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## The regions of Adwa and Aksum, Q<sup>w</sup>älla and Bägemdər on the manuscript maps by Georg Wilhelm Schimper, 1864/65 and 1868

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*The regions of Adwa and Aksum, Q<sup>w</sup>älla and Bägemdər on  
the manuscript maps by Georg Wilhelm Schimper, 1864/65  
and 1868*

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Dorothea McEwan\*

Within the framework of the ICES 18 conference topic of ‘movements’ a closer look at the role that maps, charts and textual descriptions of landscapes play, serves a particular important point: as mirrors of reality, as finding aids and as guiding aids. Human endeavour to orientate itself in the cosmos has led to important intellectual disciplines like astronomy on the one hand and religion on the other. To orientate oneself in the environment has led to equally important disciplines like geology, mineralogy, meteorology on the one hand and geography, botany and zoology on the other, as ways of learning to live with and inside a given environment.

These finding aids are known today as maps and charts. Maps present an overarching view of spatial information and carry information like an illustrated or shorthand version of a text. Maps and mapping have developed to show not only the landscape, the rivers, seashores and mountain ranges in general, but also in particular the natural growth of human interference on the landscape. Maps give a picture of the situation on the ground and allow an interpretation of that situation. Thus, river systems and road systems become the vehicles on which movement becomes possible, movement of people, of goods and most importantly of ideas. Maps, therefore, are not static records; a map is a record of one point in time, the time of the mapmaker, and new developments were charted and will be charted by every new cartographical record taking.

For the first time in its existence, the International Conference of Ethiopian Studies has established a History of Cartography Panel. This is a very welcome development as it draws attention to the history of maps, mapping and map making. It brings with it a pluridisciplinary approach involving scholars in the arts, sciences, and humanities. The Panel thus presents a broad view of what is called maps, integrated existing scholarship with new research and examined a range of manuscript and printed maps.

The manuscript maps of the German scientist Georg Wilhelm Schimper are the topic of this paper. Although he is celebrated for his botanical research, little is known of Schimper’s mapmaking activities. A recent find in the manuscript department of the

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British Library in London brought to light two manuscript books. One, called *Observations*, is a detailed description of the flora of Northern Ethiopia. The other, called *Maps*, contains four manuscript maps; the Adwa and Aksum region [fig. 2],<sup>1</sup> Kolla Noari or Q<sup>w</sup>älla, the area between the hot and dry lowlands and the highlands in western, north-eastern and south-eastern Ethiopia,<sup>2</sup> Bägemdär [fig. 3], the area to the east of Lake Ṭana as well as the map of the shoreline of Lake Ṭana.<sup>3</sup> These maps are accompanied by a number of sectional drawings of mountain ranges and river systems and copious captions, comments and descriptions.

The two volumes complement each other. The first deals mainly with Schimper's observations on the flora of Ethiopia, the geographical spread of plants and the landscape sustaining life. It is also an explanation of the subsoil, the geological substratum of the landscape. He continues this topic in the second volume, presenting detailed descriptions of the composition of the rocks supporting the ecosystem on the surface, and of the sectional drawings and maps. Through his long and extensive botanical collecting expeditions in the country, Schimper gained first-hand knowledge of the flora of Northern Ethiopia. The resulting maps and, in particular, the sectional drawings were an attempt to show the geological building blocks below ground, so to say, which shaped the landscapes above.

### **The life of Georg Whilhem Schimper (1804-1878)**

Georg Wilhelm Schimper spent more than 40 years in Abyssinia collecting specimens of plants hitherto unknown to Europeans, mainly in the Tigray, Semen and the Täckäze regions of what is now known as the Ethiopian highlands and Eritrea. Schimper is now universally considered to be the single greatest contributor to the knowledge of the flora and fauna of the Horn of Africa.<sup>4</sup> His specimens were in great demand and still form substantial parts of the collections of the major research centers of Europe such as the Jardin des Plantes in Paris, the Botanisches Museum in Berlin, and the Herbarium at Kew Gardens in London. The Kew Herbarium catalogue alone reveals some 2,400 *Schimperi* or *Schimperia* entries for Ethiopia and the countries he visited in the Middle East.<sup>5</sup>

