
Debre Haila Mariyam

Debre Haila Mariyam woodland, like the few others in the region, has the only remaining native mature trees in the region. The woodland is very open and heavily grazed with limited or no natural regeneration. In recent years extensive gap planting with mainly Australian acacias has been carried out.



Name: **Debre Haila Mariyam**

Status: monastery

Site Code: TU07

Floristic Region: TU

Region: 1 (eastern Tigray)

Altitude: 2560 m

Latitude: 13° 16' N

Longitude: 39° 20' E

Woodland/forest:

Status: relict

Size: 5 ha

Dominant species:

canopy: *Bersama abyssinica*, *Ekebergia capensis*, *Euphorbia abyssinica*, *Juniperus procera*

shrub/ground: *Pavetta abyssinica*, *Phytolacca dodecandra*, *Vernonia auriculifera*

No of woody species: 41

No of species with less than 5 individuals: 3

Threats: planting of exotic trees, grazing

Photograph: Debre Haila Mariyam open woodland spreads at the base of the upper cliff around the only permanent water source of the area.

Debre Haila Mariyam is situated half way up a small mountain at the base of a cliff. The church was built on an area of flat ground and is adjacent to a small village.

The woodland is extensive but consists mostly of isolated middle-sized *Juniperus procera*. In the small area around the permanent water source the vegetation is markedly different including large patches of *Impatiens* sp. The only large remaining juniper is found inside the inner churchyard (see photo below). Recently the Government has initiated the planting of Australian acacias. These have been planted between the junipers in the overgrazed grassy vegetation. Much of the wooded area is heavily grazed, however the small area around the well is somewhat protected from herbivory. In fact, in places, the understorey vegetation is tall and extremely dense.

The surrounding countryside is largely denuded of trees, even eucalypts are rare. Similarly, scrubby vegetation is limited. Much of the land is used to grow crops and areas unsuitable for cultivation are heavily grazed by domestic livestock. Other church woodlands exist in the region also nestling below the summital cliffs or on the mountains upper slopes.

History

This church is probably quite ancient and was established near the base of a steep cliff where a permanent water source exists. It caters for a small rural population both for domestic and religious purposes.

Conservation status

In this nearly treeless region the Debre Haila Mariyam harbours an important and relatively

large area of native tree species, and of *Juniperus procera* in particular. Particularly during the dry season, when the whole landscape is yellowish/brown, this woodland has a major impact on the landscape especially as it is situated above the main plateau.



Nearly all the woodland consists of scattered *Juniperus procera* recently interplanted with Australian acacias. The greener and denser stand to the right of the church is situated around the permanent water source.



The church in the process of being restored. To the left, the last massive *Juniperus procera* existing at the site.

Threats

Heavy grazing by domestic livestock is probably a key reason for the general lack of regeneration of tree species. Juniper, that dominates most of the wooded area, is not currently regenerating. The extreme dryness, that appears to have been prevalent over recent years, may also be an important factor, along with grazing, in preventing the regeneration of native tree species. The widespread planting of exotics, known to be invasive in other parts of the world, is another threat to the native trees. Even without regeneration of these exotics, the planting carried out will result into an acacia dominated woodland.

Management

The planting of Australian acacias amongst the relict open stand of junipers is unfortunate. Ideally, these trees should be removed and native trees (e.g. juniper) planted instead. Exotic planting should be restricted to areas devoid of native trees and focus on species with no known tendency to become weedy. Recently, the large remaining juniper in front of the church has been surrounded by concrete. This is not conducive to the conservation of this important tree. The concrete touching the base of the tree should be chipped away, however one should ensure that the base of the tree is not damaged in the process.