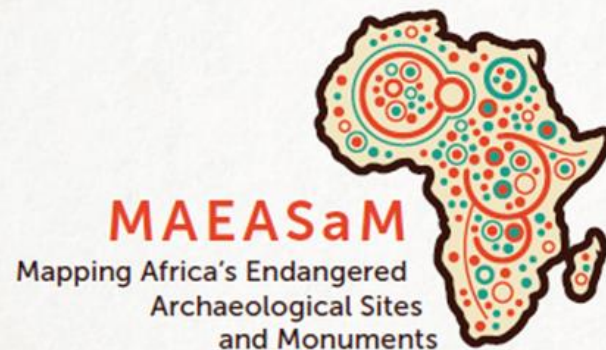


Historical Maps in Africa

What can we do with them and how is it helpful?

Edward Burnett – MAEASaM

MAHSA and MAEASaM Historic Map Workshop, 18 October 2021
McDonald Institute for Archaeological Research



Historical maps in Africa

- Overview & features of historical maps
- Where can you find historical maps in Africa?
- Digitising historical maps:
 - Georeferencing maps
 - Digitising map features
 - Verifying apparent features
- Issues:
 - Difficulties in georeferencing
 - Difficulties of scale
 - Problems with the maps themselves: inherent bias and inaccuracy
- But also: successes!

What's on a historical map?



AFRICA. 1:250,000, SHEET 54-I

Points fixed by triangulation or by astro-radio means

Intersected points

Points fixed by latitude or by latitude and azimuth

Heights in metres above sea level: Trig or spirit levelling 1000
Others 1000

Contours & form lines at intervals of 50 metres

Trees: Palm, Dom Palm, Tebeldi, General, Small trees and bush

Localities: El Batha

Large areas: EL GEZIRA

Tribal names: D I N K A

Jebel (Mountain or hill): J. AULIYA

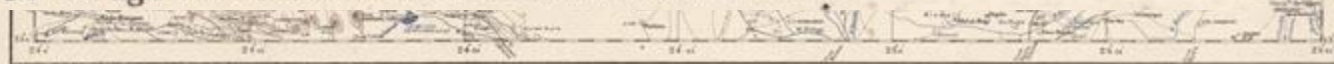
Antiquities: Church

Temporary villages

Deserted villages

Sheet is based on the Darfur Survey (1917), Quinlan (1919), Boyce (1920); and is compiled from the Sudan Survey Dept., and from Col. Saville, Maj. Boustead, Capt. and Messrs. Mac Michael, Gillan, and Keen,

1937



Scale	Projection	Contour Interval	Trig. Points	Trig. Lines	Trig. Stations	Trig. Bearings	Trig. Distances	Trig. Azimuths	Trig. Elevations	Trig. Notes
1:250,000	Universal Transverse Mercator	50 metres	1000	1000	1000	1000	1000	1000	1000	1000

Scale	Projection	Contour Interval	Trig. Points	Trig. Lines	Trig. Stations	Trig. Bearings	Trig. Distances	Trig. Azimuths	Trig. Elevations	Trig. Notes
1:250,000	Universal Transverse Mercator	50 metres	1000	1000	1000	1000	1000	1000	1000	1000

Library of Congress
Geographic Names
MAY 21 1950
Division of Maps

Scale	Projection	Contour Interval	Trig. Points	Trig. Lines	Trig. Stations	Trig. Bearings	Trig. Distances	Trig. Azimuths	Trig. Elevations	Trig. Notes
1:250,000	Universal Transverse Mercator	50 metres	1000	1000	1000	1000	1000	1000	1000	1000

06310a
20 J
50
250
57

Where to find historical maps




Digital collections (often in University libraries)

maps.lib.utexas.edu/maps/africa.html

TEXAS
The University of Texas at Austin
University of Texas Libraries

FIND, BORROW, REQUEST RESEARCH HELP & SUPPORT STUDY SPACES & TECHNOLOGY ABOUT THE LIBRARIES



The Perry-Castañeda Library (PCL) Map Collection website is archived as of 2021 and no longer being updated. Links to external sites may no longer work as expected. Please visit the [Texas GeoData portal](#) and [Collections portal](#) for map files and the [UTL Map Collections LibGuide](#) for additional information.

