

A note on methods: Photo-monitoring; travel accounts, and oral history

Historical photo-monitoring has become an important research tool in environmental history. This method compares historical photographs with present-day photographs in order to detect environmental changes in specific localities or areas. A photograph has the advantage of showing a multitude of details much better than literary sources. However, the information provided by a photograph is limited to the area shown in the picture, and by the quality of the picture. Care must be taken when making extrapolations for wider areas not shown in the pictures.

Historical travel accounts often provide a more general impression of past landscapes, and also reach much further back in time than historical photographs. Generally speaking, researchers have to be aware that historical accounts and photographs of Eritrea were written, or taken, by European travellers and therefore show characteristics of the landscape that were important in *their* perception.

Oral history through interviews with local people allows for accounts of local perceptions. Information obtained with this method is authentic, but not unbiased, as the memory of people can fail them or may be shaped and re-shaped by specific narratives and changing interpretations over time.

Forests and vegetation changes in the Central Highlands...

The highland plateau of the former Hamasien Province of Eritrea was described as very sparsely vegetated, already in travel accounts from the 19th century. This is confirmed by landscape photographs from the early Italian colonial period, in which treeless landscapes dominate. Holy places, valley bottoms and the banks of rivers were exceptions as they were in part quite densely vegetated. The Anseba valley was described as densely vegetated, especially with *kolqal* (euphorbia), which are still common, for example, in the area of Adi Hannes and north of Adi Teklezan.

Eucalyptus, sisal, and *berbere-tselim* and other indigenous trees were planted in the Highlands during Italian colonial times in order to "re"-forest the country. Trees were typically planted in and around settlements, including Asmara (see Photo 2a, 2b). Tree planting continued during the liberation war, as afforestation efforts were made by the Ethiopian as well as the Eritrean side.

After liberation, local communities, students, and soldiers were all involved in planting programmes; the resulting plantations in settlements, watersheds, and along main roads make the landscape look more forested today than it was 100 years ago in many parts of the Central Highlands.



Photo 3: "Mandrie al pascolo sull'altopiano (Segeneiti)" (photograph by Candussio, 1938. IAO)

Photo 3: Cattle grazing near Segeneiti. Taken in 1938, this photo also presents a landscape devoid of forest.

Forests and landscape changes in the Southern Highlands

According to travel accounts from the 19th century and landscape photographs from the early colonial period, the southern part of the Eritrean Highlands used to be slightly more vegetated than the central part, especially with shrubs. But generally speaking, the plateaus of the Southern Highlands were described as treeless as those in the north, while the steeper hills appear to have often been overgrown with shrubs and acacias (see Photo 1).

Comparison of the few photographs available shows that the shrub vegetation has decreased a little in some areas around villages and on hill slopes since about 1900. It also appears that primary vegetation was replaced by *beles* in some areas. This cactus plant was reportedly introduced by Catholic Missionaries in the early 19th century on the eastern escarpment. In the Italian colonial period, it had already spread to the Southern Highlands, and to the area around Keren in the north. Since then, it has expanded and can be found in almost all highland areas.

Comparison of old and new photographs shows the significant amount of eucalyptus and other trees also planted in the Southern Highlands. Even though acacia, shrubs and euphorbia vegetation as well as wild olives and juniper have diminished in some places, and some specific areas like the Kohaito plain are reported to have been more vegetated in the past, the vegetation in other areas has obviously increased significantly due to the spread of *beles* and rumex and plantations of eucalypts, *berbere-tselim*, and the regrowth of acacias and other trees.



Photo 2a: "Asmara - Col: Bet-Maka e forte Baldissera" (photograph by F.Nicotra, 1896. MVK)



Photo 2b: The forte hill in the west of Asmara (photograph by L. Lätt, 19.02.2004)

"Not a tree nor a shrub...." The Central Highlands around 1908 according to a travel account

"All along these vast valleys not a tree nor a shrub appears to interrupt the monotonous, desolate, severe aspect of the green fields and of the regular hills. The whole highland looks like that: Who has seen it in Asmara can say to have seen everything (...). Hills following one another; undulating lands, green during the short wet season, reddish, dry and dusty during all the long dry season. Just here and there some poor agaves, scarce thorny shrubs or acacias can be found, which resist to the dry climate."

(Quote from historical travel account by: Paoli 1908:196-197, translated from Italian).

"No trees apart from the big sycamore of Debarwa ...": The landscape between Dbarwa and Mendefera, around 1909 according to a travel account

"The horizon remains the same and seems far, far, almost infinite. There are cultivated fields, plantations of sorghum and forage crops, green meadows (...) no trees apart from the big sycamore of Debarwa. The landscape is always the same until Adi Ugri, Godofelassi and even further, throughout the whole Seraye. Everywhere fields and meadows, always the uniform plain..."

(Quote from historical travel account by: Dainelli 1909:1.1, translated from Italian).

Photos 2a and 2b:

The expansion of villages and towns has often been accompanied by tree planting. The capital, Asmara, is an example of this development. The town has many more trees in 2004 than in 1896, when it started to emerge on what was then a bleak and barren-looking plain. It should be noted that the two photos at the left show the same landscape.