



Clarifying elusive, obscure, or misleading historical Namibian biodiversity collecting localities

John Irish

Research Associate, National Museum of Namibia, Windhoek
asblik@biodiversity.org.na

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Abstract

Some previously ungeocoded or poorly geocoded historical biodiversity collecting localities of Namibian relevance are clarified, including those that have usually been treated as Namibian but are actually in neighbouring countries, or vice versa. Collectors treated are: J.F. Drège, J.A. Wahlberg, K.J. Andersson, A.W. Eriksson, H. Schinz, A. Lüderitz, L. Schultze, the South African Museum expeditions, the Swedish South Africa Expedition, G. Hobohm, and F. Gaerdes.

Opsomming

'n Aantal Namibies-relevante geskiedkundige biodiversiteitsversamelingspunte met geen of swak vorige geokodering word opgeklaar, insluitende daardie wat dikwels as Namibies beskou was maar eintlik in buurlande geleë is, of andersom. Versamelaars wat behandel word is: J.F. Drège, J.A. Wahlberg, K.J. Andersson, A.W. Eriksson, H. Schinz, A. Lüderitz, L. Schultze, die Suid-Afrikaanse Museum-ekspedisies, die Sweedse Suid-Afrikaanse ekspedisie, G. Hobohm en F. Gaerdes.

Introduction

Every student of biology is (or should be) taught that killing a living being for scientific purposes can be morally justified only if one utilises the act to extract the maximum possible useful data from it, and also conserves it so that future workers can continue to benefit from it. An essential part of the scientific data legacy of any biological specimen is a collecting label that includes the collecting locality. Unfortunately, the collecting data for historical material is often less satisfactory, with locality names that are no longer in use or were obscure to begin with. A few such historical 'problem' localities of Namibian relevance are treated below.

A parallel source of biogeographical confusion that is seldom mentioned is the apparent historical practice

of foreign museums to relabel collectors' material with generalised localities, or of specialists who studied the material to publish over-simplified versions of localities even when the collector's label carried more precise data. When one reads the surviving journals of prolific collectors like J.A. Wahlberg (Hummel 1994) or Gustaf de Vylder (Rudner & Rudner 1998), one is impressed with their geographical awareness. They knew where they were and what the places were called. It is inconceivable that they did not label their material accordingly, and some surviving specimens confirm that they did. Yet all of Wahlberg's South African beetle material (luckily not his Namibian/Botswanan material) was published by Boheman (1848, 1851, 1857) as being merely from 'Caffraria', a name never used by Wahlberg himself. De Vylder's Namibian insects are



labelled 'Damara', despite the fact that he traversed the entire country from south to north. One can only wonder how much potentially useful biogeographical data has been lost or rendered practically inaccessible in this way.

It becomes a wider scientific problem when subsequent workers first misinterpret these already deficient locality data and then base taxonomical decisions on, or draw conclusions from, what is essentially a geographical fallacy. In the case of Boheman/Wahlberg's 'Caffraria' above, even today workers will confidently equate it with the Eastern Cape of South Africa on the basis of a former British administrative area with the same name that was located there. In fact, Wahlberg made no significant collections in or near the Eastern Cape; instead, he worked in the present-day Kwazulu-Natal, eastern Free State, North West, Gauteng, Mpumalanga, Limpopo, and far eastern Botswana. It then becomes a Namibian irritation when non-South African Wahlberg localities get relocated in print to 'Caffraria' simply by virtue of being Wahlberg material, e.g. Loew (1862: 14), and are then evermore treated as South African records. Hopefully the following information can help to reduce or rectify similar misrepresentations.

Materials and methods

Historical geocoding is not an exact science. It becomes necessary because of the imperfection of original sources, and consequently is heavily reliant on the availability of accessory sources, the use of inference, and personal experience in the areas concerned. When determining coordinates I have generally attached the greatest significance to information from the own writings and maps of the collector; next, any primary self-surveyed maps or relevant writings by near-contemporaries of the collector; lastly, any later secondary compilation maps. Available information was supplemented by my personal knowledge of the areas, or by topographical assessment from aerial photographs for areas with which I am less familiar. I attached lesser significance to the unsubstantiated coordinate claims of subsequent publications, and did not use on-line gazetteers after finding that their claimed coordinates even for unambiguous localities in the studied areas might be wrong by up to half a degree. Final geocoding was done by visually locating the appropriate place on Google Earth and noting the coordinates. Coordinates were rendered as Cartesian decimal degrees and rounded to four decimals, giving an approximate resolution of 10 m on the ground in Namibia. I have noted my sources throughout. Many of the maps quoted are represented in the library of the Namibia Scientific Society and are accessible through their web site. In the many cases where my determinations differ from previous attempts, users may assess the relative reliability of the respective sources cited and draw their own conclusions.

Results

Collectors are treated chronologically.

1. Drège

Johann Franz Drège (1794–1881) was a German botanical collector who travelled widely in South Africa in the early 19th century. He exhaustively documented his collecting localities and collections in [Drège \(1843\)](#). On one of his expeditions he travelled north from the Cape, reaching the Orange River in September 1830 and travelling downriver to the mouth before returning to Cape Town. The fact that he also collected in what is now Namibia, and that these are some of the earliest surviving biodiversity collections made in the country, seems since to have gone unnoticed and his Namibian material has generally been treated as South African.

Drège reached the Orange River at *Verleptpram*, (also rendered *Verleptpram*) where he made two collections, one of the vegetation of the riverbank and its fringing bouldery alluvial strip, and a second on the adjacent mountains. He then crossed the river to collect on the right hand (northern) bank, before returning to the south bank and proceeding to the river mouth. He documented the relevant collections as:

- *Garip, bei Verleptpram, am Ufer des Flusses und in der steinigen Niederung* (= Orange River at Verleptpram, on riverbank and in the stony flat)
- *Garip, auf steinigen und felsigen Höhen bei Verleptpram* (= Orange River, on stony and rocky heights at Verleptpram)
- *Garip, Sandhügel am rechten Ufer des Flusses bei Verleptpram* (= Orange River, sandy hills on right hand riverbank at Verleptpram)

No place named *Verleptpram* appears on any modern or historical map to which I have had access, except the one in [Drège \(1843\)](#), which is not very useful. It depicts the Lower Orange River as flowing more or less straight east to west to the sea, but it does help to confirm that *Verleptpram* is on the south bank, and that it is downstream of the Fish River confluence, which is also marked. Enquiries to the custodians of Drège's botanical heritage, the South African National Biodiversity Institute (SANBI), indicated that they believe *Verleptpram* to be located opposite the Fish River Mouth with coordinates -28.1141, 17.1861 (pers. comm., Les Powrie and Marinda Koekemoer, 2017), and it is correspondingly referenced with quarter degree square 2817Aa in SANBI works, e.g. [Boatwright et al. \(2018: 54\)](#). The basis for their geocoding is the location near to the Fish River and the finding of some Drège *Verleptpram* species there. This is very oblique evidence indeed. Besides the fact that the coordinates are actually upstream of the Fish River Mouth, not downstream as Drège has it, the location is also off the beaten track. My research on historical travellers in arid southern Africa has shown me that their overall routes tended to go from one available water point to the next, while their specific routes between water points were constrained by topography and generally followed the path of least resistance. They also tended to follow in each other's footsteps. A route that goes where SANBI maps *Verleptpram* does not fit this pattern.

However, about 22 km west of the SANBI coordinates there is a mountain on the south bank of the Orange River called *Pokkiespramberg* (RSA 1:50 000 topographical sheet 2816Bb, Sendelingsdrif, 1979). *Pokkiespram Hill* appears on earlier maps at least as far back as 1942

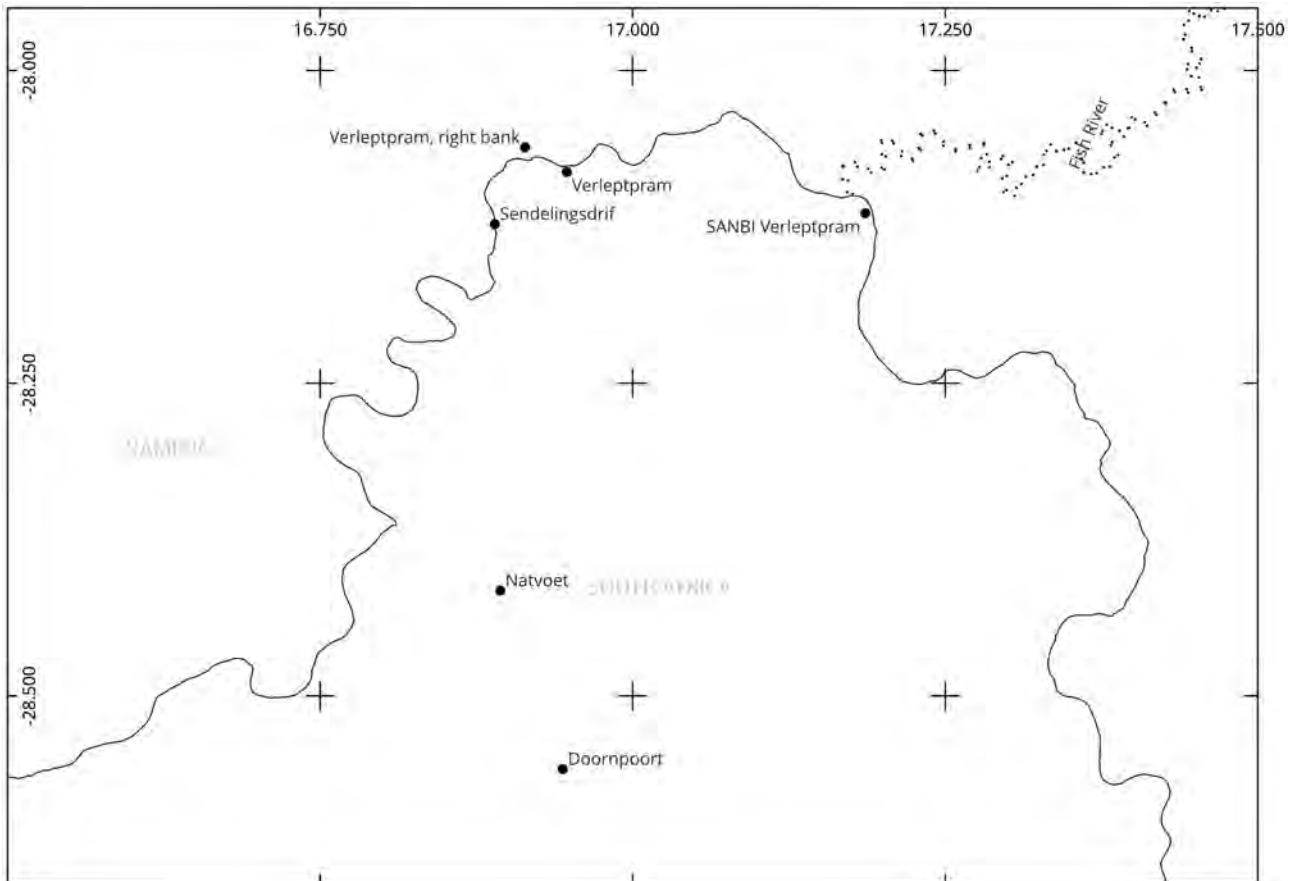


Figure 1: Namibian and near-Namibian Drège localities and relevant other places

Table 1: Cartesian coordinates for relevant Drège localities. Mapped in Figure 1.

| Locality | Country | Coordinates |
|---|---------|-------------------|
| Verleptpram (as Pokkiespramberg, taken at northern foot) | ZA | -28.0811, 16.9473 |
| Verleptpram, right bank (as Lorelei Valley, taken at prominent sandy hills centrally in mouth of valley) | NA | -28.0615, 16.9139 |
| Natvoet (as Annisfontein, today dry, taken at approximate water point location as it was in 1977; personal observation) | ZA | -28.4158, 16.8941 |
| Doornpoort (as Doringpoort, taken at location of water point on topographical map, not visited by me) | ZA | -28.5586, 16.9440 |

(South Africa 1:500 000 sheet 2715 Richtersveld, 1942). *Potjiespram*, the current name for the National Park camp site there, is evidently a neologism. Most Afrikaans place names in areas where Khoekhoegowab is spoken are translations, and it is conceivable that different informants could have translated the same unknown original Khoekhoegowab place name as *Verleptpram* (= wilted breast) for Drège and as *Pokkiespram* (= a breast scarred by smallpox) for later cartographers. Both are highly unusual and unique names and finding two similar proximate toponyms is suggestive that they might be the same.

Pokkiespram is near *Sendelingsdrif*, an established river crossing which was first documented by [Schmelen \(1818\)](#), and which was in use with an established route to it during Drège's time ([Alexander 1838](#)) and thereafter ([Andersson 1855](#)), up to the present day. It is more likely that Drège would have travelled here than at the Fish River Mouth. The case for *Pokkiespram* is further

strengthened by considering the two localities that Drège lists immediately before reaching *Verleptpram*: *Natvoet* and *Doornpoort*. They happen to be the last two water points before reaching *Sendelingsdrif* from the south along the historic (and current) route.

Natvoet is 32 km due south of *Sendelingsdrif* and is today called *Annisfontein* (RSA 1:50000 topographical sheet 2816Bd, Khubus, 1973). *Natvoet* means 'wet foot' in Afrikaans and [Alexander \(1838: 250\)](#) calls the place '*Aneip*, or wet foot'. We know that *Aneip* is *Annisfontein* because Alexander mentions the nearby (ca. 700 m distant) cave of Heije Eibib, today called *Wondergat*. The Khoekhoegowab words for 'wet' and 'foot' are respectively *laa* and *#aib/s* ([Haacke & Eiseb 2002](#)) and one can imagine how the conjunction can be rendered by non-speakers as either *Aneip* (masculine) or *Annis* (feminine). *Doornpoort* is also mentioned by [Alexander \(1838\)](#). It is 17 km further south, again along still existing roads, and still carries the name *Doringpoort*

on modern maps (RSA 1:50 000 topographical sheet 2816Db, Rooibank, 1973).

The location of *Pokkiespramberg* near an established route, with traceable preceding localities, and conceivable name-correspondence, strongly argue that it is Drège's *Verleptpram*. So does the description of Drège's Namibian locality, across the river from *Verleptpram*, which mentions 'sand hills'. The Lorelei Valley on the north side of the Orange River at this point is very sandy and all hills are sand covered. The prevailing south-westerly winds funnel a sand stream up the Orange River Valley that gets deposited in the Lorelei valley when the river turns abruptly eastwards. The nature of the Orange River bed here, rocky with numerous small islands in one place, would also have facilitated Drège's crossing of the river.

2. Wahlberg

Johan August Wahlberg (1810–1856) was a Swedish naturalist who collected much early material in southern Africa, starting in 1838. What we know of his time in southern Africa is based on his surviving journals and letters, as compiled by Hummel (1994), which is the source of everything below that is not otherwise referenced.

