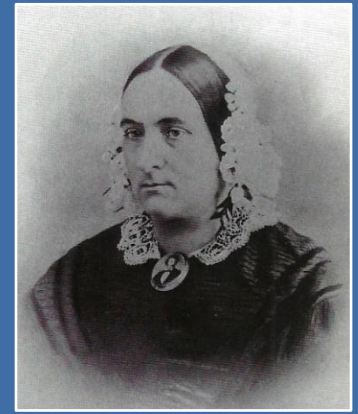


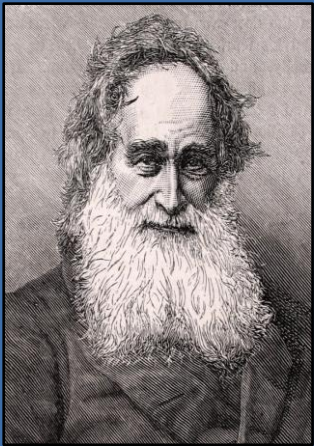




- 1813 Born in Blantyre in Scotland
- 1836-38 Studied Medicine, also Greek, Hebrew and theology
- 1839-40 Trained as Missionary of the LMS
- 1841 Arrived in South Africa - went to Kuruman
- 1841-52 Lived in Bechuanaland at various inland mission stations to learn Setswana
- 1845 Married Robert Moffat's daughter, Mary



Mary Livingstone 1821-1861



Robert Moffat
1795-1883



Mary Moffat
1795 - 1871



Church at Kuruman

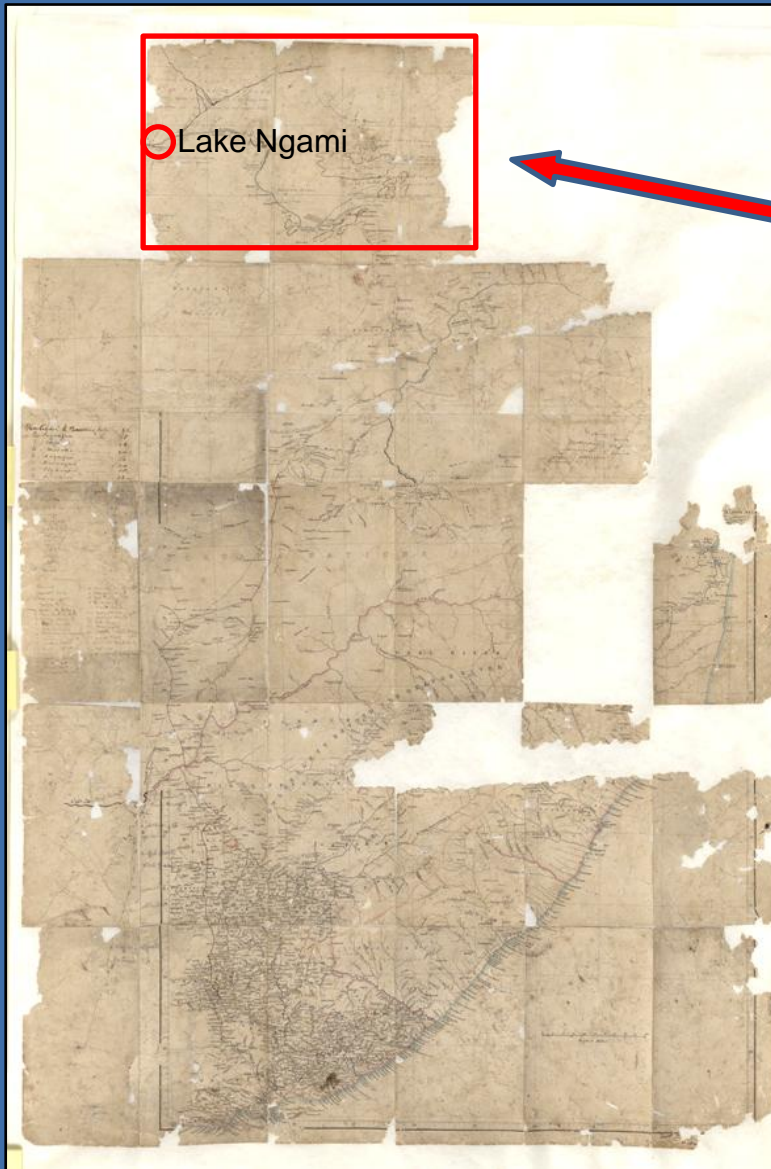


Kuruman Mission

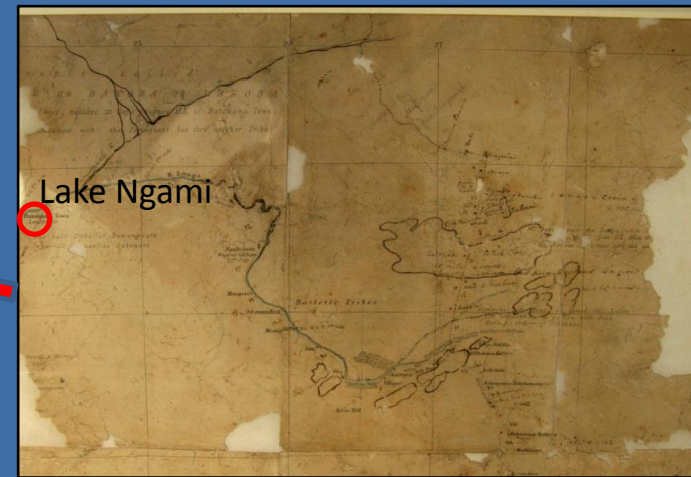


Livingstone's hut

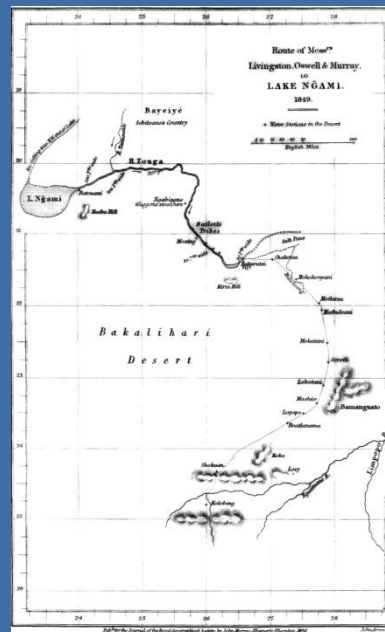




John Arrowsmith, *Map of South Eastern Africa*, August 1850. Size 98 x 66 cm.