[Ask a Map Question](#)

PCL Map Collection > Africa

Maps

- Africa
- Americas
- Asia
- Australia/Pacific
- Russia/Republics
- Europe
- Historical
- Middle East
- Polar/Oceans
- Texas
- Thematic
- Topographic
- U.S.
- World

Other Map Sites

- [Topical Map Sites](#)

Perry-Castañeda Library Map Collection

Africa Maps


The following maps were produced by the U.S. Central Intelligence Agency, unless otherwise indicated.

A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z

- Africa (Political) 2012 (3.4MB) [pdf format]
- Africa (Political) 2011 (643K)
- Africa (Political) 2008 (942K)
- Africa (Political) 2007 (710K)
- Africa (Political) 2003 (302K) and pdf format (272K)
- Africa (Political) 2001 (232K) and pdf format (234K)
- Africa (Political) 2000 (249K) and pdf format (257K)
- Africa (Political) 1998 (452K) and pdf format (390K)
- Africa (Political) June 1997 (349K) and pdf format (338K)
- Africa (Political) January 1997 (366K) and pdf format (1.2MB)
- Africa (Political) 1995 (265K) and pdf format (262K)
- Africa (Political) 1993 (274K) and pdf format (282K)
- Africa (Political) 1984 (998K)
- Africa (Political) 1983 (968K)

Physical collections (need to be scanned)

3




MAP

The Anglo-Egyptian Sudan / compiled in the Intelligence Office, Khartoum, May 1904.

Great Britain. War Office. Intelligence Division, cartographer, compiler, issuing body.
[London] : [War Office, Intelligence Division], 1904.

Available at University Library Order in Map Room, follow signs to North Gallery - past the North Staircase, First Floor, not borrowable (Maps.c.19.L.220) >

4




MAP

Adok / Survey Office, Khartoum.

Sudan, Maṣlaḥat al-Misāḥah.
Khartoum : Survey Office, 1939.

Available at Earth Sciences Library Main Library (E3.2.SPITZ7.134) >

5




MAP

Shendi - East Africa-Anglo Egyptian Sudan (Darfur Province): Sheet 53-L.

Sudan : Sudan Survey Dept, 1938.

Available at Earth Sciences Library Main Library (E3.2.SPITZ7.48) >

6




MAP

Nyala - East Africa-Anglo Egyptian Sudan (Darfur Province): Sheet 54-M.

Sudan : Sudan Survey Dept, 1944.

Available at Earth Sciences Library Main Library (E3.2.SPITZ7.41) >

7



MAP

Kaja Serug - East Africa-Anglo Egyptian Sudan (Darfur Province): Sheet 54-K.

Sudan : Sudan Survey Dept, 1928 (corrected 1933).

Available at Earth Sciences Library Main Library (E3.2.SPITZ7.52) >

Sort by Relevance ▾

Availability ▴

Full Text Online (5)

Open Access

Available in the Library (90)

Resource Type ▴

Maps (95)

Date ▴

From To

1800 1950 Refine

Library ▴

Earth Sciences Library (59)

University Library (31)

Subject ▴

Sudan (89)

Ethiopia (8)

Military maps (7)

Egypt (6)

Ahmad, Muhammad (5)

Show More

Author/Creator ▴

Sudan, Maṣlaḥat al-Misāḥah (30)

Georeferencing

Georeferencing



Open Raster...