Wahlberg arrived at *Walfish Bay* on 14 April 1854 initially not intending to spend time in Namibia. His main goal was Lake *Ngami* in north-western Botswana and the country beyond, but he was delayed and by late 1854 he was still at *Walfish Bay*. Besides specimen labels, letters dated 22 June and 15 December 1854

contain the sum total of information we have on his movements during the eight or nine months in 1854, during which most of his Namibian collections were presumably made. He eventually started for *Ngami* in January 1855 (judging by a specimen labelled *Onanis* on 11 January: Gyldenstolpe 1926: 99) and by March was already at Lake *Ngami*, where his journal re-commences on 30 May 1855, but we have virtually no information on the journey from *Walfish Bay*. On 6 March 1856, still in Botswana, he was killed by an elephant, so he never wrote the travelogue that might have answered the questions we have today.

During his time at *Walfish Bay* Wahlberg stayed at the mission station *Scheppmansdorf*. On 10 May 1854 he set off towards the Swakop River, which he followed upstream to near *Otjimbingwe*, and then along the established route across the *Khomas Hochland* to *Windhoek*, down to *Rehoboth*, and then cross-country westwards to reach *Scheppmansdorf* again on 16 June. The purpose of this first trip inland was mainly business; he does mention some collecting, but given the distance traversed in a relatively short time, this is not expected to have been significant. Subsequently he made a longer trip from 19 July to 11 October, specifically for hunting and collecting along the Swakop River, again returning to *Scheppmansdorf*.

Wahlberg localities relevant to Namibia are the following:

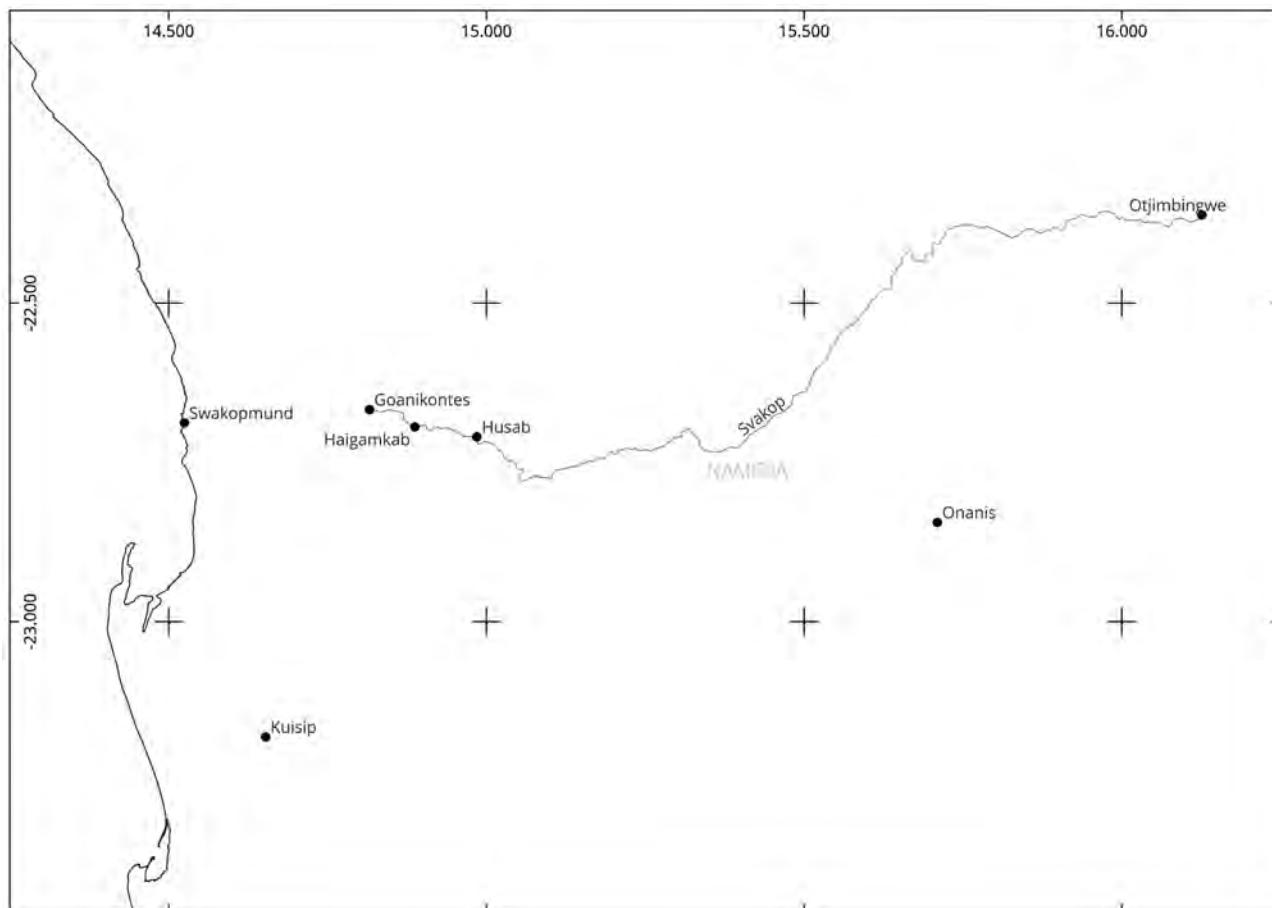


Figure 2: Wahlberg localities and relevant other places in central western Namibia

Svakop

Svakop is a rendition of ‘Swakop’ that is unique to Wahlberg. Because his May/June visit to the Swakop River was short and business-orientated, we can presume that most of Wahlberg’s *Svakop* material originate from the longer July to October journey. The route is no more precisely specified than just ‘along the course of the Swakop River’, and the journey started and ended at *Scheppmansdorf*. Contemporary established routes from *Scheppmansdorf* reached the Swakop River at the water points of *Goanikontes*, *Haigamkab*, or *Husab*, between 30 and 45 km from the coast. *Svakop* specimens do not include coastal Namib Desert species, so it is unlikely that Wahlberg proceeded downstream from either of these places. In modern studies that treat Wahlberg material, *Svakop* has often been equated to *Swakopmund*, either implicitly without comment, or explicitly as e.g. in [Londt \(2010: 456\)](#), but this is wrong. Exactly how far upstream he went is unknown. We can assume that he went at least as far as *Otjimbingwe*, for two reasons: a) he had already travelled this route for non-collecting purposes two months previously and was familiar with it, and b) *Otjimbingwe* was the first major settlement inland from the coast and all routes passed through it. It is also clear that by *Svakop* we must understand the Swakop River Valley or the Swakop catchment rather than a route confined to the actual river, as witness specimens from this time originating from e.g. *Onanis* ([Gyldenstolpe 1926: 55](#)), 35 km from the Swakop River. We are left with ‘Swakop River catchment between about *Goanikontes* and at least *Otjimbingwe*’, which may not be entirely accurate but is the best estimate possible under the circumstances. At least the time spent and the taxa collected are consistent with such a route, albeit admittedly not exclusive to it.

Of his Swakop trip Wahlberg said: ‘I scarcely managed to collect anything, and indeed there was not much of any value to collect’ ([Hummel 1994: 154](#)). Looking at the published results I have to disagree, since it is the most prolific of Wahlberg’s Namibian localities. Maybe he was comparing it to the easier collecting in wet green

south-eastern Africa that he was more used to. At least some of Wahlberg’s *Svakop* insect species have never since been recorded, e.g. the small moth *Arcyophora ledereri* ([Wallengren 1863](#)).

Kuisip

The name refers to the Kuiseb River. All of Wahlberg’s *Kuisip* material was probably collected during his stay at *Scheppmansdorf* (today: Rooibank) on the Lower Kuiseb River. He also briefly travelled along part of the Kuiseb River upstream of *Scheppmansdorf* on his way back from *Windhoek* during his May/June trip, but since they nearly died of thirst at the time, conditions were probably not conducive to collecting. The high proportion of Namib- and dune sea-specific taxa that are labelled *Kuisip*, combined with the absence of any material labelled ‘*Scheppmansdorf*,’ despite the fact that he spent a total of at least four months there (mid-April to early May, mid-June to late July, and again from mid-October to at least mid-December 1854), all argue for Wahlberg’s *Kuisip* being *Scheppmansdorf*. *Kuisip* material includes iconic Namib dune-specific insect taxa such as the jewel beetle *Julodis mitifica* Boheman 1860, the tenebrionid beetles *Pachynotelus albonotatus* Haag-Rutenberg 1872 and *Stips stali* ([Haag-Rutenberg 1872](#)), and the narra cricket *Acanthoproctus diadematus* ([Stål 1858](#)), all originally described from Wahlberg material and all occurring at Rooibank.

Eikhams

The name *Eikhams* is well known as a historical rendition of *laellgams*, one of the original names of *Windhoek*. Wahlberg visited *Windhoek* during his initial May/June trip. [Hummel \(1994: 161\)](#) maps his later route to *Ngami* as bypassing *Windhoek* by proceeding from *Okahandja* directly to *Otjihaenena* on the White Nossob River, north-east of *Seelis*. The inspiration for the latter route is likely [Gyldenstolpe \(1934: 285\)](#), who lists *Okahandja* and *Otjihaenena* as sequential localities where Wahlberg collected bird specimens. However, such a route would have had to cross directly over the

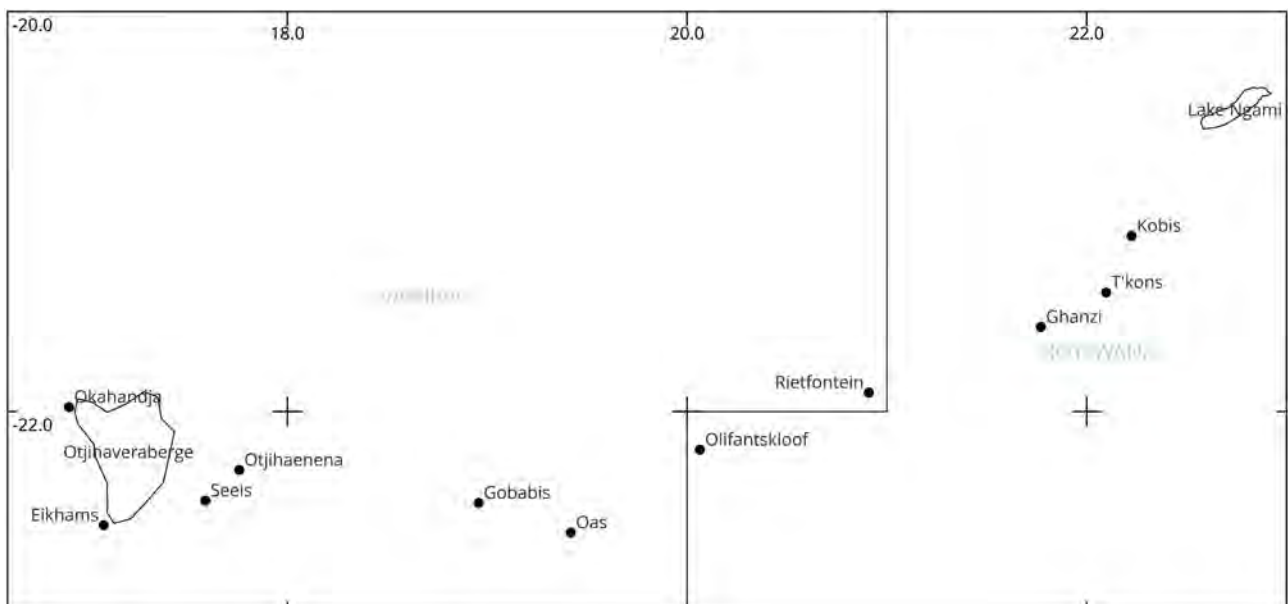


Figure 3: Wahlberg localities and relevant other places in eastern Namibia and western Botswana.

Otjihavera Mountains, and no such route existed; all documented contemporary eastward travellers proceeded along the established route from *Okahandja* to *Windhoek* and then towards *Gobabis*. I believe it is most likely that Wahlberg, too, did this, and passed through *Windhoek* a second time in early 1855. This fact has some bearing on the next locality. Relatively little Wahlberg *Eikhams* material is known.

T'kons fountain

The location of *T'kons* has not been traced before, but because it is associated with Wahlberg's other Namibian material it has till now usually been treated as Namibian. It is not mentioned in Wahlberg's journals or letters. By analogy with places he does mention, like *t'Kuisji* (for *!Khuiseb*), or *t'Eit'kams* (for *!Ae//gams*), we can deduce that the *T* in the name is Wahlberg's rendering of a click sign, though he did not distinguish between different clicks. Material also exists that is labelled '*inter Eikhams et T'kons fountain*'. Since we saw above that Wahlberg likely travelled through *Windhoek* twice, this places *T'kons* either south or west of *Windhoek* en route to *Scheppmansdorf*, or east of *Windhoek* en route to *Ngami*.

A direct search for the place name yielded no results. Considering the 'south/west of *Windhoek*' option first, I was unable to find *T'kons* or a similar name on any historical map of the relevant parts of Namibia (Irish, unpublished map indices). Presuming it to be a Khoekhoegowab name, and knowing that many places in Namibia have names in multiple languages that often have similar meanings, I explored a range of phonetically similar permutations of *kons* (gom, goms, gon, gons, khom, khons, khons, each respectively preceded by *l*, *ll*, *≠* or *!*) in Khoekhoegowab (Haacke & Eiseb 2002), and then proceeded to look for place names in the target area that represent the same meanings translated into English, Afrikaans, German, or Otjiherero (using Viljoen & Kamupingene 1983), without success. I repeated the process for the 'east of *Windhoek*' option, additionally considering maps of Botswana (Irish 1988) and expanding the languages to include Naro (Visser 2001) and Setswana (Matumo 1993), again without success.

As stated above, it is unlikely that Wahlberg did significant collecting on his May/June 1854 trip that proceeded south from *Windhoek*, but the sequential bird specimens mentioned in Gyldenstolpe (1934) show that he was collecting when he passed through again on the way to *Ngami*, so it then becomes more likely that *T'kons* is east of *Windhoek*. The route to Lake *Ngami* from Namibia was first documented by Andersson (1856) following his journey of 1853. The central part of the route was much constrained by the scarcity of reliable water points and proceeded successively through *Gobabis*, *Oas/Twass*, *Elephant's Kloof*, *Rietfontein/Tunobis*, *Ghanzi*, *Thounce*, and *Kobis*. All contemporary documented travellers followed the exact same route, and it was still being used 30 years later (Schinz 1891a). There is no reason to believe that Wahlberg deviated from the established route and the sequential localities from Gyldenstolpe (1934) support this.

Andersson (1856) describes but does not name a water point in Botswana, north-east of *Ghanzi* en route to *Ngami*. Chapman (1868), who travelled the same

route in 1855 a few months after Wahlberg but in the opposite direction, calls it *Thounce*, and Baines (1864), who travelled the same route with Chapman in 1861, includes it on his detailed map. *Thounce* is phonetically very similar to *T'kons*, and the differences in spelling may be explained by different speakers attempting to render the same foreign sound using respectively English and Swedish orthography. I believe *Thounce* and *T'kons* to be the same place since it fits best with all available information. The otherwise very broad locality 'between *Eikhams* and *T'kons*' then makes sense as a receptacle for lumped material collected opportunistically en route to the actual intended collecting area. It also means that *T'kons* is not in Namibia. Previously, the insect species collected there were compatible with its being in either Namibia or Botswana.