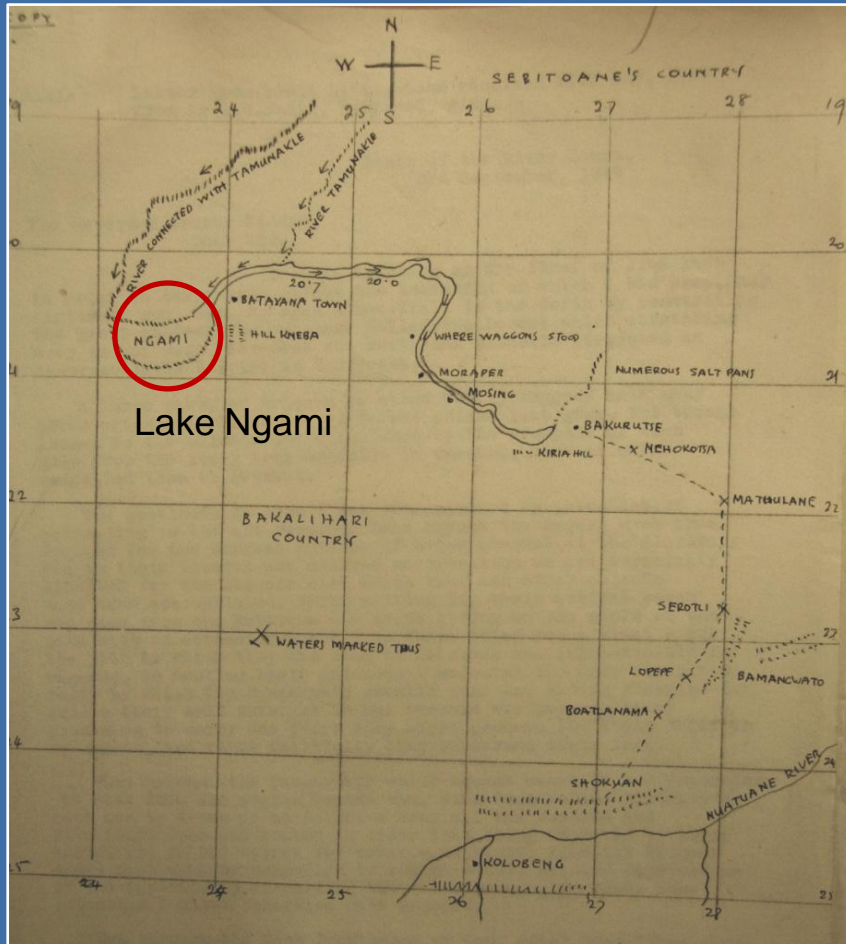
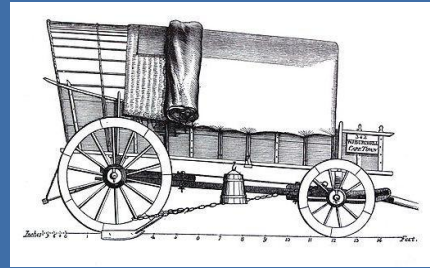
Published map acknowledges Livingstone's arrival at Lake Ngami in 1849. Further north are annotations in L's own hand of the route he and Oswell followed towards the Zambesi in 1851.



Map of route to Lake Ngami published in JRGS, 1850.

Sextant damaged, La. & Lo. incorrect.

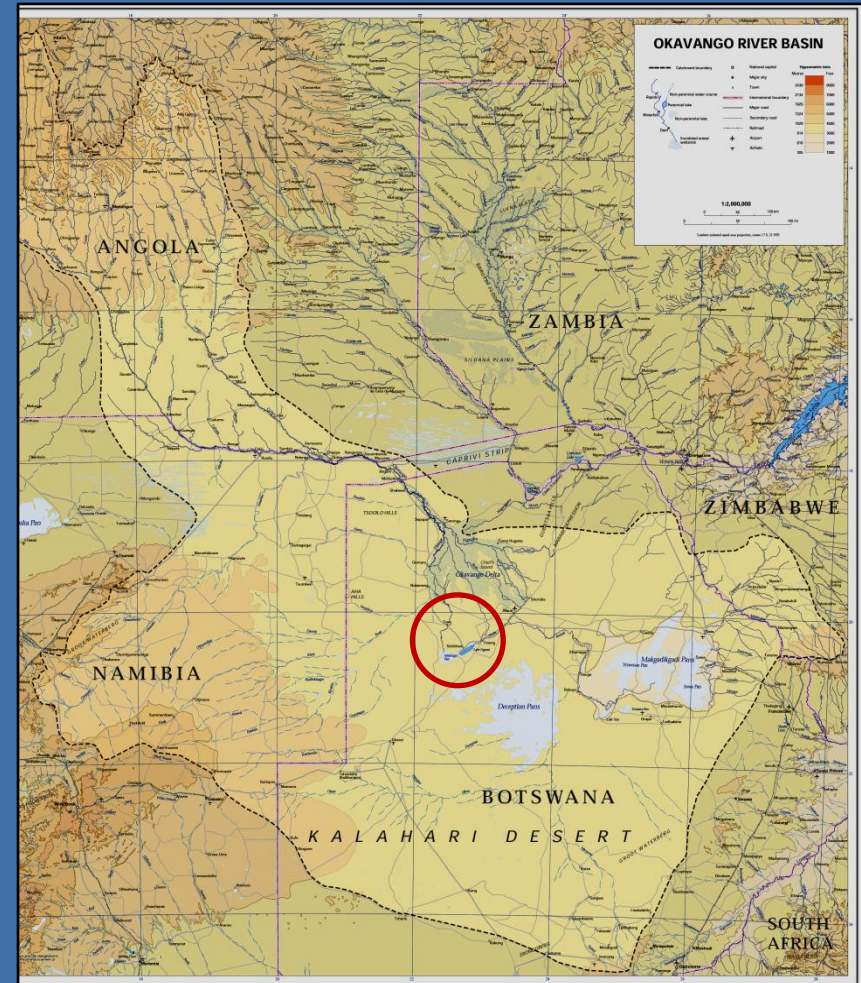
- Reach Sesheke on Zambesi with Oswell, and Mary and children. Mary pregnant, child born in ox-waggon.
- **1849 Reached Lake Ngami together with Oswell & Murray**
- 1852 Cape Town - Send Mary and children back to England

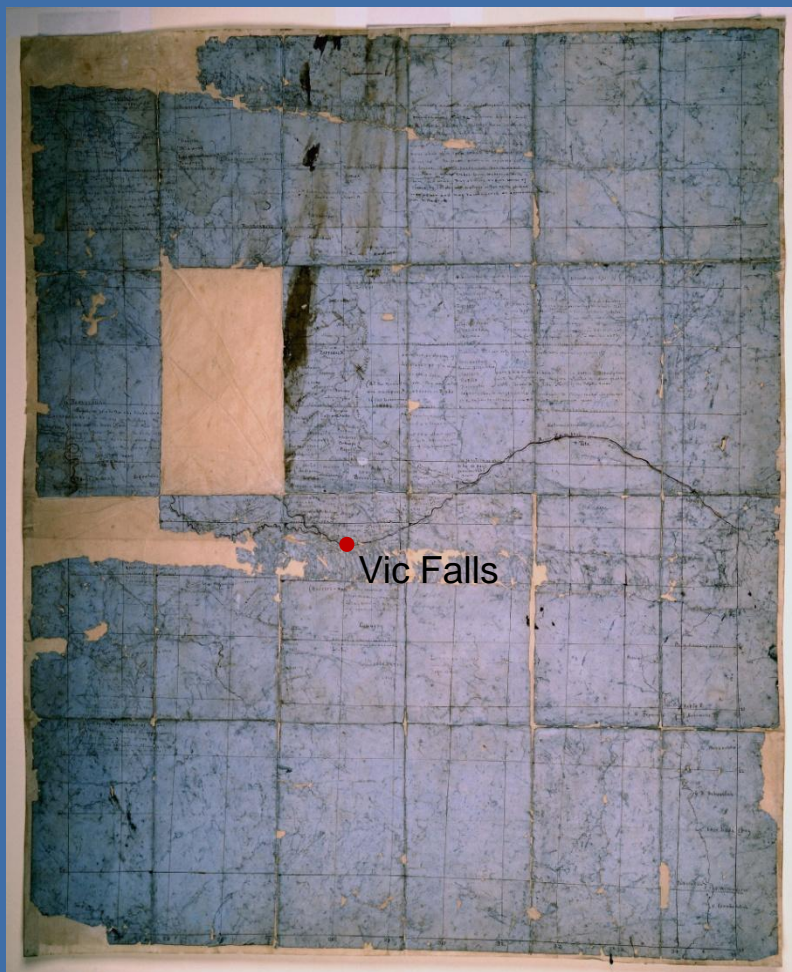


Lake Ngami

The latitude taken by a sextant on which I can fully depend was 20 degrees 20' S. at the North East extremity or junction with the Zouga. Longitude about 24 degrees East. We do not know it with certainty.

(MAP HERE)





Livingstone's original manuscript sketch map of the Zambesi River drainage area (the Barotse Valley) – the first map to be drawn of inner Africa immediately north of the Zambesi



Robert Moffat Junior's copy of Livingstone's original 1851 map. Size 53.5 x 78.5 cm.

