

CENTRAL OHIO ORCHID SOCIETY

Reporter

October 2021



Corybas papillatus
Photo Credit: W. Kiewbang

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CentralOhioOrchidSociety.org



PRESIDENT'S MESSAGE | OCTOBER 2021

Thanks to all who have participated in this year's meetings. While we thought 2020 was an unusual year (to say the least), 2021 has also brought new challenges. One of these challenges was how to conduct our biannual election of officers in the virtual world while following all of the requirements of the Society's Constitution.

The Board and I solicited a nominations committee, via requests during meetings and our newsletter, that met four times over the period of 2 or 3 months. Additionally, I requested during our in-person or Zoom meetings in each of the past 4 months that if any member of the Society was interested in joining the leadership by serving on the Board, to contact me. That request was also in my message to Society members within the newsletter during the months of May through September. Based on all of the information received, the Board approved the 2022-2023 slate as listed below:

President – Amy Thomas
Vice President – Jessica Badger
Secretary – Tom Hart
Treasurer -- Cheryl Early
Trustee – Troy Timbrook
Trustee – Megan Osika

The Constitution also states that anyone who attends the October meeting during which elections will be held can offer nominations from the floor. So, during our meeting this October, we will accept nominations from anyone interested in serving in any elected capacity on the Board.

The Constitution requires us to vote by a show of hands during our meeting. As we will be virtual this year, I will request that as we vote that you raise your hands and keep them up until the two designated vote counters agree on the vote totals for the slate or for any position that has more than one candidate. Please remember that if we have more than one candidate for the positions of President, Vice President, Secretary, or Treasurer that you can only vote once. If we have more than two candidates for Trustee, you can only vote for two. We will try and make this election process as smooth as possible and I personally want to thank those that volunteered and agreed to serve on the COOS Board.

The Board will be deciding during its November meeting if we will be meeting in person or virtually for what is normally our awards banquet. I will keep you posted on our plans for that meeting as soon as that decision is made.

Please remember to send any pictures of your blooming plants to me by October 31 for virtual judging in early November and inclusion in our November newsletter.

Thanks to Tracy Strombotne for coordinating our recent plant purchase with Big Leaf Orchids. I hope that all who purchased plants from our speaker last month, Peter Lin, were as happy as I was with the health of the plants I received.

As a reminder, we are members of the Amazon Smile rewards program. Please follow <https://smile.amazon.com/ch/31-1057116> to sign up to assist us in our fundraising efforts. We are also attempting to become a Kroger rewards program member, please stay tuned on more info on that soon.

It's also time to rejoin the Society for the 2021 calendar year. Just go to [Central Ohio Orchid Society](#) to join or rejoin the Society.

I hope to see you all at our upcoming meeting on October 21st at 7 pm!!

Nancy Shapiro
President
Central Ohio Orchid Society
October 2021

CENTRAL OHIO ORCHID SOCIETY OCTOBER MEETING

CENTRAL OHIO ORCHID SOCIETY

October 21 - 2021

RUSS VERNON

of **New Vision Orchids:**

*Lycaste, You Gotta
Love'em!*

7:00pm - Beginner's Corner

7:30pm - Virtual Meeting



RUSS VERNON BIOGRAPHY

Russ grew up in Cleveland, Ohio. Early on he had an interest in plants, helping in the yard and growing cacti purchased with his allowance. His parents and grandparents were all interested in various aspects of horticulture.

When Russ was 12 years old, his uncle arrived with 6 orchids saying, "If you can grow those darned cacti, you ought to be able to grow these." And a career was launched.

Russ is a graduate of Ohio State University majoring in horticulture/floriculture. He has worked for Orchid by Hausermann, A&P Orchids, Ball State University's Wheeler Orchid Collection and Species Bank, and Jim Davis, the creator of Garfield the Cat.

In 2004, Russ and his wife Anita started New Vision Orchids. The company specializes in Phalaenopsis, Odontoglossums and their intergenerics, Miltoniopsis, Cattleyas, and Lycastes. The biggest area of focus is hybridizing, wholesale and retail sales. Russ also lectures to various orchid societies across the country and conducts workshops on orchid culture.

Russ is a judge of the American Orchid Society and is past President of the International Phalaenopsis Alliance, and President of the Mid-America Orchid Congress and serves on their Conservation Committee. He and Anita have two daughters.

Central Ohio Orchid Society October Meeting
Thursday 10-21-21
7:00 PM Eastern Time (US and Canada)

JOIN ZOOM MEETING:

<https://us02web.zoom.us/j/81214772506?pwd=Qzl0K3lWSzV1cXlFQ3ZmN3VOMW5Vdz09>

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Into the Wild

By Ken Mettler

All photo credits: Ken Mettler

The Large Twayblade Orchid, *Liparis liliifolia*

The genus *Liparis* contains 400-500 species of orchids that grow throughout most of the temperate and tropical regions of the world. Ohio is host to two of these species: the previously covered Fen Orchid (*Liparis loeselii*), and the Large Twayblade Orchid (*Liparis liliifolia*). [See the June 2021 [**COOS Reporter**](#) for an article on *Liparis loeselii*.]



L. liliifolia Rockbridge
6-3-19

The genus name “Liparis” comes from the same root word that gives rise to the word “lipid”, and refers to the fact that the leaves of most members of the genus have a glossy surface that appear to have been coated with oil or grease. The species moniker “liliifolia” (sometimes misspelled “lilifolia”) means having a lily-like leaf. The common name “twayblade” means “two blade”, referring to the fact that most shoots consist of a pair of leaves and an inflorescence emerging between them.



L. liliifolia
5-14-19

The range of *Liparis liliifolia* is from Minnesota south to Arkansas, east to South Carolina, north to Vermont, and including southern Canada near the Great Lakes. Within Ohio, this species is rare or absent in about a third of the state west of I-71 and north of I-70, but is scattered throughout the other two thirds of the state. It grows in mesic (not too wet, not too dry) woodlands. Too much sun will burn the leaves and kill the plant. The shoots emerge in early May, and bloom from late May through mid-June. Individual plants usually survive a few years to a decade or so. If growing in conducive environments, they can form small clumps of up to a half dozen shoots, each arising from an acorn-sized pseudobulb. These pseudobulbs are important for water storage in late summer, as the trees can remove a great deal of moisture from the soil.

