

# Herbarium

## *Ethiopia*





**Ethiopia's coffee forests are home to an astonishing variety of tree species. This diversity creates an optimal environment for coffee plants.**

To give you a better idea of its rich flora, our Addis Ababa team has explored the forests of southwestern Ethiopia.

Our field coordinator Shambe Kena and agricultural engineer Meded Awel visit coffee farms weekly during the harvest period. They monitor processes and work with quality manager Fantanesh Kelem to help producers deliver the best lots possible. In the autumn of 2021, they made the most of these visits to create a herbarium, to help you fully appreciate the incredible biodiversity!











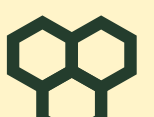





→ These photos were taken at the farms of Mustafa Mohamed Ali (trees 1, 4, 10 and 12), Khalid Shifa (trees 5, 6 and 13) and Nazimu Abamecha (2, 8 and 14) in the vicinity of Jimma. In Kaffa, Meded and Shambe visited Negusse Tadesse (7), Habtamu Abebe (11) and Zinabu Abamecha (3 and 15).

Shambe has also included a personal favourite, a picture of a majestic tree (9) taken in Wallaga, in the village of Waba. As a child, he would take refuge under a gigantic trunk of this type to shelter from the rain while herding his goats.

Our field data is based on information provided in the following books: Useful Trees and Shrubs for Ethiopia, by Bekele-Tesemma; and Flora of Ethiopia and Eritrea, by Sue Edwards.



# Each *tree* serves a specific purpose for coffee shrubs → CHECK THEM OUT!

 → SHADE  → SOIL ENRICHMENT  → EROSION CONTROL  → NATURAL BARRIER  → HUMIDITY RETENTION  → WATER SUPPLY  → FLOWERS/BEES HONEY  → FOOD/EDIBLE  → MEDICINAL USE  → FIREWOOD  → CONSTRUCTION TIMBER  → FODDER





1. Qararo 

→ OUTERIA

ADOLFI-

FRIEDERICI

| FAMILY

| → APOCACYNACEAE



## FUNCTIONS

☀️ → Shade

🌿 → Soil enrichment

## LEAF



## SIZE



→ The qararo is an endemic tree that can grow to up to 50 metres.

Its height and the characteristic buttresses created by its trunk make it particularly easy to spot. The qararo is a popular source of wood for use in carpentry and construction, so the Ethiopian population has exploited it massively. It has disappeared from many forests, but continues to grow in coffee forests, where farmers appreciate its shade and the positive effects of the humus produced by its leaves on soil fertility.





## 2. Wadeza

→ CORDIA  
ABYSSINICA  
AFRICANA

| FAMILY

| → BORAGINACEAE



## SIZE



## LEAF



→ This tree is very common in coffee forests, it offers good shade and many advantages. Its deep roots limit soil erosion on sloping ground, and its flowers attract bees for honey production.

Animals, which are a source of natural soil fertiliser, appreciate its fruit, so will leave coffee cherries alone. Wadeza wood is also a source of additional income, it is sold as timber for furniture and for making tools. Locals use its branches as firewood.

## FUNCTIONS

- ☀ → Shade
- 🔨 → Construction timber
- 🔥 → Firewood
- 🌿 → Erosion control
- 🐝 → Flowers/bees/honey



## FUNCTIONS

☀️ → Shade

🌱 → Soil enrichment

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## LEAF



## SIZE







# 3. Gatame



→ VITEX

DONIANA

SWEET

FAMILY

CAMIACETTE/LABIATAE



## LEAF



→ Used widely for reforestation, the gatame helps to fix nitrogen while its decomposing leaves improve soil quality.

It can grow to up to about twenty metres in height and offers good shade. Bees gather pollen from its flowers for honey production. Locals also use its flowers in a decoction in traditional medicine.