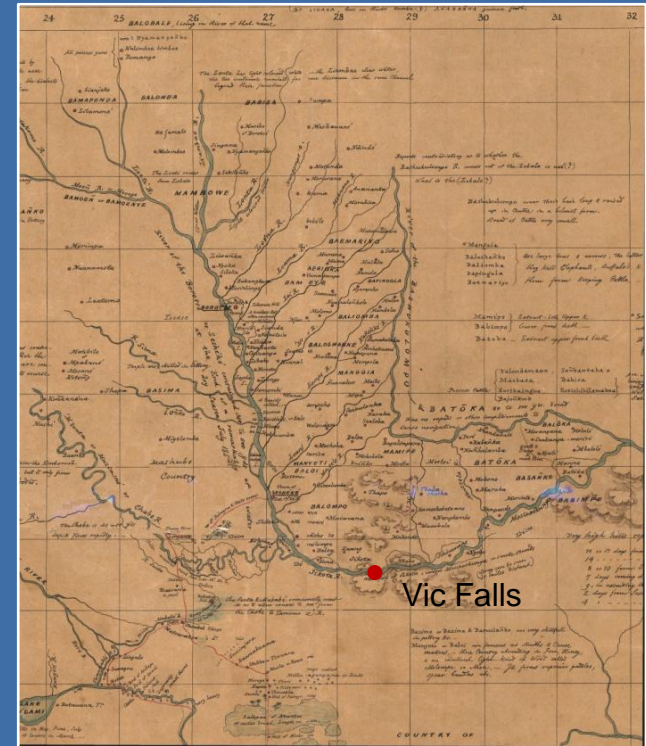
"Drawn by Shokolo & Bajolazi, lad (sic) captured by Mpepe while his companions were hunting Elephants on the Barotse River, 1850" (Liv.'s Private Journal, 15 July 1851).

Correct tracing of the original map forwarded to Kuruman by Dr D Livingstone Robert Moffat, Land Surveyor

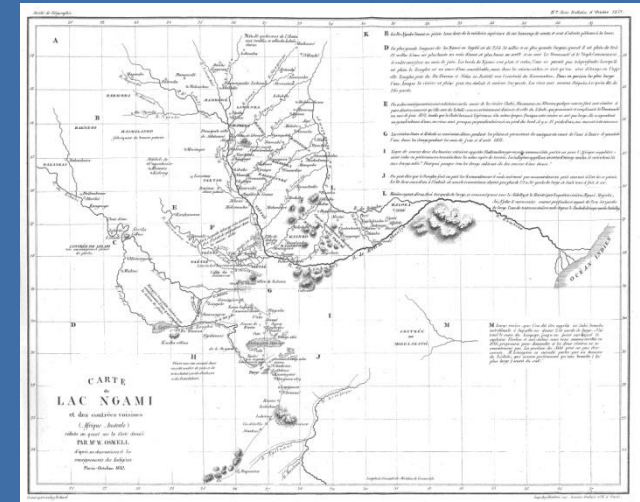


Oswell's copy of Livingstone's map which he sent sent to the Cape Government, Jan 1852

Map published in Paris in the *Bulletin de la Société de géographie*, July–December 1852,



Extract from Moffat's copy



Original map of the Portuguese Province of Angola (RGS)



Map of Livingstone route across Africa from Loanda to Quelimane as published In the JRGs (27), 1857. Lithographed by John Arrowsmith.

Left Angola in Sept 1854, crossed Africa and reached Quelimane in May 1856

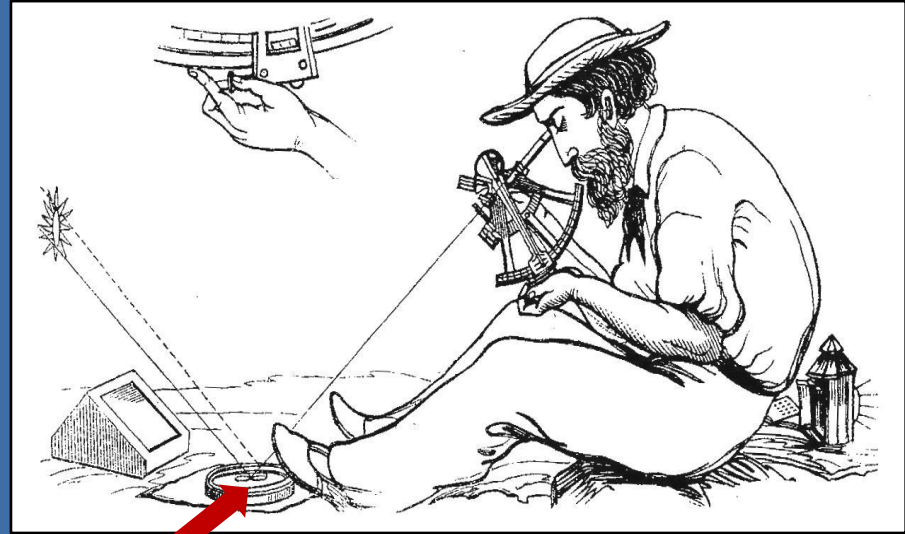


Part of Livingstone's route from Loanda to Tete, 1855-66 (RGS, Zambia S/S 2).

Measuring the height of the sun or a star



Sextant used by Livingstone

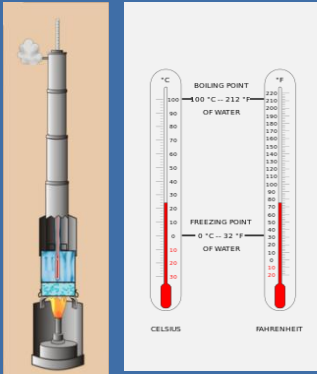


An artificial horizon. A small trough filled with mercury.

Livingstone's small telescope



Thermometers and a **hypsometer** used to determine the local elevation above sea level by comparing the boiling point of water with published tables.



A reliable watch or chronometer



Prismatic compass

Livingstone was not a cartographer, and his maps were sketch maps which were not aimed at accuracy, but... **his astronomical observations were extraordinarily accurate, considering the conditions under which he worked.**