The blooms, while not show-stoppers, are nonetheless intriguing. Up to 60 flowers can be produced on each 6 to 7-inch (1-17cm) inflorescence. The sepals are narrow, the petals thread-like, the spatulate lip is the color of cooked liver. I've seen two other color forms: a light green "viridiflora" form, and an unnamed form that is an attractive chestnut brown. This species is thought to be pollinated by a variety of carrion flies. No odor is known from the flowers, at least not detectable by humans. It seldom forms more than one to three pods per inflorescence. Four is the most that I've seen. In contrast, the Fen Orchid is self-pollinating, and may produce six to ten pods, even though it grows fewer flowers.



L. liliifolia viridiflora
6-6-20



***L. loeselii* Rockbridge**
6-2-2019

Never found in large numbers, I usually find only a few plants within a twenty-foot radius area, but occasionally up to one to two dozen. The next plant may be a hundred yards or more away. They seem to be tasty to wildlife, and are occasionally eaten by deer and rabbits. I've observed several occurrences where wild turkeys (*Meleagris gallopavo*) have dug the clumps up and eaten the pseudobulbs.

I think of this species as the last of the spring blooming orchids. The Lady Slippers (*Cypripedium* spp.) and Showy Orchis (*Galearis spectabilis*) are fading, and the *Platantheras* haven't yet started. You may be able to find a Puttyroot Orchid (*Aplectrum hyemale*) blooming at the same time.

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COOS CALENDAR 2021

January 21
CLAUDE HAMILTON
Hamlyn Orchids
Broughtonias

February 18
ROGER FRAMPTON
Roger's Orchids
YouTube channel - UK

March 18
FRANCISCO MIRANDA
Rupicolous Orchids of Brazil

April 15
WAYNE TURVILLE
Australian Native Orchids

May 20
CHALLEN WILLEMSEN
Guatemalan ecologist
Santuarion Natural El Tular
Reserve
*Native Orchids of
Guatemala*

June 17
KOON-HUI WANG
University of Hawaii
*Pest Management for
Orchid Hobbyists*

July 15
DAVID HAELTERMAN
Resident botanical +
naturalist guide, Ecuador
and Colombia
Stanhopea Orchids

August 19
LARRY KUEKES
Hilo Orchid Society
What's in a Name

September 16
Peter Lin
Fragrant Novelty Orchids
Encyclia Orchids

October 21
RUSS VERNON
New Vision Orchids
Lycaste Orchids

November 18
PATRICIA HARDING
*Huntleyas and Related
Orchids*

AMERICAN ORCHID SOCIETY CORNER



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[American Orchid Society 2021 Fall Auction](#)

October 22 - 28, 2021

The AOS Team

305-740-2010

theaos@aos.org

Location Virtual/Online

Announcing the 2021 Fall Auction! October 22 - 28th

This Fall, along with our virtual Members Meeting, we will once again hold an online/virtual fundraising auction using the BetterWorld platform. Bidding starts at 8:00 AM EST on October 22nd and ends at 8:00 PM on October 28th.

You are cordially invited to participate. Join us and prepare to bid, bid, bid on some great orchids and orchid items.

The link to preview the items up for bid will be posted shortly. Remember to check back often, as we will continue to populate the auction site daily.

Do you have something that you would like to DONATE?

You can donate online here: <http://aos.betterworld.org/donate-an-item> or contact our Auction Coordinator at jenniferr@aos.org.

Proceeds from this auction will help fund our many projects including technology improvements. Your winning bid and your donations support the ongoing needs of the American Orchid Society. The AOS relies on your generous donations to fund education, conservation, and research, as well as special projects.

Thank you for your participation and continued support.

The Story of Black Orchids

with Leslie Ee



WEBINAR: Thursday, October 21, 2021 at 8:30–9:30pm

Availability: Public

Learn how breeders have developed these flowers of legends with Leslie Ee.

REGISTER NOW: <https://attendee.gotowebinar.com/register/7800697861416226060>

The following articles are reprinted from:

Corybas papillatus (Orchidaceae), a new orchid species from peninsular Thailand

PhytoKeys 183: 1–7 (2021)

DOI: 10.3897/phytokeys.183.71167

<https://phytokeys.pensoft.net>

Dendrobium parahendersonii, a new orchid species (Orchidaceae) from Southern Vietnam

Taiwania 66(3): 360–363, 2021

DOI: 10.6165/tai.2021.66.360

<https://taiwania.ntu.edu.tw/about.php>

<https://taiwania.ntu.edu.tw/pdf/tai.2021.66.360.pdf>

Corybas papillatus (Orchidaceae), a new orchid species from peninsular Thailand

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Naiyana Tetsana³, Wittawat Kiewbang⁴, Somran Suddee³

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Abstract

A new species, *Corybas papillatus*, is described and illustrated from peninsular Thailand. The new species is easily recognized through a combination of the following characters: the purplish flower, the rounded apex of the dorsal sepal, the outer surface of dorsal sepal covered with irregular papillae in the upper half, the lateral sepals adnate laterally at the base to the connate petals, the V-shaped throat, the labellum bearing short hairs, dentate to erose labellum margins, and well-developed conical spurs. A key to the species of *Corybas* in Thailand is presented.

