Endemic Species and New Records of Orchids in Hkakaborazi and Surrounding Areas

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Introduction

"the area is the watershed of the Maikha River with China"

Location and topography

This study was undertaken in an area adjoining Hkakaborazi National Park (Myitkyina Division, Myanmar). Myitkyina Division is in the Putao District of Kachin State in the northernmost part of Myanmar. Within Putao District there are five townships: Naung Mung in the north, Khaung-Lam-Bhu in the east, Machanbaw in the south-east, Putao in the centre and Sumprabum in the south.

The area is the watershed of the Maikha River with China. It is very mountainous with rugged terrain and fast-flowing streams and incorporates Hkakaborazi (5,881m) which is the highest peak in south-east Asia. It is landlocked with no transportation except by footpath and by bridges made of steel cable or cane across the streams.

Previous knowledge of orchids in this region

Most of the previous expeditions to this region have not put much emphasis on orchid research.

"eminent plant collector and explorer F.K.Ward discovered the new *Paphiopedilum*"

In 1922 eminent plant collector and explorer F.K.Ward discovered the new *Paphiopedilum*, between Putao and Nam Tamai, but the flower was lost. He found it again in the same region between 1930 and 1931 and later in 1937, growing on a dry sandy bank in the pine forest just below Htawgaw about 241 km from his previous sighting.

After this find of F.K. Ward's, no more discoveries were reported for many years. This could be due to the remoteness of this region, as it is in the extreme north of Myanmar and one of the least-known parts of south-east Asia.

Some 40 years later in 1977, on an expedition that was organised by a team from Myanmar Orchid Nursery of the Ministry of Forestry to search for this long-lost species, *Paphiopedilum* was rediscovered. It took the team two months to discover the plants near Chan Kwe Pu Hill (2,827m) and Hkah Kin Village on the eastern side of Maikha River: they found a colony of about 50 plants with some in bloom.

"some 40 years later in 1977, *Paphiopedilum* was rediscovered"

The Expedition

In April 1998 I received an invitation from U. Saw Tun Khaing, the Country Programme coordinator of the Wildlife Conservation Society (Myanmar) to join an expedition to the Naung Mung area. I readily accepted.

There were 11 participants in this expedition, with 2 participants from the Myanmar Floriculture Association, including myself. We flew from Yangon to Putao on the 24 April 1998.

The expedition covered more than 201 km, incorporating 13 villages, of the area adjoining Hkakaborazi National Park. The expedition's route map is shown in Appendix 2 of the paper by Saw Lwin, in this publication.

My aim during this expedition was to study the orchids of the area, which have never been researched in detail before, placing emphasis on the distribution, habitats and populations of the species endemic to this area, and to create new records of orchid species.

Results

The orchids collected during our trip are listed below.

1. Aerides falcatum
2. *Anoectochilus* spp
3. Acampe longifolia
4. Bulbophyllum odoratissimum
5. *Bulbophyllum* spp
6. Cymbidium aloifolium
7. Cymbidium gigantea
8. Cymbidium insigne
9. *Cymbidium* spp
10. *Cirrhopetalum* spp
11. Coelogyne hutteriana
12. *Coelogyne* spp
13. Dendrobium aduncum
14. Dendrobium brymerianum
15. Dendrobium densiflorum
16. Dendrobium nobile
17. Dendrobium stuposum
18. Dendrobium thyrsiflorum
19. Dendrobium transparens
20. *Dendrobium* spp
21. Eria pannea
22. Eria pulchella
23. Epipogium roseum
24. *Eulophia* spp
25. *Goodyera* spp
26. *Habenaria* spp
27. *Oberonia* spp
28. Micropera rostrata
29. Paphiopedilum wardii
30. Phalaenopsis parishii
31. Phaius tankervilliae
32. Phaius flavus
33. Pholidota chinensis
34. Pleione maculata
35. *Pleione* spp
36. Rhynchostylis retusa
37. *Sarcanthus* spp
38. *Thrixspermum* spp
39. *Thunia* spp

Of the species collected those which are believed to be endemic to this region are discussed below.

