

A Historical GIS of Nubia based on the William John Bankes Archive (1815-1822)

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Outline

- ▶ The Authors: Bankes, Linant, Ricci
- ▶ Turco-Egyptian expedition to Dongola, Sinnar, Darfur and Kordofan
- ▶ The Bankes Archive: Overview
- ▶ The Loss of Nubia
- ▶ Research Questions
- ▶ The Sources
- ▶ Methodology
 - ▶ Data Collection
 - ▶ Gazetteer
 - ▶ Access Database
 - ▶ ArcGIS HGIS, Layers drawing
- ▶ Interpretation

William John Bankes (1786-1855)

- ▶ Esquire, rich family
- ▶ Cambridge graduate (Greek inscriptions)
- ▶ Friend of Byron
- ▶ Started travelling in 1813 (Iberian Peninsula, Italy, Greece, Levante, Egypt, and Nubia), until 1819
- ▶ „The Nubian Explorer“
- ▶ Philae Obelisk
- ▶ MP (1820s and 1830s)
- ▶ Arrested in 1841, he flees the country and lives in exile



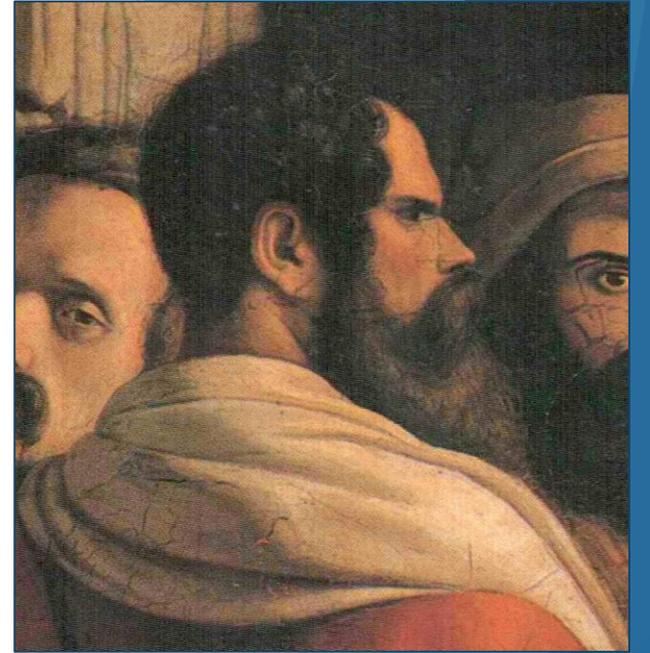
Louis Maurice Adolphe Linant de Bellefonds (1799-1883)

- ▶ Son of a French naval officer
- ▶ Employed in map making along the coast of Newfoundland (1814)
- ▶ Travel in the Eastern Mediterranean, then Egypt
- ▶ From 1817 in the service of William John Bankes
- ▶ Trips to Siwa, Sinai and Sennar (1820-22)
- ▶ Eastern Desert, Sinnar (1827, 1831)
- ▶ Egyptian Government Career:
 - ▶ Chief engineer of public works in Upper Egypt (1831)
 - ▶ Head of public works, Bey (1837)
 - ▶ Chief Engineer of the Suez Canal
 - ▶ Pasha (1873)



Alessandro Ricci (ca. 1794-1834)

- ▶ Physician
- ▶ Travel to Egypt in 1817
 - ▶ Work for Belzoni, then Salt and Bankes
 - ▶ Travel with Bankes to Nubia (1819)
 - ▶ Travel with Linant to Siwa and Sinai (1820)
 - ▶ Travel with Linant to Sennar (1821-22)
 - ▶ Collection of Egyptian antiquities
- ▶ Acquaintance with Rosellini and Champollion
- ▶ Franco-Tuscan expedition (1829-29)
- ▶ Sickness (1832) and death (1834)



Expedition to Dongola, Sinnar, Darfur, and Kordofan (1820-22)

- ▶ Isma‘il Pasha (August 1820)
- ▶ Mehmed Defterdar Bey (early 1821)
- ▶ Ibrahim Pasha (June 1821)

- ▶ Defeat of the Mameluk remnants
- ▶ Collection of taxes
- ▶ Exploitation of mines
- ▶ Slaves

- ▶ Many Europeans and Americans within the army (doctors, pharmacists, and officers)



The Bankes Archive

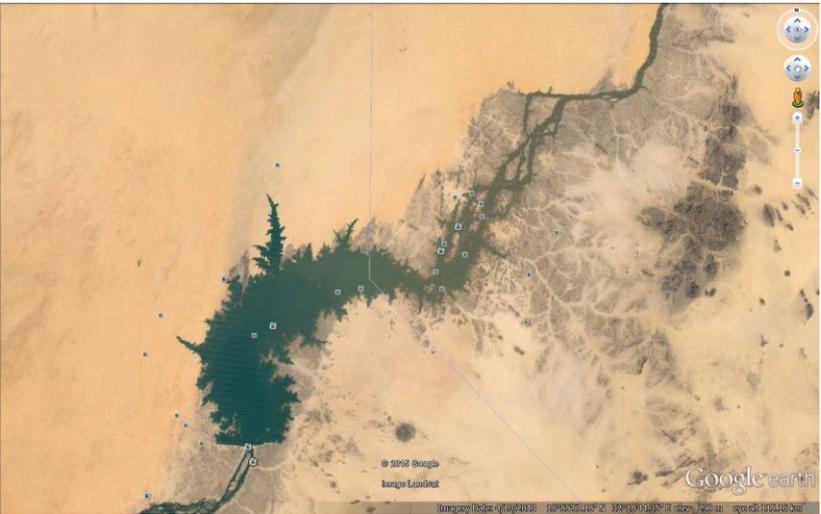
- ▶ Travel notes, drawings, plans, and maps
- ▶ Letters
- ▶ *How can we manage all this information?*

| Subject | Quantity |
|-------------------------------|----------|
| Non-hieroglyphic inscriptions | 67 |
| Plans and sections | 162 |
| Landscape views | 307 |
| Egyptian epigraphy | 567 |
| Maps | 12 |
| Architectural details | 69 |
| Anthropology, fauna & flora | 35 |
| Objects, statues | 16 |
| Notes and sketches | 457 |
| Total | 1,692 |