Schimper, born in 1804, studied Natural Sciences at Munich University from 1828 to 1829 and in 1830 he met Eduard Rüppell, the first naturalist to travel in Ethiopia. In 1831, in the service of a scientific collection society in Germany, Schimper left for his first botanical collection expedition to Algiers and in 1835 for a second expedition to Egypt, the Sinai and the Arabian Peninsula. From there he moved to Massawa in January 1837 and travelled to Tigray where he was received by the local ruler, Dädjzmach Wəbe

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<sup>1</sup> BL, Add Ms 28506, 17.

<sup>2</sup> BL, Add Ms 28506, 16.

<sup>3</sup> BL, Add Ms 28506, 14.

<sup>4</sup> HEDBERG *et al.* 1989-2009.

<sup>5</sup> The Kew Herbarium Catalogue is accessible at: <http://apps.kew.org/herbcat/navigator.do>

Haile Maryam, who allowed him to settle in Adwa. Between October 1837 and May 1855 Schimper undertook various expeditions as far north as the Märäb River and south into the Täkkäze and Səmen mountain regions, the prolific results of which made him the famous botanist.<sup>6</sup>

Financial problems of his European sponsors in 1842 meant that he was no longer supported by them but, thanks to Wəbe, he was granted the governorship of the small province of Enticho which provided him with an income. A compatriot of Schimper, the artist Eduard Zander, arrived in Ethiopia in late 1847 and over the years the two Germans went together on collection trips. In late 1849 Schimper and Zander were asked by Wəbe to build a limestone tower in the church compound of the new church of Däräsge Maryam, near the village of Däräsge, in Wəbe's home region of Semen (MCEWAN 2011: 32-47 and MCEWAN 2013b). The new church was finished and dedicated in 1852, and the project to complete the limestone tower or house of refuge, as the church had asylum status, was completed by 1855. During the battle of Däräsge, the young leader, Kasa Hailu, defeated Wəbe and was crowned Emperor Tewodros II in Däräsge Maryam church on 11<sup>th</sup> February 1855. Schimper, as a former protégé of Wəbe, lost his governorship of Enticho and retreated to Adwa where he lived in greatly reduced circumstances for several years during which he found it very difficult to carry out any scientific work.

In 1861 the German Protestant missionary, Christian Friedrich Bender, married Schimper's eldest daughter, Yāshimmābet, in Adwa and in 1863 Schimper took his youngest daughter, Sāhaytu, to Gafat to get married to another missionary, Gottlieb Kienzlen. On the orders of Tewodros II, Schimper had to stay in Gafat under house arrest, but in 1864-65 he was able to spend time working on his topographical map of Bāgemdār, a very large map measuring 132cm x 130 cm.

In the autumn of 1867 Schimper and his family, together with the whole Gafat community of European and Indian hostages, were forced to march to Māqdāla where they were finally rescued on 12<sup>th</sup> April 1868 by the British military expedition under the leadership of General Sir Robert Napier [fig 1: The European hostages]. After his release, Schimper returned to Adwa and worked on two more maps of Adwa and Aksum and 'Kolla Noari' or Q<sup>w</sup>älla. A printed version of the Tigray map, albeit with only a selection of mountain profiles, was published in Germany by Alexander Sadebeck in 1869 (SADEBECK 1869: 347-352).

Schimper spent the last ten years of his life in Adwa. He continued to write reports on Ethiopia, such as one to the German Consulate in Alexandria about the coronation ceremony of the new Emperor Yohannes IV. In another, he described the maltreatment by Yohannes of his daughter Sāhaytu who had married the pretender-to-the-throne, Kasa Golḡa, in 1868 after the death of Gottlieb Kienzlen in 1865. Schimper's last reports were published in 1877. In his last known letter of 8<sup>th</sup> May 1878, he described the misery of hunger in Tigray. He died in Adwa on 10<sup>th</sup> October 1878.