Keywords

Helmet orchid, Khao Luang National Park, montane forest, Thai-Malay Peninsula

Introduction

Corybas Salisb. is a genus of terrestrial orchids comprising about 120 species, and is widely distributed from India, South China, peninsular Thailand, the Malesian region, to New Zealand and the Western Pacific Islands (Dransfield et al. 1986; Pridgeon et

al. 2001; Pedersen 2011; Tandang et al. 2020). The members of the genus are easily recognized by being small in size with a single cordate leaf and 1–2 underground tubers, dorsal sepal and labellum which together form a tube with expanded mouth, lateral sepals and petals often antenna-like, and labellum usually bearing two spurs (Dransfield et al. 1986). Only two *Corybas* species are currently known from Thailand, namely *Corybas ecarinatus* Anker & Seidenf. (Anker and Seidenfaden 2001; Pedersen 2011), and *C. geminigibbus* J.J. Sm. (Chantanaorrapint and Chantanaorrapint 2016).

During a recent visit to Khao Luang Mountain, Khao Luang National Park, by staff of BKF herbarium, an interesting taxon of the genus *Corybas* was collected with a unique combination of characters that did not match any of the known species. It is therefore described here as a species new to science.

Materials and methods

This study is based on material collected during July 2018 from Khao Luang National Park, Nakhon Si Thammarat province, southern Thailand. Specimens were preserved in alcohol (70% ethanol) and deposited in BKF herbarium. Morphological characters were studied using a stereo microscope Olympus SZX7 and the distinctive characters of the species were illustrated with the aid of an Olympus drawing tube. Measurements were taken from spirit material. The specimen details were compared in detail with original drawings and descriptions given in the protologues of *Corybas* species in the Malaysian region (e.g. Dransfield et al. 1986; Anker and Seidenfaden 2001; Tandang et al. 2020).

Taxonomy

Corybas papillatus Inuthai, Chantanaorr. & Suddee, sp. nov.

urn:lsid:ipni.org:names:77220208-1

Figs 1, 2

Diagnosis. Similar to *Corybas villosus* J. Dransf. & Gord. Sm., but differs in the absence of dorsal sepal keel and the lateral sepals adnate laterally at the base to the connate petals.

Type. THAILAND. Nakhon Si Thammarat province, Khao Luang National Park, near summit of Khao Luang Mt., 08°29'36.8"N, 099°43'38.9"E, ca. 1,700 m alt., 4 July 2018, *M. Poopath*, *N. Tetsana*, *W. Kiewbang*, *C. Hemrat* & *S. Jirakorn* 2201 (holotype BKF!, spirit material).

Small terrestrial herb with underground tubers. **Tubers** globose or ovoid, fleshy, 3–4 mm diam. **Stem** erect, whitish-green, 5–12 mm long, 1–1.5 mm diam., with a basal sheath; stolon whitish, hairy, up to 2 cm long, 1–1.2 mm diam. **Foliage leaf** sessile, cordate, long acuminate at apex, glabrous, 6–10 mm long, 6–8 mm wide at the widest point, flat, only slightly undulate along margin, pale green with paler veins, the veins scarcely conspicuous. **Inflorescence** one-flowered, terminal; bract pale green, lanceolate-triangular,

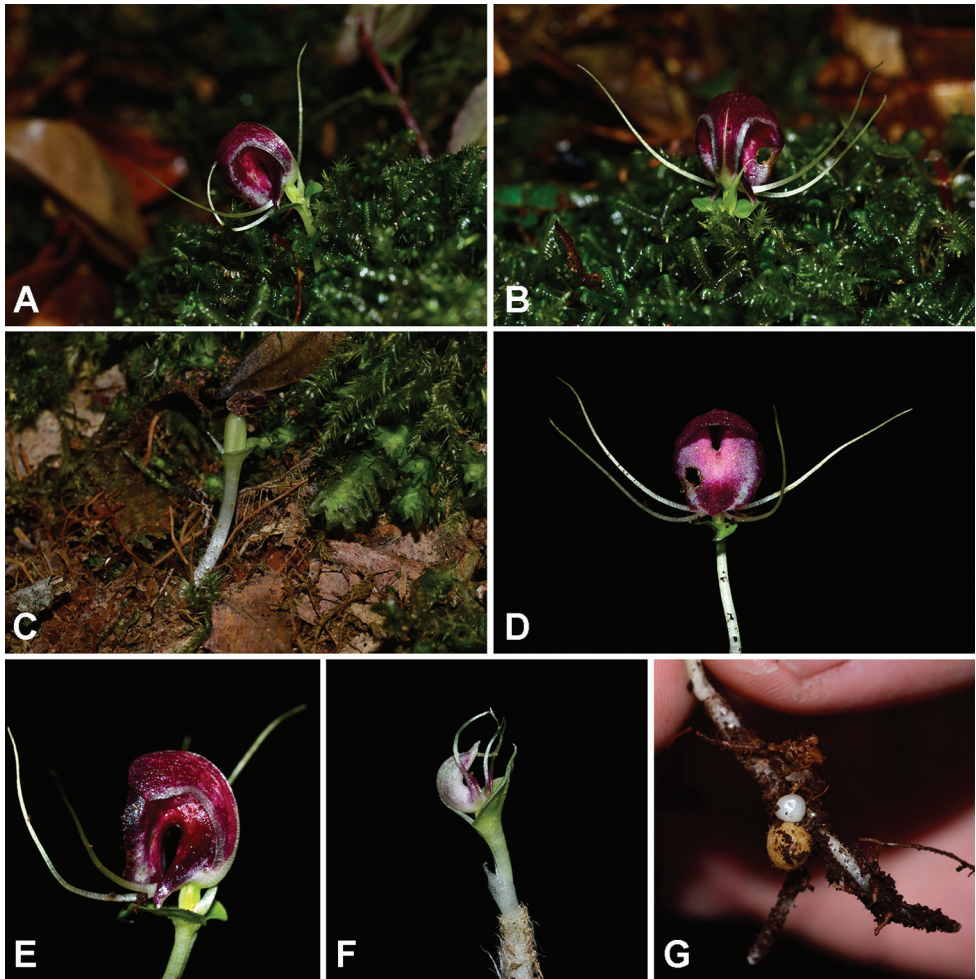


Figure 1. *Corybas papillatus* Inuthai, Chantanaorr. & Suddee **A, B** plants in natural habitat, on humus associated with *Bazzania* sp. and *Acroporium* sp. **C** plant with immature fruit **D, E** flowers **D** front view **E** lateral view **F** immature flower **G** underground parts with tubers. Photographs by W. Kiewbang.

