate. This *kꜣmw*-formal garden might even have been the artistic inspiration for the ceiling of Sennefer’s cenotaph tomb built below TT 96 proper, which is painted with expansive and intricate grape arbors, and nicknamed the ‘Tomb of the Vineyards.’ While, the *kꜣmw*-formal garden depicted in TT 90 scene seems to be one built by Amenhotep III, as the doorjambs of the shrine bear dedications with his praenomen. Hundreds of wine, fat, beer, meat, honey, and ben

---

<sup>294</sup> “Either a stela or some name for a structure which stood at [its] mouth,” see T. Eric Peet, *The great tomb-robberies of the twentieth Egyptian dynasty: Being a critical study with translations and commentaries of the papyri in which these are recorded*, (Oxford: Clarendon Press, 1930), p. 43, footnote 4.

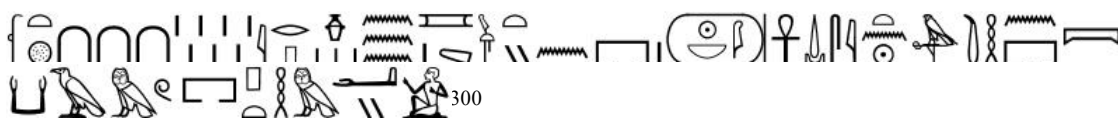
<sup>295</sup> This translation is a synthesized version of those done in English by Breasted, *Ancient records of Egypt* IV, p. 252, §513; and Peet, *The great tomb-robberies of the twentieth Egyptian dynasty*, pp. 37-38, 43, footnote 4.

<sup>296</sup> Wilhelm Spiegelberg, *Zwei Beiträge zur Geschichte und Topographie der thebanischen Necropolis im Neuen Reich I: Der Grabtempel Amenophis’ I zu Draḥ-Abu’l-Negga II: Plan einer Gesamtarbeit über die Verwaltung der thebanischen Necropolis im Neuen Reich*, (Strasbourg: Schlesier und Schweikhardt, 1898), pls. I-V; Breasted, *Ancient records of Egypt* IV, p. 252, footnote a.

<sup>297</sup> “This passage has never been found, but its entrance was certainly located on the plain, by the tombs of the Eleventh and Thirteenth Dynasties...A temple of Amenhotep I was found here by Spiegelberg” see Breasted, *Ancient records of Egypt* IV, p. 252, footnote a.

<sup>298</sup> Wilkinson, *The garden in ancient Egypt*, p. 95.

tree oil (*Moringa oleifera* Lam.) jar labels with hieratic inscriptions were discovered in the refuse heaps of the village beside Amenhotep III's Malkata Palace Complex near the Birket Habu Harbor, allowing archaeologists to better understand the components of the palace complex and the produce that was raised in or imported from the surrounding region.<sup>299</sup> Five wine jar labels (nos. 23, 54-56, 58) state that they came from a *k3mw*-formal garden located in the Malkata Palace Complex (*t3 hwt pr-ꜥ3*) known in antiquity as the 'Splendor-of-Aten' (*ṯḥn 'Itn*) Palace. Wine jar seal no. 55, for example, which has parallel inscriptions on nos. 54 and 56, was inspected by a man named Ptahmay:



*rnpt-ḥsb 37 irp n itrw imnty n pr*<sup>301</sup> *Nb-m3ꜥt-rꜥ nh(.w) wd3(.w) snb(.w) ṯḥn 'Itn pr-ḥry k3mw Pth-mꜥy*

Year 37: Wine of the western watercourse of the Palace of Nebma'atra, may he be given l.p.h., (called) 'Splendor-of-Aten' (from) the upper part of the *k3mw*-formal garden, (inspected by) Ptahmay.

Perhaps the TT 90 scene depicts this *k3mw*-formal garden in the Malkata Palace proper or one that might have been situated in the vicinity of its Northern Palace or its Amun temple enclosure with a festival hall that was called the 'Temple-of-Amun-in-the-House-of-Rejoicing' and constructed for the king's second Jubilee Festival (*ḥb-sd*).<sup>302</sup>

### The *Sš*-Formal Garden: Layouts, Architecture, and Water Features

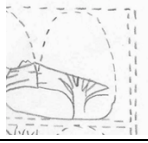
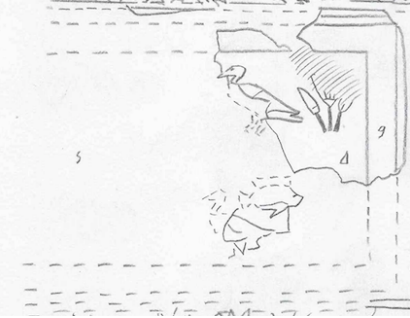
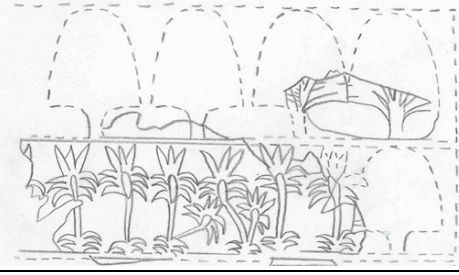
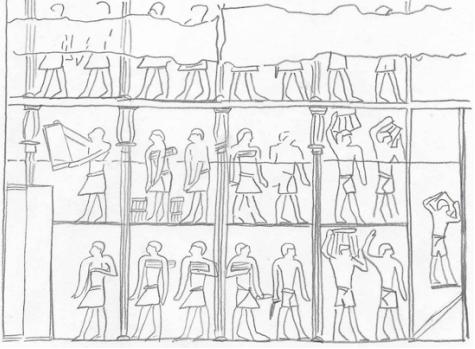
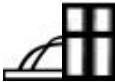
Various features would have been in a *sš*-formal garden based on the extant pictorial and textual

<sup>299</sup> See the jar label texts and the reconstruction of the palace complex in William C. Hayes, "Inscriptions from the Palace of Amenhotep III," *JNES* 10.1 (1951): pp. 37-39, figs. 1-15; and the updated map of the palace complex in Aikaterini Koltsida, "The North Palace at Malkata," *Archiv für Orientforschung* 52 (2011): pl. 1.

<sup>300</sup> Hayes, "Inscriptions from the Palace of Amenhotep III," no. 55, fig. 6 and compare to nos. 54-56.

<sup>301</sup> A shortened form perhaps of *t3 hwt pr-ꜥ3* on other jar labels. See Hayes, "Inscriptions from the Palace of Amenhotep III," nos. 58-59, figs. 6-7.

<sup>302</sup> Hayes, "Inscriptions from the Palace of Amenhotep III," p. 36; Koltsida, "The North Palace at Malkata," p. 215, pl. 1.

Table 3.2: Possible Features of a <i>sš</i> -Formal Garden <sup>303</sup>	
Enclosure walls ( <i>pr</i> )	 (T3)
Gates ( <i>sbꜣ</i> )?	Destroyed?
Ponds ( <i>sš</i> )	 (T3)
Tree avenues ( <i>ht</i> )	 (T3)
Aviaries ( <i>ht-ꜣ</i> ; <i>hrwt</i> )	 (Ti's mastaba-tomb, reign of Teti);  (Amenemhat II's Fragment M text on p. 79.)


evidence from this period. The only known example of a layout of *sš*-formal garden during this period comes from the TT 39 scene, which is dated to the time of Thutmose III, and depicts an enclosure with a central pond bordered by tree avenues (See Fig. A3.17). The enclosure wall looks to be made of mudbrick and a gate might have existed on the viewer's left had that entire half of

<sup>303</sup> Drawings by the author © 2020, after Davies (1922), pl. XVIII and Montet (1925), fig. 25.



This is further evident from the surrounding scenes and texts of the TT 39 scene, which states that Puimra's *sš*-formal garden was located in the vicinity of his tomb (*hwt*) that is situated in the El-Khokha District of the Theban Necropolis.<sup>309</sup> A hieratic graffito in Sobekhotep's tomb (TT 63) further indicates that the tomb-owner constructed a *sš*-formal garden in proximity to his tomb (*hwt*), which is located in the Sheikh Abd el-Qurna District of the Theban Necropolis:

He found that in his opinion [the tomb is] more beautiful than any temple. It is like the permanent sky. Its walls are real mountains. His fields are filled with all good things. His [*sš*-formal garden] is full of fish...<sup>310</sup>

The bird- and fish-rich pond (or lit. the *sš* () in the *sš*-formal garden, might be interpreted as a recreation of the sacred primaeval marsh thicket of Akhmim (Khemmis), and thus: (i) recalled the Theban funerary hymn to Ptah-Sokar-Osiris, which states that "...the great god has returned coming forth from primaeval waters,"<sup>311</sup> as well as (ii) evoked rebirth and resurrection symbolism. Therefore, a *sš*-formal garden would have been constructed in proximity to a cult temple or private elite tomb in a necropolis to be used by the gods or the glorified dead, recreating the wild recreational and/or sacred primaeval marsh thickets along the banks of the Nile and its tributaries that they frequented in life. The formal garden was centered around fish and fowl together with some incense and fruit cultivation.

### **The *t-nt-ht*-Formal Garden: Layouts, Architecture, and Water Features**

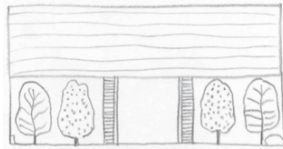


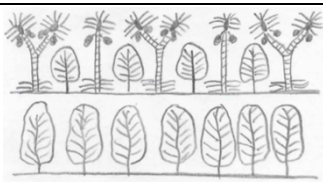
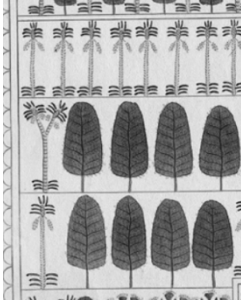
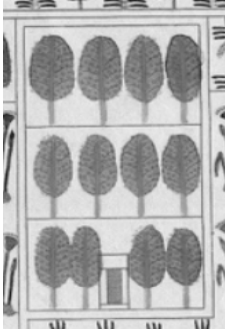

The *t-nt-ht*-formal garden depicted in Sennefer's tomb (TT 96) is a masterpiece of Egyptian formal garden design, as multiple types of formal gardens are incorporated into its extensive and impressive layout: four *š*-formal gardens and a *kšmw*-formal garden (See Fig. A3.23). A massive enclosure wall with rounded merlons and crenels encloses the formal garden proper with a grand,

<sup>309</sup> See the description of the TT 39 scene on p. 58.

<sup>310</sup> Dziobek and Raziq, *Das Grab des Sobekhotep: Theben Nr. 63*, pp. 88-90, 2d, 20a-b.

<sup>311</sup> See Carlo Rindi Nuzzolo, "Two Ptah-Sokar-Osiris Figures from Akhmim in the Egyptian Collection of the Museum of Fine Arts, Budapest," *Bulletin du musée hongrois des beaux-arts* 119 (2014): p. 26.

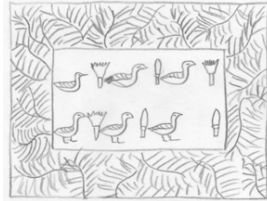
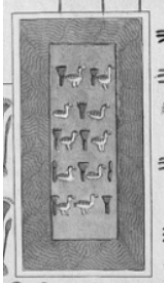


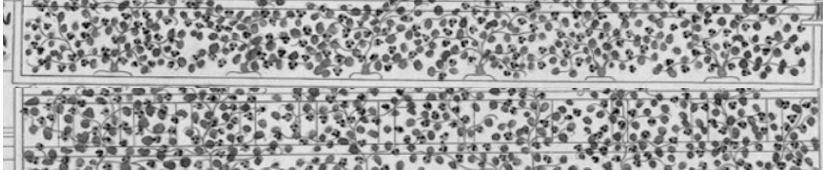
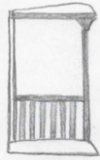









Table 3.3: Possible Features of an <i>ṯ-t-nt-ḥt</i> -Formal Garden <sup>312</sup>	
Canal ( <i>mr</i> ) and quays ( <i>dmit</i> ; <i>mryt</i> )	 (A2)
Enclosure walls ( <i>pr</i> )	 (A2)
Gates ( <i>sbꜣ</i> )	 (A2)
Tree avenues ( <i>ḥt</i> )	 (A2)
Tree groves ( <i>mnw</i> )	 (A2)
Sacred groves ( <i>wṯb-ḥt</i> <sup>313</sup> )	 (A2)
Shrubbery ( <i>bꜣt</i> <sup>314</sup> )	 (A2)

<sup>312</sup> Drawings by the author after the Rosellini (1834) facsimile and from the New York Public Library Public Domain: <https://digitalcollections.nypl.org/items/510d47d9-4779-a3d9-e040-e00a18064a99>.

<sup>313</sup> Seidlmayer, s.v. “*wṯb-ḥt*,” in TLA <http://aaew.bbaw.de/tla/servlet/GetWcnDetails?u=guest&f=0&l=0&wn=44610&db=0>.




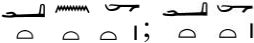

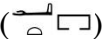
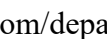

<sup>314</sup> Erman and Grapow, *WB I*, nos. 416.5-10; Lesko and Lesko, *A Dictionary of Late Egyptian I*, p. 145.

Pools ( <i>š</i> )	 ;  (A2)
Water gardens	 ;  (A2)
Arbors and pergolas ( <i>k3mw</i> )	 (A2)
Pavilions ( <i>m3rw</i> )	 (A2)
Garden shrines ( <i>hwt</i> )	 (A2)
Statuary of king in adoration and offering to the gods ( <i>twt</i> ; <i>šps</i> ; <i>sšmw</i> )	 ;  (A2)
Bouquet altars ( <i>hṭpw</i> ) and offering tables ( <i>wḏḥw</i> )	 ;  ;  (A2)
Florist workshop and storehouse ( <i>hnw</i> <sup>315</sup> )	 (A2)

<sup>315</sup> Erman and Grapow, *WB* III, nos. 288.12.-15; Lesko and Lesko, *A Dictionary of Late Egyptian* II, p. 179.

cavetto, propylon gate dedicated by Amenhotep II, as well as a row of trees alongside the staired access-quay, leading to an artificial watercourse. Minor enclosure walls fronted by two small wooden gates surround four large, symmetrical š-formal gardens with square or rectangular pools bordered by watered gardens, trees rows, avenues, groves, pavilions, shrubbery. Two of the š-formal gardens have small walled sacred groves (*w<sup>c</sup>b-ht*) with a private gate. A large walled and gated *k3mw*-formal garden, already examined on p. 75, is located in the very center of the *ʿt-nt-ht*-formal garden (See Fig. A1.19). The central avenue that runs the length of the formal garden terminates at a tripartite garden shrine with a private water garden of papyrus. Inside the shrine is statuary dedicated by the king, bouquets and offering tables. The florist workshop and storehouse with thatched siding, doors, and windows is adjacent. The statuary in the garden shrine displays the king in adoration or on his knees offering, presumably to a seated image of Amun in the middle shrine.<sup>316</sup> The layouts of its š-formal gardens begin with square water gardens bordered by two rows of trees and and palms. The rows of trees lead to pools and more water gardens. Additional rows and groves of trees and palms surround the entire *ʿt-nt-ht*-formal garden proper. At the end of the š-formal gardens are the light-roofed, wooden pavilions with balustrades, and presumably seating. The pavilions are placed beside watered gardens of papyrus, rows of shrubbery, and trees.

### Extant Evidence of *ʿt-nt-ht*-Formal Gardens during this Period

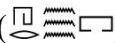


If one was to literally translate the *ʿt-nt-ht*-formal garden (; ; ; ; )) from Egyptian, it might mean something along the lines of the ‘the dwelling/field of woodlands/trees,’ as the term derives from the same nominal root as *ʿt* () or “room/department/dwelling”<sup>317</sup>; *ʿ(w)t* () or “fields”<sup>318</sup>; and *ht* (

<sup>316</sup> For parallels of similar statues (MMA 30.3.1; 30.3.2; 29.3.1), see p. 53, footnote 213 of this work.

<sup>317</sup> Erman and Grapow, *WB I*, nos. 160.1-13.

<sup>318</sup> Erman and Grapow, *WB I*, no. 162.2.

meaning “woodland(s)/wood(s)/trees.”<sup>319</sup> Based on pictorial and textual evidence from the reign of Thutmose III, Amenhotep II, and Amenhotep III, an *ʿt-nt-ht*-formal garden was built in the vicinity of a palace or cult temple during this period.


Based on the transportation of flora and fauna by Thutmose III from the Syro-Palestine to Egypt in Year 25 during his tour of the empire and his construction works in Thebes, it seems possible that the ‘botanical garden’ reliefs and texts in the *htp*-shaped Amun shrine beside the *hry-ib*-festival hall of his *ʿh-mnw*-temple at Karnak might be a reference to an *ʿt-nt-ht*-formal garden that had once existed beside it.<sup>320</sup> This is plausible because there would have been much more space available to construct formal gardens in the precinct during the reign of Thutmose III, as the Karnak Temple Complex was much smaller in the mid Eighteenth Dynasty compared to its current Graeco-Roman state.<sup>321</sup> For example, Karnak’s immense sacred lake or *hrw* () full of geese was built by Thutmose III during this time as well, filling in a vast area of the right side of the complex.<sup>322</sup> The name of the *ʿh-mnw* ()-temple proper meant the ‘Most-Glorious-of-Monuments.’ *Mnw* (), however, may further denote “tree groves/orchards.”<sup>323</sup> The name of the structure, therefore, could be interpreted as a double entendre: (i) the temple proper as ‘Most-Glorious-of-Monuments’ and (ii) a possible name of its *ʿt-nt-ht*-formal garden as the ‘Most-Glorious-of-Tree-Groves/Orchards,’ as formal gardens were also monuments to the gods.<sup>324</sup> A


<sup>319</sup> Erman and Grapow, *WB* III, nos. 339.10-341.11.

<sup>320</sup> See the translation of reliefs’ texts on p. 66 of this work.

<sup>321</sup> Note the incredible size difference of the Amun cult at Karnak during the reign of Thutmose III compared to that of current archaeological remains dated to the Graeco-Roman Period in UCLA Digital Karnak, “Digital Karnak – Temple Development,” YouTube video, posted Dec. 1, 2008, <https://www.youtube.com/watch?v=QXDipKxgU24>; and the 3D model reconstruction of ancient Thebes by Altair4 Multimedia, “Thebes 3D model and reconstruction,” Vimeo video, posted in 2014, <https://www.altair4.com/en/modelli/tebe/>.

<sup>322</sup> See Breasted, *Ancient records of Egypt* II, p. 223, § 559; Sethe, *Urkunden* IV.III, no. 745.

<sup>323</sup> See the texts that mention the tree groves (*mnw*; ) planted beside the *hnty-š*-formal garden of Hatshepsut’s memorial temple on pp. 63-64 of this work; also see its use in Erman and Grapow, *WB* II, nos. 71.13-.16.

<sup>324</sup> For example, see the Karnak doorjamb inscription that details Amenhotep II’s construction of a *š*-formal garden in the temple precinct as a “monument (*mnw* or ) for his father Amun-Ra,” pp. 37-38 of this work; also see its use in Erman and Grapow, *WB* II, nos. 69.9-72.2.

black granite striding statue of Thutmose III as ‘Menkheper-ra-who-Offers-Fresh-Produce-to-Amun-from-Karnak’ (JE 42056) was further discovered in the *wꜣdt*-hall of Karnak in proximity to Hatshepsut’s obelisk and the *ꜣh-mnw*-temple (See Fig. A3.46).<sup>325</sup> The pharaoh is shown in the guise of a fecundity figure, offering to Amun beautifully detailed lotus blossoms, papyrus umbels, and pintail duck bundles, which likely came from the formal gardens in the Karnak precinct (See Fig. A3.48).<sup>326</sup> There is an additional *ꜣt-nt-ht*-formal garden of Amun-Ra in the Domain of Amun depicted in Sennefer’s tomb (TT 96), which is stated as being ‘renewed’ by Amenhotep II. Thus, this particular *ꜣt-nt-ht*-formal garden must have been constructed by one of the previous Thutmose pharaohs; however, which one remains unclear.<sup>327</sup> The shrine has multiple statues of the pharaoh offering to Amun and their style and attitude evoke those of Hatshepsut and Thutmose III depicted as ‘Offering-Fresh-Produce.’<sup>328</sup> An alternative *ꜣt-nt-ht*-formal garden was constructed by the king as well in proximity to one of the palaces at Perunefer via the same text that mentions its *hnty-š*-formal garden(s) in Qenamun (TT 93).<sup>329</sup> It is interestingly revealed in the song sung by the singers, musicians, and dancers who entertain Qenamun, officials, the young Amenhotep II and the prince’s tutor in the harem pavilion of the *hnty-š*-formal garden of the palace:



*wrh* <sup>ʕ</sup>*nt*(y)*w* *ms*(*w*) *m* *b*<sub>3</sub>*k* *irt* *hrw* *nfr* *msw* *w*<sub>3</sub>*w*<sub>h</sub> *m* <sup>ʕ</sup>*t-nt-ht.k* *s*<sub>š</sub>*n* *r* *fnd.k* *Imn-htp* *ir.k* *n*  
*nn* *n*<sub>h</sub>*h* *m* *zwt-ib*. <*k*> *nfrwy* *hr.k* *m* *h*<sup>ʕ</sup> *n*<sub>is</sub>*wt*<*k*> *htp.ti* *hr*(y)*t* *st* *wrt*...

Anointing/smearing myrrh and frankincense, *ms*-vases of morgina tree oil, passing a bea-

<sup>325</sup> Legrain, *Statues et statuettes des rois et de particuliers* I, p. 34, pl. XXXII; Legrain, « Notes d'inspection sur le temple Manakhpirri-heng-anakh, » pp. 182-183.

<sup>326</sup> Legrain, *Statues et statuettes des rois et de particuliers* I, pl. XXXII.

<sup>327</sup> See the description of the TT 96 scene on p. 60.

<sup>328</sup> See the statues mentioned on p. 53, footnote 213 of this work.

<sup>329</sup> See p. 68 of this work.

<sup>330</sup> Helck, *Urkunden* 18, no. 1396, 'Song of the Singers,' lines 5-11.

-utiful day, bouquets (*msw*<sup>331</sup>) (and) floral wreaths/garlands from your *ʿt-nt-ht*-formal garden, (placing) a lotus blossom to your nose, O Amenhotep, you made for them eternity by means of your joy, this beautiful place is because of you by means of your royal hoe<sup>332</sup> (*hʿ nṯsw*<sup>333</sup>), may offerings be upon your great throne...

Since this *ʿt-nt-ht*-formal garden was in one of the palaces of Perunefer, it could be referring to the extensive tree groves/orchards discovered beside the Late Hyksos palace at Avaris/Perunefer (Tell el-Daba’a/Qantir): a large cluster of around 100 tree pits and 40 potted flower beds.<sup>334</sup> Likewise, another palace at Perunefer was located near the town center dated to the late Eighteenth to Nineteenth Dynasties, where archaeologists found the remains of (formal) garden,<sup>335</sup> which could be the *hnty-š*- and/or *ʿt-nt-ht*-formal gardens that Qenamun mentions. The remains are centrally situated between the palace proper, a small temple or palace wing, and the elite living quarters.<sup>336</sup>

Concerning Amenhotep III, the Malkata Palace not only had a *kzmw*-formal garden but also an *ʿt-nt-ht*-formal garden that produced wine and the aromatic *mnw*-plant. The formal garden is mentioned on one of the hieratic wine jar seals (no. 60) found in the rubbish heaps of the palace’s nearby town along the Birket Habu Harbor on the West Bank of Thebes:



*rnpt-ḥsb 37 ṯrp n ʿt- <nt> -ht Nb-mʿt-Rʿ mnw 6*

<sup>331</sup> See the similar palaeography of this term in the Nefermenu stela text translated on p. 65 of this work.

<sup>332</sup> This analogy is very intriguing because it references the ancient royal ritual of the king who ceremoniously used a hoe to commence the digging of a canal, lake, and now even possibly a formal garden. See the depiction of the ceremony from thousands of years prior on the ‘major part’ of King Scorpion’s macehead (c. 3000 B.C.) found in the Early Dynastic temple of Horus at Hierakonpolis (Nekhen) and now on display in the Ashmolean Museum, Oxford.

<sup>333</sup> Erman and Grapow, *WB* III, nos. 243.1-2.

<sup>334</sup> See the remains in “The Late Hyksos Period,” fig. 2 in Bietak, *Tell el-Dab’a – Elzabet Helmi - Ancient Avaris*, [http://www.auaris.at/html/ez\\_helmi\\_en.html](http://www.auaris.at/html/ez_helmi_en.html).

<sup>335</sup> Bietak, “Perunefer: The principal New Kingdom naval base,” p. 17 and the fig. 2: Avaris and Per-Ramesses in the late Eighteenth Dynasty and Nineteenth Dynasties; Bietak, “Minoan presence in the pharaonic naval base of *Perunefer*,” fig. 2.7.

<sup>336</sup> Bietak, “Perunefer: The principal New Kingdom naval base,” p. 17 and esp. fig. 2: Avaris and Per-Ramesses in the late Eighteenth Dynasty and Nineteenth Dynasties; Bietak, “Minoan presence in the pharaonic naval base of *Perunefer*,” p. 19, esp. fig. 2.7; Bietak, „Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab’a),“ pp. 314-328, Tafel XI, fig. 7; Bietak, “Rich beyond the Dreams of Avaris,” p. 187, fig. 2.




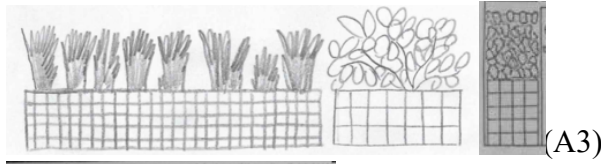
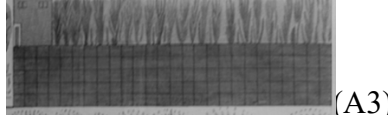
<sup>337</sup> Hayes, “Inscriptions from the Palace of Amenhotep III,” fig. 7.

Year 37: wine of the *ʿt-nt-ḥt*-formal garden of Nebma’atra (and) 6 pots of *mnw*-plants.<sup>338</sup>

Thus, the palace’s *ʿt-nt-ḥt*-formal garden, like its *k3mw*-formal garden, might have been located in vicinity to the Malkata Palace proper or perhaps in proximity to its Northern Palace or its Amun temple and festival hall that were built by the king for his second Jubilee Festival (*ḥb-sd*).

### The *Ḥrrt-š*-Formal Garden: Layouts, Architecture, and Water Features

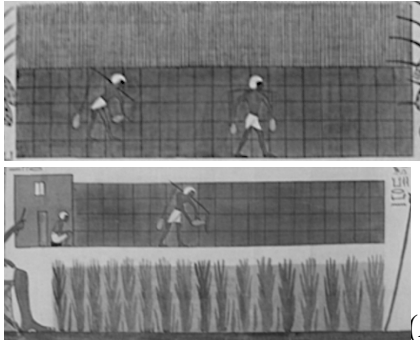


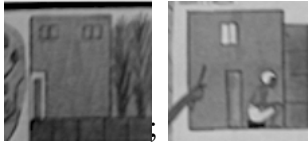



Based on the TT 161 scene as well as extant archaeological and textual evidence, the *ḥrrt-š*-formal

Table 3.4: Possible Features of a <i>Ḥrrt-š</i> -Formal Garden <sup>339</sup>	
Pools (š)	 (A3)
Water gardens	 (A3)
<i>Ḥsp</i> -plots (planting beds)	 (MK-Late Hyksos);  (A3)  (A3)

<sup>338</sup> *Mnw*-plant was some type of aromatic flora, but its identification remains unclear. See Erman and Grapow, *WB* II, no. 71.17.

<sup>339</sup> Drawings by author after Hugonot (1989) and the de Garis-Davis’s gathering honey facsimile (1930), <https://www.metmuseum.org/art/collection/search/544626>; as well as those by David Seifkin, merged together by the author and courtesy of his Creative Commons Universal Public Domain Dedication: [https://commons.wikimedia.org/wiki/File:Gardens\\_of\\_Nakh\\_1.JPG](https://commons.wikimedia.org/wiki/File:Gardens_of_Nakh_1.JPG); and screenshots from the YouTube video by 7reasons and the Austrian Academy of Sciences entitled “A Puzzle in 4D - Tell el-Daba”: [https://www.youtube.com/watch?v=pS9-jr\\_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA](https://www.youtube.com/watch?v=pS9-jr_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA)



	
Tree groves ( <i>mnw</i> )	
Garden seating	
Florist workshops and storehouses ( <i>hnw</i> )	
Belvedere porticos ( <i>h3yt</i> )	
Pavilion ( <i>m3rw</i> )	
Apiaries ( <i>fīy</i> ? <sup>340</sup> )	

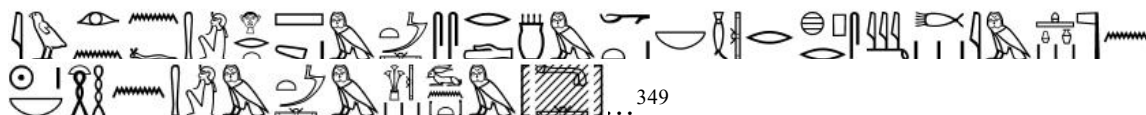
<sup>340</sup> See the discussion of the possibility of this term on p. 33, footnote 145.





Daba'a/Qantir) by the Thutmoside kings. The earliest archaeological evidence of a *hrrt-š*-formal garden comes from oldest part of the site: Palace F/I at Avaris, dating from the early Middle Kingdom to the Late Hyksos Period.<sup>343</sup> Rows of *hsp*-plots with trees in between and a pavilion (Square G in Grid Reference 23k of Stratum d/1) were constructed in the Middle Kingdom on the eastern side of Palace F/I while a large hall with a long portico of red protodoric columns overlooking the *hrrt-š*-formal garden was added in c. 1765 B.C. by the Late Hyksos rulers (See Fig. A3.42).<sup>344</sup> Opium poppy, white lotus, mandrakes, and cos-lettuce are thought to have been grown in these *hsp*-plots<sup>345</sup> and likely low cornflower,<sup>346</sup> true cardamom (*Elettaria cadamomum* L. Maton),<sup>347</sup> cilantro/coriander (*Coriandrum sativum* L.), and scented mayweed spp.<sup>348</sup>

Concerning Thutmose III, an inscription from king's annals termed 'New Feasts and Offerings from Conquests' recorded on the south half of the Sixth Pylon at Karnak, mentions that he constructed in Thebes for the first time a *hrrt-š*-formal garden to Amun:



<sup>343</sup> Manfred Bietak, "Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab'a 1979-1984)," *ÖAW* 115 (1984): pp. 312-349; and also Robert Schiestl, "The Cemeteries of F/I in the Strata d/2 (H) and d/1 (G/4), late 12th Dynasty and early 13th Dynasty," esp. pic. 3, [http://www.auaris.at/html/stratum\\_fl\\_d1\\_en.html](http://www.auaris.at/html/stratum_fl_d1_en.html); and Aspöck, Tell el-Dabaa: Palace Area F/I - Phase Model and Wooden Model," *Tell el Dabaa Puzzle in 4D*, [https://4dpuzzle.orea.oeaw.ac.at/reconstruct\\_phaseModel/](https://4dpuzzle.orea.oeaw.ac.at/reconstruct_phaseModel/).

<sup>344</sup> Bietak, "Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab'a 1979-1984)," pp. 312-349; and Aspöck, Tell el-Dabaa: Palace Area F/I - Phase Model and Wooden Model," [https://4dpuzzle.orea.oeaw.ac.at/reconstruct\\_phaseModel/](https://4dpuzzle.orea.oeaw.ac.at/reconstruct_phaseModel/).

<sup>345</sup> "Rows of regularly set flowerbeds were found in front of a small kiosk, which already existed in an older phase of the building complex. Trees had been planted in between [them] to provide shade. We have evidence that [low cornflower], [opium] poppies, [true cardamom], white lilies, [scented mayweed], and mandrakes grew in Ancient Egypt. L[ettuce] as well as coriander are also documented for this period. See Aspöck, *Tell el-Daba: Palace Area F/I – Garden area to the east of the palace*, [https://4dpuzzle.orea.oeaw.ac.at/reconstruct\\_walkthrough/](https://4dpuzzle.orea.oeaw.ac.at/reconstruct_walkthrough/).

<sup>346</sup> Aspöck states "cornflowers." However, low cornflower (*Centaurea depressa* Bieb.) is more likely, as the cornflower (*C. cyanus* L.) is native to Europe.

<sup>347</sup> Aspöck states "wild ginger." It is more likely though another species, such as true cardamom of the same family Zingiberaceae, as wild African ginger (*Siphonochilus aethiopicus* (Schweif.) B. L. Burt) is native to South Africa while true ginger (*Zingiber officinale* Roscoe) was not introduced into Africa until the Graeco-Roman Period in Egypt and the Arab Conquest in Ethiopia in the Thirteenth Century A.D.

<sup>348</sup> Aspöck states "chrysanthemums." Yet, it is more likely scented mayweed of the *Anthemis* or *Matricaria* spp., as chrysanthemums (*Chrysanthemum indicum* L.) are native to East Asia, specifically China.

<sup>349</sup> Sethe, *Urkunden* IV, no. 749; also based on the translation in Breasted, *Ancient Records of Egypt* III, p. 225, §567.



maintenance or possibly an expansion or renovation therein. It is difficult to assess how much the formal garden might have been altered due to the current lack of archaeological evidence for the actual Theban *ḥrrt-š*-formal garden of Amun. Nonetheless, the Theban *ḥrrt-š*-formal garden was definitely still active at least into the reign of Amenhotep III since the TT 161 scene is dated to his reign, as well as the fact that the tomb-owner Nakht and his sons were ‘Gardeners/Offering Bearers of the Floral/Divine Offerings of Amun.’

### **Wider Significance of the Domain of Amun Formal Gardens to the Tomb-Owners**

The emergence of the Domain of Amun formal garden scenes in the early to late-mid Eighteenth Dynasty is a result of the expansion of the empire, the enlargement in the palatial and temple construction projects, donations, and administrations of the Amun cult at Thebes. Muhs explains that “kings [during this dynasty]... endowed...on a greater scale than ever before...The temple of Amun-R[a] at Karnak in Thebes in particular benefited from building programs and donations of land and booty following successful military campaigns, [tours, and expeditions]...especially under Thutmose III.”<sup>352</sup> Consequently, the construction of the formal gardens and introducing of native and foreign trees and animals in them by the Thutmoside pharaohs was justified because they functioned as living offerings,<sup>353</sup> which Amun-Ra and the kings in life and in death would have been used for pleasure and repose. The lakes of the *ḥntyw-š*-formal gardens in the memorial temples on the West Bank were used by sacred barks and *nšmt*-barks of the glorified kings for religious observances, such as the Beautiful Festival of the Valley (See the TT 87 scene). While the *ḥnty-š*-, *k3mw*-, *sš*-, *ʿt-nt-ḥt*-, and *ḥrrt-š*-formal gardens would have cultivated surplus garden produce, fish and fowl, wine, and/or honey for private dinners, feasts, festivals, offerings, medicine

---

<sup>352</sup> Muhs, *The Ancient Egyptian Economy: 3000 – 30 BCE*, p. 124.

<sup>353</sup> Ilaria Incordino, “Foreign aromatic products in the cultural and religious identity of Ancient Egypt,” in *Materiality and Identity*, ed. by Ilaria Micheli, (Trieste: EUT, 2016), pp. 149, 152-153.

and/or cults, their pavilions and landscaping could have acted as a sort of theatrical stage for entertainment, such as singers, musicians, and dancers as well.<sup>354</sup>

Evidently, the *ḥnty-š*-, *ʿt-nt-ḥt*-, and *ḥrrt-š*-formal gardens acted as social gathering and/or pastime locales for the king, great wives and minor wives, children of the royal harems, members of the royal court, as well as permanent or visiting elite officials based on some of their placement in palatial complexes of Perunefer, Malkata, and Thebes. These formal gardens seem to have had a lasting impression on Amenhotep II in his youth, as he was possibly taught archery in the formal garden of the royal palace beside Karnak as a child and further watched performances with his tutor and high officials, such as Qenamun (TT 93), in the pavilions of the *ḥnty-š*-formal garden of the Perunefer Palace – described as his “favourite place.”<sup>355</sup>

The increase in palatial and garden construction and temple donations at Thebes meant the enlargement of the administrations to run it.<sup>356</sup> For example, the Papyrus Harris I dated to Ramesses III states that Thebes over a period of almost 31 years had 86,486 workers and 433 gardens in its many possessions as well as donations to its institutions, including:

...124 fan bouquets, 3,100 tall bouquets, 15,500 scented bouquets, 1.97 million floral bouquets, 1.97 flower bundles, 60,450 flower wreaths, 620 flowers, 12,400 flower chains, 465,000 flower ‘hands’, 110 flower ‘heaps’, 144,720 lotus bouquets, 3,410 lotus bouquets, 110,000 small lotus flower ‘hands,’ and 19,150 [cos-]lettuce and flower bouquets...9,105 jars of incense, honey, and oil...22,566 jars of wine...24,650 bundles of vegetables...289,530 water-fowl...8,160 geese...<sup>357</sup>

It is conceivable that the Domain of Amun of Eighteenth Dynasty Thebes had a comparable number of workers, gardens, and divine offering that had to be administered *en masse*. The tomb-

---

<sup>354</sup> See the text about the singers, musicians, and dancers performing in a *ḥnty-š*-formal garden on p. 68 of this work.

<sup>355</sup> See Bietak, “Minoan Presence in the Pharaonic Naval Base of *Peru-nefer*,” p. 18.

<sup>356</sup> Troy, “Religion and Cult during the Time of Thutmose III,” 124.

<sup>357</sup> Breasted, ‘Papyrus Harris,’ in *Ancient records of Egypt* IV, pp. 97, 99-100, 102, 104; also see the excerpt on the floral offerings part in Manniche, *An Ancient Egyptian Herbal*, p. 24; or Michael Hasse, „Tempel und Gärten,” pp. 178-179.

Table 3.5: Relevant Tomb-Owner Titles			
<i>Theban Tomb</i>	<i>Scene</i>	<i>Years Active</i>	<i>Relevant Titles</i>
TT 39 Puimra	<i>sš</i> -formal garden	H-T3	‘Second Priest of Amun’ ‘Architect’
TT 87 Minnakht	<i>hnty-š</i> -formal garden	T3-A2	‘Overseer of the Double-granary of Amun’ ‘Chief Servant of Amun’ ‘Scribe of the Divine Offerings of Amun in Memorial Temple of Thutmose III’ (son)
TT 90 Nebamun	<i>k3mw</i> -formal garden	T4-A3	‘Standard-bearer of the Beloved-of-Amun Bark’
TT 96 Sennefer	<i>ʿt-nt-ht</i> -formal garden	A2	‘Overseer of the <i>Hntyw-š</i> -Formal Gardens of Amun’ ‘Overseer of the <i>ʿt-nt-ht</i> -Formal Gardens of Amun’ ‘Overseer of the Double-granary of Amun’ ‘Overseer of the Cattle of Amun’
TT 161 Nakht	<i>hrrt-š</i> -formal garden	A3	‘Gardener of the Divine Offerings of Amun’ (father and four sons) ‘Offering-bearer of the Floral Offerings of Amun’ (four sons)

owners with Domain of Amun formal garden scenes from this period held positions in the priesthood and administration, which has been organized into Table 3.5 above based on the information in Appendix I. Indeed, these titles suggest direct or indirect contact with the Domain of Amun formal gardens because as endowments to the gods, they were used for worship and festivals, and to yield surplus produce, which meant labor acquisition for their construction and upkeep, recordkeeping, storage, transportation, and the arrangement and presentation of their produce into divine offerings, particularly floral arrangements, for the altars of the gods and private deceased persons each day, such as in Senenmut’s tomb (TT 71).<sup>358</sup> While these elite individuals

<sup>358</sup> See his texts that request three bouquets daily from the *hntyw-š*-formal gardens for his tomb cult on p. 74.

held esteemed titles, they were hardly honorary in nature and would have required apprenticeship, specialized skills, knowledge, and prior work-related experience. For example, Puimra (TT 39), who has a *sš*-formal garden scene and who was ‘Second Priest of Amun’ during the coregency of Hatshepsut and Thutmose III, oversaw the weighing of incense gum and resin in all of the Theban temples of the Domain of Amun based on an inscription in his tomb<sup>359</sup> (See Fig. A3.50).

Individuals with the position of ‘Gardeners of the Divine Offerings of Amun’ like Nakht (TT 161), his father Gurer, and his four sons, would have likely tended, harvested, and collected the gum and resin from the avenues, rows, and groves of trees in the Domain of Amun formal gardens. Puimra would have likely weighted, enumerated, and securely stored the gum and resin in the treasuries of Amun<sup>360</sup> alongside those who worked there, such as: Amenhotep (TT C3), Djehuty (TT 11), Baki (TT 18), Djehutynefer (TT 80), Sennefer (TT 99), and Amenmose (TT 228) who were ‘Overseers/Scribes/Deputies/Treasurers of the Treasuries of Amun’ (See Fig. A3.50).

Minnakht (TT 87), who was an ‘Overseer of the Double-granaries of Amun,’ and his son Menkheper, who was ‘Scribe of Divine Offerings of Amun in the Memorial Temple of Thutmose III,’ would have interacted directly with the produce of the Domain of Amun formal gardens, likely overseeing, enumerating, and inventorying it into the double-granaries of Amun alongside others there, such as: Nakht (TT A20), Khamhat Meh (TT 57), Nebamun (TT 65), Menkheperaseneb (TT 79), Rekhmira (TT 100), Amenemhat (TT 123), Nebamun (TT 179), Khnummose (TT 253), Amenemipet Tjanefer (TT 297), and Djehutynefer (TT 317), who were ‘Chief Scribes/Overseers/High Officials/Accountants in the Granaries of the Divine Offerings of Amun.’

Sennefer (TT 96) who was an ‘Overseer of the *Hntyw-š*- and *t-nt-ht*-Formal Gardens of Amun’ states in his tomb texts that his position included:

---

<sup>359</sup> Iwaszczuk, *Sacred Landscapes of Thebes during the Reign of Hatshepsut*, p. 150.

<sup>360</sup> Iwaszczuk, *Sacred Landscapes of Thebes during the Reign of Hatshepsut*, p. 150.

- Commanding the plucking of the trees and flowers
- Arranging/presenting all the fresh flowers, fruits, and vegetables (*rnpwt*)
- Organizing their offering each day, and
- Organizing their arrangement for special occasions, such as for the New Year Festival<sup>361</sup>

‘Offering-bearers of the Floral Offerings of Amun’ probably were assisted and overseen by individuals like Sennefer or Nefermenu (TT 138), who was a ‘Florist and a ‘Chief of the Royal Florists.’ Producing floral arrangements must have been a highly skilled vocation that likely required apprenticeship and an extensive knowledge of all the flowers, herbs, and fruit, as well as of types of bouquets, garlands, wreaths, chains, and/or collars. Flower, honey, wine, and fish and fowl offerings would have had to be created like clockwork based on the sheer amount offered in the Domain of Amun over a 31-year period.<sup>362</sup> The floral, vegetable, fruit, fish, fowl, wine or honey offerings then would have been inspected or supplied to a certain temple, monument, tomb, or palace: (i) to be offered to the gods and/or glorified dead, or (ii) to be placed in the palace complexes and royal courts, as requested by those like Ptahmay (TT unknown),<sup>363</sup> Neferrenpet (TT 43), Ray (TT 124) and Amenirneferu (TT 199), who were ‘Overseers of the (Royal) Storerooms,’ Djehutymose (TT 248) a ‘Supplier of Offerings,’ Minnakht (TT 87) a ‘Chief Servant of Amun,’ the brother of Queen Tiye and the brother-in-law of Amenhotep III A’anen (TT 120) a ‘Second Priest of Amun,’ or Qenamun (TT 93) an ‘Overseer of the Perunefer Palace.’

The aviaries and apiaries in the formal gardens were likely maintained by those, such as: Tjay (TT 349) and Nakht (TT C8) who were ‘Overseers of the Aviaries in the Domain of Amun,’ as well as Neferkhaut (TT undiscovered) who supervised the beekeepers as a ‘Chief Beekeeper of

---

<sup>361</sup> See the description of the TT 96 scene on p. 53-54 of this work.

<sup>362</sup> See the Papyrus Harris I excerpt on p. 92 of this work

<sup>363</sup> See his inspection graffito of wine amphorae and pots of *mnw*-plants from the *k3mw*-formal garden of ‘Splendor-of-Aten’ Palace at Malkata on p. 76 of this work.



Amun' based on his funerary cones (Davies & Macadam #405; BM EA 35675) discovered on the West Bank of Thebes.<sup>364</sup> Although individuals who tended to pond/pool/lake cultures during the Eighteenth Dynasty are unknown, Old Kingdom elite individuals with titles, such as 'Overseer of the Pond (ss)'<sup>365</sup> and 'Overseer of the Ponds of Recreation'<sup>366</sup> are known to have existed.

If the Domain of Amun formal gardens were in need of new pavilions, arbors, pergolas, porticos, statues, and boats, or simply repairs, individuals, such as Huy (TT 54) a 'Sculptor of the Domain of Amun' and Amenhotep Huy (TT 368) 'Overseer of the Sculptors of Amun in Thebes,' as well as Amenhotep (TT C1) an 'Overseer of the Carpenters of Amun,' and Ipy (TT C6) an 'Overseer of the Boats in the Memorial Temple of Thutmose IV' likely would have been liaised. All of these individuals who worked directly or indirectly with or in the Domain of Amun formal gardens would have been honored and grateful for their occupations, vocations, and/or professional duties,<sup>367</sup> as the flora, incense, honey, wine, and fowl and fish cultivated in them would have been considered luxury items, as they were for the gods each day or for upcoming meals, feasts, and/or festivals in the temples and/or royal palace complexes and courts. The 'Chief of Royal Florists' Nefermenu (TT 138), for example, would have had privileged access into the palace complexes to place floral offerings in the early morning,<sup>368</sup> as they were arranged at nighttime to keep them fresh.<sup>369</sup> The Thutmosides would have been familiar with the formal

---

<sup>364</sup> Neferkhaut's tomb is likely located in El-Khokha or El-Asasif Districts of the Theban Necropolis. See the funerary cone's entry in Kento Zenihiro, *The Complete Funerary Cones*, (Tokyo: Tocho Company Ltd., 2009), p. 168; Kritsky, *Tears of Re: Beekeeping in ancient Egypt*, fig. 7.6g.

<sup>365</sup> Erman and Grapow, *WB III*, no. 484.13; Jones, *An index of ancient Egyptian titles, epithets and phrases of the Old Kingdom I*, no. 767.

<sup>366</sup> Jones, *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom I*, no. 818.

<sup>367</sup> See esp. the additional text from Nefermenu's stela: "Receiving praise daily...passing the years of a long life-time...being under good orders, without saying "I wish I had" about any thing..." in El-Maenshawy, "Aspects of the office of temple gardener in ancient Egypt," pp. 60-61.

<sup>368</sup> See esp. the additional text from Nefermenu's stela: "...moving freely (in) the secret place, attending immediately in the early morning..." in El-Maenshawy, "Aspects of the office of temple gardener in ancient Egypt," pp. 60-61.

<sup>369</sup> Marija Tomashevska, "Sacred floral garlands and collars from the New Kingdom period and early third intermediate period in ancient Egypt (1550 B.C. – 943 B.C.)," MA thesis, (Leiden: Leiden University, Faculty of

gardens, storehouses, and/or double-granaries of Amun since they performed certain rituals to the gods in them, according in Thutmose III's Annals,<sup>370</sup> as well as from the depiction of Amenhotep II likely seated in one of *ṯ-nt-ḥt*-formal garden of Amun's pavilions to receive its offerings and gifts presented to him by Sennefer during the New Year Festival.<sup>371</sup>

Thus, working in the Domain of Amun formal gardens seems to have had a lasting impression on certain private individuals who included them as scenes in the decorative schema of their tombs, which has been collated into Table 3.6 based on the information in Appendix II on the following page. These five Domain of Amun formal garden scenes are not the focal point of the rooms in which they are placed; however, they are located in prime areas of the transverse halls, passages, and chapels centered around the tomb-owner's unique, sociocultural experience as a member of the Theban elite, which family and community members would have viewed more so than other scenes during funerals, festival, and feast days.<sup>372</sup> Furthermore, the scenes are on walls near daily life 'focal representations.'<sup>373</sup> The *sš*-formal garden scene, for example, is located in proximity to 'natural resource/inspecting icons.'<sup>374</sup> The *ḥnty-š*-, *k3mw*-, and *ḥrrt-š*-formal garden scenes are located near 'banqueting icons.'<sup>375</sup> The *ṯ-nt-ḥt*-formal garden scene is situated beside a 'gift to pharaoh icon' and 'royal [pavilion] icon.'<sup>376</sup> While, the *ḥrrt-š*-formal garden scene is further placed in vicinity to 'offering table icons.'<sup>377</sup> Thus, these five Domain of Amun formal

---

Humanities, 2019), p. 6; Aylward M. Blackman and T. Eric Peet, "Papyrus Lansing: A translation with notes," *JEA* 11.3/4 (1925), p. 288.

<sup>370</sup> See Breasted, 'Sacrifices to Amon,' *Ancient records of Egypt* II, p. 195, §458.

<sup>371</sup> See the wall narrative of the TT 96 scene on pp. 59-60 or in Appendix II.

<sup>372</sup> Hartwig, *Tomb Painting and Identity in Ancient Thebes, 1419-1372 BCE*, p. 49; John Baines, *High culture and experience in ancient Egypt*, (Sheffield: Equinox Publishing, 2013), pp. 76-82.

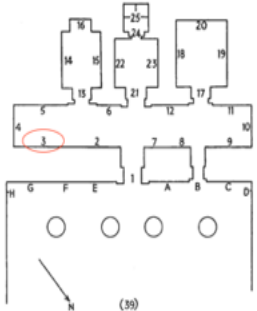
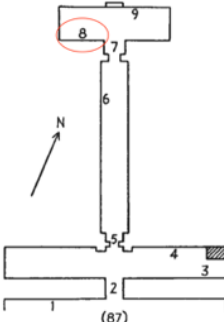
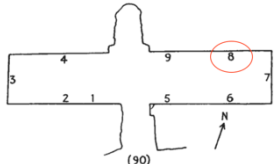
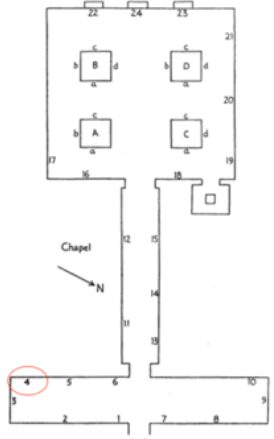

<sup>373</sup> Hartwig terms focal representations as 'icons.' See their discussions in Melina Hartwig, *Tomb Painting and Identity in Ancient Thebes, 1419-1372 BCE* (Brussels: FERE, 2004): for 'gift (to pharaoh) icons', pp. 79-81; 'offering table icons,' pp. 89-97; for 'banqueting icons,' pp. 98-103; for 'fish and fowl icons,' pp. 103-106; and for 'natural resource/inspecting icons,' pp. 106-111.

<sup>374</sup> See the wall narrative of TT 39.

<sup>375</sup> See the wall narratives of TT 87, TT 90, and TT 161.

<sup>376</sup> See the wall narrative of TT 96.

<sup>377</sup> See the wall narrative of TT 161.

Table 3.6: Location of Domain of Amun Formal Garden Scenes in Tombs					
<i>Theban Tomb</i>	<i>Location</i>				<i>Plan</i>
	<i>Scene</i>	<i>Room</i>	<i>Architecture</i>	<i>Orientation</i>	
TT 39 Puimra	<i>sš</i> -formal garden	Transverse Hall	Wall	N	
TT 87 Minnakht	<i>hnty-š</i> -formal garden	Chapel	Wall	SW	
TT 90 Nebamun	<i>k3mw</i> -formal garden	Transverse Hall	Wall	N	
TT 96 Sennefer	<i>t-nt-ht</i> -formal garden	Transverse Hall	Wall	E	
TT 161 Nakht	<i>hrrt-š</i> -formal garden	Passage	Wall	W	

garden scenes could be interpreted as a sort of ‘career icon’ that celebrated the tomb-owner’s professional life, proudly displaying it to viewers after death. Especially, due to the fact that Egyptians truly respected those with professions associated with simple or formal gardens due to the sheer upkeep they required, as recorded in Middle Kingdom didactics of *The Satire of Trades*:

The gardener carries a yoke, His shoulders are bent as with age; There’s a swelling on his neck and it festers. In the morning he waters vegetables, The evening he spends with the herbs, While at noon he has toiled in the orchard. He works himself to death, More than all other professions.<sup>378</sup>

Given the number of individuals who worked directly or indirectly in the Domain of Amun formal gardens, it is certainly tempting to consider which could have formal garden scene(s) in their tombs if they are ever discovered in the future. Nakht’s (TT 161) father Gurer and his four sons Huynefer, Waser, Pareheny, and Kha who were ‘Gardeners/Offering-bearers of Floral Offerings of Amun,’ for example, possibly might have *ḥrrt-š*-formal garden scenes in their tombs while Nefermenu might have a *ḥnty-š*-formal garden scene since he was an ‘Overseer of the *Ḥntyw-š*-Formal Gardens of Thebes.’ The tomb of Minnakht’s (TT 87) son Menkheper, who was a ‘Scribe of Divine Offerings in the Memorial Temple of Thutmose III,’ might have an additional scene of *ḥnty-š*-formal garden in the Memorial Temple of Thutmose III too. Conversely, Senenmut (TT 71) and Sennefer (TT 96) did not depict *ḥntyw-š*-formal garden scenes in their tombs even though they were ‘Overseers of the *Ḥntyw-š*-Formal Gardens.’ Likewise, Qenamun (TT 93) only mentions in his tomb texts the *ḥnty-š*- and *‘t-nt-ḥt*-formal gardens in proximity to the palaces of Perunefer, which he frequented as an ‘Overseer of the Perunefer Palace,’ and reposed in with the king and officials. Tomb-owners chose their tomb’s decorative schema, so to not include the formal gardens in which they worked/interacted as scenes could be a result of (i) cost, (ii) lack of available space in the tomb, or (iii) simply because they had not wanted to depict them.

---

<sup>378</sup> Lichtheim, *Ancient Egyptian Literature* I, p. 187.

## Chapter Four

### Patterns of Flora and Fauna in Theban Formal Gardens

By examining these š- and Domain of Amun formal garden scenes, their texts, and/or surrounding decorative schema, as well as extant archaeological,<sup>379</sup> textual, and pictorial evidence, the early to mid-late Eighteenth Dynasty formal gardens in Thebes could have incorporated at least 42 floral and 11 faunal species into its pools/ponds/lakes, *hsp*-plots, water gardens, tree avenues, (sacred) groves, arbors, and/or pergolas. This has been collated into Tables 4.0-4.2 based on Appendix II:

Table 4.0: Growth Cycle of the Formal Gardens			
<i>Tree/Palm Species</i>	<i>Blooming/Fruiting Period</i>	<i>Months</i>	<i>Growth Cycle</i>
Egyptian riverhemp	Winter-summer (flowers)	Year-round	Annual
<i>Argun</i> -palm	Winter-spring (fruit)	January-May	Annual
Egyptian willow	Winter-spring (flowers)	February-May	Annual
Persea tree	Late winter-early spring (flowers/fruit)	February-March	Annual
Myrrh tree	Spring (flowers)	March-April	Annual
Frankincense tree	Non-flowering	-	Annual
Desert date	Spring (fruit)	March-April	Annual
Pomegranate tree	Spring (flowers)	March-April	Annual
Mediterranean cypress	Spring (flowers/cones)	March-May	Annual
Moringa tree	Spring (flowers/pods)	March-May	Annual
<i>Doum</i> -palm	Spring-summer (fruit)	April-June	Annual
Sycamore fig	Spring-fall (flowers/fruit)	April-September	Annual
<i>Atil</i> -tree	Summer (flowers)	June-August	Annual
Tamarisk spp.	Summer (flowers)	June-August	Annual
Carob tree	Summer (pods)	June-August	Annual
Common fig	Summer-fall (fruit)	June-September	Biennial
Pomegranate tree	Later summer-mid fall (fruit)	August-October	Annual
Date palm	Fall (fruit)	September-October	Annual
Carob tree	Fall (flowers)	September-October	Annual
Christ's thorn tree	Fall to winter (flowers/fruit)	October-January	Annual

<sup>379</sup> Archaeobotanical evidence of other species exists from the Eighteenth Dynasty in Thebes. However, they are not attested in these images or their associated extant evidence. For more information, see Christian Tutundjian de Vartavan, *et al.*, *Codex of ancient Egyptian plant remains*, (London: SAIS Publishing, 2010).

<i>ksbt</i> -tree	?	?	?
<i>Herbaceous Species</i>	<i>Blooming/Fruiting Period</i>	<i>Months</i>	<i>Growth Cycle</i>
Low cornflower	Spring (flowers)	March-April	Annual-Biennial
Opium poppy	Spring (flowers)	March-April	Annual
True cardamom	Spring (flowers)	April-May	Perennial
Mandrake	Spring (fruit)	May	Annual
Muskmelons	Spring-summer (fruit)	April-July	Annual-Perennial
Mallow bindweed	Spring-summer (flowers)	March-August	Perennial
Lesser bindweed	Spring-summer (flowers)	March-August	Perennial
Egyptian walking/bulb onion	Spring-early fall (flowers/vegetable)	April-September	Biennial-Perennial
Cilantro/coriander	Spring-fall (flowers/seeds)	March-September	Annual
White lotus	Summer (flowers)	June-August	Annual
Grapevine	Summer (flowers)	June-August	Annual
Cos-lettuce	Summer (flowers/vegetable)	June-August	Annual-Biennial
Curled pondweed	Mid summer (flowers)	July	Annual
Papyrus	Late summer (flowers)	August	Annual
Common reed	Late summer (flowers)	August	Perennial
True cardamom	Late summer-mid fall (pods)	August-November	Perennial
Blue lotus	Summer to fall (flowers)	June-September	Annual
Scented mayweed	Summer to fall (flowers)	June-October	Annual
Grapevine	Fall (fruit)	September-October	Annual
Mandrake	Fall (flowers)	September-November	Annual
“Herbs”	?	?	Annuals
<i>ih</i> -plant	?	?	?
<i>mnw</i> -plant	?	?	?
<i>mnwh</i> -plant	?	?	?
<i>tnw</i> -plant	?	?	?

In reality, š- and Domain of Amun formal gardens would have raised a mixture of annual, biennial, and perennial species of flora that are only in bloom and harvestable at certain times throughout the year in Egypt. The formal gardens were seasonal with only a certain number of species producing flowers, fruit, herbs, or vegetables for bouquets, meals and/or offerings at any given time during the three ancient Egyptian seasonal cycles: the growing season, *pṛt* ( $\square\overline{\square}$ ), from October to February (fall/winter); the agricultural harvest season, *šmw* ( $\equiv\equiv\odot$ ), from March to May (spring); and the inundation season, *zḥt* ( $\text{𓆎}\overline{\text{𓆎}}$ ), from July to September (summer). The

information concerning the growth cycles of the aquatic, herbaceous, or low-growing species is particularly enlightening as 15 are annuals, meaning they had to be reseeded and replanted each year. Whereas, those that are biennials or perennials only needed to be reseeded and replanted after two years or more. Tree and palm species on the other hand simply had to be planted into pits, growing flowers and/or fruits annually with the exception of the common fig, which produces biennially, or the *doum*-palm, which does not produce its fruit annually until six to eight years of age. Table 4.0 demonstrates the horticultural knowledge and refined labor organization needed to be upheld each season by the overseers, gardeners, floral-offering bearers, florists, scribes, priests, who worked in these š- and Domain of Amun formal gardens.

Both native and foreign flora could have been raised in š- and Domain of Amun gardens during this period and their distribution in antiquity, detailed in Appendix II, is seen in Table 4.1:

Table 4.1: Distribution in Antiquity of Flora in the Formal Gardens	
<i>Tree/Palm Species</i>	<i>Distribution in Antiquity</i>
<i>Argun</i> -palm	Sudan
<i>Atil</i> -tree	Egypt, North Africa, Middle East
Desert date	Sub-Saharan Africa, Middle East
Egyptian riverhemp tree	Sudan, Nile Basin
Egyptian willow	Sudan, Ethiopia
Myrrh tree	Sudan, Ethiopia, Djibouti, Somalia, Arabian Peninsula
Frankincense tree	Sudan, Ethiopia, Djibouti, Somalia, Arabian Peninsula
Tamarisk spp.	North Africa, Levant
Carob tree	Sinai Peninsula, Eastern Mediterranean Basin
<i>Doum</i> -palm	Egypt, Nile Basin
Common fig	Mesopotamia (Southern Iraq), Asia Minor
Mediterranean cypress	Asia Minor, Syro-Palestine, Lebanon, Cyrenaica (Eastern Libya), Iran, Iraq, Greece, Rhodes, Cyprus
Pomegranate tree	Asia Minor, Bosphorus Region
Date palm	Egypt, North Africa, Middle East
Christ's thorn tree	Nile Basin, North Africa, Levant
Moringa tree	North Africa, Sudan, Ethiopia
Persea tree	Ethiopian Highlands, Eritrea, Somalia
Sycamore fig	Egypt
<i>ksbt</i> -tree	?

<i>Herbaceous Species</i>	<i>Distribution in Antiquity</i>
Egyptian walking/bulb onion	Egypt, Mediterranean Basin
Mallow bindweed	Mediterranean Basin
Lesser bindweed	Mediterranean Basin
Cos-lettuce	North Africa, Mediterranean Basin
Low cornflower	Syro-Palestine, Iran, Armenia, Afghanistan, Pakistan
Opium poppy	Crete, Cyprus
True cardamom	Sumer and Mesopotamia (Southern Iraq), India
Mandrake	Syro-Palestine, Israel
Muskmelons	Egypt, Sudan
Cilantro/coriander	North Africa, Southern Europe, Southwest Asia
Papyrus	Egypt, Nile Basin, Sudan, Sub-Saharan Africa
Common reed	Egypt, Eastern Mediterranean Basin
Grapevine	Egypt, Mediterranean Basin
Scented mayweed	Egypt
Blue/white lotus	Egypt, Sub-Saharan Africa, Palestine, Yemen
“Herbs”	Egypt, Nile Basin, Mediterranean Basin
<i>ih</i> -plant	?
<i>mnw</i> -plant	?
<i>mnwh</i> -plant	?
<i>tnw</i> -plant	?

Extant pictorial evidence from the New Kingdom dated from Hatshepsut to Amenhotep II<sup>380</sup> (See Figs. A3.51-A3.53) exhibits how foreign tree and palm species were imported young and potted,<sup>381</sup> aboard ships and/or over land, from the Northern (Syro-Palestine) and Southern (Sudan/Nubia) Territories and ‘foreign lands,’ such as: Minoan Crete, Mycenaean Cyprus, the Hittite Empire (Asia Minor), Punt (Ethiopia, most probably), and the Babylonian Empire (Mesopotamia). Based on Fragment M from the Ptah Temple at Memphis, two Middle Kingdom expeditionary vessels, for example, outbound from Lebanon to Egypt during the reign of Amenemhat II carried:

7 jars of cinnamon [tree products (*Cinnamomum* spp.) or *tī-šps*<sup>382</sup>], 92 jars of frankincense, 8.5 barrels of *tntm*-tree fruit, [nearly] 56 barrels of [cilantro/coriander fruit (*Coriandrum*

<sup>380</sup> See the depiction of potted incense trees in TT 39, TT 100, and TT 143, as well as the Punt Expedition reliefs in the second portico of the First Terrace of Hatshepsut’s memorial temple at Deir el-Bahari.

<sup>381</sup> Frank N. Hepper, “An ancient expedition to transplant live trees,” *JRHS* 92 (1967): pp. 435-438; David M. Dixon, “The transplantation of Punt incense trees in Egypt,” *JEA* 55 (1969): p. 57.

<sup>382</sup> Ebbell and Grapow ascribe *tī-šps* to the cinnamon tree but Germer thinks it was a Puntite fragrance due to cinnamon’s origins from Sri Lanka, India, and China. However, this vessel was outbound from Lebanon, and near Eastern spice merchants likely were able to attain cinnamon more readily from the Far East, reselling it to vessels going to Egypt, as cinnamon was used by the ancient Egyptians for embalming in mummification. For more information, see Germer, *Handbuch*, p. 151.