Thounce does not appear on modern maps of Botswana (consulted: Botswana 1:250 000 series. 1972–1984, Department of Surveys and Lands, Gaborone; and: Bechuanaland Protectorate 1:1 250 000. 1935. Ordnance Survey, Southampton). Baines' map locates it about halfway between *Ghanzi* and *Kobi Pan* (as *Kobies*), which do appear on modern maps. Chapman's tables of distances agree with Baines' relative location of *Thounce*, and both Chapman and Baines list alternative names for *Thounce*. Skead (1973) lists all their names and adds more, and the following then all refer to the same single place:

- *Thounce, T'kons, Wolf Fountain*. Baines gives the alternative name 'Wolf Fountain' for *Thounce*. The Naro word for spotted hyena, called 'wolf' in much of southern Africa, is *xàu* (Visser 2001). In Naro orthography 'x' represents the *ll*-click, and in spoken Naro *xàu* does sound very similar to *Thounce* or *T'kons* (van Rooyen, pers. comm.).
- *Leetsia Piere, Leetje Piere, Leetsia Piere*. Baines gives one version as an alternative name for *Thounce*, and Skead adds two spelling variants. The proper Setswana place name is probably *Metsiphiri*, from *metsi*, water, plus *phiri*, hyena (Matumo 1993), i.e. Wolf Fountain.
- *Stink Fountain, Stinkfontein*. Baines gives 'the Stink Fountain of Andersson' as an alternative name for *Thounce*. The name *per se* was not used by Andersson (1856), but he did mention the disagreeable taste of one water point in this general area.
- *Kameel Pan*, also *Camel Pan* and *Giraffe Pan*, were listed by Skead as synonyms for *Thounce*, without specifying a source. Schinz (1891a) maps a water point *Aus*, and in his text mentions the alternative name *Kameelpan*. *Aus* is phonetically close to *xàu*. The first mapped appearances of *Kameel Pan* under that name that I could find were by Kiepert (1893), Gentz (1903), and Passarge (1904).
- The original owner of farm *Kameelpan* north-east of *Ghanzi* was J.P.F. du Plessis, and his granddaughter, E. van Rooyen (pers. comm.), still lives in the area. She confirmed with her father, who grew up on *Kameelpan* farm, that the original *Kameelpan* water point was not actually on the farm of the same name, but on an adjacent cadastral unit for which they provided me with the coordinates listed in Table 2,

Table 2: Cartesian coordinates for relevant Wahlberg localities. Mapped in Figures 2 and 3.

| Locality | Country | Coordinates |
|--|---------|--|
| Svakop (as Swakop River Valley between about Goanikontes and at least Otjimbingwe) | NA | cannot be precisely geocoded, see fig. 2 |
| Kuisip (as Scheppmansdorf / Rooibank, taken at approximate location of historical mission station) | NA | -23.1802, 14.6490 |
| Eikhams (as Windhoek, taken centrally in Tal Valley) | NA | -22.5680, 17.0810 |
| T'kons fountain (as Thounce / Kameelpan, taken centrally on pan) | BW | -21.4046, 22.0967 |
| Nolagi (as Lake Ngami area) | BW | cannot be precisely geocoded, see fig. 3 |

below. The coordinates previously published by Skead for Kameelpan are only 2.5 km distant, but those do not correspond to a water point on the ground. Neither *Thounce* nor any of the other 'wolf'-based names remain known in the area today.

On balance of evidence, Wahlberg's *T'kons* is likely the same as *Thounce* or *Kameelpan*.

Nolagi

Nolagi is another Wahlberg locality, associated with his Namibian and Botswanan localities, that has never been traced. It has mostly been treated as Namibian, and Häckel & Farkač (2013: 319) even specified that it is in the Erongo Region, solely on the basis of the same single species that Wahlberg collected at both *Svakop* and *Nolagi*, and because they wrongly equated *Svakop* with *Swakopmund*. At least Holm (1978) stated that *Nolagi*, albeit untraced, could be either in Namibia or Botswana, while Louw (1979, 1982) located *Nolagi* in Botswana, and specifically western Botswana, but did not give his reasons for doing so.

Boheman (1860) in a reversal of his earlier treatment of Wahlberg's South African material, listed fuller label data for Wahlberg's Namibia/Botswana beetles and in the process provided us with useful clues about *Nolagi*, notably that it is a river, and that some specimens were collected in March, although the year was not specified. In the same publication, one *Ngami* record is also marked 'March'. Since Wahlberg was still en route to Namibia in March 1854, and he was killed on 6 March 1856, *Nolagi's* March can only be March 1855. *Ngami* specimens also labelled March suggest that *Nolagi* is close to Lake *Ngami*, and the *Nolagi River* is most likely one of the watercourses feeding into Lake *Ngami*. By 3 April 1855 Wahlberg had already left *Ngami*, travelling northwards along the *Okavango* (*Doughe*) River (Gyldenstolpe 1926: 7).

I can therefore confirm Louw's location of *Nolagi* in western Botswana, and furthermore that it is proximate to Lake *Ngami*, but have no more specific information. It is tempting to refer *Nolagi* to *Nhabe*, a watercourse feeding into Lake *Ngami*, on grounds of phonetic similarity, but I am not confident that this is necessarily correct. Needless to say, the name *Nolagi* appears on no maps that I have had access to, nor in the writings of Wahlberg or any other visitors to the *Ngami* area that I could trace. Previously, the insect species collected

there were compatible with its being in either Namibia or Botswana.

Wahlberg's well

A locality in Botswana, south-west of *Ghanzi*. It is not a Wahlberg collecting locality, nor does it have any bearing on his actual localities. It was named posthumously (Baines 1864: 126).

3. Andersson

The Swedish-English hunter-trader Karl Johan Andersson (1827–1867), better known under his print name of Charles John Andersson, collected mainly birds in Namibia, but also smaller numbers of many other taxa. Much material exists that is well-labelled with detailed locality information, but there is also much that is labelled only *Damaraland*, as central-northern Namibia was known at the time. A subset of this *Damaraland* material does not attribute it to Andersson or any other collector. Material from all three groups is usually cited as being in the British Museum (today, Natural History Museum, London).

Besides Namibia, Andersson's material also includes specimens from *Knysna*, on the south coast of South Africa. They are mentioned in Finsch & Hartlaub (1870), Sharpe (1871), and Layard & Sharpe (1875), to name a few, with dates ranging from December 1865 to March 1866. As Andersson, at the time, was bedridden in Cape Town, he sent his apprentice, Axel Eriksson, to collect at *Knysna* (Rudner & Rudner 2006: 30), but the material has since been universally attributed to Andersson.

There are a number of species recorded or described from unattributed *Damaraland* material that do not occur in Namibia, but that do at *Knysna*. The best-known example of this is the dwarf chameleon, today known as *Bradypodion damaranum* (Chamaeleonidae), described by Boulenger (1887), which is a range-restricted endemic occurring only in wet coastal forest near *Knysna* and adjacent areas. Another example from the same work is the skink *Acontias meleagris* (Scincidae); in Boulenger (1885) there is the gecko *Afrogecko porphyreus* (Gekkonidae); and in Westwood (1876) the wormlion fly *Leptynoma sericea* (Vermilionidae). Another *Knysna* species, the bird *Cossypha dichroa* (Muscicapidae) is recorded by Sharpe (1871)

purportedly from *Otjimbingwe* in Namibia, and stated to have been collected by Andersson.

In combination, the evidence suggests that besides the otherwise well-labelled Andersson material, some was labelled, or relabelled, with a generic Namibian locality without specifically attributing it to Andersson, and that the latter material includes a variety of non-Namibian, primarily *Knysna*, Andersson/Eriksson material.

Surviving original Andersson labels generally refer to localities that are relatively easy to locate on maps of the time or through Andersson's own writings, and need not be treated here, with one exception:

Elephant Vlei

Numerous bird specimens, as well as the type specimens of two bat species, carry the label *Elephant Vley*, *Elephant's Vley* or *Elephants Vley*. The name is also secondarily rendered as *Olifantsvlei*, or even *Elephant Valley* (Tomes 1861, recognisable by collector and date). All recorded dates are between August and November 1859.

At the time Andersson had already started on his way from the *Okavango River* back to *Otjimbingwe*, but was unable to proceed for lack of viable water points along his intended route and therefore remained stationary for almost four months while waiting for rain. He describes this in his travelogue (Andersson 1861) but does not name the place. The last date he mentions before arriving there is 3 August. He specifically mentions spending the time there collecting natural history specimens, and he also describes killing an elephant there, which may have inspired his later choice of a name. On 23 November he proceeded south. Based on the above this unnamed place must be what he called *Elephant Vley* on labels. It was never a real place name in use in the area. On Andersson's own map of his journey, appended to Baines (1866), the place is denoted simply as 'Vley (waggon long stationed)'.

The closest place to his vlei that is unequivocally identifiable and mapped by Andersson is *Ombongo*, today *Mpungu*, which he maps at coordinates only about 8 km north-east of actual *Mpungu*. Applying the same offset to the mapped coordinates of his vlei results in a location, but there are no obvious water points visible on aerial photographs of the area.

Several maps subsequent to Andersson depicted his convoluted once-off route through the area as if it were an actual road. The first subsequent map that appeared to add new first-hand information was Sprigade et al. (1913), where the place corresponding to the vlei on Andersson's map was depicted as a pan and given the name *Kuiseb*. Sprigade's coordinates for *Ombongu* are offset by 30 km and barely inside Namibia, although

when applying this offset to *Kuiseb* it ends up only 8 km distant from Andersson's location.

Thomas (1906) cited the coordinates for *Elephant Vley* as 18° S, 17° 30' E, about 28 km west of Andersson's location, without providing a source for his information. These coordinates are too broad to be taken seriously, but variations on them have since been repeatedly quoted in the literature, including some with the latitude and longitude reversed, or the longitude in the western hemisphere.

I have decided to accept Andersson's offset-corrected coordinates (figure 5). Although not precise or proven, they are probably the closest we are likely ever to get with the information available. They were calculated by the only person who truly knew where his Elephant Vlei was, and his coordinates for *Mpungu show* that he was impressively accurate under the circumstances.

4. Eriksson (as treated by Trimen, Péringuey, and Hesse)

Axel Wilhelm Eriksson (1846–1901) was a Swedish trader based in Omaruru for many years. In later life he continued the bird collecting that he started under C.J. Andersson. Eriksson's bird collections and bird localities have been well documented, e.g. Rudebeck (1955), Lundevall & Ängermark (1989), and Demasius (2022a,b), but his insect localities less so and the following brief treatment attempts to remedy this. His insect collecting may have been a one-off event in 1887 and the material was donated to the then South African Museum in Cape Town. He provided a brief list of localities and dates which Trimen (1891) published as part of his treatment of the butterflies. Péringuey (1892) treated Eriksson's beetles. In the title he said the material was from 'tropical south-western Africa' and in the introduction he calls this *Northern Ovampoland*, but he lists no localities at all for any of the many new species he described. Subsequently in Péringuey (1896, 1898, 1900, 1902, 1904) he described numerous species simply as from *Ovampoland*, again usually without specifying localities, and when he did name places some were mangled beyond recognition. Hesse (1925) treated the bugs and this is the only other large-scale treatment of Eriksson's insects that I am aware of. All Eriksson material had historically been treated as Namibian, although much of it is not. Mendes et al. (2013), in a gazetteer of Angolan beetle and butterfly collecting localities, labelled several Eriksson localities as 'reported to be in Angola, as a matter of fact in northern Namibia (in the former Damaraland)' without providing details.

As an aid to identifying proximate localities and placing them sequentially along a route, I investigated the relevant collecting chronology. I compared Eriksson's

Table 3: Cartesian coordinates for relevant Andersson localities. Mapped in Figure 5.

| Locality | Country | Coordinates |
|--|---------|-------------------|
| Mpungu (taken approximately centrally at historical water point) | NA | -17.6677, 18.2311 |
| Mpungu (as Ombongo, coordinates from Andersson's map) | NA | -17.6314, 18.2964 |
| Vley, wagon long stationed (coordinates from Andersson's map) | NA | -17.9048, 17.8240 |
| Elephant Vlei (based on Mpungu/Ombongo offset applied to 'Vley') | NA | -17.9412, 17.7588 |

itinerary from [Trimen \(1891\)](#) with Eriksson’s bird material for the same months as listed by [Lundevall & Ångermärk \(1989\)](#) (Table 4). I also considered the bird chronology of an earlier 1880 journey to many of the same places (Table 5). The list shows minor internal chronological discrepancies (specimens with the same date from different localities, or overlap between date sequences for adjacent localities); therefore I have also indicated the number of specimens involved in each case. The reasoning was that any errors, whether on the original labels or in subsequent transcriptions, would likely affect single specimens only. Numbers of specimens with a consistent locality/date combination were likely accurate. The chronology was then used in placing relevant localities below.

Ovaquenyama and Ombuela

Neither of these is a collecting locality, but Eriksson mentioned them in his itinerary to place other localities. Both are tribal names which refer to the areas inhabited by the tribes at the time, not to actual places. Their extent as mapped in fig. 5 are based on a composite average of the sometimes very different areas depicted in the listed contemporary sources. The Ovakwanyama (modern spelling; also as Ovaquenjama, Cuanhama) live on both sides of the Namibia-Angola border (Bernsmann in [Brincker 1896](#), [Tönjes 1911](#), [Nitsche 1913](#), Loeb 1962 in [Dobler 2008](#): 18), while the Ambwela (also as Ombuel(l)a, Ambuel(l)a, Amboellas) live further north in Central Angola ([Serpa Pinto 1881](#): 317, 358; [Sprigade et al. 1913](#)). [Mendes et al. \(2013\)](#) treated Ombuella as a place and located it in Namibia without further information.

Ehanda

The name *Ehanda* appears marginally on the map of [Schinz \(1891a\)](#), outside the top border. Nitsche (1913) maps *Ehanda* as a tribal area on the Cuvelai River in southern Angola. The latter area fits the statements in [Trimen & Bowker \(1889\)](#), presumably provided by Eriksson himself, that *Ehanda* is ‘between Northern *Ovampoland* and *Ombuella*’, and in [Trimen \(1891\)](#) that

it is ‘in the Southern *Ombuela* (or *Ambuella*) country’. In the same area [Sprigade et al. \(1913\)](#) map *Handa* as both a regional name and a place, located about 5 km south of the present town of *Cuvelai*. Because their mapped course for the Cuvelai River and its sharp change in direction here is offset by only 1.5 km west and 2 km north of its actual location, I have accepted their mapped coordinates for *Handa* in good faith after applying the same offset. [Demasius \(2022a\)](#) also identified *Ehanda* with *Cuvelai*, but provided coordinates that correspond to *Mupa*, some 50 km further south, instead ([Demasius 2022b](#)), while [Mendes et al. \(2013\)](#) stated that *Ehanda* is not in Angola, but in northern Namibia. There is indeed a place called *Ehanda* on modern Namibian maps (SWA 1:50000 1715Ad Okalongo, 1991), about 50 km west of Oshikango, but it does not appear on maps contemporary with Eriksson, nor does it fit the chronology.

