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Aerides upcmae

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Summary: A new species of *Aerides* is described as ***Aerides upcmae***

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A spectacular new species of *Aerides* (Orchidaceae) from the Philippines

Abstract: The Philippines is one of the most biodiverse countries in the world. Despite having lost much of its forests and various habitats, the archipelago continues to hold unknown species of plants. Continuing research and field work has revealed a stunningly beautiful orchid species. We take this opportunity to name ***Aerides upcmae***, as new to science.

Introduction: It is rare to find large and highly attractive orchid species in the wilderness of the Philippines due to habitat destruction and overcollection. To date, there are eleven ***Aerides*** species found across the major island groups of the Philippines. A number of orchid species that have been in cultivation for decades by large plant nurseries abroad have vague names or are Philippine species of uncertain provenance. Some ***Aerides*** species have been given varietal names, lumped with other species or plainly misidentified. The authors have carried out investigations, albeit with much difficulty, to ascertain the origins of species found in cultivation. Early literature and previous records of the distribution of ***Aerides*** species were reviewed. Microscopic examinations were also conducted on known Aerides species distributed in the Philippines and neighboring countries.

Aerides upcmae Motes, M.D. De Leon, Cootes, & D. Cabactulan **sp. nov.**
HOLOTYPE: Cultivated, Philippines: Mindanao, Bukidnon, December 1st, 2019, ex collected Mindanao: Bukidnon, Miguel David De Leon MDL1912001, **PNH** (custody of **CMUH** December 4th, 2020)

PLANT DESCRIPTION

Growth habit: Epiphytic, monopodial, upright to pendulous. **Stems:** cylindrical, glabrous, reaching lengths of over 1 meter, 1–1.6 cm in diameter, covered by imbricating basal leaf sheaths. **Leaves:** distichous, sessile, oblong, glabrous, up to 48 cm long by 4.8 cm wide, leathery thick, flattened, semi-arching, nerves absent on both sides, base conduplicate, apex distinctly and unequally emarginate. **Inflorescence:** axillary, one to four, 15–47 cm long by 5–7.3 cm in diameter, cylindrical, racemose, pendulous, arching, glabrous, bearing up to 45 delightfully fragrant citrusy-musky flowers, negative geotropic, rachis shallowly grooved, flower diameter 3 cm across lateral sepals. **Flower color:** tepals base colour light green to greenish white, dark purple blotches on

the apices of the petals, sepals and lip, lateral lobes of lip greenish white with purple striated lines at the base, middle lobe greenish white, with few purple spots from the base and solid dark purple from the anterior towards the central interior and the upper callus, column and column foot are white, spur is green to greenish purple, ovary greenish white at the base of the rachis and purplish at the base of the sepals. **Peduncle:** terete, glabrous, 15 – 20 cm long by 4.5 – 5 mm in diameter. **Bracts:** triangular, involute, persistent; non-floral bracts 4 – 5, 10 – 17 mm long by 11 – 12 mm wide, floral bracts 6 mm long by 4 mm wide. **Ovary:** terete, glabrous, slightly grooved, up to 22 – 24 mm long by 6 mm in diameter. **Dorsal sepal:** obtuse-obovate, flattened, margins entire, 16.5 – 17 mm long by 9.5 – 10 mm wide, 9-nerved. **Petals:** obovate, margins entire and irregularly minutely serrated towards the apex, slightly revolute, 12.5 mm long by 9 mm wide. **Lateral sepals:** broadly obovate, adnate to the column foot, margins entire, slightly revolute, 12.5 mm long by 12.5 mm wide, 11-nerved. **Labellum:** trilobed; lateral lobes truncate-flabellate, widely revolute, margins entire, apex margins erose, 1.2 cm widest, 5.5 mm wide at the base of the middle lobe, 1.8 cm long from apex to the base of the column foot, 0.9 – 1 mm long from apex to the base of the lateral lobes; middle lobe: horizontally oriented, parallel to the spur, elliptic-ovate, margins erose, anterior horizontally revolute nearly covering the apex of the spur, apex erose, bilobulate, shallowly channeled at the central posterior base between the upper calli, slight curved upwards, apex erose, 15 – 16.5 mm long by 10 mm wide at the base of the lateral lobes and 9 mm widest. **Spur:** short, narrowly conical, 14 mm long from column foot to apex, 10 mm long from the base of the midlobe to apex, 5 mm in diameter from the base of the column foot and 3 mm in diameter from the center; entrance to the nectary: upper calli paired, triangular, about 1 mm high, distally spaced about 2 mm wide at the base of the lateral lobes; lower calli paired, oblong, tightly closed at the center of the nectary, 2 mm long by 0.8 mm wide, distally 3 mm long from the upper calli. **Column:** short, cylindrical, 3.5 mm long by 4 mm in diameter; rostellum lanceolate, paired, 1.5 mm long by 0.8 mm wide; a pair of oblong calli under the base of the rostellum about 0.20 mm in diameter; column foot rectangular, vertically low decurrent, 12 mm long by 5 mm wide, anther cap triangular, concave by 4 mm long by 3 mm wide. **Pollinia:** prolate-spheroidal, unequally paired, 1.35 mm in diameter; stipe oblong, 2.5 mm long by 0.5 mm wide, viscidium oblong about 1.5 mm in diameter. **Stigma:** rounded, concave, 3.5 mm in diameter. **Infructescence (immature):** conical, with three ridges, one each laterally and inferiorly, 0.7 cm in diameter, 3 cm long.

