

Orchids of Papua New Guinea

Some Unusual Orchids from the Northeast Highlands

TEXT AND PHOTOGRAPHS BY SPIRO KASOMENAKIS



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A CHANCE ENCOUNTER with a photography book at the Strand bookstalls decades ago sowed the seeds for something that would have to wait 30 years to be realized! The book in question was a photography book with portraits of the native people of New Guinea, resplendent in feathers and paint, competing for attention with the extraordinary flora and fauna of their country. We did get to meet these people I glimpsed in that book so long ago: the Huli wigmen, the “mudmen” and several other tribes, and we saw a good representation of the very rich flora of this country. Papua, New Guinea, is the eastern half of a large, mountainous island north of Australia. The flora, especially the orchid flora, of this island is incredibly diverse, as are the native peoples. There are over 300 languages (not dialects!) spoken on the island. The trip was yet another Orchid Conservation Alliance (OCA) “Orchids in the Wild” trip, a first for this part of the world. Our focus was on orchids, and especially orchids of the highland regions of Mt. Hagen and Mt. Wilhelm; two mountains in the Western Highlands province with considerable areas of primary forest, rich in orchid species. A group of nine of us tramped about, and huffed and puffed at these high elevations (over 5,000 feet [1,524 m]), making sure to bundle up and stay warm during the cool nights. The weather was sunny during the daytime and misty/rainy/cold at night. It was comfortable enough for most of us used to temperate climates, but apparently not so much for the locals; most wore jackets and winter hats!

Botanists have been investigating this most extraordinary flora for over a century; orchid specialists such as Rudolph Schlechter and J. J. Smith, in the early part of the 20th century, published extensive firsthand accounts, which are still standard works on the subject a century later. Their floras are very important, but difficult and unwieldy to use, especially in the field. I managed to bring along P. Van Royen’s excellent work, *The Orchids of the High Mountains of New Guinea*, which provided some help in identifying species back at camp in the evenings. Another member of the group brought along André Millar’s book *Orchids of Papua New Guinea*, which is a wonderful introduction, but somewhat less useful for our purposes, as it deals mostly with showy lowland dendrobiums and such. A better resource would have been the website “Orchids of New Guinea” (www.orchids.org)



- [1] *Bulbophyllum brachypus*
- [2] *Agrostophyllum majus*
- [3] *Bulbophyllum antennatum*
- [4] *Bulbophyllum cf. sarcoglossum*

- [5] *Bulbophyllum lepanthiflorum*
- [6] *Bulbophyllum spongiola*
- [7] *Bulbophyllum takeuchi*

orchidsnewguinea.com), the work of Dr. Eduard de Vogel, Neville Howcroft and Wolfgang Bandisch, but unfortunately there is no internet service in the remote areas we stayed in. I would make great use of it back home, in addition to the classic works mentioned above. This part of the world is a hotspot of orchid diversity, having close to 3,000 species native to the island, many of them endemic. Some species have been familiar to orchid lovers for many years now; species such as the various *Latouria dendrobiums* from the lowlands, and highland types such as the spectacular and variable *Dendrobium cuthbertsonii*. We saw and photographed *Den. cuthbertsonii* in several locations, and I suspect most of you either grow or at least have seen pictures of the many awarded clones of this species. The same can be said for *Mediocalcar decorata*, *Dendrobium albiflorum* (*Cadetia potamophila*) and others. They are often seen in collections, and are wonderful subjects for cultivation. So I thought it would be of interest to share some photographs of the less often seen, or at least photographed, species from this part of the world. Interestingly, we did not see *Mediocalcar decorata* in the wild, but saw at least a half dozen other species of this genus, all with similar flowers in different combinations of red, white, yellow and green. The majority of the *Mediocalcar* species have single or pairs of leaves atop tiny pseudobulbs; one species on Mt. Wilhelm was quite succulent in habit, and looked almost like a tiny *Haworthia*. Identification for most of these plants, and many others, is difficult in the field, as dissections and measurements are needed, and collection of specimens is obviously not an option. Actually, most of the species of orchids we came upon in the forest were unfamiliar to most of us. We had to be satisfied with identifying plants to only the genus. Bulbophyllums and dendrobiums were two prominent groups that made up the bulk of orchids in the field, but there were also lesser known genera such as *Phreatia*, *Glossorhyncha*, *Octarrhena* and a bewildering array of terrestrial species, many not in bloom. Among the terrestrial species were two species of *Pterostylis*, a primarily Australian genus, *Pterostylis caulescens* and *Pterostylis papuana*, the first on Mt. Hagen, the second on Mt. Wilhelm. Both were growing in wet, shady, mossy places, under taller vegetation. *Corybas* have fantastic complex flowers but unfortunately neither of the two species we found were in flower at the time.



[8] *Bulbophyllum unicaudatum*

[9] *Ceratostylis* species

[10] The author admiring an unidentified *Dendrobium* species.

