A DATABOOK TO THE ORCHIDS OF SRI LANKA

Vol. – 1 B
**Angraecum germinyanum**

http://www.angraecum.org/Species/Angraecum/Angraecum_germinyanum.htm

Distribution :- Madagascar, Sri Lanka, Comoros, Mozambique, Tanzania, Kenya, Nigeria, Angola

<table>
<thead>
<tr>
<th><strong>Altitude</strong></th>
<th>1000-2000 m.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life Form</strong></td>
<td>Epiphytic chamaephyte</td>
</tr>
<tr>
<td><strong>Biotope</strong></td>
<td>Humid high forests</td>
</tr>
<tr>
<td><strong>Flowers</strong></td>
<td>7-9 cm</td>
</tr>
<tr>
<td><strong>Flowering time</strong></td>
<td>April-May (Europe)</td>
</tr>
<tr>
<td><strong>Fragrance</strong></td>
<td>Sweet scent at night and in the morning.</td>
</tr>
</tbody>
</table>

**Synonyms**

Angraecum arachnites Schltr.
Angraecum bathiei Schltr.
Angraecum bathiei ssp. peracuminatum H.Perrier
Angraecum conchoglossum Schltr.
Angraecum ramosum auct. non Thouars H.Perrier
Angraecum ramosum ssp. bidentatum H.Perrier
Angraecum ramosum ssp. typicum H.Perrier
Angraecum ramosum ssp. typicum var. arachnites (Schltr.) H.Perrier
Angraecum ramosum ssp. typicum var. bathiei
Angraecum ramosum ssp. typicum var. conchoglossum (Schltr.) H.Perrier
Angraecum ramosum ssp. typicum var. peracuminatum H.Perrier
Mystacidium germinyanum (Hook.f.) Rolfe

Found in Madagascar as a cool to cold growing, monopodial epiphyte with an elongated stem to 1 m (3 ft) carrying distichous, oblong, bright glossy green leaves that are obtusely bilobed that blooms with a wiry, 2 cm (3/4") long, single flowered inflorescence that carries a solitary, fragrant, long-lasting, non-resupinate, waxy flower occurring in the spring and summer.
Angraecum germinyanum  Photo courtesy Syu Tyu Sen ©
Genus Angraecum - Angraecum Encyclopedia.html

Angraecum germinyanum

Angraecum germinyanum was strongly fragrant in the evening.

http://orchidees.vandes.com/fiche_ind_angraecum germinyanum.html


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**Angraecum zeylanicum**


Trimen, J. Ceyl. Br. Roy. As. Soc. 9: 90. 1885. **Fig. 8c** Distribution: Lowland wet zone.

Note: This species is also recorded from the Seychelles (World Checklist of Monocots, 2007).
An Annotated Checklist of the Orchids of Sri Lanka

Samantha Suranjan Fernando and Paul Ormerod

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Anoectochilus_setaceus

HABITATS OF Anoectochilus setaceus, Zeuxine flava, Zeuxine regia IN KANNELIYA MAN AND BIOSPHERE RESERVE AND PEAK WILDERNESS SANCTUARY IN SRI LANKA

S Hewage & W T P S K Senarath
Department of Botany, Faculty of Applied Science, University of Sri Jayewardenepura

Anoectochilus setaceus, Zeuxine flava, and Zeuxine regia are three endangered medicinal plants belong to family Orchidaceae and sub family Neottioideae. They are widely used in traditional medicine. Due to its beautiful variegated leaves they are also used as ornamental plants and commonly known as Jewel Orchids.

The Methodology used to identify the natural distribution of these species was field observation in the sites. In order to identify the places where these species are growing knowledge of the traditional practitioners and village people were used. According to literature, these species are confined to tropical wet evergreen, sub
montane and mid country wet ever green forests. In this study these three species were observed in particular locations in Kanneliya MAB reserve and Peak Wilderness sanctuary.