The Loss of Nubia

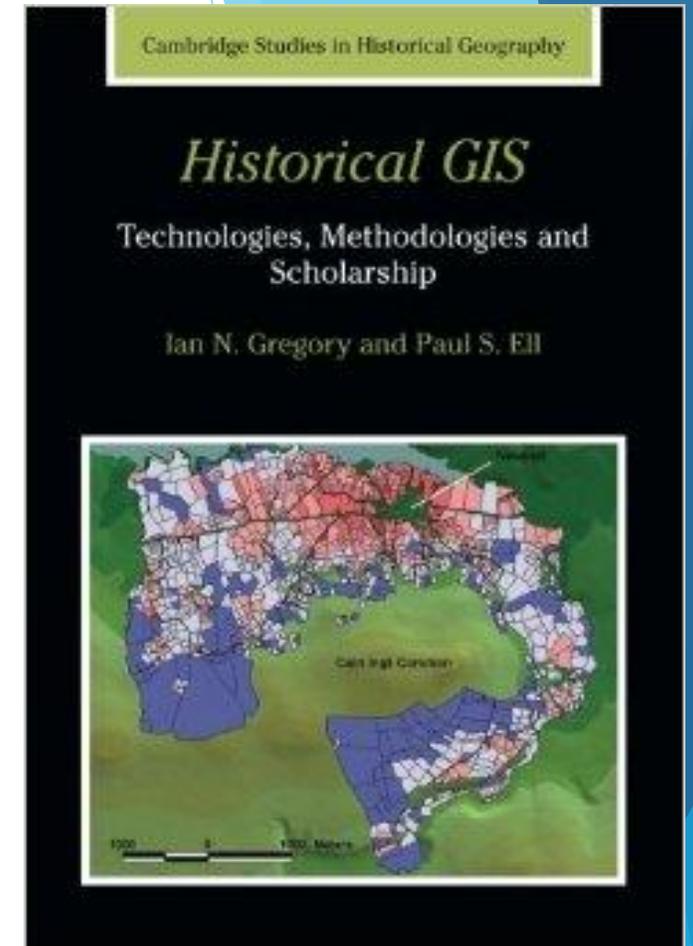
- ▶ Champollion, *Note remise au Vice-Roi pour la conservation des Monuments de l'Égypt* (1829); in the years following the Napoleonic expedition no less than thirteen entire temples were completely destroyed.
- ▶ “*The apparent woodedness of the countryside seeming almost unbelievable to those who know the modern Sudan, while any report of a lion roaring near Ed Debba would nowadays be regarded as a figment of the wildest imagination*” (Shinnie 1958)

Dams on the Nile



Research Question

- ▶ Can we use early 19th Century documents to attempt a reconstruction of a much changed *ancient* landscape?
- ▶ „How can we manage all this information?“
- ▶ Historical Geographic Information System (HGIS)
 - ▶ Relatively New
 - ▶ Growing Field



The Sources

- ▶ Landscape Drawings (Dorset History Centre, DHC)
- ▶ Inscriptions Copies (DHC, Florence Egyptian Museum)
- ▶ Maps (DHC, Florence Egyptian Museum)
- ▶ Plans and Cross Sections
- ▶ Fauna, Flora, Ethnography
- ▶ Notes
 - ▶ Sheets (DHC)
 - ▶ Two Volumes (British Museum)
- ▶ Journals
 - ▶ Linant's *Voyage* (Kingston Lacy House)
 - ▶ Linant's *Notices* (Kingston Lacy House)
 - ▶ Ricci's *Viaggi* (National Archives of Egypt)

Accuracy

- ▶ Not artists
- ▶ Technical and Academic knowledge (drawing, inscriptions, map making)
- ▶ Experience
- ▶ Ease of travel
- ▶ Publication (Linant vs. Ricci)
- ▶ Cross-check

Data (Nature)

▶ Nature - Biotic

- ▶ *Vegetation*
- ▶ *Fauna*
 - ▶ Wild fauna
 - ▶ Domesticated animals

▶ Nature - Abiotic

- ▶ *Climate*
 - ▶ Floods, precipitations
 - ▶ Winds
 - ▶ Atmospheric and Water temperature
 - ▶ Earthquakes
- ▶ *Geology*
 - ▶ Types of rocks, soil

Charles L. Redman, *Human Impact on Ancient Environments* (Tucson: University of Arizona Press, 1999)

Data (Culture)

- ▶ **Culture - Biotic**
 - ▶ *Ethnic Groups*
 - ▶ Tribes (distribution, migration patterns)
 - ▶ Immigrated communities
 - ▶ *Anthropology*
 - ▶ Rites, customs, religions, etc.
 - ▶ Handcrafts
 - ▶ Social structures, languages, etc.
 - ▶ *Traffic*
 - ▶ Trade routes, river or land ancient routes
 - ▶ Roads and dirt tracks
 - ▶ Sea and river harbours
 - ▶ *Historical Data*
 - ▶ Battles, important events, epidemics, etc.
- ▶ **Culture - Abiotic**
 - ▶ *Archaeological Heritage*
 - ▶ Ancient Egyptian monuments
 - ▶ Medieval sites (Nobatia, Makuria, Alodia)
 - ▶ Modern & Traditional buildings
 - ▶ *Settlements*
 - ▶ Cities, towns and villages with toponyms
 - ▶ Temporary settlements (Bedouins, trade, military camps)
 - ▶ *Water management*
 - ▶ Wells, springs, *wadis*, oases, dams and submerged areas
 - ▶ *Economy*
 - ▶ Crops, orchards, agricultural plots, gardens
 - ▶ Market sites, products traded, slave caravanserai, mining sites

Gazetteer

David Rumsey Map Collection
CARTOGRAPHY ASSOCIATES

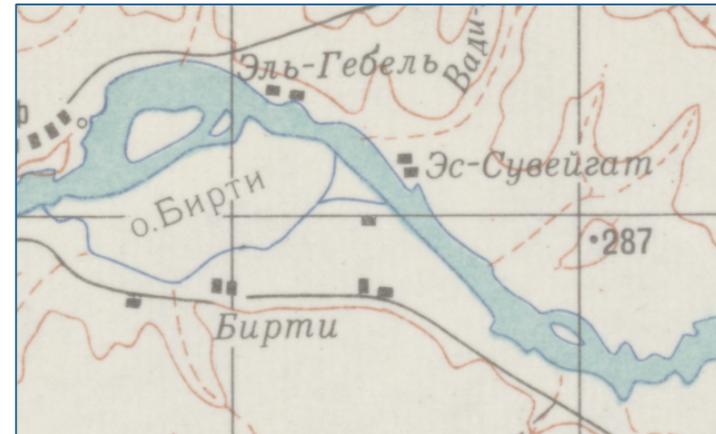
← ▶ Collections Explore Create Share This Embed This Help