*sativum* L.) or *šzw*<sup>383</sup>], 4 barrels of [dried thallus or lichen from the old man's beard tree (*Usnea barbata* L.) or *kzt-šwt*<sup>384</sup>], medicinal herbs, 73 common fig trees, 1 sycamore fig tree, 4 sacks of *šbt*-plants, 197 sacks of *bhw*-plants, and [an unknown number] of sacks of *šdšft*-plants...<sup>385</sup>

From the excerpt of Fragment M above and Thutmose III's Annals,<sup>386</sup> it is clear that many types of foreign tree and plant species were imported from Mesopotamia, Asia Minor, Syro-Palestine, Israel, the Levant, Crete, or Cyprus as trees, fruit and/or seeds.<sup>387</sup> The same was likely true for those plants that were native to Egypt but localized to a certain region, such as the carob tree native to the Sinai Peninsula (*biw*). Thus, the fruit or seeds of the low cornflower, opium poppy, mandrake, true cardamom, and cilantro/coriander would have likely been planted and naturalized, reproducing seeds the following year in the formal garden in which it was planted instead of being bought again or already grown and potted each time. For the native species, these could have been purchased already grown and potted locally, from seeds from local gardeners, or from the owners' other gardens.

Similar knowledge can be discerned concerning the fish, fowl, and insects present in the formal gardens. Fish and fowl breeding and growth patterns, as well as honey production by the Egyptian honeybee, described in Appendix II, was organized into Table 4.2 on the next page. These patterns would have determined when the ancient Egyptians were able to gather fish and fowl from their formal gardens during the year. For example, the fish species in the water features would spawn eggs from *šmw* to *pwt* (spring to fall/winter), maturing around six months after their

---

<sup>383</sup> Germer, *Handbuch*, pp. 124-125.

<sup>384</sup> "The determinative does not match the tree lichen (*Parmelia furfuracea* L.) because it has a flat, lobed thallus. If it is supposed to be a lichen, it must have been the beard lichen (*Usnea barbata* L.) found together with the *Parmelia furfuracea* L. Both types of lichen were imported from the Middle East [and used in mummy embalming]. In Egypt, no beard lichen grows. However, it is entirely open whether *kzt-šwt* is an herbal product at all," see Germer, *Handbuch*, p. 143.

<sup>385</sup> See the German translation in Altenmüller and Moussa, „Des Inschrift Amenemhets' II," pp. 14-16, M 18-21.

<sup>386</sup> See Breasted, 'Harvest of Retenu,' 'Tribute of Nahrain,' 'The harbors supplied,' 'Syrian Tribute,' and 'Tribute of Arrapachitis,' in *Ancient records of Egypt* II, p. 200, §472; p. 203, §482; p. 206, §491-492; p. 210, §509, §512.

<sup>387</sup> Seeds are also considered by El-Maenshawy, "Aspects of the office of temple gardener in ancient Egypt," p. 53.

Table 4.2: Patterns of Fauna in the Formal Gardens				
Pisciculture				
<i>Fish</i>	<i>Spawning Season</i> <sup>388</sup>	<i>Months</i>	<i>Growth to Juvenile and/or Adult</i>	
Carp spp.	Spring-early summer	March-June	± Six months	
Elephantfish spp.	Summer	June-September	± Six months	
Egyptian trunkfish	Summer	June-September	± Six months	
Catfish spp.	Summer	June-September	± Six months	
Tilapia spp.	Fall-spring	November-April	± Six months	
Aviculture				
<i>Bird</i>	<i>Breeding Season</i>	<i>Months</i>	<i>Growth to Juvenile and/or Adult</i>	
Egyptian turtle dove	Spring	March to May	± One year	
Pintail duck	Spring	March-May	± One year	
Mallard duck	Spring	March-May	± One year	
Red-breasted goose	Spring	March-May	± One year	
htꜣ-duck	?	?	?	
Apiculture				
<i>Insect</i>	<i>Honeyflow Season</i> <sup>389</sup>	<i>Months</i>	<i>Honey Season</i>	<i>Months</i>
Egyptian honey bee	Winter-early summer	January-June	Spring-early summer	April-June

hatching. Concerning waterfowl, breeding would have occurred in šmw (spring) while the eggs would have hatched and matured into a juvenile or adult over the course of one year. Egyptian honey bees pollinate almost year-round but would have only produced honey in š- and Domain of Amun formal gardens during their citrus<sup>390</sup> and clover seasons<sup>391</sup> in šmw (spring). The ancient Egyptians would have been well-versed in the breeding and production patterns of these fauna. And although the fish and waterfowl species would not have produced year-round; this was dim-

<sup>388</sup> “The typical fishing substance pattern along the Nile is believed to have two peaks with the year, at the beginning of the floods (Akhet) when fish spawn in shallow water, and at the end of the flood season, when the Nile recedes and fish can be harvested from residual pools...the average length of the fish from residual ponds is smaller than those collected from the Nile spawning places,” Pierre M. Vermeersch, *Palaeolithic Living Sites in Upper and Middle Egypt*, (Leuven: Leuven University Press, 2000), pp. 154, 194; Fred Wendorf, “Wadi Kubaniya,” in *Encyclopaedia of the archaeology of ancient Egypt*, ed. by Kathryn M. Bard, (London: Routledge, 1999), p. 874.

<sup>389</sup> This is a misnomer. In beekeeping, this is the nectar and pollen collection season for honey bees.

<sup>390</sup> ‘Citrus’ season is a misnomer, as it includes all species of fruit-bearing trees and palms not only citrus species.

<sup>391</sup> Compare this to the modern data in Taha El-Kazafy, *et al.*, “Nectar and pollen sources for honey bees in Kafrelsheikh province of northern Egypt,” *Saudi Journal of Biological Sciences* (2017): p. 1, esp. pp. 3-4.

-inished by the fact that many of these species would have beautified the pools/ponds/lakes and naturally kept them clean, as they are either bottom feeders, and/or are particularly known for their tendency to eat waterborne insects, as well as invasive aquatic leaves, grasses, algae, and/or detritus.<sup>392</sup>

These š- and Domain of Amun formal gardens could have provided surplus produce for private and/or palatial households' regular meals, medicine, perfumes, ointments, private banquets, entertainment, feasts, funerals or wakes. In the sacred sphere, the vegetables, fruit, herbs, and flowers from the formal gardens would have been administered by priesthoods who ran memorial or temple cults and prepared or arranged them into meals or bouquets for daily offerings or during festivals and feast days throughout the calendrical year. Beginning in the reign of Ahmose I, for example, celebrants ate common figs with honey and placed fresh floral *mšꜥ-hrw*-wreaths on statues in temples and tombs during the Festival of Thoth,<sup>393</sup> which evoked Spell 20 or the 'Incantation for the *mšꜥ-hrw*-Wreaths' from the Book of the Dead.<sup>394</sup> While, at the time of the Khoiak Festival of Sokar-Osiris, fresh Egyptian walking or bulb onions and blue and white lotus were strung into collars and wreaths<sup>395</sup> to be offered in the Theban Necropolis, reinstating the otherworldly powers of Sokar-Osiris and the glorified dead (*šh*).<sup>396</sup>

Accordingly, š- and Domain of Amun formal garden were used as a platform to propagandize the owner's status, power, and wealth during important Theban societal events.

---

<sup>392</sup> See the eating habits of these fauna species detailed in Appendix II.

<sup>393</sup> Mark Smith, *Following Osiris*, (Oxford: Oxford University Press, 2017), p. 231; Jan Assmann, *Death and Salvation in Ancient Egypt*, (Ithaca: Cornell University Press, 2005), p. 308; Douglas Brewer, *et al.*, *Domestic Plants and Animals: The Egyptian Origins*, (Warminster: Aris & Phillips, 1994), p. 52.

<sup>394</sup> See the incantation's mention in the entry for the common fig in Appendix II.

<sup>395</sup> See the depiction of these onion and lotus bouquets in Roy (TT 255) and in Nakhtamun (TT 341).

<sup>396</sup> Catherine Graindorge-Hereil, « Les oignons de Sokar, » *RdE* 43 (1992): pp. 87-105; Catherine Graindorge-Hereil, « L'oignon, la magie et les deux, » in *Encyclopédie religieuse de l'Univers végétal : Croyances phytoreligieuses de l'Égypte ancienne I*, ed. by Sydney Aufrère, (Montpellier: Publications de l'université Paul Virey, 2001), pp. 317-333.

Hatshepsut, Thutmose III, Amenhotep II, and Amenhotep III boast that they built *š*- and Domain of Amun formal gardens, with luxurious materials, and sometimes foreign flora, in temples as monuments to show their devotion to Amun and in palaces to enhance their prestige and power in the royal court.<sup>397</sup> In the private sphere, Ineni (TT 81) grew nearly 500 native and foreign species in his *š*-formal garden while Min (TT 109) and Qenamun (TT 93) owned multiple *š*-formal gardens.<sup>398</sup> During the Beautiful Festival of the Valley, for example, celebrations seem to have also taken place on the East Bank in the *š*-, *hnty-š*-, or *hrrt-š*-formal gardens of palaces, homes, and/or temple domains before or after royal and private citizens had visited the memorial temples (see the TT 87 scene) and tombs on the West Bank to dine with their ancestors and offer them bouquets of lotus, papyrus, mandrake, opium poppy, and/or *doum*-fronds.<sup>399</sup> In the TT 100 wall narrative, Rekhmira hosts a grand banquet with hundreds of guests “upon returning from the Temple of Amun at Karnak and upon making blessings to the majesty of this god.”<sup>400</sup> Guests enjoy a large feast in his *š*-formal garden while rituals are performed on statues in the pool and in the garden shrine.<sup>401</sup> During the New Year Festival or the Harvest Festival of Renenutet and Nepri the *ʿt-nt-ht*- and *k3mw*-formal gardens had some of their crop ritually sacrificed to the gods and/or offered to the king, who could be an active participant, as in the TT 96 wall narrative with Amenhotep II likely seated in one of the formal garden’s pavilions, or in the wall reliefs from the

---

<sup>397</sup> See the texts mentioned on pp. 37-38, 83-84 of this work.

<sup>398</sup> See the TT 81, TT 109, and TT 93 #1-#3 scenes, pp. 15-16, 18, 24-27 of this work.

<sup>399</sup> Logistically speaking, the Beautiful Festival of the Valley and all its pomp and splendor likely spanned more than one day. The Opet Festival during the time of Thutmose III, for example, was an 11-day affair. See John C. Darnell, “Opet Festival,” *UCLAE* 1.1 (2010): p. 1. During the Beautiful Festival of the Valley, priests and celebrants (i) carried and witnessed the Theban Triad barks leave Karnak Temple, (ii) the sacred barks sailed across the Nile, (iii) the sacred barks were paired with the deified pharaoh’s *nšmt*-bark and ritually sailed in memorial temples on the West Bank, and (iv) all ancient Egyptians went to their family tombs to feast with the dead, as well as feasted in their homes on other days of the festival, as in TT 100 scene and TT 161 scene in Chapter Three.

<sup>400</sup> This might be alluding to their return from the festivities occurring at Karnak Temple on the first day of the festival. The Beautiful Festival of the Valley began with grand procession of the Theban Triad’s barks from Karnak Temple to quays for them to cross to the Nile in order to visit the memorial temples on the West Bank. See Martin Stadler, “Procession,” *UCLAE* 1.1 (2008): p. 7.

<sup>401</sup> See the TT 100 wall narrative and surrounding scenes and texts, pp. 20-23 of this work.

Second Terrace of Memorial Temple of Hatshepsut where she performs rites on the Puntite incense trees of her *hnty-š*-formal garden (See Fig. A3.54). Kings could participate in these rituals *in absentia* if necessary, such as Hatshepsut, Thutmose III, and possibly Amenhotep II, who erected statues of themselves as ‘NN-who-Offers-Fresh-Produce-to-Amun’ or Amenhotep I’s as ‘NN-of-the-NN-formal-garden’<sup>402</sup> (See Figs. A3.46-A3.49).

By contrast, when banquets and feasts were not busying domestic and palatial households, the *š*- and Domain of Amun formal gardens would have been places of relaxation, repose, pleasure, aesthetics, entertainment, and even sports.<sup>403</sup> Palatial, sacred, and private *š*- and Domain of Amun formal gardens could have been multifaceted microcenters of supplementary herb, vegetable, fruit, fish, fowl, wine, and honey production to be used for banquets, meals, collars, garlands, wreaths, bouquets, perfumes, unguents, aromata,<sup>404</sup> medicine, offerings, festivities, and even for wood for sacred temple doors and barks<sup>405</sup> to name but a few.<sup>406</sup> The flora and fauna species would have had various practical uses, deeply rooted religious symbolism related to the sun, moon, creation and/or rebirth cycles, as well as certain levels of prestige due to their historical roots.<sup>407</sup> And although the produce of these formal gardens was allocated to many occasions throughout the year, Thebans did not need to worry about it being expended because they raised a mixture of annual, biennial, and perennial species in bloom and harvestable at different times throughout the year.

---

<sup>402</sup> See pp. 52, 63, 75, 82 of this work.

<sup>403</sup> See Ineni and his wife relaxing in the pavilion in the TT 81 scene; Min teaching archery to the young prince Amenhotep II in the royal palace on the East Bank beside the TT 109 scene; Qenamun and his wife fishing in the TT 93 #2 scene; and Qenamun watching a performance with others in the *hnty-š*-formal garden of one of the palaces at Perunefer.

<sup>404</sup> Myrrh and frankincense were not the only tree species to be burned by the ancient Egyptians for their scent. For more information, see the entries on the flora in the formal gardens located in Appendix II.

<sup>405</sup> For temple doors, see the text about the felling some Mediterranean cypress from the *hnty-š*-formal garden of the Memphite memorial temple of Amenhotep III in order to be crafted into doors for the structure on pp. 70-71, footnote 281 of this work; For sacred barks, see the construction of a *nšmt*-bark beside the TT 109 *š*-formal scene in Appendix I.

<sup>406</sup> See the myriad uses of the floral and faunal species in ancient Egyptian society in Appendix II.

<sup>407</sup> See Appendix II for the entire list of distribution, uses, and religious symbolism of these floral and faunal species.

## Chapter Five

### Conclusion

This thesis assessed the formal gardens represented in the private Theban funerary art of the early to mid-late Eighteenth Dynasty (TT E2, TT 39, TT 63, TT 80, TT 81, TT 85, TT 87, TT 90, TT 93 #1-3, TT 96, TT 100, TT 109, TT 161, and TT 334) prior to the reign of Amenhotep IV/Akhenaten. The ancient Egyptians had specific words for their simple and formal gardens from the Old Kingdom onward. Over the past century, scholars have translated the formal gardens' names into numerous modern language equivalents, obscuring our understanding of them. Although archaeological examples are known from the Old Kingdom onwards, the study of ancient Egyptian gardens still strongly relies on their extant pictorial and textual evidence recorded in private tombs and other material culture, such as statuary, papyri, and stelae. A review of the prior scholarship revealed that although notable studies have been conducted on aspects of ancient Egyptian gardens since the early Twentieth Century, an updated and chronological examination of the formal garden scenes was warranted, as there was scope for a deeper understanding of the role that these gardens played in the lives of their owners.

This study's methodology produced a typology of the formal gardens scenes by their Egyptian names. Two groupings of scenes became evident: *š*- and the Domain of Amun formal garden scenes, which were examined individually based on their distinct names: (i) the *hnty-š*-formal garden, the *k3mw*-formal garden, the *sš*-formal garden, *t-nt-ht*-formal garden, and the *hrrt-š*-formal garden. In Chapters Two and Three, the *š*- and Domain of Amun formal garden scenes were visually examined through formal analysis. These formal analyses were followed by discussions of the extant textual, pictorial, and/or archaeological evidence of the formal gardens from the time period, their location and relationship to the surrounding decorative schema and

texts in the tombs, their significance in terms of the tomb-owners' relevant titles, their function for the tomb-owner after death, and ultimately the growth cycle, symbolism, uses, and nomenclature of the flora and fauna that they contained.

### **Findings: Š-Formal Gardens**

In Chapter Two, the formal analysis of the images of the 13 š-formal garden in the private Theban tombs (TT 81, TT 109, TT 85, TT 100, TT 80, TT 93 #1-#3, TT 63, TT E2, and TT 334) and the discussion of their extant archaeological, pictorial, and textual evidence from this period revealed that the actual š-formal gardens seem to have been constructed close to a private home, palace, cult, and/or memorial shrine/temple during this period. The pictorial evidence from these tombs as well as the extant archaeological evidence demonstrated that a š-formal garden might be constructed in 14 different layouts during this period (See Figs. A3.1-A3.14), incorporating various features, such as: enclosure walls, gates, pools, water gardens, *hsp*-plots, tree avenues and groves, pavilions with seating, libation basins, garden shrines, arbors and/or pergolas, and apiaries (See Table 2.0).

Examples of extant archaeological, textual, and pictorial evidence of š-formal gardens included royal ones, such as: the one within the Queen Tetisheri Enclosure at Abydos, gifted to her by Ahmose I<sup>408</sup> (See Fig. A3.24); the one that was located somewhere in the enclosure of the Memorial Temple of Hatshepsut at Deir el-Bahari on the West Bank of Thebes<sup>409</sup> (See Fig. A3.30); the one called 'Pure-and-Fresh' located at the 'Rising-of-the-Horizon-of-Amun' Shrine constructed by Hatshepsut on the West Bank of Thebes<sup>410</sup>; the one called 'Libation-of-Amun' constructed by Amenhotep II within the Karnak Temple Complex of Amun-Ra on the East Bank

---

<sup>408</sup> Pierre Lacau, *Stèles du Nouvel Empire* I, p. 6; Sethe, *Urkunden* IV, no. 28; Harvey, "New evidence at Abydos for Ahmose's funerary cult," p. 6.

<sup>409</sup> Naville, *The Temple of Deir el Bahari V: Upper Court and Sanctuary*, p. 10, pl. CXLII.

<sup>410</sup> Lacau and Chevalier, *Une chapelle d'Hatchepsout à Karnak* I, p. 75, footnote 7.

of Thebes<sup>411</sup>; the one at a Theban palatial residence (*pr-ḥ*) located north of Karnak's main (western) entrance and known since the reign of Hatshepsut<sup>412</sup>; and the one that was possibly called 'Glory-of-the-Trees-Beloved-of-Thebes-upon-the-Way-of-the-Ram-Headed-Sphinxes' situated at Karnak's main (western) entrance on the East Bank<sup>413</sup> (See Fig. A3.32). Non-royal, private versions included the one in the First Court of the Memorial Temple of Amenhotep, Son of Hapu, and gifted to him by Amenhotep III<sup>414</sup> (See Fig. A3.31). The extant evidence for the royal *š*-formal gardens and the location of the private ones in the tombs in relation to the surrounding decorative schema and texts indicated that royal and private *š*-formal garden provided aesthetic landscapes for either sports, leisure, festivities, wakes, and private banquets, as well as providing surplus wine, fruit, fish, fowl, honey, herb, flower and/or incense production for the institution to which it was connected. Although the location, features, layouts, and uses for each *š*-formal garden might have differed, what they have in common is their nomenclature as a *š* (𓂏; 𓂏; 𓂏) in Egyptian.

The titles of the tomb-owners who have *š*-formal garden scenes in their tombs suggested direct or indirect contact with the actual royal *š*-formal gardens mentioned above because as endowments to palaces, funeral monuments, or to memorial or cult temples these gardens raised subsidiary produce for use in daily offerings, private meals and banquets, medicine, floral arrangements and/or rites and festivals. These individuals' positions, such as 'Overseer/Controller/Administrator of Construction Works at Karnak,' 'Overseer of the Double-granary and Double-treasury of Amun,' and 'Chief Scribe/Scribe/Grain Accountant of the Divine Offerings of Amun,' likely influenced them to establish *š*-formal gardens of their own beside their

<sup>411</sup> van Siclen III, *Two Theban Monuments from the Reign of Amenhotep II*, p. 16, fig. 10.

<sup>412</sup> Edwards, *Hieroglyphic texts from Egyptian stelae, etc. in the British Museum VIII*, p. 40, pl. XXXIII; Wilkinson, *The garden in ancient Egypt*, pp. 132-133, fig. 68; de Garis-Davies, *The Tomb of Nefer-hotep at Thebes II*, pl. I.

<sup>413</sup> de Garis-Davies, *The Tomb of Nefer-hotep at Thebes II*, pl. III; Gardiner, *Late-Egyptian Miscellanies*, p. 10; Nims, "Places about Thebes," p. 112; Wilkinson, *The garden in ancient Egypt*, p. 134.

<sup>414</sup> Robichon and Varille, *Le temple du scribe royal Amenhotep, fils de Hapou*, pp. 28, 35, 37, pls. III-V, X-XI.



homes (See Table 2.1). Formal gardens would have been symbols of power and status, as the construction of both royal and private *š*-formal gardens would have been a costly and labor-intensive endeavor, even if it was small. Some Theban elite had the resources available to construct extensive and/or multiple *š*-formal gardens for themselves, such as Ineni (TT 81), Min (TT 109) and Qenamun (TT 93).<sup>415</sup> The supervisors and workmen had to clear the land and lay the formal garden's plan and the pools, water gardens, pools, architecture, and *hsp*-plots had to be dug and/or assembled. The flora had to be bought, transported, introduced, resown, and watered and tended throughout the year, as well as the water features and/or apiaries that hosted fauna. A private elite owner of a *š*-formal garden demonstrated that they had too the power and resources necessary to construct and maintain a living monument like the pharaohs or that the tomb-owner had royal favor, as *š*-formal gardens could be gifted to private or royal individuals by the king.<sup>416</sup> The ancient Egyptian elite clearly cherished the *š*-formal gardens planted close to their homes, as they appear on the list of what Ra would revoke if one were an evildoer in life.<sup>417</sup>

Indeed, the *š*-formal garden scenes in the tombs played a wider part in the decorative schema of the room in which they were located (See Table 2.2). The *š*-formal garden scenes are positioned on the pillars or walls in the porticos, transverse halls, passages, or chapels that feature daily life 'focal representations,' which are dedicated to portraying the tomb-owner's personal, sociocultural experience as a member of Theban society, such as 'fish and fowl icons,' 'natural resource/inspecting icons,' 'banqueting icons,' 'gift to pharaoh icons,' and 'offering table icons.' (See Table 2.2). Thus, the *š*-formal garden scene might be interpreted as type of 'natural

---

<sup>415</sup> See the list of the 500 plants grown in Ineni's *š*-formal garden (TT 81 scene), and the texts mentioning the multiple *š*-formal gardens of Min (TT 109 scene), and Qenamun's three *š*-formal gardens (TT 93 #1-#3 scenes) on pp. 15-16, 18, 24-27 of this work.

<sup>416</sup> Lichtheim, *Ancient Egyptian Literature* I, p. 233; Breasted, *Ancient Records of Egypt* II, p. 16, §37; also see p. 35 of this work.

<sup>417</sup> See the Papyrus of Nesmin (pBM 10188) in Faulkner, "The Bremner-Rhind Papyrus III: D. The Book of Overthrowing 'Apep,'" pp. 173-174.

resource/inspecting icon,' which immortalized the tomb-owner's achievement of working in and/or having had the means to construct his own *š*-formal garden that supplied subsidiary produce in life and perpetuating it after death. The tomb-owners' inclusion of their *š*-formal garden as scenes in their tombs would have further allowed their *k3* and *b3* to visit them in perpetuity for pleasure and nourishment, as in the surrounding scenes and texts of the TT 100 scene:

Words spoken: presenting to you lotus blossoms that grew forth from your [*š*-formal garden]. You do not harvest [them] from it...because its yield is for you [and] every gift of every fruit and vegetable that are in it. Be pleased from its produce, be fully satisfied from its provisions, be overjoyed from its fruit and vegetables, be refreshed in the shade of its [tree groves], [and] do what your *ka* loves in it forever and ever.<sup>418</sup>

As well as from the tomb texts of 'Chief Servant and the Overseer of the Double-granary of Amun' Minnakht (TT 87) and the 'High Priest of Amun' Menkheperaseneb II (TT 112):

Going into and out of my tomb to refresh myself in its shadow, to drink water from my pond daily, that all my limbs may flourish. May Hapi supply me with nourishment and offerings, and vegetables in their season. May I stroll at the edge of my pond daily, without cease, may my *ba* alight on the branches of the trees I have planted, may I refresh myself under the branches of my sycamores and eat the bread that they give.<sup>419</sup>

### Findings: Domain of Amun Formal Gardens

In Chapter Three, 'Domain of Amun' was used as an umbrella term for these formal garden scenes due to their mutual relationship to the Amun cult at Thebes, but textually, each had its own Egyptian name: the *hnty-š*-formal garden scene in TT 87; the *k3mw*-formal garden scene in TT 90, the *sš*-formal garden scene in TT 39; the *t-nt-ht*-formal garden scene in TT 96; and the *hrrt-š*-formal garden scene in TT 161. The formal analysis of the images of these Domain of Amun formal garden scenes and their extant archaeological, pictorial, and textual evidence from the period demonstrated how intimately connected the actual physical formal gardens were to the tomb-owner's relevant titles, such as those of 'Overseer of the *Hntyw-š*-Formal Gardens of Amun,'






<sup>418</sup> Sethe, *Urkunden* IV, nos. 1158-1165; Virey, « Le jardin de Rekhmara, » p. 160.

<sup>419</sup> Guksch, *Die Gräber des Nacht-Min und des Men-cheper-Ra-seneb*, p. 152.

‘Overseer of the *ʿt-nt-ht*-Formal Gardens of Amun,’ ‘Scribe of the Divine Offerings of Amun of the Memorial Temple of Thutmose III,’ ‘Overseer of the Double-granary of Amun,’ ‘Gardener of the Divine Offerings of Amun,’ and ‘Offering-bearer of the Floral Offerings of Amun.’

A *hnty-š*-formal garden was constructed in a pharaoh’s memorial temple(s) located in fertile, inundated land (*bḥ*) and/or in palaces, such as those in the important royal naval base of Perunefer (former Avaris) in the Eastern Delta, providing an aesthetic locale for the glorified king and Amun in his form as Osiris the ‘Foremost of Westerners’ (*hnty-imntt*) to visit, as evident from the texts at Hatshepsut’s memorial temple:

...[incense] trees were taken up in the God’s Land, and set in the ground in Egypt...for the king of the gods... to establish for him a Punt...in his [*hnty-š*-formal garden], just as he commanded me for in Thebes...It is large for him. He walks...under them.<sup>420</sup>

An up-to-date interpretation of *hnty-š* from the Egyptian could be ‘the foremost of the *š*-formal garden(s),’ as the word is related to *hnt* () and *hnty* () meaning ‘foremost of,’ as well as the verbs: *hnti* () or ‘to be pleased, to be glad’; *hntš* () or ‘to have enjoyment’; and *hntš* () or ‘to walk about freely, to stroll.’<sup>421</sup> It did not seem coincidental then that the pharaohs were the only ones to construct *hntyw-š*-formal gardens with extensive lakes or pools for themselves or for the gods, as this formal garden would have been the choicest type for pleasure, relaxation, boat rites, and dance, song, and music entertainment uses, as well as raised incense, birds, fish, fruit, flowers, and wood for the palace or memorial temple that adjoined them. The floral arrangements that the overseers/gardeners/florists of the *hntyw-š*-formal gardens like Nefermenu (TT 138) produced were so beloved by the pharaohs<sup>422</sup> and Theban elite that

<sup>420</sup> Breasted, *Ancient Records of Egypt* III, p. 293.

<sup>421</sup> See the full discussion on pp. 59-60 of this work.

<sup>422</sup> Selim, “Two unpublished Eighteenth Dynasty stelae from the reign of Thutmose III at the Cairo Museum TN 20.3.25.3 and TN 21.3.25.14 (pl. I-II),” pp. 329-330, fig. 1; see the full discussion of Nefermenu’s stela on pp. 65-66 of this work.

individuals, such as Senenmut (TT 71), ‘Chief Architect’ and ‘Overseer of the *Hntyw-š*-Formal Gardens of Amun’ requested that they be placed in water and vases in his tomb-chapel every day.<sup>423</sup>

A *k3mw*-formal garden was located in proximity to a palace, and/or cult and memorial temple and was closely linked to those skilled in horticulture and viticulture, as the term literally means ‘the one that creates liquid (*mw*) provisions (*k3*)’ or *k3 mw* (𓀓𓄿𓄿𓄿) in Egyptian.<sup>424</sup> The *k3mw*-formal gardens of this period would have raised grapes and pomegranates, as well as white lotus and pintail duck, and their shrines and ornate wine presses would have been ritually used for the Harvest Festival of Renenutet and Nepri that coincided with *šmw* (spring).

A *sš*-formal garden was constructed beside a cult temple or private elite tomb and is known as early as the Middle Kingdom.<sup>425</sup> The *sš*-formal garden was centered around fish and fowl propagation with minor floral production. The *sš*-formal garden’s name in Egyptian referenced its bird- and fish-rich pond or *sš* (𓄿𓄿𓄿) and its specific type of aviary called a *ht-š3* (𓄿𓄿𓄿) or literally ‘the great wood(land)/grove’ and ultimately recreated the wild hunting and/or sacred marsh thickets along the banks of the Nile and its watercourses that the Theban elite enjoyed in life.<sup>426</sup>

An *‘t-nt-ht*-formal garden of this period was constructed in proximity to cult temples or palaces and can be interpreted literally from the Egyptian as ‘the dwelling/field of woodland(s)/tree(s),’ as the term is related to *‘t* (𓀓𓄿𓄿) or ‘room/department/dwelling’; *‘(w)t* (𓀓𓄿𓄿𓄿) or ‘fields’; and *ht* (𓄿𓄿𓄿; 𓄿𓄿𓄿𓄿) meaning ‘woodland(s)/wood(s)/trees.’<sup>427</sup> The *‘t-nt-ht*-formal gardens of Thebes incorporated multiple types of formal gardens into their layouts, such as

<sup>423</sup> Wolfgang Helck, „Die Opferstiftung des *Šn.mwt*,“ pp. 25, 32; and the full discussion on p. 64 of this work.



<sup>424</sup> See the full discussion on p. 74 of this work.

<sup>425</sup> Altenmüller and Moussa, „Des Inschrift Amenemhets’ II,“ p. 7, pl. V.

<sup>426</sup> See the full discussion on p. 79 of this work.

<sup>427</sup> See the full discussion on pp. 82-83 of this work.

the *š*- and *k3mw*-formal gardens (See the TT 96 scene), and were ‘renewed’ by the kings and prized for their native and foreign fruit, flower, incense, and faunal production, which were allocated for divine food offerings and floral arrangements to the gods or for the king’s palatial residences at Malkata and Perunefer.<sup>428</sup>

A *ḥrrt-š*-formal garden was constructed in the vicinity of a palatial residence or a cult temple domain from at least the Middle Kingdom onwards in Avaris (later Perunefer)<sup>429</sup> while its first construction in Thebes occurred during the reign Thutmose III,<sup>430</sup> which was ‘renewed’ by his son Amenhotep II and successor Amenhotep III.<sup>431</sup> The tomb-owner Nakht with the TT 161 scene of the Theban *ḥrrt-š*-formal garden and his father Gurer and four sons Huynepfer, Waser, Pareheny, and Kha must have worked there, as they were ‘Gardeners/Offering-bearers of Floral Offerings of Amun.’ Thus, a *ḥrrt-š* could be interpreted literally as a ‘formal flower garden’ since *ḥrrt* () was used as a generic term for ‘flower(s)’ in Egyptian and a major feature of its layout was its many *ḥsp*-plots.<sup>432</sup> The *ḥrrt-š*-formal garden might even be related to the Semitic loan verb *ḥrr* () or ‘to squint’ because one usually squints or close one’s eyes while smelling flowers.<sup>433</sup>

From the tomb scenes and their extant archaeological evidence, nine different layouts are known for these Domain of Amun formal gardens (See Figs. A3.15-A3.23), including features, such as: pylon gates, lakes, pools, ponds, processional ways, pavilions, statuary, tree avenues

<sup>428</sup> Helck, *Urkunden* 18, no. 1396, ‘Song of the Singers,’ lines 5-11; S Hayes, “Inscriptions from the Palace of Amenhotep III,” fig. 7; See the full discussion on the ‘botanical reliefs’ of the *ḥ-mnw*-temple of Karnak, as well as of those located at Malkata and Perunefer on pp. 83-86.

<sup>429</sup> Bietak, “Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab’a 1979-1984),” pp. 312-349; and Aspöck, Tell el-Dabaa: Palace Area F/I - Phase Model and Wooden Model”, [https://4dpuzzle.oeaw.ac.at/reconstruct\\_phaseModel/](https://4dpuzzle.oeaw.ac.at/reconstruct_phaseModel/).

<sup>430</sup> Sethe, *Urkunden* IV, no. 749; also based on the translation in Breasted, *Ancient Records of Egypt* III, p. 225, §567.

<sup>431</sup> Helck, *Urkunden* 17-22, no. 1331; see the full discussion on pp. 89-91 of this work.

<sup>432</sup> See the full discussion on p. 88 of this work.

<sup>433</sup> See the full discussion on p. 88 of this work.

and groves, *hsp*-plots, apiaries, aviaries, garden altars and shrines, florist workshops, and arbors and/or pergolas (See Tables 3.0-3.4). These Domain of Amun formal gardens would have required a large, well-trained workforce evidenced by the sheer amount of their produce recorded over a 31-year period in the Papyrus Harris I, dating to the reign of Ramesses III, and that were used in daily offerings, private meals and banquets, medicine, floral arrangements and/or rites and festivals.<sup>434</sup> As monumental endowments by the kings and gifts to the gods, Domain of Amun formal gardens provided wine, fruit, fish, fowl, herb, flower and/or incense production for the cult and/or memorial temples or palace to which they were adjoined. Thus, the formal gardens had to be cultivated, administered, maintained, and facilitated by individuals, such as the respective tomb-owners and their associated colleagues who worked in the double-treasuries, double-granaries, aviaries, apiaries, and floral, wood, and stone workshops of Amun. The formal gardens had to be upheld on numerous levels: the foundation, planning, and maintenance of its landscape and architecture by the overseers of construction works and craftsmen, such as: Puimra (TT 39) who was an ‘Architect,’ Ineni (TT 81) and Rekhmira (TT 100) who were ‘Overseers of All Construction Works at Karnak and Offices in the Domain of Amun,’ Huy (TT 54) who was a ‘Sculptor of the Domain of Amun,’ Amenhotep Huy (TT 368) who was an ‘Overseer of the Sculptors of Amun in Thebes,’ and Amenhotep (TT C1), who was an ‘Overseer of the Carpenters of Amun.’

Moreover, there was the introduction and maintenance of its flora and fauna by gardeners, overseers of the pond(s), beekeepers, aviculturists, and florists, such as: Nakht (TT 161), his father Gurer, and four sons who were ‘Gardeners/Offering-bearers of Floral Offerings of Amun,’ Tjay (TT 349) and Nakht (TT C8) who were ‘Overseers of the Aviaries in the Domain of Amun,’ and Neferkhaut (TT undiscovered) who was a ‘Chief Beekeeper of Amun.’

---

<sup>434</sup> See the entire excerpt in Breasted, ‘Papyrus Harris,’ in *Ancient records of Egypt* IV, pp. 97, 99-100, 102, 104; for the floral, see Manniche, *An Ancient Egyptian Herbal*, p. 24; or Hasse, „Tempel und Gärten,“ pp. 178-179.

The formal gardens had to have the collection, distribution and administering of its produce into the double-granaries and/or treasuries of Amun completed by overseers, priests, and scribes, such as: Amenhotep (TT C3), Djehuty (TT 11), Baki (TT 18), Djehutynefer (TT 80), Sennefer (TT 99), and Amenmose (TT 228), who were ‘Overseers/Scribes/Deputies/Treasurers of the Treasuries of Amun’; and Nakht (TT A20), Khamhat Meh (TT 57), Nebamun (TT 65), Menkheperaseneb (TT 79), Rekhmira (TT 100), Amenemhat (TT 123), Nebamun (TT 179), Khnummose (TT 253), Amenemipet Tjanefer (TT 297), and Djehutynefer (TT 317), who were ‘Chief Scribes/Overseers/High Officials/Accountants in the Granaries of the Divine Offerings of Amun.’<sup>435</sup> Additionally, there was the distribution of the formal gardens’ produce into offerings and/or floral arrangements that were prepared at nighttime to be ready in the morning<sup>436</sup> for the institutions to which they were connected, by suppliers, gardeners and florists, such as: Rahotep (TT unknown), Sennefer (TT 96), Senenmut (TT 71), and Nefermenu (TT 138), who were ‘Overseers of the *Hntyw-š*-Formal Gardens of Amun,’ Sennefer (TT 96), who was also an ‘Overseer of the *t-nt-ht*-Formal Gardens of Amun,’ Nefermenu (TT 138) who was further a ‘Florist’ and a ‘Chief of the Royal Florists,’ Neferrenpet (TT 43), Ray (TT 124) and Amenirneferu (TT 199), who were ‘Overseers of the (Royal) Storerooms,’ Djehutymose (TT 248), who was a ‘Supplier of Offerings,’ and Qenamun (TT 93), who was an ‘Overseer of the Perunefer Palace.’

Although, the Domain of Amun formal garden scenes in the tombs were not the focal point of the rooms in which they are situated, they were positioned in key parts of the transverse halls, passages, and chapels with ‘focal representations’ that illustrated the tomb-owner’s unique,

---

<sup>435</sup> See the list of the tomb-owners’ colleagues and their titles in the discussion on pp. 93-97 of this work.

<sup>436</sup> El-Maenshaw, “Aspects of the office of temple gardener in ancient Egypt,” pp. 60-61; Tomashevsk, “Sacred floral garlands and collars from the New Kingdom period and early third intermediate period in ancient Egypt (1550 B.C. – 943 B.C.),” p. 6; Blackman and Peet, “Papyrus Lansing: A translation with notes,” p. 288; see the full discussion on p 96. of this work.

sociocultural experience as a member of the Theban elite (See Table 3.6). ‘Focal representations’ in these areas of the tomb were focused around visually communicating the important worldly events of the deceased’s life and acted as images of self-glorification, which were frequently viewed by family and community members, especially during funerals, festival, and feast days. Thus, the Domain of Amun formal garden scenes functioned as its own type of ‘career focal representation,’ as the titles of these tomb-owners proposed direct or indirect contact with the actual physical formal gardens in Thebes at the time (See Table 3.5). For example, the TT 87 scene, which depicts the *ḥnty-š*-formal garden of the Memorial Temple of Thutmose III, is adjacent to an image of the tomb-owner’s son Menkheper, who was a ‘Scribe of the Divine Offerings of Amun in the Memorial Temple of Thutmose III.’ While other examples include the TT 96 scene of an *‘t-nt-ḥt*-formal garden of Amun ‘renewed’ by Amenhotep II and supervised by the tomb-owner Sennefer, who was an ‘Overseer of the *Ḥntyw-š*- and *‘t-nt-ḥt*-Formal Gardens of Amun.’

### **Findings: Growth Cycle of the Formal Gardens**

In Chapter Four, the growth cycle of the formal gardens was examined, particularly in terms of when the 42 floral and 11 faunal species would have been in bloom and in harvest throughout the seasons of the ancient Egyptian year: *pṛt* (fall/winter), *šmw* (spring), and *šḥt* (summer). This examination was supported by the information provided in Appendix III: Herbarium and Faunarium, which included an entry for each floral and faunal species alphabetically in terms of taxonomy and distribution, as well as usage, symbolism, historical roots, and nomenclature for the ancient Egyptians. The study of the growth cycle revealed that the ancient Egyptians cultivated a mixture of both native and foreign annual, biennial, and perennials species in these formal gardens (See Tables 4.0-4.2). Moreover, only certain flora or fauna would have been available each season for use in the daily offerings, medicine, food, and floral arrangements due to their distinct blooming



and fruiting, mating and maturing, and/or honeyflow and honey periods (See Tables 4.0, 4.2). If a certain native or foreign species appeared in one of the formal gardens, it was likely grown from a seed or young potted specimen purchased from local gardeners or one's other gardens, or transported/traded via trade aboard vessels and/or on foot from the Northern and Southern Territories within the Egyptian Empire or from trade with neighboring areas ('foreign lands') of the Eastern Mediterranean and Near East, as attested from the Punt Expedition and private tomb reliefs<sup>437</sup> (See Table 4.1 and Figs. A3.51-A3.54). While, an earlier example of plants, trees, and fruits being transported/traded aboard vessels from abroad included Fragment M from the Ptah Temple at Memphis concerning two Middle Kingdom expeditionary vessels outbound from Lebanon to Egypt during the reign of Amenemhat II.<sup>438</sup>

### **The Study of Ancient Egyptians Gardens in the Foreseeable Future**

The š- and Domain of Amun formal garden scenes in private Theban tombs required an up-to-date, chronological investigation in order to advance our understanding of the layouts, water features, architecture, and the flora and fauna that they sustained. The location of the š- and Domain of Amun formal garden scenes in the tombs, their relationship to the surrounding scenes and texts, the relevant tomb-owners' titles, and their extant archaeological, pictorial, and or textual evidence from the period expanded our understanding of their actual layouts, features, flora and fauna, and functions and significance in Thebes prior to the Amarna Period. It is the author's hope that this study will assist those in identifying specific types of simple or formal gardens from either archaeological, pictorial, or textual sources that already exist or those that might be discovered.

Due to advances in technology over the past decades, computer science gives us the ability

---

<sup>437</sup> See the depiction of potted incense trees in TT 39, TT 100, and TT 143, as well as the Punt Expedition reliefs in the second portico of the First Terrace of Hatshepsut's memorial temple at Deir el-Bahari.

<sup>438</sup> See the German translation in Altenmüller and Moussa, „Des Inschrift Amenemhets' II,“ pp. 14-16, M 18-21; see its discussion on pp. 103-104 of this work.

to reconstruct and preserve archaeological remains and material culture through digital media, such as 3D-printing, modeling, and virtual reality. An example is the 3D augmented virtual interactive model of the TT 96 *ṯ-nt-ḥt*-formal garden scene created by Zaak Augmented Reality Works for an exhibition at the Museum Rietberg, Zürich in 2016<sup>439</sup> (See Fig. A1.20). Archaeology is an ever-evolving discipline. It is the author's hope that in the coming decades, archaeology will continue to shift towards even more interdisciplinary and digital methods and approaches in the field and that are our meticulous investigations of sites, performed in tandem with other specialists, might garner more discoveries of simple and formal gardens, including the actual remains of their architecture, statuary, layouts, and flora and fauna. Even the smallest bits of new evidence will expand our understanding of these aesthetic landscapes that were so beloved by the ancient Egyptians. Some examples include the formal garden with over 260 tree pits discovered by the German Mission in 2014 in proximity to the Bent Pyramid of Sneferu of the Fourth Dynasty<sup>440</sup> and the discovery of a well-preserved *ḥsp*-plot in 2017 by the Spanish-Egyptian Mission located in proximity to Djehuty's tomb (TT 10)<sup>441</sup> (See Fig. A3.24 and A3.44).

---

<sup>439</sup> See the visitors' experience with VR headsets and smart phones in Zaak Augmented and Virtual Reality Works, "Museum Rietberg - Gärten der Welt," accessed August 10, 2020, <https://zaakzurich.tumblr.com/post/149319457830/augmented-virtual-reality-works-for-museum>.

<sup>440</sup> Arnold, "Cult Buildings of the Bent Pyramid at Dahshur," p. 49; Alexanian and Arnold, *The Necropolis of Dahshur*, pp. 2, 8-10.

<sup>441</sup> José Manuel Galán, "El jardín de Sinuhé," *National Geographic España* (August 2017): pp. 56-65.

**Appendix I**  
Catalogue of Formal Garden Scenes

**Part I**  
The Š-Formal Garden Scene

**Part II**  
The Domain of Amun Formal Garden Scenes:  
The *Hnty*-š-, The *Kzmw*-, The *Sš*-, The *ʿt-nt-ht*-, and The *Hrrt*-š-Formal Gardens

**Part I**  
The Š-Garden Scene

## TT 81 (Ineni)

*Date:* Amenhotep I to Thutmose III

*Location:* Sheikh Abd el-Qurna

West – left rear wall of pillar 4 in the portico

*Wall Narrative and Formal Garden Scene:* Inspecting setting

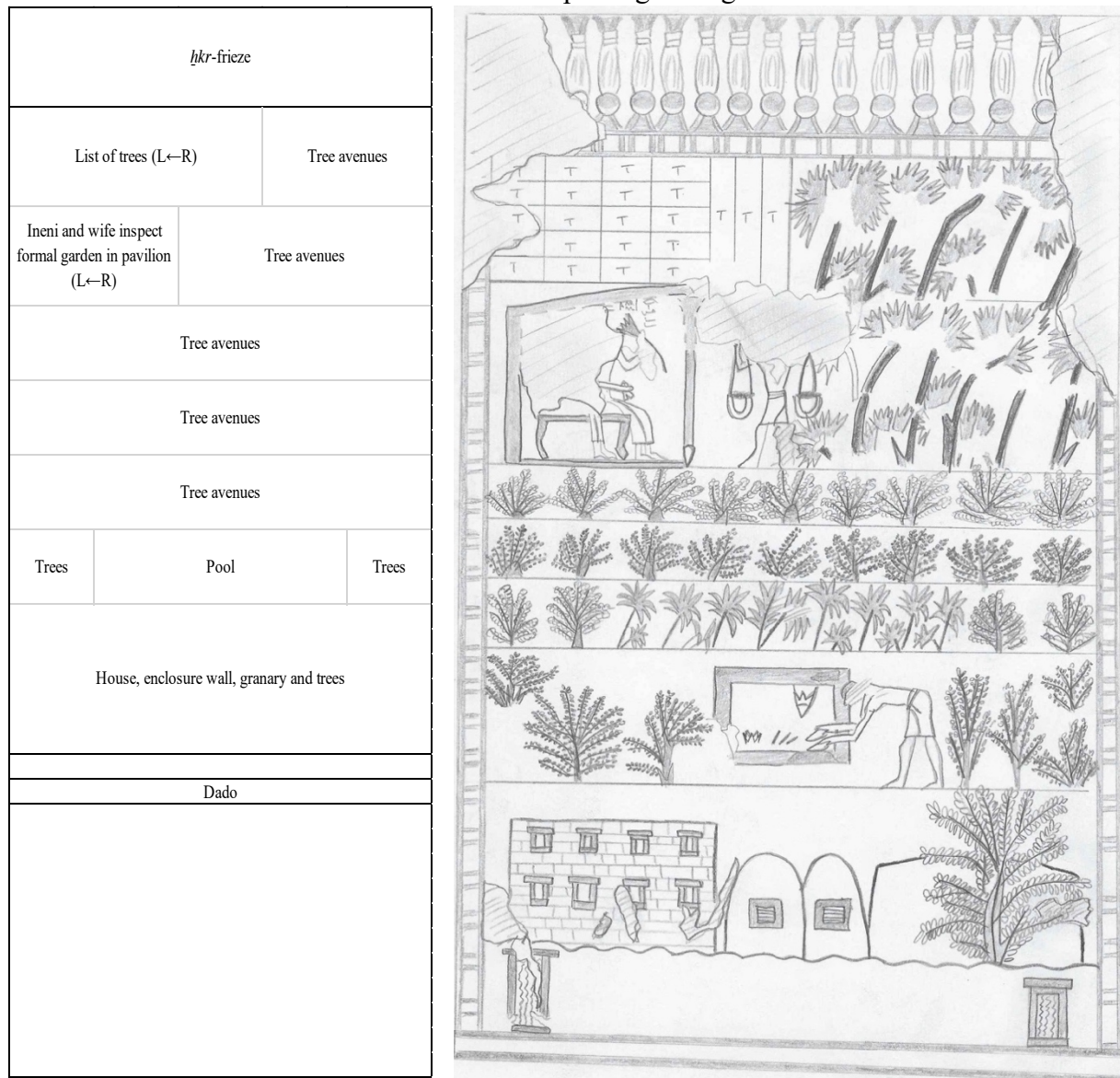


Figure A1.1: Š-formal garden of Ineni. Drawing by author © 2020, after Plate XI in Boussac (1896) and Plate XXIII in Dziobek (1992).

*Description and Relevant Text:* See Chapter Two

*Main Literature:*

Baines, John. *High culture and experience in ancient Egypt*, p. 81. Sheffield: Equinox Publishing Ltd., 2013.

Boussac, A. P.-Hippolyte. *Tombeaux thébains : Le tombeau d'Anna*, pl. XI. (= *Mémoires publiés par les membres de la Mission archéologique française au Caire* 18). Paris: Leroux, 1896.

Dziobek, Eberhard. *Das Grab des Ineni: Theben Nr. 81*, pp. 41, 54-55; 63, 67, Zweite Biografie  
 Inschrift des Ineni 1-7, line 16; 123, see text 4a for pillar 4 in portico; texts 2a, 4b, 6b-c,  
 17c-d, 18c, 21h, 22a. Vol. 68. Mainz am Rhein: Philipp von Zabern, 1992.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 326-330. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.







Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 159-160. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Sethe, Kurt. *Urkunden der 18. Dynastie: Historisch-Biographische Urkunden*, 23: Titel und Prädikate des Ineni, 67I (lines 9-15); 73 (lines 1-20). Vol. IV, Pt. I. Berlin: Akademie-Verlag, 1961.

*Materials*: Gypsum plaster and polychrome pigment


*Technique*: Painting

*Relevant Owner Titles*:

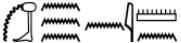
-  – *imy-r3 šnwtj n 'Imn* – Overseer of the Double-granary of Amun
-  – *imy-r3 i3t nbt m pr 'Imn* – Overseer of All Offices in the Domain of Amun<sup>442</sup>
-  – *imy-r3 k3t m 'Ipt-'Iswt* – Overseer of Construction Works at Karnak
-  – *hrp k3t nbt m 'Ipt-'Iswt* – Controller of All Construction Works at Karnak
-  – *imy-r3 prwy ḥd* – Overseer of the Double-treasury
-  – *ḥ3ty-ꜥ m niwt* – Mayor of the City

*Relevant Family Titles*:


Paheri (brother):

-  – *imy-r3 pr n ḥm-nṯr tpy n 'Imn* – Overseer of the House of the First Prophet of Amun

Waserhat (brother):

-  – *wꜥb n 'Imn* – *wꜥb*-priest of Amun

Qen (brother):

-  – *ḥm-nṯr n Mwt* – Priest of Mut

<sup>442</sup> See text 4a for pillar 4 in the transverse hall.

## TT 109 (Min)

Date: Thutmose III

Location: Sheikh Abd el-Qurna

South – left rear wall of transverse hall

Wall Narrative<sup>443</sup>: Inspecting setting

Doorway		Min offers to Thutmose III (L→R)		Temple offerings	Min censimg temple offerings (L→R)	2 registers of workmen who build a <i>nmt-buk</i>			3 registers of servants w/ formal garden's produce (L→R)		Min inspects formal garden's produce (L→R)	
	3 registers of seated relatives (L→R)						(L→R)			Sobekmose (L→R) offers formal garden's produce to Min and Mother (L→R)		Min teaches Prince Amenhotep archery (L→R)
							Tree avenue					
							Tree avenue					
							Tree avs.	Pool	Tree avs.			
	Tree avs.	Tree avs.										
									Min with Prince Amenhotep on lap (L→R)			
	Dado? (damaged)											

Formal Garden Scene:

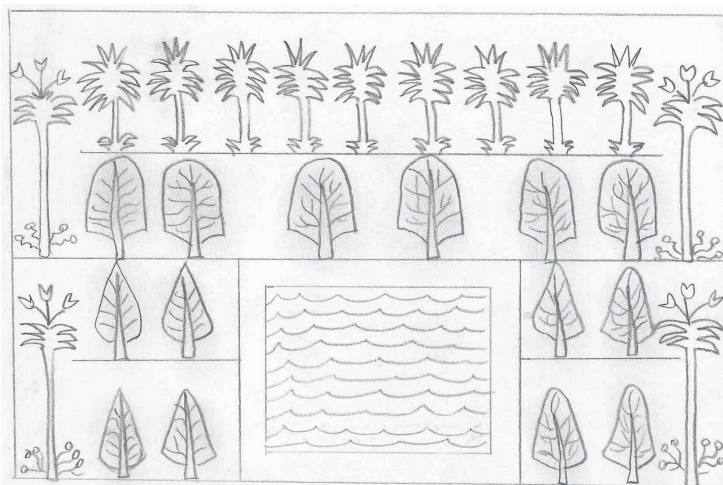


Figure A1.2: Š-formal garden of Min. Drawing by author © 2020, after Figure 3 in Virey (1891).

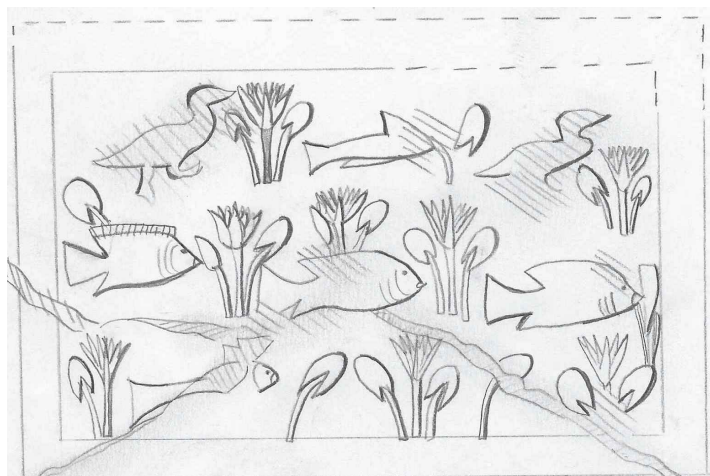


Figure A1.3: Detail of the flora and fauna in the scene's pool. Drawing by author © 2020, after Schott Photograph 8585.

<sup>443</sup> This wall narrative is based on Schott Photographs nos. 5764-5769, 5577-5588, and 8585; and Porter and Moss, *Topographical Bibliography* I, p. 226, see esp. walls (3-5).

*Main Literature:*




Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 389-390. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996

Vleeming, Sven and Holger Kockelmann. "Schott Photographs nos. 5764-5769, 5577-5588, and 8585." In „Das Digital Schott-Archiv (DAS)“, assisted by Angelika Paul and Raimar Eberhard. Trier: Universität zu Trier, 2008-2010. Accessed April 10, 2019. <http://www.schott.uni-trier.de/schott.php>.

*Materials:* Gypsum plaster and polychrome pigment

*Technique:* Painting

*Relevant Owner Titles:*

-  – *imy-r3 ḥmw nṯr n 'Ini-ḥrt* – Overseer of the Priests of Onuris
-  – *imy-r3 ḥmw nṯr n Wsir* – Overseer of the Priests of Osiris
-  – *h3ty-<sup>c</sup> n Tny* – Mayor of Thinis (Tjeny)

*Relevant Family Titles:* none



# **TT 85 (Amenemhab called Mahu)**

*Date:* Thutmose III to Amenhotep II

*Location:* Sheikh Abd el-Qurna

East – right side wall of chapel

*Wall Narrative*<sup>444</sup>: Inspecting setting

<i>hkr</i> -frieze					
Min and wife receive the formal garden's produce (L→R)	Servants w/ formal garden's produce (L←R)	Tree avenue			Min and wife inspect the formal garden (L←R)
		Tree avenue			
		Tree avenue			
	Tree avenue	Pool	Tree avenue		
	Tree avenue		Tree avenue		
	Servants w/ formal garden's produce (L←R)	Tree avenue			
		Tree avenue			
		Tree avenue			
Servants w/ formal garden's produce (L←R)					
Dado					

*Formal Garden Scene:*

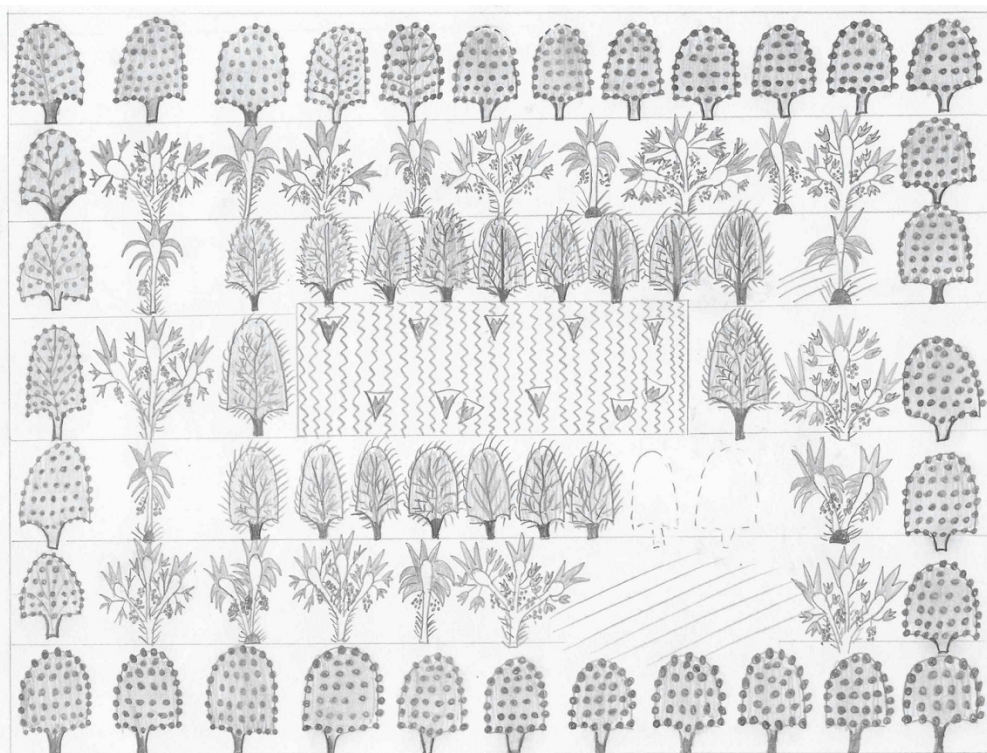


Figure A1.4: Š-formal garden of Amenemhab. Drawing by author © 2020, after Epigraphic Survey Negatives 2927, 2929, and 2932.

<sup>444</sup> This wall narrative is based on Epigraphic Survey Negatives 2927, 2929, and 2932; Schott Photographs 3993-3394; 4131-4132; 7008-7014; and 8940-8943; and the wall description in Porter and Moss, *Topographical Bibliography* I, p. 175.

*Description and Relevant Texts:* See Chapter Two

*Main Literature:*

Dibley, Gary and Bron Lipkin. Cone translations by Julie Masquelier-Loorius. *A Compendium of Egyptian Funerary Cones*, p. 170, cone no. 554. London: Bron Lipkin & Gary Dibley, 2009.

“Epigraphic Survey Negatives 2927, 2929, and 2932.” *The Oriental Institute’s Records of The Epigraphic Survey Online*. Chicago: Oriental Institute, 2014. Accessed April 26, 2019. [https://oi-idb.uchicago.edu/results.php?tab=ES&q=SrchHasMultimedia%3A%28Yes%29+&sort=SortUnitID+asc&start=700&rows=50&wt=json&facet=true&facet.mincount=1&fq\[\]=FctMultimediaFileType%3A%22Images%22&fq\[\]=FctSubjectHeadings%3A%22Private+tombs%22&&facet.sort=count](https://oi-idb.uchicago.edu/results.php?tab=ES&q=SrchHasMultimedia%3A%28Yes%29+&sort=SortUnitID+asc&start=700&rows=50&wt=json&facet=true&facet.mincount=1&fq[]=FctMultimediaFileType%3A%22Images%22&fq[]=FctSubjectHeadings%3A%22Private+tombs%22&&facet.sort=count).

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 336-338. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, p. 175. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Sethe, Kurt. *Urkunden der 18. Dynastie: Historisch-Biographische Urkunden*, no. 918 (lines 1-6). Vol. IV; Pt. IV. Berlin: Akademie-Verlag, in Zusammenarbeit mit der Akademischen Druck- und Verlagsanstalt, Graz, 1961.

Vleeming, Sven and Holger Kockelmann. “Schott Photographs nos. 3993-3394; 4131-4132; 7008-7014; and 8940-8943.” In „Das Digital Schott-Archiv (DAS)“, assisted by Angelika Paul and Raimar Eberhard. Trier: Universität zu Trier, 2008-2010. Accessed April 10, 2019. <http://www.schott.uni-trier.de/schott.php>.

Virey, Philippe. Edited by Ernest Leroux. « Tombeau de Khem. » In *Mémoires publiés par les membres de la Mission archéologique française au Caire V, fascicule 2 : Sept tombeaux thébains de la XVIII<sup>e</sup> dynastie*, pp. 269-271, 279-280, figs. 11-13. Paris: Ministre de l’instruction publique et des beaux-arts, 1891.

Wreszinski, Walter. *Atlas zur Altaegyptischen Kulturgeschichte*, Tafel 66. Vol 1. Geneva; Paris: Slatkine Reprints, 1988.

*Materials:* Gypsum plaster and polychrome pigment

*Technique:* Painting

*Relevant Owner Titles:*



– *imy-r3 šnwty n'Imn* – Overseer of the Double-granary of Amun

*Relevant Family Titles:* none

## TT 100 (Rekhmira)

**Date:** Thutmose III to Amenhotep II

**Location:** Sheikh Abd el-Qurna

East – right side wall of passage

**Wall Narrative:** Festival setting

bkr-frise									
Rekhmira and wife seated (L→R)	Son (unknown) offers to Rekhmira and wife (L→R)								
Rekhmira and wife seated (L→R)	Son Senwasret offers to Rekhmira and wife (L→R)	Phases of the Opening of the Mouth ritual on the statue (L→R)							
Rekhmira and wife seated (L→R)	Son Menkheperu offers to Rekhmira and wife (L→R)								
Rekhmira and wife seated (L→R)	Son Amenhotep offers the formal garden's produce to Rekhmira and wife (L→R)	Offering-bearers w/formal garden's produce (L→R)	Tree avenues			Rekhmira feasting inside his home (L→R)	Festival feast brought for Rekhmira and guests (L→R)		
			Tree avenues						
			Tree avenues						
		Domestic Shrine	Pool with festival rites	Tree avenue	Feast given to Rekhmira (L→R)		House column	Festival food preparation on Rekhmira's estate (L→R)	
		Tree avenues							
		Tree avenues							
		Festival rites on statue in domestic shrine (L→R)		Tree avenue			Feast given to Rekhmira (L→R)	House column	Festival food preparation on Rekhmira's estate (L→R)
Festival guests receiving feast (near formal garden/home?) (L→R)									
Dado									

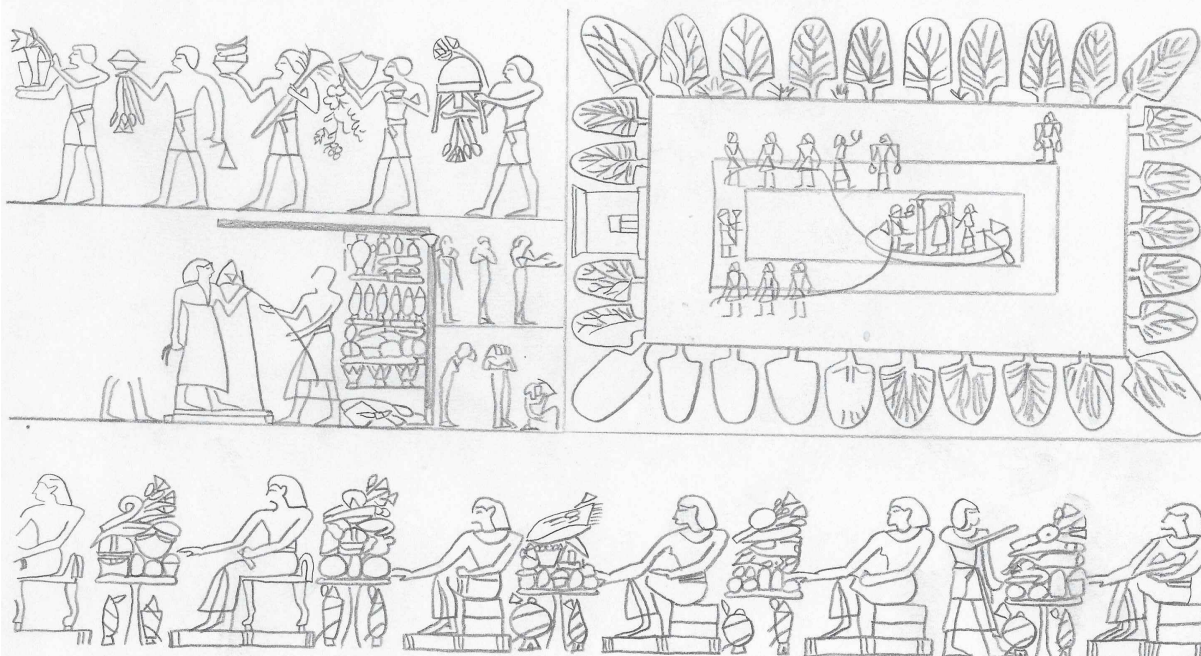


Figure A1.5: Detail of the surrounding decorative schema of the TT 100 scene. Drawing by author © 2020, after Figure 2 in Gefßler-Löhr (1991).