long acuminate, 5–6 mm long, recurved. **Flower** dark purple. **Dorsal sepal** purplish, erect below, then strongly curved above, hooded and clasping labellum throughout its length, spatulate, ca. 15 mm long, 8–10 mm wide, rounded at apex, apical margins denticulate, abaxial (dorsal) surface bearing irregular papillae in the upper half. **Lateral sepals** greenish-white, linear-triangular to antenna-like, ca. 25 mm long, laterally adnate to the petals in the basal ca. 1 mm. **Petals** greenish-white, connate at the base for ca. 1 mm, free above, similar to lateral sepals but shorter, ca. 22 mm long. **Labellum** differentiated into 2 parts, erect in basal half and strongly reflexed above, ca. 17 mm long in total length; the basal half with margins strongly inrolled throughout, and forming a tube with the dorsal sepal, ca. 7 mm long; the upper half reflexed and expanded, orbicular, ca. 10 mm diam., margin erose, reddish-purple excepted for a white zone just below the margins; mouth of throat

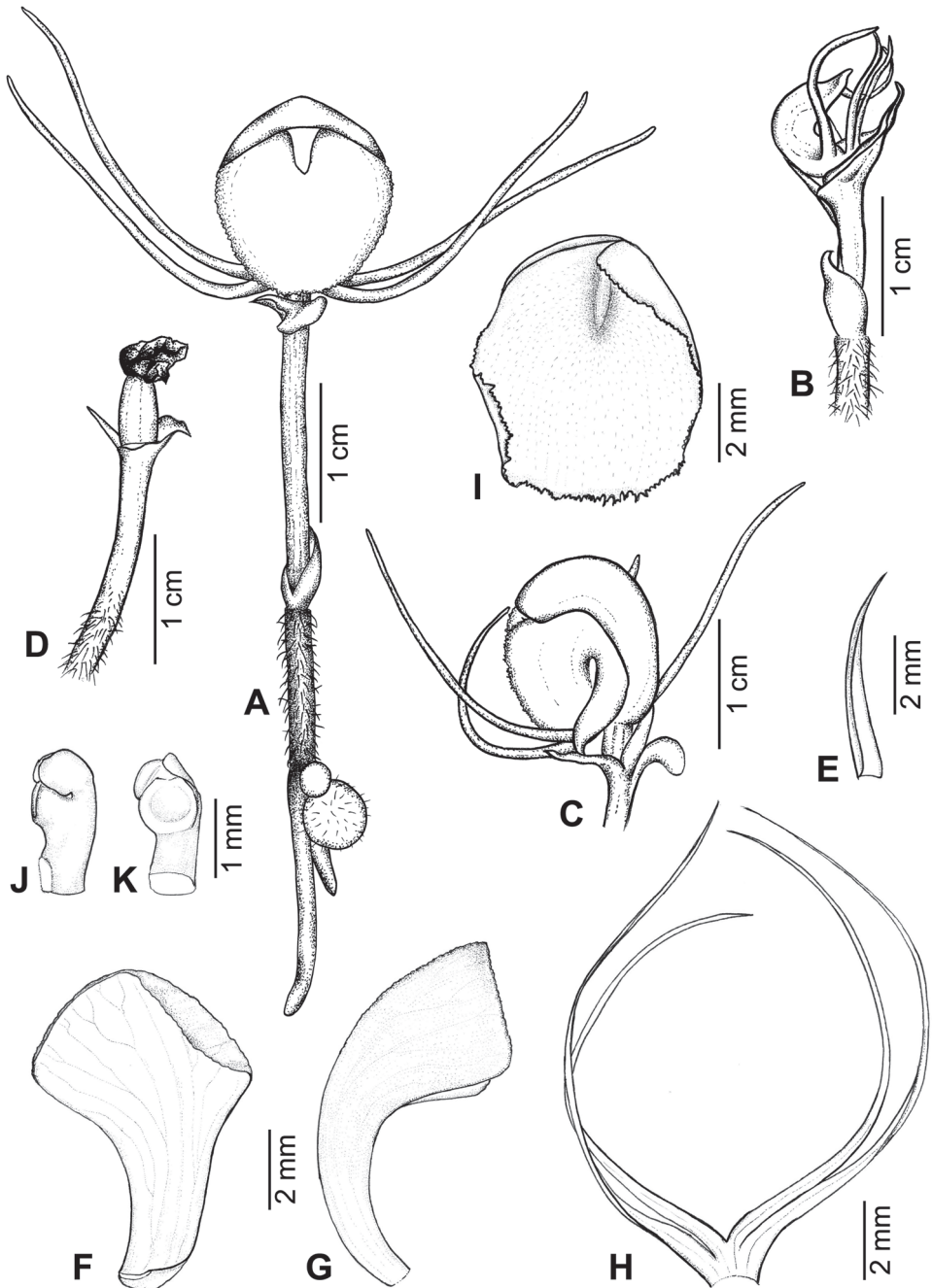


Figure 2. *Corybas papillatus* Inuthai, Chantanaorr. & Suddee **A** whole plant with flower and tubers **B** plant with immature flower **C** mature flower, lateral view **D** plant with immature fruit **E** floral bract, **F, G** dorsal sepal **F** ventral view **G** lateral view **H** lateral sepals and petals **I** labellum **J, K** column, **J** lateral view, **K** front view. Drawn by J. Inuthai.

very deeply V-shaped; adaxial surface bearing short hairs; spurs 2, divergent, conical, ca. 3 mm long. **Column** very short, ca. 1.5 mm long; stigma rounded, ca. 0.5 mm diam.; anther erect, smooth; pollinia not seen. **Ovary** green, glabrous, ca. 2 mm long. **Capsule** (immature) erect, ellipsoid or fusiform, 5–7 mm long, 2.5–3 mm diam. **Seed** not seen.