Evvari/Evare/Evale

[Trimen \(1891\)](#) does not mention the locality but [Péringuey \(1900 and later\)](#) lists unattributed beetle material from *Ovampoland* (*Evvari River*). It is a known Eriksson bird locality ([Rudebeck 1955](#)). *Evale* is a well-known place in southern Angola, located on the Cuvelai River. Contemporary maps ([Schinz 1891a](#), [Sprigade et al. 1913](#)) show it as a tribal area centred on the modern town.

Oquambe

Not an insect locality, but included in the 1880 chronology (Table 5) in order to link the start and end of the route to a known place. It is the historical name (Ukuambi, Uukuambi) for *Elim* in Namibia.

Ombanja

Ombanja/Ombandja (also Ombandya) is a tribal area in southern Angola, centred on the mission station of *Cuamato*. It appears on contemporary maps by [Schinz \(1891a\)](#) and [Sprigade et al. \(1913\)](#).

Table 4: Eriksson’s 1887 insect collecting chronology as provided to [Trimen \(1891\)](#), compared to his bird specimen dates derived from [Lundevall & Ångermärk \(1989\)](#). Number refers to number of bird specimens for each place and date. Anomalous place/date combinations (possible errors of labelling or transcription) in italics.

| Date (1887) | Locality | No. | Trimen (1891) |
|----------------------------|----------------|-----|---------------------------|
| Aug 8, 12 | Omrora | 3 | 1-25 Aug: Omrora |
| <i>Aug 19</i> | <i>Ehanda</i> | 1 | |
| Aug 23, 24 | Evari | 3 | |
| Sep 10, 16, 18, 20, 21, 30 | Ehanda | 6 | 26 Aug – 30 Sep: Ehanda |
| Oct 10 | Ehanda River | 1 | Oct: Humbe |
| Nov 15 | Evari | 1 | |
| Nov 15, 21 | Omlola | 3 | Nov: Omrora again |
| Dec 10, 12, 13, 14 | Otjimbora | 5 | 20 Nov – 3 Dec: Otiembora |
| Dec 15, 20, 17, 25 | Okavango River | 4 | Dec: Okavango River |
| Jan 1888: Omuramba Omatako | | | |

Table 5: Eriksson's 1880 bird specimen dates for some of the same areas as in Table 4, derived from Lundevall & Ångermark (1989). Number refers to number of specimens for each place and date. Anomalous place/date combinations (possible errors of labelling or transcription) in *italics*.

| Dates (1880) | Locality | No. |
|--|------------------|-----|
| Jun 29, 30; Jul 2, 4, 5 | Oquambe | 9 |
| <i>Jul 5</i> | <i>Oquambe</i> | 1 |
| Jul 5 | Ombanja | 5 |
| Jul 6, 8, 9, 10, 11, 12, 16, 18, 19, 20, 21, 22 | Ombanja | 21 |
| Jul 13, 17, 18, 20, 23, 24 | Cunene River | 8 |
| <i>Jul 22</i> | <i>Oquambe</i> | 1 |
| <i>Jul 24</i> | <i>Ombanja</i> | 1 |
| Jul 25, 26 | Cunene River | 10 |
| <i>Jul 26</i> | <i>Ombanja</i> | 1 |
| Jul 27, 28, 29, 30; Aug 1, 2, 4, 6, 7, 9, 10, 11 | Cunene River | 51 |
| Aug 16, 17 | Evari | 2 |
| Aug 20 | Cunene River | 1 |
| Sep 1 | Omrora | 1 |
| Sep 4 | Omrora, Evari | 1 |
| Sep 5, 6, 7, 8, 9, 10 | Omrora | 21 |
| Sep 10 | Omaramba, Omrora | 1 |
| Sep 12, 13 | Omrora | 2 |
| Sep 16 | Evari | 1 |
| Sep 19, 20, 21 | Omrora | 7 |
| Sep 24 | Evari | 1 |
| Sep 26, 28, 29, 30; Oct 1 | Omrora | 13 |
| Oct 2, 5, 7 | Evari | 8 |
| Oct 9 | Omrora | 1 |
| Oct 10, 11 | Ovaquenjama | 2 |
| Oct 14, 16 | Oquambe | 5 |



Figure 4: Eriksson 'Omrora' specimen label published by Péringuey (1892) as 'Omrramba'. (Photo courtesy of R. Stals.)

Humbe, Cunene River

Eriksson, in [Trimen \(1891\)](#), calls the locality *Humbe*, *Cunenè River*. Péringuey calls it either *Ovampoland (Humbe)* or *Ovampoland (Cunene River)*. *Humbe* is a well-known town in southern Angola and about 8 km from the Kunene River.

Omrora, Omrramba, Omaramba and variants

Eriksson (in [Trimen 1891](#)) stated that Omrora was 'between *Ovaquenyama* and *Ombuela*'. I have been unable to find *Omrora* or any similar place name on any map of southern Angola or northern Namibia to which I have had access. The sequential chronologies suggest that *Omrora* and *Evari* are proximate localities. In 1887 there are bird specimens for the same day from both Evari and Omrora (as Omlola) (Table 4). They are also recorded alternatively throughout September 1880, and there is one label that has both place names on it (Table 5). The [Trimen \(1891\)](#) itinerary does not mention *Evari*, but the route sequence places *Omrora* both south of *Ehanda*, and east of *Humbe*, which is broadly near *Evari*.

[Rudebeck \(1955\)](#) similarly concluded that *Omrora* must be east of the Kunene River and close to *Evari*, although the probable area he delimited is far from *Evari*, centred on *Ombanja* (fig. 5). Plausible coordinates were provided by [Chapin \(1954\)](#); he mentions his sources as 'the best maps available' without specifying any, but Omrora could not be found on any historical Angolan maps available locally or at Chapin's workplace, the American Museum of Natural History (Mai Reitmeyer, pers. comm.). Chapin's handwritten card catalogue of localities (Paul Sweet, pers. comm.) confirmed the absence of any cartographic basis for

that Meise and Struck informed him in 1949 that the meaning of *Omrora*, *Omlola*, or *Mulola* is what they termed a ‘wadi’, although the language is not specified. Demasius (2022a) confirms the meaning with additional sources. Against this background, Péringuey and Hesse’s *Omrramba/Omaramba* look more like interpretive translations than mistranscriptions. However, I find it difficult to believe that an otherwise conscientious collector like Eriksson would have used an essentially meaningless geographical description in place of a locality. The collected material is more suggestive of an actual place, and it is significant that he repeatedly spent extended time periods there. Possibly the place had no established name and only Eriksson ever called it *Omrora*, analogous to Andersson’s *Elephant Vlei* above.

Whatever the case, it appears that all of these sometimes very different locality names probably refer to the same single place that Eriksson called *Omrora*.

Otiembora

Otiembora is Eriksson’s rendering of what contemporary accounts tended to call the Otjimpoloveld, an area located on both sides of the Angola-Namibia border, west of the *Okavango* River, which appears on maps by Schinz (1891), Baum (1903), Tönjes (1911), and Sprigade et al. (1913). It is also spelled Ochimbora, Ochimboro, Ojimbora, Okimboru, Oshimboro, Oshimpolo, Oshimporo, Osthimboro, Otjiborra, Otjimbora, Otjimbora or Otjimpolo.

The Otjimpoloveld was an important elephant hunting ground at the time, and it is usually implied to have been uninhabited and mostly waterless. If Eriksson spent time there (two weeks according to Trimen’s 1891 itinerary), and remembering that he travelled by ox wagon, he would have had to be near a dependable water point. The primary, and usually only mapped, water point in the area is the so-called *Otjimpolo* Fountain.

Otjimpolo Fountain has been variously mapped in Namibia, in Angola, or exactly on the border, at locations spanning half a degree of longitude. It is located on the Omuramba *Otjimpolo* which was initially mapped as draining northwards, later draining southwards, and finally as unconnected to anything. The river first appeared on the map by Andersson (in Baines 1866), along a route attributed to Palgrave and Hartley, dated 1864. Langhans (1897) lists Andersson (1866) as the source for Palgrave and Hartley, and I have been unable to locate any independent source for them. There do not appear to have been any repeat surveys and all subsequent maps quoted above were based on this same single source.

Today we know that the only significant watercourses crossing the border anywhere in the relevant area are the upper tributaries of the Omuramba *Mpungu*. They were first correctly mapped in 1954 (Suidwes-Afrika 1:500 000 Blad 3 Okavango 1954) where a water point *Ombongola* is located on a watercourse in a position compatible with Andersson (1866) and successors. I believe this to be the *Otjimpolo* Fountain of mapmakers and the *Otiembora* of Eriksson. It still exists and is visible on recent aerial photographs at the exact location where it was mapped in 1954. It did not appear again on any maps, but the name survived and is still

used as a label for the river on current maps (Namibia 1:50 000 1717BD Ombongola, second edition, 2001).

Okavango River

For his 1887 insect specimens, Eriksson specified this locality as the course of the *Okavango* River ‘between the tributaries Omaramba-Caronga and Omaramba-Oamatako’. The Omuramba *Omatako* is well-known, but I have not found an Omuramba *Caronga* on any map. Contemporary maps do have a place *Carunga-Camuca* in southern Angola north-west of *Otjimpolo* Fountain and near what we now know are the sources of the Omuramba *Otjimpolo*, while Baum (1903) maps a short tributary of the *Okavango* River, just north of the Namibian border which he calls *Kalonga, od. Maramba von Otjiborra*. Baum’s expedition did not visit this place, so we can discount the imaginary location of the Omuramba *Otjimpolo*, but the alternative name for it is of interest. *Kalonga* and *Carunga* are both associated with the Omuramba *Otjimpolo* and both names are virtually the same as *Caronga*. The most straightforward route for Eriksson from *Otiembora* to the *Okavango* River would have been to follow the Omuramba *Otjimpolo* downstream. It remains an established route to this day, while different stretches of the river still have different names, changing from *Ombongola* to *Mpungu* to *Ekuli*. It seems possible that in Eriksson’s time the final stretch of river could have been called *Caronga/Kalonga*. This means that Eriksson’s *Okavango* River locality, and what Péringuey calls *Ovampoland (Okovango River)* is that part of the river between the mouths of the Omiramba *Mpungu* and *Omatako*, depicted on fig. 5. Because Eriksson travelled on the south bank, the locality is Namibian.

Rudebeck (1955) mentions an untraced Eriksson locality *Omaramba Carriconna* or *Cerriconna*, which has a vague resemblance to *Caronga*.

Omaramba-Oamatako

Eriksson in Trimen (1891) mentions two localities along the course of the Omuramba *Omatako: between its junction with the Okavango and Otjitoë*, where he collected from 2–14 January 1888, and *between Otjitoë and Omborombongo*, from 15–25 January 1888. The end-points of the two stretches of river are well-known places, but Trimen does not distinguish them in his text and records both as simply *Omaramba-Oamatako* (January). Neither Péringuey nor Hesse mention the Omuramba *Omatako* nor the places along it at all, which raises suspicion that some of their many *Omaramba* or similar-sounding localities may be misquoted Omuramba *Omatako* material.

Péringuey’s Ovampoland

Péringuey located all known Eriksson localities in *Ovampoland*, which resulted in their being treated as Namibian ever since, but as noted above most were actually in Angola. He also recorded many specimens from *Ovampoland* without any specific locality and unattributed to any collector. The latter are most likely also Eriksson material, and because it is highly unlikely that Eriksson would have used a vague regional name like just *Ovampoland* as a label, the actual labels of the

Table 6: Cartesian coordinates for relevant Eriksson localities. Mapped in Figure 5.

| Locality | Country | Coordinates |
|---|---------|--|
| Ehanda (taken as Handa on Sprigade et al.'s map, offset relative to course of Cuvelai River) | AO | -15.7175, 15.7943 |
| Evari (as Evale, taken centrally in settlement) | AO | -16.5528, 15.7412 |
| Oquambe, Ukuambi, Uukuambi (as Elim, taken centrally) | NA | -17.7283, 15.4969 |
| Humbe (taken centrally in town) | AO | -16.6866, 14.9052 |
| Omrora (according to Chapin 1954, based on Meise and Struck's combined 1880 / 1887 areas, see fig. 5) | AO | -16.5000, 15.4166 |
| Omrora (according to Rudebeck 1955) | AO | cannot be precisely geocoded, see fig. 5 |
| Omrora (according to Demasius 2002b) | AO | -17.1300, 17.4500 |
| Otiemboro (as Otjimpolo/Ombongola fountain) | NA | -17.4024, 17.8769 |
| Okavango River (between mouths of Mpungu and Omatako omiramba) | NA | cannot be precisely geocoded, see fig. 5 |
| Otjitoë (as Otjituuo, taken at historical water point, not at modern town of Otjituuo) | NA | -19.6592, 18.5786 |
| Omborombongo (as Otumborombonga, taken in the course of the Omuramba Omatako at the settlement) | NA | -20.5156, 17.6675 |

affected specimens may potentially be more informative. The same applies to anything Péringuey or Hesse published from *Omrumba/Omaramba* (e.g. fig. 4). Workers quoting these specimens should be aware that the published localities may not be correct and the only sure way to determine the true locality would be to examine the actual specimen labels.

5. Schinz

Hans Schinz (1858–1941) was a Swiss botanist who collected mainly in Namibia from 1884 to 1886, but also in neighbouring parts of Angola and Botswana, although the latter material has often also been treated as Namibian. Schinz's plant specimens carry detailed locality labels, and since his travelogue (Schinz 1891a) includes a route map that simplifies the geocoding of most of his plants, it is not necessary to treat the majority of his localities here. He also made zoological collections, subsequently published on by at least Boettger (1887) (Reptilia), Mousson (1887) (Mollusca), Simon (1887) (Araneae), Fairmaire (1888) (Coleoptera), Berlese (1889) (Acari), and Noack (1889) (Mammalia). The bulk of Schinz's zoological material, at least in print, was over-simplified to just four uninformative regional names (Gross-Namaland, Hereroland, Amboland, and Kalaxari), while Simon published no localities at all and called the material 'South African' in his title, resulting in later geographical miss-allocation of species. However, the occasional animal specimens that were published with useful locality data on a par with Schinz's plants suggest that at least some of this deficiency may be only in print. As with Eriksson, one hopes that actual labels might carry more information.

Angolan localities

Between 10 and 30 September 1885 Schinz travelled from *Olukonda* in Namibia, where he was based, to *Humbe* in Angola and back. Any Schinz material referring to the *Kunene* River is Angolan; he did not access

the river anywhere in Namibia, and the Namibian coordinates that he provides for some *Kunene* material (e.g. Schinz 1891b: 52) are simply wrong. His only Angolan collecting localities are *Ombandja* (rarely as *Ombandja onene*), *Onkumbi*, and *Kilevi*. Because he specified *Amboland* for all, they have been widely treated as Namibian. All other Schinz *Amboland* localities are indeed Namibian.

Botswanan localities

From April to July 1886 Schinz travelled from *Grootfontein* in northern Namibia east to Lake *Ngami* in Botswana, and then south and west to *Gobabis* in Namibia. Schinz designated most collections along this route as *Kalaxari*, and they have generally since been treated as Namibian. Localities on or relevant to the Botswanan leg of his journey have been geocoded below, regardless of whether or not I have been able to trace references to specimens from those localities. The work of Passarge (1904) was particularly useful in this regard.

