

OPEN ACCESS



The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.

Journal of Threatened Taxa

Building evidence for conservation globally

www.threatenedtaxa.org

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

NOTE

RECORD OF THE ENDEMIC ORCHID *BIERMANNIA JAINIANA* (*ASPARAGALES: ORCHIDACEAE: EPIDENDROIDEAE*) FROM ITS TYPE LOCALITY, INDIA

Krishna Chowlu & Jeewan Singh Jalal

26 January 2018 | Vol. 10 | No. 1 | Pages: 11231–11233

10.11609/jott.3686.10.1.11231-11233



For Focus, Scope, Aims, Policies and Guidelines visit <http://threatenedtaxa.org/index.php/JoTT/about/editorialPolicies#custom-0>

For Article Submission Guidelines visit <http://threatenedtaxa.org/index.php/JoTT/about/submissions#onlineSubmissions>

For Policies against Scientific Misconduct visit <http://threatenedtaxa.org/index.php/JoTT/about/editorialPolicies#custom-2>

For reprints contact info@threatenedtaxa.org



RECORD OF THE ENDEMIC ORCHID *BIERMANNIA JAINIANA* (ASPARAGALES: ORCHIDACEAE: EPIDENDROIDEAE) FROM ITS TYPE LOCALITY, INDIA

Krishna Chowlu¹ & Jeewan Singh Jalal²

¹ Botanical Survey of India, Arunachal Pradesh Regional Centre, Sanki Valley, Itanagar, Arunachal Pradesh 791113, India

² Botanical Survey of India, Western Regional Centre, 7, Koregaon Road, Koregaon Road, Pune, Maharashtra 411001, India

¹ krishnachowlu@gmail.com (corresponding author),

² jeewan.orchid@gmail.com

The northeastern region of India has been recognised as a 'mega diversity' area for flora. This region has about 876 orchid species in 151 genera, which constitutes nearly 70% of the total orchid flora of our country (Medhi & Chakrabarti 2009). A large number of them have ornamental value and are threatened. The orchid species in this region are fast declining due to habitat loss, habitat fragmentation, over-exploitation, global warming and 'jhum' (slash and burn) cultivation. The conservation of wild orchids in their natural habitats have become a matter of global concern. Keeping the importance of orchids in mind the Arunachal Pradesh government has created a Sessa Orchid Sanctuary 25km away from Orchid Research and Development Centre (ORDC) at Tipi. In the recent survey the author (KC) noticed an interesting orchid species named *Biermannia jainiana* S.N. Hegde & A.N. Rao from Kameng. The generic name *Biermannia* is based on Adolph Biermann, who was a curator of the Calcutta Botanical Garden. Genus is represented by 10 species distributed in

China, India, Thailand, Vietnam, peninsular Malaysia, Sumatra, Java and Bali. Four species viz., *Biermannia arunachalensis* A.N. Rao., *B. bimaculata* (King & Pantl.) King & Pantl., *B. jainiana* Hegde & A.N. Rao., *B. quinquecallosa* King & Pantl. occur in India.

Arunachal Pradesh, the northeastern most state of India, is a part of northeastern Himalaya and is considered as one of the biodiversity rich areas of the country. Out of 1,350 species of orchids recorded from India, about 560 species are reported from Arunachal Pradesh. Arunachal Pradesh may be botanically termed as an 'orchid paradise' because of the maximum concentration of orchid species (about 40% of the country) in the state when compared to other states of the country (Rao 2010). *Biermannia jainiana* is an endemic orchid species and known only from its type locality, i.e., from a single locality (Fig. 1). Little information is available on its habitat and population status. In addition the author (KC), for the first time, captured colour photographs of this species. The present paper highlights the detailed description, phenology, habitat and conservation status of this species supported by photographs.

Biermannia jainiana

S.N. Hegde & A.N. Rao, Bull. Bot. Surv. India 26: 97 (1984 publ. 1985); H.J. Chowdhery, Orchids Fl. Arunachal Pradesh 78, f.34. 1998 (Images 1, 2).

Type: Hegde 4192 (Orchid Herbarium Tipi, Arunachal Pradesh).

Stem 4–7 × 0.5–1.0 cm, decurved, with many



ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

OPEN ACCESS



DOI: <http://doi.org/10.11609/jott.3686.10.1.11231-11233>

Editor: Pankaj Kumar, Kadoorie Farm and Botanic Garden (KFBG) Corporation, Tai Po, Hong Kong.