Phenology. Flowering and fruiting observed in July.

Habitat and ecology. The new species was found growing amongst bryophytes (Fig. 1A–C), such as *Acroporium* sp., *Bazzania* sp., and *Schistochila aligera* (Nees & Blume) J.B. Jack & Steph., on humus in shade in montane forest, ca. 1,700 m above sea level.

Distribution. *Corybas papillatus* is only known from the type locality (Fig. 3), however, it may also occur in other areas in peninsular Thailand with similar vegetation type.

Etymology. The specific epithet ‘*papillatus*’ alludes to occurrence of irregular papillae in upper portion of abaxial (dorsal) surface of dorsal sepal.

Conservation status. We consider it likely that if a formal assessment were performed, this species would be categorized as Critically Endangered (CR (D)) based on a preliminary risk of extinction assessment using the IUCN red list categories and criteria (IUCN 2019). This species is known from only four individuals from the type locality which attracts high numbers of camping tourists. Although we returned to the same locality and tried to find more specimens in 2020 it could not be found again. The species is, however, easily be overlooked in the field because of its small size.

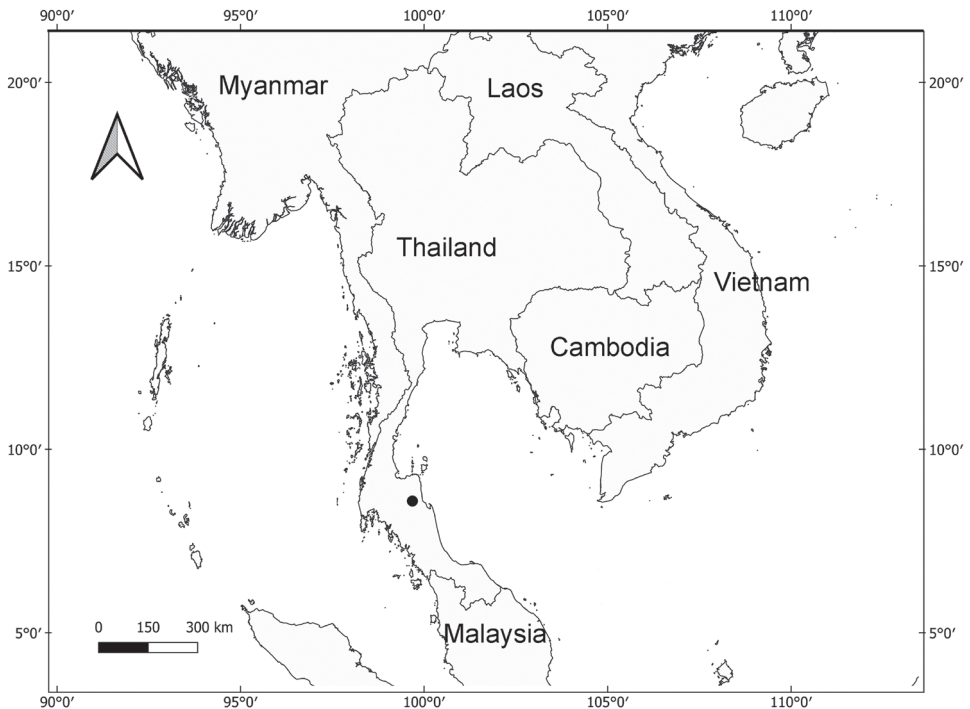


Figure 3. Type locality of *Corybas papillatus* Inuthai, Chantanaorr. & Suddee (●).

Discussion

Corybas papillatus is most similar to *C. villosus*, which is endemic to Peninsular Malaysia (Dransfield et al. 1986; Go et al. 2015). These two species share several common features, viz. flower coloration being purplish, the dorsal surface of dorsal sepal covered with irregular papillae in the upper half, the hairiness of the labellum, the V-shaped throat, irregularly dentate to erose labellum margins, and well-developed conical spurs. *Corybas papillatus* is distinguished from *C. villosus* by lacking dorsal sepal keel (strongly keeled in *C. villosus*) and the adnate lateral sepals and connate petals (all free in *C. villosus*).

Corybas papillatus might be confused with *C. ridleyanus* Schltr., another endemic to Peninsular Malaysia (Dransfield et al. 1986; Go et al. 2015), which also has purplish flowers and reddish-purple labellum excepted for a zone below the margin, and a V-shaped throat. *Corybas ridleyanus*, however, differs from *C. papillatus* by the truncate apex of the dorsal sepal and the free lateral sepals and petals.

Together with the recent discovery of a new species and new records of orchids from peninsular Thailand, especially in the Nakorn Si Thammarat mountain range (e.g. Ormerod et al. 2012; Tetsana et al. 2014; Chantanaorrapint and Chantanaorrapint 2016; Chantanaorrapint et al. 2017) it is clear that peninsular Thailand is an important region for orchid diversity and that further new species records can be expected to be found from many unexplored areas in this part of the country.

There are now three species of *Corybas* known from Thailand. A key to distinguish these is given below.

Key to the species of *Corybas* in Thailand

- 1 Lateral sepals and petals free at base; spurs inconspicuous, broad and poorly developed..... *C. geminigibbus*
- Lateral sepals adnate laterally to the connate petals at base; spurs well-developed, conical, slightly oblique to divergent **2**
- 2 Flowers pink, dorsal sepal as long as the lateral sepals, acute at apex; central portion of labellum bearing a callus *C. ecarinatus*
- Flowers purplish, dorsal sepal shorter than the lateral sepals, rounded at apex; central portion of labellum hairy without a callus *C. papillatus*

Acknowledgements

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Dendrobium parahendersonii, a new orchid species (Orchidaceae) from Southern Vietnam

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ABSTRACT: *Dendrobium parahendersonii* discovered in southern Vietnam is described as new species to science. It belongs to *D.* sect. *Crumenata*, and resembles *D. hendersonii* and *D. exile* in having a filiform, reed-like stem swollen at the base into a quadrangular ellipsoid pseudobulb and flowering from the leafless part of stem but differs clearly in the details of its tepals and lip. A morphological description, illustrations, data on habitat, phenology, and conservation status for the new species are provided.

