HOW RARE MAY AN ORCHID BE?

Candidacy for the rarest orchid depends on what criteria are used. In the UK the ephemeral Ghost orchid (*Epipogium aphyllum*) was unseen for so many years that it was classified as extirpated (locally extinct) in 2005, and then found growing in Herefordshire in 2009. One Lady's Slipper orchid (*Cypripedium calceolus*) gets police protection when it is flowering as it is believed to be the last wild plant of its kind in the UK; other Lady's Slipper orchids in the UK are the result of re-introduction. Although both Ghost orchids and Lady's Slipper orchids are rare in the UK they can be seen growing in greater numbers in other European countries. In fact standing in some Alpine meadows in Switzerland you might see so many that you would consider Lady's Slipper orchids locally abundant. In this case rarity is dependent on location.

The International Union for the Conservation of Nature Red List provides information on the conservation status of many species. However orchids are underrepresented on the Red List. While 100% of mammal and bird species have been Red Listed only 2% of orchid species have been Red Listed.

Hassan Rankou, based at Royal Botanic Gardens, Kew, is working on getting more orchids assessed to IUCN standards in order to support global orchid conservation efforts with awareness of which species are most at risk, and their relevant taxonomic and geographical details. While the IUCN Red List represents an international standard of the assessment of rarity it cannot specify which is the rarest orchid in the world.

As with most areas of knowledge it is things that occupy the liminal space between known and unknown that indicate both the extent of knowledge, and how much more there is to be known.

This was demonstrated for me by an orchid in the Madagascan rainforest. Hiking a forest trail an eagle-eyed member of the group spotted a flower on the forest floor. We do know it is from the genus Didymoplexis.

Three species of Didymoplexis are known to occur in the Afro-Madagascan region: *D. africana, D. verrucosa* and *D. madagascariensis.* Supplementing the five known herbarium specimens of *D. madagascariensis* are field photographs. Key identifying features of *D. madagascariensis* are in the plant's flowers. But the type specimen of *D. madagascariensis* is a fruiting, not flowering plant. So evidence with which to identify species of Didymoplexis in Madagascar is limited. Some

Didymoplexis sp.

Didymoplexis sightings in Madagascar have even been ascribed to *D. madagascariensis* on the basis that other species in the

Didymoplexis genus were not known at that time in Madagascar.

This means that the Didymoplexis genus in Madagascar is so little known in scientific terms that it is technically difficult to be sure what species you have seen.

If I return to Madagascar, and use the GPS co-ordinates from my group's 2013 sighting to go right back to the exact location where we saw a Didymoplexis there might be nothing to see. As a holomycotrophic plant that does not rely on photosynthesis for energy they are only visible during their fleeting flowering and fruiting season.

For me this Didymoplexis is probably the rarest orchid that I will ever see.

SUZANNE MASTERS

Didymoplex verrucosa

Swiss Orchid Foundation at the Herbarium Jany Renz