Date of publication: 26 January 2018 (online & print)

Manuscript details: Ms # 3686 | Received 21 July 2017 | Final received 04 January 2018 | Finally accepted 07 January 2018

Citation: Chowlu, K. & J.S. Jalal (2018). Record of the endemic orchid *Biermannia jainiana* (Asparagales: Orchidaceae: Epidendroideae) from its type locality, India. *Journal of Threatened Taxa* 10(1): 11231–11233; <http://doi.org/10.11609/jott.3686.10.1.11231-11233>

Copyright: © Chowlu & Jalal 2018. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use of this article in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

Funding: None.

Competing interests: The authors declare no competing interests.

Acknowledgements: The authors are thankful to Dr. Paramjit Singh, Director, Botanical Survey of India for facilities and encouragement.

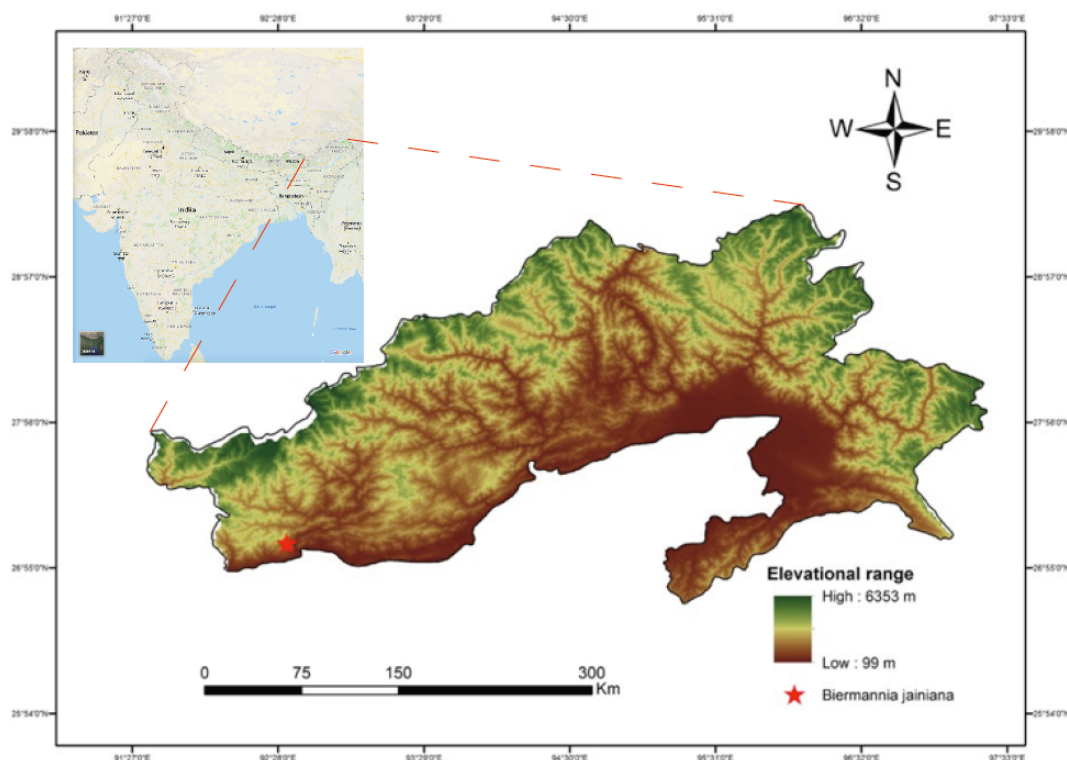


Figure 1. Distribution map of *Biermannia jainiana* in Arunachal Pradesh. (Drawn by: Jeewan Jalal)

dense roots. Leaves 6.0–15.0 × 1.2–2.5 cm, up to 8 in number, sheathing at base, oblong or oblong lanceolate, acute, unequally bilobed at apex, undulate at margins. Inflorescence 2–6 racemes, leaf opposite, 2.0–6.0 cm long, short and held beneath the leaves, 3–6-flowered; rachis club-shaped, terete, with 2 or 3 short sterile bracts at intervals of 1.0–1.5 cm, groove at the axils. Flowers white, non resupinate, restricted to the distal thickened portion of the rachis, not widely opening; perianth lobes distinctly apiculate c. 1.5cm across the lateral sepals and c. 0.9cm across the lip and odd sepals. Bracts shorter than the ovary, 2.0 × 1.0–1.5 mm, oblong, acute. Sepals 7.0–9.0 × 4.5–5.0 mm, elliptic-oblong, concave, 5-nerved, white with base pale yellow. Petals 5.5–7.0 × 3.0–3.5 mm, elliptic oblong, obtuse, 3-nerved, minutely falcate. Lip 5.5–7.0 × 3.0–4.0 mm, white with brown hairs inside, parallel to the column, fleshy, entire, with narrow erect subundulate lateral margins, truncate and thickened at apex into a cubic apicule, with sparse short papillae on the apicule; disc concave with many brownish ciliae within. Column c. 3.5×2.0 mm, short, stout; foot c. 3.0mm long, with a knob-like erect median callus at the tip. Anther 2-celled; anther cap broadly ovate, shortly beaked over the rostellum. Pollinia 2, ovoid.