Media Information **Nubia and Abyssinia to Bab El Mandeb.**

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David Rumsey Historical Map Collection

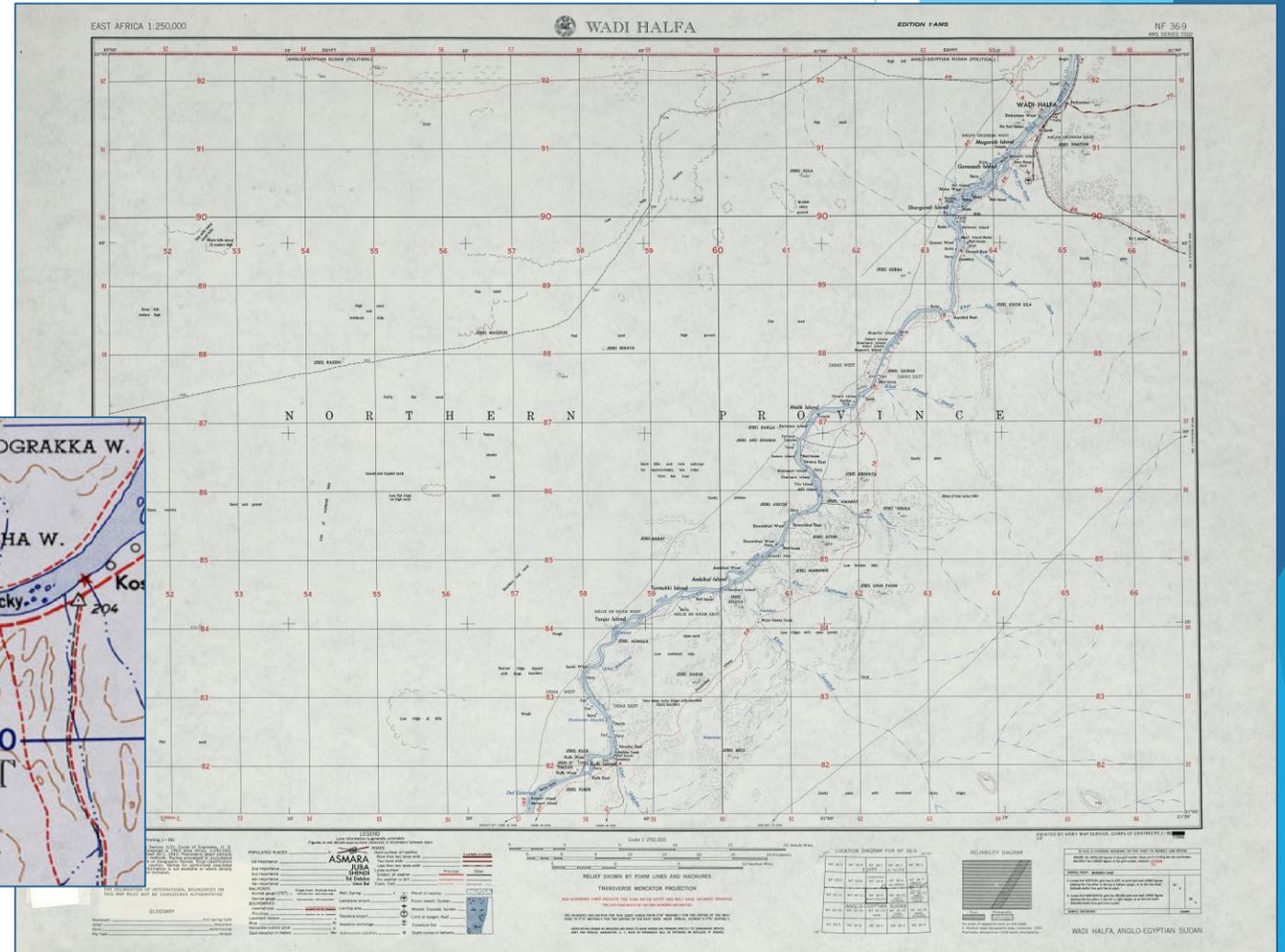
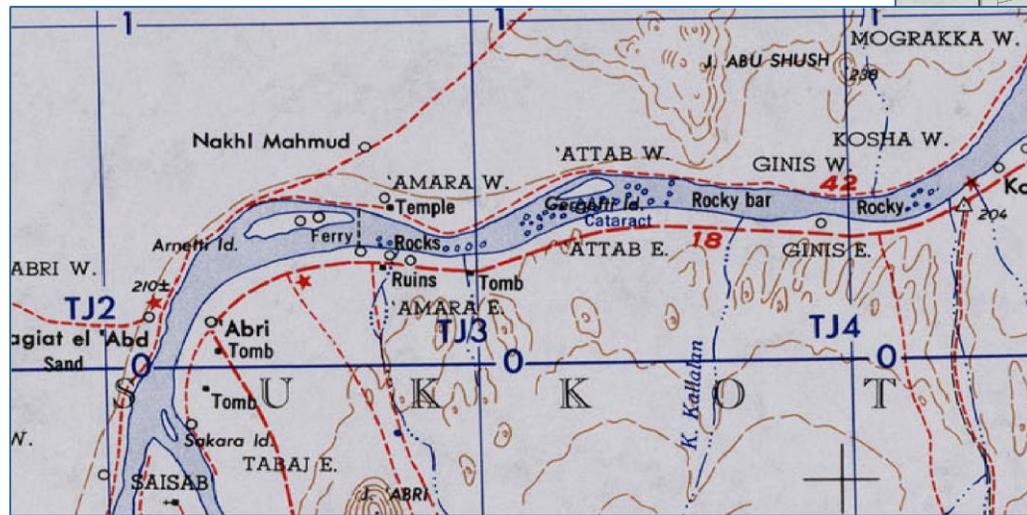
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Author:
Sharpe, J.
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1848
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Nubia and Abyssinia to Bab El Mandeb.
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Chapman & Hall
Publisher Location:
London
Type:
Atlas Map
Obj Height cm:
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Obj Width cm:
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Scale 1:
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Note:
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Sudan
Region:
Red Sea