Anoectochilus setaceus is a rather common species found under the shade of trees among fallen leaves. It was found along the riverbanks in Kanneliya while in Peak Wilderness it was found in a valley close to a stream. They were confined to small patches with high humidity where it gets very low intensity of sunlight. Number of plants, which were observed in Peak Wilderness sanctuary, was high (150 plants/m²) while it was lesser (50 plants/m²) in Kanneliya. Distance between two forest patches where A. setaceus was found was about 50m in Peak Wilderness sanctuary while it was too far (>100m) in Kanneliya MAB reserve. Some patches had a distance of about 2km.

Anoectochilus setaceus Blume 1825

![Anoectochilus setaceus](image_url)
Wanaraja Orchids (Anoectochilus setaceus) – A rare and endemic ground orchid to Sri Lanka with striking leaves. Flowers are white and yellow. Grows in the shades in wet zone rain forests, especially in Sinharaja and peak wilderness. The plant is use in the treatment to snake bites in traditional medicine.


HABITATS OF Anoectochilus setaceus, Zeuxine flava, Zeuxine regia IN KANNELIYA MAN AND BIOSPHERE RESERVE AND PEAK WILDERNESS SANCTUARY IN SRI LANKA

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Anoectochilus setaceus was observed under same environmental conditions recorded by previous researchers, while other two species were found from entirely different environmental conditions from recorded data. Although literature reports that, Z. regia found together with A. setaceus under natural conditions, such combinations were not observed in both forests. They were found in entirely different locations

Anoectochilus setaceus – Wanaraja
An endemic terrestrial orchid species grows in shade of trees among leaf litter in the tropical wet evergreen forests and subtropical montane forests (From 305m to 1829m altitude). Flowering in January, May to September and December. Wanaraja is used for treating snake-bite poisoning in traditional Sinhalese medicine. It has been collecting extensively and illegally for medicinal as well as ornamental purposes. Therefore this orchid species has become rare in most places where it was abundantly occurred previously.
Anoectochilus setaceus Blume, Bijdr.: 412 (1825).
Chrysobaphus roxburghii Wall., Tent. Fl. Napal.: 37 (1826).
Anoectochilus roxburghii (Wall.) Lindl. in N.Wallich, Numer. List: 7387 (1832).
Anoectochilus regalis Blume, Coll. Orchid.: 46 (1858).
Anoectochilus latomaculatus Blume, Coll. Orchid.: 50 (1859).
Anoectochilus regalis H.Low ex C.Morren, Belgique Hort. 12: 4 (1862).
Zeuxine roxburghii (Wall.) M.Hiroe, Orchid Flowers 2: 68 (1971).
Anoectochilus roxburghii var. regalis (Blume) Pradhan, Indian Orchids: Guide Identif. & Cult. 1: 121 (1976), without basionym date.
**Aphyllorchis Montana**

*Aphyllorchis montana* Rchb. f.

Description from *Flora of China*

- *Aphyllorchis benguetensis* Ames;
- *prainii* J. D. Hooker;
- *purpurea* Fukuyama;
- *tanegashimensis* Hayata;
- *unguiculata* Rolfe ex Downie.

**Plants** 43-70 cm tall. Rhizome short, creeping; roots spreading, stout. Stem with many membranous sheaths; proximal sheaths tubular, 0.5-2 cm; sterile bracts 1-1.3 cm. Inflorescence with few to 10 or more well-spaced flowers; rachis 10-20 cm; floral bracts reflexed, linear-lanceolate, 6-14 × 2-2.5 mm, shorter than pedicel and ovary.

**Flowers** spreading ± horizontally, usually becoming pendulous, yellow or yellowish brown; ovary glabrous or sometimes slightly puberulent. Dorsal sepal cymbiform, oblong or obovate, 9-11 × 3-4 mm, 3-veined, apex obtuse; midrib of dorsal sepal scabrous near apex on abaxial surface; lateral sepals slightly shorter, not cymbiform. Petals suboblong, shorter and thinly textured; lip 7-9 mm, fleshy, contracted into epichile and hypochile toward base; hypochile slightly concave, ca. 2 mm, irregularly verrucose inside, with 2 triangular or triangular-lanceolate wings; epichile ovate, 5-7 mm, obscurely 3-lobed, margin slightly undulate. Column slightly arcuate, 7-10 mm, apex dilated. Fl. Jul-Sep. 2n = 40.