## SIZE



## FUNCTIONS

☀ → Shade

🍯 → Flowers/bees/honey

🌱 → Soil enrichment

⊕ → Medicinal use





# 4. Sotalo

→ MILLETIA

FERUGINEA

| FAMILY

| → FABACEAE



## SIZE



→ This species can grow to over 20 metres high and provides very good shade for shrub layers.

There are lots of them on coffee plots. Leaf decomposition enriches the soil, and farmers use its wood to make tools.

## FUNCTIONS

☀ → Shade

🌿 → Soil enrichment

🪓 → Construction timber

## LEAF





# 5. Ambabesa

→ ALBIZIA

SCHIMPERIANA

| FAMILY

| → FABACEAE



## SIZE



## LEAF



→ This species grows at high altitudes of between 1,400 and 2,000 metres.

Its roots fix nitrogen, making ambabesa very effective for soil conservation. It can reach 25 metres in height when fully grown and is also a good shade tree, so it is beneficial to coffee cultivation. Bees are particularly fond of its flower nectar, which produces a tasty honey.

Locals use its bark in a decoction in traditional medicine, and farmers collect its leaves to feed their livestock.

## FUNCTIONS

- ☀ → Shade
- 🌱 → Soil enrichment
- ## → Natural barrier
- 🌿 → Fodder
- 🔨 → Construction timber
- 🍯 → Flowers/bees/honey





# 6. Ebicha

→ VERNONIA  
AMYGDALINA

| FAMILY

| → ASTERACEAE



## SIZE



## LEAF



→ Farmers often plant this low-growing species (2 to 5 metres high) as a bush to protect plots and act as a wind barrier.

Its leaf decomposition improves soil fertility. Its flowers attract bees, which produce honey as an additional source of income. The bees improve coffee productivity and quality through pollination.

## FUNCTIONS

## → Natural barrier

🌱 → Soil enrichment

🍯 → Flowers/bees/honey

🌿 → Fodder





# 7. Birbirsā

→ **PODOCAR-**  
**PUS FALCATUS**

| FAMILY

→ **PODOCARPACEAE**



## LEAF



→ The birbirsa is a conifer that grows at high altitudes of around 2,000 metres.

It grows slowly, but can reach heights of over 20 metres and is a good source of shade. Its wood acts as an insect repellent and is rarely attacked. It is easy to work with, which explains why locals also use it to build houses and furniture. It can therefore serve as an additional source of income for farmers if necessary.

## SIZE



## FUNCTIONS

☀️ → Shade

🔨 → Construction timber





**8. Homi** 

→ PRUNUS  
AFRICANA

| FAMILY

| → ROSACEAE



## LEAF



→ The homi is an endemic tree species that grows naturally on plots and has been widely integrated into coffee production.

The fully grown trees are very tall, standing at over 20 metres, so provide optimal shade. Locals have exploited it massively as a material for making small items and it is becoming increasingly rare in the Ethiopian landscape. But it offers numerous benefits for farmers, ensuring its protection in coffee forests.

## SIZE



## FUNCTIONS

- ☀ → Shade
- 🌱 → Soil enrichment
- 🍯 → Flowers/bees/honey





**9. Dambi**   
→ **GARDENIA**  
**TERNIFOLIA**

**FAMILY**

→ **RUBIACEAE**



## LEAF



→ This is a very common shade tree in coffee forests, although it grows to just a medium size of about seven metres.

It is easily recognised because it grows around old existing trees, which over the long term will generally disappear. It has edible fruit. Its wood is quite hard to cut so is rarely used, but its branches serve as firewood. Bees collect pollen from the flowers, allowing farmers to produce honey.

## SIZE



## FUNCTIONS

- ☀ → Shade
- 🌿 → Fodder
- 🍯 → Flowers/bees/honey





10. *Badessa* 

→ SYZYGIUM  
GUINEENSE

| FAMILY

| → MYRTACEAE



## LEAF



## SIZE



→ The badessa is a very common species in coffee farming areas.