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<sup>6</sup> For a detailed biography see BETTS and BETTS 2011, GRÄBER 1999: 47-68; for an overview of his life see GRÄBER 2010; for specialist publications see MCEWAN 2013a: 55-84; MCEWAN 2015.

## Mapmaking under Tewodros

Schimper's maps of the Adwa region, Q<sup>w</sup>älla or Kolla Noari, as Schimper called the low lying plain on the stretch of the Täkkäze between Səmen, Lasta and Abärgälle, and of Bägemdär are all geological and geographical records in which he tried to make visible what shaped the three areas which he crisscrossed over the decades.<sup>7</sup> By explaining the rock formation and conglomerate rock deposits beneath the surface, he could show how the underlying geological facts influenced and determined the geography, which in turn presented the key to understanding the flora and fauna of the country and ultimately its agriculture and life-supporting systems. Schimper sent rock samples with the maps and sectional drawings to Europe; to this day they are kept in the Natural History Museum in London and in the Museum für Naturkunde, Mineraliensammlung, in Berlin.

The sectional drawings with their captions on the composition of the substructure, the rocks, might no longer be acceptable to geologists, mineralogists and soil researchers today, but they were a first attempt at presenting an evolutionary account of the making of the land, from its volcanic eruptions to solidification and weathering and the ensuing changes in the landscape due to erosion and human interference.

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<sup>7</sup> BL Add Ms 28506 is a large size volume. Writing in black and red ink, maps in grey, blue, red, yellow paint. The outside cover, in brown leather, measures 50 x 74.5 cm. Inside, the cream coloured paper measures from middle fold to edge 48 x 73 cm.

- Folios 1r to 2v: cream coloured ruled paper: *Place names of the map of Bägemder*, 40 x 26 cm.
- Folios 3 and 4: cream coloured ruled paper: *Place names of the map of Aksum and Adwa*, 38 x 47.5 cm.
- Folios 5r to 12v: blue ruled paper: *Notes on the sectional drawings of the map of Aksum and Adwa*, 23 x 2.7 cm. Tables 1 to 15, with Tables 4 and 13 not listed.
- Fol. 13r: *Memorandum*, in English, cream coloured paper, 26 x 20 cm.
- Fol. 14: *Map of Bägemder* and *The shore of Lake Tana*. Papers stuck together, overall size 132 x 130 cm. Dated 1864/65. The *Bägemder* part measures 80 x 105 cm. Bottom right: *The Lake Tana* part measures 58.5 x 28.5 cm. The land in between has not been drawn. Bottom left: Notes on the bridge over the Ereb river, 71 x 19.5 cm. Scale: 'Popular scale: 8 cm = soldiers marching one hour in straight line on level ground'.
- Fol. 15: Tabula A, *Bägemder*, 89 x 14.5 cm; Tabula B, *Tigray*, 89 x 11.5 cm; Tabula C, region between Tigray and Tsälamt, 89 x 9.5 cm.
- Fol. 16: *Q<sup>w</sup>älla* or *Kolla Noari*, also called *Tabula D*. From left edge to middle fold 45 x 35.5 cm, with the explanation that the original map had been sent to his cousin Wilhelm Schimper in Strasbourg some time beforehand. From middle fold to right edge: two *Tables*, overall size 45 x 35.5. Table E: 45 x 16 cm, Table F: 4 x 16 cm.
- Fol. 17: Aksum and Adwa. From left edge to middle fold, sectional drawings of mountain ranges, 44 x 46 cm. Parts 1 and 2. *Outline of the mountain range near Adwa*, and further 8 *sectional drawings* of individual mountains, not numbered, one of them the *Outline* sectional drawing again. From middle fold to right edge, map *Outline of the mountain range near Adwa*, 41 x 46 cm, with red lines numbered 1 to 15. On the same folio, below the sectional drawings and the map: *Tables 1 to 15*, corresponding to the red lines 1 to 15 on map, 89 x 27cm.
- Fol. 18: 86 x 28 cm. From left edge to half way of page: *Aksum*, 18 x 16 cm. From half way of this page to right edge, again: *Outline of the mountain range near Adwa* (practically three times the same sectional drawings, once on f. 18, twice on f. 17).
- Fol. 19: 7 *Tables* showing the mountains ranges on the *Bägemder* map; geological drawings with numbers corresponding to the numbered rock samples sent with the maps.