Open forests; 700-1500 m. E Guangxi, Guizhou, S Hainan, Hong Kong, C and N Taiwan, S and W Yunnan [Cambodia, India, Indonesia, Japan, Malaysia, Philippines, Sri Lanka, Thailand, Vietnam].

**Aphyllorchis montana** Rchb.f., Linnaea 41: 57 (1876).


Heterotypic Synonyms:

- *Aphyllorchis benguetensis* Ames, Orchidaceae 2: 49 (1908).

I. Description
Saprophytic herb without chlorophyll and leaves, peduncle up to 60 cm high, crispy with scales at bottom. Inflorescence 6-10 flowered, up to 60 cm tall, crispy; bract 1 cm long, narrow and acute; ovary and pedicel 2 cm long; dorsal sepal big 8x3 mm; petals lightly narrow; lip 8-9 mm long with small side-lobes, center lobe shovel-shaped; column 5-9 mm tall; pollinium 2. Capsule 2 cm long.

II. Identification

Based on the pictures of this plant we sent to him, Averyanov (2007) has identified it as an Aphyllorchis montana (Reichenb.f.) or Aphyllorchis striata (Ridl.) Ridl., because the photographs of the lip of the flower is not clear enough to be more correctly identified. Also based on the specimen of this plant and its description from an illustrated flora of Vietnam of Pham Hoang Ho, we identify it as Aphyllorchis montana (Reichenb.f.), subfamily Neottioideae. Therefore, this orchid species is also recorded at Phu Quoc island on the map of orchid distribution of Vietnam.

III. Distribution

Aphyllorchis montana (Reichenb.f.), was found in southern Vietnam, Kien Giang Province, Phu Quoc District, K7-Ham Ninh Mountain of Phu Quoc National Park, around point 100 22' N, 104 000 E. It is under broad-leaved, evergreen, closed forest nearby a stream, on a west-facing steep slope of more than 300 and on sandy soil with partially decomposed forest floor at an elevation of 380 m a.s.l (approximately). A single specimen of this orchid species was found on partially decomposed leaf litter beside the path, near a large stream in the K7-Ham Ninh Mountain Chain, under primary average-wooden forest (class IIB according to classification for production forest of FIPI) with canopy of 0.5, 20-25 cm diameter at breast heigh (DBH), 12-20 m high, and dominant species such as: Shorea guiso, Vatica odorata, Tristanopsis merguensis, Garcinia spp, Callophyllum dryobalanoides, Croton spp, Memecylon spp

1  WAR's consultants
2  PhuQuoc project’s manager
3  Forestry ranger of Forest protection department of PhuQuoc National Park

IV. Flowering season: July (according to our direct observation of one plant in the wild)

V. Conservation status:

- Decree 32/2006/N_-CP: none
- IUCN red book: none
- According to Prof. Leonid V. Averyanov: Data deficient

Acknowledgment

We would like to express our sincere thanks to Professor Averyanov for his valuable support with species identification. Also thanks to Phu Quoc National Park authority for its cooperation and implementation of plant surveys.

References


G R Rao

Energy & Wetlands Research Group, Centre for Ecological Sciences, Indian Institute of Science, Bangalore - 560 012.

*Aphyllorchis montana* Reichb.f.

Terrestrial leafless saprophytes with stem purplish, erect slender, unbranched, with tubular sheaths are very rarely seen in the shrubs and undergrowth of the dense evergreen to semievergreen forests. Flowers are small, brownish purple in racemes, with bracts, few flowered with sepals and petals not equal. Lip short, sessile, shortly clawed, oblong, entire, claw with 2 triangular, acute auricles.