It grows to heights of 10 to 15 metres and provides good shade for coffee plants. Its leaves fall to the ground and help to enrich soil. Its flowers attract bees, which produce honey.

It has edible fruit. Locals collect its dead branches from the ground and use them as firewood. The species is also traditionally known to help cure intestinal ailments and rehydrate the sick.

## FUNCTIONS

🍯 → Flowers/bees/honey

🌱 → Soil enrichment

🔥 → Firewood

⊕ → Medicinal use





**11. Enset** 

→ **ENSETE  
VENTRICOSUM**



LEAF



SIZE



→ This tree is commonly associated with coffee in Ethiopia, not for its shade, but because its trunk serves as a very useful water reserve in the dry season.

The enset, also known as false banana on account of its appearance, is an extremely common tree in southern Ethiopia as it offers lots of benefits for populations. While it does not bear fruit, locals use its trunk to make an edible flour reputed to be energy-giving and which serves as the staple ingredient in the main foods in southern regions (various breads, cakes, etc.). Its large, tough leaves provide shelter from rain and protect the surrounding soil from erosion. Ethiopians weave the fibres from its trunk for use in various crafts to make practical everyday items (basketry, etc.). The enset fixes nitrogen and helps maintain soil quality wherever it grows.

## FUNCTIONS

- 💧 → Humidity retention
- 🌱 → Soil enrichment
- ## → Natural barrier
- 🍴 → Food/edible
- 💧 → Water supply





# 12. Kiltu

→ FICUS  
VASTA FORSK

| FAMILY  
| → MORACEAE



## LEAF



→ This tree can grow to 25 metres high. Its wide, rounded crown offers good shade for coffee trees. It is a species often found near waterways.

Its roots have the unique ability to retain moisture and then pass it on to neighbouring plants in the dry season. Its large leaves fertilise the soil. This tree also acts as a natural wind barrier, thus protecting other species.

## SIZE



## FUNCTIONS

- Water supply
- Soil enrichment
- Natural barrier





**13. Lafto** 

→ ACACIA

SEYAL

FAMILY

→ FABACEAE



## LEAF



→ The lafto is widespread in coffee forests, and in the Ethiopian landscape in general. It grows at both low altitudes and above 2,000 metres.

## SIZE



The tree has quite a thin trunk and a spreading crown, but with sparse foliage. Its diffuse shade is beneficial for surrounding crops. Locals use its wood for construction, and in particular to make charcoal, so it can be an additional source of income for farmers. Its branches and leaves are frequently laid on the ground for farmers to sit down on and rest or have lunch. Lafto helps fix nitrogen and contributes to soil fertility.

## FUNCTIONS

- ☀ → Shade
- 🌱 → Soil enrichment
- 🪵 → Construction timber
- 🔥 → Firewood





# 14. Bakanisa



→ CROTON  
MACROSTA-  
CHYUS

| FAMILY

| → EUPHORBIACEAE



## LEAF



## SIZE



→ This is a very common species in coffee forests, characterised by its rounded crown. Farmers set up hives and use its flowers to produce honey.

It attracts bees, which pollinate and thus improve coffee quality. Locals use bakanisa leaves for medicinal preparations. As a poultice, they serve to treat wounds and skin diseases and to soothe headaches. Traditionally, Ethiopians also use hot water containing its leaves to wash women who have just given birth.

## FUNCTIONS

☀️ → Shade

🍯 → Flowers/bees/honey

⊕ → Medicinal use





# 15. Baha

→ Olea

Welwitschii

| FAMILY

| → OLEACEAE



## LEAF



→ This is a shade tree that grows mostly in humid environments.

It can reach up to 10 to 15 metres in height. Locals use its wood to make plywood furniture, and its bark serves to build traditional beehives in coffee forests.

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## SIZE



## FUNCTIONS

☀ → Shade

🪵 → Construction timber