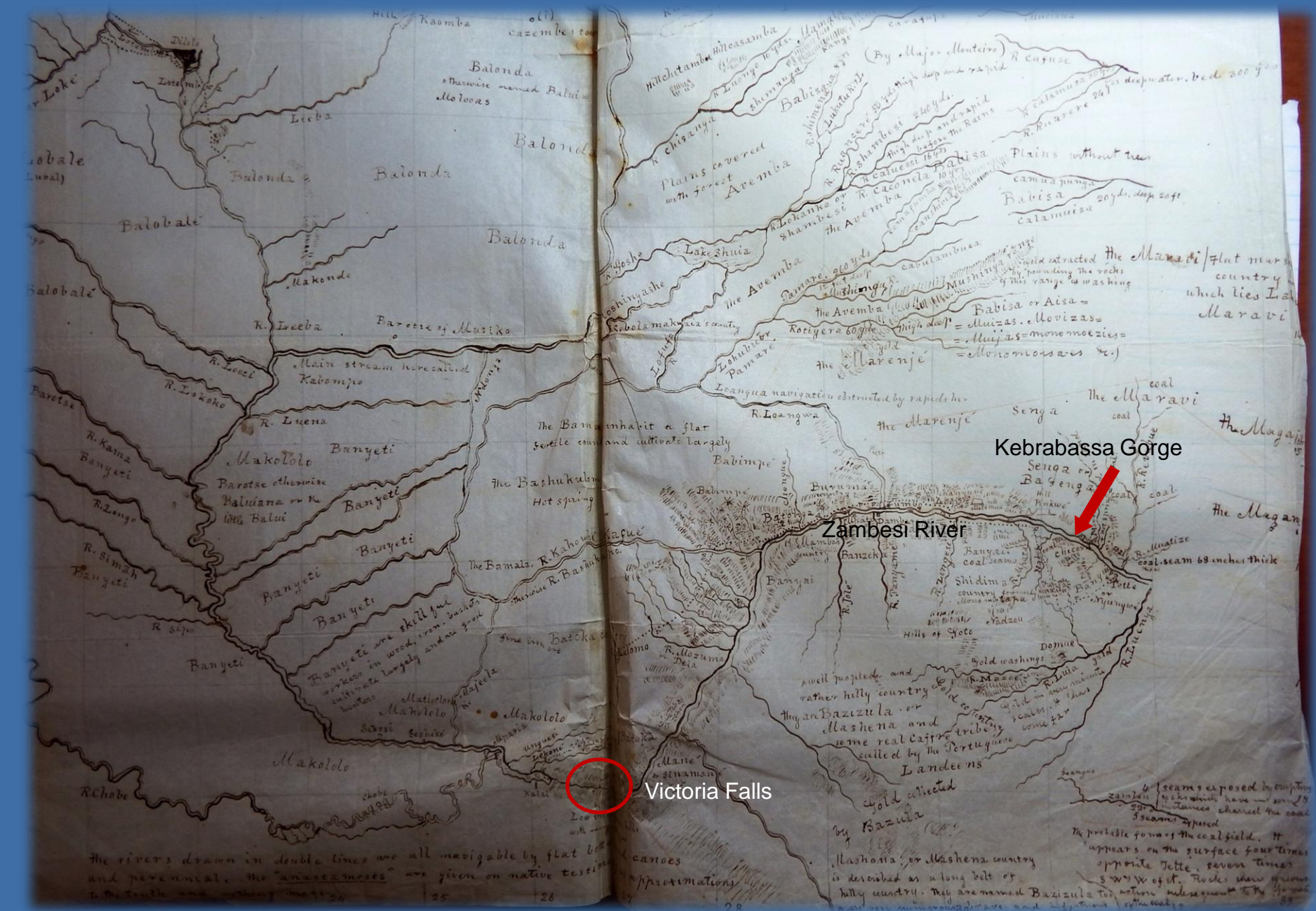
He never submitted his observations to the LMS, the RGS or the British Admiralty unless they had been checked and verified by Sir Thomas Maclear, HM Astronomer at the Cape.

	Livingstone	Official Portuguese Map of 1910	Google Earth
Golungo Alto	9° 8' 30" South	9° 4' South	9° 8' 20" South
Pungo Adongo	9° 42' 14" South 15° 30' East	9° 40' South 15° 30' East	9° 40' South 15° 35' 10" East
Ambaca	9° 16' 35" South 15° 23' East	9° 14' South 15° 12' East	9° 15' 45' South 15° 31' 05' East

Livingstone used a sextant to measure

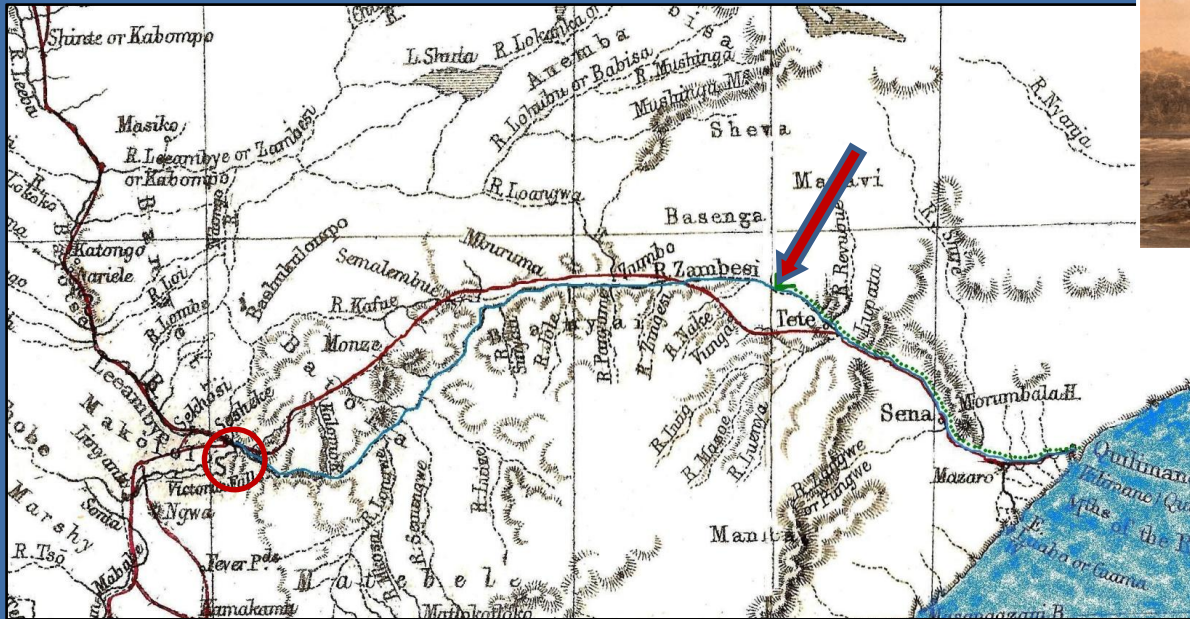
for **latitude**: the angle between the sun at noon (or a star at night) and the horizon. Using tables giving the declination of the sun or star at that specific time, he could calculate his latitude.

for **longitude**: the angle (lunar distance) between the moon and the sun, or between the moon and one of several stars. The angle depended on his position (which he did not know), but which he could find using tables which give the corresponding angle as viewed from the center of the earth at a given Greenwich time. Knowing Greenwich time, he could work out his longitude.



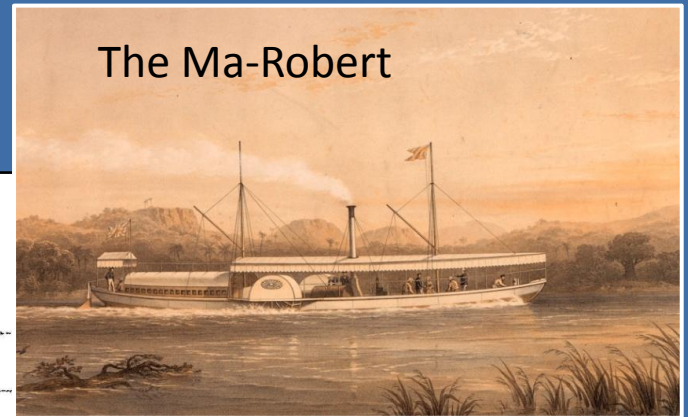
Map of journey from Angola to Tete or Nyunkwe on the River Zambesi.
(NLSA (Cape), Grey Collection, G 13 b 45 (34).