**Habitat:** Kanur. In semievergreen forests. **Fl. & Fr:** July-Sept **Distribution:** Western Ghats.
Sarcochilus australis

Sarcochilus labiatus

Sarcochilus longicornutus

Sarcochilus longifolius

Sarcochilus ovatus

Sarcochilus pictus

Sarcochilus plocamochilus

Sarcochilus purpurascens

Sarcochilus robustus

Sarcochilus samuelianus

Sarcochilus subterreus

Sarcochilus tigris

Sarcochilus tristis

Sarcochilus variegatus

Sarcochilus violaceus

Sarcochilus warrieri

Sarcochilus wightianus

Sarcochilus xerophyticus

Sarcochilus yatakiae

Sarcochilus zeylanicus
Apostasia wallichii

Note: Jayaweera treated Apostasiaceae as a separate family. This genus was unknown to Jayaweera when he accompanied Dr Leslie Garay to Sinharaja forest in 1964, where it was collected and identified as *Apostasia* (see also Fig. 7). Now the consensus is to treat it as a subfamily of Orchidaceae (Dressler, 1993; Chase *et al.*, 2003; World Checklist of Monocots, 2007).

*Apostasia wallichii* R. Br. in Wallich, *Pl. Asiatic. Rar.* 1: 75. 1830.  **Fig. 8d**  
*Distribution*: Lowland wet zone.

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**An Annotated Checklist of the Orchids of Sri Lanka**

Samantha Suranjan Fernando and Paul Ormerod

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E-mail:  [wsandave@bigpond.net.au](mailto:wsandave@bigpond.net.au)
Apostasia wallichii R.Br.v

http://www.orchisasia.org/genre/Apostasia/Apostasia%20wallichii/index.html
The image contains two photographs of yellow flowers. The text above the images is in a language that appears to be Telugu or a similar script.
Appendicula reflexa

http://orchids.la.coocan.jp/Appendicula/Appendicula%20reflexa/Appendicula%20reflexa.htm

<table>
<thead>
<tr>
<th>Family</th>
<th>Orchidaceae</th>
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<td>Subfamily</td>
<td>Epidendroideae</td>
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<tr>
<td>Tribe</td>
<td>Podochileae</td>
</tr>
<tr>
<td>Subtribe</td>
<td>Eriinae</td>
</tr>
<tr>
<td>Scientific name</td>
<td><em>Appendicula reflexa</em> Blume</td>
</tr>
</tbody>
</table>

Synonyms none

Distribution Taiwan, Thailand, Indonesia (Sumatra), New Guinea, Fiji, Tonga, Samoa, India, Sri Lanka
Appendicula reflexa Blume 1825
**Flower Size .1" [3mm]**

*Found in Taiwan, Thailand, Vietnam, Borneo, Java, Lesser Sunda Islands, Malaysia, Moluccas, Philippines, Sulawesi, Sumatra, Bissmark Islands, New Guinea, Solomon Islands, Fiji, New Caledonia, Tonga, Vanuatu, Wallis and Futuna, and the Coral Islands in lowlands and hill forests at elevations of 100 to 1100 as a small to medium sized, hot to cool growing epiphyte with close set, terete, simple stems carrying many oval, basally twisted, shortly unequally bilobed apically, basally lightly clasping leaves with sheaths persisting long after the leaves have fallen, that blooms in the summer and fall on lateral, on the back of the stems, 10 to 12 flowered inflorescence with close set flowers that do not open well.*