Schimper himself wrote about the making of the maps. During his work overseeing the construction of the limestone tower at Dārāsge Maryam in the early 1850s, he went on field trips to explore the mountain ranges of the area and make notes on its geology, geography, mineralogy and botany. He made similar records during his travels in Tigray and Bägemdər from 1862 to 1865.

“[I] was lucky, but subsequently lost part by looting and thereby also the geological collection, which I had hidden away in triplicate in two different villages, including 4 large parcels full of plants, the loss of which is less regrettable as they usually only contained duplicates... I have kept the geological, geographical maps with the associated plan drawings, both of Tigray as well as of Begemder, with me up till now”.<sup>8</sup>

He is silent about the years 1866 and 1867, only hinting that times were difficult. During this time he was kept as a hostage of Tewodros II together with the other Europeans at Gafat. He is more explicit about the time from November 1867 to the end of January 1868 whilst on the long march to Mäqdäla:

“...what did happen is something I cannot write about today. For more than three months, I have found myself in a soldiers' camp, without anything to do there. I am in my tent without being allowed free movement. Usually you travel in the morning and rest in the afternoon, and I make use of this time to jot down my botanical memories. I am surrounded by highly revolting, bad and dangerous thieves. I am disturbed by the talking and shouting, the noise and frequent tumult and I need to keep my tent closed, so as not to be seen writing. I languish in the trapped heat without any air blowing through. Writing, for me, was difficult in this situation, but I thought I should not defer it much longer: I fear that the circumstances might force me to leave what I have to do for another day, which would really mean abolishing my work altogether... What most constricted me when writing these notes was the lack of materials”.<sup>9</sup>

The observation that he had to work in his tent with the doors firmly closed, keeping prying eyes out, is a comment on the incredibly difficult conditions he endured.

The colour scheme of the large map of *Bägemdər* and the two smaller maps of *Adwa*, 41 x 46 cm, and *Qwälla*, 45 x 35.5 cm, is grey, green, yellow and, very sparingly, red for sectional lines and blue for rivers. Although he does not say so, it is obvious that he had to make the paint himself. In his botanical description he mentions the recipe for making ink.<sup>10</sup> In addition to the maps Schimper made sectional drawings of the mountain ranges of the mapped areas around the three regions mentioned. The result is as much a triumph over adversity as it is a very accurate record of the three regions.

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<sup>8</sup> BL, Add. Ms 28505, 5v. This and all following translations from Schimper's manuscript books are by the author. Place names are kept in Schimper's transliteration.

<sup>9</sup> BL, Add. Ms 28505, 6r. Schimper's alludes to his march to Mäqdäla 1867-1868, as a hostage of Tewodros II.

<sup>10</sup> BL, Add Ms 28505, 95r.

Schimper presented in his two manuscript books three major topics; first, the geology of the country, secondly, the geography as shown by his maps and thirdly, the vegetation supported by the soil conditions.