The Zambesi Expedition, 1858-63

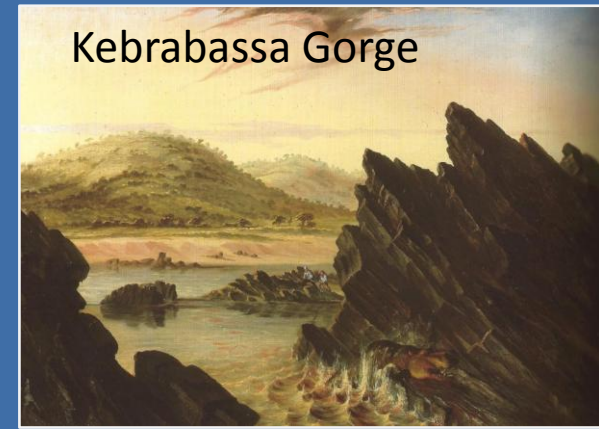


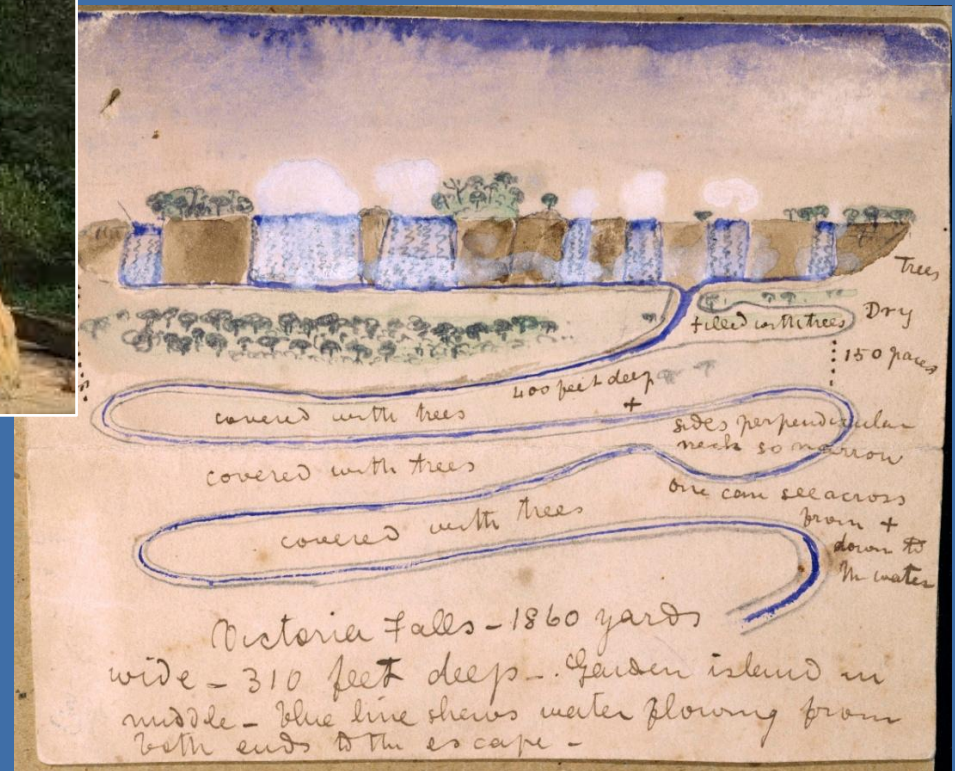
Zambesi Delta

The Ma-Robert

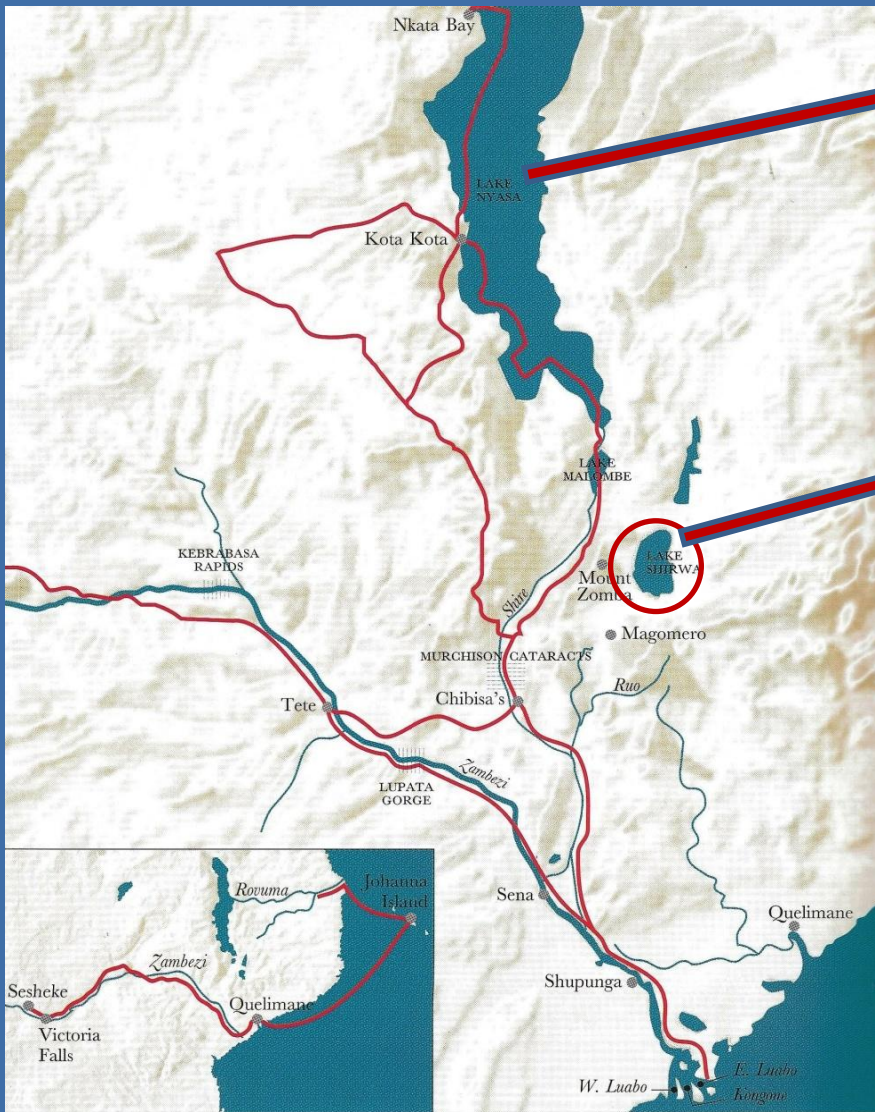


Kebrabassa Gorge