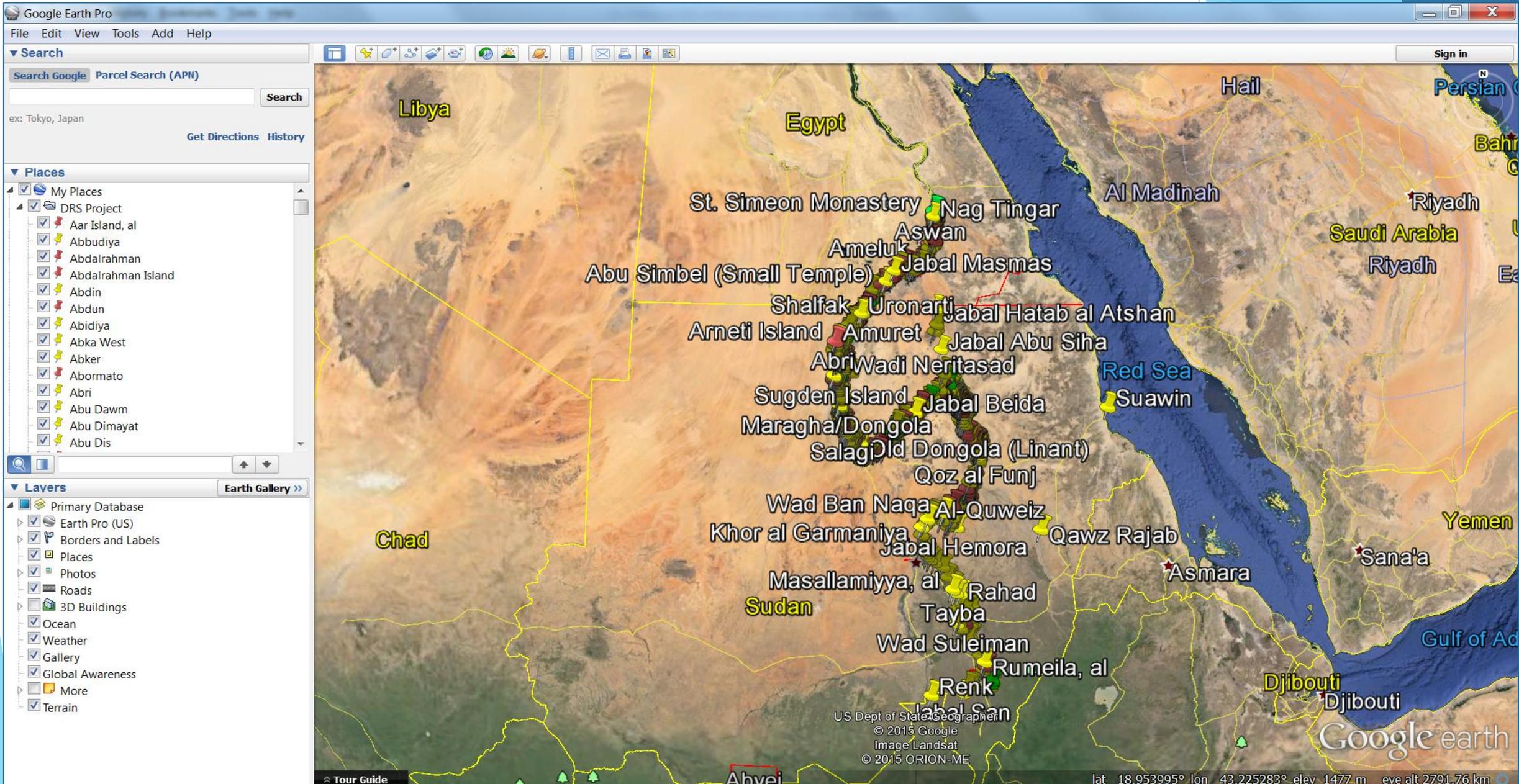
Add To Workspace



Coordinate Retrieval (1)