[11] *Epiblastis* species

[12] *Ceratostylis* species

[13] *Glossorhyncha fructicola*

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Peristylus pachyneurus — a small delicate terrestrial plant with little whorled, plicate leaves at the base, grows on rocks and embankments on Mt. Hagen. *Liparis altigena*, *Liparis brunescens* and *Liparis wernerii* are all plants of the dark, primary forest; the first species growing in wet, mossycushions, the other two epiphytically or semiepiphytically. Other fascinating jewels encountered included *Peristylus triarnus* — another true terrestrial, with long inflorescences of green flowers; *Calanthe micrantha* — a large, leafy forest floor plant, with small green flowers, quite unlike the Asiatic calanthes that usually have more showy flowers; *Crepidium* cf. *megalanthum* — long known as a species of *Malaxis*, grows as a forest-floor plant in very wet areas; *Platylepis zeuxinoides* — a small jewel orchid, with whorls of pretty foliage and tall spikes of brown flowers, peeking through the vegetation; *Caladenia papuana* grows in alpine grasslands and I suspect the plants we saw were cleistogamous (a form of self-fertilization that occurs in a permanently closed flower), as it was sunny, but no flowers were open; *Goodyera rubicunda* is another pretty terrestrial from this a widely distributed genus; several species of *Epiblastis*, most with arresting red, tubular flowers, most probably pollinated by birds; and *Agrostophyllum majus* — several species of this genus were observed on both mountains. The latter are usually large sedgeliike plants with congested inflorescences of waxy white flowers. *Phreatia* was also one of the dominant genera in this area. All species observed had rat-tail inflorescences of white flowers. *Thelasis carinata* formed large, rambling plants with inflorescences of small, white flowers. Species of *Glomera*, another very diverse genus, include large plants with globose inflorescences as well as tiny plants that formed large, pillowlike masses. *Ceratostylis* species were easily recognized by their habit of blooming from the top of the stemlike pseudobulbs and their mostly white stellate flowers. *Medicalcar subtreres*, an unusual *Medicalcar* species in both flower color and habit, produces concolor yellow flowers that do not open very widely, and almost terete foliage. *Pholidota carnea* formed large, rambling plants with stemlike pseudobulbs and very showy red flowers.

Bulbophyllums were ubiquitous throughout the area. This enormous genus exhibits such variability in flower and plant forms it could be a separate survey of its own. *Bulbophyllum brachypus*,



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[14] *Glomera* species

[15] *Glomera* species

[16] *Liparis altigena*

[17] *Liparis brunescens*

[18] Tentatively identified as *Glossorhyncha monticuprina*.

[19] *Octarrhena cordata*

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Bulbophyllum cf. *saccoglossum* and *Bulbophyllum takeuchi* all have unusual pouched flowers that look somewhat like odd little paphiopedilums. *Bulbophyllum antennatum*, a rather sinister looking flower, was easily overlooked in the dark forest. *Bulbophyllum spongiola* formed lanky, sprawling plants on Mt. Wilhelm. We found it growing by a stream in deep shade. *Bulbophyllum unicaudatum* grew as tiny little plants on a mossy tree trunk near a river we encountered. Because of its unusual red flowers, I suggested the name “red unicorn bulbo.” They were a lucky find, as we were running out of daylight on the last day in the field and red flowers are hard to spot in dimming light. *Bulbophyllum lepanthiflorum* and *Bulbophyllum linearilabium* were two very different plants growing on the same branch in good light. The first grows in a very unusual pendent habit producing round leaves and small white flowers near the base of the plant. If you were in South American and stumbled across the second species you might think it a *Barbosella*. Plants consist of narrow upright foliage on almost no pseudobulb and the upright inflorescences carry dark, elongated clamshell flowers with a long featherlike lip that flutters in the breeze!

Octarrhena, a very diverse genus of mostly small mat-forming plants, is yet another genus almost unseen outside of New Guinea. Three species we could identify were observed: *Octarrhena cordata*, *Octarrhena platyrachis* and *Octarrhena bilabrata*. You really need a magnifying glass to appreciate these tiny flowers. Speaking of tiny flowers, several species of *Oberonia* were encountered. These plants were easy to recognize, at least to genus, with their fans or chains of flattened leaves and spikes of tiny (really tiny) flowers. If you think *Oberonia* flowers are tiny, *Glossorhyncha fruticola* and *Glossorhyncha monticuprina* produce tiny succulent-leaved plants with even tinier flowers. While on Mt. Hagen, we encountered one of the strangest plants of our trip and we aren't even sure of the genus, although the flowers somewhat fit a *Bulbophyllum* species. These tiny plants, completely covered in glandular hairs — leaves, stems and flowers — were found growing in deep moss under wet conditions, and if anyone reading this article recognizes it, I would love to know its name.

I have to admit it was work preparing for this trip — vaccinations, long plane rides, jet-lag, considerable expense, and even a sudden attack of paranoia about



- [20] *Liparis wernerii*
- [21] *Oberonia* species
- [22] *Octarrhena bilabrata*
- [23] *Peristylus triarnus*

- [24] Is this an even more bizarre *Bulbophyllum*?
- [25] *Octarrhena platyrachis*



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poisonous snakes (Do not ask!). It was work on the trip itself — the long bumpy car rides over impossible roads, petty crime in the cities and the occasional illness, but it was worth it! Boy was it worth it! The orchids were otherworldly, the people friendly and generous. It was a once-in-a-lifetime trip.

The OCA will be going back in a few years. Well...maybe twice-in-a-lifetime?

— Spiro Kasomenakis has been growing orchids, and has been an AOS member, since the 1980s. His first orchid

was *Paphiopedilum callosum*, and he wishes that he still had it in his light garden. Travel always includes orchids, especially in their native habitats or at least in collections. The allure of these plants is undeniable, and once you commit to entering the “rabbit hole” you may never be the same again. 158-20 Powells Cove Boulevard, Beechurst, New York 11357 (email: kasomenakis@aol.com).

[26] Remnant forest tree colonized by an *Oberonia* species.

[27] *Pholidota carnea*

[28] Moss forest on Mount Wilhelm.

[29] *Phreatia* species

[30] *Pterostylis papuana*

[31] *Platylepis zeuxinoides*