On the geology of the Adwa area Schimper wrote:

“You can observe on the horizontal clay plateaux in Tigray and in Talamt a dolerite, trachytic conglomerate, which usually covers this plateau only very lightly, even the stones are scattered about, and everywhere in the gaps of the same, you can see the clay rock exposed. This is not only visible in the vicinity of dolerite mountains but also on those odd island-like clay plateaux. Because they form one whole mass and the fact that they are all at the same height they look like one vast plain, which it would take many hours to cross. They are neither dolerite, nor trachyte, nor basaltic mountain formations to be found. Hence the volcanic conglomerate cannot have been flung up by volcanic eruptions into a neighbouring area, but it was formed on the spot itself. Of these areas, the clay plateaux in Tigray and Kolla-Noari serve, in particular, as evidence”.<sup>11</sup>

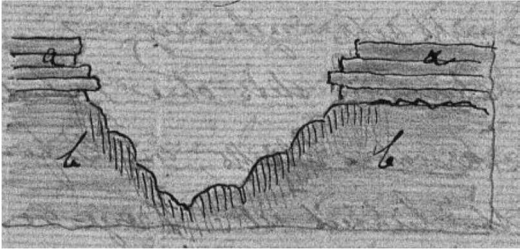
A word on the use of the terms ‘trachyte’ and ‘dolerite’: Trachyte, from the Greek ‘trachys’, meaning rough, is a volcanic rock. It is a light coloured, very fine-grained extrusive igneous rock, commonly associated with other lavas in volcanic regions and thought to have been formed by the crystallization and abstraction of magnesium, iron and calcium minerals from basaltic lava. The term dolerite is no longer in use. In earlier times, dolerite was described as a dark basic intrusive igneous rock, the composition of which could not be determined with the naked eye, hence the name’s derivation via the French *doléríte*, from the original Greek *doleros*, deceitful; it was so called because of the difficulty in determining its composition. It is a coarse-grained basaltic rock, now understood to include alkali-olivine basalts. Schimper uses the term to describe a hard conglomerate rock.<sup>12</sup>

West and northwest of the centre of Semien, in Kolla Wogara and in T’alamt (Tigraic: Zalamti), the ... red iron clay forms a lot of larger and smaller plateaux 5,000 to 6,000 feet above sea level, that, with a very horizontal surface, all have one same apparent level. Since these plateaux are close together, when viewed from a distance that area will appear as a very widely extended, broken up plain, with a dolerite hill rising from it here and there, or even a basaltic form. The valleys, which emerge at the foot of the Semien Mountains, cross this plain in numerous directions with intersecting curves, are narrow and deep, ... the clay is elevated horizontally, drops vertically, as already said, and is stored on an independent formation of primitive slate which, though undulating, drops very steeply there.

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<sup>11</sup> BL, Add Ms 28505, 168v.

<sup>12</sup> cf. DIETRICH and SKINNER 1979.



**Sketch 1:** a. Red clay, often ferrous, with intermediate layers of white and yellow clay ; b. Independent formation of primitive slate.<sup>13</sup>

In comparison to this generic drawing in his manuscript text Schimper's drawing of a specific region was accompanied by lines and captions on his geographical maps. The biographers of Schimper, Annie and Tony Betts, used the *Adwa and Aksum* map to find the Gässa Schimper estate near the village of Amba Sea in Enticho when doing research in the area. They commented that Schimper's map was so accurate, that they found the estate and the remnants of the stone built houses with its help.<sup>14</sup>

Another example of Schimper's detailed mapmaking is the drawing of river courses. A region is determined by its natural borders, usually mountain ranges, but also river beds and coast lines:

Nothing makes the structure of a region apparent to the naked eye more quickly and correctly than the course of the waters flowing through it. The strange turns of the waters in Abyssinia give testimony at first glance to the volcanic formation of this country, even without a special closer look.<sup>15</sup>

The valleys between these mountain massifs often change directions, hence the waters often travel a very long way in a small area and sometimes seem to flow towards the highest mountains, then turn away from them again and through the principal rivers into which they run, they flow roughly in a north-westerly direction. You will not be very much mistaken, if you assume the direction of the principal rivers, including the larger valleys, as being approximately parallel with the direction of the Red Sea.<sup>16</sup>

The wide bed of the river Märäb, approximately 4,000 feet above sea level, lies dry for the largest part of the year and is surrounded on both sides with dense tree cover, so that when walking on the sandy river bed, you walk as though along a pleasant shady avenue.<sup>17</sup>

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<sup>13</sup> BL, Add Ms 28505, 169r.