Topographical Maps + Google Earth

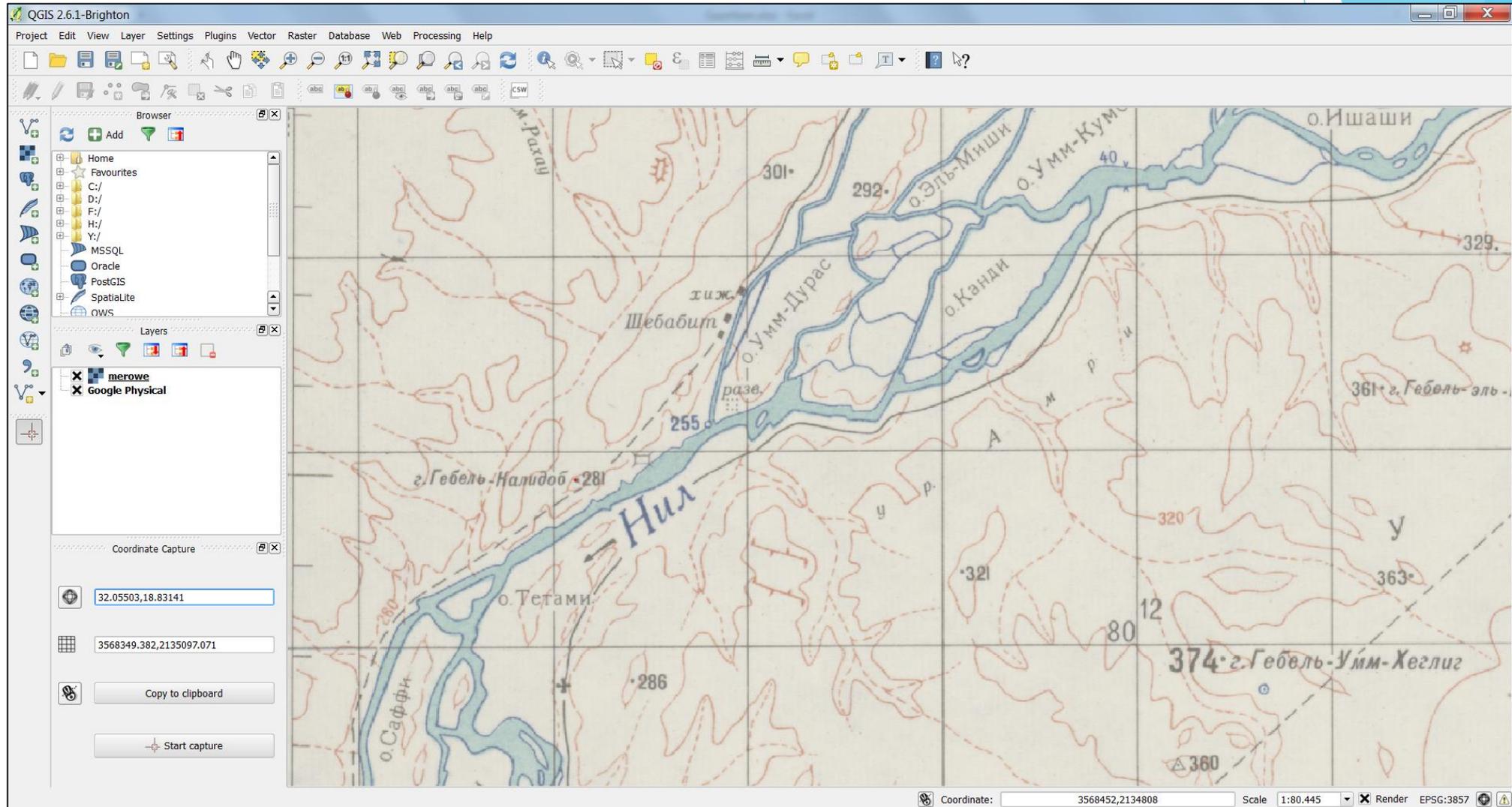






Coordinate Retrieval (2)

- ▶ Topographical Maps + GIS
- ▶ Georeferencing the maps



Gazetteer

Gazetteer.xlsx - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW ACROBAT

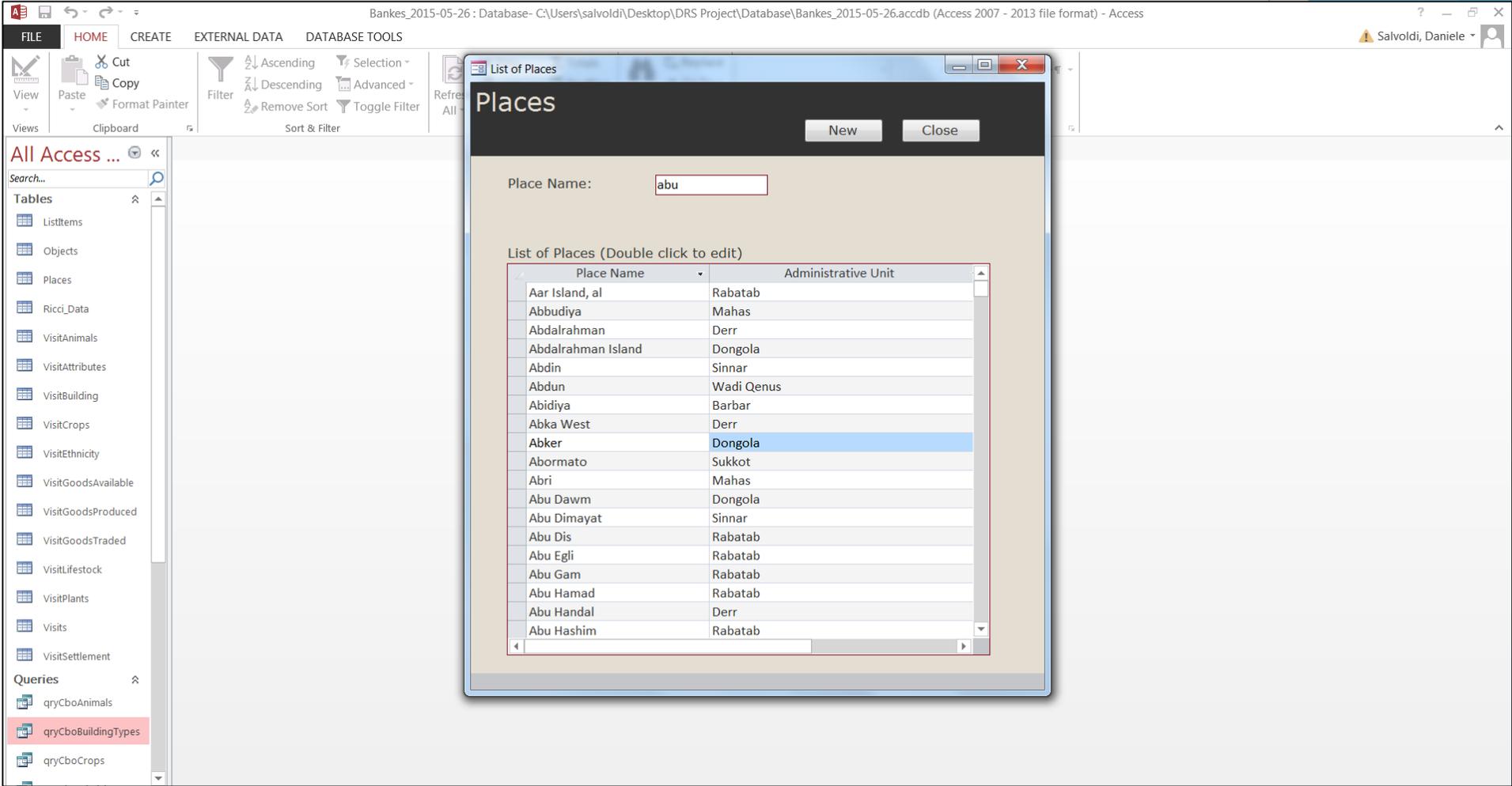
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E166 Isola del Sole

