



2013 Fieldwork Grant

Salep: Edible wild orchids in Turkey



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Background

In Turkey tubers collected from more than 30 different kinds of wild orchids are collected for consumption. These tubers are dried and ground to make a powder called *salep*, that is used to make ice cream, called *maraş dondurma* or *Kahramanmaraş* ice cream, and a hot drink that is also called *salep*. Apart from being used as a food *salep* continues to be used for its medicinal properties; it is taken in the form of a drink for the purpose of treating diarrhoea and colds.

Orchid tuber collection takes place during the flowering season, which for most species in Turkey occurs between February and May. When orchids are dug up for *salep*, the young tuber is collected, sometimes the flowers are also collected and the rest of the plant is usually discarded. Concerns have been raised that collecting orchid tubers to make *salep* is responsible for orchid population decline in Turkey. Consequently it has been recommended that orchids should not be collected for consumption. However on a global scale the biggest threat to orchids is considered to be habitat loss. This raises the question: to what extent do habitat loss, and collection pose threats to Turkish wild orchids?

2013 Fieldwork

Site visits were made to locations in Muğla province, south-west Turkey. Orchid tuber collection was found to be taking place. For example:



April 2012

In an area being managed for olive cultivation there were hundreds of flowering Italian orchids (*Orchis italica*). Several other orchid species were also present including a large specimen of the rare Giant orchid (*Himantoglossum robertianum*) surrounded by several young Giant orchids that had not yet reached flowering size.



April 2013

A repeat visit to the site described above, one year later found no flowering Italian orchids. Discarded leaf rosettes next to holes dug in the ground indicated where orchids had been dug up. and their tubers collected. Some orchids with emerging flower spikes were present, but the Giant orchid was gone.



Bunches of wild orchid flowers are also sold on local markets as cut flowers. Some were from species of orchid known to be collected for *salep*. Other bunches were flowers from species not known to be used for *salep*, for example Loose-flowered orchids (*Anacamptis laxiflora*).

While there is evidence of collection of orchid tubers in Muğla province there are also indications habitat loss may have a role in the decline of orchid populations. Road development, conversion of olive groves to housing plots and agricultural development were all seen to be occurring in areas where orchids grew. These kinds of changes in land use also change its value as a habitat for orchids.



Road widening replaces trees and mixed vegetation with road surface. Manoeuvring machinery and dumping surplus soil and rock cause disturbance to habitats along the expanded road. Wider roads improve access and can open up areas to further development and resource extraction, which can further degrade habitats that orchids grow in.



With tourism increasing the value of housing, particularly in coastal areas, land on which olives are grown can have greater value if converted to building development. Traditionally managed olive groves often host a diversity of orchid species. Conversion of olive groves to buildings removes a notable habitat in which orchids and a range of other wild plants grow.

Strawberries and a bunch of wild orchid flowers can both be bought for about £1 each on local markets.



Orchids whose flowers are collected may reflower in subsequent years. Even when orchid tubers are collected there may be enough seeds in the soil and juvenile plants to allow the population of orchids to persist. However habitat disturbance and habitat loss caused by building developments, road widening and agricultural change pose a more permanent threat to orchid populations. Significant populations of orchids grow on land that is managed through traditional agricultural and pastoral practices. Cultivation of different crops and intensification of agriculture, for example use of fertilisers, can make agricultural land inhospitable to orchids.

Values of orchids

Orchids used for *salep* are not just a unit of biodiversity, they have other specific values. Collecting orchid tubers for *salep* provides a seasonal income for collectors. Ice cream is still manufactured on a small scale, it is not restricted to large international companies. Ice cream made from orchid tubers sold by local collectors to local ice cream makers provides an income for most of the year to people making and selling ice cream in small towns and villages.

Conclusions and continuing research

Changes in land use, particularly on land that was cultivated under low intensity agricultural techniques, may also be having an impact on wild orchid populations. Following on from identifying suitable field research sites in 2013, research will continue by collecting data on the process of collection, examining the role of cultivation in reducing pressure on wild orchid populations, and assessing the scale of orchid habitat loss.