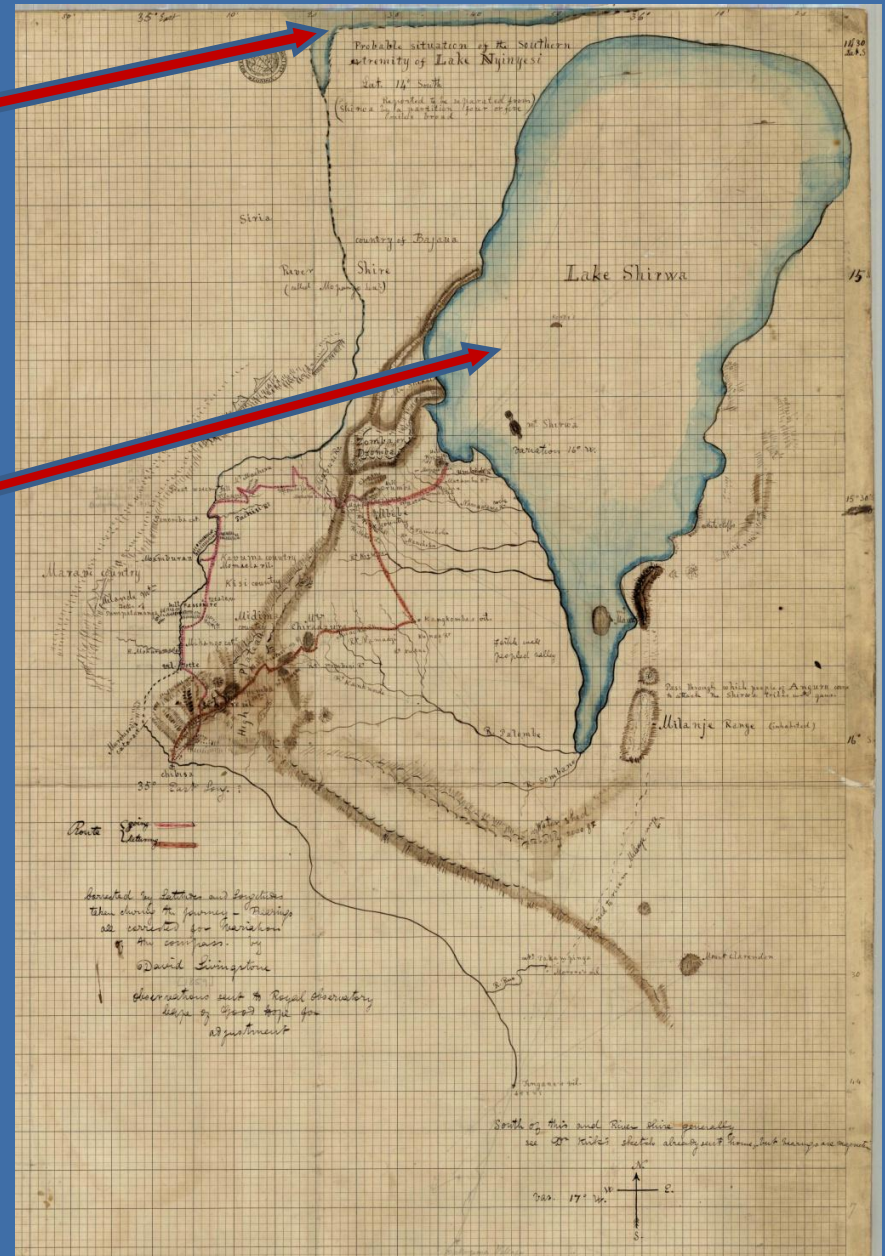


Livingstone's sketch of the Victoria Falls, 1855



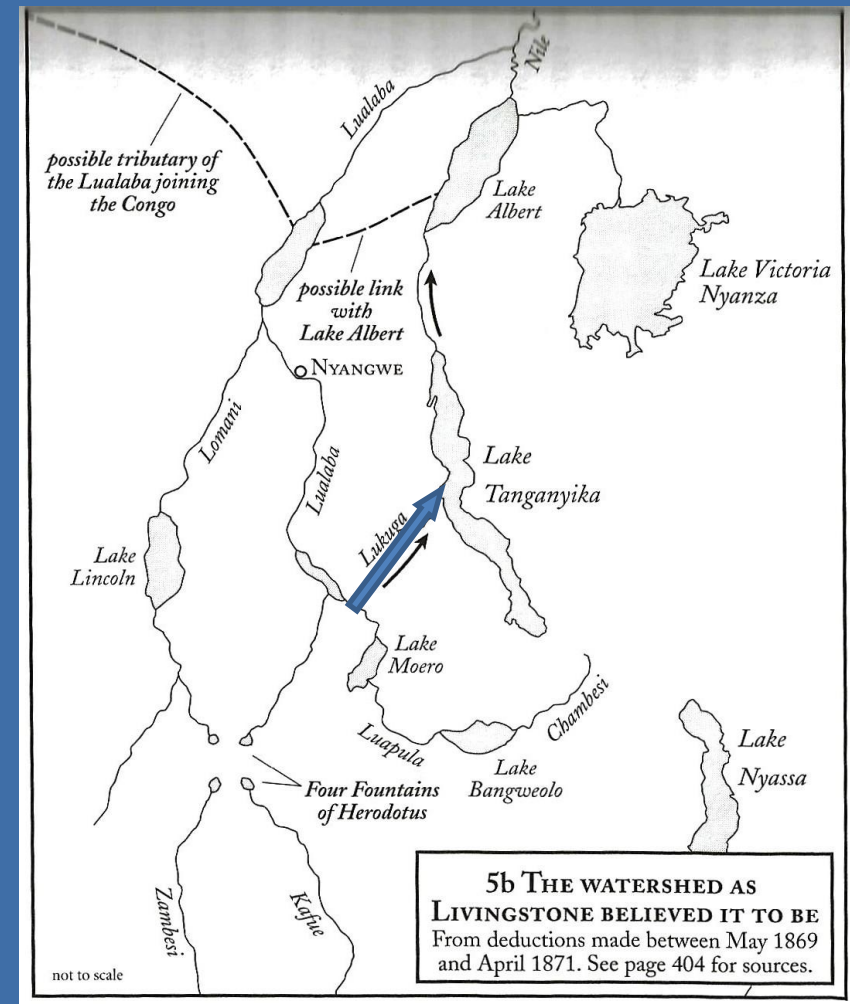
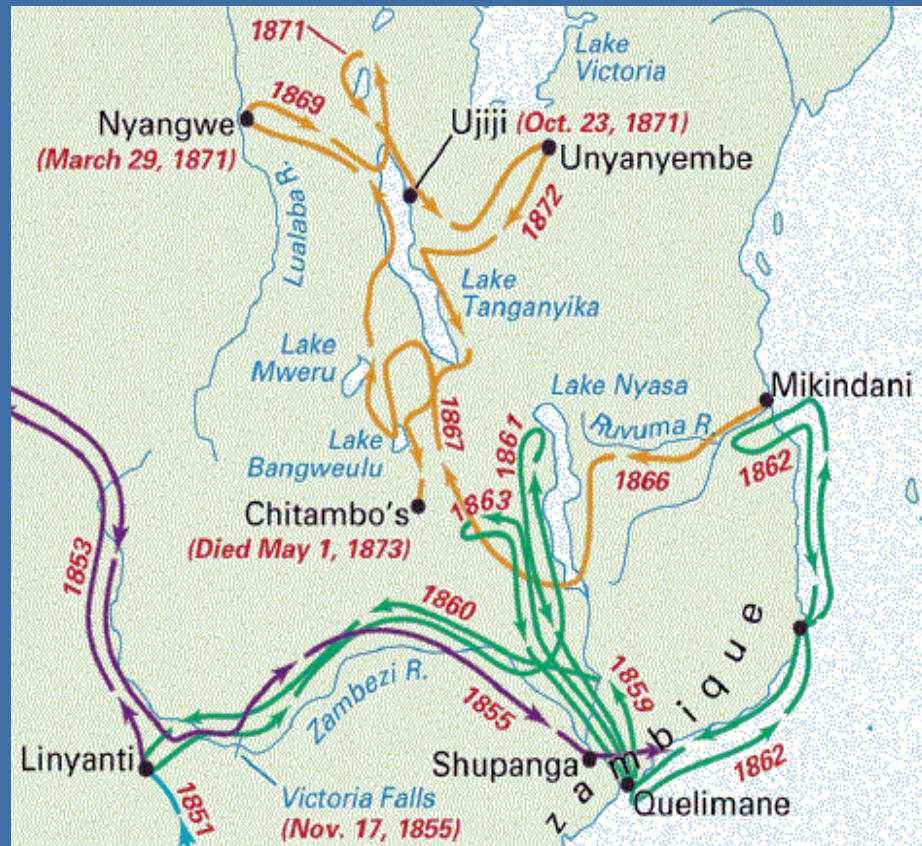
Sketch Map of the Zambezi Expedition