I have followed Passarge's location for *Lewisfontein* here because it fits better with Schinz's travelogue and map, and the purpose here is to geocode the places where Schinz collected. Another interpretation of *Lewisfontein* places it much further north and in Botswana (Wilmsen 2003).

6. Lüderitz

Franz Adolf Eduard Lüderitz (1834–1886) was a German merchant who collected a modest number of biological specimens in Namibia in the early 1880s. His localities are vague regional designations like *Hereroland* or *Kaoko*. Subsequent workers were prone to misinterpret the collector's surname as being the town of *Lüderitz* in southern Namibia, resulting in some strange distribution records. The confusion may be avoided by considering the context and date of each record. While Adolf Lüderitz was alive, there was no town named

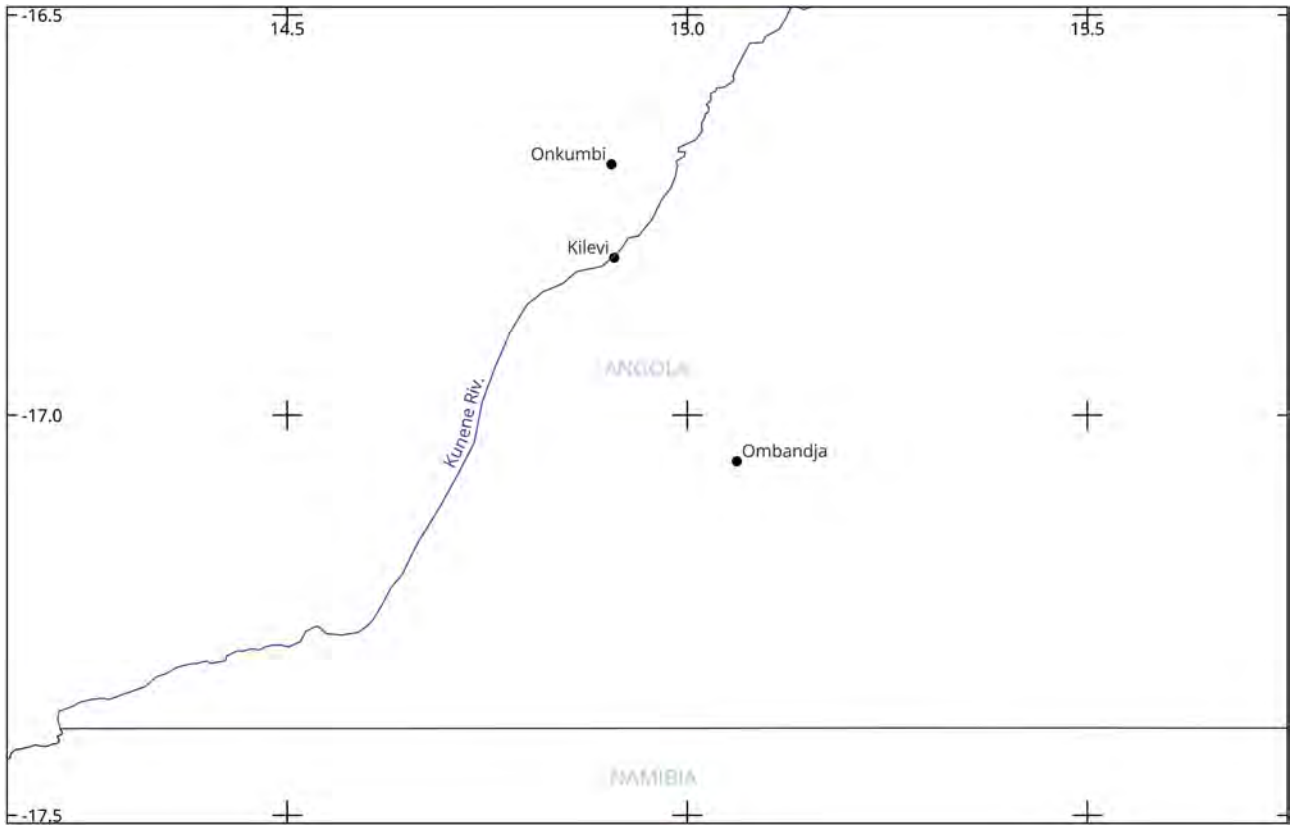


Figure 6: Schinz 'Kunene' and other localities in southern Angola.

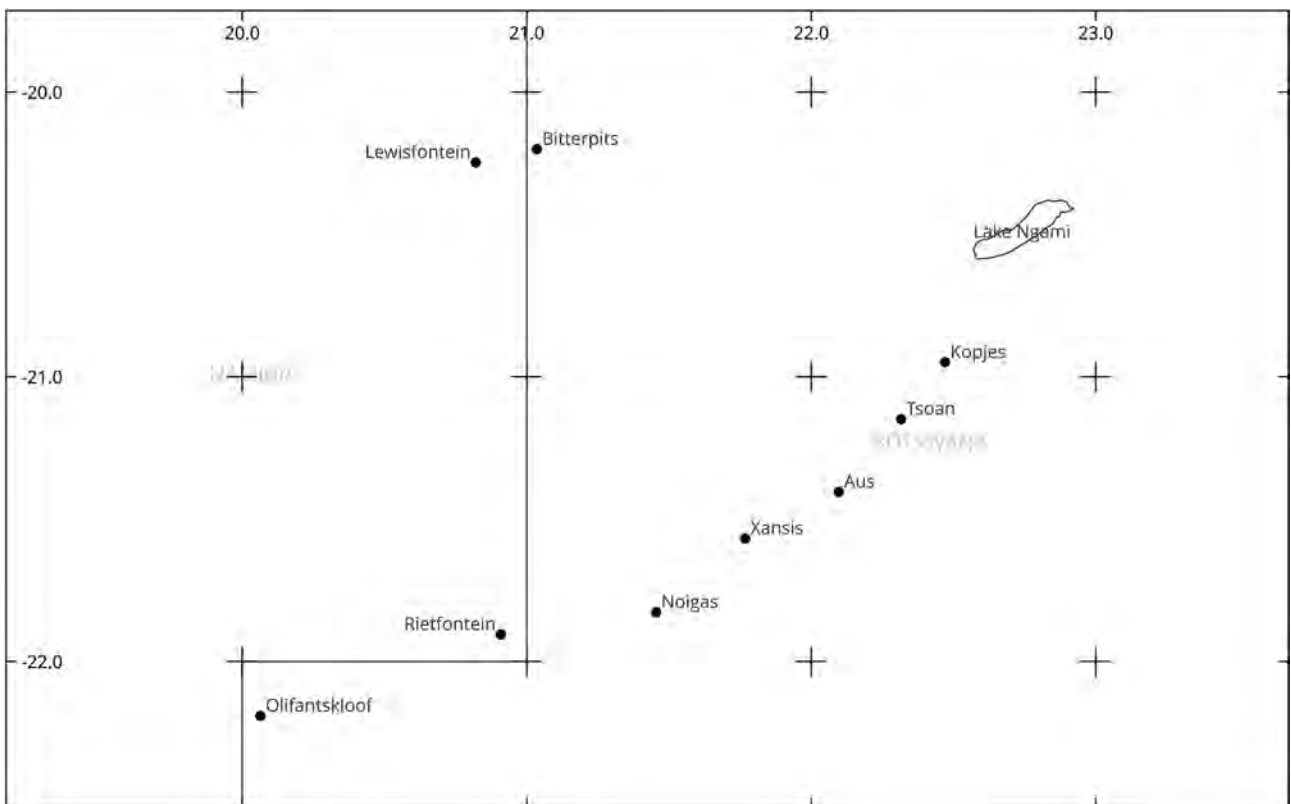


Figure 7: Schinz 'Kalaxari' localities and relevant other places in western Botswana and adjacent Namibia

Table 7: Cartesian coordinates for relevant Schinz localities. Mapped in Figures 6 and 7.

| Locality | Country | Coordinates |
|---|---------|--------------------|
| Ombandja (taken as Cuamato mission station) | AO | -17.0577, 15.0619 |
| Onkumbi (= Humbe, as in Table 6, above) | AO | -16.6866, 14.9052 |
| Kilevi (as Kilavi on Kiepert (1893b : Blatt 3), with map coordinates offset relative to known locations Humbe and Xangongo) | AO | -16.8032, 14.9088 |
| Lewisfontein (as Gam; according to Passarge, 1904) | NA | -20.2472, 20.8211 |
| Bitterpits (as Kumganni, Passarge 1904) | BW | -20.2004, 21.0358 |
| Kopjes (as Mabeleapodi Hills, western end) | BW | -20.9491, 22.4698 |
| Tsoan (as Tscho-in, Passarge 1904) | BW | -21.1488, 22.3160 |
| Aus/Kamelpan | BW | see Wahlberg above |
| Xansis (as Chanse, Passarge 1904) | BW | -21.5677, 21.7681 |
| Noigas/Noixas/ Noi xas (as Nucha, Passarge 1904) | BW | -21.8269, 21.4543 |
| Rietfontein/Tunobis | NA | -21.9050, 20.9091 |
| Olifantskloof | BW | -22.1910, 20.0640 |

Lüderitz; it was known as *Angra Pequena*. When it was renamed in his honour after 1886, its name became *Lüderitzbucht*. The name *Lüderitz* (without the *-bucht*) first appears on British maps from 1930 onwards (Irish, unpublished map indices).

7. Schultze

Leonhard Schultze (1872–1955) was a German anthropologist who conducted a study tour to southern Africa between 1903 and 1905 (Schultze 1907). His biological material was published in volumes 13, 14, 16, and 17 (1908–1912) of the *Denkschriften der Medicinisch-Naturwissenschaftlichen Gesellschaft*

zu Jena. He collected in Namibia, the northern Cape Province of South Africa and southern Botswana, but subsequent workers have often listed his Namibian material as South African, while they were also prone to listing both his Botswanan material and material from north-western South Africa (under the name of ‘British South West Africa’), as Namibian. Haddad & Marusik (2019) previously clarified Schultze locations for two spider papers. Below, the published localities from all papers in all four volumes of Schultze’s results have been considered and geocoded at the most likely collecting locations, based on his travelogue and the included map, and cross-referenced with available contemporary and modern maps. For Botswana, the

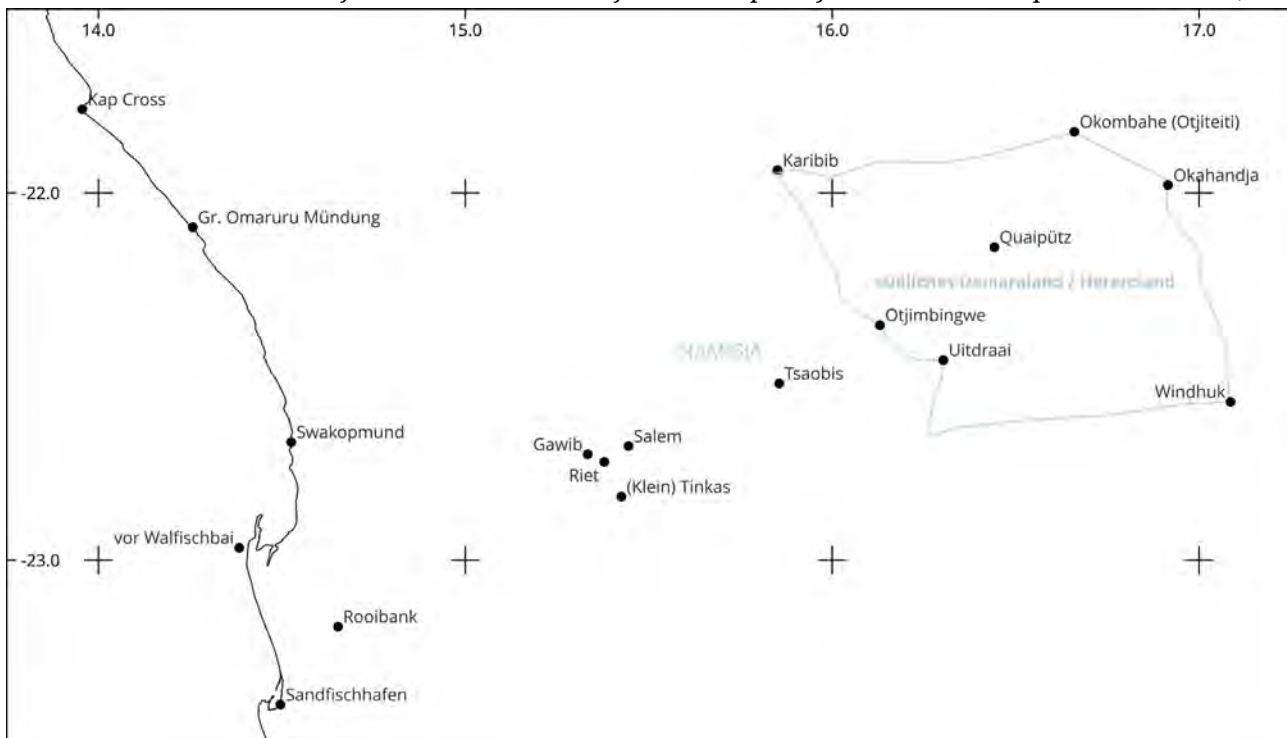


Figure 8: Schultze localities and other relevant places in west-central Namibia; ‘südliches Damaraland / Hereroland’ depicts the area where Schultze was active during September and October 1903, corresponding to dates on labels with this locality.

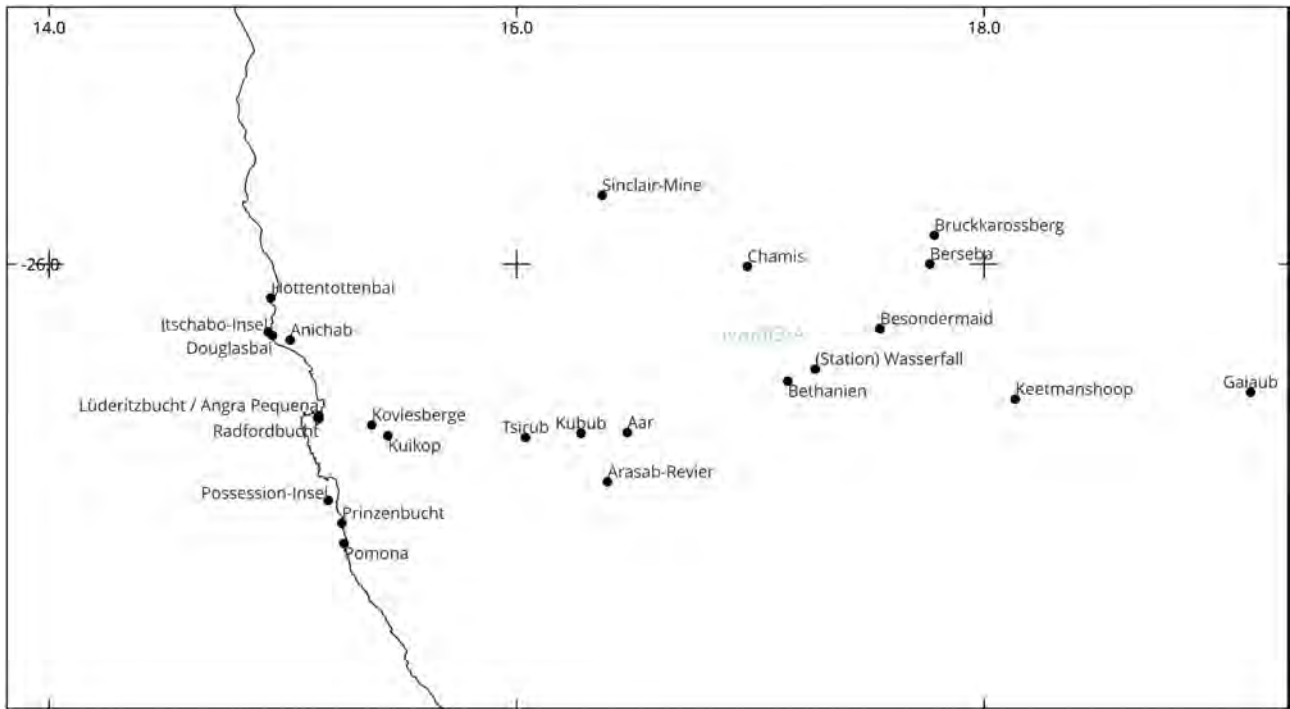


Figure 9: Schultze localities in southern Namibia.