<sup>14</sup> I am indebted to Annie and Tony Betts for this information. They used the Schimper maps on their trips in 2009; see BETTS 2011: 45.

<sup>15</sup> BL, Add Ms 28505, 173r.

<sup>16</sup> BL, Add Ms 28505, 172v.

<sup>17</sup> BL, Add Ms 28505, 8r.



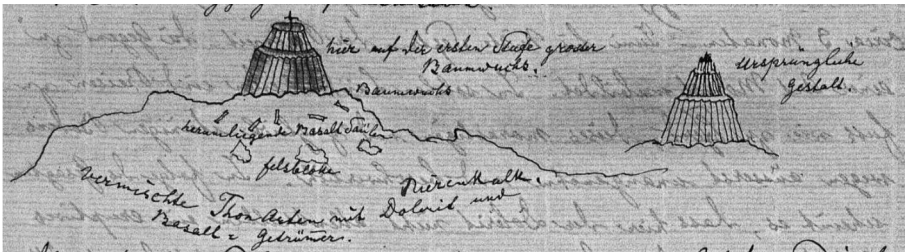
In the discussion of the vegetation and cultivation of the land he mentions figs, hibiscus, bay trees, dates, mushrooms, Eleusine or millet, lilies, onions and crocus, to name but a few.<sup>18</sup>

The second region, Qwälla or Kolla Noari, the lowland area dipping down to the Täkkäzze, is marked by clay plateaux with deep ravines. The terrain on the Qwälla map is explained on Table E and Table F.<sup>19</sup> Vegetation mentioned consists of euphorbia or spurge, any number of vegetables, cucumber, beans and echinops or globe thistle.

The third region, represented by the biggest map, is Bägemdär. Schimper describes the geology of Bägemdär in the following words:

“This conglomerate covers the ground in Begemder so thick in many places that cultivation there is more difficult. Usually, however, there is topsoil located between these rocks, a product of rock weathering, and while this topsoil is very fertile, during about 3 months – June to mid-September, the rainy season – it does also transform the area into a kind of swamp. ... The mountain elevation on which such a basalt group can be found, in the Magandi district that belongs to Begemder, consists of a mixture of white and yellow clay and dolerite soil. Nodular limestone is found scattered at the foot of the mountain, and on the plain in masses, a sign of the dolerite formation of the terrain”.<sup>20</sup>

He explained this stratification by illustrating it with a little sketch, in which he shows Giyorgis church in Mägändi, Bägemdär. The sketch shows a cross for the church on top of a basalt column, further scattered basalt columns, boulders, nodular limestone and different clays mixed with dolerite and basalt conglomerate; on the right, the original shape of the basalt column:



Sketch 2: Example for nodular limestone and basalt columns.

“The lower columns are about 3 times the height of a man. On the south side, this steep elevation has a break, which allows the worshippers to climb up to the church without having to be pulled up using ropes... It seems that the yellow clay

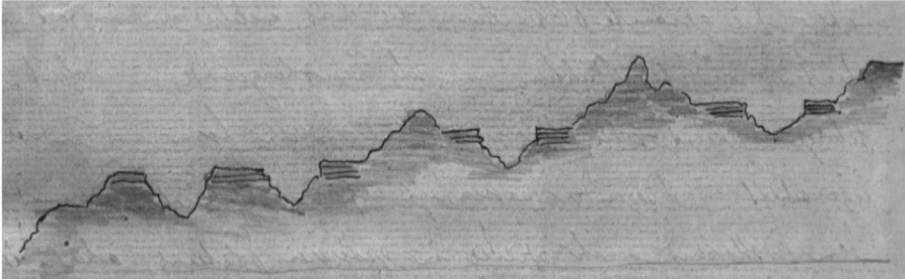
<sup>18</sup> BL, Add Ms 28505, 24r-27r.

<sup>19</sup> BL, Add Ms 28506, 16.