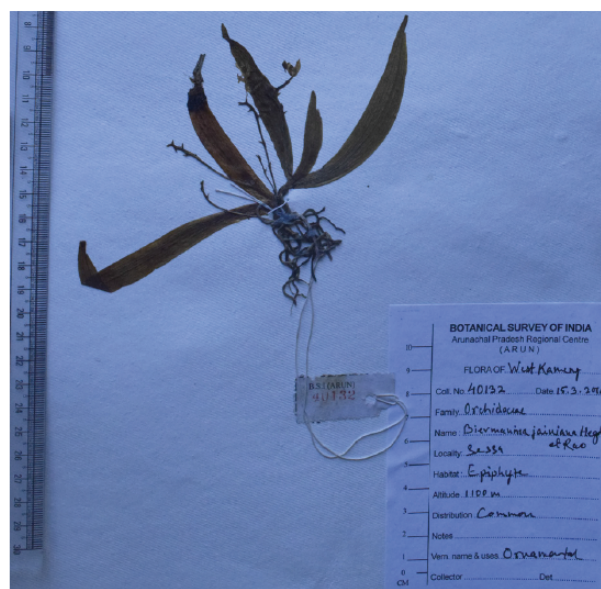


Image 2. Herbarium sheet of *Biermannia jainiana*

Flowering and fruiting: March–April.

Habitat & Ecology: This is an epiphytic species found growing on large tree trunks (*Schima wallichii* and *Toona ciliata*) in dense moist subtropical evergreen forests at an elevation of 1,100m. The dominating plant species