KEY WORDS: *Crumenata*, *Dendrobium hendersonii*, new species, Orchidaceae, plant diversity, plant taxonomy.

INTRODUCTION

Dendrobium Swartz is one of the largest orchid genera containing about 1450 known species widely distributed in tropical and subtropical Asia from Sri Lanka and India to Australia, New Guinea, and Pacific islands (Pridgeon *et al.*, 2014). In some recent assessments (Pridgeon *et al.*, 2014) *D.* section *Crumenata* was included in Section *Aporum* Blume. In this paper, we follow the concept of Wood (2015), which treats *D.* sect. *Crumenata* as a separate section.

All representatives of the *D.* sect. *Crumenata* are characterized by the following: a fusiform, pseudobulbous, swollen basal part of the stem consisting of few internodes; leaves terete or dorsiventral, conduplicate; many inflorescences spaced along the leafless apical part of the stem, rarely on the leafy stem; and each inflorescence bearing 1 or 2 flowers; usually white flowers, with or without purple stripes and marks on tepals, with a prominent mentum, and often with a gland at the basal part of the column foot; the lip 3-lobed or rarely entire, with an entire, undulate, erose, or dentate median lobe and a disk usually with three hairy or glabrous keels. The section comprises about 80 species distributed from Myanmar, Thailand, China, Laos, Cambodia, and Vietnam, to Malaysia, and Indonesia.

In Vietnam, Seidenfaden (1992) and Averyanov & Averyanova (2003), list nine species forming two groups for section *Crumanata* (= *D.* section *Rhopalanthe* Schltr.). Species of the first group have terete leaves (*D. exile*, *D.*

pseudotenellum Guillaumin, *D. dentatum* Seidenfaden, and *D. lomatochilum* Seidenfaden), and species of the second group have dorsiventral, conduplicate leaves (*D. truncatum* Lindl., *D. hendersonii* A.D.Hawkes & A.H.Heller, *D. podagraria* Hook.f., *D. crumenatum* Swartz, and *D. annamense* Rolfe.).

The new species of the section, which superficially resembles *D. hendersonii* A.D.Hawkes & A.H.Heller and *D. exile* Schltr., was found in Dong Nai Province of southern Vietnam. The morphological description of the new species, the information about its habitat, conservation status, illustrations, and relevant taxonomic notes are presented below.

MATERIAL AND METHODS

The measurements used for the description of *D. parahendersonii* are based on the living plant collected from Dong Nai province of southern Vietnam. Herbarium material was initially preserved in 70% ethanol, then dried and stored at VNM herbarium (Institute of Tropical Biology, Ho Chi Minh City, Vietnam). Terminology for the morphological description follows Beentje (2012).

TAXONOMIC TREATMENT

Dendrobium sect. *Crumenata* Pfitzer, 1888, Pflanzenfamilien 2, 6: 174. – *D.* subgen. *Crumenata* (Pfitzer) Kraenz., 1910, Pflanzenreich 45: 224.



Dendrobium parahendersonii Vuong, Aver. & Nguyen V.C., *sp. nov.* **Fig. 1**

Type. VIETNAM, Dong Nai Province, Vinh Cuu District, Ma Da Forest, evergreen lowland forest at elevation about 200 m a.s.l., epiphyte on tree trunks above 3 meters from ground, 1 April 2021, *Truong Ba Vuong, Nguyen Van Canh, Nguyen Van Khuong, Nguyen Thi Lien Thuong, BV 1142* (holotype – VNM 00069899!).

= *D. hendersonii* auct. non A.D. Hawkes & A.H. Heller, 1957: Seidenf., 1992, *Opera Botanica* 114: 247; Tran Hop, 1998, *Orch. Vietnam*: 235; Averyanov *et al.*, 2015, *Wulfenia* 22: 153, fig. 5 F & G.

Diagnosis. The new species is morphologically similar to *D. hendersonii* but clearly differs by quadrangular pseudobulbs, quadrate or sub-quadrate in cross section (vs. pseudobulbs distinctly flattened, rhomboid in cross-section), smaller flower ca. 1 cm long (vs. 2–2.5 cm long), shorter pedicel and ovary ca. 5 mm long (vs. pedicel and ovary up to 1 cm long), smaller median sepal ca. 5 mm long, 2 mm wide (vs. median sepal 10–15 mm long, 4–6 mm wide), median lip lobe half-circular (vs. median lip lobe narrowly oblong), lip disc with 5 distally fimbriate keels (vs. lip disc distally with almost glabrous tripartite callus). Morphological details of *D. hendersonii* used for the comparison are based on data reported by Wood (2015).

Description. Epiphytic perennial herb. Stems densely clustering, 30–80 cm long, filiform or reed-like, swollen near the base; swollen part pseudobulbous, narrowly ellipsoid, 2–4.7 cm long, 5 mm wide, consist of 1–3 internodes, quadrate or subquadrate in cross-section. Leaves sessile, lanceolate, conduplicate, thick, 3.2–4.5 mm long, 3–5 mm wide, apical part somewhat narrowed, apex shortly acuminate. Inflorescences many, on leafless apical part of stems, 1–2-flowered; floral bract tubular, acute, ca. 1 mm long. Pedicel and ovary ca. 5 mm long. Flowers not widely opening, ca. 1 cm long from apex of mentum to apex of median sepal, the sepals and petals white, the lip white with purple nerves and orange disc. Median sepal narrowly ovate, ca. 5 mm long, 2 mm wide, with 5 veins, apex acute; lateral sepals oblique triangular, ca. 4 mm long, 6 mm wide (at base), with 5 veins, apex acute; mentum ca. 5 mm long, slightly forward curved, apex obtuse. Petals oblong or narrowly obovate, ca. 4.5 mm long, 1.5 mm wide, with one vein, apex rounded to obtuse. Lip narrowly obovate in outline, slightly recurved, ca. 9 mm long, 4 mm wide, 3-lobed; side lobes oblique ovate, ca. 4 mm long, 1.5 mm wide, rounded at apex, erect; median lobe half-circular, ca. 2 mm long and wide, margin finely undulate; disc with 5 bright orange, distally fimbriate keels, 3 median keels extend from base to center of median lobe, 2 lateral keels much shorter, coming from base to median part of median lobe. Column stout, erect, ca. 2 mm long, with 2 erect, triangular, acute stelia; column foot ca. 6 mm long, 2 mm wide, slightly forward curved, grooved at base, below middle with small orange callus; anther cap ovoid, ca. 1.2 mm tall, slightly retuse at