*Formal Garden Scene:*

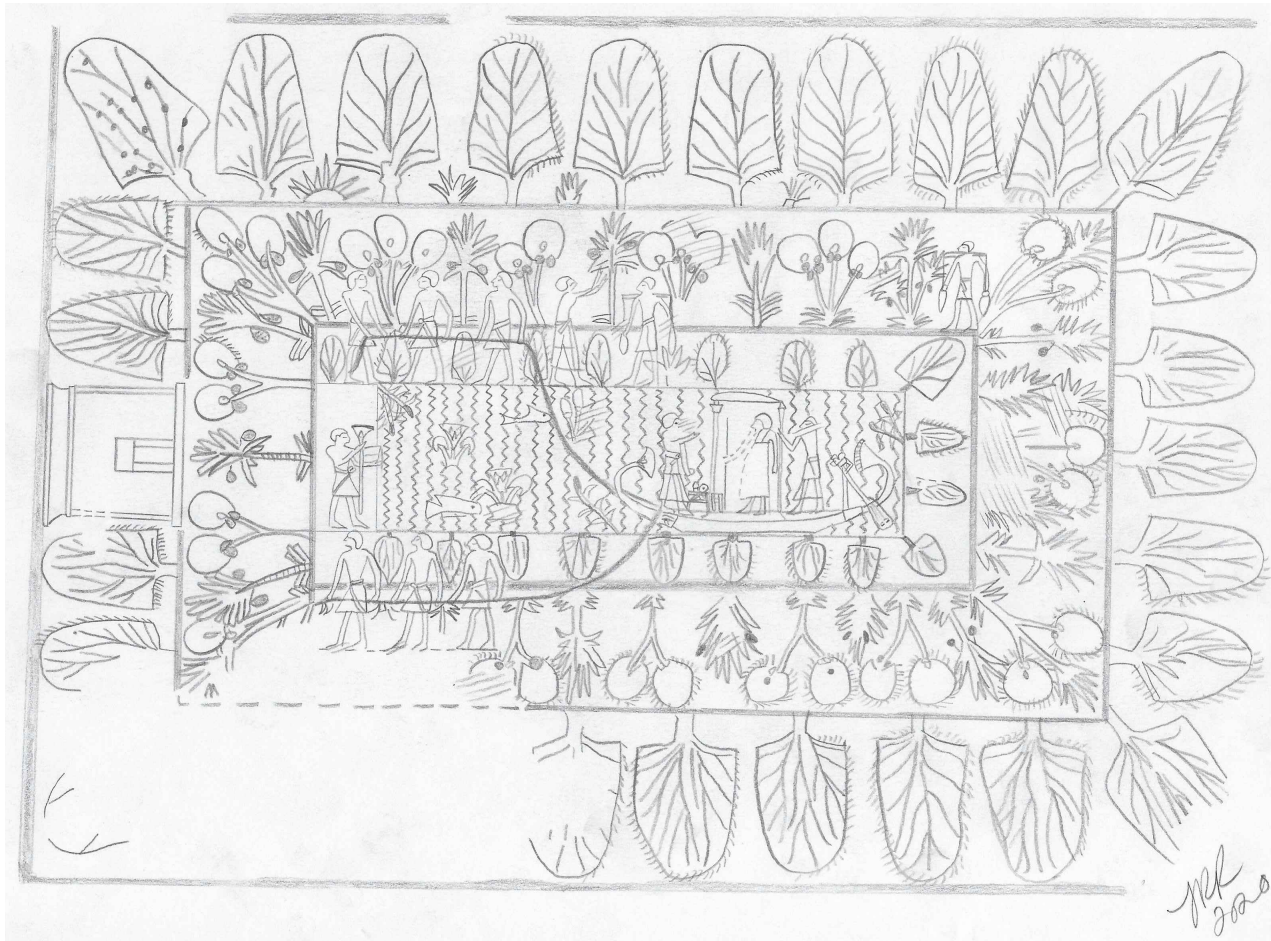


Figure A1.6: Š-formal garden of Rekhmira. Drawing by author © 2020, after Plate CX in de Garis-Davies (1935).

*Description and Relevant Text:* See Chapter Two

*Main Literature:*

Davies, Norman de Garis. Edited by L. Bull and assisted by N. E. Scott. Plates by Nina de Garis-Davies and Charles K. Wilkinson. "The Tomb of Rekh-Mi-Rē at Thebes." *Publications of The Metropolitan Museum of Art* 11 (1935): pp. 12, 70-73, 78, pls. LVIII, LXXVI, LXXIX, LXXXVII, and CX.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 370-372. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 206-208. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Sethe, Kurt. *Urkunden der 18. Dynastie: Historisch-Biographische Urkunden*, 1158, 1165, 1167; Titel und Prädikate des Rekhmira, pp. 1171-1172. Vol. IV, pt. IV. Berlin: Akademie-Verlag, in Zusammenarbeit mit der Akademischen Druck- und Verlagsanstalt, Graz, 1961.




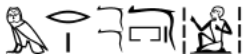


Virey, Philippe. « Le jardin de Rekhmara. La réception des invités. Les apprêts du festin. » In *Mémoires publiés par les membres de la Mission archéologique française au Caire* V,

*fascicule 1 : Sept tombeaux thébains de la XVIII<sup>e</sup> dynastie*, edited by Ernest Leroux, pp. 156-160. Paris: Ministre de l'instruction publique et des beaux-arts, 1891.

*Materials:* Gypsum plaster and polychrome pigment

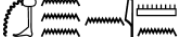

*Technique:* Painting

*Relevant Owner Titles:*

-  – *sš tp ḥtpw ntr n 'Imn* – Chief Scribe of the Divine Offerings of Amun
-  – *mr pr n 'Imn* – Steward of Amun
-  – *ḥrp kzt nbt m 'Ipt-'Iswt* – Administrator of All Constructions Works at Karnak
-  – *imy-r3 mrw prw* – Overseer of Every Department
-  – *mr nīswt* – Mayor of the City
-  – *t3ty* – Vizier

*Relevant Family Titles:*

Vizier Neferweben (father):

-  – *wꜥb n 'Imn* – *wꜥb*-priest of Amun
-  – *t3ty* – Vizier

## TT 80 (Djehutynefer)

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna

East – right side wall of chapel

*Wall Narrative:* Funeral setting

hkr-frieze					
Sister offers to Djehutynefer and wife (L←R)	Funeral rituals (L←R)				
	Funeral rituals (L←R)		Vineyard on pergola		Funeral rituals leaving the home (L←R)
	Off-bearers with formal garden produce (L←R)	Tree Avenue	Tree avenue Pool? Tree avenue	House	Funeral ritual preparations (L→R)
Dado					

*Formal Garden Scene:*



Figure A1.7: Š-formal garden of Djehutynefer with possible reconstruction. Drawing by author © 2020, after Scene 2.4 in Shedid (1988).

*Description and Relevant Texts:* See Chapter Two

*Main Literature:*

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 320-323. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 157-159. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Shedid, Abdel Ghaffar. *Stil der Grabmalereien in der Zeit Amenophis' II: Untersucht an den Thebanischen Gräbern Nr. 104 und Nr. 80*, pp. 126, 134, 145-147, 150, 162-163, Texts 80.5-80.8, 104.23, Scenes 2.4-2.5. Vol. 66. Mainz am Rhein: Philipp von Zabern, 1988.

*Materials:* Gypsum plaster and polychrome pigment


*Technique:* Painting

*Relevant Owner Titles:*

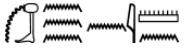
- Overseer of the Treasury

*Relevant Family Titles:*


Takhat (wife):

-  – *šm'it nt 'Imn* – Chantress of Amun

Hunay (brother):

-  – *w'b n 'Imn* – *w'b*-priest of Amun

Meryt (sister)

-  – *šm'it nt 'Imn* – Chantress of Amun



## TT 93 #1, #2, and #3 (Qenamun)

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna

#1: Northeast – right front wall and right rear wall of transverse hall

#2: North – left rear side of column towards the left front wall of transverse hall

#3: West – halfway to the left rear and left front walls of the transverse hall

*Wall Narrative #1: Theophanic setting*

West wall					North wall						
hkr-frieze					hkr-frieze						
Doorway	Text A (L←R)				Relevant Text B (L←R)		Text about Ennead. (L→R)		Stela		
	Tree avenue				Qenamun seated under sycamore fig tree (L→R)	Tree-goddess (L←R)					
	Tree av.	Vineyard on pergola									
	Domestic shrine	Pergola	Pool	Pergola							
	Tree av.	Vineyard on pergola					3 registers of offering-bearers (L→R)				
	Tree avenue										
	Off-bearers w/formal garden's produce and "garlanded oxen and gazelle" (L→R)										
					Dado						

*Formal Garden Scene #1:*

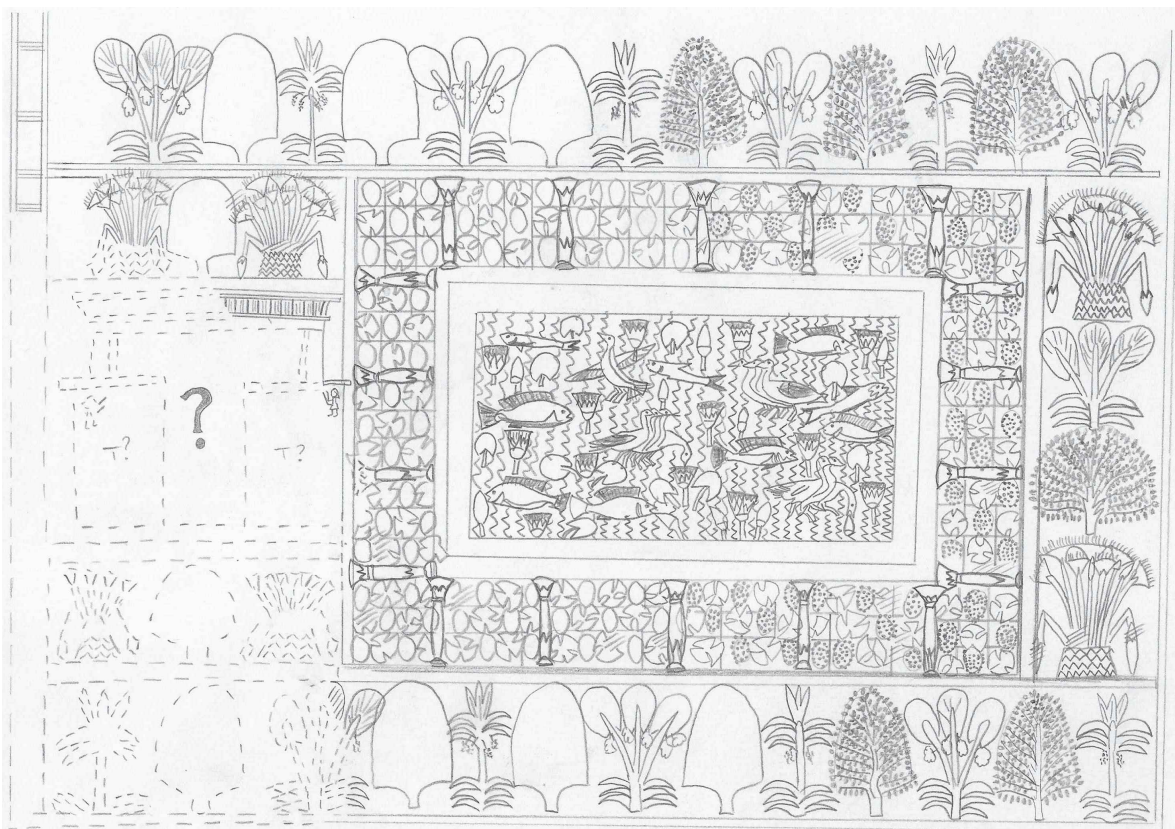


Figure A1.8: Š-formal garden of Qenamun with possible reconstruction by author. Drawing by author © 2020, after Plate XLVII in de Garis-Davies (1930).



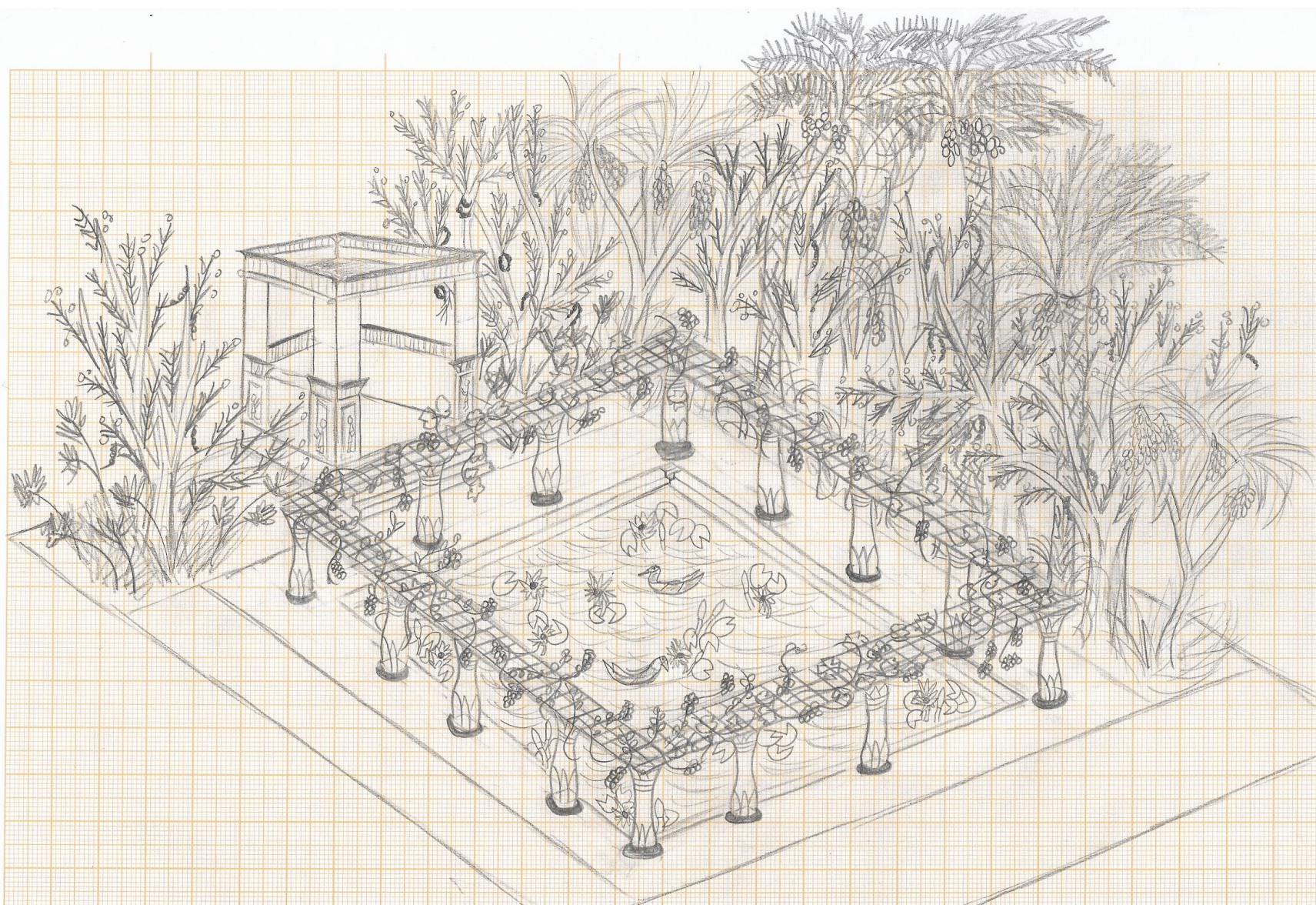


Figure A1.9: Possible 3D reconstruction of the š-formal garden of Qenamun based on its 2D image. Drawing by author © 2019.



Description and Relevant Texts #1: See Chapter Two  
 Wall Narrative and Formal Garden Scene #2:  
 Fishing setting

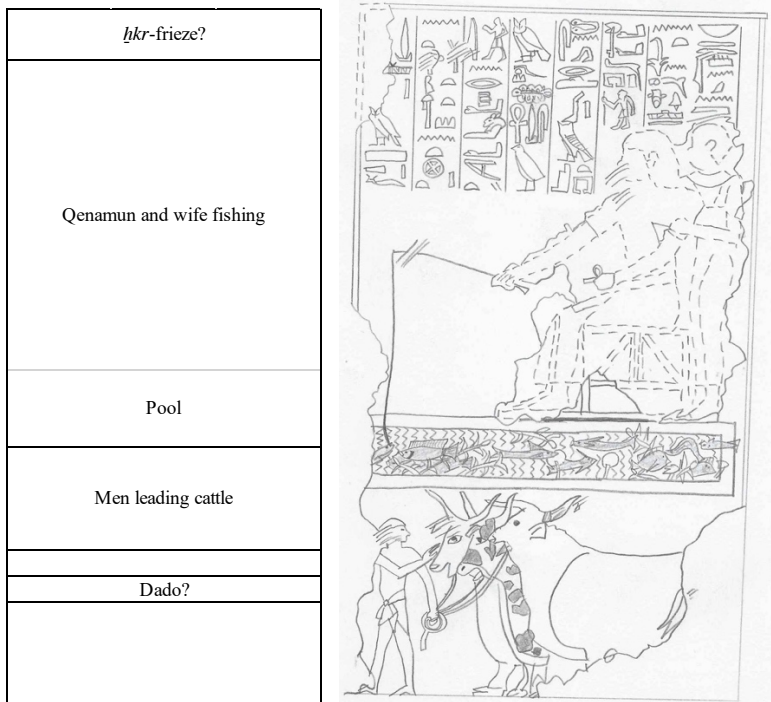


Figure A1.10: Second š-formal garden of Qenamun. Drawing by author © 2020, after Plate XLVa in de Garis-Davies (1930).

Description and Relevant Texts #2: See Chapter Two  
 Wall Narrative and Formal Garden Scene #3: Inspecting setting

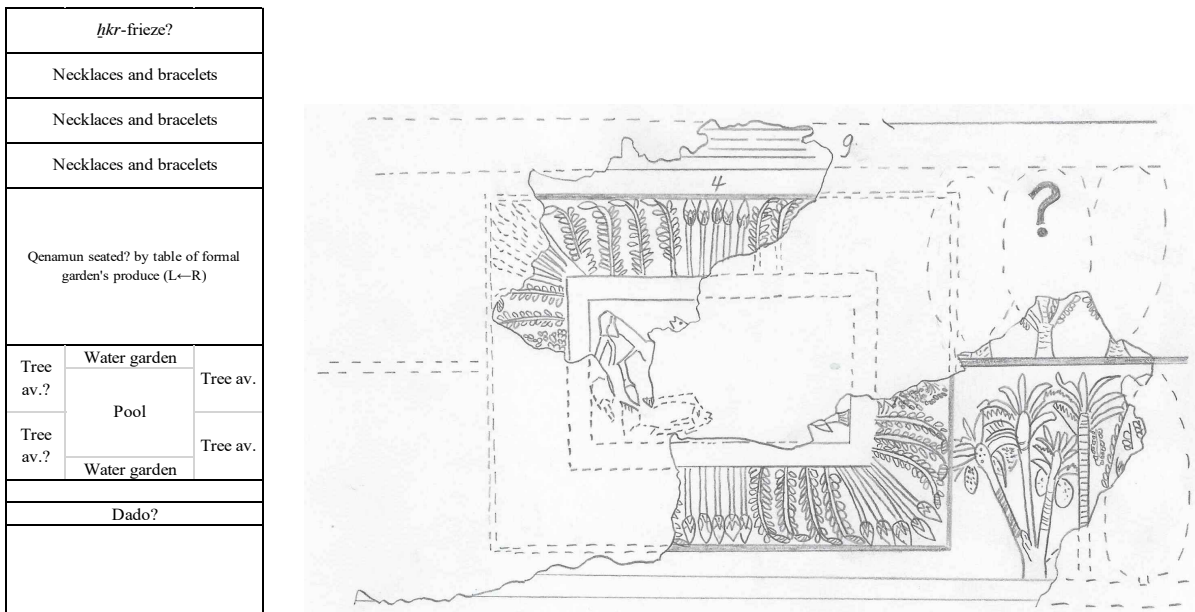


Figure A1.11: Third š-formal garden of Qenamun with possible reconstruction. Drawing by author © 2020, after Plate XLVb in de Garis-Davies (1930).

*Description and Relevant Texts #3:* See Chapter Two

*Main Literature:*

Davies, Norman de Garis. Edited by Albert M. Lythgoe. Plates by Nina de Garis-Davies and H. R. Hopgood. *The Tomb of Ken-Amūn at Thebes*, pp. 45-46; 52; pls. LXI-LXII; XLVa/b-XLVII; and LXX (= *Publications of the Metropolitan Museum of Art, Egyptian Expedition* 5). Vol 1. New York: The Metropolitan Museum of Art, 1930.

Dibley, Gary and Bron Lipkin. Cone translations by Julie Masquelier-Loorius. *A Compendium of Egyptian Funerary Cones*, p. 78, cone no. 187. London: Bron Lipkin & Gary Dibley, 2009.

Helck, Wolfgang. *Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22*, no. 1397. Vol. IV. Berlin: Akademie-Verlag, 1961.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 352-356. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996


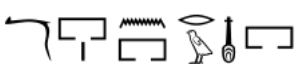
Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 190-192. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Wreszinski, Walter. *Atlas zur Altaegyptischen Kulturgeschichte*, Tafel 298. Vol 1. Geneva; Paris: Slatkine Reprints, 1988.

*Materials:* Gypsum plaster and polychrome pigment

*Technique:* Painting

*Relevant Owner Titles:*

-  – *imy-r3 iḥw n 'Imn-R<sup>c</sup>* – Overseer of the Cattle of Amun-Ra
-  – *imy-r3 pr Prw-nfr* – Overseer of the Perunefer Palace

*Relevant Family Titles:* none

## TT 63 (Sobekhotep)

*Date:* Thutmose IV

*Location:* Sheikh Abd el-Qurna

North – right side wall of passage

*Wall Narrative:* Theophanic setting

Mr-ize												
Sobekhotep, wife, and Princess Tia seated (L→R)	Son offers to his father and mother (L→R)	Servants w/ formal garden's produce for feast (L→R)	Tree avenue		Servant w/ fish (L→R)	Double scene of Sobekhotep fishing and fowling (L→R) (L→R)				Sobekhotep oversees grain production (L→R)	Destroyed	
		Servants w/ formal garden's produce for feast (L→R)	Tree-goddess and seated couple	Sobekhotep and wife drink from pool	Tree-goddess and seated couple						Servant w/ fish (L→R)	
		Servants w/ formal garden's produce for feast (L→R)	Tree avenue		Servant w/ fish (L→R)	Sobekhotep and wife seated in pavilion (L→R)	Wine production (L→R)	Marsh fishing (L→R)	Grain threshing (L→R)			
		Servants w/ formal garden's produce for feast (L→R)	Tree avenue		Sobekhotep and wife seated in pavilion (L→R)				Wine production (L→R)		Marsh fishing (L→R)	Grain harvest (L→R)
			Tree avenue									Destroyed
		Guests receive feast food (L→R)	Butchery scene? (destroyed) (L→R)	House? (destroyed)								
Dado												

*Formal Garden Scene:*

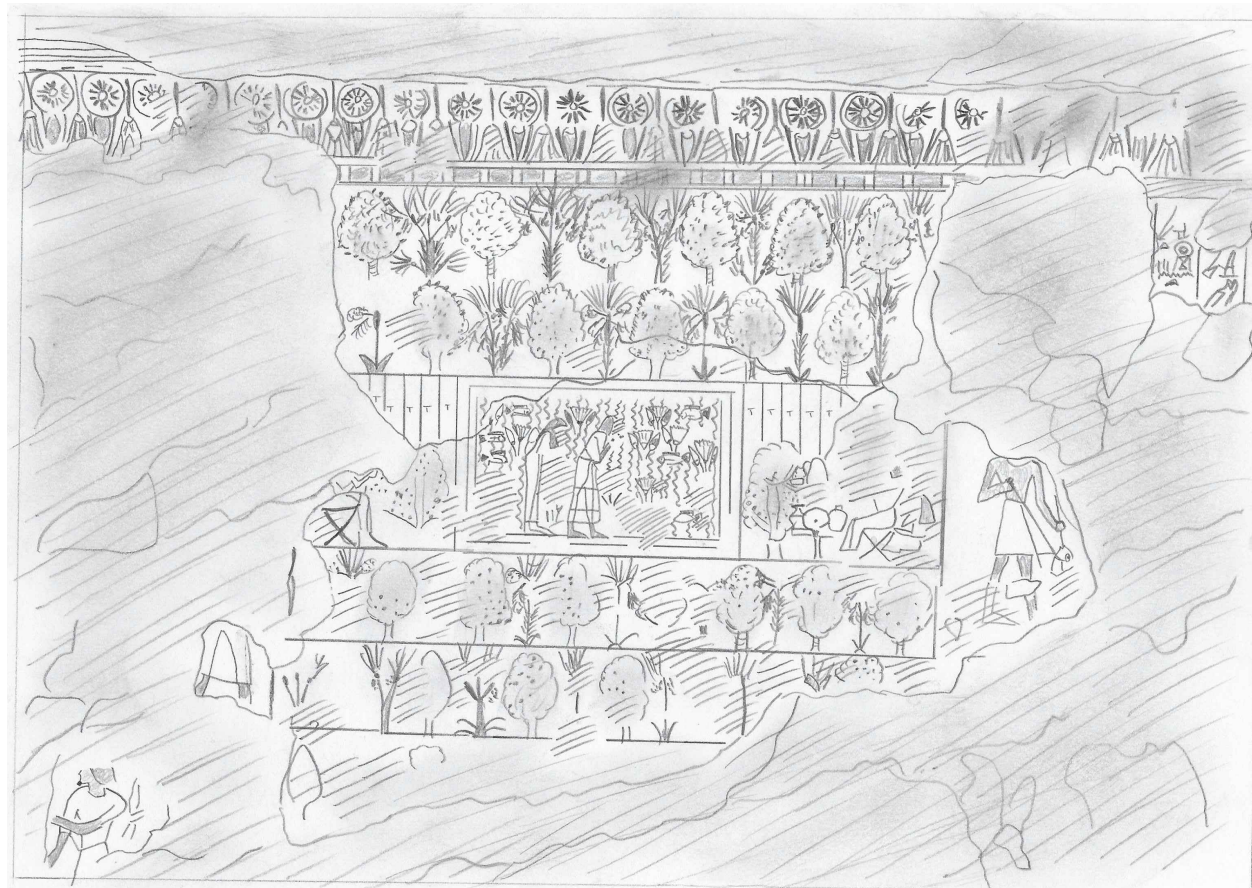


Figure A1.12: Š-formal garden of Sobekhotep, damaged by evasive beehives and moisture.  
Drawing by author © 2020, after Tafel 13 in Dziobek and Abd el-Raziq (1990).

*Description and Relevant Texts:* See Chapter Two

*Main Literature:*

Dziobek, Eberhard and Muhammad Mahmud Abd el-Raziq. *Das Grab des Sobekhotep: Theben Nr. 63*, pp. 22, 33, 66, 71-73, Texten 19a-19b; Tafelen 13, 27, 39 and 40. Vol. 71. Mainz am Rhein: Philipp von Zabern, 1990.

Gardiner, Alan Sir, Arthur E. P. Weigall, and E. P. Brome. *A Topographical Catalogue of the Private Tombs of Thebes*, p. 22. London: Bernard Quaritch, 1913.





Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 280-283. Vol. 1. Mainz am Rhein: Philipp von Zabern, 1996.

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 280-283. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

*Materials*: Gypsum plaster and polychrome pigment

*Technique*: Painting

*Relevant Owner Titles*:

-  – *imy-r3 ḥmw-ntr n Sbk Šdty* – Overseer of the Priests of Sobek Shedety (Fayyum)
-  – *imy-r3 ḥtmw Sbk* – Overseer of the Treasury of Sobek
-  – *ḥ3ty-ꜥ n š rsy š n Sbk* – Mayor of the Southern Lake and the Lake of Sobek (Fayyum)
-  – *imy-r3 ḥtmw Sbk* – Overseer of the Treasury of Sobek

*Relevant Family Titles*: none

## TT E2 (Nebamun)

*Date:* Thutmose IV to Amenhotep III

*Location:* Dra'a Abu el-Naga (?)

West – left side wall chapel<sup>445</sup>

*Wall Narrative*<sup>446</sup>: Theophanic setting

hkr-frieze					
Nebamun and wife seated? (L→R)	Tree-goddess (L←R)	Tree avenue		Tree-goddess (L→R)	Nebamun and wife seated? (L←R)
		Tree avenue	Pool	Tree avenue	
		Tree avenue		Tree-goddess? (L→R)	
Offering-bearers w/ formal garden's produce?					
Offering-bearers w/ formal garden's produce?					
Dado?					

*Formal Garden Scene:*

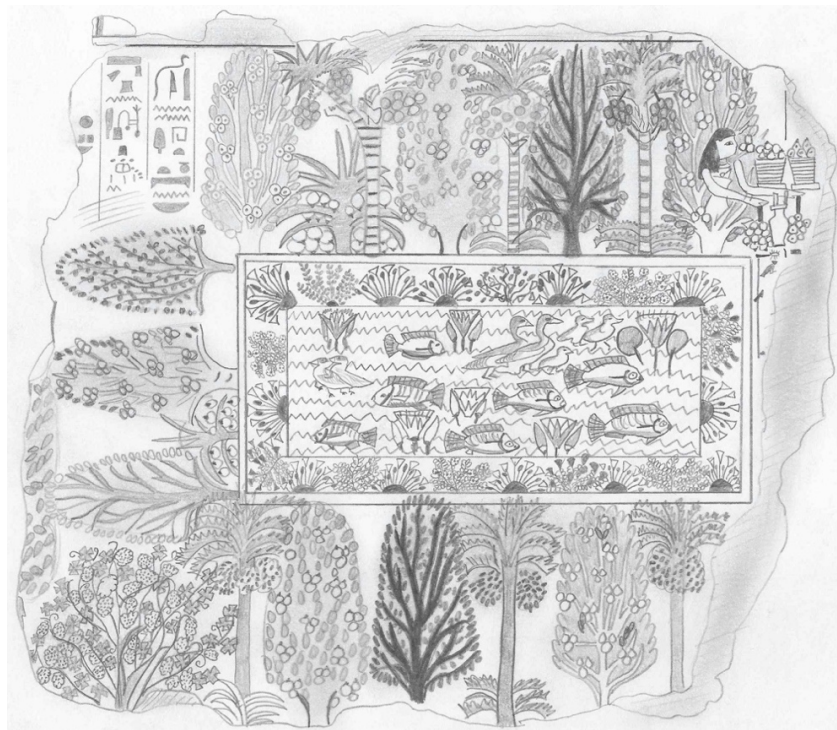


Figure A1.13: Š-formal garden of Nebamun. Drawing by author © 2020, after Figure 102 (BM EA 37983) in Parkinson (2008).

<sup>445</sup> Based on observations made by Richard H. Parkinson, *The Painted Tomb-Chapel of Nebamun*, (Cairo: AUC Press; London: BM Press, 2008), p. 137.

<sup>446</sup> This wall narrative is based on observations made in Parkinson, *The Painted Tomb-Chapel of Nebamun*, pp. 52, 134-137, figs. 63, 143; and the orientation of the text and tree-goddesses.

*Description and Relevant Texts:* See Chapter Two

*Main Literature:*

Parkinson, Richard B. *The Painted Tomb-Chapel of Nebamun: Masterpieces of Ancient Egyptian Art in The British Museum*, pp. 52, 94, 134-137, fig. 102. Cairo: The American University in Cairo Press; London: British Museum Press, 2008.

*Materials:* Gypsum plaster and polychrome pigment

*Technique:* Painting

*Relevant Owner Titles:*

- Scribe and Grain Accountant of the Granary of the Divine Offerings of Amun



## TT 334 (Unknown)

Date: Amenhotep III

Location: Dra'a Abu el-Naga

West – right front wall of transverse hall

Wall Narrative<sup>447</sup>: Inspecting setting

hkr-frieze?							
"Daughter, with others, offer to deceased and wife"							
Large tree			House		Tomb-owner inspects formal garden's produce (L→R)	Formal garden's produce (damaged) (L←R)	
Tree avenue			Gate & Stairs	Tree avenue		Tomb-owner inspects formal garden's produce (L→R)	Formal garden's produce (damaged) (L←R)
Tree avenue	Domestic shrine	Tree avenue		Pool			
		Allée					
		Tree avenue					
		Tree avenue					
Tree avenue			Tree avenue				
"[(Garden produce) brought before deceased]"							
Dado?							

Formal Garden Scene:



Figure A1.14: Š-formal garden of the unknown owner of TT 334. Drawing by author © 2020, after Figure 9 in de Garis-Davies (1929).

<sup>447</sup> This wall narrative is based on "Four registers. I, Daughter with others, offers to deceased and wife. II, Deceased seated in front of house. III, Deceased seated in... garden. IV, Harvest brought before deceased," in Porter and Moss, *Topographical Bibliography* I, p. 401; and de Garis-Davies, "The Town House in Ancient Egypt," fig. 9.



*Description and Relevant Text:* See Chapter Three

*Main Literature:*


Engelbach, Reginald. *A Supplement to the Topographical Catalogue of the Private Tombs of Thebes (nos. 253 to 334) with Some Notes on the Necropolis from 1913 to 1924*, pp. 26-27, 31. Cairo: Institut français d'archéologie orientale du Caire, 1924.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, p. 579. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, p. 401. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Davies, Norman de Garis. "The Town House in Ancient Egypt." *Metropolitan Museum Studies* 1.2 (1929): pp. 240, 248, fig. 9.

*Relevant Owner Titles:*

-  — ḥry iḥwtyw [n 'Imn?] — Chief of the Herdsmen [of Amun?]

*Relevant Family Titles:* none

## **Part II**

The Domain of Amun Formal Garden Scenes:

The *Hnty*-š, The *Kzmw*-, The *Sš*-, The *ʿt-nt-ht*, and The *Hrrt*-š-Formal Gardens

# TT 87 (Minnakht) – *hnty-š*-formal garden scene

Date: Thutmose III

Location: Sheikh Abd el-Qurna

Southwest – left rear wall of chapel

Wall Narrative: Festival setting

hkr-frieze								
Priests carry portable shrine from the nšmt-bark towards Minnakht's statue in a pavilion being censed and given offerings (L→R)					Menkheper offers Ra-Horakhety and Osiris bouquets to his parents (L→R)	Minnakht and wife seated at feast (L←R)		
Tree avenue and priests offering and censing formal garden's produce (L→R)								
Lake with deified Thutmose III's nšmt-bark	Grape arbors and pergolas	Enclosure wall					Priests in procession carry portable shrine from the nšmt-bark towards the memorial temple (L←R)	
	ProceSSIONal ramp	Pylon	Tree grove	Pylon				Shrine
								Shrine
					Shrine			
	Grape arbors and pergolas				Enclosure wall			
Tree avenue and priests offering and censing formal garden's produce (L→R)								
Mourners and celebrants (L→R)		Servants w/ festival food (L→R)			Festival feast (L←R)			
Dado?								

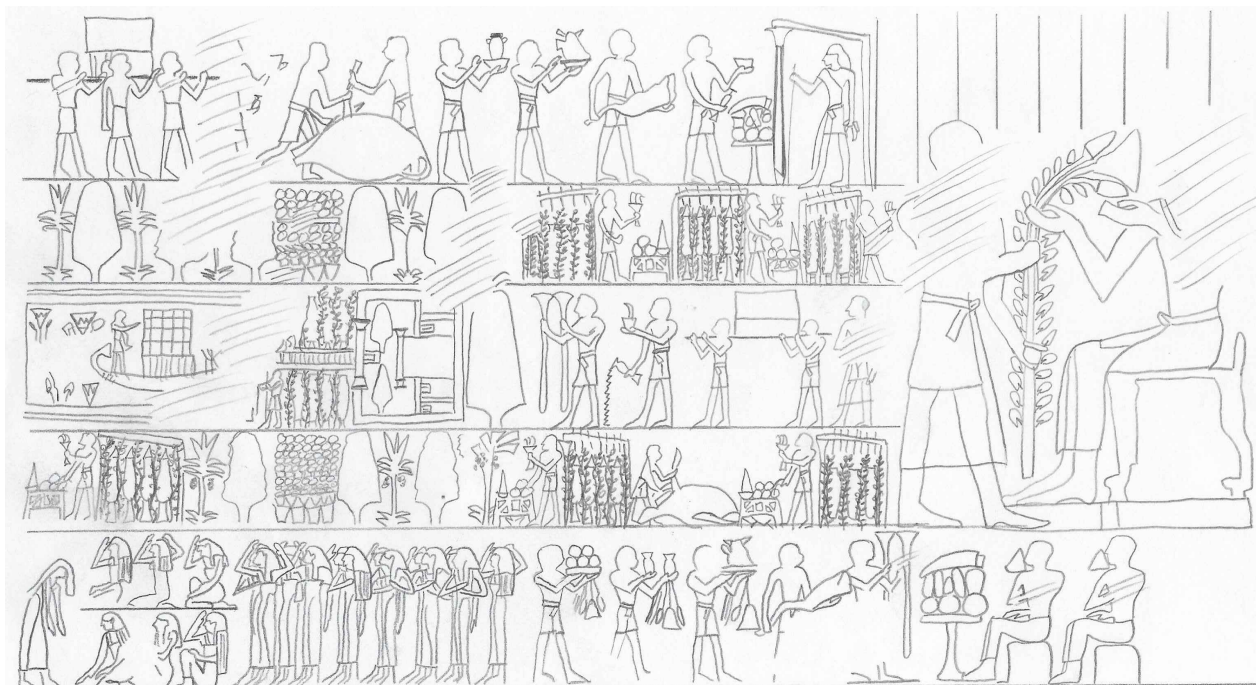


Figure A1.15: Surrounding decorative schema of the TT 87 scene. Drawing by author © 2020, after Figure 1 in Geßler-Löhr (1991).

*Formal Garden Scene:*

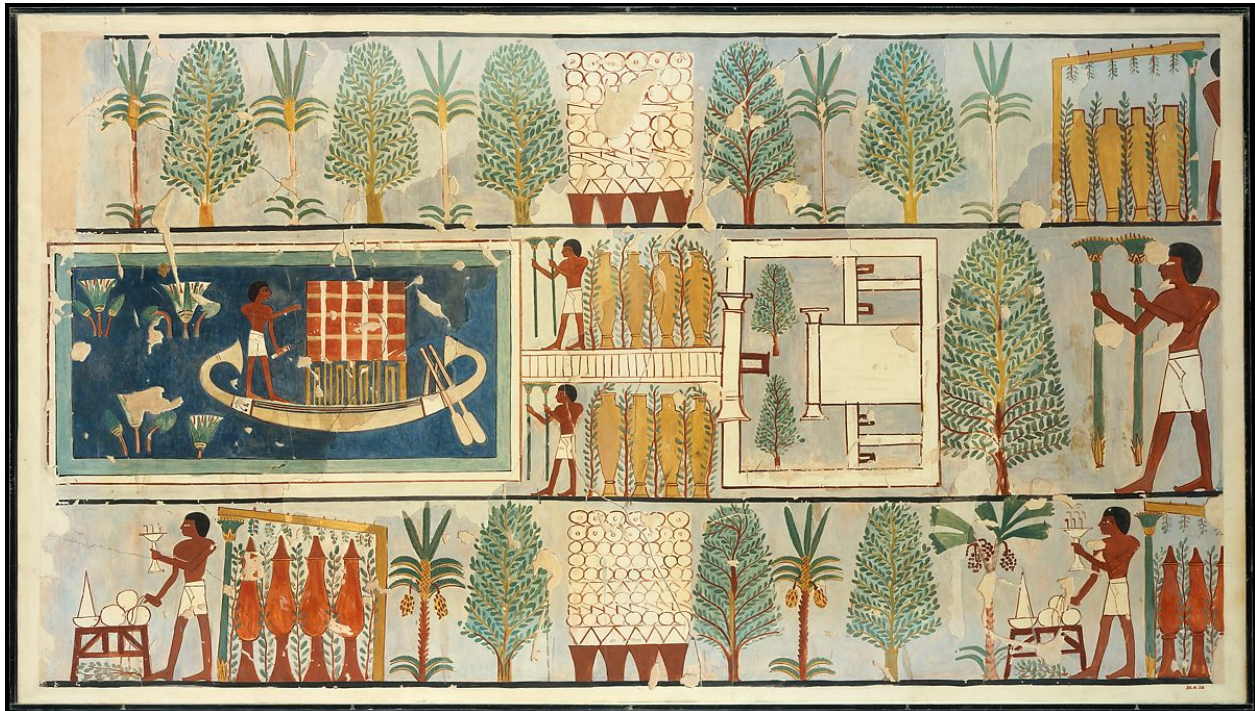


Figure A1.16: Thutmose III's *hnty-š*-formal garden depicted in the TT 87 scene. Photograph courtesy of the Creative Commons (CC0 1.0) Universal Public Domain Dedication of The Metropolitan Museum of Art, New York:  
<https://www.metmuseum.org/art/collection/search/544601>.


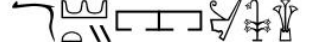
*Description and Relevant Text:* See Chapter Three

*Main Literature:*

- Dibley, Gary and Bron Lipkin. Cone translations by Julie Masquelier-Loorius. *A Compendium of Egyptian Funerary Cones*, 66, 76, cone nos. 137 and 177. London: Bron Lipkin & Gary Dibley, 2009.
- Geßler-Löhr, Beatrix. „Die Totenfeier im Garten.“ In *Das Grab des Amenemope, TT 41*, vol. Bd. 3, by Jan Assmann and Muhammad Mahmoud Abd el-Raziq, pp. 162-166. Mainz am Rhein: Philipp von Zabern, 1991.
- Guksch, Heike. *Die Gräber des Nacht-Min und des Men-cheper-Ra-seneb*, p. 64, Texte 21.2, Tafeln 11 and 12. Mainz am Rhein: Philipp von Zabern, 1995.
- Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 340-341. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.
- Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 178-179. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.
- Sethe, Kurt. *Urkunden der 18. Dynastie: Historisch-Biographische Urkunden*, 1177-1178. Vol. IV, pt. IV. Berlin: Akademie-Verlag, 1961.
- Virey, Philippe. Edited by Ernest Leroux. « Tombeau de Khem-nekht. » In *Mémoires publiés par les membres de la Mission archéologique française au Caire V, fascicule 2 : Sept tombeaux*


*thébains de la XVIII<sup>e</sup> dynastie*, pp. 316-318, fig. 1. Paris: Ministre de l'instruction publique et des beaux-arts, 1891.

*Relevant Owner Titles:*

- *ḥry mrwt n 'Imn* — Chief Servant of Amun
-  – *imy-r3 šnwty* – Overseer of the Double-granary
-  – *imy-r3 šnwty n šmꜥw mḥw* – Overseer of the Double-granary of Upper and Lower Egypt

*Relevant Family Titles:*

Menkheper (son):

-  – *sš ḥtp ntr n 'Imn n Ḥnkt-nḥ* – Scribe of the Divine Offerings of Amun in the Memorial Temple of Thutmose III



## TT 90 (Nebamun) – *k3mw*-formal garden scene

*Date:* Thutmose IV to Amenhotep III

*Location:* Sheikh Abd el-Qurna

North – right rear wall of transverse hall

*Wall Narrative:* Festival setting

bkr-frieze								
Thutmose III enthroned in a pavilion (L→R)	Nebamun offers tribute to Thutmose III (L→R)	Tribute carried by Nebamun (L→R)	Offering-bearers with bread and fowl (L→R)	Two men sacrifice a bovine beside the vineyard (L→R)	Grape arbors on pergolas Gardeners harvest grapes Grape arbors on pergolas	Tree avenue T-Shaped pool Tree avenue	Nebamun and priest offer at shrine (L→R)	Shrine of Amenhotep III (L→R)
		Tribute carried by Nebamun (L→R)	Gardeners carry grapes (L→R)	Vinters tread grapes (L→R) and offer to Renenutet (L→R)	Two rows of wine jars (L→R)		Nebamun inspects vintage from the <i>kzmnw</i> -formal garden(L→R)	House (L→R)
		Tribute carried by Nebamun (L→R)	Servants w/ foodstuffs (L→R)	Guests arrive for the Harvest Festival banquet (L→R)			Wife and daughter receive and welcome guests in front of house (L→R)	
		Military guests arrive (L→R)	Butchery scenes (L→R)				Seated Nebamun receives feast and two servants (L→R)	
Dado?								

*Formal Garden Scene:*



Figure A1.17: The *k3mw*-formal garden depicted in the TT 90 scene. These two photographs of the details of the Charles W. Wilkinson facsimile were merged together by the author, and are courtesy of the Creative Commons (CC0 1.0) Universal Public Domain Dedication of The

Metropolitan Museum of Art, New York:

[https://commons.wikimedia.org/wiki/File:Nebamun\\_Supervising\\_Estate\\_Activities,\\_Tomb\\_of\\_Nebamun\\_MET\\_DT11772\\_detail-6.jpg](https://commons.wikimedia.org/wiki/File:Nebamun_Supervising_Estate_Activities,_Tomb_of_Nebamun_MET_DT11772_detail-6.jpg) and

[https://commons.wikimedia.org/wiki/File:Nebamun\\_Supervising\\_Estate\\_Activities,\\_Tomb\\_of\\_Nebamun\\_MET\\_DT11772\\_detail-8.jpg](https://commons.wikimedia.org/wiki/File:Nebamun_Supervising_Estate_Activities,_Tomb_of_Nebamun_MET_DT11772_detail-8.jpg).

*Description and Relevant Texts:* See Chapter Three

*Main Literature:*


Davies, Norman de Garis and Nina de Garis-Davies. Edited by Norman de Garis-Davies and Sir Alan Gardiner. *The Tombs of Two Officials of Tuthmosis the Fourth (nos. 75 and 90)*, pp. 30-33, pls. XXX, XXXI, and XXXIII. London: Egypt Exploration Society, 1923.

- Dibley, Gary and Bron Lipkin. Cone translations by Julie Masquelier-Loorius. *A Compendium of Egyptian Funerary Cones*, p. 131, cone no. 398. London: Bron Lipkin & Gary Dibley, 2009.
- Gardiner, Sir Alan, Arthur E. P. Weigall, and E. P. Brome. *A Topographical Catalogue of the Private Tombs of Thebes*, p. 24. London: Bernard Quaritch, 1913.
- Hartwig, Melinda. *Tomb Painting and Identity in Ancient Thebes, 1419-1372 BCE*, fig. 30. Brussels: Fondation égyptologique reine Elizabeth, 2004.
- Helck, Wolfgang. *Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22*, nos. 1624-11625. Vol. IV. Berlin: Akademie, 1961.
- Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 348-349. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.
- Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 183-184. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.
- Sethe, Kurt. *Urkunden der 18. Dynastie: Historisch-Biographische Urkunden*, pp. 1618, 1621; pls. XXVI, XXX, and XXXIII. Vol. IV, Pt. IV. Berlin: Akademie-Verlag, in Zusammenarbeit mit der Akademischen Druck- und Verlagsanstalt, Graz, 1961.
- Vleeming, Sven and Holger Kockelmann. "Schott Photographs 6824-6836." In „Das Digital Schott-Archiv (DAS)“, assisted by Angelika Paul and Raimar Eberhard. Trier: Universität zu Trier, 2008-2010. Accessed April 10, 2019. <http://www.schott.uni-trier.de/schott.php>.

*Materials:* Gypsum plaster and polychrome pigment

*Technique:* Painting

*Relevant Owner Titles:*

-  – *t3ty sryt n Mry-Imn* – Standard-bearer of the Beloved-of-Amun Bark

*Relevant Family Titles:* none

# **TT 39 (Puimra) – sš-formal garden scene**

**Date:** Hatshepsut-Thutmose III

**Location:** El-Khokha

North – left rear wall of transverse hall

**Wall Narrative**<sup>448</sup>: Inspecting setting

hkr-frieze?							
Doorway			Puimra seated inspects cattleyard and food (badly damaged) (L←R)	Tree avenues			
	3 registers of food offerings (L→R)	3 registers of cattleyard and cattle offerings (L→R)		Tree avenues	Fish and bird pond	Tree avenues	3 registers of servants w/ formal garden's produce (L→R)
				Tree avenues			
	Puimra seated inspects formal garden's produce (L←R)						Standing Puimra inspects harvest (L←R)
		3 registers of Domain of Amun workshop scenes (L→R)	3 registers of argicultural scenes (L→R)				
	Dado						

**Formal Garden Scene:**

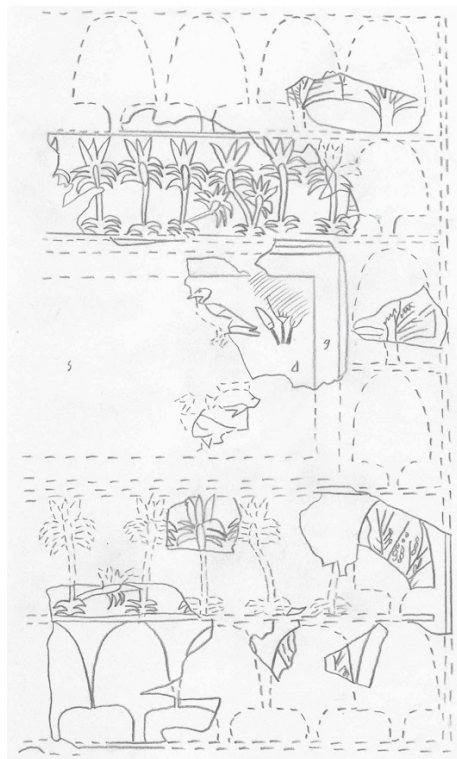


Figure A1.18: Sš-formal garden of Puimra. Drawing by author © 2020, after Plate XII.2 in de Garis-Davies (1922).

<sup>448</sup> Based on plate XVIII in de Garis-Davies and Saba, *The Tomb of Puyemrê at Thebes*, p. 55; and the wall description in Porter and Moss, *Topographical Bibliography I*, p. 71.



*Description and Relevant Text:* See Chapter Three

*Main Literature:*

Carter, Howard. "The 'Valley-Temple' of Queen Hatshepsut." In *Five Years' Explorations at Thebes: A Record of Work done 1907-1911* by Howard Carter, George Edward Stanhope Molyneux Herbert – 6<sup>th</sup> Earl of Carnarvon, Francis L. Griffith, Georges Legrain, George Möller, Percy E. Newberry, and Wilhelm Spiegelberg, p. 39, fig. 10. London; New York: H. Frowde, 1912.

Davies, Norman de Garis and Mahmoud Saba. *The Tomb of Puyemrê at Thebes*, pp. 5-7, 20, 55-56, pls. XXI.2-7, VIII, and XLVI-LXVII. Vol. I-III. New York: The Metropolitan Museum of Art, 1922.

Louant, Emmanuel. *Comme Pouiemrê triompha de la mort : Analyse du programme iconographique de la tombe thébaine n°39*. Leuven: Peeters, 2000.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 230-233. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 71-75. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

*Materials:* Gypsum plaster and polychrome pigment

*Technique:* Painting

*Relevant Owner Titles:*

- Second Priest of Amun
- Architect<sup>449</sup>

*Relevant Family Titles:* none

---

<sup>449</sup> These titles come from a hieratic graffito on the Memorial Temple of Hatshepsut at Deir el-Bahari. See the above bibliography.

## TT 96 (Sennefer) – *ṯ-nt-ḥt*-formal garden scene

*Date:* Amenhotep II

*Location:* Sheikh Abd el-Qurna

East – Left front wall of transverse hall

*Wall Narrative:* Festival setting

bkr-frice?																																	
Enclosure wall	Enclosure wall					Tree avenue	Canal	Sennefer presents formal garden's produce and wares to Amenhotep II for New Year's Festival (L→R)	Offerings of formal garden's produce (L→R)	Sennefer presents the offerings to Amenhotep II for New Year's Festival (L→R)	Amenhotep II receives formal garden's produce and wares enthroned in kiosk (L→R)																						
	Tree avenue																																
	<table><tr><td rowspan="4">Tree avenue</td><td colspan="2">Tree avenue</td><td rowspan="4">Walled tree grove</td><td colspan="2">Tree avenue</td></tr><tr><td>Pavilion</td><td>Pool</td><td>Water garden</td><td>Gate</td></tr><tr><td rowspan="2">Tree avenue</td><td rowspan="2">Shrubbery</td><td rowspan="2">Water garden</td><td rowspan="2">Gate</td></tr><tr><td>Tree av.</td><td>Gate</td></tr><tr><td colspan="2">Tree avenue</td><td colspan="2">Tree avenue</td><td colspan="2">Tree av.</td></tr></table>											Tree avenue	Tree avenue		Walled tree grove	Tree avenue		Pavilion	Pool	Water garden	Gate	Tree avenue	Shrubbery	Water garden	Gate	Tree av.	Gate	Tree avenue		Tree avenue		Tree av.	
	Tree avenue	Tree avenue		Walled tree grove	Tree avenue																												
		Pavilion	Pool		Water garden								Gate																				
		Tree avenue	Shrubbery		Water garden								Gate																				
												Tree av.		Gate																			
	Tree avenue		Tree avenue		Tree av.																												
	Four tree avenues																																
	<table><tr><td>Water garden</td><td colspan="3">3 pergolas with grapevines</td><td rowspan="4">Gate of Amenhotep II</td></tr><tr><td>Shrine</td><td colspan="3">Pathway</td></tr><tr><td>Shrine</td><td colspan="3">Gate</td></tr><tr><td>Florist workshop</td><td colspan="3">3 pergolas with grapevines</td></tr></table>											Water garden	3 pergolas with grapevines			Gate of Amenhotep II	Shrine	Pathway			Shrine	Gate			Florist workshop	3 pergolas with grapevines							
Water garden	3 pergolas with grapevines			Gate of Amenhotep II																													
Shrine	Pathway																																
Shrine	Gate																																
Florist workshop	3 pergolas with grapevines																																
<table><tr><td rowspan="4">Tree avenue</td><td colspan="2">Tree avenue</td><td rowspan="4">Gate</td><td colspan="2">Tree avenue</td><td colspan="2">Tree av.</td></tr><tr><td>Shrubbery</td><td>Pool</td><td>Water garden</td><td>Walled tree grove</td><td>Pool</td><td>Tree av.</td></tr><tr><td rowspan="2">Tree avenue</td><td rowspan="2">Pavilion</td><td rowspan="2">Pool</td><td rowspan="2">Water garden</td><td rowspan="2">Gate</td></tr><tr><td>Tree avenue</td><td>Tree avenue</td></tr></table>					Tree avenue	Tree avenue		Gate	Tree avenue		Tree av.		Shrubbery	Pool	Water garden	Walled tree grove	Pool	Tree av.	Tree avenue	Pavilion	Pool	Water garden	Gate	Tree avenue	Tree avenue								
Tree avenue	Tree avenue		Gate	Tree avenue		Tree av.																											
	Shrubbery	Pool		Water garden		Walled tree grove	Pool		Tree av.																								
	Tree avenue	Pavilion		Pool		Water garden	Gate																										
					Tree avenue			Tree avenue																									
Tree avenue																																	
Enclosure wall																																	
Tree avenue																																	
Enclosure wall																																	

*Formal Garden Scene:*

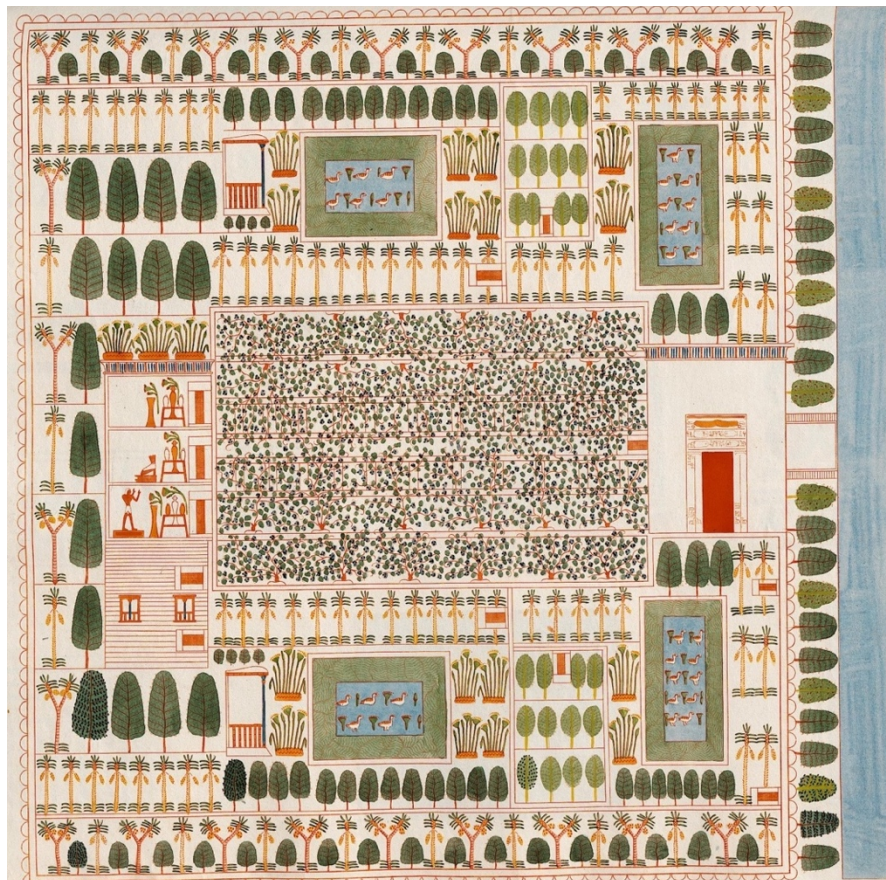


Figure A1.19: An *ṯ-nt-ḥt*-formal garden of Amun depicted in the TT 96 scene. Plate by Lasinio in Rosellini (1834). Courtesy of the Public Domain of The New York Public Library Digital Collections: <https://digitalcollections.nypl.org/items/510d47d9-4779-a3d9-e040-e00a18064a99>.



Figure A1.20: 3D model of the *ṯ-nt-ḥt*-formal garden of the TT 96 scene by Zaak: Augmented & Virtual Reality Works for the exhibition *Gärten der Welt* (2016) at the Museum Rietberg. Photograph via their Tumblr post: <https://zaakzurich.tumblr.com/post/149319457830/augmented-virtual-reality-works-for-museum>.

*Description and Relevant Text:* See Chapter Three

*Main Literature:*

Dibley, Gary and Bron Lipkin. Cone translations by Julie Masquelier-Loorius. *A Compendium of Egyptian Funerary Cones*, 87, cone nos. 223 and 224. London: Bron Lipkin & Gary Dibley, 2009.

Helck, Wolfgang. *Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22*, nos. 1417-1418. Vol. IV. Berlin: Akademie, 1961.

Hugonot, Jean-Claude. *Le jardin dans l'Égypte ancienne*, p. 16. New York; Bern; Paris; Frankfurt am Main: Publications universitaires européennes, 1989.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 360-364. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.






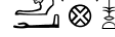
Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 30, 198. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Rosellini, Ippolito and Mahmoud Saba. *I monumenti dell'Egitto e della Nubia: Disegnati dalla spedizione scientifico letteraria toscana in Egitto*, pl. LXIX. Vol. 2. Pisa: Presso N. Capurro, 1834.

*Materials:* Gypsum plaster and polychrome pigment

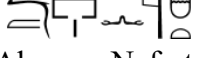

*Technique:* Painting

*Relevant Owner Titles:*

-  – *imy-r3 hntyw-s n 'Imn* – Overseer of the *hntyw-s*-formal gardens of Amun
-  – *imy-r3 t-nt-ht nt 'Imn* – Overseer of the *t-nt-ht*-formal garden(s) of Amun
-  – *mr pr n 'Imn* – Steward of Amun
-  – *imy-r3 šnwty n 'Imn* – Overseer of the Double-granary of Amun
-  – *imy-r3 nfrt iḥm m 'Imn* – Overseer of the Cattle of Amun
-  – *h3ty-s n niwt rsyt* – Mayor of the Southern City (Thebes)

*Relevant Family Titles:*

Ahmoose called Humay (father; TT 224)

-  – *imy-r3 m pr n hmt-ntr* – Overseer of the Estate of the God's Wife (Ahmoose-Nefertary)
- Overseer of the Double-granary of the God's Wife Ahmoose-Nefertary<sup>450</sup>
-  – *imy-r3 iḥw* – Overseer of Cattle

<sup>450</sup> Copies of the title made by Vladimir Semionovich Golenischev (1856-1947) held in the Griffiths Institute Archive, Oxford, text [14] m.



## TT 161 (Nakht) – *hrrt-š*-formal garden scene

Date: Amenhotep III

Location: Dra'a Abu el-Naga

West – left side wall of passage

Wall Narrative: Festival setting

Left rear wall		Left side wall									
		hkr-freize									
Nakht and his wife Tahmet offer to statues of Amun-Ra and Mut for the Beautiful Festival of the Valley (L←R)	Four sons bring floral offerings from the formal garden (L←R)	Text about festival banquet to the right	Sons and daughters bring floral offerings and formal garden produce to their parents for the festival (L→R)						Nakht and wife receive formal garden's produce (L←R)		
			10 male guests served festival food (L→R)			Festival food	Musicans (L→R)		Nakht and wife seated for meal (L←R)		
	10 female guests served festival food (L→R)			Musicans (L→R)							
	Four daughters bring floral offerings from the formal garden (L←R)		Water garden	Hsp-garden	Hsp-garden and gardeners	Nakht inspects garden (L←R)	Florist workshop (?) and hsp-garden	Tree grove and gardener (L←R)	Sons and daughters served festival food (L←R)		
			Hsp-garden	Pond	Hsp-garden and gardeners	Florist workshop (?) and hsp-garden		Hsp-garden			
Dado?											

### Formal Garden Scene:

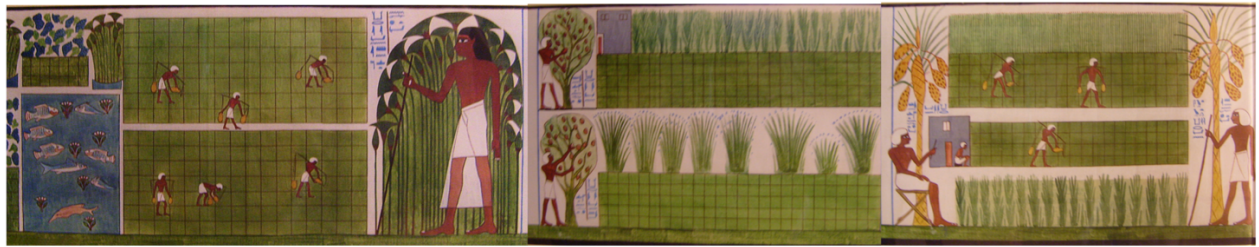


Figure A1.21: The Theban *hrrt-š* formal garden depicted in the TT 161 scene. Colored facsimile of the scene at the Musée royaux d'art et d'histoire et du Cinquantenaire, Brussels. Photographs by David Seifkin, merged together by the author and courtesy of his Creative Commons Universal Public Domain Dedication: [https://commons.wikimedia.org/wiki/File:Gardens\\_of\\_Nakh\\_1.JPG](https://commons.wikimedia.org/wiki/File:Gardens_of_Nakh_1.JPG).

Description and Relevant Text: See Chapter Three

### Main Literature:

Hugonot, Jean-Claude. *Le jardin dans l'Égypte ancienne*, pp. 15, 228-229. New York; Bern; Paris; Frankfurt am Main: Publications universitaires européennes, 1989.

Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, pp. 451-452. Vol. 1. Mainz am Rhein: Verlag Philipp von Zabern, 1996.

Manniche, Lise. "The Tomb of Nakht, The Gardener, at Thebes (no. 161) as Copied by Robert Hay." *JEA* 72 (1986): pp. 58-60, pls. 1, 2, 14, 22, 34.

Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*, pp. 30, 274-275. 2<sup>nd</sup> edition. Oxford: Oxford University Press, 1970.

Vleeming, Sven and Holger Kockelmann. "Schott Photograph 3726." In „Das Digital Schott-Archiv (DAS)“, assisted by Angelika Paul and Raimar Eberhard. Trier: Universität zu Trier, 2008-2010. Accessed April 10, 2019. <http://www.schott.uni-trier.de/schott.php>.