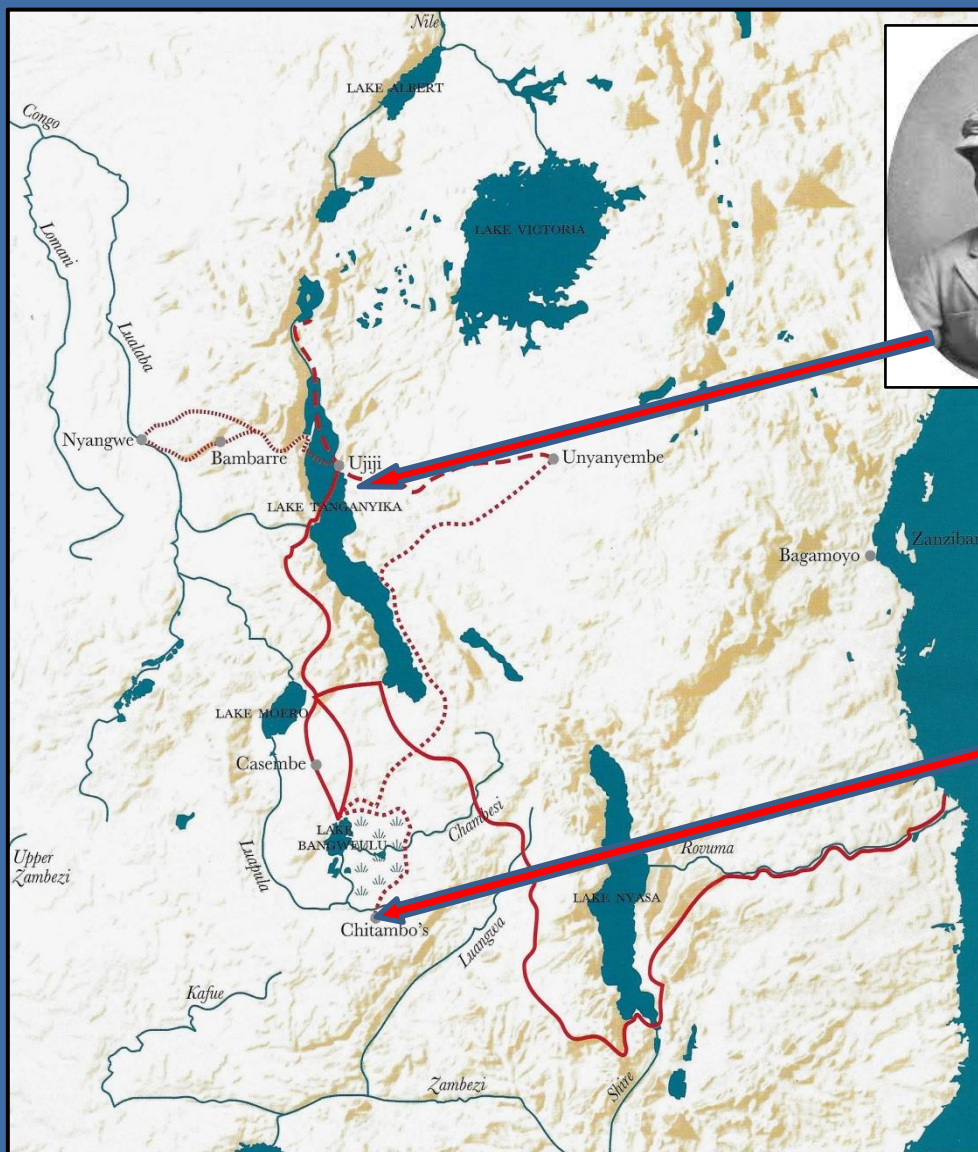
- Towns and places
- Livingstone's route
- Rivers and waterways



Map of Lake Shirwa and the River Shire, RGS Malawi S.5)

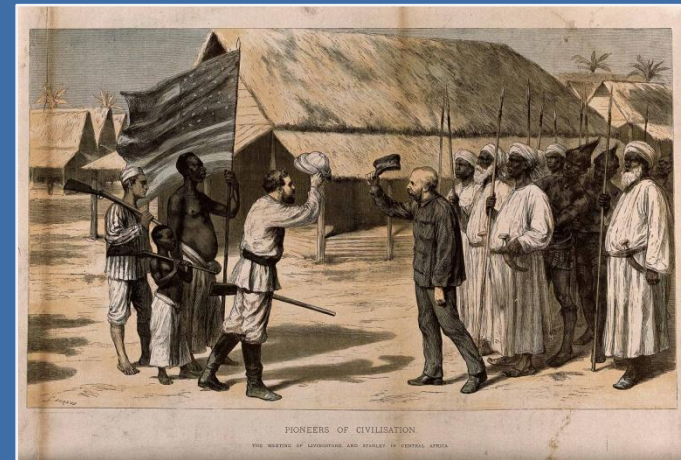
Searching for the source of the Nile



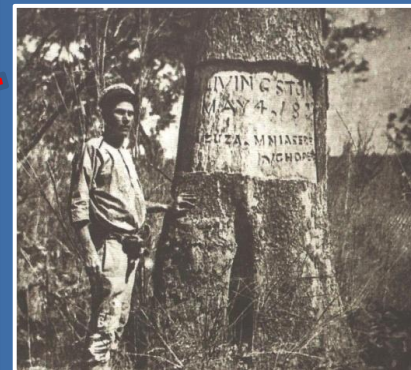


Sketch Map of Livingstone's Last Journeys

- | | |
|-------------------------------------|--------------------|
| — March 1866 – March 1869 | ● Towns and places |
| July 1869 – October 1871 | — Rivers |
| - - - November 1871 – February 1872 | ≡ Marshland |
| August 1872 – April 1873 | |



Henry Morton Stanley sent by *New York Herald* to locate Livingstone who had been “missing” for several years.



Tree under which L's heart was buried.



James Chuma and Abdullah Susi

THE ILLUSTRATED LONDON NEWS

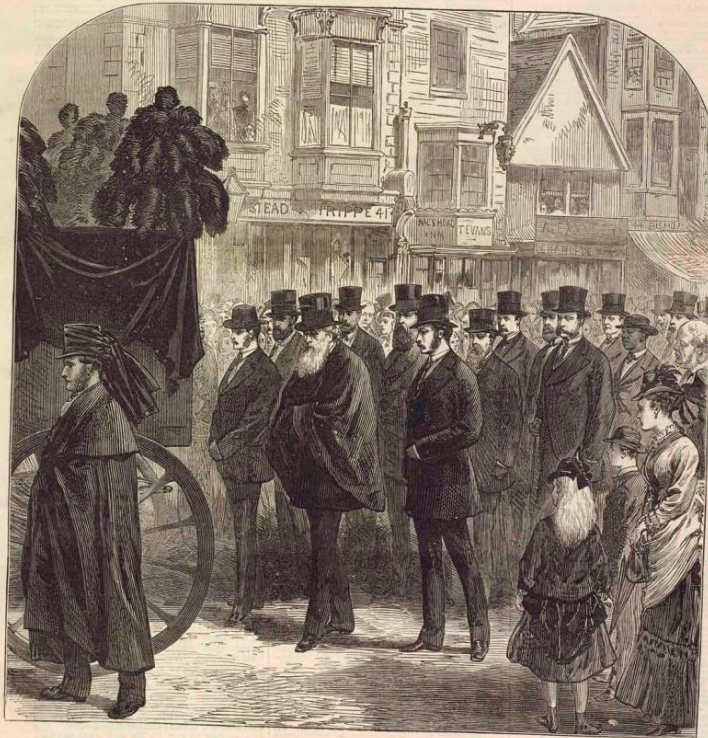


ENGRAVED AT THE GENERAL POST-OFFICE FOR TRANSMISSION ABROAD.