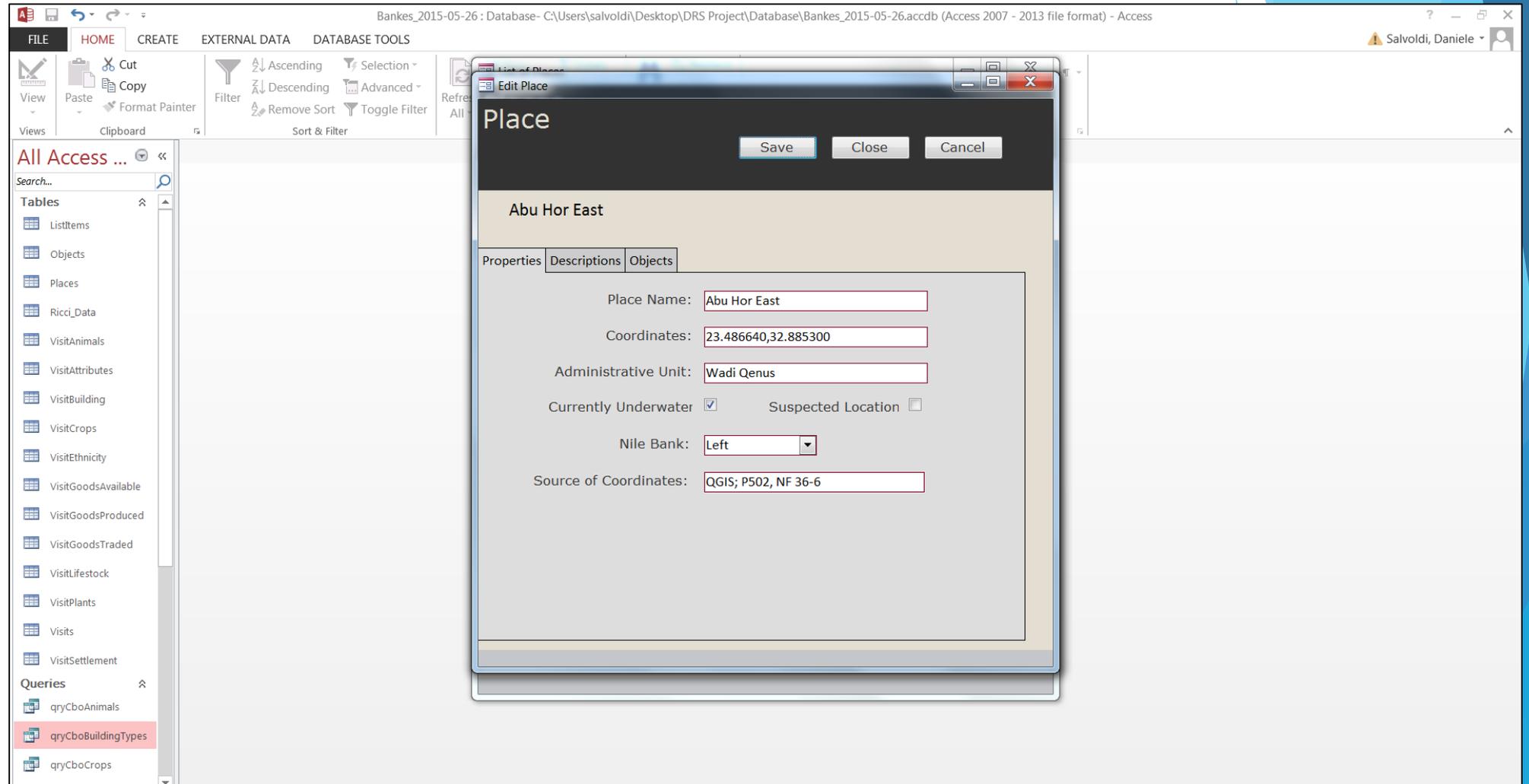
| ID | Name | Ancient Name | Classic Name | Ricci | Linant's Journal | Linant's Map | Cailliaud 1827 | Prokesch von Osten 1827 | Decimals_Y | Decimals_X | Coordinat | Toponym source |
|----|---------------------------------|--------------|--------------|-----------------|------------------|-----------------|----------------|---------------------------|------------|------------|-----------|----------------|
| 2 | Aswan | | Syene | Assuano | Assouan | | | | 24.082064° | 32.888469° | GE | |
| 3 | Aswan (Unfinished Obelisk) | | | | | | | | 24.076912° | 32.895423° | GE | |
| 4 | Elephantine | | | Elefantina | Elephantine | | | | 24.084610° | 32.885986° | GE | |
| 5 | | | | Hayt el-Adjouz | | | | | | | | |
| 6 | | | | Birbé | | | | | | | | |
| 7 | Aswan (Wall) | | | | | | | | 24.050004° | 32.883728° | GE | |
| 8 | (Old) Philae/Ile Cast el Heyoud | | | Philae | Philae | Philoée | Philae | G. Kassr Anas el Wudschut | 24.020833° | 32.889444° | GE | |
| 9 | Hesse Island | | | | | Ile Hessé | | Gesiret el Hesseh | 24.011145° | 32.877213° | GE | Prokesch |
| 10 | Bab | | | | | Bab | | Bab | 24.013685° | 32.891529° | GE | Prokesch |
| 11 | Nag Tingar | | | | | Congar | | | 23.990479° | 32.868364° | GE | Castaneda |
| 12 | Tiki, al | | | | | Quitto | | El Tiki | 23.98495° | 32.87749° | GE | Prokesch |
| 13 | Shimat Mahdar | | | | | Mardar | | | 23.983333° | 32.866667° | GNS | |
| 14 | Meshe | | | | | Méchié | | | 23.96473° | 32.85975° | QGIS | Linant |
| 15 | Kulutot | | | | | Couloutode | | Kulutot | 23.96556° | 32.87935° | QGIS | Castaneda |
| 16 | Saqiyat al Gamal | | | Sach el-Gemel | | | | Sagiet Ghemel | 23.92492° | 32.86511° | QGIS | Prokesch |
| 17 | Wadi Shellal | | | Ouadi Scialal | | Vallé de Chelal | | | 24.039891° | 32.889012° | GE | Linant |
| 18 | Aqaba Sihali | | | | | Accaba Sihali | | | 24.019359° | 32.917052° | | |
| 19 | Gudi Island | | | | | Gaudri | | | 23.95° | 32.866667° | GNS | |
| 20 | | | | | | Gerbode | | | | | | |
| 21 | Shamet al Uwa | | | Sciamet el-Ouah | Chemtéloua | Chamtéloua | None | None | 23.94348° | 32.87749° | QGIS | Castaneda |
| 22 | Dabod | | | Debode | Debode | Debode | | | 23.86932° | 32.87550° | QGIS | Castaneda |
| 23 | Khor Baranurum | | | | | Ile Barambram | Ile Beremrem | Bab al Barambram | 23.886799° | 32.900763° | GNS | |
| 24 | Birein | | | | | Birendi | | | 23.883333° | 32.883333° | GNS | |
| 25 | Abdun | | | | | Abdoun | | Abdoum/Abdoun | 23.85983° | 32.87646° | QGIS | Castaneda |
| 26 | Nag Mireis | | | | | Mérié | | | 23.82507° | 32.89234° | QGIS | Castaneda |
| 27 | Siali | | | Siale | Sihali | Sihalé | | | 23.82631° | 32.91462° | QGIS | Castaneda |
| 28 | Morkosarti | | | | | Morcosarti | Ile Markos | Gesiret Markos | 23.81496° | 32.90905° | QGIS | Castaneda |
| 29 | Obisco | | | | | Obisco | | Abisko | 23.78195° | 32.89915° | QGIS | Castaneda |
| 30 | Khor Dimri | | | | | Déramit | | Dimhüt | 23.85° | 32.883333° | GNS | |