Werbrouck, Marcelle and Baudouin van de Walle. *La tombe de Nakht : Notice sommaire*, pp. 8-




9. Brussels: Vromant and Co. and the Musée royaux d'art et d'histoire et parc du Cinquantenaire, 1929.

Wilkinson, Alix. *The garden in ancient Egypt*, p. 136. London: Rubicon Press, 1998.

*Materials*: Gypsum plaster and polychrome pigment


*Technique*: Painting

*Relevant Owner Titles*:


-  – *k3ry n 'Imn n ḥtp nṯr* – Gardener of the Divine Offerings of Amun
-  – *f3y n ḥtp n 'Imn* – Offering-bearer of the Floral Offerings of Amun
-  – *s3w n 'Imn* – Guardian of Amun

*Relevant Family Titles*:


Gurer/Gurel (father)

-  – *k3ry n 'Imn n ḥtp nṯr* – Gardener of the Divine Offerings (of Amun)

Huynefter (son)

-  – *k3ry n 'Imn n ḥtp nṯr* – Gardener of the Divine Offerings (of Amun)

Waser (son)

-  – *k3ry n 'Imn n ḥtp nṯr* – Gardener of the Divine Offerings (of Amun)

Pareheny (son)

-  – *f3y n ḥtp n 'Imn* – Offering-bearer of the Floral Offerings of Amun

Kha (son)

-  – *f3y n ḥtp n 'Imn* – Offering-bearer of the Floral Offerings of Amun

## Appendix II:

### Herbarium and Faunarium

#### Author's Note

This appendix is organized alphabetically by common name while the scientific name is listed beside the entry head. Each species' entry further includes photograph(s) for one to imagine how they might have appeared in the formal gardens in Thebes during this time. These images are the author's own, kindly given permission of use by friends or colleagues, and/or from license-free websites, such as CreativeCommons, Unsplash, Shutterstock, Flickr, Pngkey, and Pinterest. The name of the appendix was inspired by the mediaeval term 'herbarium,' also commonly known as 'an herbal,' which was and still continues to this day, to denotate a collection of botanical specimens that are collected, inventoried, and catalogued for scientific study and use. The term 'faunarium' derives from herbarium's use, both meaning 'a place of animals/plants' in Latin.

#### ***Argun-Palm (Medemia argun Württemb. ex Mart.)***

The *argun*-palm occurs in the š- and Domain of Amun formal garden scenes with its trunk and crown shown stylized like M54 (𓆎) or realistic with two pinnate ribs bent downwards. The *argun*-palm is a variety of the *doum*-palm native to Sudan, is evergreen, grows up to 10 meters (33 feet) tall, has large green fronds, and produces purple to yellow ovate fruit from winter to spring.<sup>451</sup>

Archaeobotanical evidence of *argun*-fruit as a Nubian (Sudanese) import exists from the Fifth Dynasty onwards.<sup>452</sup> The palm's presence in the formal garden scenes dating to the coregency of Hatshepsut and Thutmose III is historically significant because the rulers naturalized

---

<sup>451</sup> Claire Newton, « Le palme argoun (*Medemia argun* (Mart.) Württemb. ex Wendl), » in *Encyclopédie religieuse de l'Univers végétal* II, ed. by Sydney Aufrère, (Montpellier: Publications de l'université Paul Virey, 2001), pp. 143-147; Manniche, *An Ancient Egyptian Herbal*, p. 125.

<sup>452</sup> Douglas Brewer, *et al.*, *Domestic Plants and Animals*, p. 51; its fruit (FM 374) was found in Memphite and Elephantine contexts in the Fifth Dynasty. See de Vartavan, *et al.*, *Codex*, p. 158; and also, Vivi Täckholm, *et al.*, *Flora of Egypt* IIb, (Cairo: Cairo University Press, 1969), pp. 122, 299.

it into Egypt.<sup>453</sup> Its naturalization was likely a result of the well-organized trade of exotic goods from Nubia to Egypt by their second and third Viceroy of Kush, Amenemenekhu (Years 2 to 18) and Inebny (Years 19-22).<sup>454</sup> The fact that Ineni (TT 81) only has one *argun*-palm listed in his š-formal garden also suggests its recent introduction into horticulture during the Eighteenth Dynasty.

The *argun*-palm is represented and planted beside the pools or ponds in the formal gardens because of its funerary significance. For example, the fruit of the *argun*-palm is normally bland unless it is buried in the ground where after the fruit sweetens and tastes like a coconut.<sup>455</sup> This transformation from tasteless (dead) to sweet (alive) was symbolic of Osiris's resurrection. Baskets of *argun*-fruit have been found in tombs since the Old Kingdom.<sup>456</sup>



Figure A2.1: *Argun*-palm and fruit clusters via Portable Graphics Network Key (Pngkey).

<sup>453</sup> Täckholm, *et al.*, *Flora of Egypt* IIb, p. 300.

<sup>454</sup> For the chronology of the Kings' Sons/Viceroy of Kush during the coregency of Hatshepsut and Thutmose III, see Abdul-Fattah El-Sabbahy, "Kings' Sons under Hatshepsut," *GM* 129 (1992): pp. 101-102; and also W. Vivian Davies, "Egypt's Contacts with Neighboring Cultures: Egypt and Nubia: Conflict with the Kingdom of Kush," in *Hatshepsut, from Queen to Pharaoh*, eds. by Catherine H. Roehrig, *et al.*, (New York; New Haven: MMA, 2005), pp. 53-54.

<sup>455</sup> The ancient Nubians practiced this method and scholars theorize that the Egyptians did as well. See Marie-Antoinette Beauverie, « Sur quelques fruits de l'ancienne Egypte exposés au musée de Grenoble, » *BIFAO* 30.2 (1931): p. 400; and Täckholm, *et al.*, *Flora of Egypt* IIb/III, p. 298.

<sup>456</sup> Bernard Bruyère, *Deir el Médineh* II, (Cairo: IFAO, 1937), 108; Newton, « Le palme argoun (*Medemia argun* (Mart.) Württemb. ex Wendl), » pp. 143-147; de Vartavan, *et al.*, *Codex*, p. 158.



### *Atil*-Tree (*Mærua crassifolia* Forssk.?)

The *atil*-tree appears in Ineni's list (TT 81). The deciduous umbrella-shaped shrub or tree that is native to Egypt, North Africa, and the Middle East, grows 2-6 meters (6.6-19 feet) in height, has elliptical green leaflets, and produces yellow to green flowers and circular green fruits from June to August during the African dry season.<sup>457</sup> Moldenke and Baum identified the *atil*-tree with *imz* (𓆎𓆏𓆐) in Egyptian because of its edible leaves and branches mentioned in medicinal texts to treat external ailments.<sup>458</sup> However, in her study on the medicinal use of *imz*, Germer advises the use of *Mærua crassifolia* Forssk.<sup>2</sup> because she proved that *imz* was actually used for internal ailments.<sup>459</sup> The *atil*-tree was significant in funerary religion, as it was associated with necropoleis,<sup>460</sup> and has been discovered in a Middle Kingdom tomb in Gebelein (BBM Schw. 195).<sup>461</sup> The tree was associated with Osiris and Hathor and was one of the few species personified as a tree-goddess who nourished the dead.<sup>462</sup> For example, in Pyramid Texts 437<sup>463</sup> the fruit of the *atil*-tree and Christ's thorn are personified:

...The [*atil*-tree] serves you, the [Christ's thorn tree] tilts its head towards you...<sup>464</sup>

The tree is also depicted as a source of nourishment for private individuals on First Intermediate Period coffins<sup>465</sup> and is mentioned in many funerary texts, such as Coffin Texts 164:

---

<sup>457</sup> Grubben, et al., *PROTA*, [https://uses.plantnet-project.org/en/Maerua\\_crassifolia\\_\(PROTA\)](https://uses.plantnet-project.org/en/Maerua_crassifolia_(PROTA)), (accessed June 29, 2020); Loutfy Boutros, *Flora of Egypt* Ia, (Cairo: Al Hadara Publishing, 1999), p. 176; Natalie Baum, *Arbres et arbustes*, (Leuven: Peeters, 1988), 193-194; Germer, *Handbuch*, pp. 290-291.

<sup>458</sup> Moldenke, *Ueber die in den altägyptischen Texten erwähnten Bäume und deren Verwertung*, pp. 60-65; Baum, *Arbres et arbustes*, pp. 191, 196.

<sup>459</sup> Germer, *Handbuch*, p. 27.

<sup>460</sup> Hélène Jacquet-Gordon, *Les noms des domaines funéraires sous l'Ancien Empire égyptien*, (Cairo: IFAO, 1962), nos. 315.5, 349.4, 359.21, 363.75, 376.7; Baum, *Arbres et arbustes*, p. 186.

<sup>461</sup> de Vartavan, et al., *Codex*, p. 156; Georg A. Schweinfurth, « Les dernières découvertes botaniques dans les anciens tombeaux de l'Égypte, » *BIEg* 5 (1884): p. 262.

<sup>462</sup> "At Dendera, *imz*-trees are shown, according to the captions, under an Osiris bed," see Baum, *Arbres et arbustes*, p. 185; and Auguste Mariette, *Dendérah* IV, (Paris: Librairie A. Franck, 1973), p. 71.

<sup>463</sup> Baum, *Arbres et arbustes*, p. 190.

<sup>464</sup> Baum, *Arbres et arbustes*, p. 289.

<sup>465</sup> Samuel Birch, *Egyptian texts of the earliest period from the coffin of Amamu in the British Museum*, (London: Longmans, 1886), 25-27, pl. 20; Baum, *Arbres et arbustes*, (Leuven: Peeters, 1988), p. 184.

Where will you be allowed to eat?  
I will eat in a pavilion under the branches of the [*atil*-tree] of Hathor.  
Where will you be allowed to eat?  
In the pavilions, under the [*atil*-tree]...<sup>466</sup>

As well as, Coffins Texts 225 (Book of the Dead Spell 68):

I dwell under the branches of the [*atil*-tree] of Hathor, who has command over the broad sun disk— she has betaken herself to Heliopolis, carrying the writings of the divine word, the books of Thoth.<sup>467</sup>

Like the sycamore fig tree-goddess, the deceased further desired to be nourished by *atil*-tree- and Christ's thorn-tree-goddesses in the hereafter. *Atil*-fruits, leaves or seeds have yet to be discovered in an Eighteenth Dynasty Theban tombs.<sup>468</sup>






Figure A2.2: *Atil*-tree flower clusters and fruit. Photograph courtesy of Sahara-Nature for Feedipedia: Animal Feed Resources Information System with the FAOUN (2010): <https://www.feedipedia.org/node/130>.

<sup>466</sup> Paul Barguet, *Les textes des sarcophages égyptiens du Moyen Empire*, (Paris: Éditions du Cerf, 1986), p. 376; also Baum, *Arbres et arbustes*, p. 293.

<sup>467</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 129.

<sup>468</sup> de Vartavan, *et al.*, *Codex*, p. 156.

### Blue Lotus and White Lotus (*Nymphaea caerulea* L. Savigny and *Nymphaea lotus* L.)

The blue and white lotus, also known as a waterlily, appear in many of the š- and Domain of Amun formal garden scenes as well as in the offerings and bouquets of the surrounding scenes. The blue and white lotuses are shown stylized with hints of realism in their shape and form like Gardiner M228/228B () , M90/90A () , and M73/74 () . The lotus is a perennial aquatic species native to Egypt, Sub-Saharan Africa, Palestine, and Yemen, which grows deep thick rhizomes under water, and has large peltate lily pads<sup>469</sup> with white, blue, or purplish flowers from summer to fall or sometimes even year-round in particularly warm climates.<sup>470</sup>


The blue and white lotus were a symbol of the primaeval waters, of the solar and lunar cycles, and of rebirth and resurrection. The blue lotus, for example, is a heliotrope associated with Ra and Nefertem because its flowers emerge from under water in the early morning until midday (See Fig. A1.3). While, the white lotus is a selenotrope associated with Osiris, Thoth, and Khonsu because it emerges from under water to open its flowers in the evening until mid-morning<sup>471</sup> (See Fig. A1.3). This duality is further evident from the Book of the Dead Spell 81A in the ‘Book of Transformations’:

I am this pure lotus which went forth from the sunshine, which is at the nose of R[a]; I have descended that I may seek it for Horus, for I am the pure one who issued from the fen.<sup>472</sup>

As well as, in Coffin Texts 62:

...You will cross the steppes with R[a], he will show you the places of enjoyment. You will find the wadis full of water and wash yourself to your refreshment. You will pluck papyrus and reeds, and lotus blooms with buds...<sup>473</sup>

---

<sup>469</sup> The lily pads and their rhizomes were the inspiration for *h3* () or ‘one-thousand’ in Egyptian (Gardiner M12/12A/12B) since they sprout so numerously. Lily pads were even included in New Kingdom bouquets.

<sup>470</sup> Boulos, *Flora of Egypt* Ia, pp. 152-153; Manniche, *An Ancient Egyptian Herbal*, p. 132.

<sup>471</sup> Marina Heilmeyer, „Die Natur und die Götter,“ in *Ägyptische Gärten*, ed. by Christian Tietze, (Weimar: Akademie-Verlag, 2011), p. 85; Wilkinson, *The garden in ancient Egypt*, p. 54.

<sup>472</sup> Ogden Goelet, et al., *The Complete Papyrus of Ani*, (San Francisco: Chronicle Books, 2015), pl. 28-B.

<sup>473</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 271.

The presence of the blue and white lotus in the pools, ponds or lakes of the formal gardens and in funerary and festival bouquets clearly evokes the creation myths, solar and lunar cycles, and the rebirth and resurrection of the deceased. This interpretation is supported by the discovery of blue lotus remains on Ahmose I's mummy in Deir el-Bahari (Schw.256 and 304), from Kha's tomb (TT 08) in Deir el-Medina, dating to the reign of Amenhotep II to Amenhotep III, as well as from the petals and sepals (MMA 09.184.214) discovered in Tutankhamun's tomb (KV 62).<sup>474</sup>



Figure A2.3: (Left) White lotuses open at mid-morning on Utrecht's canals. Photograph courtesy of Martin Woortman via Unsplash (2020). (Right) A blue lotus opening its petals in the early morning in the Maldives. Photograph courtesy of Saffu via Unsplash (2017).

### **Carob Tree (*Ceratonia siliqua* L.)**

The carob tree appears in the list of plants in Ineni (TT 81). Ineni indicates that he had 16 carob trees in his š-formal garden. Although the tree is not shown or mentioned in the other formal garden scenes, an image of the tree does exist in the private Eighteenth Dynasty tomb of Menna (TT 61) on the West Bank of Thebes.<sup>475</sup> The evergreen tree of the pea family Fabaceae is known

<sup>474</sup> de Vartavan, *et al.*, *Codex*, p. 168; Oreste Mattiolo, "I vegetali scoperti nella tomba dell'architetto Kha e di sua moglie Mirit nella necropoli di Tebe, etc.," *ARAST* 61.13 (1926): p. 548; Percy E. Newberry, "Report on the floral wreaths found in the coffins of Tut-Ankh-Amen," in *The tomb of Tutankhamen II*, by Howard Carter and A. C. Mace, (London: Cassel and Co., 1927), p. 190.

<sup>475</sup> Manniche, *An Ancient Egyptian Herbal*, p. 92.





Figure A2.4: Carob pods ripening in Turkey. Photograph courtesy of Nevit Dilmen via CreativeCommons (2013). The tree and its pods might easily be mistaken for those of the flame of the forest (*Delonix regia* L.) and golden shower (*Cassia fistula* L.) trees that are native to Madagascar and China and grow in the AUC gardens and El-Rehab City in New Cairo today.

since the Old Kingdom, is native to the eastern Mediterranean and the Sinai, grows 2-6 meters (6.6-20 feet) tall in harsh climates, has large paripinnate leaves, and produces brownish sweet chocolate-tasting pods and seeds in summer, which were used by the Egyptians in food, beer, medicine, perfumes, and unguents.<sup>476</sup> Carob pods are mentioned under the fruit section of Pyramid Texts Recitations for the ‘Preparation of the Offering Table’ while actual carob pods were discovered in the eastern necropolis of Deir el-Medina<sup>477</sup>:

Pyramid Texts of Wenis (line 168):  
Osiris [Wenis]...2 bowls of carob beans...<sup>478</sup>

Pyramid Texts of Pepy II (line 182):  
...I have given to you 2 bowls of carob beans...<sup>479</sup>

<sup>476</sup> Boulos, *Flora of Egypt* Ia, p. 361; Baum, *Arbres et arbustes*, p. 163; Germer, *Handbuch*, p. 91; Manniche, *An Ancient Egyptian Herbal*, p. 92; and Brewer, *et al.*, *Domestic Plants and Animals*, p. 62.

<sup>477</sup> Bruyère, *Deir el Médineh* II, p. 108; de Vartavan, *et al.*, *Codex*, p. 73.

<sup>478</sup> James P. Allen, *The ancient Egyptian pyramid texts*, (Atlanta: SBL Press, 2015), p. 30.

<sup>479</sup> Allen, *The ancient Egyptian pyramid texts*, p. 256.

### **Christ's Thorn Tree (*Ziziphus spina Christi* L. Desf.)**

There is no confirmed depiction of Christ's thorn tree in any of the formal garden scenes. Although, Ineni (TT 81) lists that he had five in his š-formal garden. The Christ's thorn fruit (jujube) occurs in the formal garden produce carried by gardeners/servants in the š- and the Domain of Amun garden scenes for the banquet and/or offering tables. The shrub or tree has been cultivated in the arid to warm regions of North Africa, the Nile Basin, and the Levant since the Predynastic Period.<sup>480</sup> It is evergreen, grows 4-8 meters (13-26 feet) tall, has green serrated leaves that end with sharp thorns, and produces yellowish florets that grow into yellow berry-sized fruit from October to January, and was used in food, timber, and medicine production.<sup>481</sup>

The presence of Christ's thorn fruit in the offerings and inscriptions related to the formal garden scenes indicates its importance to the dead as a source of nourishment. Like the carob tree, Christ's thorn is mentioned in the fruit section of Pyramid Texts Recitations for the 'Preparation of the Offering Table':

Pyramid Texts of Wenis (line 166):

Osiris [Wenis]...2 bowls of sidder<sup>482</sup> fruit...<sup>483</sup>

Pyramid Texts of Pepy II (line 182):

...Horus has given to you 2 bowls of sidder fruit...<sup>484</sup>

The sweet tasting fruit remained sought-after for offering tables in the New Kingdom, as four instances of the fruit and seeds were discovered in Eighteenth Dynasty tombs in the Thebaid Region (MM 3710; BBM 17385).<sup>485</sup> The use of Christ's thorn wood in sarcophagi,

---

<sup>480</sup> Boulos, *Flora of Egypt* IIa, p. 361; de Vartavan, *et al.*, *Codex*, p. 255; Brewer, *et al.*, *Domestic Plants and Animals*, p. 63; Germer, *Handbuch*, p. 365.

<sup>481</sup> Boulos, *Flora of Egypt* IIa, p. 361; de Vartavan, *et al.*, *Codex*, p. 255; Brewer, *et al.*, *Domestic Plants and Animals*, p. 63; Germer, *Handbuch*, p. 365.

<sup>482</sup> Sidder is another common name for Christ's thorn jujube.

<sup>483</sup> Allen, *The ancient Egyptian pyramid texts*, p. 30.

<sup>484</sup> Allen, *The ancient Egyptian pyramid texts*, p. 256.

<sup>485</sup> de Vartavan, *et al.*, *Codex*, pp. 256-257; Renate Germer, "Ancient Egyptian plant remains in the Manchester Museum," *JEA* 73 (1987): p. 246; Howard Carter, *et al.*, *Five Years' Explorations at Thebes*, p. 31; Oreste Mattiolo,

Tutankhamun's wreaths (KG 11428), and in private individuals' grave goods (BBM 15/70 and 29/70)<sup>486</sup> further enforces its sanctity, as well as, its continued holiness in Christianity, Judaism, and Islam today.<sup>487</sup>



Figure A2.5: Christ's thorn jujube ripening in the AUC gardens. Photograph by author © 2019.

### **Cilantro/Coriander (*Coriandrum sativum* L.)**

Cilantro/coriander appears in the Domain of Amun formal gardens, particularly in the *hsp*-plots of the Middle Kingdom to Late Hyksos Period *hrrt-š*-formal garden of Palace F/I at Avaris later Perunefer (Tell el-Daba'a/Qantir).<sup>488</sup> This plant species is known for the two herbs it produces: cilantro refers to its soap-tasting leaves while coriander refers to its small green seeds (3-5 mm or

---

"I vegetali scoperti nella tomba dell'architetto Kha e di sua moglie Mirit nella necropoli di Tebe, etc.," *ARAST* 61.13 (1926): p. 558.

<sup>486</sup> de Vartavan, *et al.*, *Codex*, pp. 256-257.

<sup>487</sup> Amots Dafni, *et al.*, "The ethnobotany of Christ's thorn jujube (*Zizyphus spina-Christi*) in Israel," *JEE* 1.8 (2005): pp. 1-9.

<sup>488</sup> See p. 89 in Chapter Three.





Figure A2.6: Coriander flowers in bloom, seeding will follow, as well as cilantro leaves below.  
Photograph courtesy of Garden Making via Pinterest (2019).

.20 inches large).<sup>489</sup> Cilantro/coriander is annual member of the parsley family Apiaceae, is native to Southern Europe, North Africa, Southwest Asia, grows 50 cm (20 inches) tall, has asymmetrical white and pink flowers that are larger at the base and smaller at the top, which grow in umbels from spring to fall (See Fig. A1.6).<sup>490</sup> The Latin name *coriandrum* derives from the ancient Minoan and Greek *ó kopíavδpov* or ‘bedbug,’ as its seeds produce a foul scent during its blooming period.<sup>491</sup> The plant was called *šꜣw* (𓆎𓅓𓏏𓏏) in Egyptian.<sup>492</sup> Coriander/cilantro is attested since the Predynastic Period via seeds found at Adaima.<sup>493</sup> The herbaceous plant was imported from the Levant as early as the Middle Kingdom in Egypt during the reign of Amenemhat II.<sup>494</sup> The herb’s

<sup>489</sup> Germer, *Handbuch*, p. 237.

<sup>490</sup> Germer, *Handbuch*, p. 237.

<sup>491</sup> John Chadwick, *The Mycenaean world*, (Cambridge: Cambridge University Press, 1976/2005), p. 119.

<sup>492</sup> Germer, *Handbuch*, p. 124.



<sup>493</sup> de Vartavan, *et al.*, *Codex*, p. 86; Christian Tutundjian de Vartavan, « Rapport préliminaire sur les restes végétaux d’Adaima, » *BIFAO* 91 (1992): p. 244.

<sup>494</sup> See the text about foreign flora in cargo onboard two Middle Kingdom expeditionary vessels outbound from Lebanon to Egypt on Fragment M from the Ptah Temple at Memphis on pp. 103-104 in Chapter Four of this work; Germer, *Handbuch*, p. 237.



oil, seeds, flowers, and leaves were used in medicine for stomach ailments, to cure poisons, cooking, as well as in bouquets.<sup>495</sup> Archaeobotanical evidence of cilantro/coriander carpels (KG 364, 371, 451, 454, 476, 495, 518B, 573C) have been discovered in Tutankhamun's tomb (KV 62) in the Valley of the Kings, as well as in Deir el-Medina.<sup>496</sup>

### **Common Fig (*Ficus carica* L.)**

The common fig and/or its fruit appear in the š- and Domain of Amun formal garden scenes and/or their relevant surrounding scenes. The tree is shown realistic like Gardiner M1B () or stylized like Gardiner M1 (). The common fig was introduced into Egypt in the early Old Kingdom from Asia Minor and Mesopotamia and is a deciduous shrub or tree that grows up to 6 meters (19 feet), has broad green ovate leaves, and produces round milky figs biennially from June to September.<sup>497</sup>

The common fig is placed beside the pools, lakes or ponds in the š-garden and Domain of Amun formal garden scenes. The Egyptians particularly loved its sweet figs, which were picked ripe in the summertime and candied and dried for the wintertime.<sup>498</sup> Beginning in the reign of Ahmose I,<sup>499</sup> festivalgoers ate common figs with honey and placed floral *mꜣꜥ-hrw*-wreaths on statues in temples and in tombs during the Festival of Thoth, recalling the 'Incantation for *mꜣꜥ-hrw*-Wreaths' (Spell 20) from the Book of the Dead.<sup>500</sup> Remains of the fig were even discovered as offerings in the Eighteenth Dynasty strata of Deir el-Medina's eastern necropolis.<sup>501</sup> The fig's

<sup>495</sup> Germer, *Handbuch*, pp. 124-125.

<sup>496</sup> de Vartavan, *et al.*, *Codex*, p. 86; Bruyère, *Deir el Médineh* II, pp. 108; Ehud Weiss, *et al.*, *Domestication of plants in the old world: The origin and spread of domesticated plants in south-west Asia, Europe, and the Mediterranean basin*, (Oxford: Oxford University Press, 2011), pp. 205-206.

<sup>497</sup> Brewer, *et al.*, *Domestic Plants and Animals*, pp. 51-52; Wilkinson, *The garden in ancient Egypt*, p. 45; Boulos, *Flora of Egypt* Ia, p. 16; and Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 142.

<sup>498</sup> Manniche, *An Ancient Egyptian Herbal*, p. 108.

<sup>499</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 308; Brewer, *et al.*, *Domestic Plants and Animals*, p. 52; Smith, *Following Osiris*, p. 231.

<sup>500</sup> Thomas G. Allen, *The Book of the Dead or Going forth by Day: Ideas of Ancient Egyptians Concerning the Hereafter as Expressed in their Own Terms*, (Chicago: University of Chicago Press, 1974), pp. 35-36.

<sup>501</sup> Bruyère, *Deir el Médineh* II, pp. 108, 157; de Vartavan, *et al.*, *Codex*, p. 110.

funerary significance derives from the Pyramid Texts Recitation 778 ‘Meeting the Sun’ from the ‘Spells for the Spirit’s Rebirth’ in the Pyramid of Queen Neith dated to the Sixth Dynasty:

...to those whom the god desires, who eat of [common] figs, are censured with incense...and escort the great god. My ka escorts the great god and elevates me to the great god, for I am one of them.<sup>502</sup>



Figure A2.7: Ripening common fig and its florets beside the Rijksmuseum van Oudheden, Leiden. Photograph by author © 2019.

### **Common Reed (*Phragmites australis* (Cav.) Trin. ex Steud.)**

The common reed appears in pools, such as the TT 93 #3 scene. This reed is an aquatic species that thrives in canals, dykes, pools, and along the banks of the Nile. Archaeobotanical evidence of its culms and leaves exists since the Late Palaeolithic Period,<sup>503</sup> and it is depicted in art since the Old Kingdom. This particular species occurs throughout Egypt and the Eastern Mediterranean, grows 2-5 meters (6.6-16 feet) tall, and has long stiff stems that end in feathery<sup>504</sup> brown flower

---

<sup>502</sup> Allen, *The ancient Egyptian pyramid texts*, p. 320.

<sup>503</sup> de Vartavan, *et al.*, *Codex*, pp. 183-184.

<sup>504</sup> Gardiner M17 (𓆎) is a stylized rendering of its flower clusters, and “its stems were used for pens and arrows,” see Wilkinson, *The garden in ancient Egypt*, p. 60.

clusters in late summer.<sup>505</sup> If not properly tended, it can pose a nuisance to gardeners because it is an aggressive colonizer similar to curled pondweed.<sup>506</sup> It seems to have been placed in bouquets as its culm has been discovered in Tutankhamun's tomb (KV 62) and in two New Kingdom private Theban tombs (FM 1338),<sup>507</sup> evoking the primeval waters of Nun and the Field of Reeds (*iꜥrw*).



Figure A2.8: Very tall common reed growing on El-Rehab Square in New Cairo. Photographs by author © 2019.

### **Cos-Lettuce (*Lactuca sativa* L.)**

Cos-lettuce (UK) or romaine lettuce (US) appears in the š- and the Domain of Amun formal garden scenes and/or their relevant surrounding scenes. The lettuce is shown realistic or stylized like Gardiner M1 (𓆎), as it tends to grow comparatively tall and resembles a miniature tree (See Fig A2.9.). Cos-lettuce is an annual or biennial vegetable native to Egypt and many parts of the Mediterranean Basin, grows up to 1 meter (3 feet) tall, has large erect leaves, produces lactose-infused seeds in the spring, and long stemmed reddish to brown flower clusters that go to seed in

<sup>505</sup> Boulos, *Flora of Egypt* IVa, pp. 223-224; Germer, *Handbuch*, pp. 316-317; Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 126.

<sup>506</sup> Kamal Hussien Shaltout, *et al.*, “Biology of the common reed (*Phragmites australis* (Cav.) Trin. ex Steud.): Review and inquiry,” *AUCES* 7 (2006): pp. 10, 34.

<sup>507</sup> de Vartavan, *et al.*, *Codex*, p. 184; Täckholm, *et al.*, *Flora of Egypt* I, p. 214; E. A. M. Greiss, “Anatomical identification of plant material from ancient Egypt,” *BIE* 31 (1949): p. 270.

the late summer (See Fig. A2.9).<sup>508</sup> The lettuce is planted in *hsp*-plots demarcated by low mud walls and/or pots, since the Fifth Dynasty,<sup>509</sup> and is included in the formal produce and bouquets offered to the gods and glorified dead due to its association with Min of Koptos (Gebtu; Qift), as well as the syncretic gods Amun-Min and Amun-Kamutef worshiped in the Domain of Amun at Luxor Temple for their fecundity. This was because its seeds and stems excrete white lactose-infused fluid when crushed or cut and were considered an aphrodisiac and source of male potency. This is further evident from the word for cos-lettuce *ꜥbw* (𓆎𓅓𓏏𓏏) in Egyptian, which has the same verbal root as *ꜥbꜥ* (𓆎𓅓𓅓) or “to become excited.”<sup>510</sup> In 2017, the Spanish-Egyptian Mission in the Tomb of Djehuty (TT 11) dated from Hatshepsut to Thutmose III, discovered evidence of a *hsp*-plot that might have had cos-lettuce planted in it<sup>511</sup> (See Fig. A3.44 in Appendix III).



Figure A2.9: Cos-lettuce growing in an arboreal shape and going to seed in late August in Buffalo, New York. Note how the long slender stems grow upwards with small florets. After harvesting the leaves or at the touch, the stems excrete white lactose. Photographs by author © 2020.

<sup>508</sup> Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 125; Wilkinson, *The garden in ancient Egypt*, p. 59; Manniche, *An Ancient Egyptian Herbal*, p. 118.

<sup>509</sup> Wilkinson, *The garden in ancient Egypt*, p. 59; Germer, *Handbuch*, p. 279.

<sup>510</sup> Faulkner, *A Concise Dictionary of Middle Egyptian*, p. 41.

<sup>511</sup> Galán, “El jardín de Sinuhé,” pp. 56-65.



### **Curled pondweed (*Potamogeton crispus* L.)**

Curled pondweed occurs in š- and Domain of Amun formal garden scenes, growing around the pools. The freshwater aquatic seaweed-like species, depicted since the Old Kingdom, is native to many parts of Africa and Eurasia, has green serrated paripinnate leaves, pink flowers with fruitlets in springtime, and grows in stagnant canals, dykes, and pools along the banks of the Nile.<sup>512</sup> There are no known examples of the pondweed in medicine, religion, or even floral bouquets. Ethnographically, in modern Egypt, curled pondweed is “regarded as a severe nuisance...because it blocks canals”<sup>513</sup> and hinders boat navigation along the Nile.<sup>514</sup>



Figure A2.10: Curled pondweed in bloom beside white lotus in the Lower Lake of the Cassadaga Lakes in July. Photographs by author © 2020.

<sup>512</sup> “The plant used to produce flowers and fruits more frequently than they do now, most probably due to the environmental stress to which aquatic habitats are subjected,” see Boulos, *Flora of Egypt* IVa, pp. 18-19; Beaux, *Le cabinet des curiosités de Thoutmosis III*, pp. 186-187; Wilkinson, *The garden in ancient Egypt*, p. 61.

<sup>513</sup> Wilkinson, *The garden in ancient Egypt*, p. 61.

<sup>514</sup> Beaux, *Le cabinet des curiosités de Thoutmosis III*, p. 186.

### **Date Palm (*Phoenix dactylifera* L.)**

The date palm and/or its fruit occur in š- and Domain of Amun formal garden scenes and is shown realistic or stylized like Gardiner M55 (𓆎). The date palm is evergreen, has pinnate fronds, grows 15-25 meters (50-66 feet) tall, and in September to October produces red oblong dates from its small white florets via pollination from the male leafage.<sup>515</sup> Date palms functioned as a botanical representation of the Delta marsh where Isis birthed Horus and was symbolic of the deceased's eventual rebirth,<sup>516</sup> as well as, the “the sacred date palm grove”<sup>517</sup> in the Delta. The fruit clusters and fronds of the palm were used in various banquets, meals, and/or as (floral) offerings. This is



Figure A2.11: Clusters of dates ripening in the AUC gardens. Photograph by author © 2019.

---

<sup>515</sup> Hepper, *Pharaoh's Flowers*, p. 62; Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora“, p. 147; Magdi Gamal, *Trees and Flowers of Egypt*, (Al Rehab City: Sahara Printing Company, 2018), p. 250.

<sup>516</sup> Similar to the stone architecture of a temple's mammisi. For more on the mammisi's symbolism, see Wilkinson, *The garden in ancient Egypt*, pp. 62, 128-129.

<sup>517</sup> Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora“, p. 147.

further supported by 13 examples of ancient dates or leaf remains that were discovered in Eighteenth Dynasty royal and private Theban tombs.<sup>518</sup> The dates would have also been made into wine. Date wine especially was known for its “healing properties.”<sup>519</sup> The pinnate shape of a date palm’s ribs further represented time immemorial as multiples of *rnp(w)t* (𓆎𓅓𓆏) and were associated with Ma’at, Seshat, and Thoth who “[were] said to restore the members of the deceased in the afterlife.”<sup>520</sup>

### ***Doum-Palm (Hyphæne thebaica L. Mart.)***

The *doum*-palm and/or its fronds and fruit occur in the š- and Domain of Amun formal garden scenes and/or their relevant surrounding scenes. The palm is shown realistic or stylized on a bifurcate or trifurcate trunk like Gardiner M55 (𓆎). Both bifurcate and trifurcate types might occur in the same composition. The palm is native to Egypt, is evergreen, grows up to 15-20 meters (49-66 feet), has large green fanned fronds (7-8 centimeters long), and produces reddish to brown gingerbread-like oval fruit that grow in clusters of 40 or more on large erect branches from April to June once it is six to eight years old.<sup>521</sup>

The *doum*-palm was associated with Thoth and Min and was depicted in avenues, rows, or groves in vicinity to the pools, ponds or lakes of the formal gardens because the Egyptians were aware that it was a hydrophile. In funerary religion, for example, it was symbolically a “source of water for the deceased...[since] the *doum*-nut contains fluids.”<sup>522</sup> The Ramesside tomb-owner Irinefer (TT 290) further asks to be turned into a *doum*-palm so that he can drink the waters of the

<sup>518</sup> de Vartavan, *et al.*, *Codex*, p. 179.

<sup>519</sup> Manniche, *An Ancient Egyptian Herbal*, p. 142.

<sup>520</sup> Richard H. Wilkinson, “Seshat,” in *The Complete Gods and Goddesses of Ancient Egypt*, (New York: Thames and Hudson, 2003), p. 166.

<sup>521</sup> Hugonot, *Le jardin dans l’Egypte ancienne*, p. 55; Baum, *Arbres et arbustes*, p. 106; Manniche, *An Ancient Egyptian Herbal*, p. 115; Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 150.

<sup>522</sup> Wilkinson, *The garden in ancient Egypt*, p. 108.



hereafter.<sup>523</sup> A prayer text on Papyrus Sallier I (pBM EA 10185.3) written by a priest of Thoth at Hermopolis in the Twenty-first Dynasty likewise details the importance of the *doum*-palm for the deceased's transformation into a glorified spirit (*ꜣḥ*):

You will assure my subsistence on bread and beer...May Thoth protect me...I leave triumphant...The *doum*-palm that is many cubits in height, which bears fruit (*ḳwḳw*). There are seeds (*ḥꜣ-nnt*) inside the fruit and a liquid (*mw*) inside the seeds, that captures the water (from) the distant place.<sup>524</sup> O come and save me! I, who am silent...<sup>525</sup>

This significance is further enforced by the presence of the *doum*-fruit and fronds in the bouquets offered to the deceased in surrounding scenes of TT 85 and TT 161 as well as by ten cases of *doum*-fruit, frond, and branch remains that were discovered in Eighteenth Dynasty royal and private Theban tombs.<sup>526</sup> *Doum*-fruit was likely collected by monkeys, who were associated with Thoth, and who are agile with tough foot padding. This was practical because the *doum*, unlike the date palm, has sharp serrated fronds. When its trunk grows long and tall, it would have been difficult for humans to collect the fruit without cutting themselves (See Fig. A1.12 and A1.13).



Figure A2.12: *Doum*-palm, its spiked ribs and fronds, and its fruit clusters ripening in the AUC gardens. Photographs by author © 2019.

<sup>523</sup> Wilkinson, *The garden in ancient Egypt*, p. 108.

<sup>524</sup> This must refer to the realm of the gods.

<sup>525</sup> See Ludwig Keimer, « Interprétation d'un passage du Papyrus Sallier I : Une prière au dieu Thot, » *BIE* 29 (1948): pp. 275-291; and the French translation in Baum, *Arbres et arbustes*, p. 118.

<sup>526</sup> de Vartavan, *et al.*, *Codex*, p. 130.





Figure A2.13: A very tall *doum*-palm growing beside the right side of the Barbican Gate of Horemheb in front of the Second Pylon of Karnak before entering the Bubastite Portal of Shoshenq I. Note the many sharp, serrated fronds on the trunk. Photograph by author © 2020.





Figure A2.14: Serrated fronds on the trunk of a *doum*-palm that are sharp like knives to the touch growing by the El-Rehab Souq. Photograph by author © 2020.



### Desert Date (*Balanites ægyptiaca* L. Delile)

The fruit of the desert date palm appears in the š-formal garden scenes. The particular amount that Ineni planted in his š-formal garden has been lost due to a lacuna in the text. The ‘palm’ is actually a deciduous tree that is native to Egypt, the Middle East, and Sub-Saharan Africa, grows 4-10 meters (13-33 feet) tall, has elliptical green leaves on thorny branches, and produces yellow to green flower clusters and large amounts of oval bittersweet yellow fruit in the spring.<sup>527</sup> The *išd* was identified with *Balanites ægyptiaca* L. Delile by Brugsch,<sup>528</sup> and Germer conclude similar results from her study of the desert date fruit in Egyptian medicine.<sup>529</sup> In medicine, its seeds and



Figure A2.15: (Left) A very tall desert date with (right) many fruit clusters in springtime at the Howard Carter Resthouse on the West Bank of Luxor. Photographs by author (c) 2019.

<sup>527</sup> Boulos, *Flora of Egypt* Ia, pp. 31, 34, 316.

<sup>528</sup> Brugsch, *Recueil de monuments égyptiens* I, p. 50, pl. 36; Baum, *Arbres et arbustes*, p. 183.

<sup>529</sup> Germer, *Handbuch*, pp. 35-37, 207-208.

leaves were used to treat stomach ailments.<sup>530</sup> Desert dates have been discovered in Egypt from the Predynastic Period onwards, and in late Eighteenth Dynasty to Twentieth Dynasty Theban tombs as offerings (BBM 23983),<sup>531</sup> as it had funerary and solar symbolism. In Book of the Dead Spell 17, for example, a tomcat (Ra) decapitates the chaos-serpent Apep (Apophis) beneath a desert date (*išd*).<sup>532</sup> Thus, desert date played a role in Ra's (and the deceased's) triumph over chaos and eventual rebirth into the hereafter. The tree was not only sacred but also magical. It is known as the 'tree of life' or 'family tree'<sup>533</sup> because in temple reliefs the king's praenomen and regnal years were magically inscribed onto its leaves by the scribe-goddess Seshat in the presence of wisdom-god Thoth and elder-god Atum, so to be preserved for 'tens of millions of years.'

### **Egyptian Riverhemp Tree (*Sesbania sesban* L. Merrill?)**

The Egyptian riverhemp tree appears in Ineni's plant list (TT 81): two were grown in his š-formal garden. The deciduous shrub or tree occurs from the Predynastic Period onwards, is native to East Africa, the Nile Basin, and Sudan, grows up to 8 meters (26 feet) tall, has long greenish paripinnate leaflets, and produces yellow flowers and pods year-round in warm climates.<sup>534</sup> The riverhemp is shown realistic with its long erect branches and paripinnate leaves in the TT 81 scene on the right side of the pool.<sup>535</sup> The religious significance of the tree is unknown, but its wood was used in magic (*hk3*), especially as a smoking agent (pEb 856e).<sup>536</sup> An Eighteenth Dynasty funerary bouquet with its flowers include in the arrangement was discovered on Ahmose I's mummy.<sup>537</sup>

---

<sup>530</sup> Germer, *Handbuch*, pp. 35-37, 208.

<sup>531</sup> de Vartavan, *et al.*, p. 53.

<sup>532</sup> Mykola Tarasenko, *Studies on the Vignettes from Chapter 17 of the Book of the Dead*, (Oxford: Archaeopress, 2016), 1-22.

<sup>533</sup> Wilkinson, *The garden in ancient Egypt*, p. 37.

<sup>534</sup> Zerihun Nigussie, *et al.*, "Sesbania sesban (L.) Merrill: Potential uses of an underutilized multipurpose tree in Ethiopia," *AJPS* 7.10 (2013): p. 469; Germer, *Handbuch*, p. 105.

<sup>535</sup> Nigussie, *et al.*, "Sesbania sesban (L.) Merrill: Potential uses of an underutilized multipurpose tree in Ethiopia," compare to fig. 1, p. 469 (the second of four photographs).

<sup>536</sup> Aufrère, « Remarques au sujet des végétaux interdits dans le temple d'Isis à Philæ, » pp. 20-21.

<sup>537</sup> de Vartavan, *et al.*, *Codex*, p. 218; Georg A. Schweinfurth, « De la flore pharaonique, » *BIEg* 27. 3 (1882): p. 68.



Figure A2.16: An Egyptian riverhemp growing beside a canal. Photograph courtesy of Bùi Thụy Đào Nguyên for Feedipedia: Animal Feed Resources Information System with the FAOUN (2012).

**Egyptian Walking Onion (*Allium × proliferum* (Moench) Schrad. ex Willd.) and/or Bulb Onion (*Allium cepa* L.)**

Egyptian walking and/or bulb onion are present in the formal garden produce depicted in the surrounding scenes of the š- and Domain of Amun formal gardens scenes. These biennial or perennial vegetables are from the same family Liliaceae as garlic (*Allium sativum* L.) and are native to Egypt, Iran, Afghanistan, and Western Asia.<sup>538</sup> Its nested roots and leaves under or near to the

---

<sup>538</sup> Germer, *Handbuch*, p. 187; Graindorge-Hereil, « Les oignons de Sokar, » pp. 87-105; Graindorge-Hereil, « L'oignon, la magie et les deux, » pp. 317-333.

soil grow into a tunicated vegetable, eventually producing aerial, long, green, thin, and fleshy stems about 1 meter (3.2 feet) tall with additional clusters of bolting flowers and bulblets from spring to early fall (See Fig. A1.17).<sup>539</sup> From tomb art, Egyptian walking onions were offered or arranged into bouquets with their long stems intact whereas bulb onion and garlic were harvested at the scape before the stem (See Fig. A1.17).<sup>540</sup> These herbaceous plants are known in Egypt from the Predynastic Period onwards and their many layered onions were sacred to the regenerative-, chthonic-god Sokar-Osiris whose festival, known as Sharm el-Nessim (شم النسيم) in the Coptic calendar today, included wreaths of fresh onions and lotuses to celebrate springtime and the reinstating of the otherworldly powers of the god against chaotic-beings, such as Apep (Apophis) and his denizens of chaotic daemon snakes in the Duat.<sup>541</sup> Onions and garlic were both called *ḥḏw* (𓆎𓆏𓆐𓆑) in Egyptian,<sup>542</sup> reflecting how the ancient Egyptians believed these vegetables could quench chaos (*isft*) and restore order or balance (*mꜣꜥt*), as it comes from the same root as *ḥḏ* (𓆎𓆏) or “bright.”<sup>543</sup> During the Festival of Bastet, as well, onions were harvested, collected, arranged into offerings, and presented to Sokar and Bastet in her form as the Burning Eye of Ra in order to assist them in ridding the earthly realm of chaotic snake daemons, as well as to aid Ra in his nightly triumph over Apep (Apophis) in the Duat.<sup>544</sup> Thus, funerary bouquets placed upon or around many mummy wrappings included onion bulbs, which is attested from at least five examples from the Middle Kingdom, Kha’s tomb (TT 08) at Deir el-Medina, and the Tomb of

<sup>539</sup> Germer, *Handbuch*, pp. 187; Graindorge-Hereil, « Les oignons de Sokar, » pp. 87-105; Graindorge-Hereil, « L’oignon, la magie et les deux, » pp. 317-333.

<sup>540</sup> See esp. the figure atop the page from an Old Kingdom offering-bearer procession after Duell in Germer, *Handbuch*, p. 188.

<sup>541</sup> Graindorge-Hereil, « Les oignons de Sokar, » pp. 87-105; Graindorge-Hereil, « L’oignon, la magie et les deux, » pp. 317-333.

<sup>542</sup> Erman and Grapow, *WB* III, nos. 212.5-9; Germer, *Handbuch*, pp. 98, 187; Graindorge-Hereil, « Les oignons de Sokar, » pp. 87-105; Graindorge-Hereil, « L’oignon, la magie et les deux, » pp. 317-333.

<sup>543</sup> Erman and Grapow, *WB* III, nos. 206.14-207.16.

<sup>544</sup> Germer, *Handbuch*, p. 188; Graindorge-Hereil, « Les oignons de Sokar, » pp. 87-105; Graindorge-Hereil, « L’oignon, la magie et les deux, » pp. 317-333.



Yuya and Thuya (KV 46; CM 3639), dating from the Thirteenth to Eighteenth Dynasties prior to the Amarna Period.<sup>545</sup> Indeed, the ancient Egyptian medicinal usage of onions mirrors these rites and mythologies, as its leaves, enzymes, stems, oils, and juices have antibiotic, diuretic, and anti-inflammatory properties that were used to cure, remedy, or treat: boils, sepsis, dog, snake, or scorpion bites, eye sight, cataracts, streptococcus, menstruation, intestinal works, skin fungus, diarrhoea, and hardening arteries.<sup>546</sup> Onion was a popular agent in ancient Egyptian cooking for flavoring meals and as a staple of an average person's diet,<sup>547</sup> thus being one of the foremost desired by the glorified dead (*ꜥḥ*) in tomb art and text from the Old Kingdom onwards.



Figure A2.17: (Left) Egyptian walking onion with its bolting flowers and bulblets growing and in bloom. Photograph courtesy of Stacy Shintani via Flickr and CreativeCommons (2011). (Right) Bulb onion harvested at its scape, just as in Egyptian tomb art. Photograph courtesy of Samur Isma via Unsplash (2020).

<sup>545</sup> de Vartavan, *et al.*, *Codex*, p. 40; Lucas, *Ancient Egyptian Materials and Industries*, p. 316; Bruyère, *Deir el Medineh* II, p. 109; Mattiolo, “I vegetali scoperti nella tomba dell’architetto Kha e di sua moglie Mirit nella necropoli di Tebe, etc.,” p. 560; Quibell, “The tomb of Yuaa and Thuiu,” pl. 61.

<sup>546</sup> Germer, *Handbuch*, pp. 98, 188; Keimer and Germer, *Die Gartenpflanzen im alten Ägypten: Ägyptologische Studien*, p. 56; Loutfy Boulos, *Medicinal Plants of North Africa*, (Algonac: Reference Publications, Indiana University, 1983), p. 23.

<sup>547</sup> Magdy I. Mehdawy and Amr Hussein, *The Pharaoh's Kitchen*, (Cairo: AUC Press, 2010), p. 87.

**Egyptian Willow Tree (*Salix mucronata* Thunb. = *Salix safsaf* Forssk. = *Salix subserrata* Willd.)**

The Egyptian willow tree occurs in Ineni's plant list (TT 81): nine were planted in his š-formal garden. Indeed, two willows are depicted on the left side of the pool.<sup>548</sup> The Egyptian willow is a deciduous bush or tree native to Egypt, Libya, Sudan, and Ethiopia, grows up to 8-10 meters (26-33 feet) tall, has green serrated ovate leaflets on long delicate branches, and produces flowers in winter to spring and brown oval fruits with hairy seeds.<sup>549</sup> The willow is likewise a hydrophile that thrives in dykes, banks, and canals, referencing Atum and Nun.<sup>550</sup> The willow was associated



Figure A2.18: Egyptian willows (?) near a pond by Gate Four in the AUC gardens in New Cairo. Photograph by author © 2018.

---

<sup>548</sup> Compare to the Egyptian willow tree shown in Ipuy's tomb (TT 217) in Deir el-Medina, dating to Ramesses II.

<sup>549</sup> Vivi Täckholm, *Students' Flora of Egypt*, (Beirut: CU and Cooperative Printing Co., 1974), pp. 51-54; Boulos, *Flora of Egypt* Ia, p. 13; Baum, *Arbres et arbustes*, p. 196; Germer, *Handbuch*, pp. 32-33, 333-334.

<sup>550</sup> Baum, *Arbres et arbustes*, pp. 198-199.



with the creation myths and as symbol of rebirth and resurrection. According to creation mythology “Ra-Horakhty [*bꜣ*], Osiris [body], and Horus as a phoenix reposed on a willow tree during the First Creation...and at the willow’s summit was the *bnw*-bird and the *ba* of the god.”<sup>551</sup> The Egyptian willow was used in a variety of professions from medicine to furniture and house construction, boatbuilding, staff and stave crafting, and even by florists.<sup>552</sup> Remains of the willow leaves and branches, for example, were used in the floral arrangements discovered in Tutankhamun’s tomb (KV 62).<sup>553</sup>

### **Grapevine (*Vitis vinifera* L.)**

The grapevine appears in the š- and Domain of Amun formal garden scenes, as well as, in the formal garden produce for banquets or as offerings to the gods or glorified dead. The grapevine is depicted realistic and is one of the oldest cultivated species in Egypt while abundant archaeological, pictorial, and archaeobotanical evidence existing since the Early Dynastic Period. The vine a climbing species with winding branches, grows 1.5-2 meters (5-6.5 feet) tall, has medium green disk-like leaves, produces green flower clusters in summer that develop into sweet white to purple fruits with greenish seeds, which ripen from September to October, and were used in in food, viticulture, and medicine.<sup>554</sup> In the š- and Domain of Amun formal garden scenes, the grapevine is cultivated on arbors, pergolas, or in *hsp*-plots. According to scholars:

the grape harvest coincided with the Nile flood and the red colour of the Nile — caused by ferruginous sediments washed down from the Ethiopian mountains — during the inundation suggested the colour of wine.<sup>555</sup>

---

<sup>551</sup> Baum, *Arbres et arbustes*, p. 199.

<sup>552</sup> Baum, *Arbres et arbustes*, p. 197.

<sup>553</sup> Christian de Vartavan, *Hidden fields of Tutankhamun*, (London: Triade Exploration, 1999), p. 107; de Vartavan, *et al.*, *Codex*, pp. 210-211.

<sup>554</sup> María Rosa Guasch Jané, *Wine in ancient Egypt: a cultural and analytical study*, (Oxford: Archaeopress, 2008), p. 13; Baum, *Arbres et arbustes*, p. 136 ; Wilkinson, *The garden in ancient Egypt*, p. 87; Manniche, *An Ancient Egyptian Herbal*, p. 164; Brewer, *et al.*, *Domestic Plants and Animals*, p. 56.

<sup>555</sup> María Rosa Guasch Jané, “The meaning of wine in Egyptian tombs: The three amphorae from Tutankhamun's burial chamber,” *Antiquity* 85 (2011): p. 855; also see Mu-Chou Poo, „Weinopfer,” in *LA VI*, ed. by Wolfgang Helck, *et al.*, (Wiesbaden: Harrassowitz, 1986), pp. 1186–90.

The grapevines in the formal gardens were not only practical but referenced the deceased's eventual rebirth and resurrection. Grape offerings referenced the Pyramid Texts Recitation 576 for 'Becoming Osiris at Dusk' in the Pyramid of Pepy I, which states the glorified dead "live on figs and drink wine."<sup>556</sup> Additionally, the fruits and seeds of the grapevine were discovered in Kha's tomb (TT 08) in Deir el-Medina dated from Amenhotep II to Amenhotep III.<sup>557</sup>



Figure A2.19: (Left) Concord grapes (*Vitis labrusca* L.) growing on a pergola and (right) on an arbor at Becker Farms and Vizcarra Vineyards. Photographs by author © 2020.

### *ih*-Plant (?)

The *ih*-plant appears in Ineni's plant list (TT 81): five were grown in his š-formal garden. The plant is known from the First Intermediate Period onwards, and was used medicinally to cure burns, skin infections, and hair loss (pEb 485, 488, 772).<sup>558</sup> Due to the paucity of evidence and images of the *ih*-plant, the plant must remain unidentified.

<sup>556</sup> Allen, *The ancient Egyptian pyramid texts*, p. 181.

<sup>557</sup> de Vartavan, *et al.*, *Codex*, p. 253.

<sup>558</sup> Baum, *Arbres et arbustes*, p. 183; Germer, *Handbuch*, pp. 32-33.

**Incense Trees (*Commiphora erythraea* var. *glabrescens* Engler and *Boswellia frereana* Birdw.)**

Myrrh and/or frankincense trees occur in the Domain of Amun formal gardens. The term *nty* (𓏏𓏏𓏏) was used for both aromata in Egyptian.<sup>559</sup> In the garden scenes, the trees have stylized crowns like Gardiner M1 (𓏏) and gnarled trunks like Gardiner M1B (𓏏𓏏). Both species are native to Sudan, Ethiopia, Djibouti, Somalia, Oman, Yemen, and Saudi Arabia, and are grey thorny shrubs or trees that are low-spreading and grow 1-10 meters (3-33 feet) tall with green pinnate leaflets; however, frankincense is non-flowering while myrrh grows white and green flower clusters in the spring.<sup>560</sup>

In the Domain of Amun formal garden scenes, the incense trees are depicted within two walled groves in *ty-nt-ht*-formal garden and as offerings from the formal gardens themselves in the surrounding scenes. The presence of the incense trees is religiously significant because their green bark produces reddish-brown gum and resin, which was gathered and rolled into balls and then burned in the daily rituals in temples and memorial cults to arouse the gods and/or glorified spirits.<sup>561</sup> For example, the trees' name in Egyptian has the same root as the adjective *ty* (𓏏𓏏) or "beautiful, pleasing."<sup>562</sup> At Deir el-Bahari, Hatshepsut emphasizes the importance of the incense trees in her *hty-š*-garden, which was an offering place and earthly abode for Amun:

...[incense] trees were taken up in the God's Land, and set in the ground in Egypt...for the king of the gods...they were brought bearing incense therein...to establish for him a Punt...in his [*hty-š*-formal garden], just as he commanded me for in Thebes...It is large for him. He walks...under them.<sup>563</sup>

Thutmose III further requested that Puimra and Rekhmira bring back incense trees from the Land

---

<sup>559</sup> Renate Germer, *Flora des pharaonischen Ägypten*, (Mainz am Rhein: PvZ, 1985), p. 106f; Rami van der Mole, *Hieroglyphic Dictionary of Egyptian Coffin Texts*, (Leiden: Brill, 2000), p. 74.

<sup>560</sup> Hepper, *Pharaoh's Flowers*, p. 24; Frank N. Hepper, "Arabian and African Incense Trees," *JEA* 55 (1969): p. 70; Alfred Lucas, *Ancient Egyptian Materials and Industries*, (London: E. Arnold, 1948), p. 92.

<sup>561</sup> Incordino, "Foreign aromatic products in the cultural and religious identity of Ancient Egypt," p. 152.

<sup>562</sup> Faulkner, *A Concise Dictionary of Middle Egyptian*, p. 43.

<sup>563</sup> Breasted, *Ancient Records of Egypt* III, p. 293.



Figure A2.20: (Left) Young and potted incense trees transported to Egypt from Punt in the reliefs of Hatshepsut's memorial temple at Deir el-Bahari. (Right) Incense gum and resin rolled into balls for sale in the Nubian village market in Aswan. Photographs by author © 2019/2020.

of Punt (Ethiopia, most likely)<sup>564</sup> and this is evident from inscriptions in the tomb of an unknown individual (TT 143) dated from Thutmose III to Amenhotep II that mentions “travelling to Thebes, starting on the high road...carrying thousands (?) of various products [from] Punt: myrrh...incense trees.”<sup>565</sup> Indeed, the presence of these exotic trees in the formal garden scenes is due to the tomb-owners' desire to have them as a “resting place for the[ir *ba*]”<sup>566</sup> in the hereafter. This is evident from a limestone stela inscription (OI 8798) dated to the coregency of Hatshepsut and Thutmose III, which mimics the ‘Spells of Making Transformations’ in the Book of the Dead, and was commissioned by Senenu, the High Priest of Amun and Hathor in the Memorial Temple of Hatshepsut,<sup>567</sup> who likely interacted with her *hnty-š*-formal garden with incense trees there:

If one is transformed...my [*ba*] shall follow Hathor. It will assume the form of a swallow [from the] God's Land in order to [alight?] on the incense trees...<sup>568</sup>

<sup>564</sup> Wilkinson, *The garden in ancient Egypt*, p. 84.

<sup>565</sup> Norman de Garis-Davies, “The Egyptian Expedition 1934-35: The Work of the Graphic Branch of the Expedition,” *BMAA* 30.11 (1935): 48; Wilkinson, *The garden in ancient Egypt*, p. 84.

<sup>566</sup> Wilkinson, *The garden in ancient Egypt*, p. 87.

<sup>567</sup> Edward Brovarski, “Senenu, High Priest of Amūn at Deir El-Bahri,” *JEA* 62 (1976): 58; Wilkinson, *The garden in ancient Egypt*, p. 84.

<sup>568</sup> Brovarski, “Senenu, High Priest of Amūn at Deir El-Bahri,” p. 58.

The limestone stela of Neferhotep (CG 34057) in the Egyptian Museum, Cairo dated from Thutmose III to Amenhotep II describes a similar desire by the deceased:

As surely as one is transfigured for having been *akh*-effective, my *ba* will follow Hathor and turn into a swallow of God's Land so as to gather (seeds) under the myrrh trees, and transform into a living *ba* so as to gaze upon R[a] in his morning.<sup>569</sup>

### ***Ksbt*-Tree (?)**

The *ksbt*-tree occurs in Ineni's plant list (TT 81): eight were in his š-formal garden. The shrub or tree is known from the Old Kingdom onwards, was the sacred tree of Hierakonpolis (Nekhen), and its wood (*ht n ksbt*) was used for private statuary as per reliefs in the mastaba-tombs of Nyhetepptah (GT G 2430) in Giza and Ankhma'ahor in Saqqara.<sup>570</sup> Yet, neither its fruit nor yield appear in the formal garden offering lists<sup>571</sup> in the Eighteenth Dynasty private Theban tombs nor is its religious significance ever indicated. Baum attempted to identify the *ksbt*-tree as the umbrella thorn acacia (*Acacia tortillis* Forssk.),<sup>572</sup> but Germer disproved this theory through her study of the *ksbt*-tree's practical use, which concluded that it did not match the medicinal use of the umbrella thorn acacia, and that the correct taxon must be one with an "effective worm termite as wood and charcoal were often made from it."<sup>573</sup>

### **Low Cornflower (*Centaurea depressa* Bieb.)**

The low cornflower appears in the š- and the Domain of Amun formal garden scenes and in the bouquets of the relevant surrounding scenes. The low cornflower is shown stylized with its star-thistles. The annual or biennial weed is native to Syro-Palestine, Iran, Armenia, Afghanistan, and Pakistan, grows 40 centimeters (1.3 feet) tall, and has greyish green leaves that produce scentless

---

<sup>569</sup> Lacau, *Stèles du Nouvel Empire*, pp. 102-103; and the translation in Assmann, *Death and Salvation in Ancient Egypt*, p. 224.

<sup>570</sup> Baum, *Arbres et arbustes*, p. 155; Germer, *Handbuch*, p. 145.

<sup>571</sup> Baum, *Arbres et arbustes*, p. 155.

<sup>572</sup> Baum, *Arbres et arbustes*, p. 156.

<sup>573</sup> Germer, *Handbuch*, p. 145.





Figure A2.21: Low cornflower in bloom beside the Lower Lake of the Cassadaga Lakes. Note how its crown appears similar to the palaeography of *an* (✱) in Old Akkadian/Babylonian. Photographs by author © 2020.

blue to purple star-thistles in springtime.<sup>574</sup> The low cornflower must have been introduced by Thutmose III during his tour of the empire in Syro-Palestine in his Year 25, as the first attestation in Egypt is from the ‘botanical garden’ reliefs at Karnak.<sup>575</sup> It is often placed in Eighteenth Dynasty floral bouquets, wreaths, and garlands, apparent from their images in TT 63, TT 85, and TT 161. In addition to the archaeobotanical evidence discovered around Kha’s statue (TT 08), the mummies of Ahapy, foster-mother of Queen Ahmose-Nefertary and an unknown woman found in the Deir el-Bahari cachette (CG 61053), and Tutankhamun’s Anubis statue (MM 09.184.214).<sup>576</sup>

<sup>574</sup> Marina Heilmeyer, „Die Natur und die Götter,“ p. 84; Wilkinson, *The garden in ancient Egypt*, p. 53; Frank N. Hepper, *Pharaoh’s Flowers*, p. 14; Beaux, *Le cabinet des curiosités de Thoutmosis III*, p. 92.

<sup>575</sup> Beaux, *Le cabinet des curiosités de Thoutmosis III*, p. 92.

<sup>576</sup> de Vartavan, *et al.*, *Codex*, p. 72; Renate Germer, *Katalog der altägyptischen Pflanzenreste der Berliner Museen*, (Wiesbaden, Harrassowitz, 1988), p. 11; Mattiolo, “I vegetali scoperti nella tomba dell’architetto Kha,” p. 559;

The low cornflower was called *dadânu*<sup>577</sup> or literally ‘thorn crown/flower’ in Old Akkadian/Babylonian. Its etymology is related to the Old Akkadian/Babylonian nouns *dala/dalû* (𒀭𒀭𒀭) or “thorn, pin, needle,”<sup>578</sup> *an* (𒀭) or “sky, heaven, upper, crown (of a tree),”<sup>579</sup> as well as the Old Akkadian verb *dada/da3-da3* (𒀭𒀭; 𒀭𒀭𒀭) or “to be fierce, to be hostile, to be difficult,”<sup>580</sup> alluding to its thorns. The name of low cornflower in Egyptian remains unknown, although, it might derive from the Old Akkadian/Babylonian.<sup>581</sup> For example, the medicinal use of low cornflower in Egypt, like the mandrake, can be deduced from Mesopotamian medicine. A Mesopotamian cure for the urinal ailment strangury was low cornflower mixed with mandrake.<sup>582</sup> Its religious significance is not particularly clear but its inclusion in funerary and festival bouquets implies rebirth and resurrection symbolism.

### **Mallow Bindweed and Lesser Bindweed (*Convolvulus althæoides* L. and *C. arvensis* L.)**

Mallow and lesser bindweed occur in the relevant surrounding scenes of TT 87 and TT 161. Bindweed is a species of morning glory and is a creeping herbaceous species native to the Mediterranean Basin, grows 20-80 centimeters (8 inches to 3 feet) long, and has green sagittate leaflets on thin branches that produce white, blue, or pink trumpeted florets in the spring and summer months.<sup>583</sup> In temple and tomb art, the plant is shown realistically.<sup>584</sup> Archaeobotanical evidence of bindweed has yet to be found, but a possible painted depiction occurs on the coffin of

---

Newberry, “Report on the floral wreaths found in the coffins of Tut-Ankh-Amen,” in *The tomb of Tutankhamen II*, by Howard Carter and A. C. Mace, (London: Cassel and Co., 1927), p. 190.

<sup>577</sup> R. Campbell Thompson, *A dictionary of Assyrian botany*, (London: The British Academy, 1949), p. 184.

<sup>578</sup> Steve Tinney and Philip Jones, s.v. “dala, dalû,” in *Electronic Pennsylvania Sumerian Dictionary*, (accessed August 1, 2020), <http://psd.museum.upenn.edu/nepsd-frame.html>.

<sup>579</sup> Steve Tinney and Philip Jones, s.v. “an,” in *ePSD*, (accessed August 1, 2020), <http://psd.museum.upenn.edu/nepsd-frame.html>.