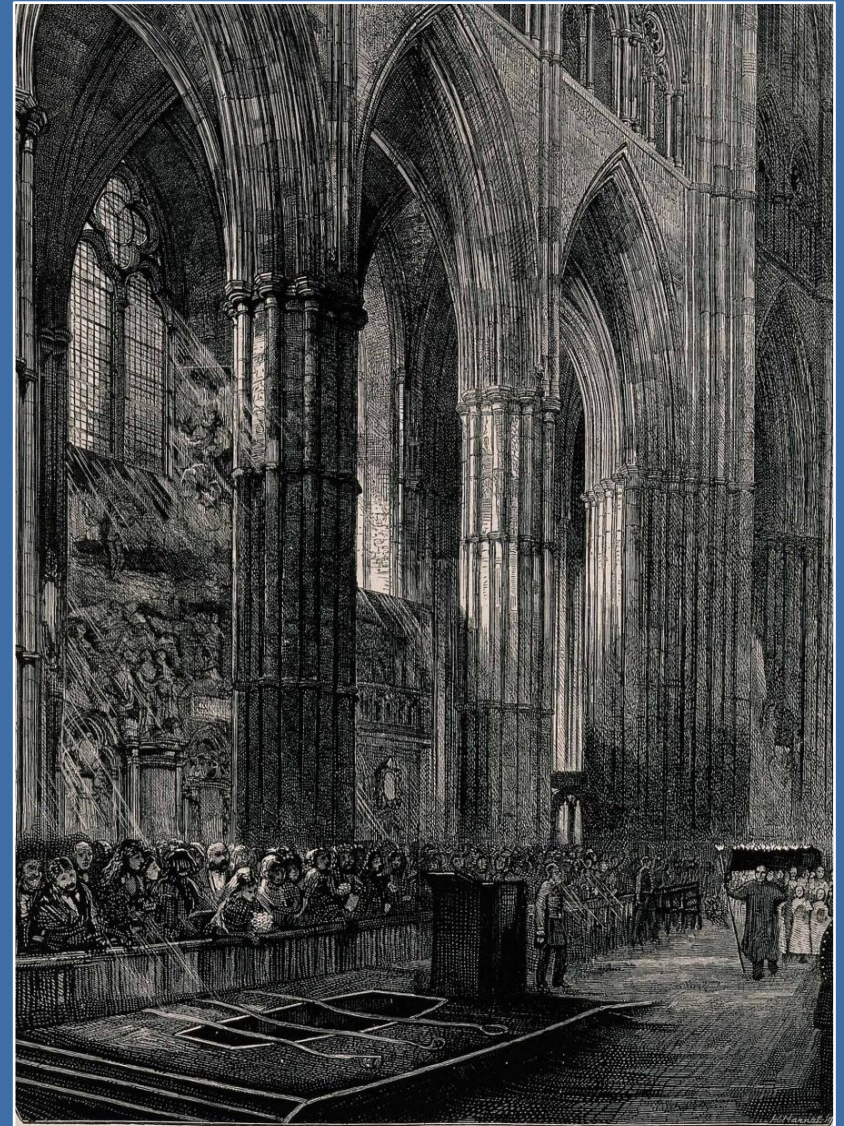
No. 1809.—VOL. LXIV.

SATURDAY, APRIL 25, 1874.

WITH EXTRA SUPPLEMENT (SIXPENCE.)



MR. LIVINGSTONE'S REMAINS AT SOUTHAMPTON: PROCESSION TO THE RAILWAY STATION.



THE GRAVE, WESTMINSTER ABBEY

Livingstone's funeral. Buried in Westminster Cathedral, April 1874.

LIVINGSTONE'S WRITTEN LEGACY

Livingstone was an extremely **prolific writer** who left

- over **2 000 letters**, many of them which, when transcribed, would fill 5-8 A4 single spaced typescript pages
- **2** voluminous books (687 and 475 pp)
- **11** substantial journals
- **39** field diaries of various sorts
- **18** notebooks
- **30** lengthy papers and reports, and almost
- **200** miscellaneous items (shorter notes, cards, etc.)

In manuscripts scattered around the world amongst some 90 repositories.
Largest collection in the **National Library of Scotland**.

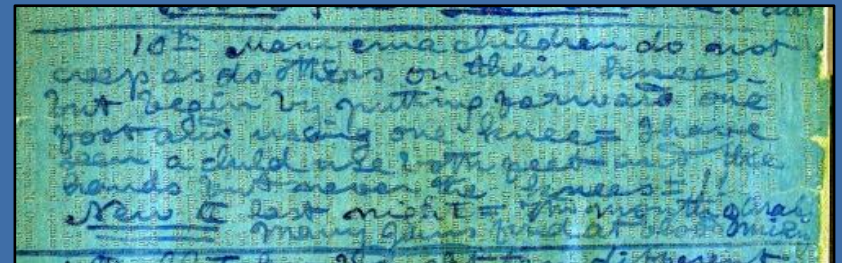
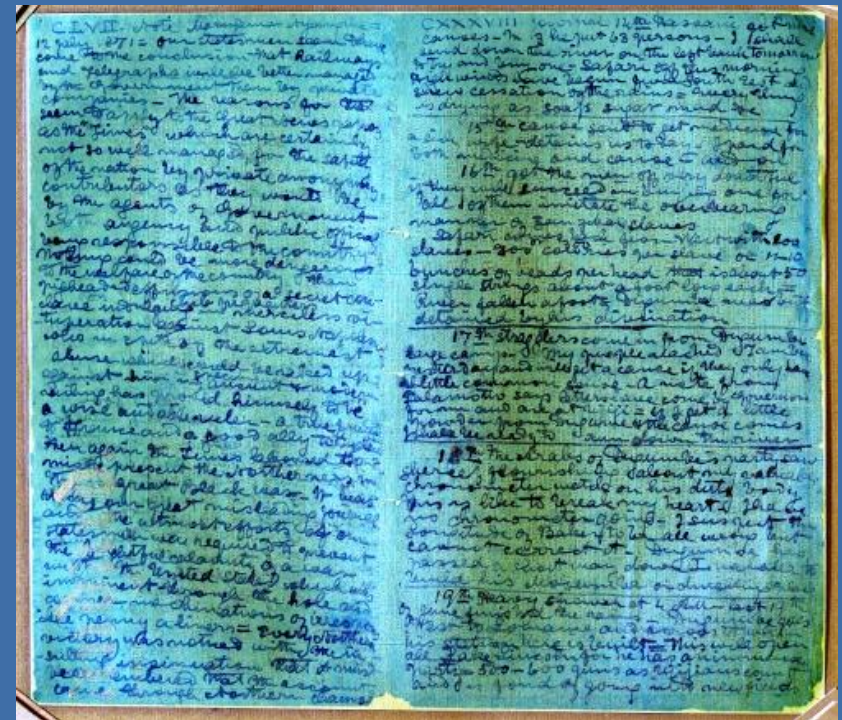
Some letters and journals were published (notably those by Prof I. Schapera)

During 1970's and 1980's : *David Livingstone; A Catalogue of Documents* (1879) edited by Gary Glendennan and Ian Cunningham.

A website [livingstoneonline.ucl.ac. uk](http://livingstoneonline.ucl.ac.uk) (now obsolete)

The David Livingstone Spectral Imaging Project

- Ongoing international project since 2004 jointly undertaken by the National Library of Scotland, UCLA (Univ of California, Los Angeles) Digital Library, University College London, and the Indiana Univ of Pennsylvania.
- Aim to transcribe and/or digitize **ALL** Livingstone manuscript material and make it available on the Web.
- Funded by the National Endowment for the Humanities (USA) and the British Academy.
- New Website: livingstoneonline.org (some sections still under construction)
- When complete, *Livingstoneonline.org* will contain the largest digital collection of manuscript images on the internet related to any historical British visitor to Africa - -- over 10,000 by 2016 .
- The Livingstone spectral image archive will digitally preserve all the pages of Livingstone's 1870 and 1871 Field Diaries (previously not accessible) as high-resolution spectral images with full metadata.



Pages from **Livingstone's 1871 Field Diary**, covers the years 1871-73 and now readable for the first time. Lack of paper; used old newspaper. Colour (left) and spectral ratio (right). Turned printed the page ninety degrees clockwise or counter-clockwise and wrote at a perpendicular angle. Ink made from a local African berry faded to a point of invisibility.

Letter from Maclear to Sir John Herschel, 19.04.1854:

“He has done what few other travellers in Africa can boast of; he has fixed his geographical points with very great accuracy; and still he is only a poor missionary”.

Letter from Maclear to Sir Roderick Murchison, President of the RGS, 17.05.1855:

“It is astonishing that he has been able to accomplish so much for sound geography under the circumstances. Few, very few, explorers have so perseveringly and so geometrically accurate fixed their tracks”.

Prof JW Gregory (University of Glasgow) in “Livingstone as an Explorer” (1913):

“His first journey, with its chain of accurately determined stations, represents the greatest single contribution to African geography which has ever been made” (p.32).



Thank you
for your attention