

***Himantoglossum metlesicsianum* in Northern Tenerife:
An Endangered Orchid
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The island of Tenerife is part of Spain, although it lies quite far south, on the same latitude as the south of Morocco. Whilst it is not known for a high number of orchid species, it is frequently visited by orchid enthusiasts who come for species that can only be found here, namely *Habenaria tridactylites*, *Orchis canariensis* and *Himantoglossum metlesicsianum*. An additional benefit is that those orchids flower in our winter, so they offer a chance to combine the joy of the warm winter sun and orchid hunting.

H. tridactylites is the most common orchid on the Canary Islands and can be found in the regions where the climate is influenced by the trade winds, providing constant moisture. *O. canariensis* is an endemic of Tenerife, Gran Canaria, El Hierro, La Gomera and La Palma. It has similar climatic preferences as *H. tridactylites* but is rarer, although it can be locally abundant. *H. metlesicsianum* is an endemic of Tenerife and La Palma, where it was recently found. Most reports indicate that it is confined to the west of Tenerife. It can be found in the region between the communities of Santiago del Teide and Guia de Isora. It is a threatened orchid; estimates of the total population size vary from 1639 to more than 4000 plants. *H. metlesicsianum* is a tall plant which distinguishes it from *Himantoglossum robertianum*. The stem is longer than the flower spike (in *H. robertianum* it can be as long but not longer) and the leaves are distributed along the stem. The flowers are pinker, lacking the green tinge of *H. robertianum* and have only slightly wavy lip margins.

***H. metlesicsianum* in Northern Tenerife** – Spanish literature reports the existence of a population of about 70 plants in the hills above Icod de los Vinos, which is thought to have escaped from cultivation in a private garden. This mention is totally overlooked in all reports on *H. metlesicsianum* on Tenerife. To my great surprise I encountered in December 2013 two plants of this rare orchid in this part of the island, unaware of the existence of a possible population (Claessens 2014). The healthy appearance of the plants made me think that it could well be possible that there were other plants growing nearby. Unfortunately there was no chance to make further investigations. Mid November 2014 I returned to Tenerife. The first goal was of course to see if my suppositions were correct. I was unable to find any orchids in the region mentioned in Spanish literature. However, I was luckier at the spot where I found the initial two specimens. I found a total of 40 plants that were flowering or still in bud. Two main questions interested me: in what conditions does *H. metlesicsianum* grow in Northern Tenerife and what are the similarities or differences between this habitat and the well-known habitats in the west?

Habitats – The orchids were found in a small, north facing area with some scattered houses between small terraced fields. They were from 700 to 800 metres altitude, in a zone directly under the lower limit of the *Pinus canariensis* forests. Almost all specimens grow on old terrace walls, bordering the small fields that are still being used as vineyards or for growing potatoes. The steep hills of Tenerife make large scale agriculture impossible. Especially around the remote hamlets that lie high up on the volcano the little fields are still being tilled. They form a great contrast with the vast banana plantations, omnipresent near the coast.

The broad stone pile walls are old and contain enough humus for the orchids and for other plants as well. *Habenaria tridactylites*, *Centranthus ruber*, *Ranunculus cortusifolius*, *Aeonium* species (*A. canariense*, *A. undulatum*), *Polypodium macaronesicum* and *Davallia canariensis*, are present in almost all sites. Other plants, not found in all sites were: *Hypericum* sp., *Sonchus congestis*, *Oxalis pes-caprae*, *Trifolium* sp., *Aichryson laxum*, *Chamaecytisus proliferus*, *Rumex lunaria*, *Laurus* sp. and *Bituminaria bituminosa*. Most of those plants are indicators of a more or less humid environment and indicate the influence of the trade winds which force the air up the northern slopes. The air cools and starts condensing at an altitude of 500 to 600 metres, creating a layer of clouds that reaches up to 1700 meters in winter. Thus the orchids are supplied with enough moisture and protected against the powerful afternoon sun. That is also the reason why the orchids thrive in full sun, unprotected by plant cover or shade from the stone walls.