Discussion: ***Aerides upcmae*** is most similar to mainland Southeast Asian species: ***Aer. crassifolia*** Parish ex Burbidge, ***Aer. falcata*** Lindley, and ***Aer. houlletiana*** Rchb.f. but differs in the overall floral morphology. The lateral lip lobes of ***Aer. upcmae*** are truncate-flabellate, whereas those of **Aer.** ***crassifolia*** and ***Aer. houlletiana*** are narrowly falcate-lanceolate, and broadly falcate in ***Aer. falcata***. The middle lobe of ***Aer. upcmae*** is elliptic-ovate whereas, trullate in ***Aer. crassifolia***, broadly ovate in ***Aer. falcata*** and rhomboid in ***Aer. houlletiana***. The spur of ***Aer. upcmae*** is recurved at the base of the column foot whereas, recurved upright, angled at the base of the column foot in ***Aer. crassifolia***, 45° angled upright in ***Aer. falcata*** and ***Aer. houlletiana***. The rostellum and anther cap of ***Aer. upcmae*** are short, whereas they are longer in ***Aer. crassifolia, Aer. falcata*** and ***Aer. houlletiana***. The upper calli of ***Aer. upcmae*** are smaller and

distally spaced, whereas, larger and tightly closed at the entrance of the nectary in ***Aer. crassifolia, Aer. falcata*** and ***Aer. houlletiana***. The lower calli of ***Aer. upcmae*** are higher, tightly closed at the center of the nectary, whereas they are lower and more widely-spaced at the center of the nectary in ***Aer. crassifolia***, ***Aer. falcata*** and ***Aer. houlletiana***.

Aerides upcmae is presently the only species in the Philippines from the ***Aerides*** section ***Falcata*** Christenson.

Habitat and distribution: ***Aerides upcmae*** is found at elevations of between 800 – 900 meters above sea level in secondary forest, so far known only from the province of Bukidnon.

Etymology: The specific epithet ***upcmae*** (pronounced U. P. C. M. – ae) honors the University of the Philippines College of Medicine (**UPCM**), the alma mater of discoverer and co-author Miguel David De Leon.

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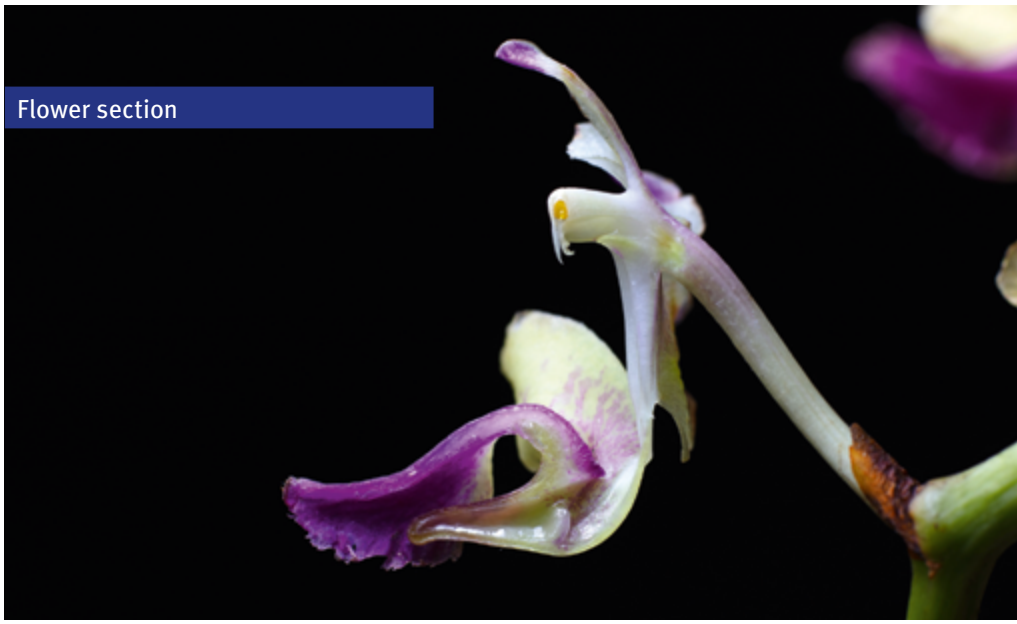