Add Point

Move GCP Point

Set ta

Horizon

Vertical

Reports

Generate

Generate

✓ Load in

Help

Cancel

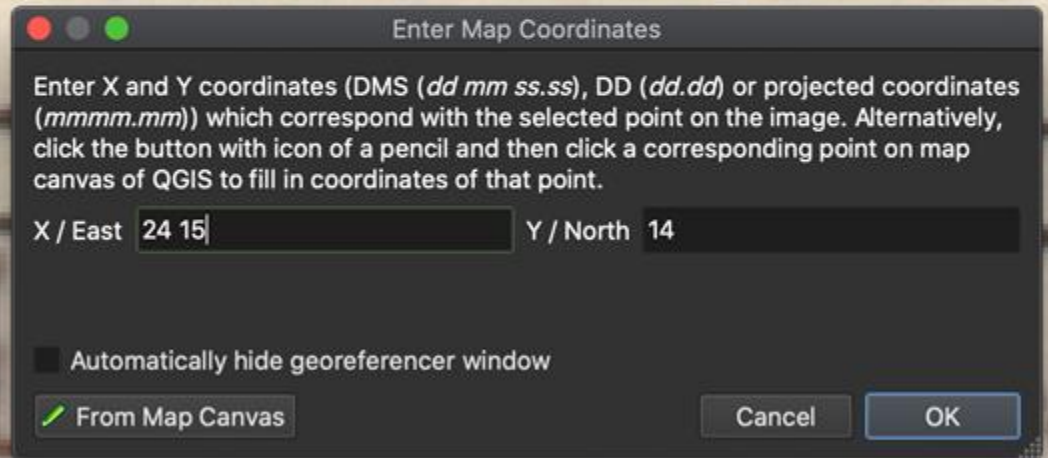
OK

els) Residual (pixels)

0	0
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GCP table				
Visible	ID	Source X	Source Y	Dest
✓	0	836.686	-7753.37	
✓	1	2562.25	-6003.55	24
✓	2	4284.18	-4263.51	2
✓	3	7719.68	-804.607	
✓	4	11130.4	-814.476	2
✓	5	9415.85	-2546.37	25
✓	6	7700.44	-4280.32	
✓	7	6001.64	-2533.05	24
✓	8	5982.19	-6026.07	24
✓	9	4261.2	-7769.16	2