<sup>20</sup> BL, Add Ms 28505, 169r.

frequently occurring in Begemder is a volcanic metamorphosis of the massively occurring white clay; the red clay is a metamorphosis of the yellow clay, which is something my collections show clearly. These three types of clay partly merge into each other, sometimes, however, each of them also makes a transition to that type of dark-coloured hard, crystalline rock, which I call here dolerite and trachyte types<sup>21</sup>.

Because of the geology, ‘...a wonderful mixture of volcanic metamorphoses...’<sup>22</sup> he conjectures that coal seams are extant in the Bägemdär area. The pointer to these are the occurrence of sulphur pyrite, clay and salty and warm springs, even ferrous ones, to wit the hot springs in Wansagjë and Guramba.<sup>23</sup> The volcanic action produced diversity in the shapes of mountains in the Bägemdär area but there are no cone hills with plugs of extinct craters, as shown on the following profile, an example for volcanic action producing rock diversity in Bägemdär:<sup>24</sup>



Sketch 3: Example for stepwise descent of mountains in Tigray.

The big map of Bägemdär is somewhat difficult to read, as the colours are browns, and greys and the hundreds of names of villages, rivers, mountains are not easily legible. The exception is the shoreline of Lake Ṭana, picked out in blue. This is a historic record, the expedition by Annie and Tony Betts, who were trying to find the location of the town of Korota on the lake shore, used the Schimper map once again and found the shoreline as drawn by Schimper.<sup>25</sup> Such records will be useful in future for climatological studies on the changing level of the lake due to rain or drought.

As to vegetation, Bägemdär, a high plateau region, is described as a region with rich cultivation of teff, sorghum, vegetables, trees for construction and firewood.

<sup>21</sup> BL, Add Ms 28505, 169v. Mägändi is also entered in BL, Add Ms 28506, 14.

<sup>22</sup> BL, Add Ms 28505, 167r, ‘...ein wunderbares Gemenge vulkanischer Metamorphosen.’

<sup>23</sup> BL, Add Ms 28505, 170r.

<sup>24</sup> BL, Add, Ms 28505, 171v.

<sup>25</sup> I am indebted to Annie and Tony Betts for supplying this information, 20.8.2012.

Finally, Schimper makes mention of a ‘special deviation’ of the magnetic needle on the mountains of Bägemdär. There, the more crystalline the volcanic rocks are, the more magnetic they are:

“... the magnetic needle deviates to the west, but there are lines of unknown length and of small width, where the deviation is to the east instead, these lines consistently have the direction towards 10 on the geological compass,<sup>26</sup> so they form a right angle with the direction 2 approximately southeast to northwest, which is the main direction of the Red Sea and the larger valleys of this region of the world; - and the frequent earthquakes have almost the same directional course, especially those appearing in the month of February... The prominence of the deviation is locally different, the strongest I have noticed is 10¼ hours towards the east, the magnetic needle therefore points to the south there instead of to the north”.<sup>27</sup>

This is typical of Schimper’s observations of natural phenomena. His descriptions are meticulous, backed up by sketches, copious captions and cross references to his very detailed register of plants, both cultivated and uncultivated. In such a way he presents an ecosystem from the bottom up, as it were; the geological givens determining the skin, the landscape above with its soil conditions for cultivation.

A list of towns and villages accompanies the maps of Adwa and Aksum and Bägemdär and the shoreline of Lake Tana. This is linguistically interesting, because Schimper transcribed the Tigrayan and Amharic names according to sounds in his mother tongue, German. It will be left to detailed future research to track down the villages and locate them on modern maps. So far, only the major towns on the four maps by Schimper have been geo-referenced.<sup>28</sup>

Schimper, having sent his third plant collection of 1847-1848 to the Herbarium at Kew Gardens in London, handed his manuscripts, not yet bound up in two books, and the

<sup>26</sup> The numbers on the compass dial ascend in an anticlockwise direction.

<sup>27</sup> BL, Add Ms 28505, 201v.

