

Did you know that...

- Peatlands are mainly composed by *Sphagnum sp.*, which has a water retention capacity of 20 times its own weight.

- Peatlands store 10% of the world resources of fresh water.

- Peatlands retain about 400 gigatonnes of carbon, contributing to the reduction climacteric changes.

- In Azores, most of the higher zones of the islands (with the exception of Graciosa and St. Maria), are occupied by hydrophilous vegetation, specially peatlands.

- Peatlands are very important as water supplies to the human populations in Azores and in the world.

LIFE Sustainable Laurel Forest Project www.life-laurissilva.spea.pt

This project aims to protect the natural habitats present in the Special Protection Area (SPA) *Pico da Vara/ Ribeira do Guilherme*. This SPA contains the bigger area of natural vegetation existent in the island of São Miguel and one of the biggest in the archipelago, being a suitable area for modeling the future management of the Regional Protected Areas Network.

As a result of the insularity and distance from the mainland, the Azores present many species that can only be found in this archipelago (endemic species), that are not even present in the other Macaronesian archipelagos (Madeira, Canarias and Cabo Verde).

It is for this reason that this projects reveals a great importance, because through its actions it will ensure the survival of this unique natural values!

www.life-laurissilva.spea.pt



Peatland, source of water

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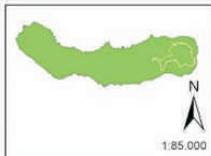


Peatland, source of water

The Peatlands can be found on mountain zones where a high level of water supply exists. They are poor habitats on mineral nutrients, therefore depending on the rain and fog to get them.

They are characterized for being ecosystems in which the water level is close to the surface, which promotes the development of the hydrophilous vegetation (adapted to flooding conditions) and Turf formation, which is a soil type that develops in anoxic conditions (lack of oxygen).

One of biggest Peatland stains in Azores can be found on the *Planalto dos Graminhais*, included on the Site of Community Importance *Pico da Vara/Planalto dos Graminhais*.



Legenda

- ZPE Pico da Vara - PTZPE0033
- Futuro SIC
- Laursilve Macaronésica - 9360
- Chameças Macaronésicas - 4050
- Turfeiras Activas-7710
- Turfeiras Degradadas-7120
- Turfeiras Arborizadas-91D0

Peatland vegetation

In the Azorean Archipelago exists 3 types of Peatlands: the Bogs, which are formed mainly by big mosses, the Fens, which are humid grassland and the Bog Woodland, which presents tree species on top of the mosses.

The first ones are dominated by big mosses (*Sphagnum sp.*) which are responsible for their structure and growth. These areas present a floristic diversity relatively low. Besides the *Sphagnum sp.* species (*Sphagnum palustre*, *S. auriculatum*, *S. subnitens*, *S. papillosum*, *S. squarrosum*, *S. cuspidatum*, *S. lescurii*, *S. centrale*, *S. capillifolium* e *S. compactum*), other important groups in bogs are the *Polytrichum commune*. Mosses and some vascular plants like the *Eleocharis multicaulis* e *Juncus (Juncus effusus)*.

The Fens in Azores are the equivalent to wetlands, sometimes of great floristic diversity, but normally dominated by one single species, the *Eleocharis palustre*.

In the Bog Woodlands we can find species that belong to the Laurel Forest, such as the Azorean Heather (*Erica Azorica*), the Azorean Juniper (*Juniperus brevifolia*) and the Azorean Blueberry (*Vaccinium cylindraceum*), normally of small size due to the winds, being associated to a *Sphagnum* blanket that covers the whole soil beneath the trees.

The Peatland importance



Polytrichum sp.



Sphagnum sp.



Eleocharis palustre

The Peatland has a very important role on the hydrologic cycle (water cycle) and on the carbon cycle, being essential to control aspects like the superficial run-off, the quantity and quality of water and even the microclimate, besides of having an important role in the reduction of the Climate Change.

The *Sphagnum sp.* has an enormous water retention capacity, up to 20 times its dry weight, because its cells work like a natural sponge. After intense rain, these mosses retain the water and release it gradually, which allows to control soil erosion, streams flux and replacement of the water levels on the groundwater.

Another particularity of these plants is their water purification capacity by retaining on their structure metals and toxic substances and due to their acid pH which has a bactericide effect.

The Turf is nothing more than a huge carbon accumulation, caused by the acidity and lack of oxygen on the Peatland. This way, the Peatland has a relevant role on the carbon cycle reducing the greenhouse effect, main cause of the Climate Change.

Threats

- Degradation and reduction of the Peatbog area due to her use as grassland and forestry projects.
- Invasion by the exotic species, namely the Chilean Rhubarb and the Tree Fern.
- Visitors trampling.



Gigante
Gunnera tinctoria



Feto arbóreo
Dryopteris antarctica