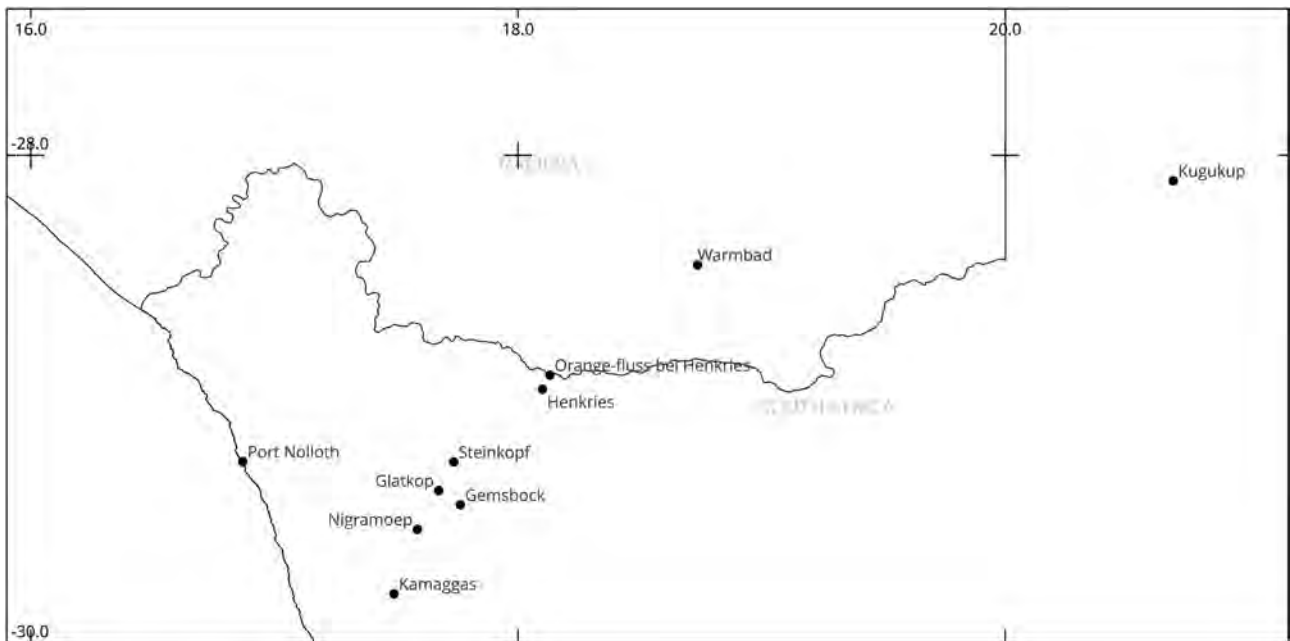


Figure 10: Schultze localities in northwestern South Africa and adjacent Namibia.

first edition of the 1:250 000 series, as indexed by Irish (1988), proved particularly useful. Schultze did not survey his route and plotted it afterwards on a pre-existing map of southern Africa; he also mapped only his main route and excluded many side excursions, e.g. his visits to Aar, Arasab, or Sinclair Mine from Kubub are not mapped.

Whenever Schultze collected en route between two named places, his labels consist of the two place names separated by a hyphen, e.g. *Severelela-Kooa*. In print, most workers repeated this verbatim, but some interpreted it (to use the same example), as *zwischen*

Severelela und Kooa, while others rendered the same as *Severelela and Kooa*, or *Severelela, Kooa* or *Severelela Kooa*. The latter cases can be ambiguous as to whether an ‘en route’ locality or two separate localities are intended. They may be resolved by considering the number of specimens (a single specimen cannot come from two places), considering the proximity of the locations, and looking at how other, unambiguous ‘en route’ locations are handled in the same work. ‘En route’ localities cannot be precisely geocoded and only their endpoints were treated below. Regional appellations (Damaraland, Kalahari, etc.) were stripped from

localities, and spelling variants and lapses (by subsequent workers) are noted.

Especially Schultze's Botswanan localities with similar names have been confused in the past: *Kanya* and *Kanyane* are different places, as are *Katsane* and *Kwatsane*, *Moshaneng* and *Matshaneng*.

Many workers who treated Schultze's material opportunistically included locality records from other collectors as well, recognisable by the collectors' names or their location far from Schultze's routes; these localities have not been considered here, nor have Schultze's collections from Cape Town and vicinity been included. One Schultze locality needs some discussion:

Ku-Gudië

The locality names *Ku-Gudië* and variants appear on specimen labels, some of which state it to be between Kooa and Phitshane; the place is not mentioned in Schultze's travelogue. In the latter (page 571-2), daily weather observations are provided for the *Kooa-Phitshane* route; day one is labelled *between Kooa and Phitshane*; day two: *Kgogoye (Wasserstelle im Rivier)* (= water point in riverbed); day three: *between Kgogoye and Phitshane*; and day four: *before Phitshane*. There are no specimens with label *Kgogoye*. *Ku-Gudië* and *Kgogoye* are phonetically similar, and their mutual exclusivity, despite both being on the *Kooa-Phitshane* route, suggests that they could be the same. They may respectively represent a field label using German orthography and a later linguistically improved version of the same name for print purposes, using Setswana orthography.

I have been unable to find either *Ku-Gudië* or *Kgogoye* on maps or anywhere other than in Schultze context. Assuming a relatively straight route from *Kooa* to *Phitshane*, as suggested by Schultze's map, and knowing that *Kgogoye* is on a watercourse, there are only two possibilities: the Selakolela River, crossed near *Gasita*,

and the Moselebe River, crossed near *Mmathethe*. The route stages as suggested by the weather observations are too broad to allow us to choose one or the other river. However, there are also many specimens with the imprecise locality *nördlich von Phitshane* (= north of Phitshane), which in one case (Silvestri 1908) is specified as *circa 20 miglia a nord di Phitshane* (= about 20 miles north of Phitshane). Interpreted literally, twenty miles due north of *Pitsane* is already north of *Lobatsi*, which would make it incompatible with Schultze's route, but if one interprets it as *20 miles away from Phitshane on the route from Kooa, which is north of Phitshane*, the resultant location is virtually at *Mmathethe*. On balance of probabilities, I have considered all these locations to be different versions of the same, and geocoded them at the river crossing at *Mmathethe*.

8. South African Museum expeditions

Between 1916 and 1927 the then South African Museum, now Iziko Museum, of Cape Town, partly in collaboration with the Geological Survey of South Africa, undertook several collecting expeditions to Namibia, as summarised by Connolly (1931: 278). Zoological, mainly arthropod, results were published in nine parts under a common heading in volumes 20, 23, 25, and 29 of the *Annals of the South African Museum* (1924–1931), with a single botanical contribution in volume 16 (1925). All published collecting localities from all ten contributions have been considered here. The majority are well-known places and are still known by the same names today, and with a few exceptions, have not been included below. All localities from the 1921 and 1923 Ovamboland expeditions, and the 1925 Kaokoveld expedition, have however been treated below. They introduced some sources of confusion, including the similar names *Otju* and *Outjo*, different places with the same

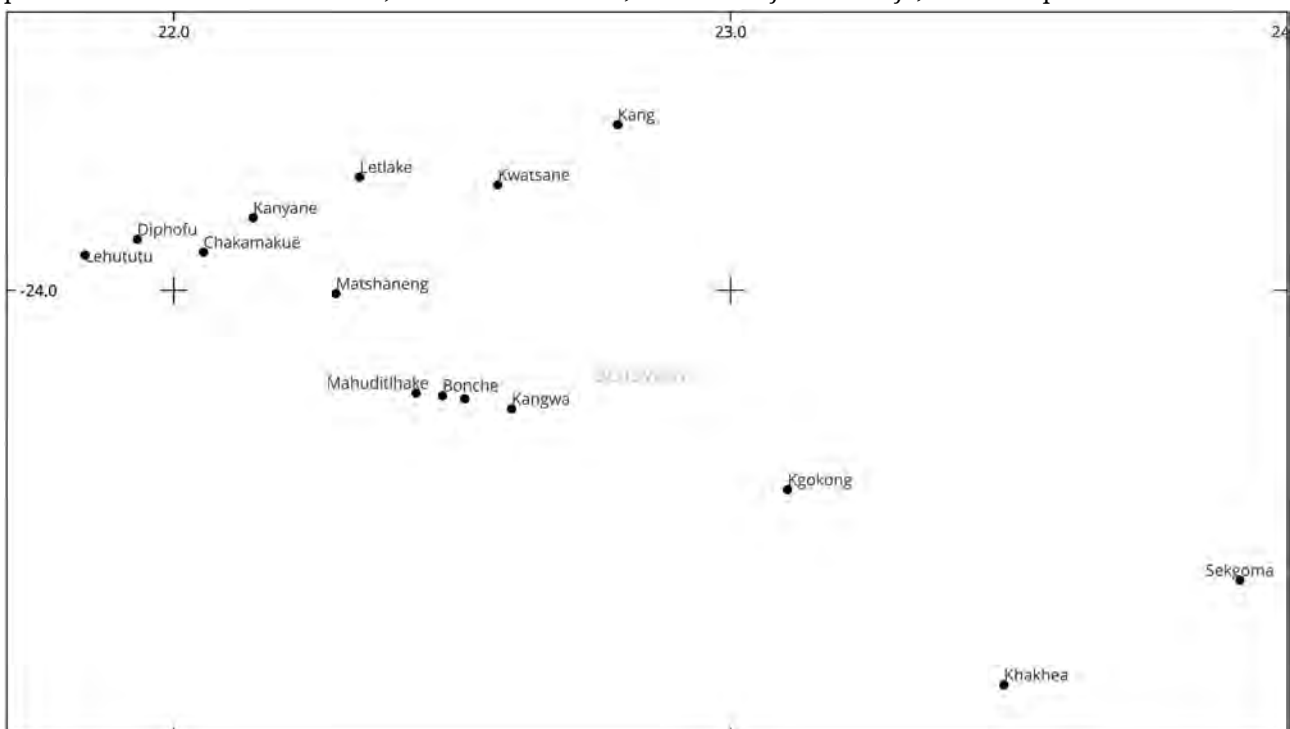


Figure 11: Schultze localities in central Botswana. Southeastern corner of map overlaps with Figure 12.

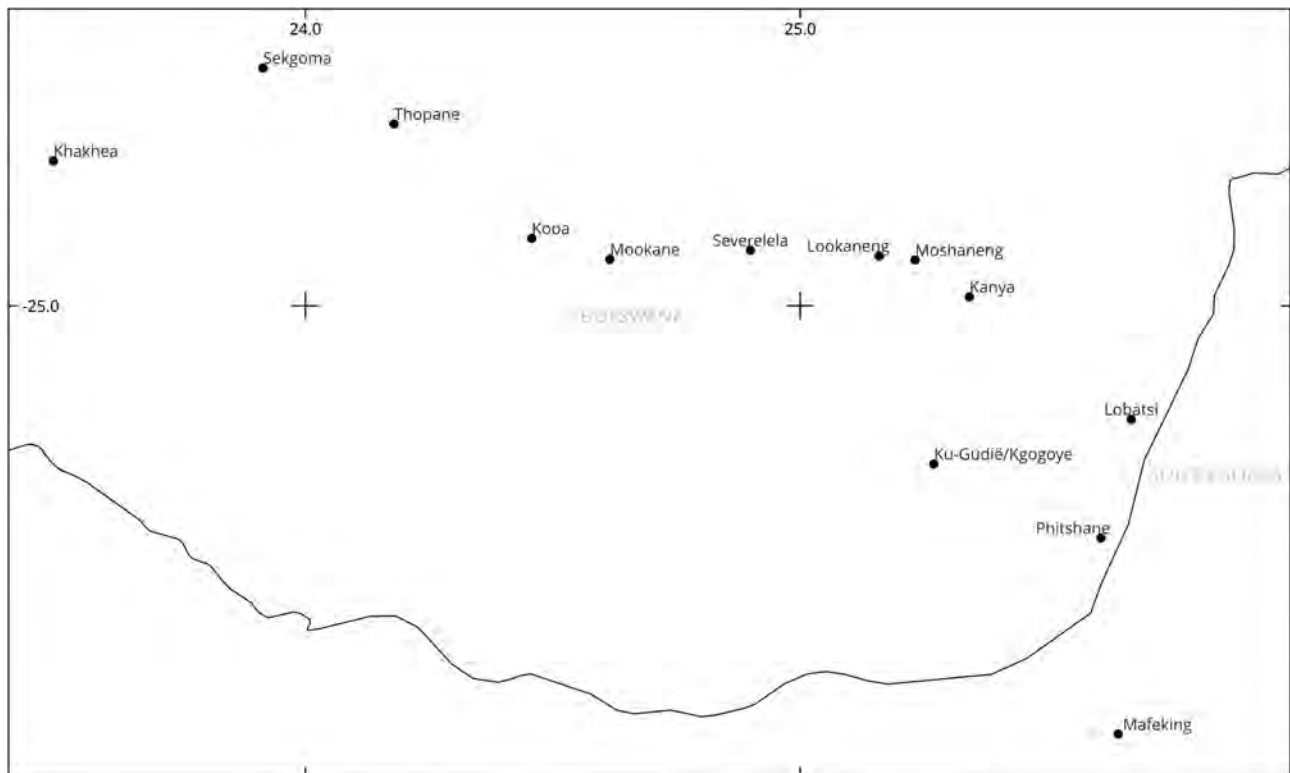


Figure 12: Schultze localities southeastern Botswana and adjacent South Africa. Northwestern corner of map overlaps with Figure 11.