<sup>580</sup> Tinney and Jones, s.v. “dada, da3-da3,” in *ePSD*, (accessed August 1, 2020), <http://psd.museum.upenn.edu/nepsd-frame.html>.

<sup>581</sup> For example, see how the Egyptian word for mandrake derives from Akkadian on p. 190.

<sup>582</sup> P. B. Adamson, “Surgery in ancient Mesopotamia,” *Medical History* 35 (1991): p. 433.

<sup>583</sup> Boulos, *Flora of Egypt* IVa, pp. 249-251, pl. 62.

<sup>584</sup> Compare to the Hatshepsut and Thutmose III reliefs at Deir el-Bahari and Karnak.



Isis (JE 27309), daughter-in-law of Sennedjem of Deir el-Medina, dated to Sethy I to Ramesses II.



Figure A2.22: Bindweed (morning glory) spp. in bloom in Buffalo, New York. Photographs by author © 2016/2020.

**Mandrake (*Mandragora autumnalis* Bertol. = *Mandragora officinarum* L.)**

The mandrake occurs in the š-garden and the Domain of Amun garden scenes as well as in the formal garden produce and bouquets prepared for banquets or offered to the gods and/or glorified dead in the relevant surrounding scenes. The plant is shown realistic, is a perennial plant with deep thick roots (up to 80 centimeters (2.6 feet) long) that is native to Syro-Palestine and Israel, grows 30-60 centimeters (1-2 feet) tall, produces purple florets with yellow seeds in the fall that develop into clusters of sweet-smelling ovate yellow fruits with a blackened calyx by springtime.<sup>585</sup> The mandrake must have been was one of the foreign flora species that Thutmose III brought back to Egypt for Amun’s ‘botanical gardens’ at Karnak during his tour of the empire

---

<sup>585</sup> Alix Wilkinson, *The garden in ancient Egypt*, (London: Rubicon Press, 1998), 123; Frank N. Hepper, *Pharaoh's Flowers*, (Chicago: KWS Publishers, 2009), 15; Renate Germer, *Handbuch*, (Wiesbaden: Harrassowitz, 2008), 294; R. K. Harrison, “The Mandrake and the Ancient World,” *The Evangelical Quarterly* 28.2 (1956): p. 88.



Figure A2.23: (Left) Beautiful purple mandrake flowers blossoming in fall at the Riserva naturale dello Zingano in Trapani, Sicily. (Right) Its yellow ripened fruit in spring. Photographs courtesy of Tato Grasso via CreativeCommons (2014).

in his Year 25.<sup>586</sup> The earliest pictorial evidence of the mandrake in ancient Egypt occurs in Thutmose III's 'botanical garden' reliefs at the *3h-mnw*-temple<sup>587</sup> and in tomb art (See the bouquets depicted in TT 109 surrounding scenes). The Egyptian name of mandrake or *rrmt* (𓆎𓅓𓏏𓏏) derives from its Akkadian name *samtarpilû* (𒍪𒍪𒍪𒍪) or literally "egg-plant."<sup>588</sup> In the ancient Near East, the mandrake was associated with Ereškigal, the queen and goddess of the underworld and Namtar, the chthonic-god of death, plague, and disease.<sup>589</sup> The word *namtar* (𒍪𒍪𒍪𒍪) was also Old Babylonian for "sickness, fate, destiny, or daemons."<sup>590</sup> The use of mandrake roots by the

<sup>586</sup> Germer, *Handbuch*, (Wiesbaden: Harrassowitz, 2008), p. 294.

<sup>587</sup> The relief of the mandrake was overlooked in her study; however, it is depicted. See Beaux, *Le cabinet des curiosités de Thoutmosis III*, pls. XXV-XXVI.

<sup>588</sup> Tinney and Jones, s.v. "billum, pilû," in *ePSD*, (accessed August 1, 2020), <http://psd.museum.upenn.edu/nepsd-frame.html>; Thompson, *A dictionary of Assyrian botany*, pp. 217-218.

<sup>589</sup> Thompson, *A dictionary of Assyrian botany*, pp. 217-218; Jeremy A. Black, et al., *Gods, Demons and Symbols of Ancient Mesopotamia*, (London: BM Press, 1992), pp. 77, 134; Manniche, *An Ancient Egyptian Herbal*, p. 124.

<sup>590</sup> Tinney and Jones, s.v. "namtar," in *ePSD*, (accessed August 1, 2020), <http://psd.museum.upenn.edu/nepsd-frame.html>.

ancient Egyptians as a narcotic to induce sleep and treat disease is not unexpected because hyoscyamine and scopolamine naturally occur in its roots, which was used for gastrointestinal and gynaecological complications, such as: ulcers, strangury, vomiting, and nausea.<sup>591</sup> Mandrake fruit was further included in floral arrangements, one of which was discovered in a bouquet from Tutankhamun's tomb (KV 62).<sup>592</sup>

### **Mediterranean Cypress (*Cupressus sempervirens* L.)**

Mediterranean cypress is evergreen that is native to Asia Minor, Cyrenaica (Eastern Libya), Greece, Rhodes, Turkey, and the Levant, grows 20 to 30 meters (65 to 100 feet) tall, and has a thick, warped trunk with small, fresh-smelling, waxy, coniferous leaves, scentless flowers, and female fruit that develop into ovoid or oblong brownish cones in spring<sup>593</sup> (Fig. A2.24). The wild form of Mediterranean cypress grows outwardly while its cultivated form grows like columns (Fig. A2.24).<sup>594</sup> When one thinks of the Mediterranean cypress, it is more often associated with Graeco-Roman funerary customs, as it was an ornamental tree placed beside crossroads associated with the magic-goddess Hekate and the time, transitions-god Janus, as well as tombs, mausolea and grave stelae due to the story of Apollo and Cyparissus (Kyparissos<sup>595</sup>) by the Roman poet Ovid. In this tale, Apollo transforms his lover, Cyparissus, into a cypress when the youth is struck by suicidal grief, following the accidental slaughter of his beloved stag during a hunting excursion:

Amongst the arboreal thong was...the cone-shaped cypress, now a tree, but a boy in the past, and the darling of Phoebus Apollo...This is the story...Cyparissus adored a stag

---

<sup>591</sup> Lumír H. Hanuš, *et al.*, "Substances isolated from *Mandragora* species," *Phytochemistry* 66 (2005): 2409, 2411; P. B. Adamson, "Surgery in ancient Mesopotamia," *Medical History* 35 (1991): 443; Thompson, *A dictionary of Assyrian botany*, pp. 177, 183, 185; Germer, *Handbuch*, p. 293; known as belladonna alkaloids because they can induce sleep.

<sup>592</sup> de Vartavan, *et al.*, *Codex*, p. 157; Percy E. Newberry, "Report on the floral wreaths found in the coffins of Tut-Ankh-Amen," in *The tomb of Tutankhamen* II, by Howard Carter and A. C. Mace, (London: Cassel and Co., 1927), 192.

<sup>593</sup> Hepper, *Pharaoh's Flowers*, p. 46; Täckholm, *et al.*, *Flora of Egypt* II, p. 56; Victoria Asensi-Amorós, "The history of conifers in Egypt, part I: Mediterranean cypress (*Cupressus sempervirens* L., Cupressaceae)," (Paris: Société Xylodata SARL, Département scientifique, 2016), p. 4.

<sup>594</sup> Hepper, *Pharaoh's Flowers*, p. 46.

<sup>595</sup> His Latin name derives directly from the ancient Greek for a cypress tree or η κυπάρισσος.

which was sacred to all the nymphs who haunted the Carthaéan plains...Resting his weary limbs on the grassy earth, the stag was quietly enjoying the cool beneath the shade of a tree, when a sharp spear pierced him, unthinkingly thrown by the young Cyparissus. Seeing the creature he loved was cruelly wounded and dying, the boy was determined to die himself. Though Apollo consoled him...Cyparissus kept sobbing away and asked as a final gift from the gods to mourn till the end of time. He wept and he wailed till his blood drained out and the whole of his body started to turn the colour green. The hair that was hanging over his creamy forehead was changed into a shaggy profusion, which stiffened and rose to the starry sky in a slender point. The god sighed deeply and sadly explained: ‘You’ll be mourned by me, you will mourn for others and always be there when they mourn for their loved ones.’<sup>596</sup>

Although Ovid’s interpretation is a masterwork, the ancient Egyptians were actually the forerunners for planting Mediterranean cypress in necropoleis from the Old Kingdom onwards. The Mediterranean cypress was called ʕ (𓆎𓅓𓏏) in Egyptian and is known in ancient Egypt since the Predynastic Period via wood discovered in Hierakonpolis (Nekhen).<sup>597</sup> Cypress wood was further used to fabricate Old Kingdom to New Kingdom statues, boxes, and coffins, such as those found in the Pyramids of Djoser and Sneferu, Lahun, and Tutankhamun’s tomb (KG 253).<sup>598</sup> Cypresses would have been imported from the Levant and then naturalized, as they were among the flora planted in the formal garden of the Bent Pyramid at Dahshur dated to the reign of Sneferu of the Fourth Dynasty<sup>599</sup> (Fig A3.21.). Cypresses were likely planted in *hnty-š*-formal garden of the Memorial Temple of Amenhotep III at Kom el-Hettan on Thebes-West, as they were grown in the pharaoh’s counterpart memorial temple at Memphis.<sup>600</sup> Some of the Mediterranean cypresses that grew in Amenhotep III’s Memphite *hnty-š*-formal garden were felled to construct temple

---

<sup>596</sup> Ovid and David Raeburn, “Cyparissus,” in *Metamorphoses: Translated by David Raeburn with an introduction by Denis Feeney*, (London: Penguin Classics, 2004), pp. 387-338.

<sup>597</sup> de Vartavan, *et al.*, *Codex*, p. 91; Germer, *Handbuch*, p. 47; Asensi-Amorós, “The history of conifers in Egypt, part I: Mediterranean cypress (*Cupressus sempervirens* L., Cupressaceae),” p. 5.

<sup>598</sup> de Vartavan, *et al.*, *Codex*, p. 91; Asensi-Amorós, “The history of conifers in Egypt, part I: Mediterranean cypress (*Cupressus sempervirens* L., Cupressaceae),” p. 4.

<sup>599</sup> Arnold, “Cult Buildings of the Bent Pyramid at Dahshur,” *Archaeology in Egypt: Magazine of the German Archaeological Institute in Cairo* 5 (Nov. 2019) p. 49; Alexanian and Arnold, *The Necropolis of Dahshur*, pp. 2, 8-10.

<sup>600</sup> See the text from the scribal statue of the private individual Amenhotep who supervised the construction of the Memphite memorial temple of Amenhotep III, on pp. 70-71 in Chapter Three.



doors.<sup>601</sup> This is not unexpected, as the reddish, semi-resinous wood of this cypress is sweet-smelling, extremely durable, water-resistant, fireproof,<sup>602</sup> insect-resistant, and easily polishable.<sup>603</sup> Cypresses in the context of these formal gardens evoked the cenotaph tomb mound of Osiris, also known as the *Pkr*-tomb, which was located at the end of the ‘Terrace of the Great God’ at Abydos and featured in the Khoiak Festival of Osiris.<sup>604</sup> Images of the *Pkr*-tomb show cypresses and tamarisk growing atop it (See Figure A2.23).<sup>605</sup> Osiris was called the ‘Lord of Eternity’ (*hkꜣ dt*) and ‘of the West’ (*hnty imntt*) and the planting of cypresses on his Abydene cenotaph tomb mound would have evoked eternity, immortality, and rebirth, as the conifer is an evergreen and is able to live for thousands of years. For example, the oldest cypress in the world at Sarv-e-Abarkouh in Iran is currently 4000-years-old and is said to have been planted by the Prophet Zoroaster who founded Zoroastrianism, the state religion of the Persian Achaemenid Empire.<sup>606</sup> Accordingly, Islamic-Persian ‘Andalusian paradise gardens’ or *al-andalus* (الأندلس), such as the Hada’iq al-Andalus Garden built by Said Pasha Zulfugar in 1929 for his wife in Zamalek (Gezira) in downtown Cairo, further included them in their groves. The cones and leaves of this cypress have yet to be found in ancient Egyptian bouquets. In ancient Egyptian medicine, cypress wood (*ht*), its sandarac resin (*hps*) and oil (*ꜥd*) was used in the recipes to treat swelling of the body, and joint

<sup>601</sup> See the text from the scribal statue of the private individual Amenhotep on pp. 70-71 in Chapter Three.

<sup>602</sup> Joaquín Gil, “The curious case of Valencia’s flameproof cypresses,” *El País Seminal* (August 14, 2012), (accessed August 27, 2020), [https://english.elpais.com/elpais/2012/08/14/inenglish/1344943477\\_469339.html](https://english.elpais.com/elpais/2012/08/14/inenglish/1344943477_469339.html).

<sup>603</sup> Hepper, *Pharaoh’s Flowers*, p. 46; Täckholm, *et al.*, *Flora of Egypt* II, p. 56; Asensi-Amorós, “The history of conifers in Egypt, part I: Mediterranean cypress (*Cupressus sempervirens* L., Cupressaceae),” p. 4.

<sup>604</sup> William Kelly Simpson, *The Terrace of the Great God at Abydos: The Offering Chapels of Dynasties 12 and 13*, (New Haven: Peabody Museum of Natural History of Yale University, 1974), pp. 10-13.

<sup>605</sup> See the myriad examples in Hugonot, *Le jardin dans l’Égypte ancienne*, pp. 209-210, figs. 185-196; Wilkinson, *The garden in ancient Egypt*, p. 63; Jacques Vandier, *Manuel d’archéologie égyptienne : Bas-reliefs et peintures I/II : Scènes de la vie quotidienne*, (Paris: A. et J. Picard, 1952), fig. 319.

<sup>606</sup> Moslem Forodui, “The story of the 4000-year-old cypress in Abarkouh,” *Tehran Times* 22.4 (April 13, 2019), (accessed August 27, 2020), <https://www.tehrantimes.com/news/434641/The-story-of-4000-year-old-cypress-in-Abarkouh>.



Figure A2.24: (Left) Avenues of Mediterranean cypresses in a vineyard at San Quirico d'Orcia. Photograph by Clay Banks via Unsplash (2019). (Middle) Detail of its coniferous leaves. Photography by Herbert Goetsch via Unsplash (2019). (Right) Wilder, cultivated form with its branches reaching outward. Photograph in Marilla Cemetery by author © 2020.

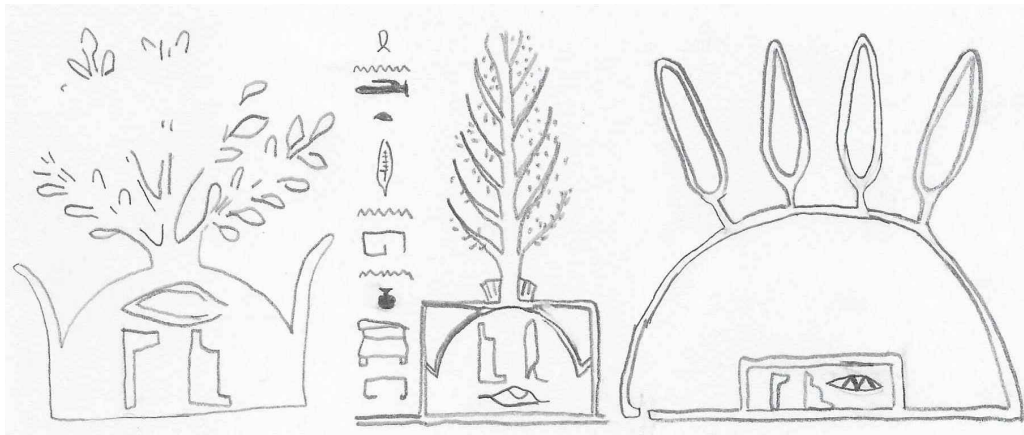



Figure A2.25: Examples of the *Pkr*-tomb (cenotaph tomb mound) of Osiris at Abydos with Tamarisk spp. (left, middle) and cypress (right) from artifacts dated from the Ramesside Period to the Late Period. Drawings by Rachel M. Reichart © 2020, after Figures 185, 187, and 189 in Hugonot (1989).

aches, headaches, burns, shoulder pain, and mucilage.<sup>607</sup> In today's pharmacies, cypress is also used for its wound-healing, anti-rash, anti-parasitic, anti-bacterial, anti-fungal, anti-viral, and astringent properties.<sup>608</sup> In modern Egypt, its oil is used as a treatment for diabetes and rheumatism.<sup>609</sup>

### ***Mnw*-Plant (?)**

The *mnw*-plant is mentioned as growing in the *k3mw*-formal garden of the 'Splendor-of-Aten' Palace (Malkata) built by Amenhotep III beside the Birket Habu at Thebes-West during the mid-late Eighteenth Dynasty.<sup>610</sup> Unfortunately, not much else is known about this plant currently. Some scholars believe that is an aromatic herbaceous species.<sup>611</sup> Perhaps the species was associated with the fertility-god Min of Koptos (Gebtu; Qift), as his name is *Mnw* () in Egyptian.<sup>612</sup>

### ***Mnwḥ*-Plant (?)**

The *mnwḥ*-plant is mentioned in Ineni's plant list (TT 81 scene): three were planted in his *ṣ*-formal garden. Baum did not attempt to identify the species due to the paucity of evidence<sup>613</sup> while Dawson suggested fenugreek (*Trigonella fænum græcum* L.).<sup>614</sup> Germer recently disproved Dawson's theory through her study of the medicinal use of the *mnwḥ*-plant as a cathartic and for the stomach region in medicine, which "does not match the pharmaceutical effects of fenugreek."<sup>615</sup> Therefore, the plant's identification and religious significance remains a mystery.

---

<sup>607</sup> Germer, *Handbuch*, pp. 47-48.

<sup>608</sup> Ali Esmail Al-Snafi, "Medical importance of *Cupressus sempervirens* – A review," *International Organization of Scientific Research Journal of Pharmacy* 6.1.2 (June 2016): pp. 66-76.

<sup>609</sup> Asensi-Amorós, "The history of conifers in Egypt, part I: Mediterranean cypress (*Cupressus sempervirens* L., Cupressaceae)," p. 5; Täckholm, *et al.*, *Flora of Egypt* I, p. 64.

<sup>610</sup> See the text of wine jar label (no. 60) from the Malkata Palace in Chapter Three on pp. 85-86.

<sup>611</sup> Erman and Grapow, *WB* II, no. 71.17.

<sup>612</sup> Erman and Grapow, *WB* II, no. 72.11.

<sup>613</sup> Baum, *Arbres et arbustes*, p. 128.

<sup>614</sup> Warren R. Dawson, "The Plant Called "Hairs of the Earth"," *JEA* 12.3/4 (1926): pp. 240-241.

<sup>615</sup> Germer, *Handbuch*, pp. 78, 113, 133-134.



Perhaps it is a grassy species or a low-growing shrub because its fruit/seeds were known as *šni-t3* (𓂏𓂛𓂏𓂛) or literally the “hair of the earth.”<sup>616</sup>

### **Moringa Tree (*Moringa peregrina* (Forssk.) Fiori)**

The moringa tree is mentioned in Ineni’s plant list (TT 81 scene). The morgina is native to Northwest Africa, Sudan, and Ethiopia. Ineni had two planted in his š-formal garden, and for good reason: the deciduous tree grows 4-10 meters tall (32-49 feet), thrives in arid desert climates, has broad willow-like branches with slender leaflets that provide ample shade, and produces pinkish to white-yellow flowers and bittersweet pods in spring that the Egyptians squeezed into moringa oil (*bḥn*) for cosmetics, medicine, and unguents.<sup>617</sup>



Figure A2.26: (Right) The willow-like branches and leaves for the morgina tree. (Left) Its scented flowers. Photographs by Wikimedia Israel (WM-IL) and the Israel Internet Association (ISOC-IL), Public Domain (2016).

As such, the tree was associated with Hathor and Ptah of Memphis, especially in his form as Ptah-under-his-moringa-tree (*Pth ḥry-b3k.f*) since the late Old Kingdom.<sup>618</sup> Moringa oil was not one of

<sup>616</sup> Dawson, “The Plant Called “Hairs of the Earth”, p. 240; Germer, *Handbuch*, p. 78.

<sup>617</sup> Boulos, *Flora of Egypt* Ia, p. 238; Baum, *Arbres et arbustes*, p. 129; Manniche, *An Ancient Egyptian Herbal*, pp. 128-129; Wilkinson, *The garden in ancient Egypt*, p. 45.

<sup>618</sup> Baum, *Arbres et arbustes*, p. 131.

the seven sacred oils used in Opening of the Mouth Ritual<sup>619</sup>; however, it is apparent from a *hṯp-di-niswt*-stela in the Tomb of Pahery (T 03) in El-Kab, dating to Thutmose III, that oils in general were included in Eighteenth Dynasty daily cult offerings:

...May pure oil be poured out for you...you being equipped with the rank of a foremost of the praised ones...<sup>620</sup>

The remains of moringa seeds were discovered in the Tutankhamun's tomb (KV 62) in the Valley of the Kings.<sup>621</sup>

### **Muskmelons (*Cucumis melo* L. spp.)**

Muskmelons appears in the š- and the Domain of Amun formal garden scenes as well as in their produce prepared for festivals or banquets or as offerings to the gods and glorified dead in the surrounding scenes. These melons are shown realistic, with a stripped bent oblong rind similar to the snake melon (*Cucumis melo* L. var. *flexuosus*) and ovate Egyptian chate melon (*Cucumis melo* L. var. *chate* (L.) Naud. ex Boiss.). Muskmelons are annual or perennial subshrubs, native to Egypt, Sudan, and other parts of tropical Africa, grow near watercourses and in fields, prefer warm to dry environments, and develop from root clusters and tendrils that form into florets and eventually into 3-6 sweet-tasting fleshy green melons from April to July.<sup>622</sup> The sweet-tasting melons occurs in Egypt from Predynastic Period onwards<sup>623</sup> and were grown in formal gardens because the Egyptians frequently ate them and used them in medicine for snake bites, heart ailments, and eye infections (pEb 220).<sup>624</sup> When the melons are sliced, they mimic the sun-disk,

---

<sup>619</sup> Zahi Hawass, "A unique Old Kingdom headrest and offering tablet of seven sacred oils found at Saqqara," *Memnonia* 9 (1998): pp. 155-160.

<sup>620</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 256.

<sup>621</sup> de Vartavan, *et al.*, *Codex*, p. 164.

<sup>622</sup> Boulos, *Flora of Egypt* IIa, p. 142; G. J. H. Grubben, *et al.*, "Vegetables," in *Plant Resources of Tropical Africa* 2, ed. by G. J. H. Grubben, *et al.*, (Wageningen: PROTA Foundation, 2004), pp. 243-245; Brewer, *et al.*, *Domestic Plants and Animals*, pp. 64-65; Manniche, *An Ancient Egyptian Herbal*, pp. 101-102.

<sup>623</sup> de Vartavan, *et al.*, *Codex*, p. 90.

<sup>624</sup> Germer, *Handbuch*, pp. 140, 244; Brewer, *et al.*, *Domestic Plants and Animals*, p. 65.

and sweet provisions, like muskmelons, were desired by the gods and glorified dead, which is indirectly evident from Pyramid Texts Recitation 424 for ‘Invoking the Spirit as Osiris’ in the Pyramid of Pepy I:

Ho, Pep[y]! Know that you receive for yourself this god’s-offering of yours and become content through it every day: ...a thousand of everything sweet.<sup>625</sup>

And in the Liturgy B related to embalming and offerings, which was spoken on the night before a funeral:

May the goddess of the valley give you bread from the grave goods of her father Osiris. When R[a] bites into something sweet, he will give it to you.<sup>626</sup>

Clearly, muskmelons were a favored fruit on the offering tables of the gods and the glorified dead, as they are often depicted upon them since the Old Kingdom. Although Eighteenth Dynasty archaeobotanical evidence of muskmelon rinds in private Theban tombs have yet to be discovered, Twentieth Dynasty seeds have been unearthed in the eastern cemetery of Deir el-Medina.<sup>627</sup>



Figure A2.27: (Left) Snake melon for sale in the El-Rehab Souq in the summertime. (Right) Chate melon for sale in the Nubian village market in Aswan. Photographs by author © 2020.

<sup>625</sup> Allen, *The ancient Egyptian pyramid texts*, p. 106.

<sup>626</sup> Assmann in *Death and Salvation in Ancient Egypt*, p. 294.

<sup>627</sup> These seeds do not have a catalogue number in the Cairo Agriculture Museum. See de Vartavan, *et al.*, *Codex*, p. 90; Ludwig Keimer, « Plusieurs antiquités récemment trouvées, » *BIE* 28 (1947): p. 122.



### Opium Poppy (*Papaver somniferum* L.)



The opium poppy, also known as breadseed poppy, appears in š- and Domain of Amun formal garden scenes. The poppy is shown stylized with red triangular petals and black dots, is an annual, grows 30 centimeters (1 foot) high, has serrated green ovate leaves with large scarlet to orange white flowers and black seeds in springtime, and is native to the Eastern Mediterranean – possibly Crete and/or Cyprus.<sup>628</sup> The flower was likely introduced via trade with Crete and Cyprus by the Thutmosides, as its first pictorial depiction in Egypt occurs in Thutmose III's 'botanical garden' reliefs in the *šh-mnw*-temple at Karnak.<sup>629</sup> The poppy was associated with the love-, fertility-,







Figure A2.28: Orange, white, and red poppies in bloom in the Jardin des Plantes in Paris during the spring. Their black seeds have been blown away by the wind. Photograph by author © 2015.

<sup>628</sup> Hepper, *Pharaoh's Flowers*, p. 16; Germer, *Handbuch*, pp. 310-311; Manniche, *An Ancient Egyptian Herbal*, p. 138.

<sup>629</sup> Scholars debate the old-world origin of the opium poppy. For a concise overview, see Germer, *Handbuch*, pp. 310-311; Beaux, *Le cabinet des curiosités de Thoutmosis III*, pp. 134-135.

and motherhood-goddess Hathor and was grown in water gardens planted beside pools due to its use in Egyptian medicine, perfumes and unguents. The term *špn/špnn* (; ) has been considered for the name of the poppy in Egyptian,<sup>630</sup> although some scholars remain unconvinced.<sup>631</sup> It is the author's opinion that *špn/špnn* should remain a possibility since it was used to induce sleep in a child (pEb 782),<sup>632</sup> as well as the fact that its name in ancient Greek, which would have been used by Aegean merchants, was *ἡ μήκων*, meaning “the black excrement of a newborn child, poppy juice, and opium.”<sup>633</sup> For example, the poppy has narcotic properties, which when burned with aromata, induces euphoria, aphrodisia,<sup>634</sup> and sleep.<sup>635</sup> The flower was arranged into bouquets likely as a potent symbol of fertility and resurrection. Eighteenth Dynasty poppy capsules have been discovered in a tomb in the eastern cemetery of Deir el-Medina.<sup>636</sup>

### **Papyrus (*Cyperus papyrus* L.)**

Papyrus is found in both the š- and Domain of Amun formal garden scenes and in the bouquets of the relevant surrounding scenes. The plant is shown stylized in the garden scenes like Gardiner M15 () , M215 () ,<sup>637</sup> M82 and 83 (), and M13 (). Papyrus is a perennial aquatic species that was once native to Egypt – but now only grows in Sudan and Sub-Saharan Africa.<sup>638</sup> Papyrus

<sup>630</sup> Hermann Grapow and Hildegard von Deines, *Wörterbuch der ägyptischen Drogenname: Grundriß der Medizin der Alten Ägypten* VI, (Berlin: Akademie-Verlag, 1959), p. 490.

<sup>631</sup> Germer, *Handbuch*, pp. 131-132, 311.

<sup>632</sup> Germer, *Handbuch*, p. 131; Grapow and Deines, *Wörterbuch der ägyptischen Drogenname: Grundriß der Medizin der Alten Ägypten* VI, p. 490.

<sup>633</sup> Where the English adjective meconial derives from. See s.v., “meconium,” in *Online Etymology Dictionary*, (accessed August 1, 2020), <https://www.etymonline.com/word/meconium>; and Keith Alexander, s.v., “mēcōn, mēcōnis,” in *Numen: The Latin Lexicon Online*, (accessed August 1, 2020), [https://latinlexicon.org/search\\_english.php](https://latinlexicon.org/search_english.php).

<sup>634</sup> Manniche, *An Ancient Egyptian Herbal*, p. 139.

<sup>635</sup> Its scientific name *Papaver somniferum* L. literally means ‘the poppy that makes sleep’ in Latin.

<sup>636</sup> The capsules are housed in the Cairo Agriculture Museum, but they do not have an inventory number; thus, a proper context cannot be surmised. See Bruyère, *Deir el Médineh* II, pp. 108, 157; Germer, *Handbuch*, p. 310.

<sup>637</sup> The inverted papyrus umbels of Gardiner M15 and M215 are actually more than a stylistic feature, as the stalks naturally crack and bend downwards following their death and decay (See Fig. A2.29 on the following page).

<sup>638</sup> The last known sighting of papyrus in Egypt was in 1820. It has in recent times been reintroduced into Egypt on Jacob's Island in Cairo by Dr. Hassan Ragab. See Brewer, *et al.*, *Domestic Plants and Animals*, p. 41; Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 124.





Figure A2.29: (Left) Papyrus (*C. papyrus* L.) in a water garden beside our pond in Buffalo, New York. (Middle) Papyrus umbels going to seed in late summer. (Right) Dead, inverted umbels in mid fall similar to those on Gardiner M15 (𓆎) and M215 (𓆎). Photographs by author © 2020.

grows deep thick rhizomes under water and produces large erect fan-like clusters with greenish yellow florets in late summer.<sup>639</sup> Papyrus was one of the most important plants in ancient Egypt and was called *w3dt* (𓆎),<sup>640</sup> which plays on terms, such as: *w3dt* (𓆎) “to flourish, to prosper, to become green”<sup>641</sup>; *3h* (𓆎) “to be blessed”; and *s3h* (𓆎) “to have spiritual power, to become glorified.”<sup>642</sup> This is evident from Pyramid Texts Recitations 554 for ‘Joining the Sun’ and 637 and 662A for the ‘Invocation of the Sun and the Spirit’ in the Pyramids of Pepy I and Pepy II:

<sup>639</sup> Boulos, *Flora of Egypt* Ia, pp. 375-376.

<sup>640</sup> Erman and Grapow, *WB*

<sup>641</sup> The Egyptians must have been aware of the plant’s rapid grow as “papyrus has been shown to be among the most productive plants in terms of biomass per year,” see Brewer, *et al.*, *Domestic Plants and Animals*, p. 40; and Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 124.

<sup>642</sup> “The Egyptian word *s3h.w* is the causative form of the root *3h*, which means something along the lines of “to have spirit power.” The causative formation of the designation of this text genre itself indicates that these are effective

Pyramid Texts Recitation 554 in Pepy I:

...My papyrus baton<sup>643</sup> is in my hand, and I strike and direct in accordance with my state (as one) of the possessors of honor. I belong to those who surround the Sun, who are around the morning god. I cannot become bad, nor can my name on earth become bad.<sup>644</sup>

Pyramid Texts Recitation 662 in Pepy II:

...O you of the papyrus plant, you have emerged in me, I have emerged in you.<sup>645</sup>

And from Pyramid Texts Recitation 774 in the Pyramid of Queen Ankhenespepy II:

...Receive this your papyrus scepter (*w3dt*). You go as Horus and return as the Sun's...<sup>646</sup>

As well as, Book of the Dead Spells 159-160 that are meant to be recited over a papyrus-shaped amulet during a funeral:

To me belongs a papyrus-column of green feldspar which is not imperfect...Welcome, O Elder of Heliopolis, greatest of Pe...He has taken his place opposite the Great God, and Atum is satisfied with Eye, so that my members will not be damaged.<sup>647</sup>

Evidently, the papyrus had a close relationship with the Osiris myth, fertility, Ra, Hathor,<sup>648</sup> and the deceased's transformation into an *sh* (glorified spirit). Papyrus stems, bundles, culms, stalks, and umbels<sup>649</sup> have been discovered in Eighteenth Dynasty royal and private Theban tombs, such as: Queen Ahmosemeretamun (TT 358), a wife of Amenhotep I; Kha (TT 08); Yuya and Thuya (KV 46); Maiherperi (KV 36), and Tutankhamun (KV 62).<sup>650</sup>

---

texts whose recitation resulted in a transformation, and specifically, transformation into a transfigured ancestral spirit," see Assmann, *Death and Salvation in Ancient Egypt*, p. 244.

<sup>643</sup> Such papyrus bouquets are used in the Beautiful Festival of the Valley rites too. See the TT 100 and TT 87 scenes.

<sup>644</sup> Allen, *The ancient Egyptian pyramid texts*, p. 191.

<sup>645</sup> Allen, *The ancient Egyptian pyramid texts*, p. 268.

<sup>646</sup> Allen, *The ancient Egyptian pyramid texts*, p. 235.

<sup>647</sup> Goelet, *et al.*, *The Complete Papyrus of Ani*, p. 138.

<sup>648</sup> Sistra or *sš(s)št* (𓆎𓅓) in Egyptian were used in the Hathor cult because they imitated the sound of the papyrus rushes and pacified the goddess. See Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora," p. 124; Erman and Grapow, *WB III*, nos. 486.16-487.6-8.

<sup>649</sup> See CM 910-11, 1261, 1263, 3627, 3614-15, and 3820 in de Vartavan, *et al.*, *Codex*, pp. 96-97.

<sup>650</sup> de Vartavan, *et al.*, *Codex*, pp. 96-97; also Herbert E. Winlock, *et al.*, *The tomb of queen Meryet-Amun at Thebes*, (New York: MMA, 1932), p. 80; Mattiolo, "I vegetali scoperti nella tomba dell'architetto Kha e di sua moglie Mirit nella necropoli di Tebe, etc.," *ARAST* 61.13 (1926): p. 560; James E. Quibell, "The tomb of Yuua and Thuiu," in *CGC n° 51001-51191*, (Cairo: SAE, 1908), pls. 61, 64; Täckholm, *et al.*, *Flora of Egypt IIb*, p. 123; Newberry, "Report on the floral wreaths found in the coffins of Tut-Ankh-Amen," p. 171.



**Persea Tree (*Mimusops laurifolia* (Forssk.) Friis = *Mimusops schimperi* Hochst.)**

The persea tree and/or its fruit are present in the š- and Domain of Amun formal garden scenes and/or their relevant surrounding scenes. In the formal garden scenes, persea is shown realistic like Gardiner M1B (𓆎) or stylized like Gardiner M1 (𓆏). Persea is native to the Ethiopian Highlands, Eritrea, and Somalia, is evergreen, grows 15-30 meters (49-98 feet) tall with green to yellow oval leaves, and produces “sweet and luscious”<sup>651</sup> cordate fruit from late winter to early spring.<sup>652</sup> Persea was called šwꜣb (𓆎𓆏) in Egyptian<sup>653</sup> and occurs in groves and avenues beside the pools of the š- and Domain of Amun formal garden scenes for banquets, meals, and/or bouquets. Its heart-shaped fruit and tongue-like leaves recall the Heliopolitan creation myth, as “creation was an act of will represented by the heart [and] effected through the utterance of the world (tongue),”<sup>654</sup> and was sacred to Hathor and Isis, according to Plutarch:

Of the plants found in Egypt they say that the persea [περσεαν] is especially sacred to the goddess (Isis) because its fruit is like a heart and its leaf like a tongue. For of the qualities which man possesses, none is more divine than reason [λογον]...<sup>655</sup>

This is the reason two rows of persea were planted in the *hnty*-š-formal garden of the Memorial Temple of Hatshepsut at Deir el-Bahari<sup>656</sup> — but the tree was not introduced to Egypt from Sub-Saharan Africa by the queen-pharaoh herself. Old Kingdom depictions of persea exist, such as in Sahura’s pyramid temple reliefs dated to the Fifth Dynasty<sup>657</sup> while archaeobotanical evidence of

---

<sup>651</sup> “The [persea]...is sweet and luscious and easily digestible,” see Theophrastos, *Enquiry into plants* IV.II.5-7, (Cambridge: Harvard University Press, 1968), p. 297.

<sup>652</sup> Ib Friis, “The Taxonomy and Distribution of *Mimusops laurifolia* (Sapotaceae),” *Kew Bulletin* 35.4 (1980): pp. 788-790; Baum, *Arbres et arbustes*, p. 87; Manniche, *An Ancient Egyptian Herbal*, pp. 127-128; Wilkinson, *The garden in ancient Egypt*, p. 43; Hepper, *Pharaoh’s Flowers*, p. 15.

<sup>653</sup> Germer, *Handbuch*, p. 301.

<sup>654</sup> Brewer, *et al.*, *Domestic Plants and Animals*, p. 64.

<sup>655</sup> Plutarch and J. Gwyn Griffiths, *Plutarch’s De Iside et Osiride*, (Cardiff: University of Wales Press, 1970), Ch. 68: pp. 224-225.

<sup>656</sup> Winlock, *Excavations at Deir el-Bahari 1911-1931*, figs. 12, 213.

<sup>657</sup> Emil Åberg, *et al.*, « Les plantes découvertes dans les souterrains de l’enceinte du roi Zoser à Saqqarah (III<sup>e</sup> dynastie), » *BIE* 32 (1949-1950): p. 29; Baum, *Arbres et arbustes*, p. 87.

its fruit and leaflets have been discovered in the royal and private tombs in Memphis and Thebes prior to the Eighteenth Dynasty.<sup>658</sup>

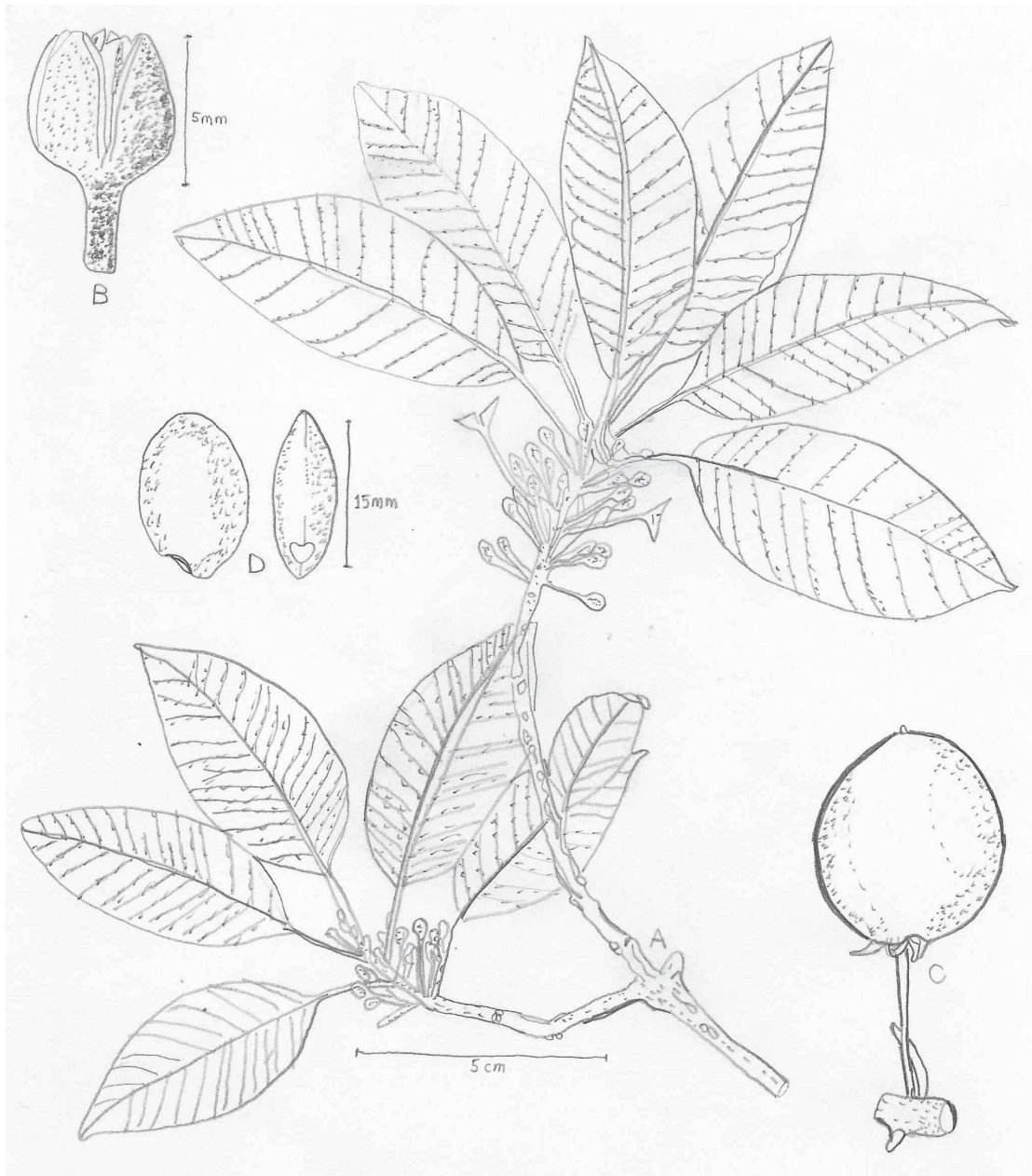



Figure A2.30: *Persea* leaves and fruit. Drawing by Rachel M. Reichart © 2020, after Figure 1 in Friis (1980).

<sup>658</sup> Third to Twelfth Dynasty *persea* remains exist. See Friis, “The Taxonomy and Distribution of *Mimusops laurifolia* (Sapotaceae),” p. 790; de Vartavan, *et al.*, *Codex*, pp. 161-162.

### Pomegranate Tree (*Punica granatum* L.)

The pomegranate and/or its fruit occur in the š-garden and Domain of Amun formal garden scenes as well as in their produce and bouquets in the surrounding scenes. The tree is shown stylized like Gardiner M1 () with its oblique green leaves and crimson-yellow oval fruit and sepals. Pomegranate is a deciduous shrub or tree that is native to Asia Minor and the Bosphorus Region, grows up to 8 meters (26 feet) tall, has red fragrant florets in spring, and fruit with juicy edible seeds that mature from late summer to mid fall.<sup>659</sup> Historically, various scholars have speculated that Thutmose III brought pomegranate trees to Egypt for Amun's 'botanical gardens' at Karnak during his tour of Syro-Palestine in his Year 25.<sup>660</sup> The pomegranate is depicted in the 'botanical garden' reliefs; however, the tree is not native to the Middle East. The tree was likely naturalized in Egypt during the Middle Kingdom<sup>661</sup> due to the pomegranate-headed staff that was discovered in the Memorial Temple of Montuhotep II at Deir el-Bahari,<sup>662</sup> as well as the existence of Twelfth Dynasty pomegranate remains from Dra'a Abu el-Naga in the Egyptian Museum, Cairo.<sup>663</sup> Pomegranate trees were grown beside pools, ponds, lakes, or canals and quays in the š- and Domain of Amun formal gardens or among the food preparations, bouquets, and/or offerings for dinner guests, the gods, and/or the glorified dead due to its fragrance and sweet-tasting, arousing juice and seeds associated with Hathor. Eighteenth Dynasty pomegranate remains (BBM 6998), which were likely placed as offerings, were discovered in the eastern necropolis of Deir el-Medina.<sup>664</sup> Pomegranate trees were said to flank the entrance to the hereafter in Book of the Dead

---

<sup>659</sup> Baum, *Arbres et arbustes*, pp. 149-150; Germer, *Handbuch*, pp. 78, 113, 329-330; Manniche, *An Ancient Egyptian Herbal*, p. 147; Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 64.

<sup>660</sup> Manniche, *An Ancient Egyptian Herbal*, p. 148.

<sup>661</sup> Baum, *Arbres et arbustes*, p. 151; Germer, *Handbuch*, p. 330.

<sup>662</sup> Arnold, *Deir el-Bahari III*, p. 81; Baum, *Arbres et arbustes*, p. 151.

<sup>663</sup> Georg A. Schweinfurth, "Further discoveries in the flora of ancient Egypt," *Nature* 29 (1884): p. 314; de Vartavan, *et al.*, *Codex*, p. 200.

<sup>664</sup> Bruyère, *Deir el Médineh II*, p. 108; de Vartavan, *et al.*, *Codex*, p. 200.



Figure A2.31: Pomegranates and their florets growing in the AUC gardens. Photographs by author © 2019.

Spell 45.<sup>665</sup> The growth of the fruit from a small red floret into a crimson ball mimics the solar cycle and hints at the deceased's eventual rebirth in the hereafter. It is no wonder why the pomegranate flowers and leaves were included in a wreath (KG 225a) placed in the Tomb of Tutankhamun (KV 62) in the Valley of the Kings.<sup>666</sup>

#### **Scented Mayweed (*Anthemis* or *Matricaria* spp.)**

Scented mayweed occurs in the š- and Domain of Amun formal gardens. Mayweed species were grown in the water or *hsp*-plots and were shown stylized like Gardiner M86 and M86A (✱✱) in art. Scented mayweed is an annual that is known in Egypt from the Predynastic Period onwards, grows 30 centimeters (1 foot) tall in sandy and fertile soil, has green pinnate leaves on erect branches, and produces white stellate flowers with yellow seeds from summer to fall.<sup>667</sup> *Anthemis*

<sup>665</sup> Baum, *Arbres et arbustes*, p. 153.

<sup>666</sup> de Vartavan, *et al.*, *Codex*, p. 200.

<sup>667</sup> Boulos, *Flora of Egypt* IIIa, pp. 238-242, 251-253; Hepper, *Pharaoh's Flowers*, p. 14; Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 131; de Vartavan, *et al.*, *Codex*, pp. 157-158.





Figure A2.32: Scented mayweed spp. growing in the AUC gardens. Photograph by author © 2019.

and *Matricaria* spp. are suggested because both have very similar physiognomies in color, shape, and form. The flower must have been associated with the sun because of its color and its shape.

### **Sycamore Fig (*Ficus sycomorus* L.)**

The sycamore fig and/or its fruit occur in the š- and Domain of Amun formal garden scenes and/or their relevant surrounding scenes. The sycamore is shown realistic like Gardiner M1B (𐎎) or stylized like Gardiner M1 (𐎎) while its ovate green leaves and red cylindrical fruit are accurately portrayed. Sycamore fig is evergreen in warm subtropical regions like Egypt and “live to a great age and become massive in size,”<sup>668</sup> while its small green florets bloom into clusters of reddish orange fruits along its trunk and branches from spring to fall. Sycamore figs were called *nh(ꜥ)t(i)* (𐎎𐎓𐎐) in Egyptian<sup>669</sup> and were symbolic of Hathor’s role as ‘Lady of the West and Southern Syc-

<sup>668</sup> Hepper, *Pharaoh’s Flowers*, pp. 58-59.

<sup>669</sup> See the plant list of the TT 81 scene, the text of the TT E2 and TT 63 scenes; as well as Germer, *Handbuch*, p. 265.



Figure A2.33: (Left) Avenues of enormous sycamore figs growing along the roads in Ma'adi in downtown Cairo. (Right) Sycamore figs growing along their immense branches. Photographs by author © 2019.

-amore' and 'Mistress of the Necropolis.' For example, according to Book of the Dead Spell 109 'For Knowing the Souls of the Easterners,' a pair of sycamores stood at the site of the morning rise of Ra-Kheperi and symbolized the deceased's journey to the western horizon to become a glorified spirit (*ʒh*):

I know those two [sycamore] trees of turquoise between which R[a] goes forth, which have grown up at the Supports of Shu at that gate of the Lord of the East from which R[a] goes forth.<sup>670</sup>

The juices and leaves of the sycamore fig were used by embalmers who would mix them with "frankincense, myrrh, wax, and honey"<sup>671</sup> to wash out and perfume mummies while premature sycamore figs were strung into collars and wreaths or its branches and leaves were offered in private Theban Eighteenth Dynasty and Deir el-Medina tombs.<sup>672</sup> The premature fertilized

<sup>670</sup> Goelet, *et al.*, *The Complete Papyrus of Ani*, p. 127.

<sup>671</sup> Manniche, *An Ancient Egyptian Herbal*, p. 109.

<sup>672</sup> de Vartavan, *et al.*, *Codex*, p. 112.

sycamore fig collars would have continued to ripen and symbolized the deceased's rebirth and resurrection in the hereafter just like fertilized Osirian barley beds. In terms of the š- and Domain of Amun formal garden scenes, Book of the Dead Spell 52 relates how the deceased was meant to feast under sycamores in the hereafter:

... "Where are you allowed to eat?" say they, the gods, to me. "I eat under that sycamore of Hathor, my mistress, and I give the rest of it to her dancing girls..." "Where is it, where do you eat?" say the primeval gods to him. "I eat under the sycamore that I know, the beautiful one, verdant and many-leaved!"<sup>673</sup>

The sycamore figs color, shape, and growth are reminiscent of the sun whereas its milky juice was associated with the cow-goddess Hathor and the sycamore fig tree-goddesses. When the fruit is cut in two, for example, the shape of the flesh and seeds mimic the sun-disk. Moreover, wasps pollinate a sycamore fig's florets by climbing into the tiny hole at the fruit's end to mate and lay their eggs. This in turn makes the fruit "ripen at the same time as the young hatch"<sup>674</sup> and recalls solar theology and the deceased's eventual rebirth and resurrection in the hereafter; similarly, to how dung beetles produce cylindrical faeces from which their young hatch.

### **Tamarisk (*Tamarix* spp.)**

Ineni lists that he had ten in his š-formal garden, and at least one is shown like Gardiner M1B (𓆎) beside his pool. Tamarisk spp., also known as salt cedar, are deciduous shrubs or trees, and nine are native to Egypt and parts of North Africa and the Levant<sup>675</sup>:

- 1) *Amap-tamarisk* (*T. passerinoides* Del. ex Desv.)
- 2) *Arabian tamarisk* (*T. arabica* (Ehrenb.) Bunge)
- 3) *Athel-tamarisk* (*T. aphylla* L. Karst.)
- 4) *Farash-tamarisk* (*T. articulata* Vahl)
- 5) *Four-stamen tamarisk* (*T. tetragyna* Ehrenb.)

---

<sup>673</sup> Assmann, *Death and Salvation in Ancient Egypt*, pp. 129-130.

<sup>674</sup> The ancient Egyptians were well-aware of how wasps and honey bees climb into the fruit from their apiculture production. See Hepper, *Pharaoh's Flowers*, pp. 58-59; and Germer, „Die Pflanzen und ihre Nutzung: Sträucher und Bäume der heimischen Flora,“ p. 151.

<sup>675</sup> Boulos, *Flora of Egypt* IIa, pp. 126-127; Baum, *Arbres et arbustes*, p. 200; Germer, *Handbuch*, pp. 347-348; Hepper, *Pharaoh's Flowers*, p. 48.



- 6) Fronded tamarisk (*T. arborea* (Sieb. ex Ehrenb.) Bunge)
- 7) Manna yielding tamarisk (*T. mannifera* (Ehrenb.) Bunge)
- 8) Nile tamarisk (*T. nilotica* (Ehrenb.) Bunge = *T. gallica* var. *macrocarpa* Ehrenb.)
- 9) *Tarfā*-tamarisk (*T. amplexicaulis* Ehrenb.)

The Egyptians did not differentiate between the species in art,<sup>676</sup> so it is impossible to prove which species are represented in the TT 81 scene. These species grow from 3-10 meters (10-33 feet) tall in the Nile Basin, wadis, deserts, and maritime coasts, have many feather-like branches with sheathing green leaflets, and produce ovate to triangular pink, red, or white flowers throughout the summer.<sup>677</sup> Tamarisk wood (*isrt*) in Egypt is known from the Predynastic Period<sup>678</sup> while archaeological and iconographical evidence has been discovered from Old Kingdom onwards in tomb and temple art, as a medium for statuary, sarcophagi, furniture, weaponry, and even in medicine (pEb 96).<sup>679</sup> Tamarisks were called *isr* (𓆎𓅓) in Egyptian.<sup>680</sup> Tamarisks were planted in the *hntyw-š*-formal gardens of the Memorial Temple of Montuhotep II and of Hatshepsut at Deir el-Bahari<sup>681</sup> due to their association with the sun and Osiris as a symbol of creation, rebirth and resurrection. This is clear from the Pyramid Texts Recitation 669 that is part of the ‘Resurrection Rituals’ of the Pyramid of Pepy II:

I [have been given birth] by my mother Begetter in a rebirth in the nest [of] Thoth inside the Tamarisk Field (*šht isr*), the gods’ source...<sup>682</sup>

Also, in the ‘Reponses to the Offering Ritual: Spells for Power of Nourishment’ in Pyramid Texts Recitation 210 in the Pyramid of Wenis:

---

<sup>676</sup> Baum, *Arbres et arbustes*, p. 200.

<sup>677</sup> Boulos, *Flora of Egypt* IIa, pp. 126-130; Hepper, *Pharaoh’s Flowers*, p. 48; Germer, *Handbuch*, p. 347; Baum, *Arbres et arbustes*, p. 200; Gamal, *Trees and Flowers of Egypt*, pp. 316-318.

<sup>678</sup> de Vartavan, et al., *Codex*, pp. 224-228.

<sup>679</sup> Baum, *Arbres et arbustes*, p. 202.

<sup>680</sup> Germer, *Flora des pharaonischen Ägypten*, p. 125.

<sup>681</sup> Alan J. Rowe, *New Light on Egypto-Cyrenæan Relations: Two Ptolemaic Statues Found in Tolmeita*, (Cairo: ASAE, 1948): p. 304; Arnold, *Deir el-Bahari* I, p. 6, Tafelen I, 42D; Tamarisk remains were also discovered around the Nineteenth Dynasty Osirion in Abydos built by Sethy I, see Henri Frankfort, “Preliminary report of the expedition to Abydos 1925-1926,” *JEA* 12 (1926): p. 159; Baum, *Arbres et arbustes*, pp. 202-205.

<sup>682</sup> Allen, *The ancient Egyptian pyramid texts*, p. 262.

...Before the Great Heron that comes from the garden, Paths-Parter [Wepwawet<sup>683</sup>] who comes from the tamarisk... Sun and Thoth, take me with you... I may grow powerful from what you grow powerful from, that I may sail in what you sail in...I circumnavigate the sky like the Sun, I course the sky like Thoth.<sup>684</sup>

Tamarisks planted in formal gardens evoked the Tamarisk Field where Isis birthed Horus, the solar *bnbn*-mound of creation, the *Pkr*-tomb of Osiris at Abydos (See Fig. A1.25), as well as the jackal-god Wepwawet who piloted the departed to the hereafter.<sup>685</sup> The divine tribunal who judged those wishing to enter the hereafter were even called ‘Those-of-the-Tamarisk’ (*isrtyw*).<sup>686</sup> Evidence has yet to be discovered in Eighteenth Dynasty Theban tombs; though, its wood was magically imbued with the ideology discussed above, and used to fashion tomb goods, such as: a stave (LM E 14470) dated to Thutmose III and two sticks dated from the Middle to New Kingdom (BBM 17830).<sup>687</sup>



Figure A2.34: (Left) Tamarisk spp. and oleander (*Nerium oleander* L.) growing beside the ram-headed sphinx avenue in front of Karnak’s Western Entrance, which had š-formal garden in antiquity. (Right) Growing beside the Ramesseum. Photographs by author © 2019.

### True Cardamom (*Elettaria cadamomum* L. Maton)

The earliest attestation of true cardamon in Egypt comes from the *hsp*-plots of the Middle Kingdom to Late Hyksos Period *hrrt*-š-formal garden of Palace F/I at Avaris later Perunefer (See Fig.

<sup>683</sup> Allen, *The ancient Egyptian pyramid texts*, p. 369.

<sup>684</sup> Allen, *The ancient Egyptian pyramid texts*, p. 33.

<sup>685</sup> Allen, *The ancient Egyptian pyramid texts*, p. 366.

<sup>686</sup> Dimitri Meeks, *Année lexicographique : Égypte ancienne I*, (Paris: Librairie Cybèle, 1977/1998), nos. 77.0462; 78.0484.

<sup>687</sup> de Vartavan, *et al.*, *Codex*, p. 227.

A3.37).<sup>688</sup> True cardamon, also known as green cardamom or *hal* (حب الهال) in Arabic, is a member of the ginger family Zingiberaceae, is native to Mesopotamia, Sri Lanka, India, China, Indonesia, and Myanmar, has green heart-shaped leaves and white, yellow, red, pink, and/or lilac orchid-like flowers in spring and black, white or reddish ovular pods that grow from late summer to mid fall.<sup>689</sup>



Figure A2.35: (Left) True cardamom flowers growing in India. Photograph courtesy of Santanu Maity via Shutterstock (2019). (Right) True cardamom pods are sold in stalls in India just like in Egypt. Photograph by Mousum De via Unsplash (2018).

True cardamom's earliest attestation in the ancient world comes from bread and soup recipes recorded on a Sumerian clay tablet discovered in the city-state of Nippur dated to 2000 B.C.<sup>690</sup> Perhaps it is the Early Old Babylonian/Akkadian word: *zi(ib)batum* (𒆪𒆫𒆪𒆫; 𒆪𒆫𒆪𒆫𒆫𒆫) or "an aromatic seed; a garden plant."<sup>691</sup> The pods are crushed in many cultures and cuisines for their black seeds that are used in cooking and medicine.<sup>692</sup> True cardamom is included in Egyptian and

<sup>688</sup> See the discussion of this formal garden on pp. 88-89 in Chapter Three.

<sup>689</sup> Edward A. Weiss, *Spice Crops*, (Wallingford: CABI Publishing, 2002), pp. 300-303; Muthuswamy Anandaraj and M. R. Sudharshan, "Cardamom, Ginger, and Turmeric," in *Soils, Plant Growth, and Crop Production III: UNESCO Encyclopedia of Life Support Systems: Food and Agricultural Sciences, Engineering and Technology Resources*, ed. by Willy H. Verheye, (Oxford: UNESCO-EOLSS Publications Co., Ltd., 2010), p. 3.

<sup>690</sup> Weiss, *Spice Crops*, p. 299; Anandaraj and Sudharshan, "Cardamom, Ginger, and Turmeric," p. 3.

<sup>691</sup> Tinney and Jones, s.v., "zibatum," in *ePSD*, (accessed August 2, 2020), <http://psd.museum.upenn.edu/nepsd-frame.html>.

<sup>692</sup> Weiss, *Spice Crops*, p. 299; Anandaraj and Sudharshan, "Cardamom, Ginger, and Turmeric," p. 3.

Nubian-Sudanese dishes today that date back to pharaonic times, such as the flava bean dish *ful medames* (فول مدمس) often eaten for breakfast and an okra and beef dinner dish paired with boiled cardamom with cloves.<sup>693</sup> The ancient Egyptians chewed cardamom to clean and freshen their mouth and teeth, for digestion, as well as in mummy embalming.<sup>694</sup>

### ***ṭwn*-Plant (?)**

The *ṭwn*-plant is mentioned in Ineni's plant list (the TT 81 scene): five were planted in his š-formal garden. A proper identification of the plant has been sought, but with difficulty, as *ṭwn* is written with both Gardiner M1 (𓄏) and M2 (𓄏). Ebbell identified the *ṭwn* with *Acacia* spp. whereas Loret and Täckholm identified the plant as one of the *Ceruana* spp. (*Ceruana pratensis* Forssk.) from the daisy family Asteraceae, which is native to the Egypt, Ethiopia, the Sahel-Saharan interior, and Upper and Lower Egypt watercourses.<sup>695</sup> Archaeobotanical evidence of *Ceruana* spp. as been discovered in an Eighteenth Dynasty private Theban tomb (TT 294).<sup>696</sup> Germer does not deny this interpretation, but her study of the *ṭwn*-plant's medicinal use is suggestive of one that induces "antibacterial and anti-inflammatory action."<sup>697</sup> Perhaps the *ṭwn*-plant is an herbaceous species that was further eaten by cattle, as four out of its 11 palaeographies include Gardiner E1 (𓄏).

### **Waterfowl, Fish, and Insects in the Formal Gardens**

The waterfowl in the formal garden scenes and/or surrounding scenes, were meant to nourish those depicted in both life and death. Breeding in the spring and maturing to juvenile or adult by the fall


<sup>693</sup> Mehdaawy and Hussein, *The Pharaoh's Kitchen*, pp. 15, 101.

<sup>694</sup> Farooq Anwar, *et al.*, "Cardamom (*Elettaria cardamomum* Maton) Oils," in *Essential Oils in Food Preservation, Flavor, and Safety*, ed. by Victor E. Preedy, (Amsterdam: Elsevier, 2016), pp. 295-301.

<sup>695</sup> Victor Loret, « Le signe hiéroglyphique *nn* (jonc des marais), » in *Studies presented to F. Ll. Griffiths*, ed. by Stephen R. K. Granville, (London: EES, 1932), pp. 304-309; Täckholm, *Students' Flora of Egypt*, p. 547.

<sup>696</sup> de Vartavan, *et al.*, *Codex*, p. 74; Ludwig Keimer, « *Ceruana pratensis* Forssk., dans l'Égypte ancienne et moderne, » *ASAE* 30 (1932): p. 32; Granger, *et al.*, "Report on botanical samples from TT294," in *The Tombs of Amenhotep, Khnummose and Amenmose at Thebes*, (Oxford: Griffith Institute, 1998), pp. 192-193.

<sup>697</sup> Germer, *Handbuch*, p. 159.

or winter, the waterfowl in the formal garden scenes do not represent the enemies of Horus<sup>698</sup> as in marsh hunting scenes, or flee from the tomb-owner's arrows, spears or throw sticks, but float or graze calmly among the lotus and papyri in the pools/pond/lakes and water gardens. Waterfowl's close connection to water features is enforced by the Egyptian word to describe one filled with fish and fowl: *sš* (), as seen in the TT 39 scene.<sup>699</sup> Their funerary symbolism in the formal gardens is demonstrated by Book of the Dead Spell 109 'For Knowing the Souls of the Easterners':

I know the northern gate of the sky; its south is in the Lake of Waterfowl, its north is in the Waters of the Geese, the place in which R[a] navigates by wind or by rowing.<sup>700</sup>

As well as, from Coffin Texts Spell 62 spoken during the deceased's wake:

I shall cause that you transform yourself in the company of the *Dwj.t*-bird, and cause that you fare over the *ptr.wj*-waters and over the lake...You shall rule the streams in the company of the phoenix, with no one opposing you on the bank.<sup>701</sup>

The waterfowl's funerary role in the formal gardens, as divine intermediaries between heaven and earth, and in the deceased's transformation into a glorified spirit (*ꜥḥ*) is emphasized in this section.

### **Egyptian Turtle Dove (*Streptopelia turtur rufescens* Brehm)**

*Double click on the icon to listen to their call here*<sup>702</sup>:



The Egyptian turtle dove was propagated in Egypt since the Old Kingdom and in *sš*-formal gardens from the Middle Kingdom onwards in aviaries (*ḥt-ꜥ*) alongside the *ḥt-ꜥ*-duck.<sup>703</sup> This turtle dove is a member of the dove and pigeon family Columbidae, is native to the Dakhla and Kharga Oases, the Fayyum Region and Northern Sudan, breeds in North Africa, and winters in the Sub-Saharan

<sup>698</sup> Catherine Graindorge-Hereil, « La quête de la lumière au mois de Khoiak : Une histoire d'oies, » *JEA* 82 (1996): p. 90.

<sup>699</sup> For more information on its etymology, see Chapter Three: Extant Evidence of *Šs*-Formal Gardens.

<sup>700</sup> Goelet, *et al.*, *The Complete Papyrus of Ani*, p. 127.

<sup>701</sup> This "describe[s] movement toward water. Typical is the connection of the theme of transformation with that of freedom to move and to cross. The deceased assumes the form of a bird so as to cross the body of water that separates him and the realm of death from Elysium," Assmann, *Death and Salvation in Ancient Egypt*, pp. 271, 273.

<sup>702</sup> Recorded by Tanguy Loïs in Saint-Lucien (2020) via Xento-Canto: Sharing Bird Sounds from Around the World.

<sup>703</sup> See the hieroglyphic text on p. 78 of this work; and Erman and Grapow, *WB* I, no. 229.11; and Patrick F. Houlihan and Steven M. Goodman, *The birds of ancient Egypt*, (Warminster, England: Aris and Phillips, 1986), p. 106.





Figure A2.36: An Egyptian turtle dove. Color drawing by author © 2020, after the Bree and Fawcett sketch in *A history of the birds of Europe, not observed in the British Isles* (1859).