The West – The classical sites of *H. metlesicsianum* are all situated in the west and in order to compare this region with the sites in the north I studied three types of site: former almond orchards, abandoned Guanche fields and sites along the canals that run from the north to the south. The west is not under the influence of the trade winds and has a much more arid nature. The orchids grow in the block lava region where little humus is available. The influence of the sun is much larger and there is little rainfall; moisture is collected by the long needles of the indigenous pine, *Pinus canariensis*. The orchids respond to the harsh conditions in several ways: they grow at a higher altitude (900 to 1200 metres) and in the vicinity of a protective vegetative cover or in the shade of stone walls. Many sites along the road TF-38 from Chio to the Teide lie in valleys with small fields surrounded by stone walls. The fields were tilled by the ancient inhabitants of the island, the Guanches. Here the orchids find shelter under the shade of spreading and moisture retaining trees (Fig *Ficus carica* and Almond *Prunus dulcis*) and near stone walls.

Fig. 1: This single plant of *H. metlesicsianum* grew 1300 meters away from the main population on a stone wall. Icod de los Vinos, 26-11-2014.

Fig. 2: *H. metlesicsianum*, flower spike. Icod de los Vinos, 24-11-2014.

Fig. 3: *H. metlesicsianum* on a stone wall with *Aeonium undulatum*, *Polypodium macaronesicum*, *Davallia canariensis* and *Ranunculus cortusifolius*. Icod de los Vinos, 24-11-2014.

Photos by Jean Claessens



The accompanying plants reflect the different climatic circumstances, although there are several plants that can be found both in the north and the south. I recorded the following plants: *Asphodelus aestivus*, *Sonchus acaulis*, *Sonchus canariensis*, *Aeonium urbicum*, *Micromeria lachnophylla*, *Lavandula multifida*, *Opuntia ficus-indica*, *Kleinia neriifolia*, *Adenocarpus foliolosus*, *Rumex lunaria*, *Ranunculus cortusifolius*, *Davallia canariensis* and *Aeonium undulatum*. The last four species also were found in the north.

An Endangered Orchid – Although the climatic conditions in the north are much more suitable for most plants, as indicated by the lush vegetation, *H. metlesicsianum* favours more harsh conditions: it grows on stone walls with little humus and is not protected by plant cover or a stone wall. However, the water supply is much more constant than in the west, making it possible to survive in these conditions. The plants in the north are quite vigorous, showing that the growing conditions are suitable. Probably having escaped from cultivation in a garden, the plants have found an appropriate biotope. The region where the orchids grow is small and consists basically of two parallel valleys with a total surface of about 20 hectares. But the finding of one orchid in a valley 1300 metres away from the main population indicates that probably there are more sites. Searching for the orchids is a laborious job and even more difficult because most orchids grow on private property. In November the fields are not yet tilled, giving the opportunity to inspect the terrain.

This immediately indicates that the main threat to this small orchid population is that it is fully dependent on human activities. If the fields are no longer tilled the shrubs take over and completely cover the stone walls within a year, destroying the habitat for the orchid. Some farmers thoroughly “clean” the stone walls, stripping them of all vegetative cover, maybe including the orchids. There is a fine balance between human activities and retaining suitable growing places and conditions.

In 2004 members of a German botanical excursion found *H. metlesicsianum* in the Barranco de Bocaron, in the hills above Los Silos. Richard Bate reported with photographs on the website Flickr that he had found a site of 15 plants among the abandoned almond groves in the region of Adeje as well as a single specimen in the surroundings of Masca. There are older reports of plants that were found near Agumansa (Northern Tenerife) and in the surroundings of Güimar (south Tenerife). Those findings indicate that *H. metlesicsianum* might be more widespread on Tenerife than expected.

Fig. 4: Stone walls surrounding tilled land are the main habitat of *H. metlesicsianum* in the north. Icod de los Vinos, 25-11-2014.

Fig. 5: A larger group of *H. metlesicsianum* with *Centranthus ruber* and *Polypodium macaronicum*. Icod de los Vinos, 24-11-2014

Photos by Jean Claessens

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Nevertheless, *H. metlesicsianum* is an endangered orchid throughout the island. In the west it is threatened by overgrowth of old almond orchards and transport of the water from the north to the south in pipes instead of in the old canals, diminishing the supply of moisture for the plants growing along the canals. In the North it fully depends on human activities to preserve its growing places. Therefore it is important that any secondary growing place offering survival for this beautiful but highly endangered orchid should be protected. Let's hope this article can contribute to that. I want to thank Josef Stierli and Richard Bate for their valuable information on the presence of *H. metlesicsianum*.

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