Table 8: Cartesian coordinates for relevant Schultze localities. Mapped in Figures 8–12.

| Locality | Country | Coordinates |
|--|---------|-------------------|
| Aar, Aar-Revier, Aar bei Kubub, also Aaar in error (taken at historical water point) | NA | -26.7200, 16.4737 |
| Angra Pequena (as Lüderitz, taken at historical town centre) | NA | -26.6474, 15.1536 |
| Anichab (taken at historical water point) | NA | -26.3242, 15.0315 |
| Arasab Revier, bei Kubub, also Arsab Rivier in error (taken at closest point on watercourse to Kubub) | NA | -26.9308, 16.3887 |
| Berseba (taken centrally in town) | NA | -25.9994, 17.7677 |
| Besondermaid (because Schultze calls it a <i>Wasserstelle</i> , taken at the historical water point, which lies outside cadastral unit Besondermaid 5) | NA | -26.2762, 17.5544 |
| Bethanien (taken centrally in town) | NA | -26.5003, 17.1602 |
| Chamis (<i>nördlich von Bethanien am Koankip</i> , taken at historical water point) | NA | -26.0101, 16.9876 |
| Douglasbai (as Douglas Bay, taken centrally on beach) | NA | -26.3046, 14.9550 |
| Gaiaub (as Gross Aub, taken at historical water point) | NA | -26.5476, 19.1399 |
| Gawib, Gawieb (taken at location of historical water point) | NA | -22.7117, 15.3336 |
| Groß-Bruckkarroßberg, Brukkarossberg (taken at southern entrance to crater, after photo in Schultze 1907: 139) | NA | -25.8762, 17.7870 |
| Gr. Omaruru Mündung (as Omaruru River Mouth, taken centrally in main channel) | NA | -22.0935, 14.2570 |
| Hottentottenbai (as Hottentot Bay, taken on beach centrally in bay) | NA | -26.1445, 14.9486 |
| Itschabo Insel (as Ichaboe Island, taken centrally) | NA | -26.2891, 14.9365 |
| Kap Cross, Cap Kross (as Cape Cross) | NA | -21.7725, 13.9557 |
| Keetmanshoop, also Ketmanshoop in error (taken at historical town centre) | NA | -26.5771, 18.1333 |
| Kovisberge, Koviesberge (as Kowisberge, taken at southern end next to Schultze's route as per his map) | NA | -26.6876, 15.3803 |
| Kuikop (taken at summit) | NA | -26.7334, 15.4494 |
| Kubub, Gubub (taken at historical location) | NA | -26.7230, 16.2755 |
| Lüderitzbucht, Lüderitzbai, also Lüderitzburg in error (= Angra Pequena, both names are used interchangeably by Schultze) | | |
| Okahandja (taken at historical town centre) | NA | -21.9788, 16.9153 |

| Locality | Country | Coordinates |
|--|---------|---|
| Okombahe (Otjiteiti) unweit Okahandja (taken at centre of cadastral unit Okombahe 16) | NA | -21.8336, 16.6600 |
| Otjimbingwe (taken at historical town centre) | NA | -22.3605, 16.1299 |
| Pomona (taken on mainland adjacent to Pomona Island, based on description in Schultze 1907) | NA | -27.1943, 15.2615 |
| Possession-Insel (taken at historical landing point) | NA | -27.0101, 15.1940 |
| Prinzenbucht, Prinzenbai, Prince of Wales Bay (taken on beach centrally in bay as it existed before destructive mining) | NA | -27.1081, 15.2523 |
| Quaipütz (former location, based on Südwestafrika 1:200 000 Blatt 13 Khomas Hochland 1918) | NA | -22.1480, 16.4421 |
| Radfordbucht, Radford Bay, also Redford Bay in error (taken centrally on shore) | NA | -26.6593, 15.1548 |
| Riet (taken at ruins of historical homestead) | NA | -22.7326, 15.3785 |
| Rooibank (taken at approximate location of former water point, which was flowing in Schultze's time) | NA | -23.1814, 14.6527 |
| Salem (taken at ruins of historical homestead) | NA | -22.6897, 15.4446 |
| Sandfischhafen (as Sandwich Harbour, taken at former location of historical settlement) | NA | -23.3935, 14.4956 |
| Sinclair-Mine (taken at historical location) | NA | -25.7055, 16.3661 |
| südliches Damaraland / Hereroland (September and October 1903; mapped route = Otjimbingwe - Windhoek - Okahandja - Karibib - Otjimbingwe) | NA | cannot be accurately geocoded, see fig. 8 |
| Swakopmund (taken in historical town centre) | NA | -22.6790, 14.5251 |
| Tinkas (taken at Klein Tinkas, as per Schultze's map) | NA | -22.8273, 15.4254 |
| Tsaobis (taken at historical water point) | NA | -22.5192, 15.8554 |
| Tsirub, also Tsubub in error (approximate location; was a rain-dependent seasonal settlement area rather than a fixed place) | NA | -26.7408, 16.0375 |
| Uitdraai (as per map of Baines (1864), and Schultze's route) | NA | -22.4557, 16.3028 |
| vor Walfischbai (locality at sea; Schultze's own coordinates) | NA | -22.9667, 14.3833 |
| Warmbad (as current town, taken at historical water point) | NA | -28.4497, 18.7361 |
| (Station) Wasserfall (as cadastral unit Wasserfall 64, taken where historic route breaches the escarpment, at the approximate location of the photo in Schultze 1907: 149) | NA | -26.4484, 17.2778 |
| Windhuk, Gr. Windhuk (as Windhoek, taken at historical town centre) | NA | -22.5692, 17.0859 |
| Gemsbock bei Steinkopf (as Gemsbok: South Africa 1:250 000 sheet 2916 Springbok 1974) | ZA | -29.4321, 17.7620 |
| Glatkop (as Gladkop, same source as above) | ZA | -29.3735, 17.6733 |
| Henkries (taken centrally in settlement) | ZA | -28.9588, 18.0990 |
| Kamaggas (as Komaggas, taken at historical town centre) | ZA | -29.7968, 17.4899 |
| Kugukup (as Koegoekoep, from Schultze's map) | ZA | -28.1044, 20.6890 |
| Mafeking, also Mafking in error (as Mahikeng, taken at city centre) | ZA | -25.8642, 25.6426 |
| Nigramoop (as Nigramoep, taken centrally in settlement area) | ZA | -29.5327, 17.5857 |
| Nobob (not traced, near Steinkopf) | ZA | |
| Orange-Fluß bei Henkries (taken on south bank of Orange River, north of Henkries) | ZA | -28.9006, 18.1294 |
| Port Nolloth (taken in historical town centre) | ZA | -29.2551, 16.8689 |
| Steinkopf, also Steinkopff in error (taken at historical town centre) | ZA | -29.2567, 17.7350 |
| Bonche, also Bonce in error (name not traced; based on its position relative to Mahuratlake and Kang Noa, modern Mahudithlake and Kangwa Pans, this is the unnamed pan at the given coordinates) | BW | -24.1880, 22.4825 |
| Chakamakuë (name not traced; based on its position relative to Letlake and Diphofu, this is likely the Tshawe Pan of modern maps; taken centrally) | BW | -23.9315, 22.0533 |
| Diphofu (as Dimpho Pan, taken centrally) | BW | -23.9085, 21.9345 |
| Kang, also Kong in error (as Kang Pan, taken centrally) | BW | -23.7023, 22.7973 |
| Kanya, also Konya, Konyo in error (as Kanye, taken at modern town centre) | BW | -24.9821, 25.3420 |
| Kanyane (as Kangnyane Pan, taken centrally) | BW | -23.8699, 22.1427 |
| Katsane, Kotsane, also Kotsare in error (as for Bonche above) | BW | -24.1936, 22.5226 |
| Khakhea, also Kakir in error (as Khakhea Pan, taken centrally) | BW | -24.7072, 23.4908 |
| Kooa, Sekuaa, also Koos in error (as Kue Pan, taken centrally) | BW | -24.8638, 24.4575 |
| Kgokong, Kokong (as Kokong Pan, taken centrally) | BW | -24.3568, 23.1021 |
| Ku-Gudië, Ku Gudie, Ku-Gu-Di, Ku-Gui-Di, Kugudie, Kgogoye (taken at river crossing at Mmathethe, see above) | BW | -25.3185, 25.2700 |

| Locality | Country | Coordinates |
|--|---------|-------------------|
| Kwatsane (not traced, coordinates calculated, based on offset from Kang and Letlake, then centred on nearby large pan) | BW | -23.8105, 22.5819 |
| Letlake, also Leclake in error (as Lotlhake Pan, taken centrally) | BW | -23.7966, 22.3337 |
| Lehututu, also Lekututu in error (as Lehututu Pan, taken centrally) | BW | -23.9370, 21.8407 |
| Lobatsi (as Lobatse, taken at historical town centre) | BW | -25.2284, 25.6692 |
| Lookaneng (not traced; coordinates calculated at 7.5 km west of Moshaneng, based on Schultze's map) | BW | -24.8994, 25.1595 |
| Mookane, also Moocane (taken at historical water point: spring on Mookane Pan) | BW | -24.9061, 24.6152 |
| Moshaneng, also Mashoning in error (taken at modern town centre) | BW | -24.9074, 25.2322 |
| Matshaneng (as Matshaneng Pan, taken centrally) | BW | -24.0059, 22.2912 |
| Phitshane, Phitsane, Pitsani, Phetsane (as Pitsane Pan, taken centrally) | BW | -25.4682, 25.6078 |
| nördlich von Phitshane (= Ku-Gudië/Kgogoye, see above) | | |
| Sekgoma, Sekuma, also Segkoma in error (as Sekoma Pan, taken at water point) | BW | -24.5195, 23.9145 |
| Severelela (as Seherelela Pan, taken centrally) | BW | -24.8881, 24.8996 |
| Thopane, Tepane, Vleij/Vlej Topani, Topan (as Tobane Pan, taken centrally) | BW | -24.6325, 24.1790 |

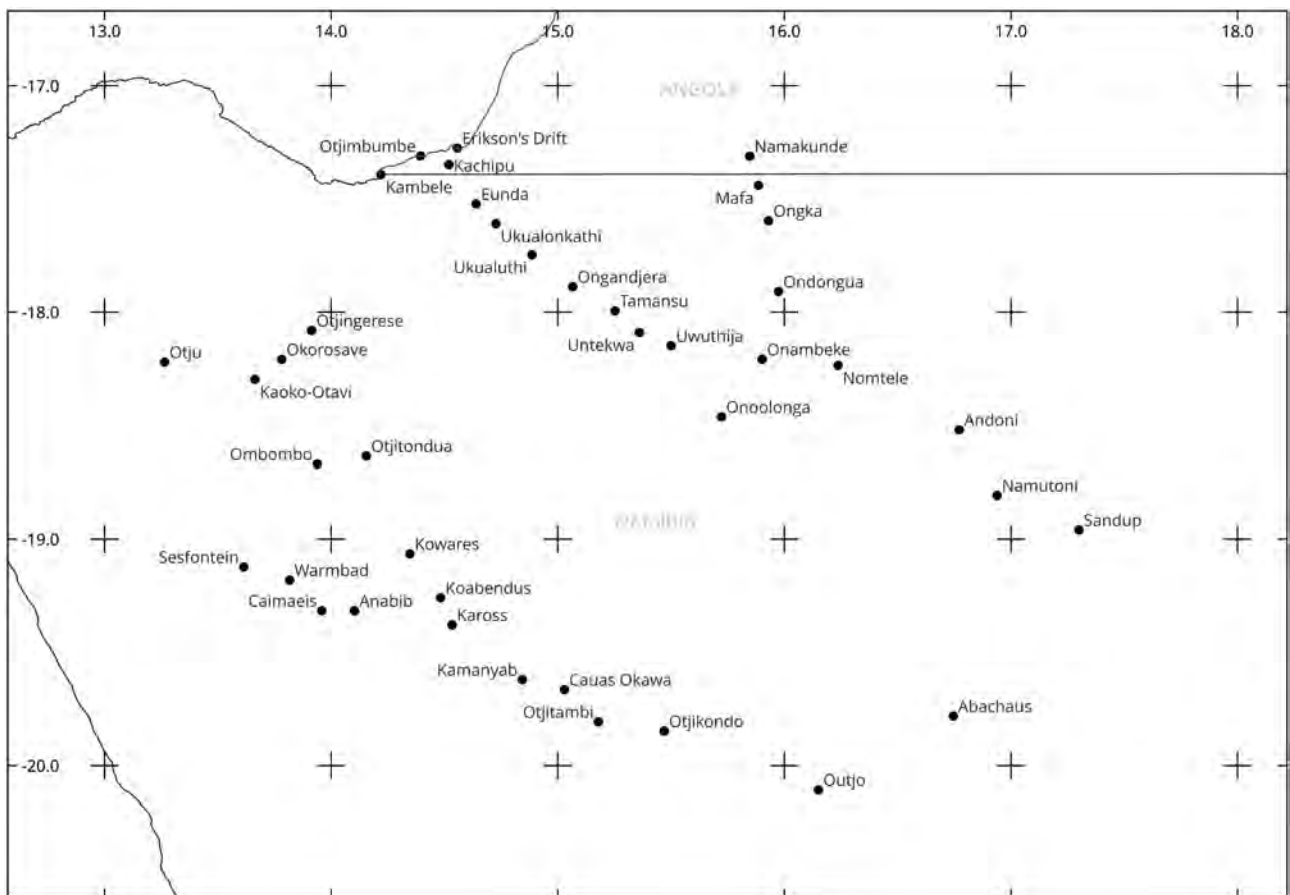


Figure 13: South African Museum expedition localities in northern Namibia and adjacent Angola, plus one Hobohm locality.