apex; pollinia 4, each half-ellipsoid, ca. 1.2 mm long arranged in 2 groups; stigma obovate, concave; rostellum in form of small transversal fold, not protruding. Fruits not seen.

Etymology. The species name refers its closest relation to *D. hendersonii*.

Habitat and phenology. Trunk and branch epiphyte in broadleaved evergreen and semideciduous lowland and submontane forests at elevation 200–800 m a.s.l. Flowers all around the year, usually after light short weather cooling.

Distribution. Vietnam, provinces Dong Nai (Vinh Cuu District), Khanh Hoa (Ninh Hoa District), and Lam Dong. Endemic of the eastern part of Central Highlands in southern Vietnam.

Proposed conservation status. The currently available records suggest that the new species is locally common. More field studies are needed for assessment of its true conservation status. According to the IUCN criteria (IUCN, 2019) it may be tentatively assessed at present as “Data Deficient” (DD).

Other specimen examined. VIETNAM, southern Vietnam, without exact location, Feb. 2004, sine coll., wild collected plant in culture, herbarium and photos prepared in 9 Dec. 2020, *L. Averyanov, T. Maisak, AL 1279* (LE 01076988 <http://en.herbariumle.ru/?t=occ&id=57020>, LE 01088333 <http://en.herbariumle.ru/?t=occ&id=46984>). Khanh Hoa Province, Ninh Hoa District, Ninh Phu Village, Mont Hon Heo (Suoi Hoa Lan area), 18 July 2014, *Le Hong Son et al.*, Tich 05-06-15, under unpublished name – *D. lehongsonii* Tich (SGN, photos LE 01088650 <http://en.herbariumle.ru/?t=occ&id=52117>, drawing LE 01090981 <http://en.herbariumle.ru/?t=occ&id=82430>). Khanh Hoa Province, broad-leaved evergreen forest at elevation 400–800 m a.s.l., epiphyte, locally very common, 5 Nov. 2014, *Nguyen Van Canh s.n.* photo and herbarium specimen prepared from cultivated plant in Nguyen Van Canh private garden in 5 Dec. 2014 by *L. Averyanov et al.*, *CPC 7687* (LE 01088649 <http://en.herbariumle.ru/?t=occ&id=52116>, LE 01066324 <http://en.herbariumle.ru/?t=occ&id=14677>). Dong Nai Province, Cat Tien National Park, 15 May 2020, *Nguyen Van Canh, Truong Ba Vuong, BV 634* (LE 01073230 <http://en.herbariumle.ru/?t=occ&id=15834>). Dong Nai Province, Vinh Cuu District, Ma Da Forest, evergreen lowland forest at elevation about 200 m a.s.l., epiphyte on tree trunks above 3 meters from ground, 16 May 2020, *Truong Ba Vuong, Nguyen Van Canh, BV 1141* (VNM00032286).

Notes. *Dendrobium parahendersonii* is morphologically very close to *D. hendersonii* and can be easily misidentified in herbarium collections. Earlier the new species was reported from Vietnam by Seidenfaden (1992), Tran Hop (1998), and Averyanov *et al.* (2015) under the name *D. hendersonii*. At the same time, it was noted that Vietnamese plants originating from Lam Dong Province differs somewhat from the type of *D. hendersonii* in a series of morphological features indicated in Tixier’s unpublished description reported by Seidenfaden (1992). In 2014 Nguyen Thien Tich studied plants collected in Khanh Hoa Province with the result that he proposed a new species, *D. lehongsonii* Tich and illustrated his new taxon with an excellent original illustration (LE 01090981 <http://en.herbariumle.ru/?t=occ&id=82430>) and numerous photos (LE 01088650 <http://en.herbariumle.ru/?t=occ&id=52117>). Unfortunately, his new species was left unpublished on his death in 2015.