Flower section

Immature infructescence

ta who has kindly allowed the deposit of the holotype at the CMU Herbarium in keeping with COVID-19 precautions. We thank the CMU Herbarium for the custody of the holotype for the Philippine National Herbarium.

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References:

Agoo E.M.G., Schuiteman A., and de Vogel E.F. 2003. Flora Malesiana: Orchids of the Philippines Vol. 1 World Biodiversity Database CD-ROM Series. ETI/National Herbarium of the Netherlands.

Ames O. 1905 to 1922. Studies in the Family Orchidaceae Fascicles I to VII. (Reprint) Bishen Singh Mahendra Pal Singh, India.

Ames O. 1922 to 1930. Schedulae Orchidianae Volumes 1 to 10 (Reprint) Bishen Singh Mahendra Pal Singh, India.

Averyanov L.V. 1994. Identification guide to Vietnamese orchids (Orchidaceae - Juss.) S. Petersburg.

Beaman T, et al. 2001. Orchids of Sarawak - Natural History Publications (Borneo).

Chan C., Lamb A., Shim P., Wood J.J. 1994. Orchids of Borneo Vol. 1. The Sabah Society, Kota Kinabalu, Sabah, Malaysia.

Comber J.B. 1990. Orchids of Java - Royal Botanic Gardens, Kew.

Comber J.B. 2001. Orchids of Sumatra - Natural History Publications (Borneo).

Cootes J.E. 2011. Philippine Native Orchid Species. Katha Publishing Co. Inc. 388 Quezon Ave, Quezon City, Philippines.

Handoyo Frankie. 2010. Orchids of Indonesia. Indonesian Orchid Society.

Handoyo Frankie and Ramadani Prasetya. 2014. Orchids of Sulawesi. Indonesian Orchid Society.

Seidenfaden G. 1988. Orchid Genera in Thailand XIV. Fifty-nine vandoid Genera. Opera Botanica **95**.

Seidenfaden G. 1992. The Orchids of Indochina. Opera Botanica 141.

Seidenfaden G. and Wood J.J. 1992. The Orchids of Peninsular Malaysia and Singapore - Olsen and Olsen, Fredensborg.

Smith J.J. 1984. (Reprint) Die Orchideen von Java. Figuren Atlas. - Bishen Singh Mahendra Pal Singh, India.

Valmayor H.L. 1984. Orchidiana Philippiniana - Eugenio Lopez Foundation, Inc. Manila, Philippines.

Wood J.J., Beaman R.S., and Beaman J.H. 1993. The Plants of Mount Kinabalu 2. Orchids Royal Botanic Gardens, Kew and Toihaan Publishing Co., Kota Kinabalu, Sabah, Malaysia.

Wood J.J., Beaman T.E., Lamb A., Chan C.L., and Beaman J.H. 2011. The Orchids of Mount Kinabalu. Two Volumes. Natural History Publications (Borneo) Kota Kinabalu.

Wu Z.-G., Raven P. and Hong D.Y. (eds.) 2009. Flora of China **25**. Science Press, Beijing & Missouri BG Press, St. Louis.

Zhihui Xu, Hong Jiang, Deping Ye, & Ende Liu. 2010. The Wild Orchids in Yunnan. Yunnan Publishing Group Corporation & Yunnan Science and Technology Press.