**Synonyms**

Appendicula cordata Hook.f. 1890; Appendicula dalatensis Guillaumin 1961; Appendicula formosana Hayata 1911; Appendicula formosana var. kotoensis (Hayata) T.P.Lin 1977; Appendicula kotoensis Hayata 1911; Appendicula reflexa f. cleistogama J.J.Sm. 1909; Appendicula reflexa var. cycloglossa (Schltr.) Schltr. 1911; Appendicula reflexa var. neopommeranica (Schltr.) Schltr. 1912; Appendicula reflexa var. reflexa.; Appendicula robusta Ridl. 1924; Appendicula vanikorensis Ames 1932; Appendicula vieillardi Rchb.f. 1876; Appendicula viridiflora Teijsm. & Binn. 1862; Podochilus reflexus (Blume) Schltr. 1900; Podochilus neopommeranicus Schltr. 1905; Podochilus reflexus var. cycloglossus Schltr. 1911; Podochilus taiwanianus S.S.Ying 1977; Podochilus vieillardi (Rchb.f.) Schltr. 1900
**Arundina graminifolia** (D. Don) Hochr.

**Syn:** *Arundina bambusifolia* Lindl., *Cymbidium bambusifolium* Roxb.

**Common name:** Bamboo Orchid.

**Distribution:** Himalayas of Nepal, Sri Lanka, Thailand, Laos, Cambodia, Vietnam, southern China, Japan, Taiwan and south to Malaya and Java. (3)

**Botany:** *Arundina graminifolia* is a large terrestrial plant with erect stems that are 1.5-2.5 cm tall and up to 1.5 cm in diameter. The leaves are borne in two ranks and are narrowly oblong and grass-like, 12-30 cm long and 1.6-2.5 cm. The simple, terminal inflorescence may be branched and is 15-30 cm long. The large cattleya-like flowers are purple-red, flesh-coloured or white and are up to 10 cm across. The lip is darker than the sepals and petals, often veined darker purple and has a yellow to orange-yellow patch at the base. The short-lived, scented flowers last for about 3 days and there are usually several open at a time. (18)

**Phytochemistry:** Benzylidihydrophenanthrene: arundinaol, stilbenoid: arundinan and phenanthrene constituents. (18, 19, 20)

**Part used:** Rhizome. **Pre-clinical studies:** Antibacterial.

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**Arundina graminifolia** Bamboo Orchid

[Image of Bamboo Orchid]

**Common name:** Bamboo Orchid, Bird Orchid

**Botanical name:** *Arundina graminifolia*  **Family:** Orchidaceae (Orchid family)

**Synonyms:** Arundina bambusifolia, Bletia graminifolia, Arundina speciosa

Bamboo orchid is a terrestrial orchid with reedy stems, forming large clumps growing to a height of 70 cm to 2 m. The plaited linear leaves are oblong lanceolate, with a length of 9-19 cm and a width of 0.8-1.5 cm. The apex is acuminate. There are sheaths clasping the stem. The species name *graminifolia* grass-leaved. This orchid blooms in summer and autumn, showing rather open clusters of showy terminal flowers, ten at the most. They bloom in succession on the terminal racemes, which are 7-16 cm long. These flowers, 5–8 cm in
diameter, are a rosy lilac and white disk with a purple lip. The bracts are wide triangular and surround the main stalk of the flower cluster. **Identification credit:** Navendu Págé

**Sunday, April 11, 2010**

**ORCHIDS OF LAKHIMPUR DISTRICT AND IT'S ADJOINING HILLS OF ARUNACHAL PRADESH**

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**Arundina graminifolia**

This species is commonly known as bamboo orchid because of it’s thin and tall bamboo like stem. This warm to hot growing monopodial, terrestrial orchid is found in almost entire Asia including Hawaii, Puerto Rico, Jamaica and Guadeloupe at the elevations of sea level to 1200 meters. **Flowering Time:** May –September.

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**Arundina graminifolia (D.Don) Hochr.**

Stems 60-120 cm long, 0.5-1 cm thick with new shoots arising either at apex or in the middle, many noded; internodes 4-5 cm long, sheathed. Leaves sessile, oblong-lanceolate, 5-nerved, 11-22 cm long, ca 1.4 cm broad. Flowers pinkish-white, 3.5-4.5 cm across; bracts erect, acute, ca 8 mm long; sepals lanceolate, acute, ca 4 cm long, ca 9 mm broad; petals orbicular-ovate, 4.5 cm long, ca 1.5 cm broad; lip pink with dark pink spots, ca 4.2 cm long; 3-lobed; sidelong broad, round; midlobe dark pink, oblong; apex crisped, bifid; disk 2-ridged; ridges fleshy, undulate.