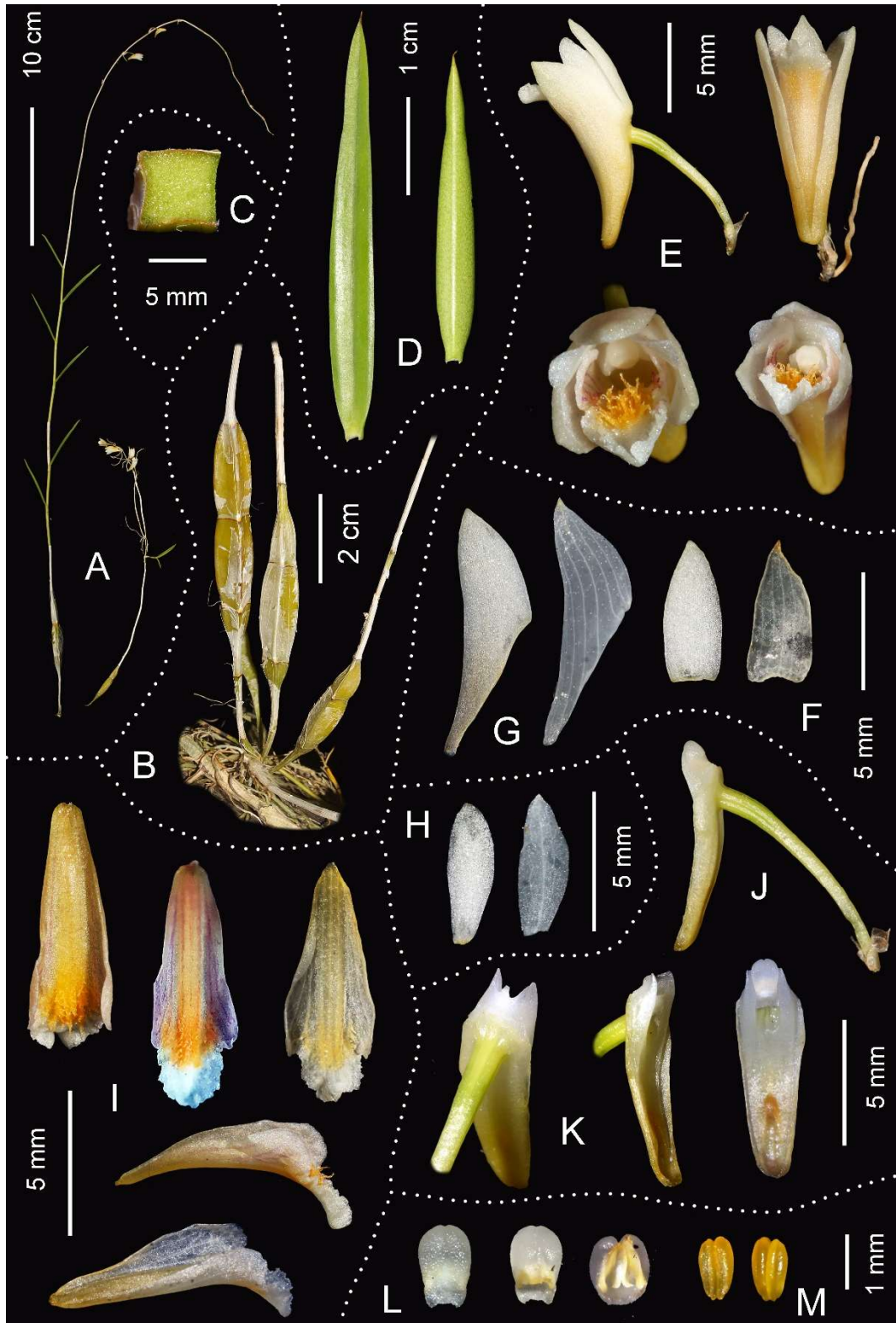


Fig. 1. *Dendrobium parahendersonii* Vuong, Aver. & V.C. Nguyen. **A.** Flowering shoots. **B.** Swelling basal parts of stems (pseudobulbs). **C.** Cross section of the swelling part of stem. **D.** Leaves, adaxial and abaxial surface. **E.** Flowers, view from different sides. **F.** Median sepal (fresh and alcohol preserved). **G.** Lateral sepals (fresh and alcohol preserved). **H.** Petals (fresh and alcohol preserved). **I.** Lip, view from different sides. **J.** Column, pedicel, and ovary, side view. **K.** Column and column foot, view from different sides. **L.** Anther cap, view from different sides. **M.** Pollinaria. Photos by Truong Ba Vuong from plant used for preparation of the holotype (Truong Ba Vuong *et al.*, BV 1142). Photo correction and design by L. Averyanov and T. Maisak.



The study of additional collections from Dong Nai and Khanh Hoa provinces confirms the distinction of Vietnamese plants as a separate species, which is described here with the name *D. parahendersonii* that refers to its close relations to *D. hendersonii*.

The newly described species may be also compared with *D. exile* Schltr. which has similar quadrangular pseudobulbs. However, our plant differs in having dorsiventral, lanceolate leaves (vs. leaves terete), smaller flowers with sepals about 5 mm long (vs. sepals 10–12 mm long), and half-circular median lip lobe as long as the side lobes (vs. median lip lobe narrowly ovate to elliptic, distinctly longer than side lobes).

Currently, the new species is documented as occurring in Dong Nai, Khanh Hoa, and Lam Dong provinces. However, from personal observations, this species is also fairly common in dry lowland primary forests of Quang Nam and Gia Lai provinces (N.V. Canh unpublished data).

Additional species examined. *Dendrobium exile* Schltr.: VIETNAM, Lam Dong Province, Dalat Town area, fl. et coll. in horto 16 Sep. 1985, L. Averyanov s.n. (LE 01077038 <http://en.herbariumle.ru/?t=occ&id=82431>). Lam Dong Province, Dalat Town area, fl. et coll. in horto 16 Sep. 1985, L. Averyanov (LE 01066245 <http://en.herbariumle.ru/?t=occ&id=13708>); Dong Nai Province, 7 Jan. 1990, Vu Ngoc Long, B 075 (LE 01066254 <http://en.herbariumle.ru/?t=occ&id=13717>); Lam Dong Province, Dalat Town area, fl. et coll. in horto 7 July 1987, L. Averyanov s.n. (LE 01066245 <http://en.herbariumle.ru/?t=occ&id=13708>). Daklak, Krong No District, Nam Ha municipality, Day Sap – Gia Long Waterfall Historical, 27 Nov. 2014, Averyanov et al., CPC 7679 (LE 01066249 <http://en.herbariumle.ru/?t=occ&id=13712>); VIETNAM, Kon Tum Province, fl. et coll. in horto 17 December 2015, Averyanov et al., AL 209 (LE 01077039 <http://en.herbariumle.ru/?t=occ&id=82432>).

Dendrobium hendersonii A.D. Hawkes & A.H. Heller: THAILAND, Betong, Pattani, on tree by stream in evergreen forest, 28 August 1923, A.F.G., Kerr 0102 (K000596869, K000596870, type of *D. hendersonii*) <https://apps.kew.org/herbcat/detailsQuery.do?imageId=288180&pageCode=1&presentPage=1&queryId=1&sessionId=F6143BDDE272EEAC4C5E454E04AC13CB&barcode=K000596871>

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