Entering known coordinates



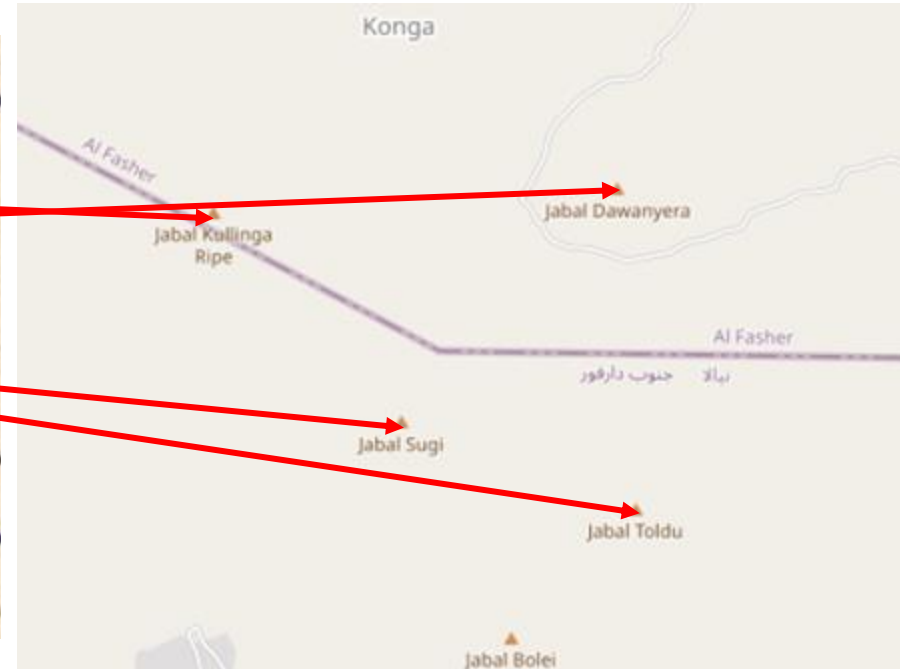
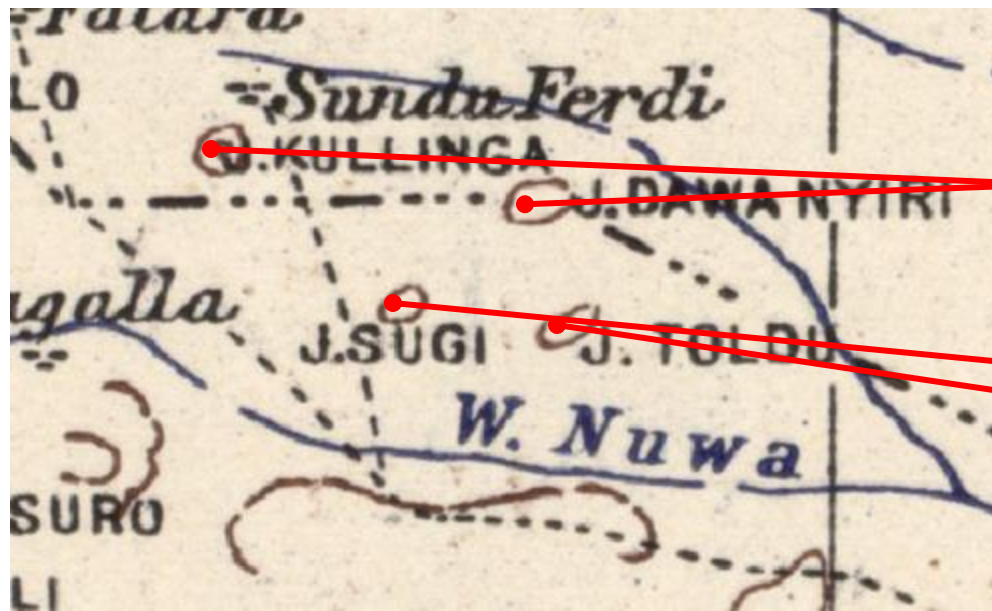
Enter X and Y coordinates (DMS (*dd mm ss.ss*), DD (*dd.dd*) or projected coordinates (*mmmm.mm*)) which correspond with the selected point on the image. Alternatively, click the button with icon of a pencil and then click a corresponding point on map canvas of QGIS to fill in coordinates of that point.