Flowering: May-August  Occurrence: Cherrapunji, Mawsmai forest, Dawki, Jowai, Pynursla, Pynursla-Dawki, Raliang, Shillong

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http://meghalaya.nic.in/naturalres/pages/arundina_jpg.htm

**Arundina graminifolia**

- **Family:** Orchidaceae
- **Subfamily:** Epidendroideae
- **Tribe:** Arethuseae
Subtribe  Bletiinae

Scientific name  Arundina graminifolia (D. Don) Hochreutiner

Synonyms  Arundina affinis Griffith; Arundina bambusifolia (Roxburgh) Lindley; Arundina cantleyi Hooker f.; Arundina celebica Schlechter; Arundina chinensis Blume; Arundina densa Lindley; Arundina densiflora Hooker f.; Arundina graminifolia var. revoluta (Hooker f.) A. L. Lamb; Arundina maculata J.J. Smith; Arundina meyenii (Schauer) Reichenbach f.; Arundina minor Lindley; Arundina pentandra Reichenbach f.; Arundina philippi Reichenbach f.; Arundina pulchella Teijsmann & Binnend; Arundina pulchra Miquel; Arundina revoluta Hooker f.; Arundina sanderiana Kränzlin; Arundina speciosa Blume; Arundina speciosa var. sarasinorum Schlechter; Arundina stenopetala Gagnep.; Arundina subsessilis Rolfe; Arundina tahitensis Nadeaud; Arundina wallichii Reichenbach f.; Bletia graminifolia D. Don; Cymbidium bambusifolium Roxburgh; Cymbidium meyenii Schauer; Cymbidium speciosum Reinwardt ex Lindley; Limodorum graminifolium (D. Don) Buchanan-Hamilton; Ophrys arundinacea Noronha

Common name  (Japanese common name) nariya-ran (ナリヤラン, 成屋蘭 [meaning: Nariya orchid (Nariya = a local area name in Okinawa)])

(English common name) bamboo orchid

Distribution  (Japan) okinawa (Iriomote Island, Ishigaki Island)

(Other nations) China, Taiwan, Vietnam, Thailand, Cambodia, Malaya, Singapore, Indonesia, Laos, Nepal, Sri Lanka

Habitat  Wet field

Chromosomal number  2n=40

Description  Leaves 10-20cm long. Scapes 50-130cm tall. Flowers sepals 3cm long, lips 3cm long, flowering in May to August. Terrestrial. Perennial plants.

Reference  Arundina graminifolia (D. Don) Hochr.

Arundina graminifolia [D Don] Hochr. 1910

Note  In some areas (for instance in Hawaii), Arundina graminifolia may be invasive plants. However this species is being rare in Japan, due to over gathering.

Photos below at Tsukuba Botanical Garden are those of an orchid (Arundina graminifolia 'Jumbo Orchid') which was cultivated by Mr. Ei-ichi Ohishi and displayed at the Orchid Show 2008 in Tsukuba Botanical Garden.
**Arundina minor**

*Arundina* Blume Bijdr. 401.1825. # *Arundina graminifolia* (D. Don) Hochr., Bull. New
English: **bamboo orchid**  *Distribution*: Lowland wet and submontane zones.

* **Arundina minor** Lindl., Gen. Sp. Orchid. Pl. 125. 1831. **Fig. 8e**

*Distribution*: Submontane zone.

*Note*: *A. minor* Lindl. has been synonymised under *A. graminifolia* (D. Don) Hochr., a widespread taxon found in disturbed areas (World Checklist of Monocots, 2007). After examining floral, morphological and habitat characters, these two taxa have been clearly distinguished in Sri Lanka as different entities. We prefer to keep them separate.
SEE VOL. 2

“B”