Table 9: Cartesian coordinates for selected (see text) South African Museum expedition localities. Mapped in Figure 13.

| Locality | Country | Coordinates |
|---|---------|-------------------|
| Anabib (taken at water point; not the same place as the Swedish Expedition <i>Anabib</i> , Table 10, below) | NA | -19.3162, 14.1031 |
| Andoni (taken at water point) | NA | -18.5201, 16.7721 |

Clarifying elusive, obscure, or misleading historical Namibian biodiversity collecting localities

| Locality | Country | Coordinates |
|--|---------|-------------------|
| Caimaeis, Camaeis, Gaimaias (taken at the origin of the easternmost resurgence in Khowarib Schlucht; collecting site may have been anywhere along the ca. 8 km downstream extent) | NA | -19.3160, 13.9585 |
| Cauas Okawa (as cadastral unit Cauas-Okawa 30, taken centrally) | NA | -19.6646, 15.0295 |
| Erikson's Drift (submerged by Calueque Dam; taken at approximate location relative to Etaka confluence) | AO | -17.2745, 14.5559 |
| Eunda (taken centrally in area) | NA | -17.5224, 14.6397 |
| Great Falls (= Kambele Falls, Ruacana Falls; see below) | | |
| Hoarusib River, Hoarusib W of Kaoko Otavi, Hoarusib (Otshu) | | see Otju below |
| Kachipu (Kashipu, Gachibu of maps; taken at average mapped position of 9 km SSW of Erikson's Drift; near but not on Kunene River, despite some labels suggesting latter) | AO | -17.3486, 14.5197 |
| Kalkfontein, or Kalkfontein South (the contemporary name for Karasburg; taken centrally) | NA | -28.0170, 18.7484 |
| Kamanyab (as Kamanjab, taken centrally) | NA | -19.6209, 14.8434 |
| Kambele, Kambele Falls (as Ruacana Falls, taken at modern viewpoint; exact collecting site unknown) | NA | -17.3924, 14.2196 |
| Kaoko Otavi (taken at water point) | NA | -18.2970, 13.6636 |
| Kaross (taken at historical water point) | NA | -19.3785, 14.5338 |
| Koabendus, Choabendus (as Otjovasandu, taken at approximate position of former historical water point) | NA | -19.2594, 14.4830 |
| Kowares (taken at historical water point) | NA | -19.0651, 14.3476 |
| Kunene River, Cunene: see Erikson's Drift, Kambele Falls, Otjimbumbi, Kachipu (localities that state only 'Kunene River' may be any of the former, they are mostly in Angola, up to 40 km upstream from the Namibian border) | | |
| Mafa (as Omafo, taken centrally) | NA | -17.4403, 15.8861 |
| Namakunde (as Namacunde, taken centrally) | AO | -17.3115, 15.8474 |
| Namutoni (taken at water point) | NA | -18.8072, 16.9387 |
| Nomtele (as Omuntele, taken centrally in settlement) | NA | -18.2355, 16.2371 |
| Okorosave, Okorosawe (taken at water point) | NA | -18.2088, 13.7818 |
| Ombombo (taken at historical water point) | NA | -18.6703, 13.9387 |
| Onambeke (based on 1:50 000 sheet 1815Bb Uukwiyu 1975, taken at Ekuma crossing) | NA | -18.2085, 15.9023 |
| Ondongua (as Ondangwa, taken centrally) | NA | -17.9091, 15.9745 |
| Ongandjera (as Okahao, former Ongandjera, former Rehoboth, taken centrally) | NA | -17.8879, 15.0661 |
| Ongka, Oncka, Onka (as Ongha, taken centrally in settlement area) | NA | -17.5962, 15.9303 |
| Onoolonga, Onolongo (unnamed on modern maps, placement based on: Suidwesafrika 1:500 000 Ovamboland 1963) | NA | -18.4629, 15.7222 |
| Otjikondo (taken centrally) | NA | -19.8479, 15.4698 |
| Otjimbumbi, Otjimbombe (Tschombumbi, Otshombumbi of maps; position topographically determined relative to adjacent hills) | AO | -17.3104, 14.3942 |
| Otjingerese, Otjijerese (taken at water point) | NA | -18.0812, 13.9134 |
| Otjitambi (taken at historical water point) | NA | -19.8070, 15.1794 |
| Otjitondua (as Otjitunduwa, taken at historical water point) | NA | -18.6350, 14.1554 |
| Otju, Otshu (as Otjiu, taken at resurgence; collecting site may have been anywhere along the ca. 5 km downstream extent) | NA | -18.2212, 13.2648 |
| Outjo (taken centrally in town) | NA | -20.1076, 16.1502 |
| Sandup (as Sandhup Pan, taken centrally) | NA | -18.9595, 17.3003 |
| Sesfontein, Zesfontein (taken in historical centre) | NA | -19.1228, 13.6141 |
| Tamansu (as Otamanzi, taken centrally in settlement) | NA | -17.9947, 15.2528 |
| Ukualonkathi, Ukualonkanthi (as Okorongasi, taken centrally in area) | NA | -17.6096, 14.7272 |
| Ukualuthi (as Tsandi, taken centrally) | NA | -17.7468, 14.8865 |
| Untekwa near Tamansu (as Omutekua, taken centrally) | NA | -18.0901, 15.3601 |
| Uwuthija, Uwuthya (as Uuvidhiya, taken centrally) | NA | -18.1486, 15.5008 |
| Warmbad (as Warmquelle, taken at water point; not the same place as the town in southern Namibia) | NA | -19.1813, 13.8166 |

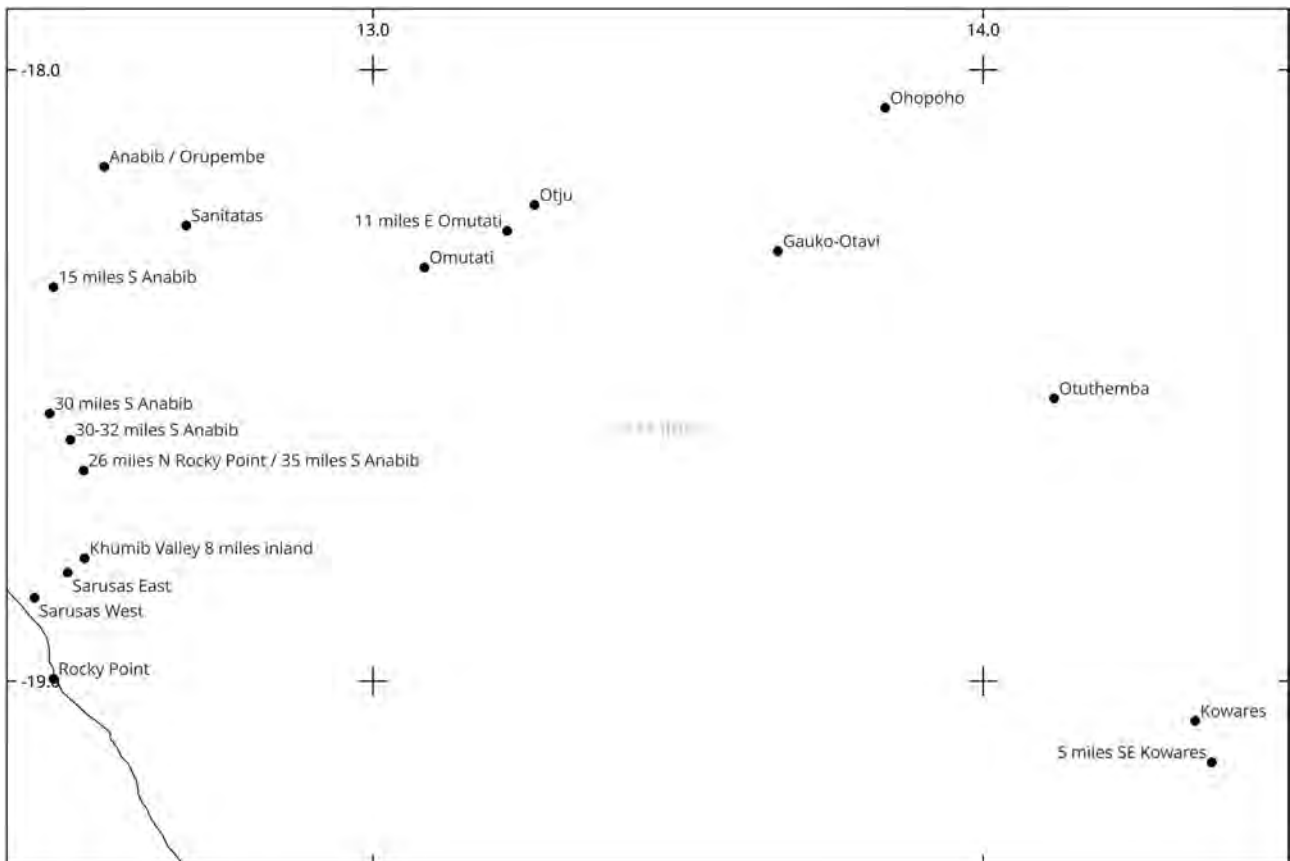


Figure 14: Swedish South Africa Expedition localities in north-western Namibia

Table 10: Cartesian coordinates all Namibian Swedish South Africa Expedition localities. The numbers are the expedition's locality numbers. Mapped in Figure 14 (only northwestern Namibia),

| No. | Locality | Country | Coordinates |
|----------|---|---------|-------------------|
| 330, 339 | Anabib (Orupembe), about 100 miles W Ohopoho (taken at former site of natural water point) | NA | -18.1585, 12.5597 |
| 331 | 15 miles S Anabib (Orupembe), about 100 miles WSW Ohopoho (measured along route) | NA | -18.3561, 12.4765 |
| 332 | 30 miles S Anabib (Orupembe) about 110 miles WSW Ohopoho (measured along route) | NA | -18.5631, 12.4702 |
| 338 | 30-32 miles S Anabib (Orupembe), about 110 miles SSW Ohopoho (taken at 4 miles north of locality 337) | NA | -18.6061, 12.5042 |
| 337 | 35 miles S Anabib (Orupembe), about 26 miles N Rocky Point (taken halfway between measured distances) | NA | -18.6552, 12.5257 |
| 326 | Gauko-Otavi (Kaoko-Otavi), 20 miles SSW Ohopoho (taken at water point) | NA | -18.2970, 13.6636 |
| 321 | Kamanjab, 100 miles NW Outjo (taken centrally) | NA | -19.6209, 14.8434 |
| 333 | Khumib Valley 8 miles inland, about 110 miles SW Ohopoho (taken in Khumib riverbed, 2.5 miles upstream of locality 336) | NA | -18.7989, 12.5273 |
| 323 | Kowares, 90 miles SE Ohopoho (taken at historical water point) | NA | -19.0652, 14.3476 |
| 322 | 5 miles SE Kowares, 90 miles SE Ohopoho (taken along road) | NA | -19.1332, 14.3746 |
| 316 | 30 miles S Marienthal (as Mariental, taken along road, measured from centre) | NA | -25.0519, 17.8851 |
| 325 | Ohopoho (as Opuwo, taken in historical centre) | NA | -18.0622, 13.8399 |
| 324 | Otuthemba, 40 miles SE Ohopoho (as Otuzemba, taken at water point) | NA | -18.5383, 14.1164 |
| 318 | 40 miles N Okahandja (taken along road, measured from centre) | NA | -21.4131, 16.8452 |
| 329 | Omutati, 70 miles WSW Ohopoho (as Okomutati, taken at water point) | NA | -18.3236, 13.0842 |

| No. | Locality | Country | Coordinates |
|-----|--|---------|-------------------|
| 328 | 11 miles E Omutati, 60 miles WSW Ohopoho (taken by road starting from river crossing at Okomutati) | NA | -18.2637, 13.2200 |
| 319 | 20 miles S Otjiwarongo (taken along road, measured from centre) | NA | -20.7127, 16.7920 |
| 327 | Otju, 45 miles WSW Ohopoho (as Otjiu, taken at water point) | NA | -18.2212, 13.2648 |
| 340 | Sanitatas, about 85 miles WSW Ohopoho (taken at water point) | NA | -18.2550, 12.6941 |
| 335 | Rocky Point, 10 miles S Sarusas West (taken at point) | NA | -18.9964, 12.4764 |
| 337 | 26 miles N Rocky Point (= 35 miles S Anabib, see above) | | |
| 336 | Khumib Valley, Sarusas East, 5.5 miles inland (taken at water point) | NA | -18.8226, 12.4997 |
| 334 | Khumib Valley, Sarusas West, 1.5 mile inland (taken at water point) | NA | -18.8637, 12.4452 |

names (*Anabib*, *Warmbad*), and yet more Namibian-Angolan ambiguity. The expedition route map included in Lawrence (1928: 218) provides an overview. Additionally, maps 'Deutsch-Südwestafrika, Vorläufige Ausgabe, Blatt 3 Rehoboth (Amboland) 1912', Sprigade et al. (1913), 'Travellers' Map of Kaokoveld, C.N. Manning 1923' and 'Suidwesafrika 1:500 000 Ovamboland 1963' were especially useful.

9. Swedish South Africa Expedition

The Lund University Museum of Sweden collected much material mainly in South Africa in 1950 and 1951, and also made one short visit to Namibia. Their results were published in 15 volumes between 1955 and 1973 as *South African Animal Life*. The material is well-labelled, and there is a list of localities (Brinck & Rudebeck 1955) with maps, but no coordinates. The latter are provided below for Namibian localities, excepting those that refer to large towns under names still in use. Distances were measured along routes in use at the time.

Along the route between *Orupembe* and *Rocky Point* localities were denoted by distance from *Orupembe*. On the return journey the first locality (number 337) was denoted by distances from both *Orupembe* (35 miles) and *Rocky Point* (26 miles). Measuring from both places resulted in two localities 5.5 miles apart. Site 337 was therefore geocoded halfway between these two endpoints. The next site chronologically (338) was denoted as *30-32 miles S Orupembe*. I decided to geocode this at 31 miles (halfway between 30 and 32); however, since they wrongly believed they were 35 miles south of *Orupembe* at site 337, I geocoded site 338 at 4 miles north of site 337, rather than at actual 31 miles south of *Orupembe*. This fits best with their map, which places site 337 much closer to 338 than to 332 (*30 miles S Orupembe*).

10. Hobohm

Gerd Hobohm (1900–1991) was a Namibian farmer and amateur entomologist. Virtually all his specimens were

collected on his farm *Abachaus* and the bulk of his material is in the Ditsong Museum, South Africa. *Abachaus* has proved elusive since no farm by that name appears on any current or former Namibian maps. An *Abachaus* Mountain may be found on maps as far back as 'German S.W. Africa Sheet 11 Otawi 1914', but it is misspelled *Abachausberg* on all modern official maps (e.g. 'Namibia 1:250 000 sheet 1916 Tsumeb, 3rd edition 2002'). Different text descriptions of the location (e.g. 160 miles N of Windhoek) and purported coordinates for *Abachaus* exist in print, but they are inconsistent and the extremes cover an area of more than 75 km in diameter.

Thanks to farmers' almanacs and other historical resources held in the library of the Namibia Scientific Society, and a competent librarian, Hobohm could be definitely linked to cadastral unit *Valhal 331*, located just south of *Abachausberg* (pers. comm., Armin Jagdhuber, 2023) (fig. 13).

11. Gaerdes

Fritz Gaerdes (1892–1975) was a Namibian educator and amateur entomologist who collected widely in Namibia. The bulk of his surviving insect material is kept in the National Museum of Namibia. He created a few 'problem' localities of his own, notably a confusion between *Tinkas* and *Tiras*, and the abbreviation of the name of his farm *Ongombaenavita* on labels to just *Ovita*, a name that cannot be found on any map. Irish (1997) previously clarified Gaerdes' collecting localities at a quarter degree square resolution.

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Table 11: Cartesian coordinates for discussed Hobohm locality. Mapped in Figure 13.

| Locality | Country | Coordinates |
|---|---------|-------------------|
| Abachaus (taken as cadastral unit Valhal 331) | NA | -19.7818, 16.7456 |

Agricultural Research Council, South Africa, is thanked for permission to use his observation and picture of a Péringuey label. Mai Reitmeyer, librarian, and Paul Sweet and Thomas Trombone, ornithologists, American Museum of Natural History, New York, United States, are thanked for their assistance regarding Chapin's maps and localities, as is Lorenzo Prendini for facilitating this.

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About the Author

John Irish is a Namibian bioscientist and specialist entomologist who grew up in Windhoek. He has worked for the National Museum of Namibia, National Biodiversity Programme, National Botanical Research Institute, and Gobabeb Namib Research Institute, when not surviving as a self-unemployed consultant. He holds a PhD in Entomology and maintains the on-line Namibia Biodiversity Database.