Gazetteer Legend

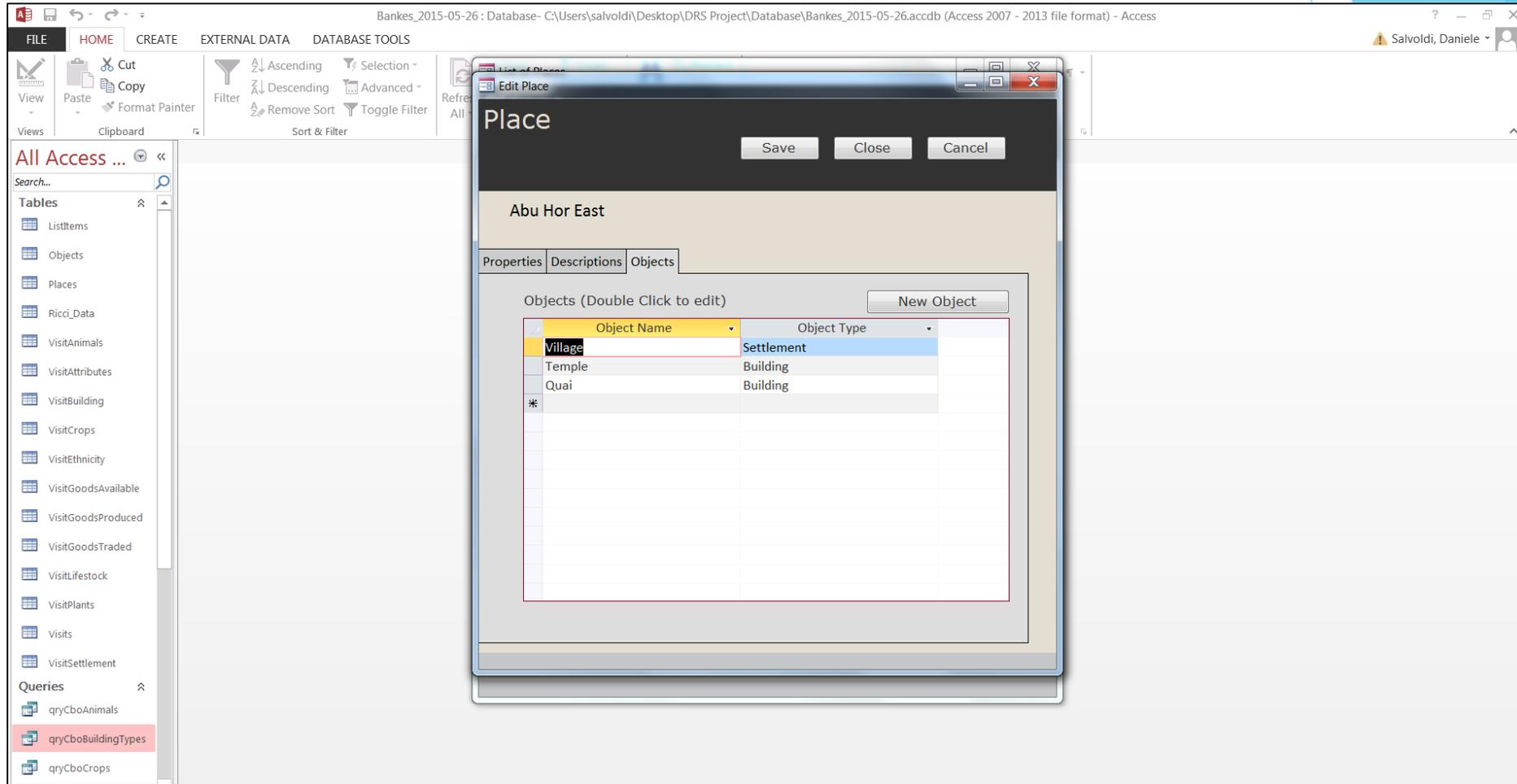
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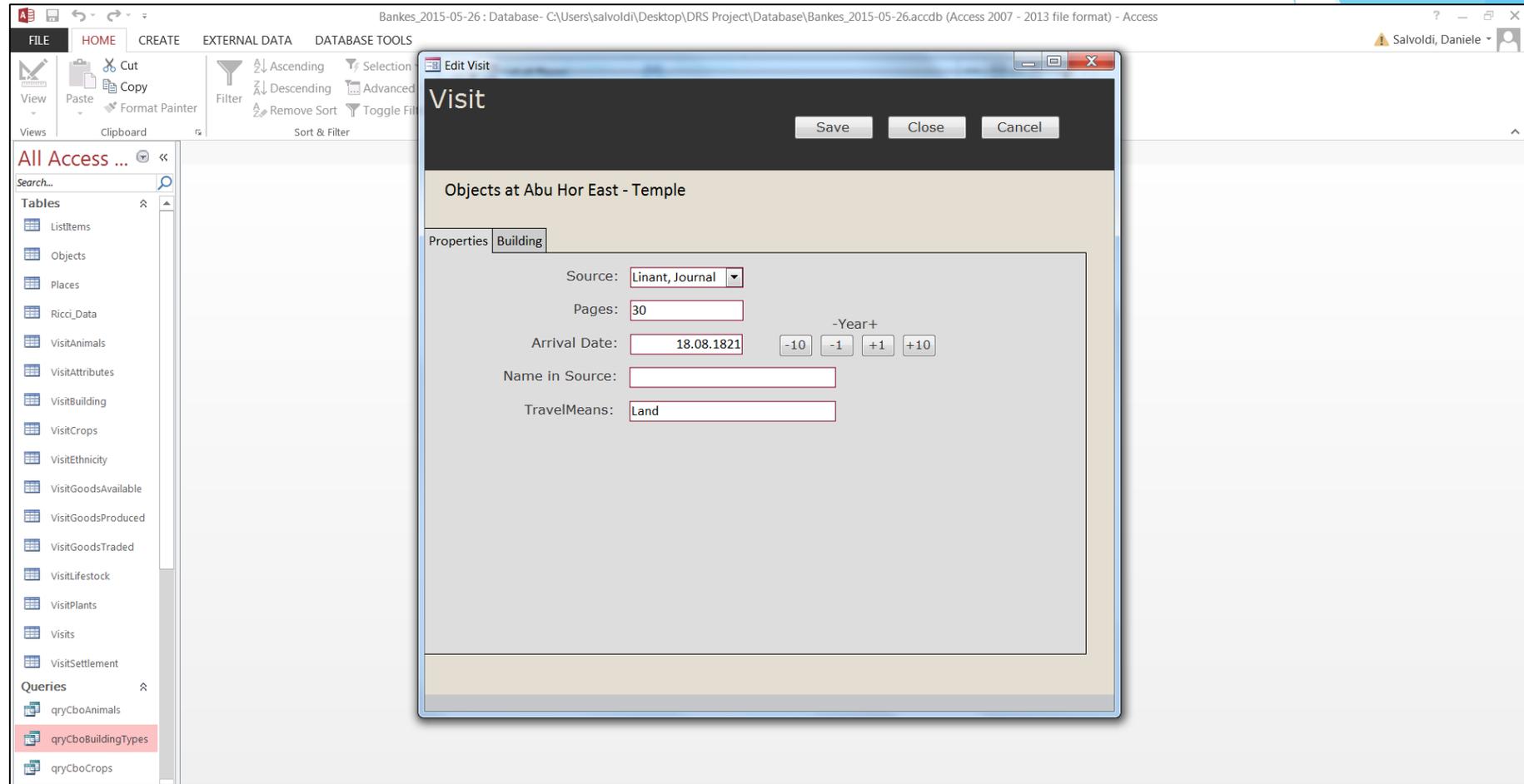
Access Database