African interior.<sup>704</sup> Egyptian turtle doves are smaller than other Columbidae, have a black bill with red rims around the eyes, brown to black feathers, black and white neck stripes that develop after the juvenile stage, and a wedged tail with white ends.<sup>705</sup> These turtle doves are loving and

<sup>704</sup> “European Turtle-Dove (Egyptian) (*Streptopelia turtur rufescens* Brehm),” *Avibase – The World Bird Database*, (Accessed July 4, 2020), <https://avibase.bsc-eoc.org/species.jsp?avibaseid=28B02FC068295CAE>.

<sup>705</sup> Houlihan and Goodman, *The birds of ancient Egypt*, pp. 103-106; BirdLife International, “Habitat and Ecology,” in *Streptopelia turtur: The IUCN Red List of Threatened Species*, ed. by the IUCN Global Species Programme, (Gland, Switzerland: IUCN, 2019), pp. 4-5

affectionate, and are known for their love of open spaces, nesting, trees, shrubbery, orchards, and expansive gardens where they can easily graze for food.<sup>706</sup> This type of dove was called ṣṣ (𓆎𓆏) in Egyptian<sup>707</sup> and their Latin name *turtur* is an onomatopoeia of the purring sound they make, which is often transcribed: *turr-turr*, *turr-turr*.<sup>708</sup> The Egyptian name must refer to their many flocks in pharaonic Egypt, as ṣṣ (𓆎𓆏𓆏𓆏) denotes “many/quantity/multitude,”<sup>709</sup> in addition to their talkative friendly nature, which is related to the verb ṣṣ-r (𓆎𓆏𓆏𓆏𓆏) “to be talkative (or lit. to be manifold in utterance)”<sup>710</sup> and the adjective ṣṣ-hrw (𓆎𓆏𓆏𓆏𓆏𓆏) or “talkative.”<sup>711</sup> The ancient Egyptians prepared dove and pigeons spp. into savory broths with goose fat for funerary banquets while the Nubian-Sudanese tradition of boiling, grilling, frying, and/or stuffing them with wheat and onions might derive from pharaonic times as well.<sup>712</sup>

### **Pintail and Mallard Duck (*Anas acuta* L. and *Anas platyrhynchos* L.)**

Double click on the icon to listen to their calls here<sup>713</sup>: (1)



(2)



The pintail and mallard duck are staples in Egyptian funerary art since the Second Dynasty at Saqqara.<sup>714</sup> The pintail and mallard are depicted in the formal garden scenes, as well as in their produce shown in relevant surrounding tomb scenes. These birds and their ducklings are shown realistic like Gardiner G39 (𓆎𓆏), G49 (𓆎𓆏𓆏), and G169 (𓆎𓆏𓆏). The pintail and mallard duck have green to brown squarish heads, triangular beaks with short thin necks, and large oval bodies with

<sup>706</sup> BirdLife International, “Habitat and Ecology,” p. 4; “Turledove,” *Online Etymology Dictionary*, (accessed August 28, 2020), <https://www.etymonline.com/search?q=turtledove>.

<sup>707</sup> Erman and Grapow, *WB* I, no. 229.11; Faulkner, *A Concise Dictionary of Middle Egyptian*, p. 48; Faulkner and Saba, *Egyptian Grammar*,

<sup>708</sup> Turledove,” *Online Etymology Dictionary*, (accessed August 28, 2020), <https://www.etymonline.com/search?q=turtledove>.

<sup>709</sup> Erman and Grapow, *WB* I, nos. 228-14-.24, 229.1-.4; Faulkner and Saba, *Egyptian Grammar*, p. 475.

<sup>710</sup> Erman and Grapow, *WB* I, no. 228.17; *WB* II, no. 391.24.

<sup>711</sup> Erman and Grapow, *WB* I, no. 228.18; *WB* II, no. 228.9.

<sup>712</sup> Mehdaawy and Hussein, *The Pharaoh's Kitchen*, pp. 65, 71.


<sup>713</sup> (1) *A. acuta* recorded by Marco Dragonetti in Orbetello (2012) and (2) *A. platyrhynchos* calls recorded by Jorge Leitão in Genneper Parken, Eindhoven (2020) via Xeno-Canto: Sharing Bird Sounds from Around the World.

<sup>714</sup> Houlihan and Goodman, *The birds of ancient Egypt*, p. 72.






Figure A2.37: Pintail swimming and a mallard walking in a clover meadow. Photographs courtesy of Dr. Rients E. Niks, Professor of Plant Science, University of Wageningen, The Netherlands © 2019.

distinctly colored feathers in grey, white, brown, black, and blue. The wild ducks prefer to breed in Eurasia and spend the winter in both Upper and Lower Egypt along the Nile Basin, in oases, the Fayyum Region, and in other parts of North Africa, such as: Tunisia, Morocco, and Asia Minor.<sup>715</sup> The ducks that were raised in the actual formal gardens were likely domesticated and not wild – as in the marsh hunting scenes – since “ancient Egyptian aviculturists [knew that] pintails soon became tame and in time...readily breed.”<sup>716</sup> In the relevant surrounding scenes, the ducks are shown in offering bundles; and for good reason, as they were a good source of nourishment due to their meat and fat.<sup>717</sup> As “guarant[ors of] sexual vigor,”<sup>718</sup> they were associated with Hathor and rebirth, evident from the presence of ducklings (TT 93 #1 and TT E2 scenes) and eventual egg laying or *st ms* (  ) once the tomb paintings were magically imbued. They were further related

<sup>715</sup> Houlihan and Goodman, *The birds of ancient Egypt*, pp. 71-72; Natalie Baum, *Arbres et arbustes*, p. 252.

<sup>716</sup> Houlihan and Goodman, *The birds of ancient Egypt*, p. 72.

<sup>717</sup> Salima Ikram, *Choice cuts:  Meat production in ancient Egypt*, (Leuven: Peeters, 1995), p. 28.

<sup>718</sup> Rozenn Bailleul-LeSuer, “Bird Motifs in Ancient Egyptian Arts and Crafts,” in *Between Heaven and Earth*, ed. by Rozenn Bailleul-LeSuer, (Chicago: Oriental Institute, 2012), p. 167.

to the transformative passage across water to become a glorified spirit (*sh*). This is evident from Pyramid Texts Recitation 521 from ‘Summoning the Ferryman’ in the Pyramids of Pepy I and Menenra I:

Is it a grey goose (speaking)?” (asks the ferryman). Fetch him! “Is it a pintail duck?” Fetch her! “Is it a steer?” Fetch him! You scud as a heron, father, your form like a ‘youngsters’-father’ (heron). So... you go to your fathers who are at the fore of Spread-Lake.<sup>719</sup>


As well as, in Pyramid Texts Recitation 270 ‘For Crossing the Akhet’ in the Pyramid of Wenis:

...There is no accusation of a duck against me...So, should you not transport me, I will jump up and put myself on a wing of Thoth, and he is the one who will transport me to yonder side.<sup>720</sup>

### **Red-Breasted Goose (*Branta ruficollis* Pallas)**

*Double click on the icon to listen to their call here*<sup>721</sup>:



Domesticated red-breasted geese are depicted realistic like Gardiner M38 () swimming in the pool, pond, or lake of the formal gardens. The goose is shown in tomb art from the Old Kingdom onwards.<sup>722</sup> The wild red-breasted goose breeds in Siberia, winters in North Africa, Eurasia, and Asia Minor, and has a small bill, head with black and white plumage, an arched bronze neck, and an average sized body with black and white wings.<sup>723</sup> The goose was associated with Geb, the Amun goose, and the deceased’s rebirth and resurrection, which is evident from Pyramid Texts Recitation 302 for ‘Ascending Towards the Sky’ in the Pyramid of Wenis:

...People hide, the gods fly away, for Sothis has flown me to the sky amidst my brothers the gods...My seat is with you, Sun, and I do not give it to any other. So, I go up to the sky by you, Sun, my face as that of falcons, my wings as those of birds, my nails as the talons of He of Atfet. Paths-Parter has flown me to the sky among my brothers the gods. I have acquired arms as a Nile goose, I have beaten wing as a kite. A flier flies, people: I fly away

---

<sup>719</sup> Allen, *The ancient Egyptian pyramid texts*, pp. 167, 226.

<sup>720</sup> Allen, *The ancient Egyptian pyramid texts*, 53.

<sup>721</sup> *B. ruficollis* Pallas call recorded by Mark Pearse in St. James’s Park, London (2019) via Xeno-Canto: Sharing Bird Sounds from Around the World.

<sup>722</sup> Houlihan and Goodman, *The birds of ancient Egypt*, pp. 61-62.

<sup>723</sup> Houlihan and Goodman, *The birds of ancient Egypt*, pp. 61-62.

from you.<sup>724</sup>

As well as, from the goose's role in the transformative passage of the deceased across water to be reborn from Pyramid Texts Recitation 522 in 'Summoning the Ferry' in the Pyramid of Menenra I dated to the Sixth Dynasty:

O, Hapi, Imseti, Duamutef, and Qebehsenuf! Fetch for me that Khnum-made boat that is in that Canal of the Goose. Swallow open the path for me!<sup>725</sup>

The goose's presence in the funeral offerings for the deceased's *k3* and *b3* and the transcendence to heaven is described in Pyramid Texts Recitation 711 for 'Sending the Spirit to the Sun' in the Pyramid of Pepy II:

...You serve yourself a Nile goose...Ascender, ascend! [Go up to your house, as a star] atop your house, and save your children [from] mourning. Your offering stand has made firm those on earth for the course of eternity.<sup>726</sup>

In Coffin Texts 190:

I fly up as a swallow, I gabble as a goose. I swoop down on the sycamore that nourishes the one who endows it in the midst of the flood. I have been granted an alighting on the leaves of the *hes-neferet*-tree on the isle of the flood. I have been granted an alighting on the beautiful sycamore on the hill of the two sycamores of the two floods.<sup>727</sup>

And from Coffins Texts 205:

I have risen to the place where *maat* is, I have flown up as a swallow, like Thoth, I have cried out to them as a goose, like Shesemu, I have flown up as a *gebga*-goose on that great shore. I stand on it, I appear as a god. The one they espy, he does not "land."<sup>728</sup>

The red-breasted goose as a source of rebirth and resurrection in the formal gardens is supported by the ancient Egyptians' observations of their "erotic...vociferous and ecstatic behaviour...during mating season."<sup>729</sup> The quacking of the geese was associated with Geb's solar form as the 'Great

---

<sup>724</sup> Allen, *The ancient Egyptian pyramid texts*, p. 60.

<sup>725</sup> Allen, *The ancient Egyptian pyramid texts*, p. 227.

<sup>726</sup> Allen, *The ancient Egyptian pyramid texts*, p. 280.

<sup>727</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 348

<sup>728</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 348.

<sup>729</sup> Foy Scalf, "Birds in Creation Myths," in *Between Heaven and Earth*, ed. by Rozenn Bailleul-LeSuer, (Chicago: OI, 2012), p. 131.



Figure A2.38: A red-breasted goose in a meadow. Photography courtesy of Dr. Rients N. Niks, Professor of Plant Sciences, University of Wageningen, The Netherlands © 2019.

Cackler’ because when he gave birth or *st ms* (𓆎𓆏) to the cosmic egg on the primaeval mound, he quacked and the sun-god Ra hatched forth in the form of the *bnw*-bird (or solar phoenix).<sup>730</sup> Geb’s association with the geese in the formal gardens is likewise apparent from the Egyptian word for goose: *gb* (𓆎𓆏) and from his iconography with a goose upon his head. Although the red-breasted goose can be aggressive in the wild, propagating them in the formal gardens was likely not as difficult, as they quickly become docile following domestication.<sup>731</sup>

### *Hrꜥ*-Duck (?)


This type of ‘duck’ is either “a specific edible bird”<sup>732</sup> and/or denotes “poultry in general”<sup>733</sup> in Egyptian. The *hrꜥ*-duck (𓆎𓆏) is attested from the Old Kingdom onwards and appears alongside

<sup>730</sup> Sclaf, “Birds in Creation Myths,” p. 132.

<sup>731</sup> Houlihan and Goodman, *The birds of ancient Egypt*, p. 72.

<sup>732</sup> Erman and Grapow, *WB III*, no. 342.1.

<sup>733</sup> Erman and Grapow, *WB III*, no. 342.1.


the Egyptian turtle dove as a bird that was propagated in aviaries and *sš*-formal gardens.<sup>734</sup> It is interesting that this unknown edible duck species has the same name as a certain type of aviary called a *ḥt-ꜥ3* ()<sup>735</sup>

### **Fish in the Formal Gardens**

Fish, like waterfowl, were a source of nourishment for the ancient Egyptians from the Predynastic Period onwards. Spawning in the spring and growing to juvenile or adult by the summer, the Eighteenth Dynasty Egyptian's love of fish translated over into the *š*- and Domain of Amun formal gardens, which feature those that were commonly eaten. Remains of Catfish and Tilapia spp., for example, have been discovered in the kitchens of the priests' residences in the Amun cult at Karnak.<sup>736</sup> Fish were not only a source of nutrition, but a magical means to maintain the formal gardens for the deceased, as well as assisted in their transformation into an Osiris and a glorified spirit (*ꜥḥ*), evident from an offering inscription in Rekhmira (TT 100):

You will cross the river and traverse the Great Green, a shank of beef in your mouth. The goddess of the fields (comes to you) with her fish, and the mistress of fishing with her geese...<sup>737</sup>

### ***Boueza*- or Egyptian trunkfish (*Mormyrus niloticus* Bloch & Schneider)**

Egyptian trunkfish, also known as the *boueza*-fish in the Egyptian Arabic vernacular, appears in the *ḥrrt-š*-formal garden of the Domain of Amun in the TT 161 scene. The fish is shown realistic like Gardiner K4 () from the Fifth Dynasty onwards and swims in pools with carp, tilapia, catfish, and white lotus. The Egyptian trunkfish is a freshwater member of the Mormyridae family, also known as elephantfish, which are native to the Nile Basin, the White Nile, and especially Lake

<sup>734</sup> See the text from the Ptah Temple at Memphis in Chapter Three on p. 78 of this work.

<sup>735</sup> See the discussion about this type of aviary in Chapter Three on pp. 78-79, esp. footnote 304 of this work.

<sup>736</sup> Angela von den Driesch, "Some Archaeozoological Remarks on Fishes in Ancient Egypt," in *Animals and Archaeology II*, by Caroline Grigson and Juliet Clutton-Brock, (Oxford: BAR Series, 1983), Table 2; Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 16.

<sup>737</sup> Assmann, *Death and Salvation in Ancient Egypt*, pp. 276-277.

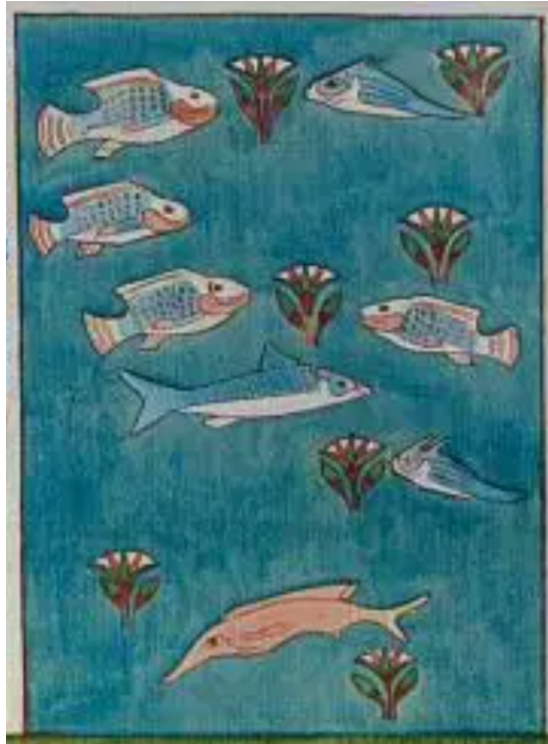


Figure A2.39: *Tilapia* spp., *Labeo* spp., *Syndontis* spp., and Egyptian trunkfish floating and eating at white lotus in the pool of the Theban *ḥrrt-š*-formal garden of Amun depicted in the TT 161 scene. Photograph of the Brussels's facsimile by author © 2014.

Albert in the Eastern Delta.<sup>738</sup> Trunkfish spp. are most recognizable from their elongated snout, tiny eyes, and small silver pectoral fins and long dorsal fins.<sup>739</sup> The trunkfish was not only a source of nourishment in the formal gardens, but like the white lotus, was associated with the moon – the night time Osirian aspect of Ra – as trunkfish are “very active at night and spends the day quietly at the bottom of [a pool/pond/lake].”<sup>740</sup> This is evident from the shepherd’s songs (*Hirtenliedes*) in the mastaba-tombs of Ti, Mereruka, and Sekhemankhptah dated from Fifth to Sixth Dynasty:

...The shepherd is in the water among the fishes, so he talks to the Mormyrus: “Oh, our shepherd, Oh Westerner!” He talks to the catfish: “West! Where is the shepherd? The shepherd went west.”<sup>741</sup>

<sup>738</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 51.

<sup>739</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 51.

<sup>740</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 51.

<sup>741</sup> Ingrid Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, (Wiesbaden: Harrassowitz, 1970), p. 122; Hans Goedicke, „Eine Variante des „Hirtenliedes“,“ *WZKM* 54 (1957): p. 47.



Here, the Egyptian trunkfish and catfish aid in the deceased's rebirth and resurrection as pilots to the West.

### Catfish (*Syndontis* spp.)

Catfish spp. are depicted realistically like Gardiner K4A (𓆎) in the pools, ponds, or lakes of the š- and the Domain of Amun formal garden scenes. Thirteen freshwater species of the catfish family Mochokidae are native to Egypt, the Nile Basin, and tropical Africa, varying in size from small to large (5-120 cm or 2-47 inches).<sup>742</sup> The Wahrindi (*Syndontis schall* Bloch & Schneider) was called *wh̥(w)* (𓆎𓆎) in Egyptian,<sup>743</sup> which is interestingly similar to the verb *wh̥* (𓆎𓆎𓆎𓆎𓆎𓆎) or “to fish and fowl,”<sup>744</sup> *wh̥(w)* (𓆎𓆎) or “fishers and fowlers,”<sup>745</sup> and *wh̥* (𓆎) or “a fisherman's boat.”<sup>746</sup> These types of catfish have medium-sized eyes, strong cephalon-nuchal bumps, serrated spines, spotted brownish, black or silver scales, and cat-like barbels around their mouths.<sup>747</sup> While, *n̥r* (𓆎𓆎; 𓆎𓆎) and *s̥r(y)r* (𓆎𓆎𓆎𓆎) denote air-breathing catfish of the *Heterobranchus* spp.<sup>748</sup> Catfish were perfect for water features because, like carp, they are bottom feeders who love to burrow into shallow muddy ponds, lakes, and pools and eat insect larvae, small fish, algae, and detritus.<sup>749</sup> *Syndontis schall* Bloch & Schneider remains were even discovered in the pool of the š-formal garden of the Memorial Temple of

<sup>742</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 67; Dietrich Sahrhage, *Fischfang und Fischkult im alten Ägypten*, (Mainz am Rhein: PvZ, 1997), p. 70; Salima Ikram, *Choice cuts: 𓆎𓆎 Meat production in ancient Egypt*, (Leuven: Peeters, 1995), p. 10.

<sup>743</sup> Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 32.

<sup>744</sup> Erman and Grapow, *WB I*, no. 350.7.

<sup>745</sup> Erman and Grapow, *WB I*, nos. 350.1-6.

<sup>746</sup> Erman and Grapow, *WB I*, no. 348.2.

<sup>747</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 67; Sahrhage, *Fischfang und Fischkult im alten Ägypten*, p. 70; Ikram, *Choice cuts*, p. 10.

<sup>748</sup> For *n̥r*, see Erman and Grapow, *WB II*, nos. 209.1-6; for *s̥r*, see Guillemette Andreu-Lanoë and Sylvie Cauville, « Vocabulaire absent du Wörterbuch (I), » *RdE* 29 (1977): p. 11.

<sup>749</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 67; Sahrhage, *Fischfang und Fischkult im alten Ägypten*, p. 70; Ikram, *Choice cuts*, p. 10. The Egyptians were aware of the catfish's predilection for this habitat, evident from the Late Period sarcophagus of the dwarf Djedher (CG 29302), which says: “O catfish whose secret forms are within the earth,” see Colleen Manassa, *The Late Period Underworld: Sarcophagi and Related Texts from the Nectanebid Period*, (Wiesbaden, Harrassowitz, 2007), p. 50.



Amenhotep, Son of Hapu.<sup>750</sup> Catfish, like the Egyptian trunkfish, was related to the moon – the night aspect of Ra-Osiris<sup>751</sup> and assisted in the deceased's rebirth and resurrection as a journeyman to the West in Old Kingdom shepherd's songs. This is evident from the Book of Caverns where 11 catfish daemons guarded the entrance to the horizon so that Ra could make his morning rise<sup>752</sup> and guide the *bꜣw* of the dead into the West:

...O Catfish, lords of provisions, manifesting ones, who become/come from Osiris! O those who exist as Mekhentyenirty gods who become/come from Horus, lords of the provisions in the forepart of the Duat, powerful upon their corpses. O those in the following of the one foremost of the Duat, Catfish, great of provisions! O these great gods within their sarcophagi, Behold, I call to you, with the result that your *bas* might be powerful in the west...<sup>753</sup>

Their protective power in formal gardens is further evident from their function in Coffin Texts 312 in which the deceased condemns Seth (*isft* or chaos):

...To be recited over a waxen representation of an enemy, inscribed with the name of that enemy on its breast, with the bone of a *whꜥ*-fish (*Synodontis* spp.); put it in the earth at the place of Osiris:...Behold that enemy of mine among men, in the netherworld, and among all creatures, he has allied himself with Seth... May you ruin him and bring him to collapse...<sup>754</sup>

The notion of dualism – moon and sun, light and dark, creator and destroyer, aggressor and pacifier – is evident for the catfish. They were fierce guardians of Ra, Osiris, and the deceased but were also known to be friendly and gentle. This is according to classical sources that speak of the catfish in the sacred lake of the Temple of Bastet in the Eastern Delta:

In Bubastis, Egypt, there is an artificial pool with many tamed catfish; wherein they throw pieces of bread and they competitively leap for them as nourishment...<sup>755</sup>

<sup>750</sup> Robichon and Varille, « Fouilles des temples funéraires thébains, » *Rdé* 3 (1938): pp. 99-102, pls. V-VII; Hugonot, *Le jardin dans l'Égypte ancienne*, p. 75, figs. 56-57.

<sup>751</sup> Faulkner, *A Concise Dictionary of Middle Egyptian*, p. 66; Ingrid Gamer-Wallert, „Ente,“ in *LÄ* I.8, eds. by Wolfgang Helck and Eberhard Otto, (Wiesbaden: Harrassowitz, 1975), p. 1210; Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 117.

<sup>752</sup> Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 118.

<sup>753</sup> Manassa, *The Late Period Underworld: Sarcophagi and Related Texts from the Nectanebid Period*, p. 334.

<sup>754</sup> Assmann, *Death and Salvation in Ancient Egypt*, p. 159.

<sup>755</sup> The author's own up-to-date translation. See the Latin original in Ælianus, *et al.*, *Claudii Æliani: De natura animalium libri XII*, (Cambridge: Harvard University Press, 1864), p. 181.

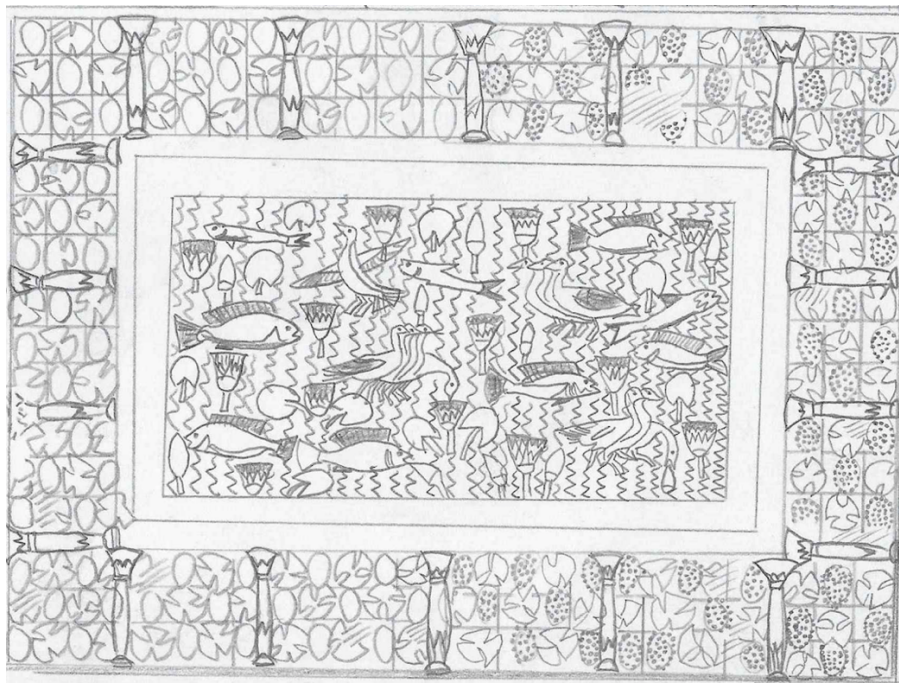


Figure A2.40: *Lotus* spp., red-breasted geese, *Tilapia* spp., likely *T. zillii*, Catfish spp., and Elephantfish spp. floating and eating the vegetation in the pool of Qenamun's š-formal garden (TT 93 #2 scene). Drawing by author © 2020, after Plate XLVII in de Garis-Davies (1930).

The catfish in formal gardens were likewise associated with Bastet due to their appearance and behavior: their barbels look like whiskers and catfish are squeakers, which means they make sounds with their fins reminiscent of cat hissing.<sup>756</sup>

### **Carp (*Labeo* spp.)**



Carp spp. occur in the water features of š- and Domain of Amun formal gardens and are realistically depicted in art from the Fifth Dynasty onwards. Four species of freshwater carp are native to Egypt and widespread throughout the Nile Basin:

- 1) African carp (*L. coubie* L.)
- 2) Assuan labeo (*L. horie* Herkel)
- 3) Nile carp (*L. niloticus* L.)
- 4) Nülinhuulibarbi or Nile lip barbie (*L. forskalii* Rüppell)

<sup>756</sup> Claude Gaillard, *Recherches sur les poissons représentés dans quelques tombeaux égyptiens de l'Ancien Empire*, (Cairo: IFAO, 1923), p. 54; Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 118.

Carp spp. grows up to 50 centimeters (20 inches) long, have large lips<sup>757</sup> with barbels, medium sized eyes, large caudal fins, small dorsal and pelvic fins, and silver to grey scalloped scales.<sup>758</sup> Carp love calm inshore waters and are “herbivorous bottom feeders – known to swallow great quantities of mud from which they digest the diatoms – leaves, grasses, algae, detritus, and insects.”<sup>759</sup> The religious symbolism of the carp is not known, but it is not surprising why the Egyptians included them in their formal gardens, as they would have naturally keep the water features clean and pest free.

### **Elephantfish (*Petrocephalus/Marcusenius* spp.)**

Elephantfish spp. appears in the š-formal garden scenes and are shown realistic like Gardiner K2 () and K3 (). There are 14 species of elephantfish native to the Nile Basin, which range in size from 15 centimeters to 1 meter (6 inches to 3.3 feet), have elephant-like nostrils, small inferior mouths and eyes, and are easily distinguishable from their identical dorsal and anal fins<sup>760</sup> (See Fig. A2.62). Elephantfish were also journeyman of the dead to the West like catfish and carp, and were protectors of Ra-Osiris, evident from Coffin Texts 35 (variation B2L):

The fish that are in the water protected me (from the...people who are in the watercourses), the fish that are in the watercourses cleanse me...<sup>761</sup>

### **Tilapia (*Tilapia* spp.) and Redbelly Tilapia (*T. zillii* Gervais = *Coptodon zillii* Gervais)**

Tilapia spp. occur in the š- and the Domain of Amun formal garden scenes, as well as in their produce in the relevant surrounding scenes. More than 70 species of tilapia exist in the Nile Basin, which range in size from small to large; they love shallow inshore waters, have triangular mouths,

---

<sup>757</sup> This species' family name *Labeo* literally means ‘the one who has large lips’ in Latin.

<sup>758</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, pp. 57-58.


<sup>759</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 58.

<sup>760</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 48; Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 122; Salima Ikram, *Choice cuts*, p. 36.

<sup>761</sup> Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 123.



Figure A2.41: Detail of the pool in Nebamun's š-formal garden with *Tilapia* spp., redbelly tilapia as well as red-breasted goose and pintail duck. Drawing by author © 2020, after Figure 102 (BM EA 37983) in Parkinson (2008).

small eyes, and distinct elongated silver blue dorsal fins that nearly reach their squarish caudal fins.<sup>762</sup> Tilapia are shown realistic like Gardiner K1 (); however, its specific taxon might not always be recognizable in Egyptian art. The redbelly tilapia (*T. zillii* Gervais = *Coptodon zillii* Gervais) is sometimes apparent due to its distinct red belly, especially in the TT E2 scene. Tilapia have been a preference in water features for centuries because they keep them clean and love algae and rooted aquatic flora unlike the Nile tilapia (*T. nilotica* L.) or the mango tilapia (*T. galilæa* L.).<sup>763</sup> Tilapia were protectors of the solar bark on its journey to the morning horizon, evident from a 'Hymn to the Sun' in Book of the Dead Spell 15:

You see the tilapia in its [true] form at the turquoise pool, and I behold the tilapia in its [true] nature guiding the speedy boat in its waters.<sup>764</sup>

<sup>762</sup> Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, pp. 13-14; Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, pp. 77, 79.

<sup>763</sup> Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, p. 128; Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 79; Gay Robins, *Women in ancient Egypt*, (London: British Museum Press, 1993), p. 188.

<sup>764</sup> Robins, *Women in ancient Egypt*, p. 188.

The Egyptians equated Tilapia spp. with the sun instead of the moon, Hathor's motherly aspect, and rebirth cycle because they are mouthbrooders. When their eggs hatch, the female will place them into the back her mouth in order to nurture them, only releasing the babies once they have hatched.<sup>765</sup> This is further clear from the name of Tilapia spp. in Egyptian: *w3d* (𓏏𓏏),<sup>766</sup> which like the papyrus in water features of the formal gardens, played on the verb *w3d* (𓏏𓏏) or "to flourish, to be green (fertile)."<sup>767</sup>

## Insects in the Formal Gardens

### Egyptian Honey Bee (*Apis mellifera lamarckii* Cockerell)

Egyptian honey bees are considered because of their indirect presence via the New Kingdom triangular honey pots (called *mnt-* or *mdkt-jars*<sup>768</sup>) shown among the formal garden produce in the relevant surrounding scenes. Egyptian honey bees are native to Egypt and Sudan<sup>769</sup> and shown stylized like Gardiner L2 (𓏏). An Egyptian honey bee was called *ʿfi-n-bit* (𓏏𓏏𓏏𓏏𓏏) or *ʿfi* (𓏏𓏏), coming from the same root as *ʿfi* (𓏏𓏏) or "to squeeze out."<sup>770</sup> In reality, this type of honey bee has six legs, a small ovate black and yellow abdomen, a hairy thorax, two forewings and hindwings, and two compound eyes with antennae. Egyptian honey bees are low in honey yield and collect nectar and pollen during their honeyflow season from January to June, producing their actual honey from April to June.<sup>771</sup>

Apiculture in Egypt is known from the Predynastic Period onwards and most famously from Niwoserra Any's sun-temple in the so-called *Weltskammer* or 'Room of Seasons,' dating to

<sup>765</sup> Brewer and Friedman, *Fish and Fishing in Ancient Egypt*, p. 79.

<sup>766</sup> Erman and Grapow, *WB I*, nos. 268, 399.7-.8; Gamer-Wallert, *Fische und Fischkulte im alten Ägypten*, pp. 25-26.

<sup>767</sup> Erman and Grapow, *WB I*, nos. 264.12-266.9.

<sup>768</sup> Differently shaped honey pots were used in the Old Kingdom. See Kritsky, *Tears of Re: Beekeeping in ancient Egypt*, p. 85.

<sup>769</sup> Soliman K. Kamel, *et al.*, "A scientific note on hygienic behavior in *Apis mellifera lamarckii* and *A. m. carnica* in Egypt," *Apidologie* 34 (2003): p. 189.

<sup>770</sup> Erman and Grapow, *WB I*, nos. 41.3.-4, 182.1-11.

<sup>771</sup> El-Kazafy, *et al.*, "Nectar and pollen sources for honeybees in Kafrelsheikh province of northern Egypt." pp. 1-4.



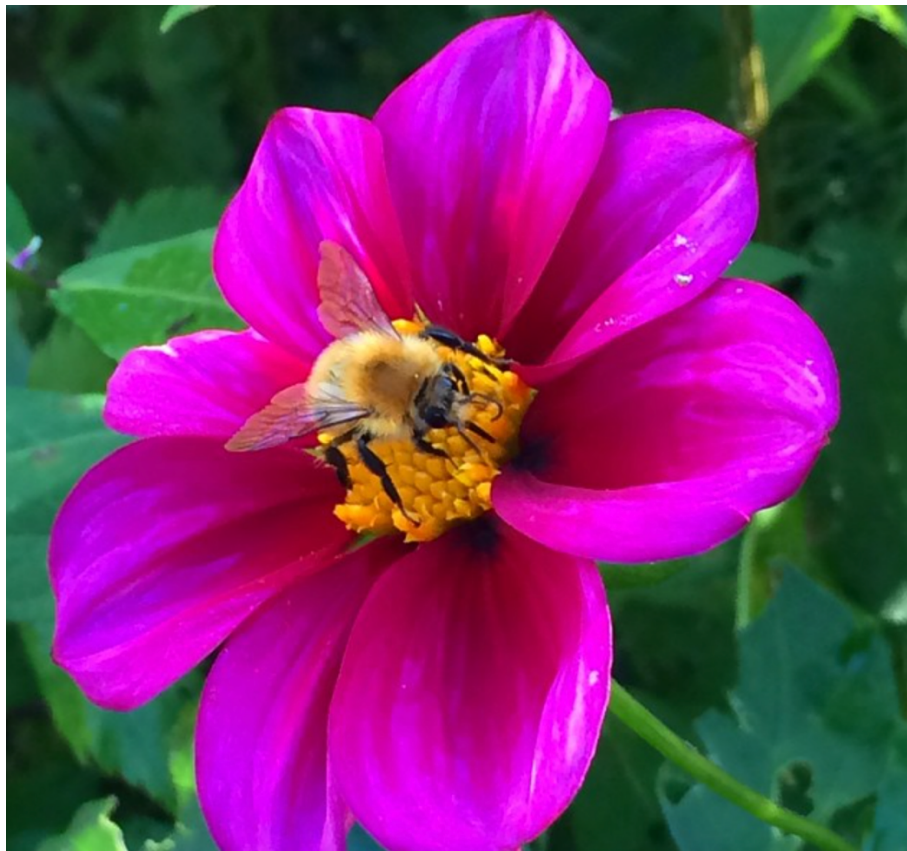


Figure A2.42: A busy bee collection pollen from a pink dahlia (*Dahlia pinnata* Cav.) in Monet's gardens at Giverny. Photograph by author © 2014.

the Sixth Dynasty.<sup>772</sup> Apiaries<sup>773</sup> were likely placed in the (formal) gardens of the elite and in temple domains, as the ancient Egyptians were well-aware of the bee's symbiotic relationship with plants, evident from Salt Papyrus 825 dated to the end of the Late Period (c. 300 B.C.):

As soon as all the bees had been fashioned, [their] work in the flowers of all the fields came into existence.<sup>774</sup>

Honey could be raised in formal gardens because of its importance in food and medicine. There are more than 500 medicinal cures that include honey and it was used as a rub on meats, in desserts,

---

<sup>772</sup> Kritsky, *The Tears of Re: Beekeeping in Ancient Egypt*, pp. 9-10.

<sup>773</sup> See the discussion of the possible term in Egyptian for an 'apiary' in Chapter Two, p. 33, footnote 144.

<sup>774</sup> See the updated translation in Colleen Manassa, "Sounds of the netherworld," in *Mythos and Ritual, Festschrift für Jan Assmann zum 70*, ed. by Benedikt Rothöhler, et al., (Münster: Lit Verlag, 2008), p. 115; and also Frank F. Leek, "Some evidence of bees and honey in ancient Egypt," *Bee World* 56.4 (1975): pp. 141-148; or Kritsky, *The Tears of Re: Beekeeping in Ancient Egypt*, p. 10.

and as a sweetener for wine and beer.<sup>775</sup> Honey was associated with the sun and had funerary and fertility symbolism. According to Salt Papyrus 825, bees and their honey were considered acts of solar creation by the sun-god due to their color, shape, and sweetness, which were referred to as the tears of Ra:

The god R[a] wept and the tears from his eyes fell on the ground and turned into a bee. The bee made (his honeycomb) and busied himself with the flowers of every plant; and so wax was made and also honey out of the tears of R[a].<sup>776</sup>

In funerary religion, honey was considered magical and aided in the deceased's rebirth as a glorified spirit (*ꜣḥ*), as it preserves indefinitely unless it is exposed to high temperatures<sup>777</sup> and evident from Pyramid Texts Recitations 429-30 for 'Invoking the Spirit and Nut' in the Pyramid of Pepy I:

Nut, as you became effective and took control in your mother Tefnut's belly before you were born, may you join Pep[y], and he will not die. You are the daughter who took control in her mother, having appeared as a bee. May you *ꜣḥ*-ify this Pep[y] inside you, and he will not die.<sup>778</sup>

As well as, in Pyramid Texts Recitation 444 for 'Joining Nut as a Star':

Nut, you have appeared as a bee, for you control the gods and their kas as well, and their inheritance as well, and their nourishment as well, and all their things as well. Nut, whenever you make me revive, I live. Nut, as you live, I live.<sup>779</sup>

Honey's use as an '*ꜣḥ*-ifying' and protective agent is one reason that beeswax was collected from apiaries and further used in mummification, as it was believed to symbolically destroy both the enemies of Horus and Ra (Salt Papyrus 825).

---

<sup>775</sup> Pierre Tallet, "Food in Ancient Egypt," in *A Companion to Food in the Ancient World*, eds. John Wilkins, et al., (Chichester: Wiley-Blackwell, 2015), p. 325; Mehdaawy and Hussein, *The Pharaoh's Kitchen*, p. 116; and Kritsky, *The Tears of Re: Beekeeping in Ancient Egypt*, pp. 87-88, 91-92.

<sup>776</sup> Leek, "Some evidence of bees and honey in ancient Egypt," pp. 141-148; Kritsky, *The Tears of Re: Beekeeping in Ancient Egypt*, p. 10.

<sup>777</sup> Kritsky, *The Tears of Re: Beekeeping in Ancient Egypt*, p. 106.

<sup>778</sup> Allen, *The ancient Egyptian pyramid texts*, p. 108.

<sup>779</sup> Allen, *The ancient Egyptian pyramid texts*, p. 112.



## Appendix III

### List of Figures

#### Š-Formal Garden Layouts (Not to Scale; Origin on the Last Page)

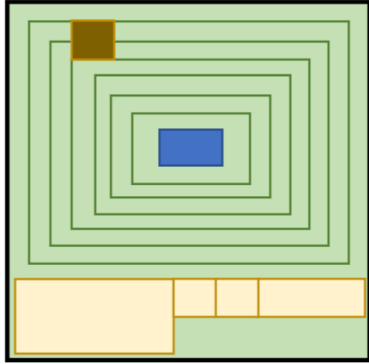


Figure A3.1: TT 81

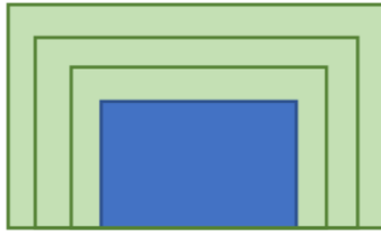


Figure A2.3: TT 109



Figure A3.5: TT 93 #2

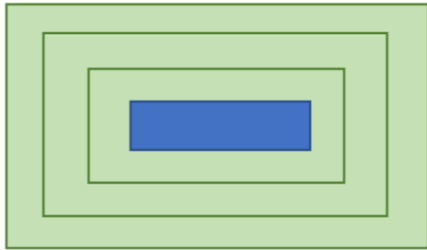


Figure A3.3: TT 85

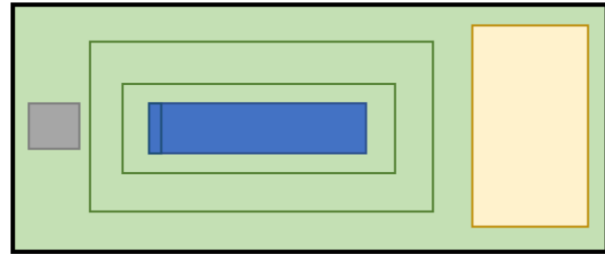


Figure A3.4: TT 100

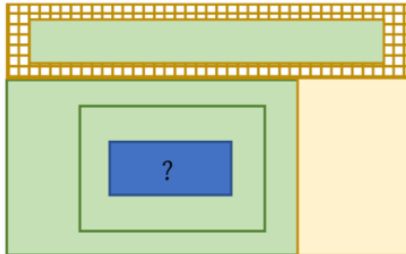


Figure A3.6: TT 80

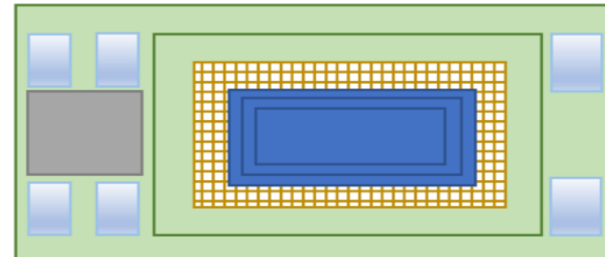


Figure A3.7: TT 93 #1



Figure A3.8: TT 93 #3

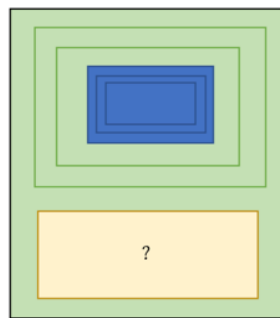


Figure A3.9: TT 63

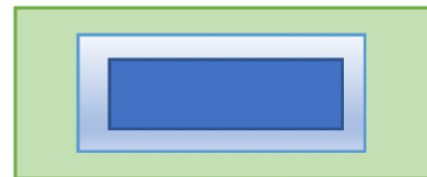


Figure A3.10: TT E2

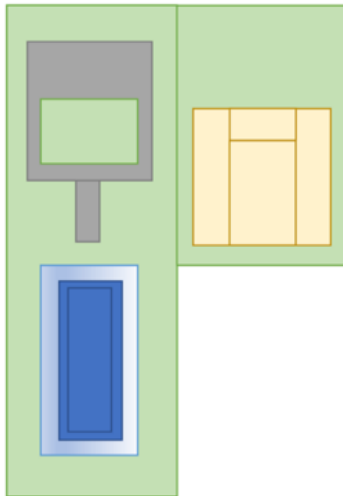


Figure A3.11: TT 334

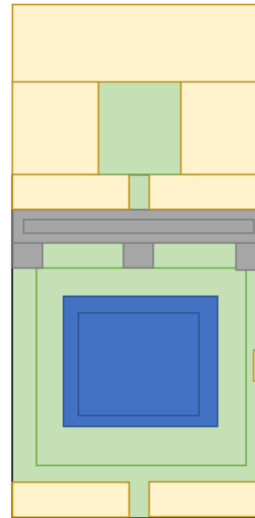


Figure A3.12: Memorial Temple of Amenhotep, Son of Hapu

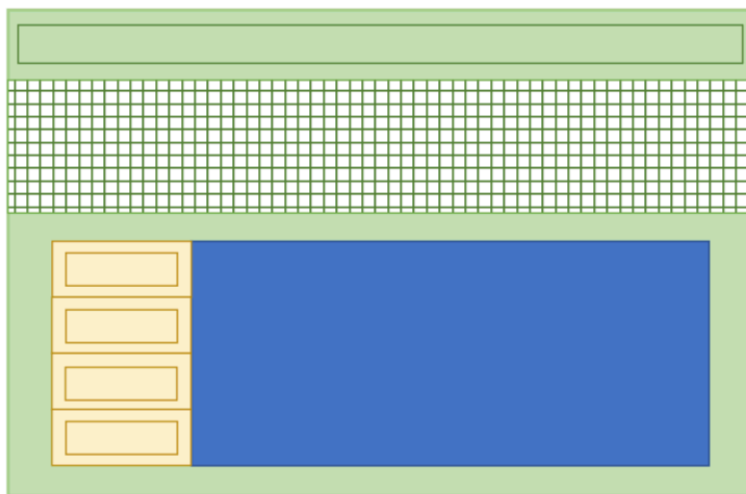


Figure A3.13: Memorial Temple of Hatshepsut

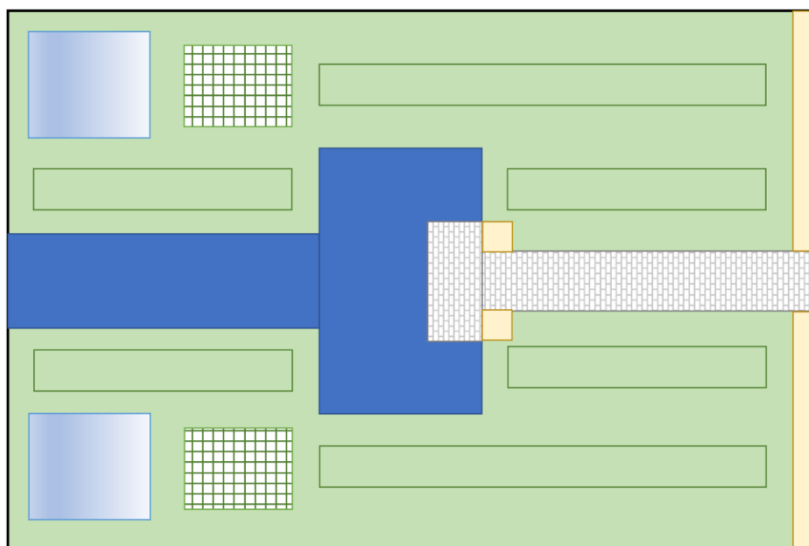


Figure A3.14: Karnak Main (Western) Entrance

**Domain of Amun Formal Garden Layouts (Not to Scale; Origin on the Last Page)**

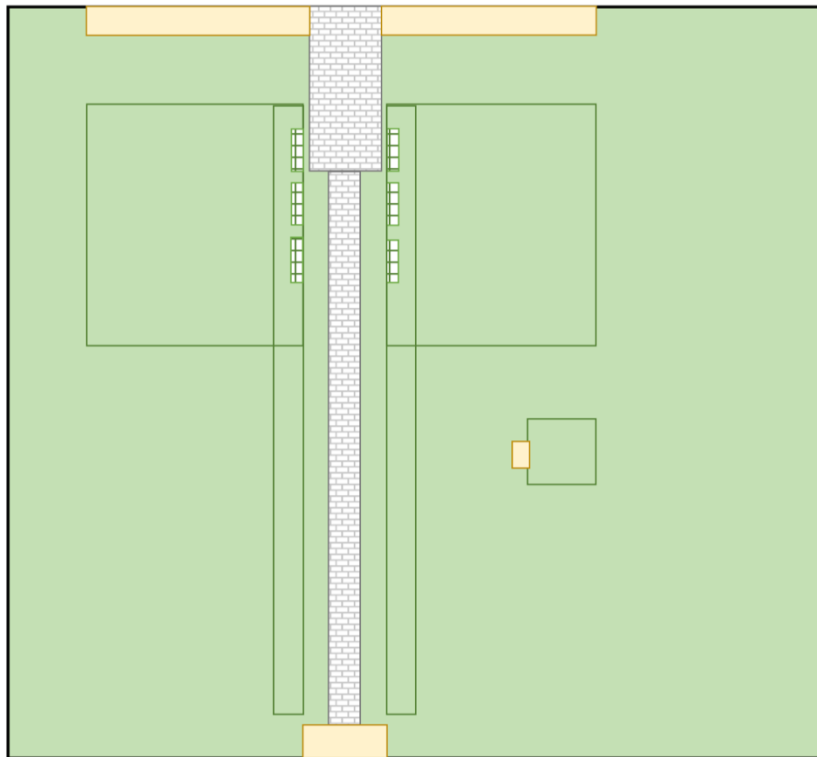


Figure A3.15: Memorial Temple of Montuhotep II

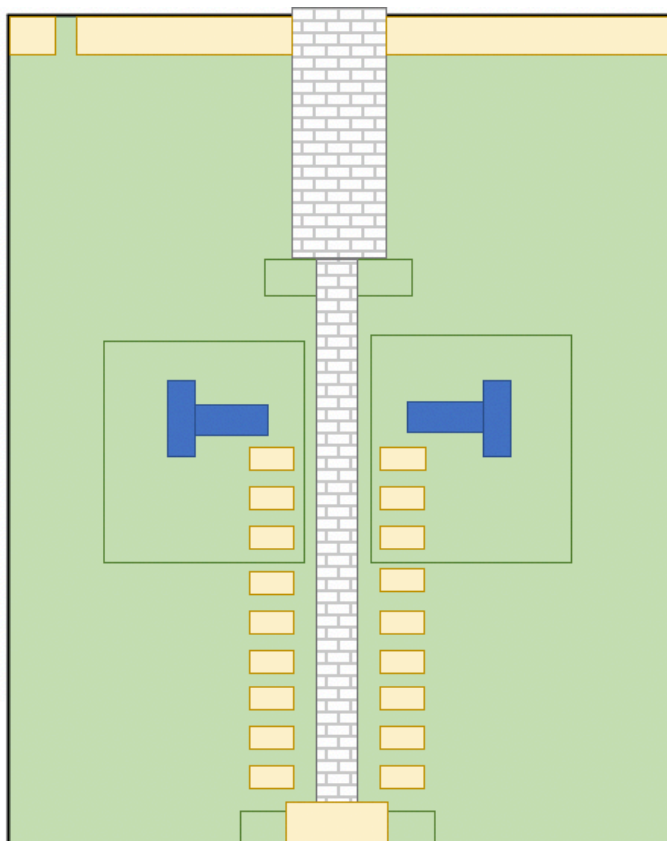


Figure A3.16: Memorial Temple of Hatshepsut

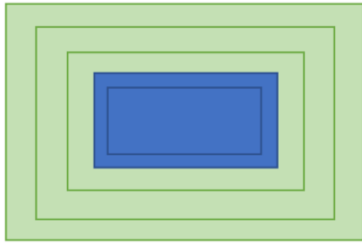


Figure A3.17: TT 39

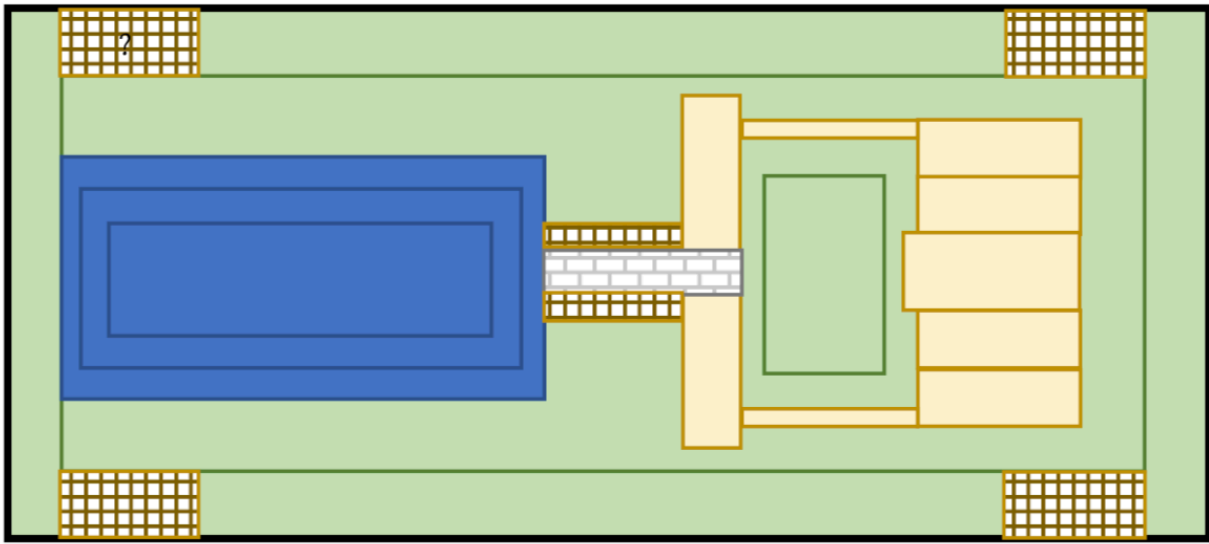


Figure A3.18: TT 87

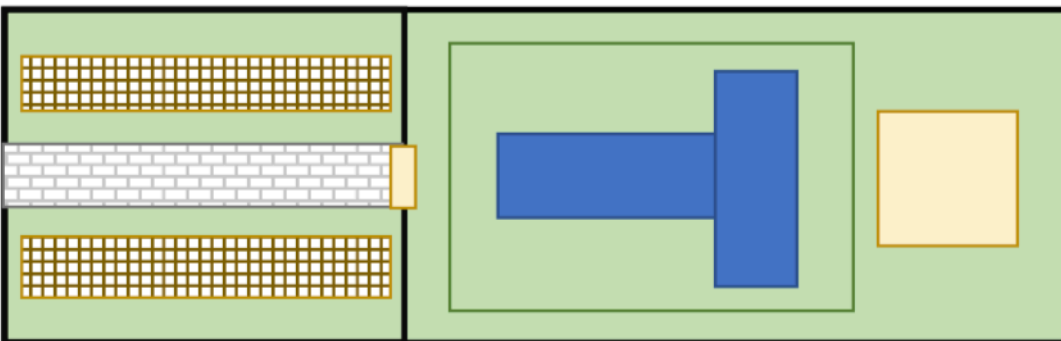


Figure A3.19: TT 90

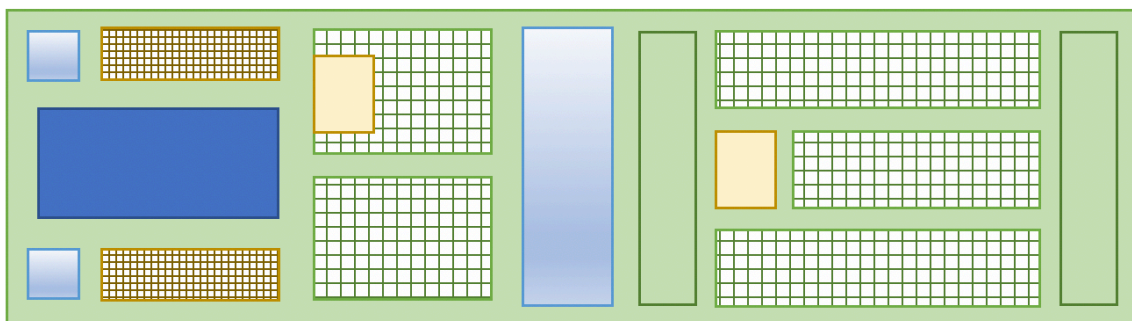


Figure A3.20: TT 161

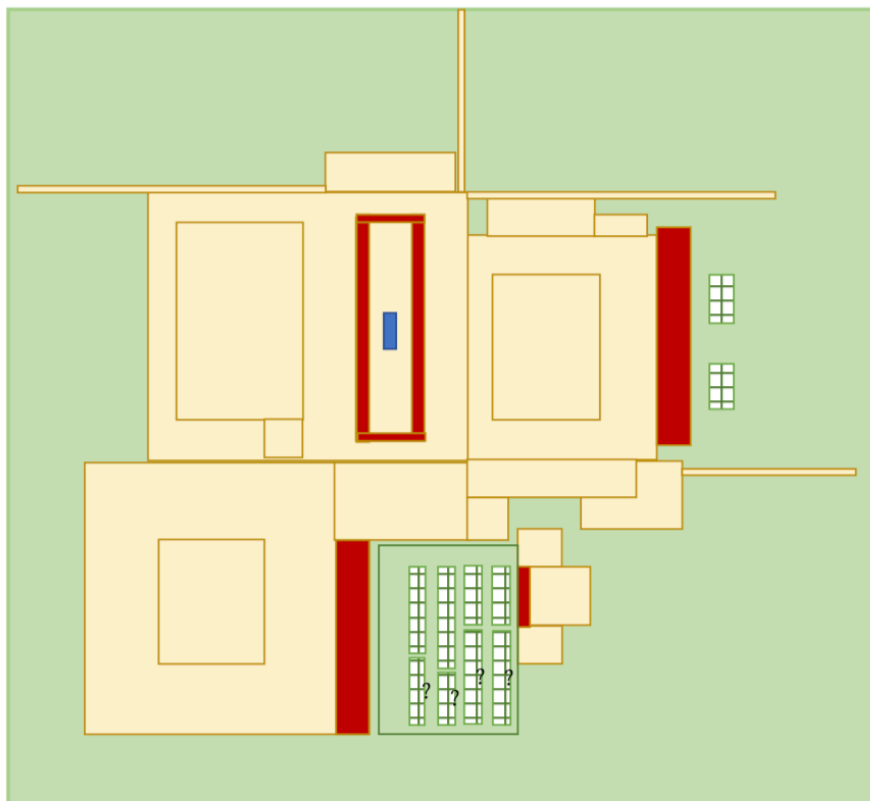


Figure A3.21: Middle Kingdom to Late Hyksos Period Palace F/I at Tell el-Daba'a

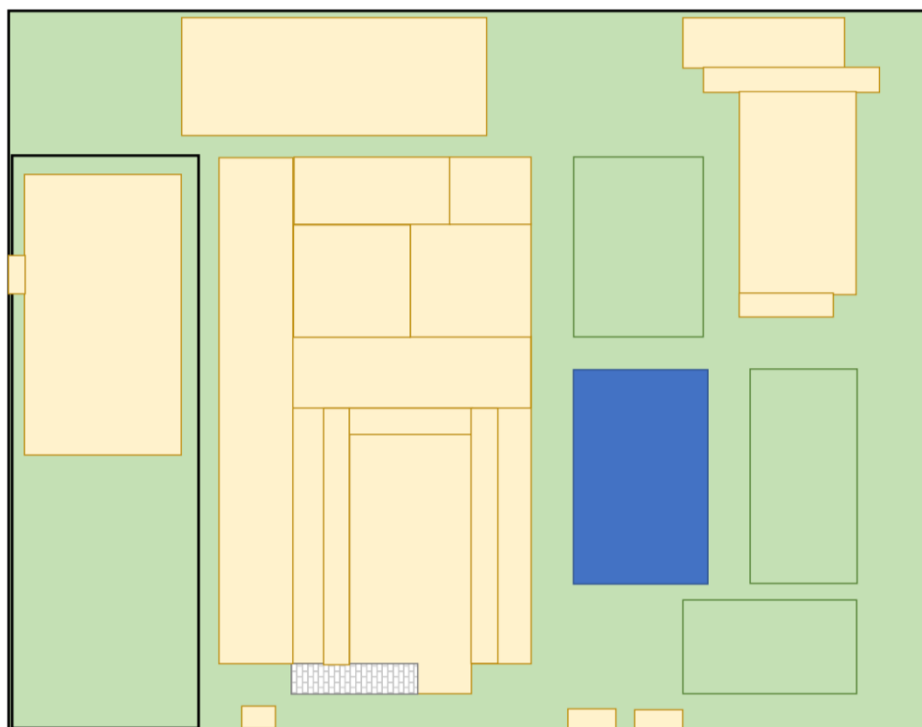


Figure A3.22: Perunefer Thutmose's Palace Complex F, J, & G

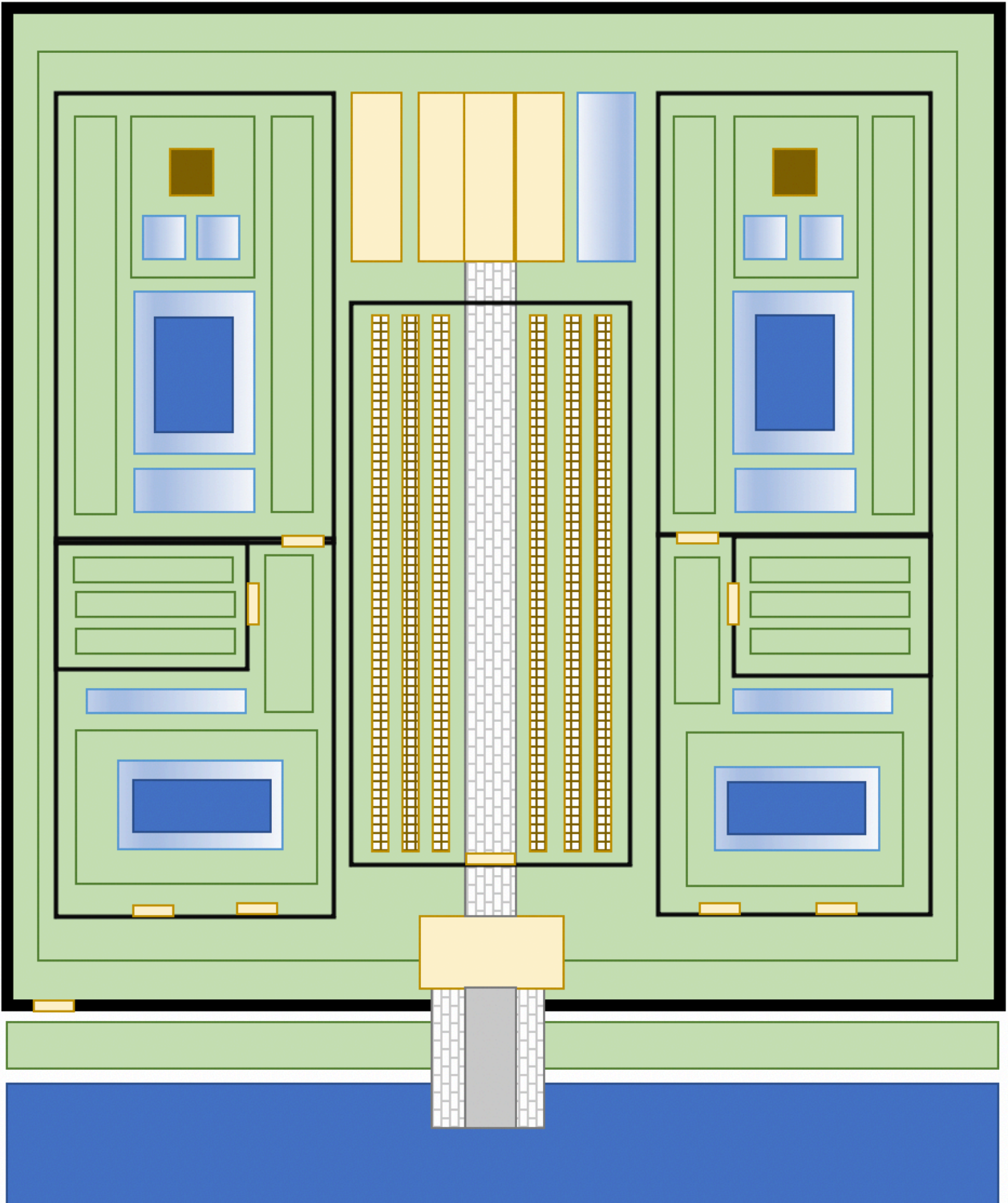

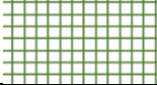




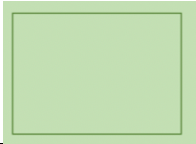
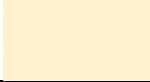



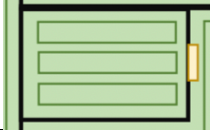
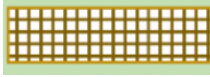
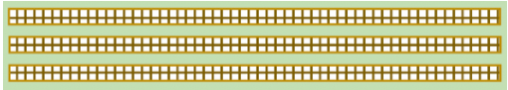




Figure A3.23: TT 96

Table A3.1: Origin for Formal Garden Layouts	
	Ground
	<i>Hsp</i> -plot
	Pool
	Water garden
	Pool surrounded by a water garden
	Processional way; quay
	Tree grove; tree avenue
	Architecture and/or sculpture
	Pavilion
	Stone architecture
	Painted peristyle
	Walled grove
 ; 	Pergola; arbor
	Large enclosure wall
	Small enclosure wall



## Miscellaneous Images

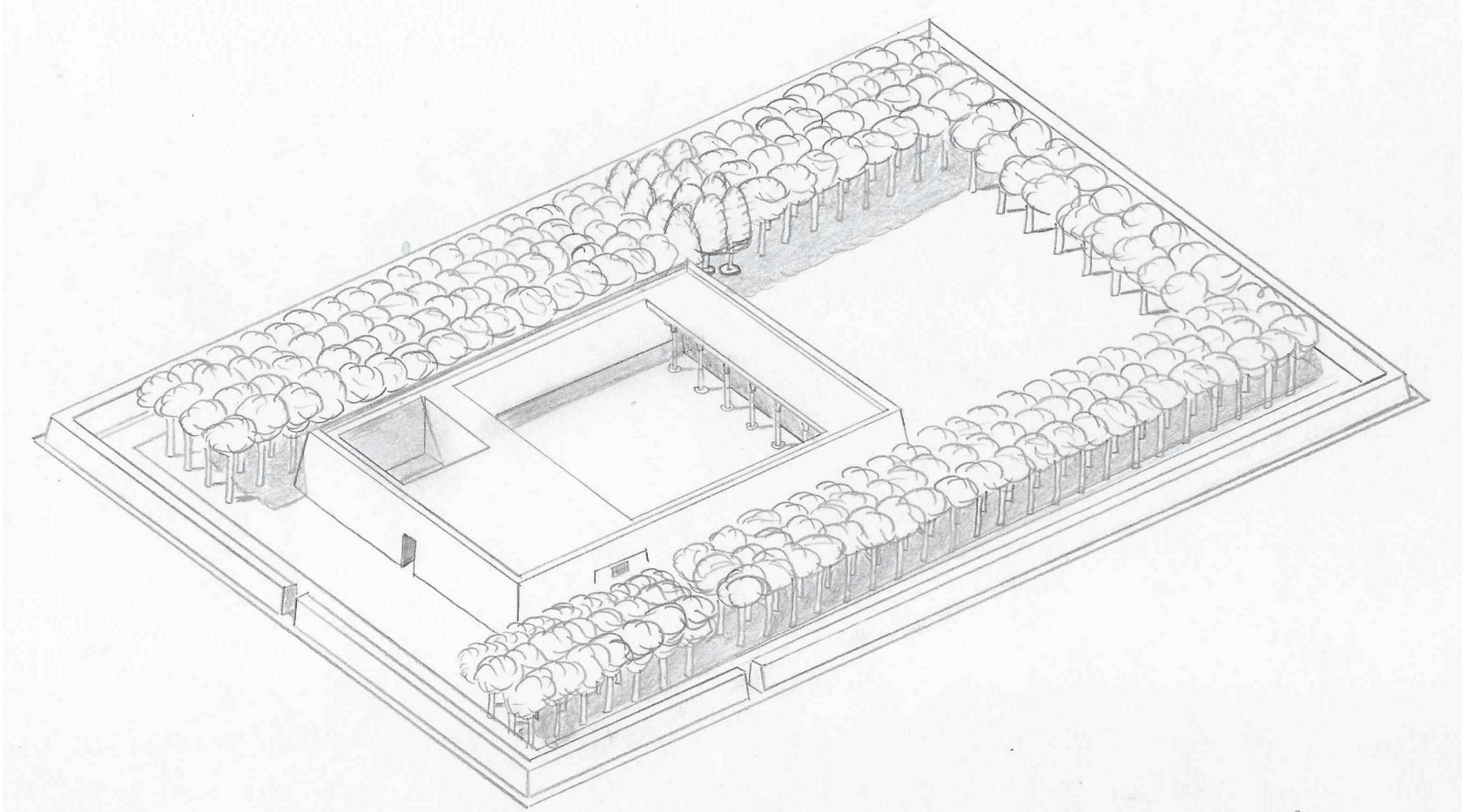


Figure A3.24: The *hnty-š*-formal garden (?) of the Bent Pyramid of Sneferu of the Fourth Dynasty at Dahshur. Drawing by author © 2020, after Figure 1 in Arnold (2019).