<sup>28</sup> 1. For *Karte von dem wichtigsten Theil der Provinz Begemder, trigonometrisch aufgenommen von W. Schimper, 1864, 1865* (The Bägemdär part). See <http://www.bl.uk/onlinegallery/onlineex/maps/africa/addumsu28506uf14u04.html>. The geo-referenced map: <http://britishlibrary.georeferencer.com/map/188WkRFVqEB3TYcsp.fWCmb/201306122151-XyxKF/geo-reference>.

2. For *Karte von dem wichtigsten Theil der Provinz Begemder, trigonometrisch aufgenommen von W. Schimper, 1864, 1865* (The Shoreline of Lake Tana part). See <http://www.bl.uk/onlinegallery/onlineex/maps/africa/addumsu28506uf14upanoram1.html>. The geo-reference map: <http://britishlibrary.georeferencer.com/map/qwCSNNyZl5Z8WCW338cKzB/201306122203-Xv9nrK/visualize>.

3. For *The low lying flat land called Kolla Noari or Quälla, Western Ethiopia*. See <http://www.bl.uk/onlinegallery/onlineex/maps/africa/adduu28506uf16ukollauno.html>. The geo-referenced map: <http://britishlibrary.georeferencer.com/map/83MJ1vlyz38FRZBstqpbvY/201306130633-r3huZ/geo-reference>

4. For *The Aksum and Adwa region in Tigray, Northern Ethiopia*. See <http://www.bl.uk/onlinegallery/onlineex/maps/africa/addumsu28506uf17r.html>. The geo-referenced map: <http://britishlibrary.georeferencer.com/map/qLSzrvSLok4XuwtD4yT.Swk/201303221705-LqpJAi/visualize>

large map of Bägemdər to the British officers in 1868.<sup>29</sup> He had asked them to take his material to London, as he had decided to sell the papers for £ 50.00 to the British Museum, which indeed purchased them. The papers had been accessioned into the holdings of the Museum in 1870 and bound into two volumes, the first the large manuscript book *Observations*, dated 1868, the second the collection of the four maps and numerous sectional drawings, *Maps*, dated 1864/65. However, the two maps of Adwa and Aksum and Q<sup>w</sup>älla or ‘Kolla Noari’, now in the second volume, were only finished by Schimper after the British left Ethiopia.<sup>30</sup> It is as yet unknown who took them to Europe; they were already published by Sadebeck in Berlin in 1869.

Schimper often strayed into a variety of disciplines, meteorology, climatology, and mineralogy to make a point. Not all of his findings have stood the test of time, but as an attempt to present as accurate a record as possible of the land, his manuscripts are of great importance in measuring the effects of erosion, land improvement, settlement, deforestation, abandonment of some areas and overpopulation of others on the land over the last 150 years. Schimper, a natural scientist, has provided maps, sectional drawings, exhaustive observations on the soil conditions and plant life in Ethiopia, which have stood the test of time. With no formal training in the science of surveying and map making he can aptly be called a genius in the way he observed and described the world around him.

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<sup>29</sup> He made use of the occasion and requested that his scientific records should be sent from London to Berlin to his friend Alexander Braun, Director of the Herbarium, for correction. After all, Schimper has done his research from memory. Braun should then send back the records to London to be presented to the British Museum in the hope of receiving further collecting commissions. See BL, Add Ms 28505, 7r and BETTS 2011: 231.

<sup>30</sup> GIRARD 1873: 229 and 235.

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## Illustrations

**Fig. 1:** 'The European Hostages. © Rheinisches Bildarchiv. Theodore’s Artisans and their Wives. WRM/PH/SL888/52.

**Fig. 2:** Schimper’s Map of the Adwa and Aksum region. London, BL, Add Ms 28506, 17. © The British Library Board.

**Fig. 3:** A section of Schimper's map of Bägemder. London, BL, Add Ms 28506, 14. © The British Library Board. London.

Fig. 1



Fig. 2



Fig. 3

