Conservation of the coastal and thermophilous forests of Tenerife

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Report 1

The vegetation on Tenerife consists of 5 layers, rising from sea level to the highest point of almost 4000 meters. My project is focusing on the two lowest layers: the cardonal-tabaibal vegetation and the thermophilous forest. Tenerife is an oceanic island that due to the isolation from the mainland has evolved a unique range of plant and animal species with strong relationships between the two. Therefore, endemic species can be found on the island that cannot be found elsewhere in the world. Sadly, both vegetation layers have been heavily damaged by human activities, that are mainly taking place in the exact same coastal areas. Nowadays, a very fragmented landscape remains, and it is hard to imagine what the ecosystem has once looked like before decades of human development.

The cardonal-tabaibal is one of the most typical vegetation layers of the island and it is characterised by succulent plants, like the impressive Euphorbia Canariensis. Other typical plant species in this vegetation layer are the Euphorbia Atropurpurea, Euphorbia Aphylla, Plocama Pendula and Kleinia Neriifolia. The succulent plants are very well adapted to the low humidity and high temperature that are typical for the coastal slopes, due to the thickening of their leaves.

Just above this layer we find ourselves in thermophilous forest, where we can find the Dracaena Draco, Juniperus Turbinata Canariensis, Pistachio Atlantic, Echium Leucophaeum and Limonium Macrophyllum. Some of these species can grow on completely vertical rocks where they preserve their water for many years to tolerate the typical drought. An example of a unique relationship that has evolved over the course of time on Tenerife, is the strong relationship between the Juniperus Turbinata Canariensis and the Gallotia Galloti, an endemic lizard species. The lizard is essential for the short distance dispersal of the Juniperus Turbinata Canariensis.

Today, only a few last patches of well-preserved cardonal-tabaibal vegetation and thermophilous forests can be found around the island. Rubén Barone Tosco, local ecologist and naturalist and my guide during my field work, shows me the last group of wild dragon trees on inaccessible cliffs in Anaga and the few places where well preserved cardonal-tabaibal vegetation and groups of juniper trees can still be found.

The thermophilous forest layer has been reduced to 2% of its original cover and turned into a layer of shrubs wherein only last few trees are still standing. The pictures above show the change in potential and real distribution of the thermophilous forest layer on Tenerife. The main reasons that so much of the original ecosystem has been lost are the tourism industry, the expansion of invasive species, intense logging, grazing and exotic agriculture.

According to Rubén Barone Tosco, today two of these reasons are the main threats to the cardonal-tabaibal vegetation and the thermophilous forest: the tourism industry and the expansion of invasive species. Examples of invasive species are Opuntia Dillenee and Agave Americana. They are fast regenerators and thereby taking over places in the ecosystem that were once taken by endemic species. The tourism industry on the other hand is a vast source of income for the island and therefore hard to decrease. On top of that, the Counsel of Tenerife is the party in charge of nature conservation on the island, whilst at the same time the party that is earning money from the tourism industry and further urban development.

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