Paphiopedilum wardii Summehayes

Distribution

During this expedition, *Paphiopedilum wardii* was found near Nam Sabum Village, between Nam Ti Camp and Babulon Hill, near Tasa Ku and Lone Seng Hill and at Gawlei Village. We also obtained about 50 specimens of *Paphiopedilum wardii* that the villagers had collected from the surrounding mountains. We did not find *Paphiopedilum wardii* any more after Gawlei, so we presume that Gawlei must be the limit of species' distribution in this area.

"colonies of 50-60 plants were found at each location"

Habitat

The plants we found grew mostly in the deep shade of the primary forest floor in deep humus and loose soil. The terrain is very steep with a gradient of 60-70%. The slopes mostly face north but that at Tasa Ku faces south. Colonies of 50-60 plants were found at each location and included young seedlings and mature plants. As it was after the flowering period (which is from December to March) we observed only seed pods on the plants.

Identification

The plant is easy to distinguish on the ground with its silvery green and dark tessellated green on the upper surface of the leaf. The lower surface of the basal part of the leaf has dense purple spots. New growth appears from both the lower leaf axil and from the creeping rhizomes.

"the plant is easy to distinguish on the ground with its silvery green and dark tessellated green on the upper surface of the leaf"

The flowers are single with a purple, pubescent peduncle 20-25 cm long and measure 8-10 cm across. The dorsal sepals are green with white veins, the lateral petals are greenish white flushed with brownish purple and spotted all over with dark maroon and the lips are greenish yellow, finely spotted with brown.

The flowers from the plants collected were uniform with very little variation in size and colour.

***Dendrobium aduncum* Wall ex Lindl**

Distribution

This species has not been recorded in Myanmar before. It was first introduced from India and subsequently from Malaysia and south-west China (Schelpe and Stewart 1990). On this expedition it was found between Nam Sabum and Nam Ti and near Ratbaw.

Habitat

It was mostly found at elevations of between 500-1,000m, on trees along the streams, in partial sunlight.

Description

This species hangs from the branches of trees along streams, as a tangle of stems. The stems are stiff, slender branches, greenish grey in colour, with greyish white leaf sheaths. Old stems can be 40-60 cm long. The leaves are linear lanceolate and deciduous. The flower buds appear from the inter-nodes, with one or two flowers at each node. The flowers are pink and measure about 1.5 cm across. A distinctive feature of the flower is the lip, which is small and globular and the tip is like a hook at the centre of the flower. The inside surface is hairy with a bright purple anther cap. The sepals and petals are rather similar in shape and colour. The flowering season is in May and June.

"this species hangs from the branches of trees along streams, as a tangle of stems"

***Dendrobium brymerianum* Reich b.f.**

Distribution

Grant (1895) wrote that the species existed somewhere in Burma, but no specific location was mentioned. Pridgeon (1992) described it as a striking species from Burma, Thailand, and Laos. During our expedition, we found it between Nam Sabum and Nam Ti Camp.

Habitat

Plants were found on branches of large trees 50 to 60m high in the primary forest. The branches shade the plants. The plants grow at elevations greater than 1,500masl.

Description

The terete stem is slightly swollen in the middle and 12-18 inches long. The leaves are persistent, at the upper end of the stem. The golden yellow flowers appear near the top of the stem; they are 2 inches across and have a lip with a beard-like appendage. The flowering season is in the period from March to May.

***Epipogium roseum* (Don) Lindl**

Distribution

This species is found in Africa, Asia, Australia, and New Caledonia. In Malaysia, it has been found only once, in the Cameron highlands (Siedenfaden and Wood 1992).

This species has not been recorded in Myanmar before. We found the plant, in flower, between Nam Sabum and Nam Ti.

Habitat

Saprophytic rhizomes are ovoid horizontal tubers. We found the plants inside the ankle-deep grasses in the open sunlight.

Description

The stem is yellowish white and the flowers are white. Many flowers grow from the base of the rhizome. The flower is 1-2 cm long, the lip 1 cm long and the flower bract 1.5 cm long.

Conclusions

We believe that

- there are many new species unrecorded in the orchid world,
- there are some known species that have not yet been recorded in Myanmar, and
- existing known species should be properly surveyed, recorded, and preserved in the interests of biodiversity conservation in this region.

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