X / East Y / North

☐ Automatically hide georeferencer window

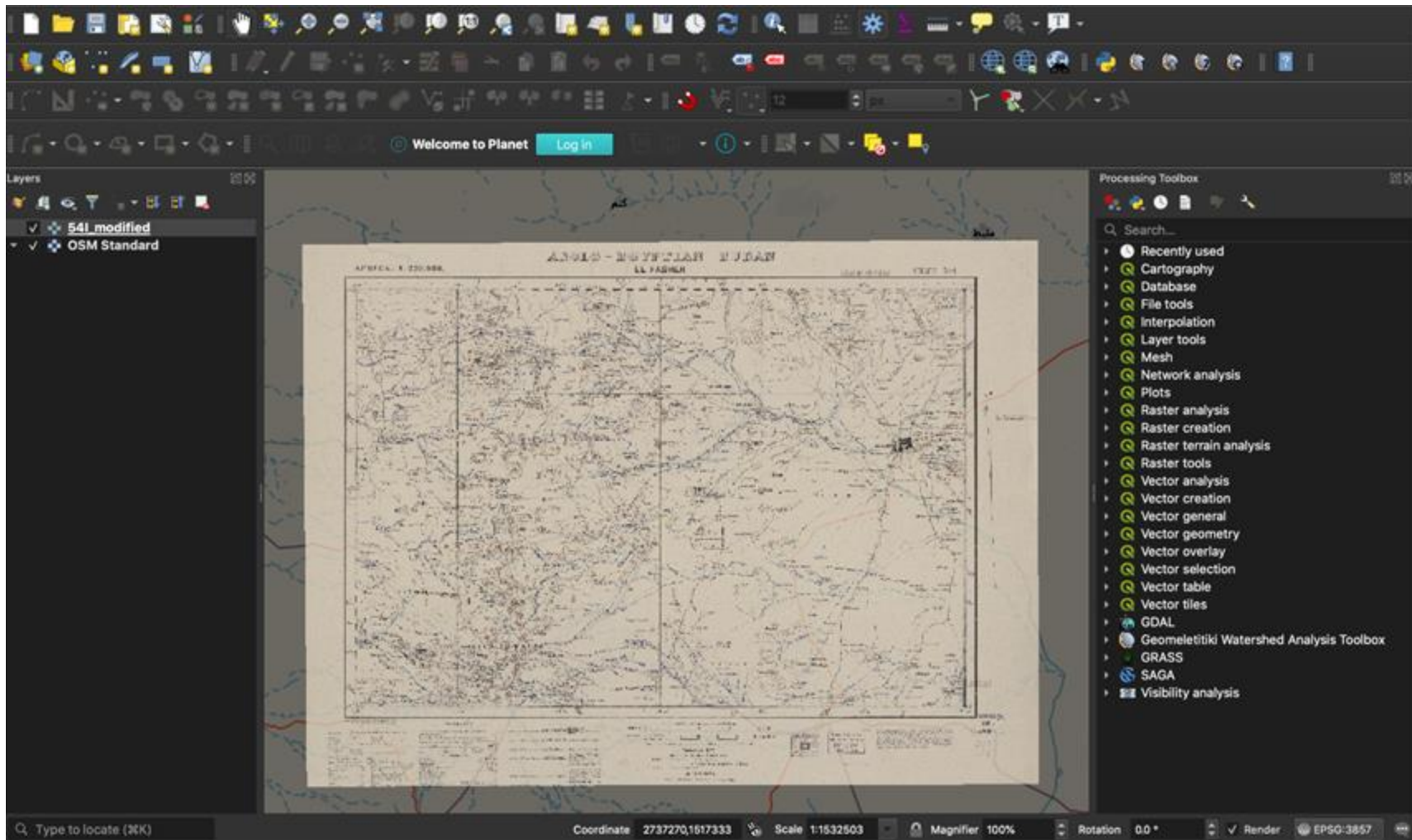
 From Map Canvas

Georeferencing from natural features



Digitisation & Verification





12/2004

N13°07'32.16"

E 24°04'23.52"

E 24°04'49.44"

Image © 2021 Maxar Technologies

218 m

Google Earth





6/2019

N13°28'3.36"

N13°27'37.44"

E 23°51'25.92"

E 23°51'51.84"

Well
E 23°52'17.76"

E 23°52'43.68"

~1.8km

Mosque

N13°27'11.52"

Image © 2021 CNES / Airbus

658 m

Google Earth

1988

13°27'32.28" N 23°51'48.08" E elev. 1053 m eye alt. 3.89 km

But despite the pessimism:

- Much of this information is **otherwise unretrievable**
 - E.g. very little survey or excavation in Darfur... ever!
 - And some sites will have been destroyed since historical maps' creation, although MAEASaM is still deciding how to deal with sites that can't be verified through Google Earth
- With older historical maps, some sites can be fairly **old even if described as more-or-less current** at the time (this depends however...)
- **Many map series = much easier to work with** than 1:250,000 Sudan series - we started with a bit of a low point!

As Renier will show, when you use a comparatively “good” series, a lot of useful information can be generated!

Thank you for listening

**Please save any questions until
after Renier's part of the
presentation**