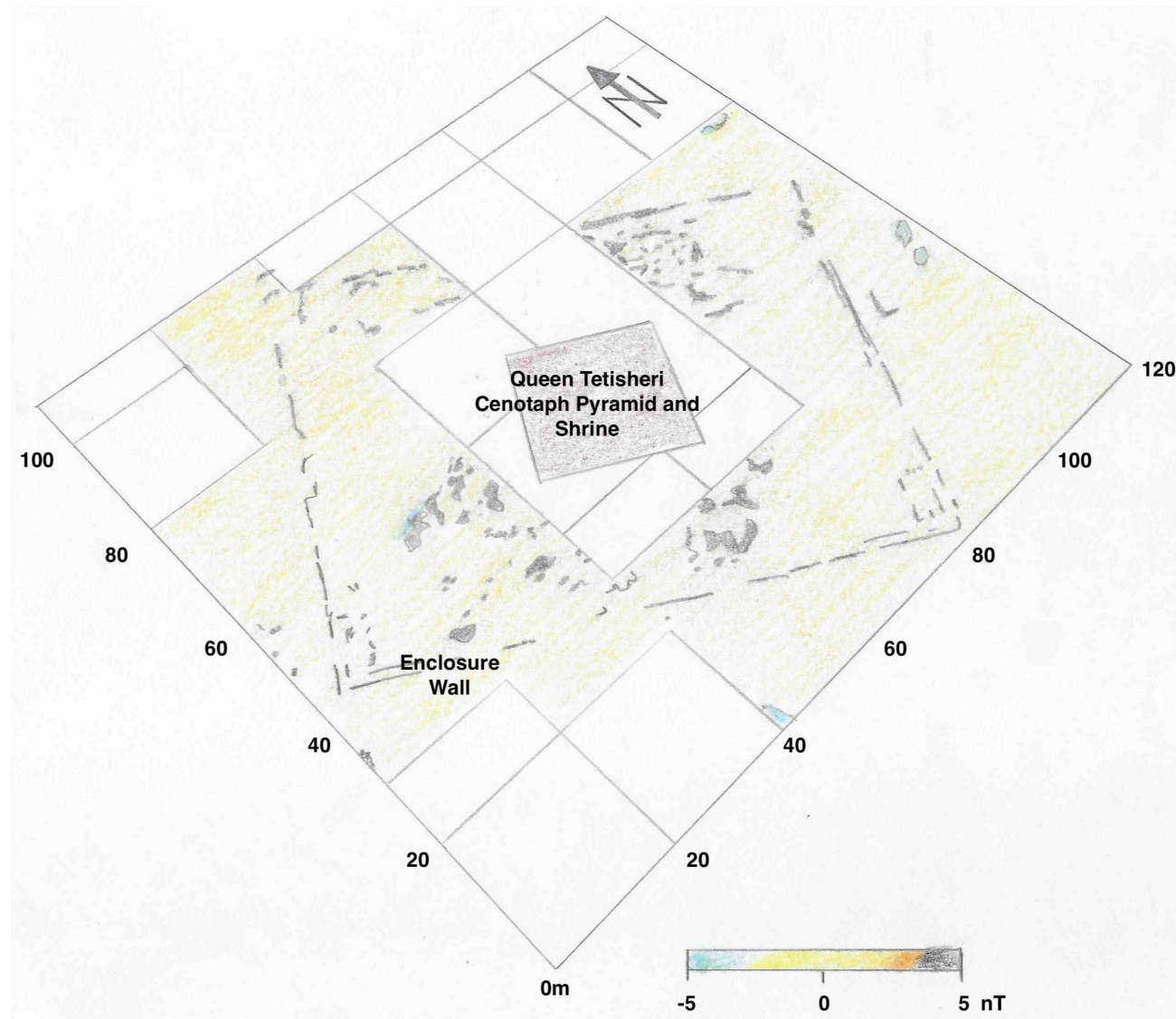


Figure A3.25: 3D archaeological surface plot of the Queen Tetisheri Cenotaph Pyramid and Shrine Enclosure at Abydos. Drawing by author © 2020, after Figure 8 by Herbig in Harvey (2004).





Figure A3.26: Satellite image taken on November 17, 2020 of the archaeological sites of Ahmose I at Abydos as well as those of Senwosret III of the Middle Kingdom. Screenshot by author via Google Earth © 2020.



Figure A3.27: Satellite image taken on November 17, 2020 of the archaeological sites of the Memorial Temples of Montuhotep II and Hatshepsut, and the Thutmose III Shrine at Deir el-Bahari on the West Bank of Thebes (modern-day Luxor). Note the outlines of the remains of their *hntyw-š*-formal gardens. Screenshot by author via Google Earth © 2020.





Figure A3.28: Satellite image taken on November 17, 2020 of the archaeological sites of the Memorial Temple of Thutmose III on the West Bank of Thebes (modern-day Luxor). Screenshot by author via Google Earth © 2020.



Figure A3.29: Satellite image taken on November 17, 2020 of the archaeological sites of the Memorial Temple of Amenhotep III with its Colossi of Memnon and four additional colossal seated statues. Screenshot by author via Google Earth © 2020.



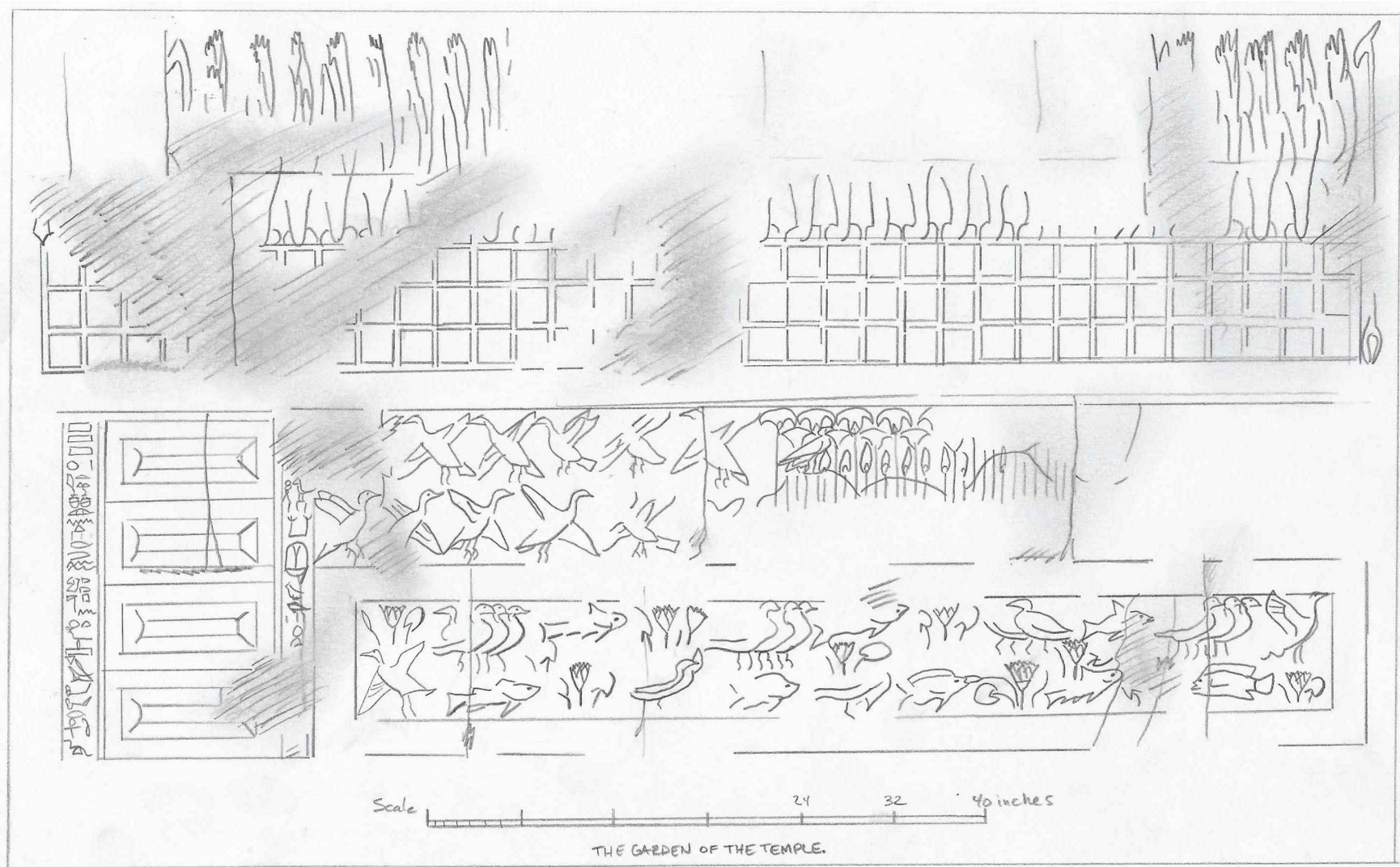


Figure A3.30: Wall reliefs depicting the š-formal garden of the Memorial Temple of Hatshepsut. Drawing by author © 2020, after Plate CXLII in Naville (1899).



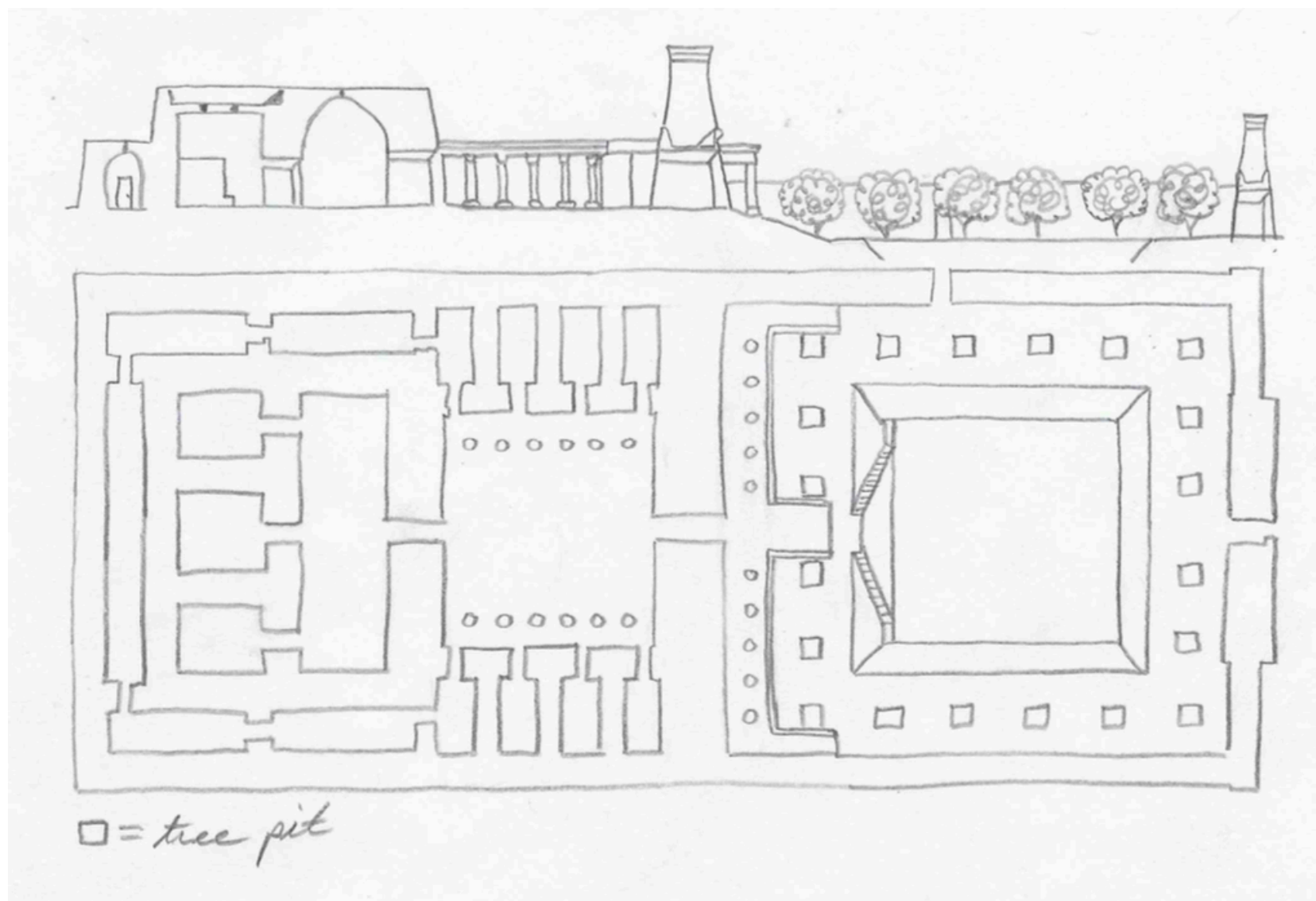


Figure A3.31: Reconstruction of the Memorial Temple of Amenhotep, Son of Hapu with its š-formal garden. Drawing by author © 2019, after Plate XI in Robichon and Varille (1936).

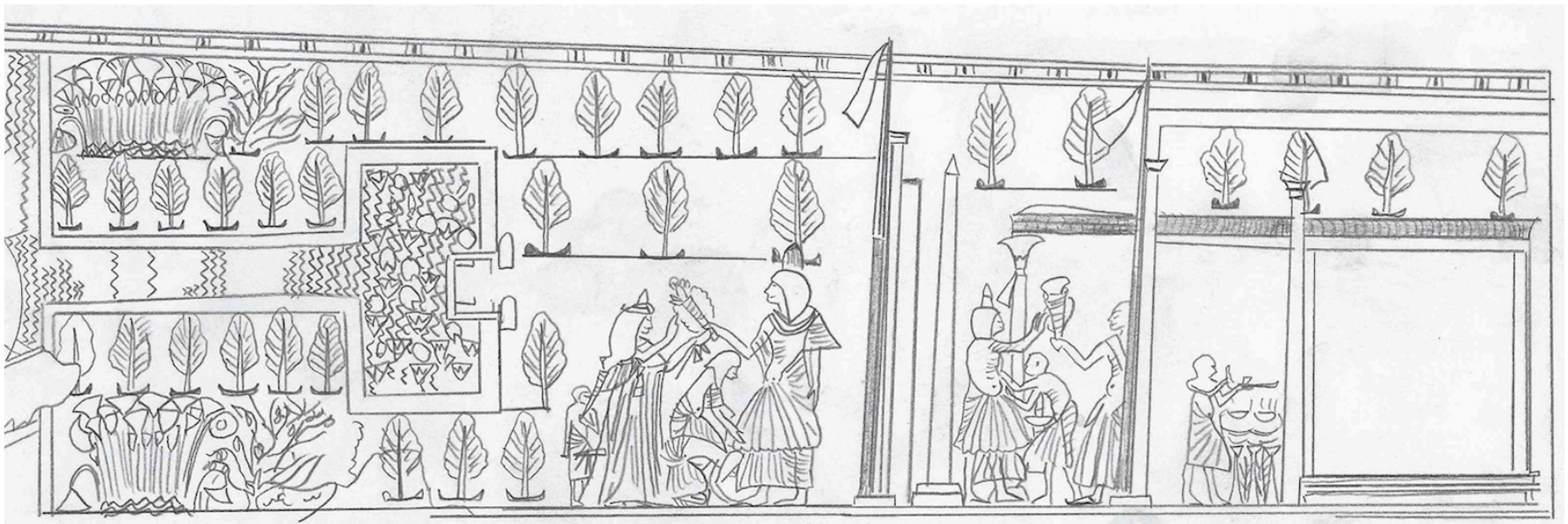


Figure A3.32: Š-formal garden of the Karnak's main (western) entrance, leading to the Second Pylon built by Amenhotep III, and depicted in Neferhotep (TT 49), and possibly called 'Glory-of-the-Trees-Beloved-of-Thebes-upon-the-Way-of-the-Ram-Headed-Sphinxes.' Drawing by author © 2020, after Plate III in de Garis-Davies (1933).





Figure A3.33: Panorama view of Thutmose III's inscriptions and the flora and fauna from across the empire depicted in the 'botanical garden' reliefs in the 'Sun Chamber' of his *ꜥḥ-mnw*-temple at Karnak on the East Bank of Luxor. Photographs by author © 2019.





Figure A3.34: Satellite image taken on November 17, 2020 of the archaeological site of the Karnak Temple Complex on the East Bank of modern-day Luxor. Screenshot by author via Google Earth © 2020.

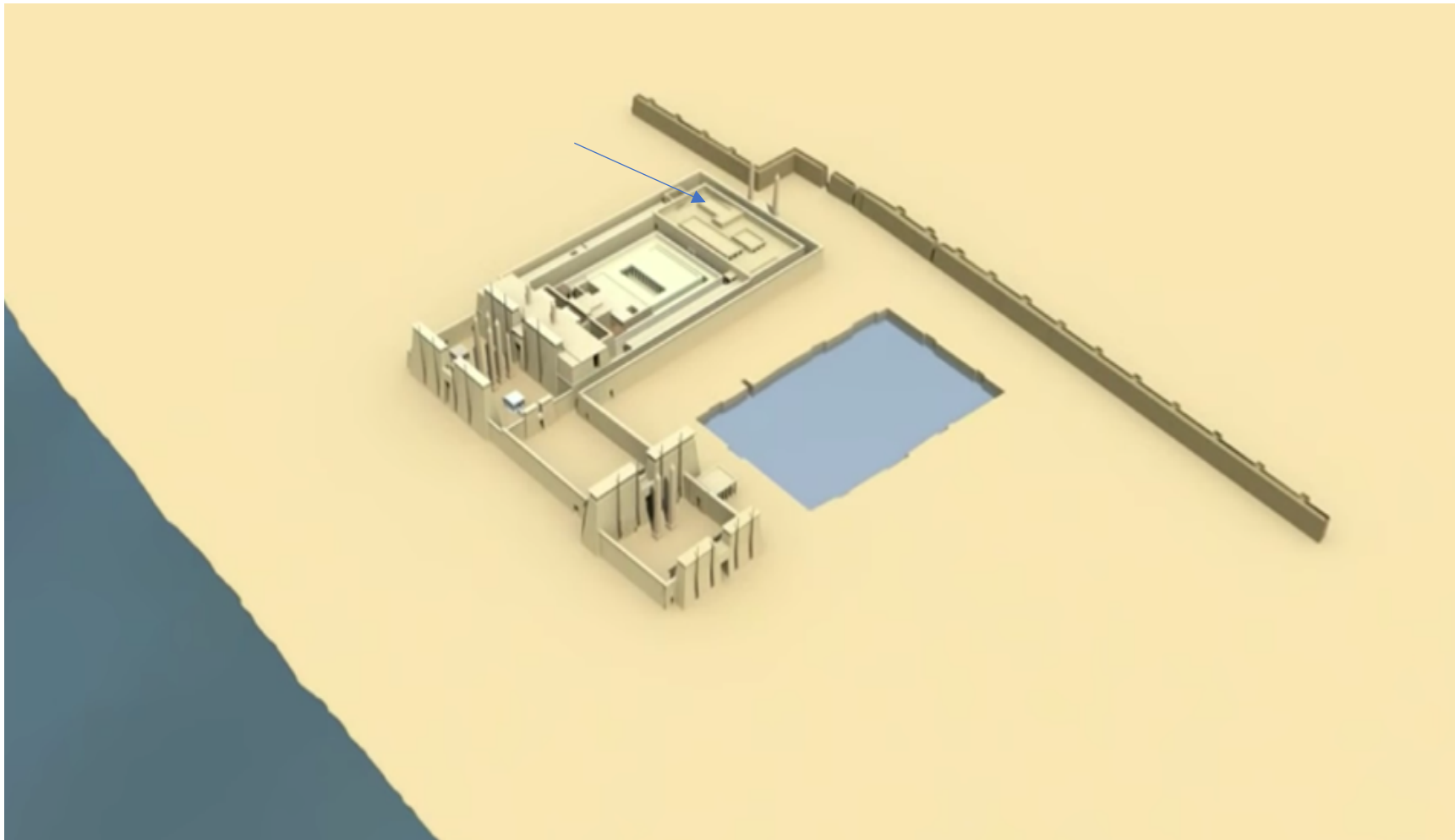


Figure A3.35: The Amun cult at Karnak Temple during the reigns of Thutmose III and Amenhotep II. The T-shaped structure on the back-left side indicated with the blue arrow is the ‘Sun Chamber’ where the ‘botanical garden’ reliefs are located. There would have been ample space for its actual counterpart at Karnak. Screenshot from UCLA Digital Karnak (2008):

<https://www.youtube.com/watch?v=QXDipKxgU24>.



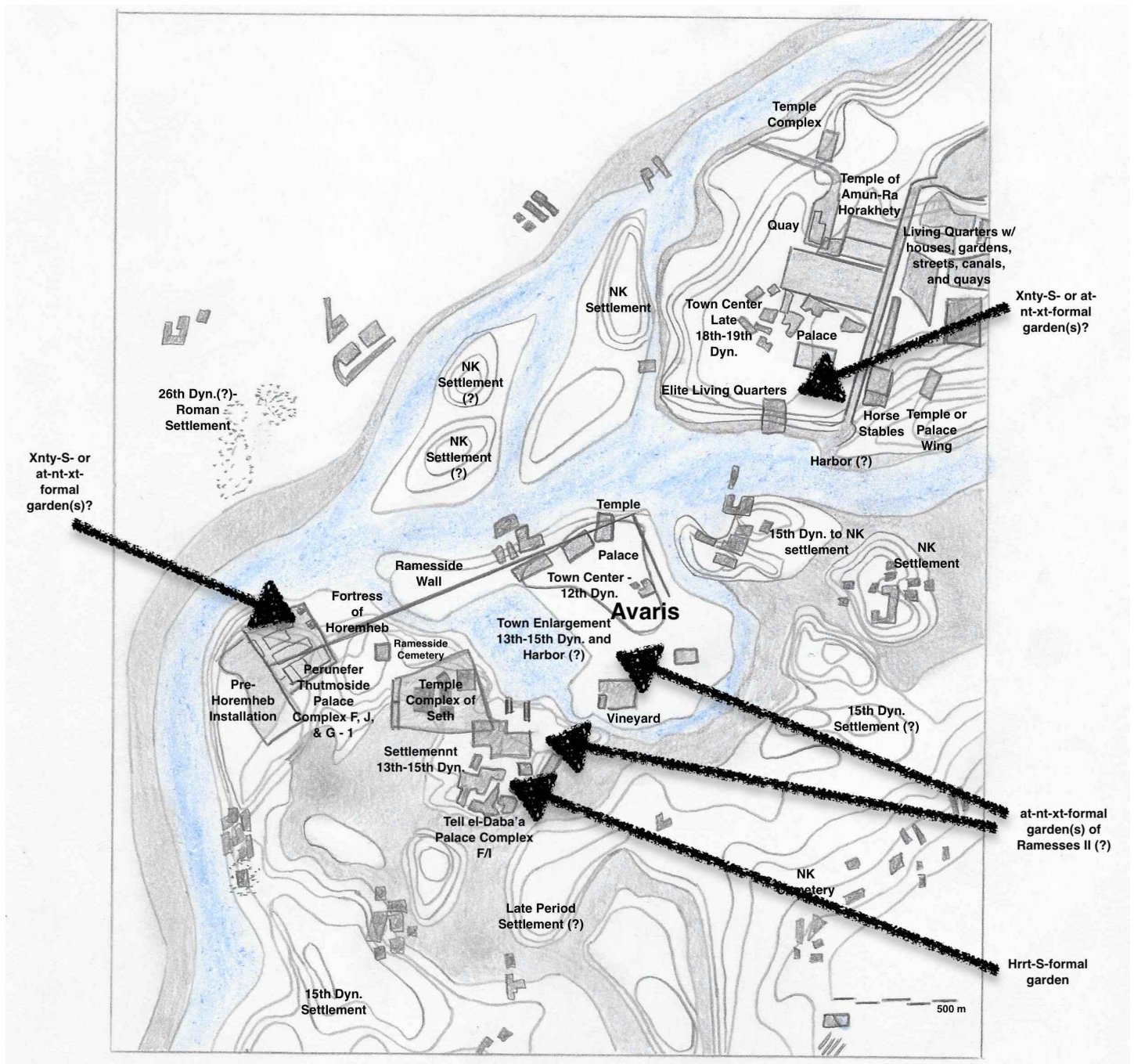


Figure A3.36: Archaeological map of Tell el-Daba'a/Ezbet Helmi/Qantir (Avaris/Perunefer/Per-Ramesses) with the locations of variously dated palaces, settlements, living quarters, temples, cemeteries, harbors, stables, and formal gardens and gardens. Drawing by author © 2020, after Figure 1 by Bietak: [http://www.auaris.at/html/helmi1\\_en.html](http://www.auaris.at/html/helmi1_en.html) and in his *EA* 26 (2009): p. 17.

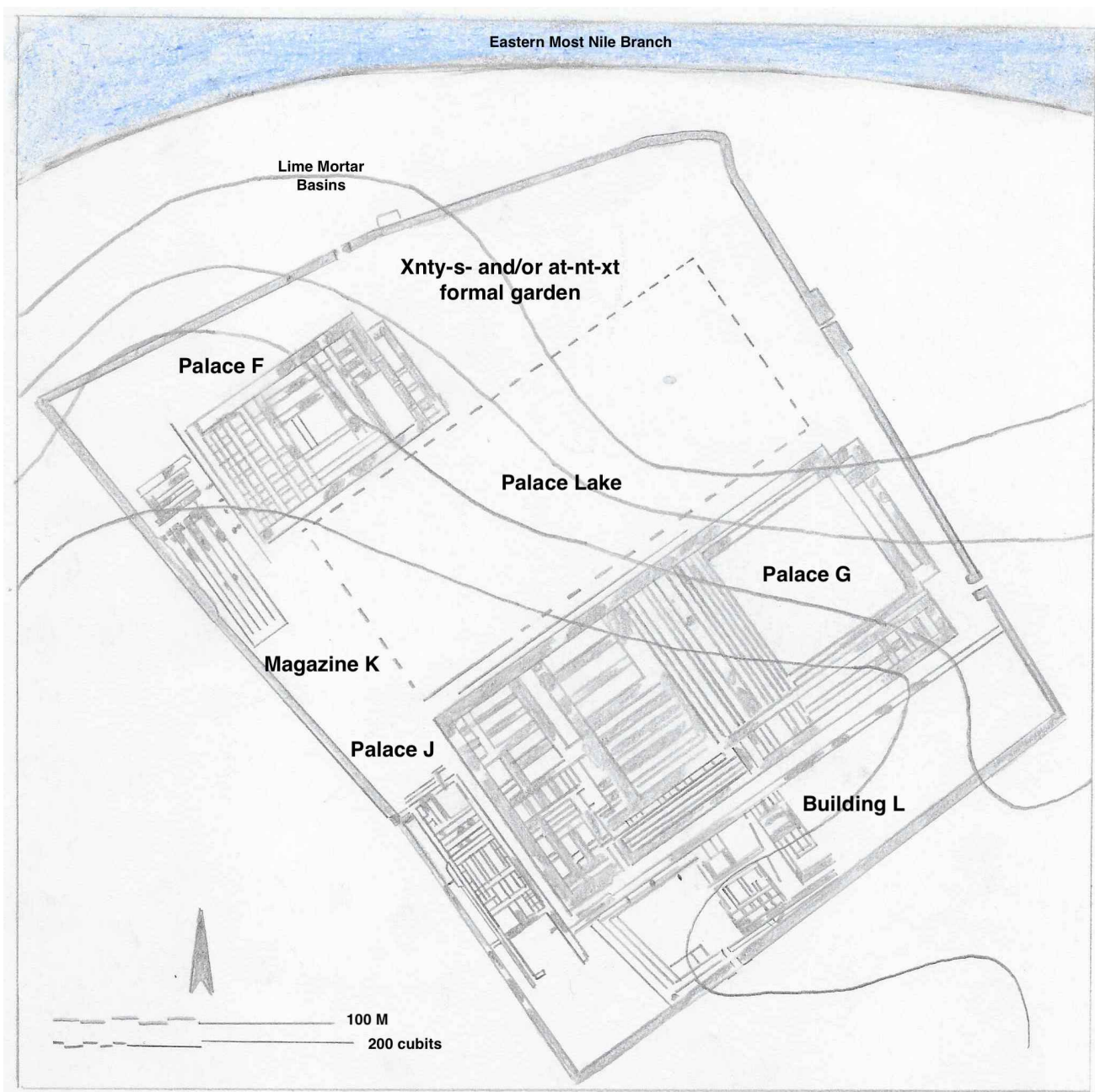


Figure A3.37: Archaeological plan of the Perunefer Thutmose Palace Complex F, J, and G with the location of its formal gardens. Drawing by author © 2020, after Figure 2 by Bietak: [http://www.auaris.at/html/helmi16\\_en.html](http://www.auaris.at/html/helmi16_en.html) and in his *EA* 26 (2009): p. 16.





Figure A3.38: Detail of archaeological remains of Palace F of the Perunefer Thutmoside Palace Complex. Note the tree and flower pits in the bottom right-hand corner in clusters. Drawing by author © 2020, after Figure 2 by Bietak: [http://www.auaris.at/html/helmi4\\_en.html](http://www.auaris.at/html/helmi4_en.html).



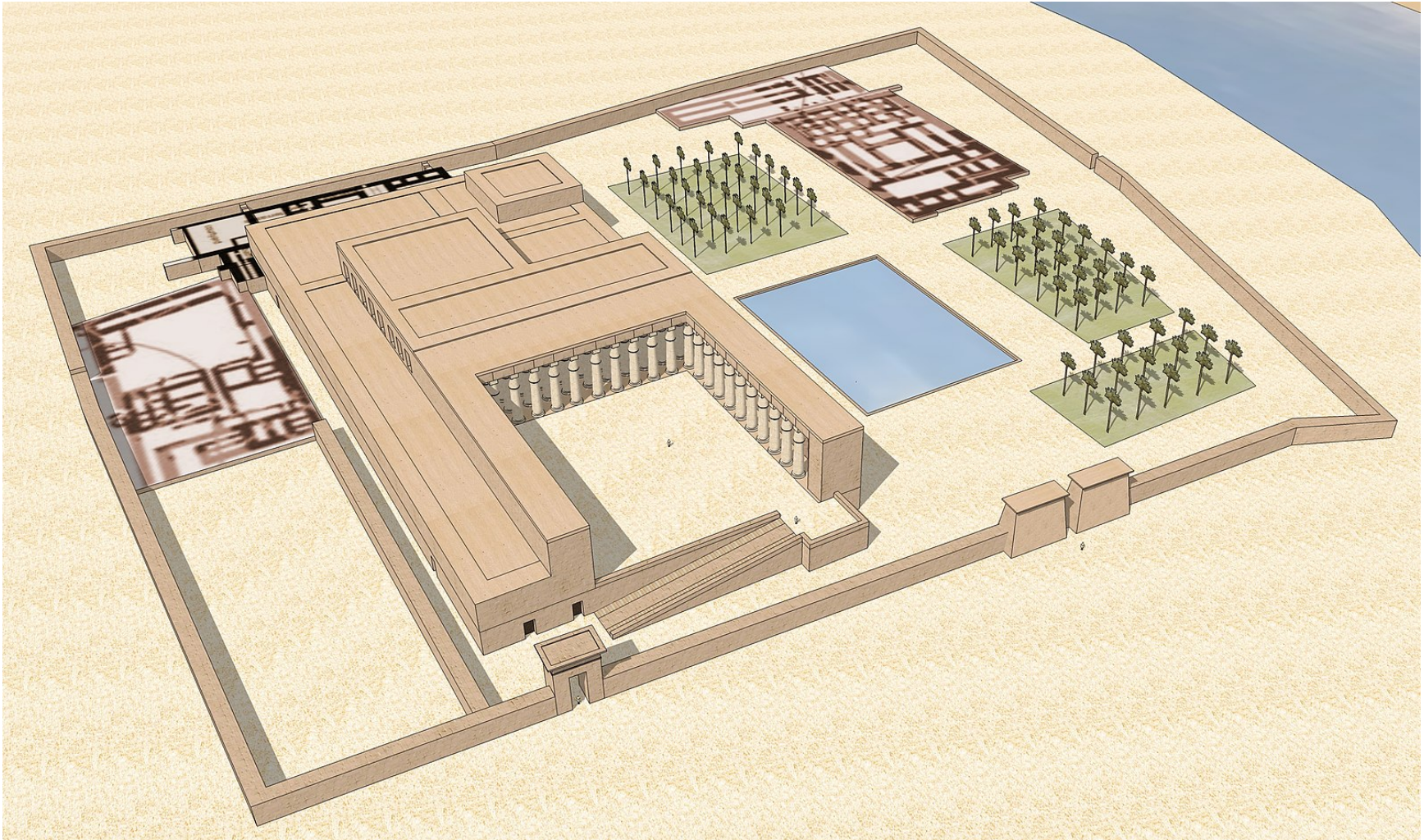


Figure A3.39: Possible reconstruction of the Perunefer Thutmose Palace Complex G with the outlines of the archaeological remains of F and J. Note its *hnty-š*- and/or *t-nt-ht*-formal gardens with its own pylonic entrance, lake, trees, and flowers. Photograph by Franck Devedjian (2019), courtesy of his Creative Commons (CC0 4.0) Attribution-Share Alike International Domain Dedication: [https://commons.wikimedia.org/wiki/File:Avaris\\_Palais\\_G\\_sch%C3%A9ma.jpg](https://commons.wikimedia.org/wiki/File:Avaris_Palais_G_sch%C3%A9ma.jpg).



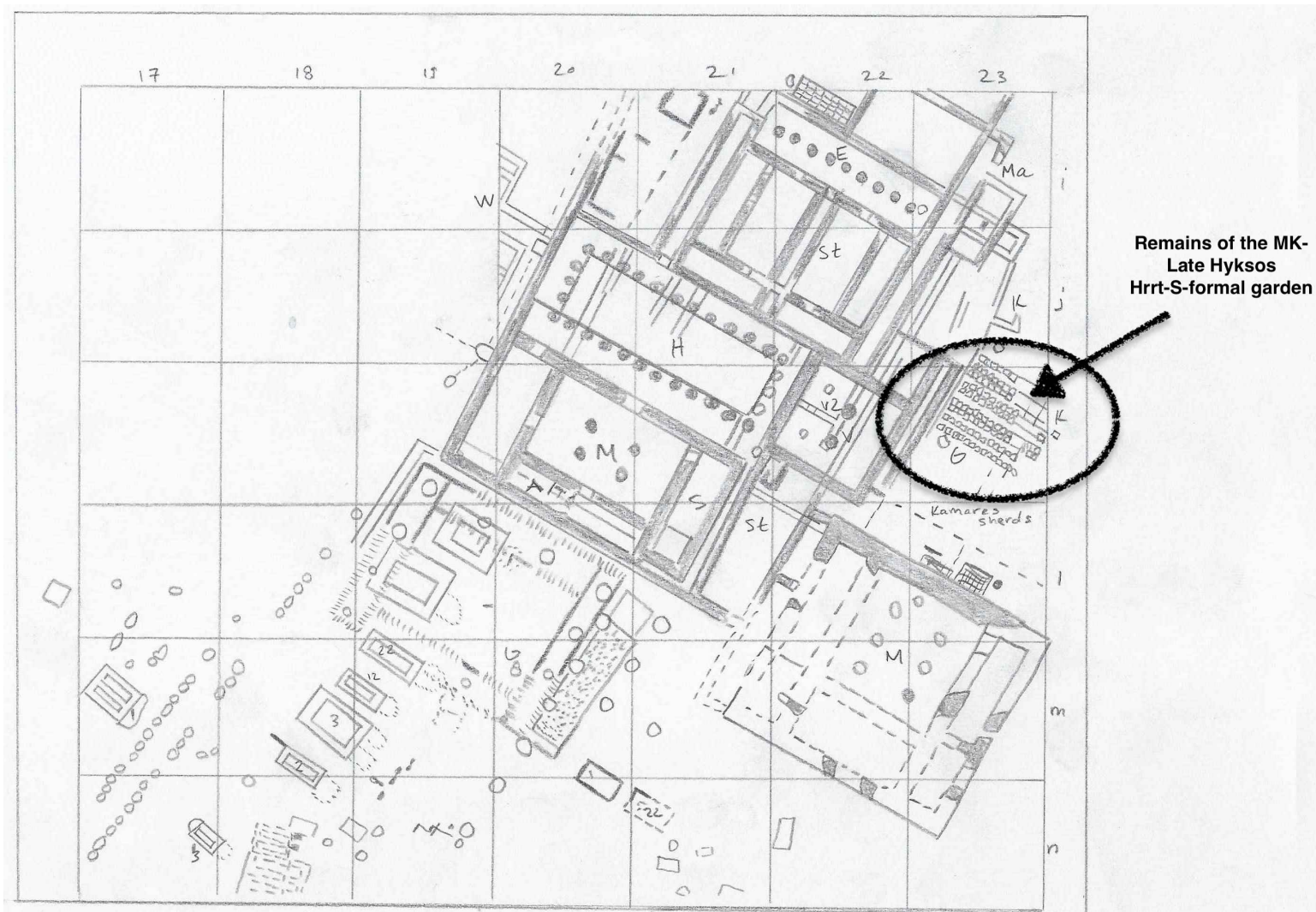


Figure A3.40: Archaeological plan of the Middle Kingdom to Late Hyksos Period Palace F/I, Stratum d/1, at Avaris (Tell el-Daba'a). Note the remains of its *hrrt-š*-formal garden circled above. Drawing by author © 2020, after Figure 72 in Hugonot (1989).



Figure A3.41: 3D reconstruction of the Middle Kingdom to Late Hyksos Period phase of the Tell el-Daba'a Palace F/I at Avaris based on the archaeological finds by the Austrian mission. Note its *ḥrrt-š*-formal garden with its belvedere peristyle and pavilion (opposite).

Screenshot from the joint YouTube video by 7reasons and the Austrian Academy of Sciences entitled "A Puzzle in 4D - Tell el-Daba'a": [https://www.youtube.com/watch?v=pS9-jr\\_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA](https://www.youtube.com/watch?v=pS9-jr_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA).



Figure A3.42: 3D reconstruction of the Middle Kingdom to Late Hyksos *ḥrrt-š*-formal garden at the Tell el-Daba'a Palace F/I with its belvedere peristyle, *ḥsp*-plot remains, tree groves, and pavilion (opposite). Screenshot from the joint YouTube video by 7reasons and the Austrian Academy of Sciences entitled "A Puzzle in 4D - Tell el-Daba": [https://www.youtube.com/watch?v=pS9-jr\\_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA](https://www.youtube.com/watch?v=pS9-jr_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA).





Figure A3.43: 3D reconstruction of the Middle Kingdom to Late Hyksos *ḥrrt-š*-formal garden at the Tell el-Daba'a Palace F/I at Avaris with its pavilion, *ḥsp*-plots and tree groves. Screenshots from the joint YouTube video by 7reasons and the Austrian Academy of Sciences entitled "A Puzzle in 4D - Tell el-Daba": [https://www.youtube.com/watch?v=pS9-jr\\_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA](https://www.youtube.com/watch?v=pS9-jr_sTTM&list=FLTrhZBDGGVIGvzcB0ne4jNA).





Figure A3.44: Reconstruction of Djehuty's *hsp*-plot, discovered in 2017 by the Joint Spanish-Egyptian Mission at his tomb (TT 11) in Dra'a Abu el-Naga, in the gardens of the Marsam Hotel before it was moved to the tomb proper. Photograph by author © 2019.



Figure A3.45: One of the human-headed sphinxes (MMA 31.3.166) that lined the processional way of Hatshepsut's *hnty-š*-formal garden at her memorial temple. Photograph courtesy of the Creative Commons (CC.01) Public Domain Distribution of The Metropolitan Museum of Art, New York: <https://www.metmuseum.org/art/collection/search/544442>.





Figure A3.46: One of the granite kneeling statues of Hatshepsut in the White Crown (MMA 30.3.1) called 'Ma'atkara-who-Offers-Fresh-Produce-to-Amun' from her memorial temple at Deir el-Bahari. Photograph courtesy of the Creative Commons (CC.01) Public Domain Distribution of The Metropolitan Museum of Art, New York: <https://www.metmuseum.org/art/collection/search/544448>.



Figure A3.47: One of the granite kneeling statues of Hatshepsut in the *nemes*-headdress (MMA 30.2.1) from her memorial temple at Deir el-Bahari. Photograph courtesy of the Creative Commons (CC.01) Public Domain Distribution of The Metropolitan Museum of Art, New York: <https://www.metmuseum.org/art/collection/search/544449>.



Figure A3.48: A granite striding statue of Thutmose III called 'Menkheperra-who-Offers-Fresh-Produce-to-Amun-from-Karnak' (JE 42056) found in proximity to Hatshepsut's obelisk at the Karnak Temple Complex. Photograph courtesy of the Egyptian Ministry of Antiquities from Plate XXXII in Legrain (1906).



Figure A3.49: Detail of the tripartite shrine in the *ṯ-nt-ḥt*-formal garden of Amun depicted in TT 96 scene. Note how the style and form of the two preserved statues of Amenhotep II in the painting evoke those of the ‘NN-who-Offers-Fresh-Produce-to-Amun’ type known from Hatshepsut (MMA 30.3.1) and Thutmose III (JE 42056). Drawing by author © 2020, after the Lasinio facsimile in Rosellini (1834).



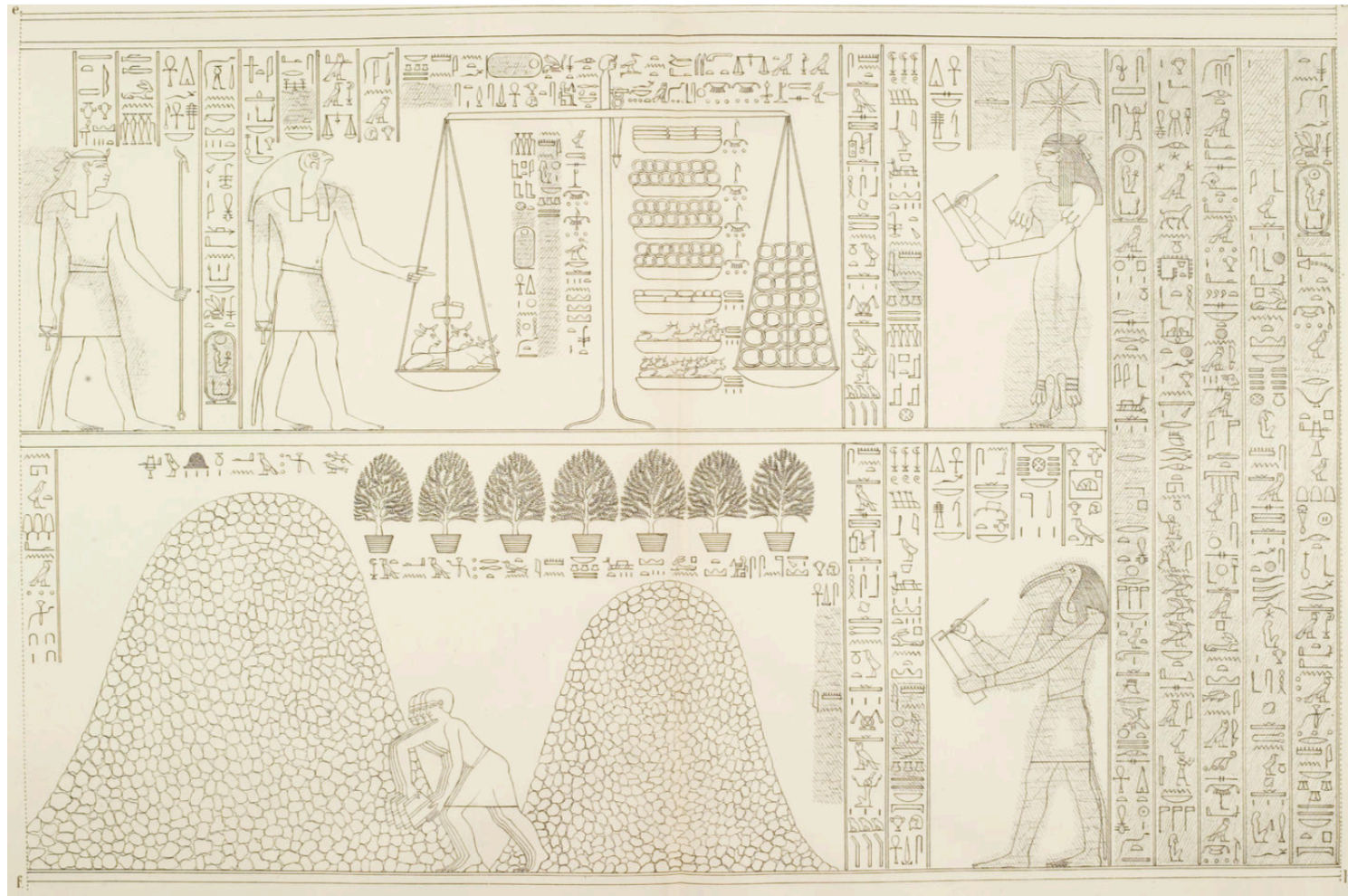


Figure A3.50: A wall relief of Puntite luxuries being weighted and collected by workmen, as well as enumerated by the scribal- and architecture-goddess Seshat and her consort, the writing- and moon-god Thoth from the Second Terrace of the Memorial Temple of Hatshepsut. Puimra (TT 39), who has *sš*-formal garden scene, was a ‘Second Priest of Amun’ during the coregency of Hatshepsut and Thutmose III and one of his duties was to oversee the weighing of incense gum and resin in all of the Theban temples of the Domain of Amun based on an inscription in his tomb. Photograph of Plate 8 in Mariette (1877), courtesy of the Creative Commons Public Domain of the Universität Heidelberg: <https://digi.ub.uni-heidelberg.de/diglit/mariette1877>.

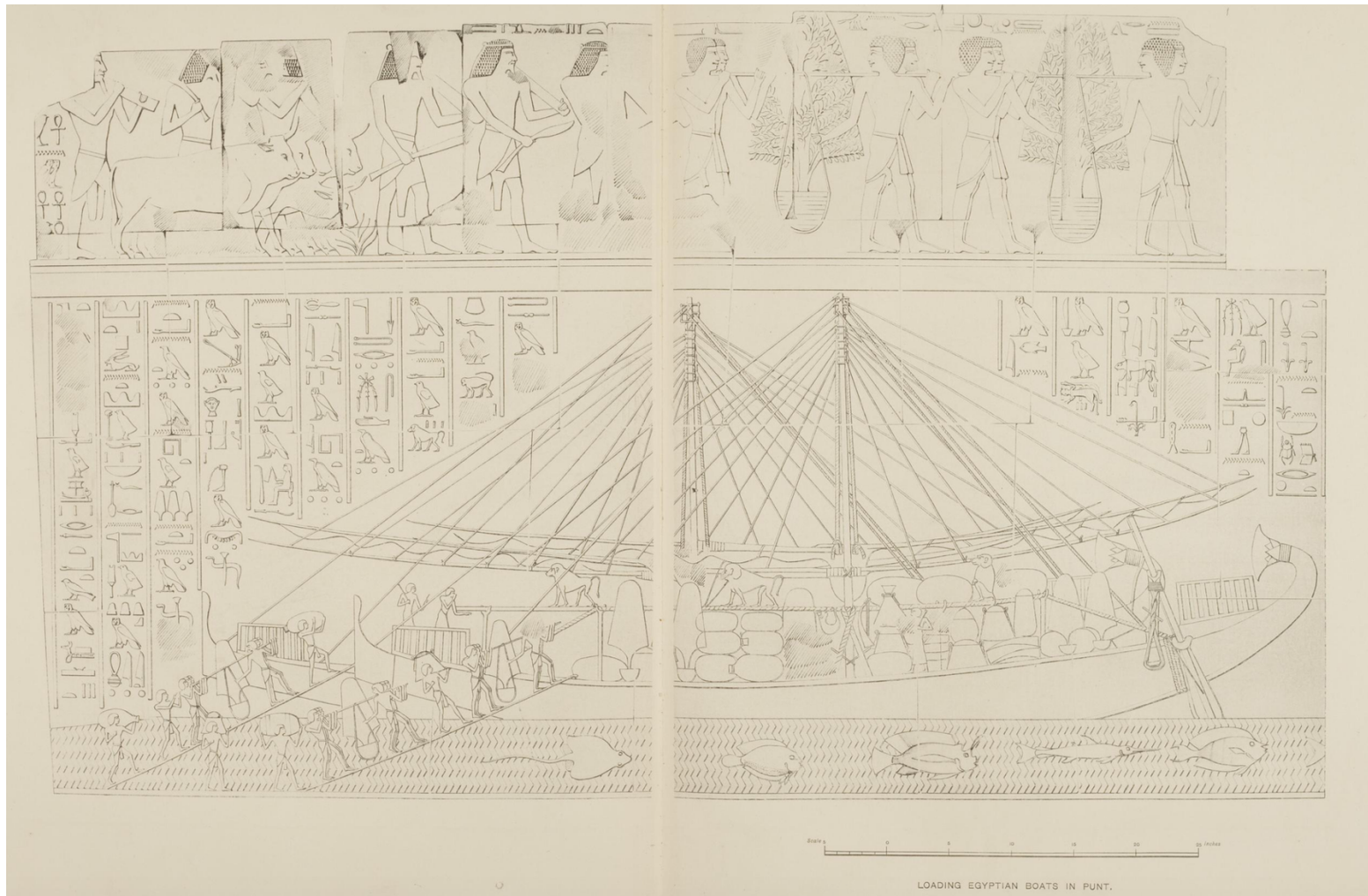


Figure A3.51: A wall relief of Egyptian expeditionary vessels in Punt being loaded with luxury items from the Middle Colonnade of the Memorial Temple of Hatshepsut at Deir el-Bahari. Note the young and potted incense trees being carried in the top register and those being carried aboard the ship, as well as those already placed on board in cargo. Photograph of Plate LXXIV in Naville (1898), courtesy of the Creative Commons Public Domain of the Universität Heidelberg: <https://digi.ub.uni-heidelberg.de/diglit/naville1898bd3>.



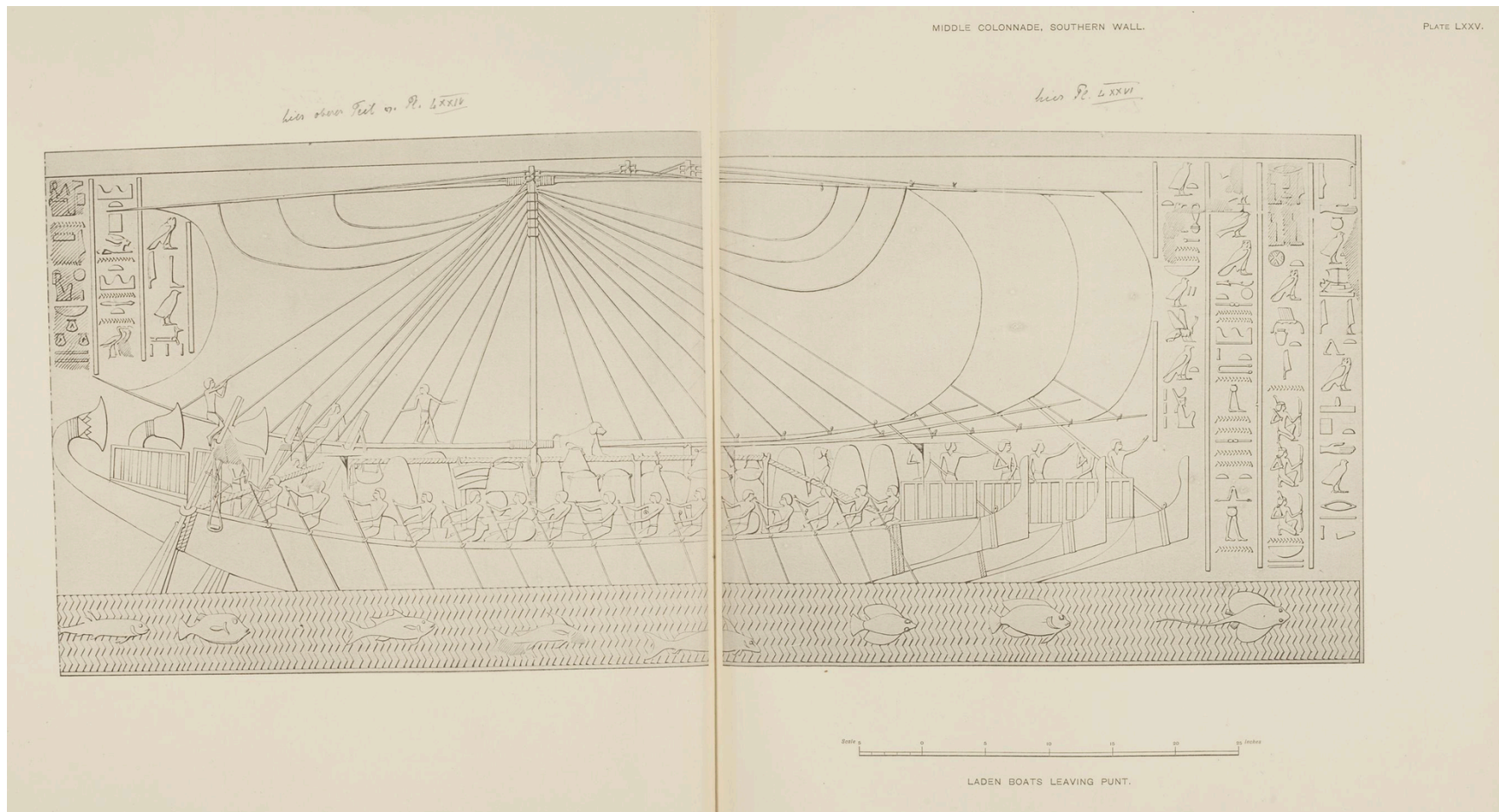


Figure A3.52: A wall relief of Egyptian expeditionary vessels outbound from Punt to Egypt from the Middle Colonnade of the Memorial Temple of Hatshepsut at Deir el-Bahari. Note the potted incense trees in the ship's cargo beside the rowers and below the mast. Photograph of Plate LXXV in Naville (1898) and courtesy of the Creative Commons Public Domain of the Universität Heidelberg: <https://digi.ub.uni-heidelberg.de/diglit/naville1898bd3>.



Figure A3.53: Facsimile (MMA 30.4.152) by Nina de Garis-Davies of Nubians carrying a small, young, and potted incense tree from Punt in Rekhmira's tomb (TT 100). Photograph courtesy of the Creative Commons (CC.01) Public Domain Distribution of The Metropolitan Museum of Art, New York: <https://www.metmuseum.org/art/collection/search/544606>.





Figure A3.54: A wall relief from the Second Terrace of the Memorial Temple of Hatshepsut in kingly regalia, performing a ritual on the incense trees planted in her *hnty-š*-formal garden at Deir el-Bahari, which were imported from Punt as a gift to Amun. Photograph of Plate 7 in Mariette (1877), courtesy of the Creative Commons Public Domain of the Universität Heidelberg: <https://digi.ub.uni-heidelberg.de/diglit/mariette1877>.

## Bibliography

- Åberg, Emil, Jean-Philippe Lauret, and Vivi Täckholm. « Les plantes découvertes dans les souterrains de l'enceinte du roi Zoser à Saqqarah (III<sup>e</sup> dynastie). » *Bulletin de l'Institut d'Égypte* 32 (1949-1950): pp. 121-157.
- Adamson, P. B. "Surgery in ancient Mesopotamia." *Medical History* 35 (1991): pp. 428-435.
- Ælianus, Demetrius Pepagomenus, Pisida Georgius, and Rudolf Hercher. *Claudii Æliani: De natura animalium libri XII*. Cambridge: Harvard University Press, 1864.
- Alexander, Keith. *Numen: The Latin Lexicon Online*. 2008–. <https://latinlexicon.org/index.php>.
- Al-Snafi, Ali Esmail. "Medical importance of *Cupressus sempervirens* – A review." *International Organization of Scientific Research Journal of Pharmacy* 6.1.2 (June 2016): pp. 66-76.
- Altair4 Multimedia. "Thebes 3D model and reconstruction." Vimeo video. Posted in 2014. doi: <https://www.altair4.com/en/modelli/tebe/>.
- Anandaraj, Muthuswamy and M. R. Sudharshan. "Cardamom, Ginger, and Turmeric." In *Soils, Plant Growth, and Crop Production III: UNESCO Encyclopedia of Life Support Systems: Food and Agricultural Sciences, Engineering and Technology Resources*, edited by Willy H. Verheye. Oxford: UNESCO-EOLSS Publications Co., Ltd., 2010.
- Andreu-Lanoë, Guillemette and Sylvie Cauville. « Vocabulaire absent du Wörterbuch (I). » *Revue d'égyptologie* 29 (1977): pp. 5-13.
- Antón, Jancito. "La gloria de Tutmosis III." *El País Seminal* (Dec. 6, 2012). doi: [https://elpais.com/cultura/2012/12/07/actualidad/1354879058\\_090754.html](https://elpais.com/cultura/2012/12/07/actualidad/1354879058_090754.html).
- Anwar, Farooq, Ali Abbas, Khalid M. Alkharfy, and Anwar-ul-Hassan Gilani. "Cardamom (*Elettaria cardamomum* Maton) Oils." In *Essential Oils in Food Preservation, Flavor, and Safety*, edited by Victor E. Preedy, pp. 295-301. Amsterdam: Elsevier, 2016.
- Arnold, Dieter. *Der Tempel des Königs Mentuhotep von Deir el-Bahari*. Band I-III. (= *Archäologische Veröffentlichungen, Deutschen Archäologisches Institut, Abteilung Kairo* 23). Mainz am Rhein: Philipp von Zabern, 1981.
- Arnold, Felix. "Cult Buildings of the Bent Pyramid at Dahshur." *Archaeology in Egypt: Magazine of the German Archaeological Institute in Cairo* 5 (Nov. 2019): p. 49.
- Asensi-Amorós, Victoria. "The history of conifers in Egypt, part I: Mediterranean cypress (*Cupressus sempervirens* L., Cupressaceae)." Paris: Société Xylodata SARL, Département scientifique, 2016.



- Aspöck, Edeltraud. "Tell el-Dabaa: Palace Area F/I - Phase Model and Wooden Model." *Tell el Dabaa Puzzle in 4D*. Accessed May 26, 2019. doi:  
<https://4dpuzzle.oeaw.ac.at/reconstruct/>;  
[https://4dpuzzle.oeaw.ac.at/reconstruct\\_phaseModel/](https://4dpuzzle.oeaw.ac.at/reconstruct_phaseModel/).
- Assmann, Jan and Martin Bommas. *Altägyptische Totenliturgien, Band 2: Totenliturgien und Totensprüche in Grabinschriften des Neuen Reiches*. Heidelberg: Universitätsverlag Winter Heidelberg, 2005.
- Assmann, Jan and Muhammad Mahmoud Abd el-Raziq. Photographs by Eva Hofmann. *Das Grab des Amenemope, TT 41*. Vol. Bd. 3. Mainz am Rhein: Philipp von Zabern, 1991.
- Assmann, Jan. Translated by David Lorton. *Death and Salvation in Ancient Egypt*. 1<sup>st</sup> edition. Ithaca: Cornell University Press, 2005.
- Assmann, Jan. „Erster Vorbericht über des Ägyptologischen Instituts der Universität Heidelberg in thebanischen Gräbern der Ramessidenzeit.“ *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 36 (1980): pp. 23-31.
- Alexanian, Nicole and Felix Arnold. *The Necropolis of Dahshur: Eleventh Excavation Report of the Work in Spring 2014*. Cairo: Deutsche Archäologische Institut, 2015.
- Allen, James P. *The ancient Egyptian pyramid texts*. 2<sup>nd</sup> edition. Atlanta: SBL Press, 2015.
- Allen, Thomas G. *The Book of the Dead or Going Forth by Day: Ideas of Ancient Egyptians Concerning the Hereafter as Expressed in their Own Terms*. Chicago: University of Chicago Press, 1974.
- Altenmüller Hartwig, and Ahmed M. Moussa. „Des Inschrift Amenemhets' II aus dem Ptah-Tempel von Memphis ein Vorbericht.“ *Studien zur Altägyptischen Kultur* 18 (1991): pp. 1-48.
- Aufrère, Sydney. « Remarques au sujet des végétaux interdits dans le temple d'Isis à Philæ. » *Bulletin d'Institut français d'archéologie orientale du Caire* 86 (1986): pp. 1-33.
- Baligh, Randa O. K. *Tuthmosis I*. Ann Arbor: University of Michigan Dissertation Services, 1997.
- Bailleul-LeSuer, Rozenn. "Bird Motifs in Ancient Egyptian Arts and Crafts." In *Between Heaven and Earth: Birds in Ancient Egypt*, edited by Rozenn Bailleul-LeSuer. Chicago: Oriental Institute, 2012.
- Baines, John and Jaromír Málek. *Atlas of ancient Egypt*. Rev. ed. Cairo: The American University in Cairo Press, 2002.