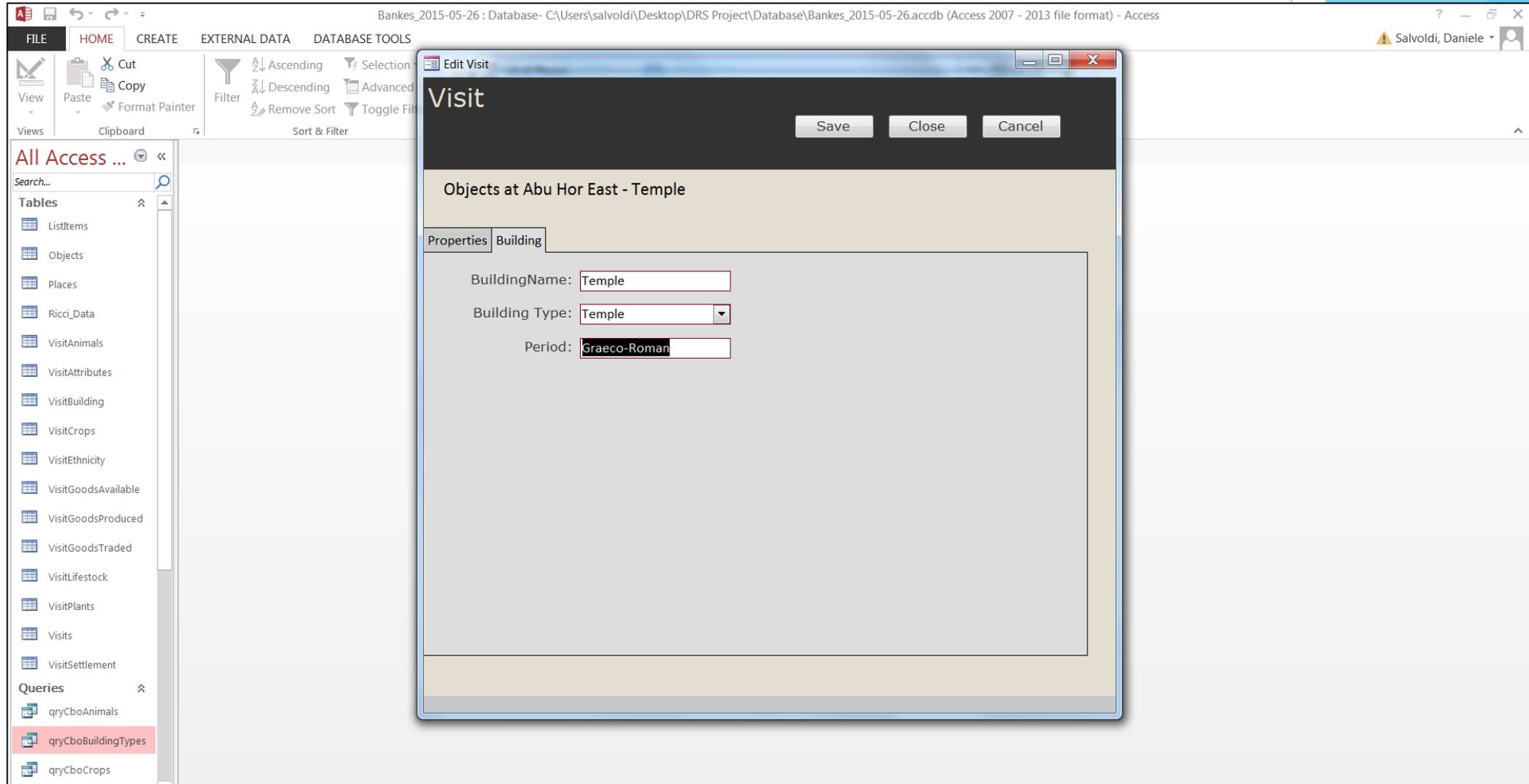
Access Database



Access Database



Access Database



GIS Layers

- ▶ Data from Access Database > Queries
- ▶ *Ad hoc* symbology
 - ▶ Colour, size, and shape coding
- ▶ Specifically drawn layers:
 - ▶ Nile course and islands
 - ▶ Route taken by travellers
 - ▶ Temple plans
 - ▶ Regional borders

Interpretation

- ▶ The maps will visualize an environment no longer extant and much closer to the ancient landscape, where ancient Egyptians, Nubians and Byzantines were making successful choices of exploitation and building. Maps will help to detect specific relations between different settlements and the natural environment, the concept of space itself and its organisation/modification through parameters like distance, river/road practicability, travel time, river flood range, climate, water and trade resources, etc.
- ▶ Ancient written sources: ancient Egyptian, Nubian and Meroitic literary and non-literary texts, religious compositions, and monumental inscriptions, as well as classical historical sources (Herodotus, Strabo, Cassius Dio, Procopius of Caesarea).
- ▶ Modern archaeological/ethnographical data: archaeological field reports, iconographical and architectural analysis, and ethnographic surveys. Starting from the 1905-07 Oriental Institute Expedition and the following Coxe Expeditions (1907-10), archaeological and ethnographic work in the area intensified in the 1960s before the completion of the Aswan High Dam and produced a rich collection of data.

Outcome

- ▶ On-line open HGIS
 - ▶ (TOPOI WebGIS)
 - ▶ Accessibility of georeferenced original drawings (National Trust, Dorset History Centre)

Thank you very much for your attention

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