- Baines, John. *High culture and experience in ancient Egypt*. 2<sup>nd</sup> edition. Sheffield: Equinox Publishing, 2013.
- Barguet, Paul. *Le livre des morts des anciens Égyptiens*. Paris: Éditions du Cerf, 1973.
- Barguet, Paul. *Les textes des sarcophages égyptiens du Moyen Empire*. Paris: Éditions du Cerf, 1986.
- Baum, Natalie. *Arbres et arbustes de l'Égypte ancienne : La liste de la tombe thébaine d'Ineni (no. 81)*. Leuven: Peeters, 1988.
- Beauverie, Marie-Antoinette. « Sur quelques fruits de l'ancienne Égypte exposés au musée de Grenoble. » *Bulletin d'Institut français d'archéologie orientale du Caire* 30.2 (1931): pp. 393-405.
- Beaux, Nathalie. *Le cabinet de curiosités de Thoutmosis III : Plantes et animaux du « Jardin botanique » de Karnak. (= Orientalis Lovaniensia Analecta 36)*. Leuven: Oriëntalistiek, 1990.
- Beckerath, Jürgen von. *Chronologie des pharaonischen Ägypten: Die Zeitbestimmung der ägyptischen Geschichte von der Vorzeit bis 332 v. Chr.* Mainz am Rhein: Philipp von Zabern, 1997.
- Bénédicte, Georges, Urbain Bouriant, Gaston Maspero, and Émile Chassinat. « Le tombeau de Neferhorpu, fils d'Amenemhaît. » In *Mémoires publiés par la Mission archéologique française au Caire*. Vol. 5, Pt. 3. Cairo: Imprimerie de l'Institut français d'archéologie orientale du Caire, 1894.
- Benson, Margaret and Janet Gourlay. *The Temple of Mut in Asher*. Reprint. Cambridge: Cambridge University Press, 1899/2014.
- Bietak, Manfred. "Eine Palastanlage aus der Zeit des späten Mittleren Reiches und andere Forschungsergebnisse aus dem östlichen Nildelta (Tell el-Dab'a 1979-1984)." *Anzeiger der philosophisch-historischen Klasse der Österreichischen Akademie der Wissenschaften* 115 (1984): pp. 312-349.
- Bietak, Manfred. "Minoan presence in the pharaonic naval base of *Peru-nefer*." In *Cretan Offerings: Studies in Honour of Peter Warren*, edited by Olga Krzyszkowska, pp. 11-23. (= *British School at Athens Studies* 18). London: British School at Athens, 2010.
- Bietak, Manfred. "Perunefer: The principal New Kingdom naval base." *Egyptian Archaeology* 26 (2009): pp. 13-17.

- Bietak, Manfred. "Rich Beyond the Dreams of Avaris: Tell el-Dab'a and the Aegean World: A Guide for the Perplexed: A Response to Eric H. Cline." *Annual of the British School at Athens* 95 (2000): pp. 185-205.
- BirdLife International. "Habitat and Ecology." In *Streptopelia turtur: The IUCN Red List of Threatened Species*, edited by The International Union for Conservation of Nature Global Species Programme, pp. 4-5. Gland, Switzerland: The International Union for Conservation of Nature Programme, 2019.
- Black, Jeremy A. and Anthony Green. Images by Tessa Rickards. *Gods, Demons and Symbols of Ancient Mesopotamia*. 1<sup>st</sup> edition. London: British Museum Press, 1992.
- Blackman, Aylward M., and T. Eric Peet. "Papyrus Lansing: A translation with notes." *Journal of Egyptian Archaeology* 11.3/4 (1925): pp. 284-298.
- Boulenger, George Albert and L. Loat. *Zoology of Egypt: The fishes of the Nile*. London: Hughes Lee Ltd., 1907.
- Boulos, Loutfy. *Flora of Egypt*. Vol. I-V. Cairo: Al Hadara Publishing, 1999-2005.
- Boulos, Loutfy. Illustrated by Magdy El-Gohary. *Medicinal Plants of North Africa*. Algonac: Reference Publications, Indiana University, 1983.
- Boussac, A. P.-Hippolyte. *Tombeaux thébains : Le tombeau d'Anna*. (= *Mémoires publiés par les membres de la Mission archéologique française au Caire* 18). Paris: Leroux, 1896.
- Breasted, James H. *Ancient records of Egypt*. Vols. I-IV. Chicago: University of Chicago Press, 1906.
- Brewer, Douglas J., Donald B. Redford, and Susan Redford. *Domestic Plants and Animals: The Egyptian Origins*. Warminster: Aris & Phillips, 1994.
- Brewer, Douglas J. and Renée F. Friedman. *Fish and Fishing in Ancient Egypt*. Cairo: The American University in Cairo Press, 1990.
- Birch, Samuel. *Egyptian texts of the earliest period from the coffin of Amamu in the British Museum*. London: Longmans, 1886.
- Bree, Charles Robert. Engravings by Benjamin Fawcett. *A history of birds of Europe, not observed in the British Isles*. London: Groombridge and Sons Ltd., 1859.
- Brovarski, Edward. "Senenu, High Priest of Amūn at Deir El-Baḥrī." *Journal of Egyptian Archaeology* 62 (1976): pp. 57-73.

- Brugsch, Heinrich. *Recueil de monuments égyptiens*. Vol. I. Leipzig: Librarie J. C. Hinrichs, 1862.
- Bruyère, Bernard. *Rapport sur les fouilles de Deir el Medineh (1934-1935) : Deuxième partie : La nécropole de l'Est*. Cairo: Institut français d'archéologie orientale du Caire, 1937.
- Bryan, Betsy M. "The 18th Dynasty before the Amarna Period (c. 1550-1352 BC)." In *The Oxford History of Ancient Egypt*, edited by Ian Shaw, pp. 207-264. Oxford: Oxford University Press, 2000.
- Bryan, Betsy M. *The Reign of Thutmose IV*. Baltimore; London: Johns Hopkins University Press, 1991.
- Carter, Howard. "The Mortuary Chapel and Sepulchre of Teta-Ky." In *Five Years' Explorations at Thebes: A Record of Work done 1907-1911* by Howard Carter, George Edward Stanhope Molyneux Herbert – 6<sup>th</sup> Earl of Carnarvon, Francis L. Griffith, Georges Legrain, George Möller, Percy E. Newberry, and Wilhelm Spiegelberg. London; New York: H. Frowde, 1912.
- Carter, Howard and A. C. Mace. *The tomb of Tutankhamen*. Vol. II. London: Cassel and Co. 1927.
- Carter, Howard. "The 'Valley-Temple' of Queen Hatshepsût." *Five Years' Explorations at Thebes: A Record of Work done 1907-1911* by Howard Carter, George Edward Stanhope Molyneux Herbert – 6<sup>th</sup> Earl of Carnarvon, Francis L. Griffith, Georges Legrain, George Möller, Percy E. Newberry, and Wilhelm Spiegelberg. London; New York: H. Frowde, 1912.
- Chadwick, John. *The Mycenaean world*. 14<sup>th</sup> edition. Cambridge: Cambridge University Press, 1976/2005.
- Collins, Lydia. "The Private Tombs of Thebes: Excavations by Sir Robert Mond 1905 and 1906." *Journal of Egyptian Archaeology* 62 (1972): pp. 18-40.
- Counsell, D. J. "Blue lotus: ancient Egyptian narcotic and aphrodisiac?" In *Pharmacy and medicine in ancient Egypt: Proceedings of the Conference held in Cairo (2007) and Manchester (2008)*, edited by Rosalie David and Jenefer Cockitt, pp. 51-55. Oxford: Archaeopress, 2010.

- Dafni, Amots, Shay Levy, and Efraim Lev. "The ethnobotany of Christ's thorn jujube (*Zizyphus spina-Christi*) in Israel." *Journal of Ethnobiology and Ethnomedicine* 1.8 (2005): pp. 1-11.
- Daines, Alison. "Egyptian Gardens." *Studia Antiqua* 6.1 (2008): pp. 15-25.
- Darnell, John C. "Opet Festival." In *University of California, Los Angeles Encyclopedia of Egyptology* 1.1, edited by Jacco Dieleman, Willeke Wendrich, Elizabeth Frood, and John Baines, pp. 1-15. Los Angeles: University of California, Los Angeles, 2010.
- Daressy, Georges. « Le palais d'Aménophis III et le Birket Habu. » *Annales du service des antiquités de l'Égypte* 4 (1903): pp. 165-170.
- Davies, Benedict G. *Egyptian Historical Inscriptions of the Nineteenth Dynasty*. Jonsered: Paul Åströms Förlag, 1997.
- Davies, Nina de Garis and Sir Alan Gardiner. *The tomb of Amenemhet (no. 82)*. London: Egypt Exploration Society, 1915.
- Davies, Norman de Garis. *Five Theban Tombs: Being Those of Mentuherkhepeshef, User, Daga, Nehemawäy and Tati*. London; Boston: Egypt Exploration Society, 1913.
- Davies, Norman de Garis and Sir Alan Gardiner. *Seven Private Tombs at Kurnah*. London: Egypt Exploration Society, 1948.
- Davies, Norman de Garis and Nina de Garis-Davies. *Scenes from Some Theban Tombs (no. 38, 66, 162, with Excerpts from 81)*. Oxford: Oxford University Press, 1963.
- Davies, Norman de Garis, Nina de Garis-Davies, and Sir Alan Gardiner. *The tomb of Antefoker, vizier of Sesostri I, and of his wife, Senet (no. 60)*. London: G. Allen and Unwin, 1920.
- Davies, Norman de Garis and Nina de Garis-Davies. Edited by Norman de Garis-Davies and Sir Alan Gardiner. *The Tombs of Two Officials of Tuthmosis the Fourth (nos. 75 and 90)*. London: Egypt Exploration Society, 1923.
- Davies, Norman de Garis and Nina de Garis-Davies. *The Tombs of Menkheperasonb, Amenmosē, and Another (nos. 86, 112, 42, 226)*. London: Egypt Exploration Society, 1933.
- Davies, Norman de Garis. *The Tomb of Nakht*. New York: The Metropolitan Museum of Art, 1907.
- Davies, Norman de Garis. *The Tomb of Nefer-hotep at Thebes*. Vol. II. New York: The Metropolitan Museum of Art, 1933.

- Davies, Norman de Garis. "Tehuti: Owner of Tomb 110 at Thebes." *Studies Presented to F. Ll. Griffith, London* by S. R. K. Glanville and Nora Macdonald Griffith, pp. 279-290. Oxford: Oxford University Press; London: Egypt Exploration Society, 1932.
- Davies, Norman de Garis. "The Graphic Work of the Expedition." *The Metropolitan Museum of Art Bulletin* 24.11 (1929): pp. 35-49.
- Davies, Norman de Garis. "The Egyptian Expedition 1934-35: The Work of the Graphic Branch of the Expedition." *The Metropolitan Museum of Art Bulletin* 30.11 (1935): pp. 46-57.
- Davies, Norman de Garis. Edited by Albert M. Lythgoe. Plates by Nina de Garis-Davies and H. R. Hopgood. *The Tomb of Ken-Amūn at Thebes. (= Publications of the Metropolitan Museum of Art, Egyptian Expedition 5)*. Vol 1. New York: The Metropolitan Museum of Art, 1930.
- Davies, Norman de Garis. *The Tomb of Puyemrē at Thebes*. New York: The Metropolitan Museum of Art, 1923.
- Davies, Norman de Garis. Edited by L. Bull and assisted by N. E. Scott. Plates by Nina de Garis-Davies and Charles K. Wilkinson. *The Tomb of Rekh-Mi-Rē at Thebes. (= Publications of The Metropolitan Museum of Art 11)*. Vol. 1. New York: The Metropolitan Museum of Art, 1935.
- Davies, Norman de Garis. *The Tomb of the Vizier Ramose. (= Mond Excavations at Thebes I)*. London: Egypt Exploration Society, 1941.
- Davies, Norman de Garis. "The Town House in Ancient Egypt". *Metropolitan Museum Studies* 1.2 (1929): pp. 233-255.
- Davies, Norman de Garis and Nina de Garis-Davies. "Norman de Garis and Nina Davies Collection (Davies MMS)." Oxford: Griffith Institute, 1900-1940. doi: <http://archive.griffith.ox.ac.uk/index.php/norman-de-garis-and-nina-davies-collection>.
- Davies., W. Vivian. "Egypt's Contacts with Neighboring Cultures: Egypt and Nubia: Conflict with the Kingdom of Kush." In *Hatshepsut, from Queen to Pharaoh*, edited by Catherine H. Roehrig, Renée Dreyfus, and Cathleen A. Keller, pp. 53-54. New York; New Haven: The Metropolitan Museum of Art, 2005.
- Dawson, Warren R. "The Plant Called "Hairs of the Earth"." *Journal of Egyptian Archaeology* 12.3/4 (1926): pp. 240-241.
- Devauchelle, Didier. « De nouveau rdmt. » *Revue d'égyptologie* 41 (1990): pp. 218-220.



- Devauchelle, Didier. « L'arbre RDM.T. » *Revue d'égyptologie* 32 (1980): pp. 65-68.
- Dibley, Gary and Bron Lipkin. *A Compendium of Egyptian Funerary Cones*. London: Bron Lipkin and Gary Dibley, 2009.
- Dixon, David M. "The transplantation of Punt incense trees in Egypt." *Journal of Egyptian Archaeology* 55 (1969): pp. 55-65.
- Dodson, Aidan and Salima Ikram. *The Tomb in Ancient Egypt: Royal and Private Sepulchres from the Early Dynastic Period to the Romans*. London: Thames and Hudson Ltd., 2008.
- Doyon-Aitken, Robyn and Chip Harley. "What's the Difference: Trellis, Arbor, and Pergola." *Fine Home Building Magazine* (April/May 2009). Accessed July 4, 2020. doi: <https://www.finehomebuilding.com/2009/05/01/whats-the-difference-between-a-trellis-an-arbor-and-a-pergola>.
- Driesch, Angela von den. "Some Archaeozoological Remarks on Fishes in Ancient Egypt." In *Animals and Archaeology II: Shell Middens, Fishes, and Birds*, by Caroline Grigson and Juliet Clutton-Brock. (= *British Archaeological Reports International Series* 183). Oxford: British Archaeological Reports International Series, 1983.
- Dziobek, Eberhard. *Das Grab des Ineni: Theben Nr. 81*. Vol. 68. Mainz am Rhein: Philipp von Zabern, 1992.
- Dziobek, Eberhard and Muhammad Mahmud Abd el-Raziq. *Das Grab des Sobekhotep: Theben Nr. 63*. Vol. 71. Mainz am Rhein: Philipp von Zabern, 1990.
- Edwards, Iorwerth E. S. *Hieroglyphic texts from Egyptian stelae, etc. in the British Museum VIII*. London: Harrison and Sons, Ltd., 1939.
- "European Turtle-Dove (Egyptian) (*Streptopelia turtur rufescens* Brehm, CL 1845)." *Avibase – The World Bird Database*. Accessed July 4, 2020. doi: <https://avibase.bsc-eoc.org/species.jsp?avibaseid=28B02FC068295CAE>.
- El-Kazafy, Taha, Reda A. Taha, and Saad Naser Al-Kahtani. "Nectar and pollen sources for honey bees in Kafrelsheikh province of northern Egypt." *Saudi Journal of Biological Sciences* (2017): pp. 1-7.
- El-Khadragy, Mahmoud. "Fishing, fowling, and animal-handling in the tomb of Djefhaihapi at Asyut." *Bulletin of the Australian Centre in Egypt* 17 (2007): pp. 125-144.

- El-Maenshawy, Sherine. "Aspects of the office of temple gardener in ancient Egypt: A reconsideration of the recently published stela TN 20.3.23.3." *Discussions in Egyptology* 65 (2012): pp. 53-66.
- El-Sabbahy, Abdul-Fattah. "Kings' Sons under Hatshepsut." *Göttingen Miszellen* 129 (1992): pp. 101-102.
- Engelbach, Reginald. *A Supplement to the Topographical Catalogue of the Private Tombs of Thebes (nos. 253 to 334) with Some Notes on the Necropolis from 1913 to 1924*. Cairo: Institut français d'archéologie orientale du Caire, 1924.
- Engelmann-von Carnap, Barbara. „Die Struktur des thebanischen Beamtenfriedhofs in dem ersten Hälften der 18. Dynastie: Analyse von Position, Grissgestaltung und Bildprogramm der Gräber.“ *Abhandlungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 15 (1999): pp. 115-124.
- "Epigraphic Survey Negatives." *The Oriental Institute's Records of The Epigraphic Survey Online*. Chicago: Oriental Institute, 2014. Accessed April 26, 2019. doi: [https://oi-idb.uchicago.edu/results.php?tab=ES&q=SrchHasMultimedia%3A%28Yes%29+&sort=SortUnitID+asc&start=700&rows=50&wt=json&facet=true&facet.mincount=1&fq\[\]=FctMultimediaFileType%3A%22Images%22&fq\[\]=FctSubjectHeadings%3A%22Private+to+mb%22&&facet.sort=count](https://oi-idb.uchicago.edu/results.php?tab=ES&q=SrchHasMultimedia%3A%28Yes%29+&sort=SortUnitID+asc&start=700&rows=50&wt=json&facet=true&facet.mincount=1&fq[]=FctMultimediaFileType%3A%22Images%22&fq[]=FctSubjectHeadings%3A%22Private+to+mb%22&&facet.sort=count).
- Erman, Adolf and Hermann Grapow. *Wörterbuch der ägyptischen Sprache*. Vols. I-XIII. Berlin: Akademie-Verlag, 1926-1961.
- "Extensive garden of King Sneferu (4th Dynasty)." DAI Kairo - German Archaeological Institute Cairo Facebook Page Post from April 11, 2020. Accessed May 4, 2020. doi: <https://facebook.com/DAINST.Kairo/posts/2861983523922430>.
- Eyre, Christopher J. "The water regime for orchards and plantations in pharaonic Egypt." *Journal of Egyptian Archaeology* 80 (1994): pp. 57-80.
- Faulkner, Raymond O. *A Concise Dictionary of Middle Egyptian*. Oxford: Griffith Institute, 1981.
- Faulkner, Raymond O. "The Bremner-Rhind Papyrus III: D. The Book of Overthrowing 'Apep.'" *Journal of Egyptian Archaeology* 23.2 (1937): pp. 166-185.
- "Fauna." In *Merriam-Webster's Collegiate Dictionary*. Accessed December 17, 2019. doi: <https://www.merriam-webster.com/dictionary/fauna>.


- Feucht, Erika. *Die Gräber des Nedjemger (TT 138) und des Hori (TT 259)*. Vol. Bd. 15. Mainz am Rhein: Philipp von Zabern, 2006.
- “Flora.” In *Merriam-Webster’s Collegiate Dictionary*. Accessed December 17, 2019. doi: <https://www.merriam-webster.com/dictionary/flora>.
- Forodui, Moslem. “The story of the 4000-year-old cypress in Abarkouh.” *Tehran Times* 22.4 (April 13, 2019). Accessed August 27, 2020. doi: <https://www.tehrantimes.com/news/434641/The-story-of-4000-year-old-cypress-in-Abarkouh>.
- Friis, Ib. “The Taxonomy and Distribution of *Mimusops laurifolia* (Sapotaceae).” *Kew Bulletin* 35.4 (1980): pp. 785-792.
- Gaillard, Claude. *Recherches sur les poissons représentés dans quelques tombeaux égyptiens de l’Ancien Empire*. (= *Mémoires publiés par les membres de l’Institut français d’archéologie orientale du Caire* 51). Cairo: Institut français d’archéologie orientale du Caire, 1923.
- Galán, José Manuel. Photographs by José Latova. “El jardín de Sinuhé.” *National Geographic España* (August 2017): pp. 56-65.
- Gamal, Magdi. Revised by Thérèse Labib. *Trees and Flowers of Egypt: A Guide to Popular Ornamental Egyptian Plants*. Al Rehab City; New Cairo: Sahara Printing Company, 2018.
- Gamer-Wallert, Ingrid. *Fische und Fischkulte im alten Ägypten*. Wiesbaden: Harrassowitz, 1970.
- Gardiner, Sir Alan, Arthur E. P. Weigall, and E. P. Brome. *A Topographical Catalogue of the Private Tombs of Thebes*. London: Bernard Quaritch, 1913.
- Gardiner, Sir Alan and Mahmoud Saba. *Egyptian Grammar: Being an Introduction to the Study of Hieroglyphs*. 2<sup>nd</sup> edition. London: Griffith Institute, 1950.
- Gardiner, Sir Alan. *Notes on the story of Sinuhe*. Chalon-sur-Saône: Imprimerie française et orientale E. Bertrand, 1916.
- Germer, Renate. “Ancient Egyptian plant remains in the Manchester Museum.” *Journal of Egyptian Archaeology* 73 (1987): pp. 245-246.
- Germer, Renate. *Flora des pharaonischen Ägypten*. (= *Deutsches Archäologisches Institut Abteilung Kairo, Sonderschrift* 14). Mainz am Rhein: Philipp von Zabern, 1985.
- Germer, Renate. *Handbuch der altägyptischen Heilpflanzen*. Wiesbaden, Harrassowitz, 2008.

- Germer, Renate. *Katalog der altägyptischen Pflanzenreste der Berliner Museen*. Wiesbaden, Harrassowitz, 1988.
- Geßler-Löhr, Beatrix. „Die Totenfeier im Garten.“ In *Das Grab des Amenemope, TT 41*, by Jan Assmann and Muhammad Mahmoud Abd el-Raziq, pp. 162-183. Mainz am Rhein: Philipp von Zabern, 1991.
- Gil, Joaquín. “The curious case of Valencia’s flameproof cypresses.” *El País Seminal* (August 14, 2012). Accessed August 27, 2020. doi: [https://english.elpais.com/elpais/2012/08/14/inenglish/1344943477\\_469339.html](https://english.elpais.com/elpais/2012/08/14/inenglish/1344943477_469339.html).
- Goedicke, Hans. „Eine Variante des „Hirtenliedes.“ *Beihefte zur Wiener Zeitschrift für die Kunde des Morgenlandes* 54 (1957): pp. 46-50.
- Goelet, Ogden, Raymond O. Faulkner, Carol A. R. Andrews, J. Daniel Gunther, and James Wasserman. Edited by Eva von Dassow. *The Egyptian Book of the Dead: The Book of Going Forth by Day: The Complete Papyrus of Ani*. 3<sup>rd</sup> edition. San Francisco: Chronicle Books, 2015.
- Gomaa, Farouk. *Die Besiedlung Ägyptens während des Mittleren Reiches*. Vol. II. Reichert Verlag: Wiesbaden, 1986.
- Guasch Jané, María Rosa. *Wine in ancient Egypt: A cultural and analytical study*. (= *British Archaeological Reports International Series* 1851). Oxford: Archaeopress, 2008.
- Guasch Jané, María Rosa. “The meaning of wine in Egyptian tombs: The three amphorae from Tutankhamun’s burial chamber.” *Antiquity* 85 (2011): pp. 851-858.
- Guksch, Heike. *Die Gräber des Nacht-Min und des Men-cheper-Ra-seneb*. Mainz am Rhein: Philipp von Zabern, 1995.
- Gundlach, Rolf, Arne Eggebrecht, Monique Nelson, Fathy Hassanein, Marcel Kurtz, and Christine Desroches-Noblecourt. *Sennefer: Die Grabkammer des Bürgermeisters von Theben*. Mainz am Rhein: Philipp von Zabern, 1988.
- Gothein, Marie-Luise Schröter. Edited by Walter P. Wright. Translated by Laura Archer-Hind. *A History of Garden Art: From the Earliest Times to the Present Day, Vol. 1: From Egypt to the Renaissance in Italy, Spain and Portugal*. 1<sup>st</sup>/2<sup>nd</sup> editions. Cambridge: Cambridge University Press, 1928/1966.
- Goyon, Jean-Claude. « Le feu nouveau du jour de l’an à Dendara et Karnak. » In *Hommages à François Daumas* 2, pp. 331-344. Montpellier: Université de Montpellier, 1986.

- Graindorge-Hereil, Catherine. « La quête de la lumière au mois de Khoiak : Une histoire d'oies. » *Journal of Egyptian Archaeology* 82 (1996): pp. 83-103.
- Graindorge-Hereil, Catherine. « Les oignons de Sokar. » *Revue d'égyptologie* 43 (1992): pp. 87-105.
- Graindorge-Hereil, Catherine. « L'oignon, la magie et les deux. » In *Encyclopédie religieuse de l'Univers végétal : Croyances phytoreligieuses de l'Égypte ancienne I*, edited by Sydney Aufrère, pp. 317-333. Montpellier: Publications de l'université Paul Virey, 2001.
- Granger, O., Stuart Tyson Smith, and D. Elder Smith. "Report on botanical samples from TT294." In *The Tombs of Amenhotep, Khnummose and Amenmose at Thebes* by Nigel Strudwick and Helen Strudwick, pp. 192-193. Oxford: Griffith Institute, 1998.
- Grapow, Hermann and Hildegard von Deines. *Wörterbuch der ägyptischen Drogenname: Grundriß der Medizin der Alten Ägypten*. Vol. VI. Berlin: Akademie-Verlag, 1959.
- Greco, Christian, Vincent Oeters, and Maarten J. Raven. *Tuinen van de Farao's: Planten en bloemen van het Oude Egypte uit de collecties van het Rijksmuseum van Oudheden*. Leiden: Rijksmuseum van Oudheden, 2012.
- Greiss, E. A. M. "Anatomical identification of plant material from ancient Egypt." *Bulletin de l'Institut d'Égypte* 31 (1949): pp. 249-283.
- Grubben, G. J. H, O. A. Denton, C.-M. Messiaen, R. R. Schippers, R. H. M. J. Lemmens, and L. P. A. Oyen. *Plant Resources of Tropical Africa*. Vol. 2. Wageningen: Plant Resources of Tropical Africa Foundation, 2004.
- Hanuš, Lumír H., Tomáš Rezanka, Jaroslav Spížek, and Valery M. Dembitsky. "Substances isolated from *Mandragora* species." *Phytochemistry* 66 (2005): pp. 2408-2416.
- Harrison, R. K. "The Mandrake and the Ancient World." *The Evangelical Quarterly* 28.2 (1956): pp. 87-95.
- Hartwig, Melinda. *Tomb Painting and Identity in Ancient Thebes, 1419-1372 BCE*. (= *Monumenta Aegyptiaca* X). Brussels: Fondation égyptologique reine Elisabeth, 2004.
- Harvey, Stephen. "The Cults of the King Ahmose at Abydos." PhD dissertation. Philadelphia: University of Pennsylvania, 1998.
- Harvey, Stephen. "New evidence at Abydos for Ahmose's funerary cult." *Egyptian Archaeology: Bulletin of The Egypt Exploration Society* 24 (2004): pp. 3-6.

- Hayes, William C. "Inscriptions from the Palace of Amenhotep III." *Journal of Near Eastern Studies* 10.1 (1951): pp. 35-56.
- Hawass, Zahi. "A unique Old Kingdom headrest and offering tablet of seven sacred oils found at Saqqara." *Memnonia* 9 (1998): pp. 155-160.
- Helck, Wolfgang. „Die Opferstiftung des Šn.mwt.“ *Zeitschrift für ägyptische Sprache und Altertumskunde* 85 (1960): pp. 23-34.
- Helck, Wolfgang. *Urkunden der 18. Dynastie: Biographischen Inschriften von Zeitgenossen Thutmosis' III und Amenophis' II.* Vol. 18. Berlin: Akademie-Verlag, 1956.
- Helck, Wolfgang. *Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22.* Vol. IV. Berlin: Akademie, 1961.
- Helck, Wolfgang. *Historisch-Biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie.* Wiesbaden: Harrassowitz, 1975.
- Helck, Wolfgang. *Zur Verwaltung des Mittleren und Neuen Reichs.* (= *Probleme der Ägyptologie* IIIA). Leiden: Brill, 1975.
- Haeny, Gerhard. *Untersuchungen im Totentempel Amenophis' III.* Wiesbaden: Franz Steiner, 1981.
- Hepper, Frank Nigel. "An ancient expedition to transplant live trees." *Journal of the Royal Horticultural Society* 92 (1967): pp. 435-438.
- Hepper, Frank Nigel. "Arabian and African Incense Trees." *Journal of Egyptian Archaeology* 55 (1969): pp. 66-72.
- Hepper, Frank Nigel. *Pharaoh's Flowers: The Botanical Treasures of Tutankhamun.* 2<sup>nd</sup> edition. Chicago: KWS Publishers, 2009.
- Hermann, Alfred. *Die Stelen der thebanischen felsgräber der 18. Dynastie.* Vol. Heft 11. New York; Glückstadt: J. J. Augustin, 1940.
- Hirst, Jon J. *Study Guide for the Story of Sinuhe.* London: University College London, 2007.
- Hugonot, Jean-Claude. *Le jardin dans l'Égypte ancienne.* New York; Bern; Paris; Frankfurt am Main: Publications universitaires européennes, 1989.
- Houlihan, Patrick F. and Steven M. Goodman. *The birds of ancient Egypt.* Vol 1. Warminster, England: Aris and Phillips, 1986.
- "Ideal." In *Merriam-Webster's Collegiate Dictionary*. Accessed December 17, 2019. doi: <https://www.merriam-webster.com/dictionary/ideals>.



- Ikram, Salima. *Choice cuts:  Meat production in ancient Egypt. (= Orientalia Lovaniensia Analecta 69). Leuven: Peeters, 1995.*
- Ikram, Salima. “The home of the giant catfish.” *Nekhen News* 13 (2001): p. 10.
- Incordino, Ilaria. “Foreign aromatic products in the cultural and religious identity of Ancient Egypt.” In *Materiality and Identity: Selected Papers from the Proceedings of the ATrA Conferences of Naples and Turin 2015*, edited by Ilaria Micheli, pp. 149-156. Trieste: EUT Edizioni Università di Trieste, 2016.
- Iwaszczuk, Jadwiga. *Sacred Landscapes of Thebes during the Reign of Hatshepsut: Royal Construction Projects I: Topography of the West Bank*. Warsaw: IKŚiO PAN, 2017.
- Jacquet-Gordon, Hélène. *Les noms des domaines funéraires sous l’Ancien Empire égyptien. (= Bibliothèque d’étude 34)*. Cairo: Institut français d’archéologie orientale du Caire, 1962.
- James, T. G. H., Araldo de Luca, Elisabetta Ferrero, Valeria Manfredi, and Patricia Balocco Lovisetti. *Tutankhamun: The Eternal Splendor of the Boy Pharaoh*. Cairo: The American University in Cairo Press, 2007.
- Jaros-Deckert, Brigitte, Dieter Arnold, and Jürgen Settgast. *Das Grab des JnJ-Jtj.f: Die Wandmalereien der XI. Dynastie*. Mainz am Rhein: Philipp von Zabern, 1984.
- Jones, Dilywn. *An index of ancient Egyptian titles, epithets and phrases of the Old Kingdom*. Vol 1. Oxford: Archaeopress, 2000.
- Karelin, Dmitry and Irina Kulikova. “Сады в Древнем Египте (Gardens in ancient Egypt).” In *Сад: Символы Метафоры Аллегорий (Gardens: Symbols, metaphors, and allegories)*, edited by E. D. Fedotova, pp. 3-34. Moscow: Russian Academy of Arts, 2010.
- Kamel, Soliman K., James P. Strange, and Walter S. Sheppard. “A scientific note on hygienic behavior in *Apis mellifera lamarckii* and *A. m. carnica* in Egypt.” *Apidologie* 34 (2003): pp. 189-190.
- Kampp, Friedericke. *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*. Vols. 1-2. Mainz am Rhein: Philipp von Zabern, 1996.
- Kampp, Friedericke. „Bemerkungen zur Datierung der Gräber TT 80 und 104 nach topographischen und architektonischen Gesichtspunkten.“ In *Eine Ikonographische Datierungsmethode Datierungsmethode für Thebanische Wandmalereien der 18. Dynastie*, edited by Eberhard Dziobek, Thomas Schneyer and Norbert Semmelbauer. Heidelberg: Orientverlag, 1992.

- Kanawati, Naguib. *The Rock Tombs of El-Hawawish: The Cemetery of Akhmim*. Vol 5. Sydney: The Australian Centre for Egyptology, Macquarie University, 1982.
- Kappel, Sven, Christian E. Loeben, Dieter Eigner, Marc Loth, and Pawel Wolf. *Gärten im alten Ägypten und in Nubien 2000 v. Chr. - 250 n. Chr.* Rahden: Verlag Marie Leidorf, 2011.
- Keel, Othmar. „Ägyptische Baumgöttinnen der 18.-21. Dynastie: Bild und Wort, Wort und Bild.“ *Orbis Biblicus et Orientalis* 122 (1992): pp. 74-75.
- Keimer, Ludwig and Renate Germer. *Die Gartenpflanzen im alten Ägypten: Ägyptologische Studien*. Forward by Georg Schweinfurth. Vol. I. Hildesheim: Georg Olms Verlagsbuchhandlung, 1961.
- Keimer, Ludwig. « *Ceruana pratensis* Forssk., dans l'Égypte ancienne et moderne. » *Annales du service des antiquités de l'Égypte* 30 (1932): pp. 30-37.
- Keimer, Ludwig. « Interprétation d'un passage du Papyrus Sallier I : Une prière au dieu Thot. » *Bulletin de l'Institut d'Égypte* 29 (1948): pp. 275-291.
- Keimer, Ludwig. « L'arbre *trt* est-il réellement le saule égyptien (*Salix safsaf* Forssk.) ? » *Bulletin d'Institut français d'archéologie orientale du Caire* 31 (1931): pp. 177-234.
- Keimer, Ludwig. « Plusieurs antiquités récemment trouvées. » *Bulletin de l'Institut d'Égypte* 28 (1947): pp. 117-137.
- Kemp, Barry. *Amarna Reports*. Edited by A. J. Spencer. Vol. I. London: Egypt Exploration Society, 1984.
- Kemp, Barry. “New Kingdom Egypt: a mature state.” In *Ancient Egypt: Anatomy of a Civilization*. London; New York: Routledge, 2006.
- Kitchen, Kenneth A. *Ramesside Inscriptions: Historical and Bibliographical*. Vol. VI. Cambridge: Blackwell, 1993.
- Koltsida, Aikaterini. “The North Palace at Malkata.” *Archiv für Orientforschung* 52 (2011): pp. 199-215.
- Kozloff, Arielle P. *Amenhotep III: Egypt's Radiant Pharaoh*. New York; Cambridge: Cambridge University Press, 2012.
- Kuentz, Charles. « Deux stèles d'Edfou. » *Bulletin d'Institut français archéologie orientale du Caire* 21 (1923): pp. 107-111.

- Kuhlmann, Klaus P. „Eine Beschreibung der Grabdekoration mit der Aufforderung zu kopieren und zum Hinterlassen von Besucherinschriften aus saitischer Zeit.“ *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 29.2 (1973): pp. 207-211.
- Kritsky, Gene. “Beetle Gods, King Bees and Other Insects of Ancient Egypt.” *Kmt* 4.1 (1993): 32-39.
- Kritsky, Gene. *The Tears of Re: Beekeeping in ancient Egypt*. Oxford: Oxford University Press, 2015.
- Lacau, Pierre. *Catalogue général des antiquités égyptiennes du musée du Caire n° 34001-34064 : Stèles du Nouvel Empire I*. Cairo: Institut français d’archéologie orientale du Caire, 1906.
- Lacau, Pierre and Henri Chevalier. *Une chapelle d’Hatchepsout à Karnak*. Vol 1. Cairo: Conseil suprême des antiquités égyptiennes; Institut français d’archéologie orientale du Caire, 1977.
- Lack, H. Walter. „Blütenkränze für die Pharaonen: eine Sonderausstellung im Botanischen Museum Berlin-Dahlem.“ *Antike Welt* 24.2 (1993): pp. 150-151.
- Legrain, Georges. “The Paintings and Inscriptions of the Painted Vaulted Chamber of Teta-Ky.” In *Five Years’ Explorations at Thebes: A Record of Work done 1907-1911* by Howard Carter, George Edward Stanhope Molyneux Herbert – 6<sup>th</sup> Earl of Carnarvon, Francis L. Griffith, Georges Legrain, George Möller, Percy E. Newberry, and Wilhelm Spiegelberg. London; New York: H. Frowde, 1912.
- Legrain, Georges. *Catalogue général des antiquités égyptiennes du musée du Caire n° 42001-42138 : Statues et statuettes des rois et de particuliers I*. Cairo: Institut français d’archéologie orientale du Caire, 1906.
- Legrain, Georges. « Notes d’inspection sur le temple Manakhpirri-henq-anh. » *Annales du service des antiquités de l’Egypte* 7 (1906): pp. 183-186.
- Leek, Frank F. “Some evidence of bees and honey in ancient Egypt.” *Bee World* 56.4 (1975): pp. 141-148.
- Leitz, Christian. *Lexikon der ägyptischen Götter und Götterbezeichnungen*. Vol. 5. (= *Orientalia Lovaniensia Analecta* 112). Dudley: Peeters, 2002.
- Lesko, Leonard H. and Barbara S. Lesko. *A Dictionary of Late Egyptian*. Vols. I-II. Berkeley: B.C. Scribe Publications, 1982.

- Lichtheim, Miriam. *Ancient Egyptian Literature: Old and Middle Kingdom*. Vol 1. Berkeley: University of California Press, 2006.
- Lucas, Alfred. Edited by John R. Harris. *Ancient Egyptian Materials and Industries*. 3<sup>rd</sup> edition. London: E. Arnold, 1948.
- Loret, Victor. « Le signe hiéroglyphique *nn* (jonc des marais). » In *Studies presented to F. Ll. Griffiths*, edited by Stephen R. K. Glanville, pp. 304-309. London: Egypt Exploration Society, 1932.
- Louant, Emmanuel. *Comme Pouiemrê triompha de la mort : Analyse du programme iconographique de la tombe thébaine n°39*. (= *Lettres orientales* 6). Leuven: Peeters, 2000.
- Mahmoud, Tamer. *Desert Plants of Egypt's Wadi el-Gamal National Park*. Cairo; New York: The American University in Cairo Press, 2010.
- Manassa, Colleen. "Sounds of the netherworld." In *Mythos and Ritual, Festschrift für Jan Assmann zum 70*, edited by Benedikt Rothöhler and Alexander Manisali. Münster: Lit Verlag, 2008.
- Manassa, Colleen. *The Late Period Underworld: Sarcophagi and Related Texts from the Nectanebid Period*. (= *Ägypten und Altes Testament* 72). Wiesbaden, Harrassowitz, 2007.
- Manniche, Lise. *Lost tombs: A study of certain eighteenth dynasty monuments in the Theban necropolis*. London; New York: Kegan Paul International Ltd., 1988.
- Manniche, Lise. *An Ancient Egyptian Herbal*. London: The British Museum Press; Cairo: The American University in Cairo Press, 1989/2006.
- Manniche, Lise. "The Tomb of Nakht, The Gardener, at Thebes (no. 161) as Copied by Robert Hay." *Journal of Egyptian Archaeology* 72 (1986): pp. 55-78.
- Mariette, Auguste. *Dendérah : Description générale du grand temple de cette ville*. Vol. IV. Paris: Librairie A. Franck, 1973.
- Mariette, Auguste. *Deir-el-Bahari : Documents topographiques, historiques et ethnographiques recueillis dans ce temple pendant les fouilles exécutées par Auguste Mariette-Bey : Ouvrage publié sous les auspices de son Altesse Ismaïl, khédive d'Égypte : Planches*. Leipzig: J. C. Hinrichs; Cairo: Boulaq Museum; Paris: C. Klincksieck, 1877.
- Marini, Paolo. "Renenutet: worship and popular piety at Thebes in the New Kingdom." *Journal of Intercultural and Interdisciplinary Archaeology* 2 (2015): pp. 73-84.

- Maspero, Gaston. « La copie de la tombe d'Anna à Thèbes par M. P.-Hippolyte Boussac. » In *Comptes rendus des séances de l'Académie des inscriptions et belles-lettres*, 35<sup>e</sup> année, n° 6, pp. 418-419. Paris: Académie des inscriptions et des belles-lettres, 1891.
- Mathieu, Bernard. *Abréviations des périodiques et collections en usage à l'Institut français d'archéologie orientale*. 6<sup>th</sup> edition. Cairo: Institut français d'archéologie orientale du Caire, 2017.
- Mattiolo, Oreste. "I vegetali scoperti nella tomba dell'architetto Kha e di sua moglie Mirit nella necropoli di Tebe, etc." *Atti della reale accademia delle scienze di Torino* 61.13 (1926): pp. 558-568.
- Meeks, Dimitri. *Année lexicographique : Égypte ancienne*. Vol I. Rev. edition. Paris: Librairie Cybèle, 1977/1998.
- Mehdawy, Magda I. and Amr Hussein. *The Pharaoh's Kitchen: Recipes from Ancient Egypt's Enduring Food Traditions*. Cairo: The American University in Cairo Press, 2010.
- Meinertzhagen, Col. Richard. *Nicholl's Birds of Egypt*. Vols. I-II. London: Hugh Reeds Ltd., 1930.
- Menu, Bernadette. *Histoire économique et sociale de l'ancienne Égypte : De Nârmer à Alexandre le Grand I : Les fondements de l'économie, tome 1 : Les bases structurelles de l'économie*. Paris: Éditions du Centre national de la recherche scientifique, 2018.
- Miles, John. *Pharaoh's birds: A guide to ancient and present-day birds in Egypt*. Cairo: The American University in Cairo Press, 1998.
- Moldenke, Charles E. *Ueber die in den altägyptischen Texten erwähnten Bäume und deren Verwertung*. Leipzig: Druck von Breitkopf and Härtel, 1886.
- Mole, Rami van der. *Hieroglyphic Dictionary of Egyptian Coffin Texts*. Leiden: Brill, 2000.
- Montet, Pierre. *Scènes de la tombe privée dans les tombeaux égyptiens de l'Ancien Empire*. (= *Publications de la faculté des lettres de l'université de Strasbourg* 34). Paris; Strasbourg: Librairie Istra; Oxford: Oxford University Press, 1925.
- Muhs, Brian. *The Ancient Egyptian Economy: 3000 – 30 BCE*. Cambridge: Cambridge University Press, 2016.
- Murane, William J. "Servant, seer, saint, son of Hapu, Amenhotep called Huy." *Kmt* 2.2 (1991): p. 58.

- Naville, Édouard. *The Temple of Deir el Bahari: End of Northern Half and Southern Half of the Middle Platform*. Vol. III. London: Egypt Exploration Society, 1898.
- Naville, Édouard. *The Temple of Deir el Bahari: Upper Court and Sanctuary*. Vol. V. London: Egypt Exploration Society, 1899.
- Newberry, Percy E. "The Funerary Statuettes from Tomb of Teta-Ky." In *Five Years' Explorations at Thebes: A Record of Work done 1907-1911* by Howard Carter, George Edward Stanhope Molyneux Herbert – 6<sup>th</sup> Earl of Carnarvon, Francis L. Griffith, Georges Legrain, George Möller, Percy E. Newberry, and Wilhelm Spiegelberg. London; New York: H. Frowde, 1912.
- Newton, Claire. « Le palme argoun (*Medemia argun* (Mart.) Württemb. ex Wendl). » In *Encyclopédie religieuse de l'Univers végétal : Croyances phytoreligieuses de l'Égypte ancienne*, edited by Sydney Aufrère. Vol. II. Montpellier: Publications de l'université Paul-Valéry – Montpellier III, 2001.
- Nigussie, Zerihun and Getachew Alemayehu. "Sesbania sesban (L.) Merrill: Potential uses of an underutilized multipurpose tree in Ethiopia." *African Journal of Plant Science* 7.10 (2013): pp. 468-473.
- O'Connor, David. "The King's Palace at Malkata and the Purpose of the Royal Harem." In *Millions of Jubilees: Studies in Honor of David P. Silverman*, pp. 55-80, edited by Zahi Hawass and Jennifer Houser Wegner. Cairo: Conseil suprême des antiquités de l'Égypte, 2010.
- Online Etymology Dictionary*. Lancaster, Pennsylvania, 2001 –. <https://www.etymonline.com/>.
- Ovid and David Raeburn. Introduction by Denis Feeney. "Cyparissus." In *Metamorphoses: Translated by David Raeburn with an introduction by Denis Feeney*. London: Penguin Classics, 2004.
- Parkinson, Richard B. *The Painted Tomb-Chapel of Nebamun: Masterpieces of Ancient Egyptian Art in The British Museum*. Cairo: The American University in Cairo Press; London: British Museum Press, 2008.
- Peet, T. Eric. *The great tomb-robberies of the twentieth Egyptian dynasty: Being a critical study with translations and commentaries of the papyri in which these are recorded*. Oxford: Clarendon Press, 1930.
- Petrie, Sir William Flinders. *Six temples at Thebes*. London: Bernard Quaritch, 1897.



- Plutarch and J. Gwyn Griffiths. *Plutarch's De Iside et Osiride*. Cardiff: University of Wales Press, 1970.
- Polz, Daniel. „Bemerkungen der Grabbenutzung in der thebanischen Nekropole.“ *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 46 (1990): pp. 301-336.
- Poo, Mu-Chou. „Weinopfer.“ In *Lexikon der Ägyptologie, Band VI, Lieferung I*, edited by Wolfgang Helck, Eberhard Otto, Wolfhart Westendorf, pp. 1186–90. Wiesbaden: Harrassowitz, 1986.
- Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings I: The Theban Necropolis: Part 1: Private Tombs*. 2<sup>nd</sup> edition. Oxford: Griffith Institute, 1970.
- Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. Revised by Jaromír Málek. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings III: Memphis: Part 2: Saqqâra and Dahshûr*. 2<sup>nd</sup> edition. Oxford: Griffith Institute, 1981.
- Porter, Bertha and Rosalind Moss. Assisted by Ethel W. Burney. *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings IV: Lower and Middle Egypt (Delta and Cairo and Asyût)*. 2<sup>nd</sup> edition. Oxford: Griffith Institute, 1968.
- Quibell, James E. “The tomb of Yuaa and Thuiu.” In *Catalogue général des antiquités égyptiennes du musée du Caire n° 51001-51191*. Cairo: Service des antiquités égyptiennes du musée du Caire, 1908.
- “Realistic.” In *Merriam-Webster's Collegiate Dictionary*. Accessed December 17, 2019. doi: <https://www.merriam-webster.com/dictionary/realistic>.
- Redford, Donald, Susan Redford, and Ray Smith. *The Akhenaten Temple Project*. Vol. 4. Warminster: Aris and Philips, 1988.
- Rindi Nuzzolo, Carlo. “Two Ptah-Sokar-Osiris Figures from Akhmim in the Egyptian Collection of the Museum of Fine Arts, Budapest.” *Bulletin du musée hongrois des beaux-arts* 119 (2014): pp. 13-41.
- Robichon, Clément and Alexandre Varille. *Le temple du scribe royal Amenhotep, fils de Hapou*. (= *Fouilles de l'Institut français d'archéologie orientale du Caire* 11). Cairo: Institut français d'archéologie orientale du Caire, 1936.

- Robichon, Clément and Alexandre Varille. « Fouilles des temples funéraires thébains. » *Revue d'égyptologie* 3 (1938): pp. 99-102.
- Robins, Gay. *Women in ancient Egypt*. London: British Museum Press, 1993.
- Roehrig, Catharine H., Renée Dreyfus, Cathleen A. Keller. *Hatshepsut, from Queen to Pharaoh*. New York; New Haven: The Metropolitan Museum of Art, 2005.
- Rosellini, Ippolito and Mahmoud Saba. *I monumenti dell'Egitto e della Nubia: Disegnati dalla spedizione scientifico letteraria toscana in Egitto*. Vol. 2. Pisa: Presso N. Capurro, 1834.
- Rowe, Alan J. *New Light on Ægypto-Cyrenæan Relations: Two Ptolemaic Statues Found in Tolmeita*. (= *Cahiers supplémentaires des annales du service des antiquités de l'Égypte* 12). Cairo: Conseil suprême des antiquités de l'Égypte, 1948.
- Säve-Söderbergh, Torgny, Norman de Garis Davies, and Nina de Garis-Davies. *Private Tombs at Thebes: Four Eighteenth Dynasty Tombs*. Vol. 2. Oxford: Griffith Institute, 1957.
- Sahrhage, Dietrich. *Fischfang und Fischkult im alten Ägypten*. (= *Kulturgeschichte der antiken Welt* 70). Mainz am Rhein: Philipp von Zabern, 1997.
- Schäfer, Heinrich. Edited by Emma Brunner-Traut. Translated by John Baines. Forward by E. H. Gombirch. *Principles of Egyptian Art*. Reprint with revisions. ed. Oxford: Griffith Institute, 2002.
- Schiestl, Robert. "The Cemeteries of F/I in the Strata d/2 (H) and d/1 (G/4), late 12th Dynasty and early 13th Dynasty." *Tell el-Dab'a-Homepage*. Accessed August 26, 2020. doi: [http://www.auaris.at/html/stratum\\_fl\\_d1\\_en.html](http://www.auaris.at/html/stratum_fl_d1_en.html).
- Schoske, Sylvia, Barbara Kreißl, and Renate Germer. „Anch“ *Blumen für das Leben: Pflanzen im alten Ägypten*. München: Staatliche Sammlung ägyptischer Kunst, 1992.
- Schweinfurth, Georg A. « De la flore pharaonique. » *Bulletin de l'Institut égyptien* 27.3 (1882): p. 68.
- Schweinfurth, Georg A. "Further discoveries in the flora of ancient Egypt." *Nature* 29 (1884): p. 312.
- Schweinfurth, Georg A. « Les dernières découvertes botaniques dans les anciens tombeaux de l'Égypte. » *Bulletin de l'Institut Égyptien* 5 (1884): pp. 256-283.
- Seidlmayer, Stephan and Ingelore Hafemann. English translations by Marianne Easton-Krauss and Jana Szeponik. Demotic lemmata by Günter Vittmann. Internet presentation by Anika

- Strobach. *Thesaurus Linguae Aegyptiae*. 14<sup>th</sup> update. Last updated October 31, 2014. <http://aaew.bbaw.de/tla/index.html>.
- Selim, Hassan. "Two unpublished Eighteenth Dynasty stelae from the reign of Thutmose III at the Cairo Museum TN 20.3.25.3 and TN 21.3.25.14 (pl. I-II)." In *Studies in honor of Ali Radwan II*, edited by Khaled A. Daoud, Shafia Bedier, and Sawsan Abd el-Fatah. (= *Supplément aux annales du service des antiquités de l'Égypte* 34). Cairo: Conseil suprême des antiquités de l'Égypte, 2005.
- Semple, Ellen Churchill. "Ancient Mediterranean Pleasure Gardens." *Geographical Review* 19.3 (1929): pp. 420-443.
- Sethe, Kurt. *Urkunden des Altes Reichs*. Vol. I, Pt I. Leipzig: Akademie-Verlag, 1932-1933.
- Sethe, Kurt. *Urkunden der 18. Dynastie: Historisch-Biographische Urkunden*. Vol. IV, Pt. I-IV. Berlin: Akademie-Verlag, 1961.
- Settgast, Jürgen. *Untersuchungen zu altägyptischen Bestattungsdarstellungen*. (= *Abhandlungen des Deutschen Archäologischen Instituts Kairo Ägyptologische Reihe* 3). Glückstadt; Hamburg; New York: Verlag J. J. Augustin, 1963.
- Shaltout, Kamal Hussien, Yassin Al-Sodany, and Ebrahim M. Eid. "Biology of the common reed (*Phragmites australis* (Cav.) Trin. ex Steud.): Review and inquiry." *Assiut University Center for Environmental Studies* 7 (2006): pp. 2-37.
- Shedid, Abdel Ghaffar. *Stil der Grabmalereien in der Zeit Amenophis' II: Untersucht an den Thebanischen Gräbern Nr. 104 und Nr. 80*. Vol. 66. Mainz am Rhein: P. von Zabern, 1988.
- Simman, Eleanor B. "Amenhotep son of Hapu: Self-presentation through statues and their texts in pursuit of semi-divine intermediary status." MPhil thesis. Birmingham: University of Birmingham, 2014.
- Simon, Herta, Marion Nickig, and Jürgen Becker. *Das große Gärtenbuch: Das Standardwerk für jeden Gartenliebhaber*. München: Gräfe und Unzer Verlag, 2016.
- Simpson, William Kelly. *The Terrace of the Great God at Abydos: The Offering Chapels of Dynasties 12 and 13*. New Haven: Peabody Museum of Natural History of Yale University, 1974.
- Smith, Mark. *Following Osiris: Perspectives on the Osirian Afterlife from Four Millennia*. 1<sup>st</sup> Edition. Oxford: Oxford University Press, 2017.

- Spiegelberg, Wilhelm. *Zwei Beiträge zur Geschichte und Topographie der thebanischen Necropolis im Neuen Reich I: Der Grabtempel Amenophis' I zu Draḥ-Abu'l-Negga II: Plan einer Gesamtarbeit über die Verwaltung der thebanischen Necropolis im Neuen Reich*. Strasbourg: Schlesier und Schweikhardt, 1898.
- St-Denis, Bernard. "Just what is a garden?" *Studies in the History of Gardens and Landscape Design* 27.1 (2007): pp. 61-76.
- Stadler, Martin. "Procession." In *University of California, Los Angeles Encyclopedia of Egyptology* 1.1, edited by Jacco Dieleman, Willeke Wendrich, Elizabeth Froom, and John Baines, pp. 1-10. Los Angeles: University of California, Los Angeles, 2008.
- Stadelmann, Rainer. „Die ḥntyw-š, der Königsbezirk SNPR und die Namen der Graben Langen der Frühzeit.“ *Bulletin de l'Institut français d'archéologie orientale du Caire* 81 (1981): pp. 153-164.
- Stadelmann, Rainer. « La ville de pyramide à l'Ancien Empire. » *Recueil d'égyptologie* 33 (1981): pp. 67-77.
- Steindorff, Georg. Edited by Wolfgang Helck. *Urkunden des ägyptischen Altertums XX: Historische Inschriften Amenophis' III*. Berlin: Akademie-Verlag, 1957.
- Tallet, Pierre. "Food in Ancient Egypt." In *A Companion to Food in the Ancient World*, edited by John Wilkins and Robin Nadeau. Chichester: Wiley-Blackwell, 2015.
- Tarasenko, Mykola. *Studies on the Vignettes from Chapter 17 of the Book of the Dead*. Vol. 16. Oxford: Archaeopress, 2016.
- Täckholm, Vivi, Mohammed Drar, Jamiat el-Qahirah, and Kulluyat el-Ulum. *Flora of Egypt: Pteridorhyta, Gymnospermae and Angiospermae, Part Monocotyledones: Typhaceae-Gramineae*. Vols. I-III. Cairo: Cairo University Press, 1969.
- Täckholm, Vivi. *Students' Flora of Egypt*. Beirut: Cairo University and Cooperative Printing Co., 1974.
- Taylor, John H. Edited by John H. Taylor. *Journey through the Afterlife: Ancient Egyptian Book of the Dead*. Cambridge: Harvard University Press, 2010.
- "The temple." *Thutmose III Temple Project*. Accessed July 10, 2019. doi: <https://thutmosisiiitempleproject.org/index.php/en/thutmosis-iii/the-temple>.

The University of Chicago. *The Chicago Manual of Style Online*. 17<sup>th</sup> edition. Chicago: University of Chicago Press, 2017. doi:

<https://www.chicagomanualofstyle.org/home.html>.

Theophrastos. Translated by Sir Arthur Hort. *Theophrastus: Enquiry into plants and minor works on odours and weather signs*. Vol. VI, pt. II. 4<sup>th</sup> edition. Cambridge: Harvard University Press; London: William Heinemann Ltd., 1968.

Thompson, R. Campbell. *A dictionary of Assyrian botany*. London: The British Academy, 1949.

“Typology.” In *Merriam-Webster’s Collegiate Dictionary*. Accessed December 17, 2019. doi: <https://www.merriam-webster.com/dictionary/typology>.

Tietze, Christian, Erik Hornung, Michael Haase, Christine Mende, Martin Fitzenreiter, Hermann Schlögl, Martin von Falck, Wolfgang Waitkus, Marina Heilmeyer, Wafaa el-Saddik, Jan Assmann, Renate Germer, Susanne Martinssen-von Falck, and Adolf Hoffmann. Edited by Christian Tietze. *Ägyptische Gärten: Eine Ausstellung im Römisch-Germanischen Museum der Stadt Köln vom 27. Mai bis zum 6. November 2011 (Egyptian Gardens: An Exhibition in The Roman-Germanic Museum of The City of Cologne from May 27<sup>th</sup> to November 6<sup>th</sup>, 2011)*. Weimar: Arcus-Verlag, 2011.

Tinney, Steve and Philip Jones. *Electronic Pennsylvania Sumerian Dictionary Project (ePSD)*. Philadelphia: University of Pennsylvania Museum of Anthropology and Archaeology, 2006–Present. <http://psd.museum.upenn.edu/>

Tomashevskaja, Marija. “Sacred floral garlands and collars from the New Kingdom period and early third intermediate period in ancient Egypt (1550 B.C. – 943 B.C.).” MA thesis. Leiden: Leiden University, Faculty of Humanities, 2019.

Trakás, Gábor. *Etymological Dictionary of Egyptian: A Phonological Introduction*. Vol. 1. (= *Handbuch der Orientalistik der Nahe und Mittlere Osten*. Leiden; Boston; Cologne: Brill, 1999.

Turabian, Kate L., John Grossman, and Alice Bennett. *A Manual for Writers of Term Papers, Theses, and Dissertations*. 9<sup>th</sup> edition. Chicago: University of Chicago Press, 2018.

“Turtledove.” *Online Etymology Dictionary*. Accessed August 28, 2020. doi:

<https://www.etymonline.com/search?q=turtledove>.

UCLA Digital Karnak. “Digital Karnak – Temple Development.” YouTube video. Posted Dec. 1, 2008. doi: <https://www.youtube.com/watch?v=QXDipKxgU24>.

- Vandersleyen, Claude. *Les guerres d'Amosis : Fondateur de la XVIII<sup>e</sup> dynastie*. Brussels: Fondation égyptologique reine Elisabeth, 1971.
- Vandier, Jacques. *Manuel d'archéologie égyptienne : Bas-reliefs et peintures I/II : Scènes de la vie quotidienne*. Paris: A. et J. Picard, 1952.
- Vartavan, Christian Tutundjian de, Arminee Arakelyan, and Victoria Asensi-Amorós. *Codex of ancient Egyptian plant remains = Codex des restes végétaux de l'Égypte ancienne*. 2<sup>nd</sup> revised and extended edition. London: SAIS Publishing, 2010.
- Vartavan, Christian Tutundjian de. Appendix by Leonard A. Boodle. *Hidden fields of Tutankhamun: From identification to interpretation of newly discovered plant material from the pharaoh's grave*. London: Triade Exploration, 1999.
- Vartavan, Christian Tutundjian de. « Rapport préliminaire sur les restes végétaux d'Adaïma. » *Bulletin de l'Institut français d'archéologie orientale du Caire* 91 (1992): pp. 243-246.
- Vermeersch, Pierre M. *Palaeolithic Living Sites in Upper and Middle Egypt*. Leuven: Leuven University Press, 2000.
- Virey, Philippe. Edited by Ernest Leroux. « Le jardin de Rekhmara. La réception des invités. Les apprêts du festin. » In *Mémoires publiés par les membres de la Mission archéologique française au Caire V, fascicule 1 : Sept tombeaux thébains de la XVIII<sup>e</sup> dynastie*, pp. 156-160. Paris: Ministre de l'instruction publique et des beaux-arts, 1891.
- Virey, Philippe. Edited by Ernest Leroux. « Tombeau d'Amenemheb » ; « Tombeau de Khem-nekht » ; and « Tombeau de Khem. » In *Mémoires publiés par les membres de la Mission archéologique française au Caire V, fascicule 2 : Sept tombeaux thébains de la XVIII<sup>e</sup> dynastie*, pp. 268-270, fig. 13; pp. 314-321, figs. 1, 7-9; 366-367, figs. 1-3. Paris: Ministre de l'instruction publique et des beaux-arts, 1891.
- Vleeming, Sven and Holger Kockelmann. Assisted by Angelika Paul and Raimar Eberhard. „Das Digital Schott-Archiv (DSA).“ Trier: Universität zu Trier, 2008-2010. Accessed April 10, 2019 to June 20, 2019. doi: <http://www.schott.uni-trier.de/schott.php>.
- Vomberg, Petra. „Die Weidendarstellung im Grab des Jpwj (TT 217) aus Onomasiologischer Sicht betrachtet.“ *Studien zur altägyptischen Kultur* 33 (2005): pp. 373-78.
- Wahlberg, Eva-Lena. “The mysterious beverage called šdḥ.” *Göttingen Miszellen* 230 (2011): pp. 73-82.



- Weiss, Ehud, Daniel Zohary, and Maria Hopf. *Domestication of plants in the old world: The origin and spread of domesticated plants in south-west Asia, Europe, and the Mediterranean basin*. 4<sup>th</sup> edition. Oxford: Oxford University Press, 2011.
- Wiese, André B., Christiane Jacquat, and Yasmin Müller. *Blumenreich: Wiedergeburt in Pharaonengräbern. Katalog zur Ausstellung des Antikenmuseums Basel und Sammlung Ludwig. 03.09.2014 - 01.02.2015*. Antikenmuseum Basel und Sammlung Ludwig, 2014.
- Wild, Henri. « Contributions à l'iconographie et à la titulature de Qen-amon. » *Bulletin d'Institut français d'archéologie orientale du Caire* 56 (1956): pp. 203-237.
- Wilkinson, Alix. "Gardens in ancient Egypt: their location and symbolism." *The Journal of Garden History* 10.4 (1990): pp. 199-208.
- Wilkinson, Alix. *The garden in ancient Egypt*. London: Rubicon Press, 1998.
- Wilkinson, Alix. "Symbolism and Design in Ancient Egyptian Gardens." *Garden History* 22.1 (1994): pp. 1-17.
- Wilkinson, Richard H. *The Complete Gods and Goddesses of Ancient Egypt*. New York: Thames and Hudson, 2003.
- Winlock, Hebert E. *Excavations at Deir el-Bahari 1911-1931*. New York: Macmillan, 1942.
- Winlock, Herbert E. Photographs by Harry Burton. Plans by Walter Hauser. Catalogue by Charlotte R. Clark. *The tomb of queen Meryet-Amun at Thebes. (= Publications of The Metropolitan Museum of Art, Egyptian Expedition 6)*. New York: The Metropolitan Museum of Art, 1932.
- Weeks, Kent. *Egyptology and Social Sciences*. Cairo: The American University in Cairo Press, 1979.
- Wegner, Josef. "Museum Excavations at Abydos: Modeling the Mayor's House at South Abydos: The Palatial Residence at *Wah-Sut*." *Expedition* 56.1 (Spring 2014): pp. 24-31.
- Wegner, Max. „Die Stilentwicklung der thebanischen Beamtengräber.“ *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 4 (1933): pp. 38-164.
- Wendorf, Fred. "Wadi Kubaniya." In *Encyclopaedia of the archaeology of ancient Egypt*, edited by Kathryn A. Bard, p. 874. London: Routledge Press, 1999.
- Werbrouck, Marcelle and Baudouin van de Walle. *La tombe de Nakht : Notice sommaire*. Brussels: Vromant and Co. and the Musée royaux d'art et d'histoire et parc du Cinquantenaire, 1929.

- Wolff, Esther and François Felber. *Le jardin des pharaons : Exposition du 20 mai au 30 octobre 2016 au musée botanique, place de Milan, Montriond, Lausanne*. Lausanne: Musée et jardins botaniques cantonaux vaudois, 2016.
- Wyatt, John. "Bird Identification from Art, Artifacts, and Hieroglyphs: An Ornithologist's Viewpoint." In *Between Heaven and Earth: Birds in Ancient Egypt*, edited by Rozenn Bailleul-LeSuer, pp. 83-90. Chicago: Oriental Institute, 2012.
- Wysocki, Zygmunt. "The temple of queen Hatshepsut at Deir el-Bahari: Its original form," *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 42 (1986): pp. 213-228.
- Zaak Augmented and Virtual Reality Works. "Museum Rietberg - Gärten der Welt." Accessed August 10, 2020. doi: <https://zaakzurich.tumblr.com/post/149319457830/augmented-virtual-reality-works-for-museum>.
- Zenihiro, Kento. *The Complete Funerary Cones*. Tokyo: Tocho Company Ltd., 2009.
- Zingarelli, Andrea Paula. "Some considerations about the water offered by the tree-goddess at TT49." In *L'acqua nell'antico Egitto: Vita, rigenerazione, incantesimo, medicamento – Proceedings of the First International Conference for Young Egyptologists, Italy, Chianciano Terme, October 15-18, 2003*, edited by Alessia Amenta, Maria Michela Luiselli, and Maria Novella Sordi, pp. 381-388. Rome: L'Erma di Bretschneider, 2005.