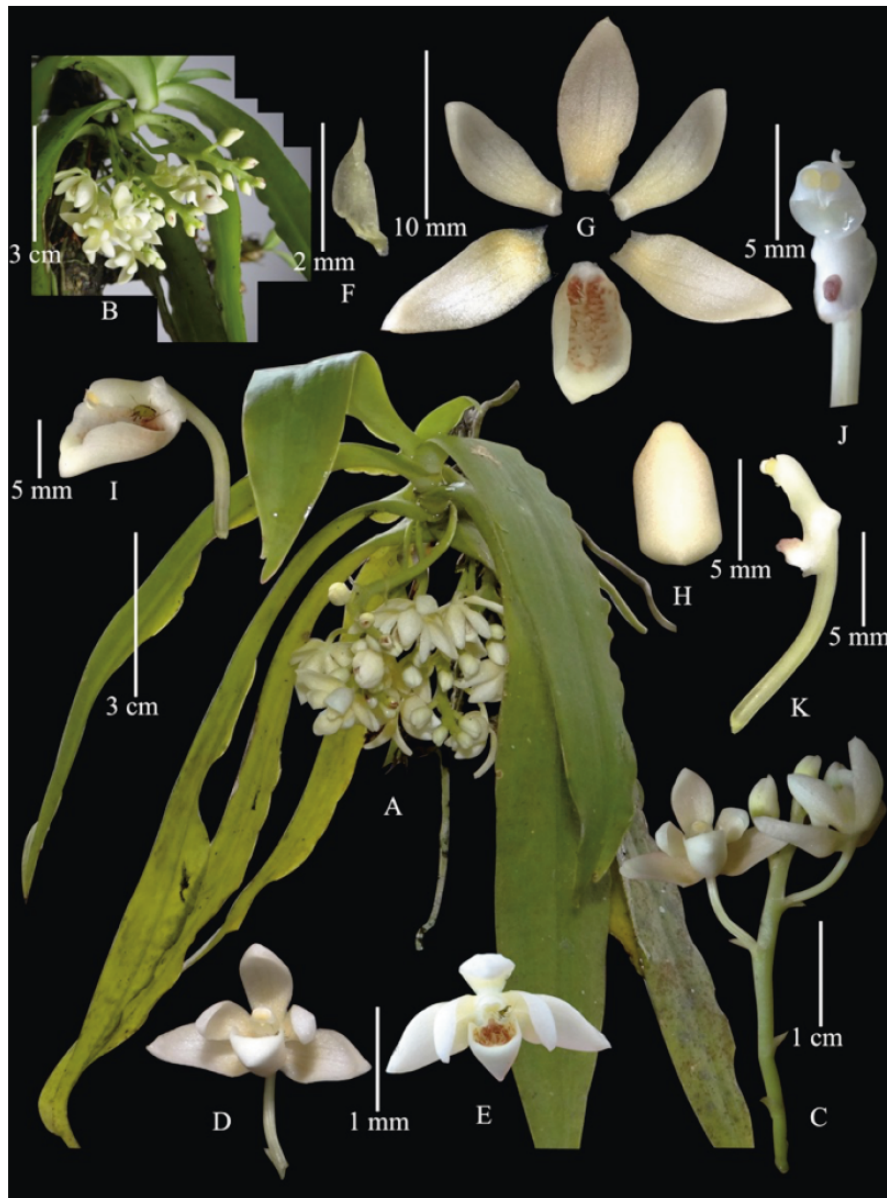


Image 1. *Biermannia jainiana*
S.N. Hegde & A.N. Rao
A–B - Habit; C - Inflorescence;
D–E - Flower; F - Bract; G - Floral
parts; H - Lip ventral view; I - Lip with
column; J - Column; K - Column with
pedicel ovary. (© Krishna Chowlu)

of the region include *Schima wallichii*, *Toona ciliata* and *Castanopsis*. The associated orchids found with *Biermannia* are *Dendrobium* sp., *Flickingeria* sp., etc.

Distribution: India (Arunachal Pradesh). Endemic.

Conservation status: The first report of this species in Arunachal Pradesh is from West Kameng. Till date this species is confined only to a single location. The area of occupancy is less than 10km². In the present survey about 12 mature individuals were recorded from this location. It was observed that the present location is facing threats due to illicit felling of its host trees. Based on the IUCN (2017) Red Listing criteria, the species is potentially Critically Endangered [D]; however, further field surveys are recommended for the species.

References

- Chowdhery, H.J. (1987). *Orchid flora of Arunachal Pradesh*. Bishen Singh Mahendra Pal Singh, Dehradun, 78pp.
- Hegde, S.N. & A.N. Rao (1984). *Biermannia jainiana* Hedge et Rao - a new species of orchid from Arunachal Pradesh. *Bulletin of Botanical Survey of India* 26: 97–99.
- IUCN (2017). Guidelines for Using the IUCN Red List Categories and Criteria. Version 3.1. Second Edition. <http://www.iucnredlist.org/> [accessed on 06December 2017]
- Medhi, R.P. & S. Chakrabarti (2009). Traditional Knowledge of NE people on conservation of wild orchids. *Indian Journal of Traditional Knowledge* 8(1): 11–16.
- Rao, A.N. (2010). Orchid flora of Arunachal Pradesh- an update. *Bulletin of Arunachal Forest Research* 26(1 & 2): 82–110.



OPEN ACCESS



The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.

ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

January 2018 | Vol. 10 | No. 1 | Pages: 11105–11244

Date of Publication: 26 January 2018 (Online & Print)

DOI: 10.11609/jott.2018.10.1.11105-11244

www.threatenedtaxa.org

Articles

On the reproductive ecology of *Premna latifolia* L. and *Premna tomentosa* Willd. (Lamiaceae)

-- B. Dileepu Kumar, D. Sandhya Deepika & A.J. Solomon Raju, Pp. 11105–11125

Stream macro-invertebrate diversity of the Phobjikha Valley, Bhutan

-- Jigme Wangchuk & Kuenzang Dorji, Pp. 11126–11146

Communications

Population characteristics of *Silaum silaus* (L.) Schinz & Thell. (Apiaceae) in Mordovia, a highly threatened plant species at the northern limit of its range

-- Anatoliy A. Khapugin, Pp. 11147–11155

Distribution of *Nanhaipotamon hongkongense* (Shen, 1940) (Crustacea: Brachyura: Potamidae), a freshwater crab endemic to Hong Kong

-- David John Stanton, Michael Robertson Leven & Tommy Chung Hong Hui, Pp. 11156–11165

Status of birds in Agasthyamalai Hills, Western Ghats, Kerala, India

-- Madhumita Panigrahi & V.J. Jins, Pp. 11166–11184

A short-term survey report on the post-winter avian diversity in Corbett National Park and associated areas, Uttarakhand, India

-- Srinjana Ghosh & Tanmay Bhattacharya, Pp. 11185–11191

Short Communications

Rhododendron diversity along the Kusong-Panch Pokhari transect in Khangchendzonga Biosphere Reserve, the eastern Himalaya: a conservation perspective

-- Prem K. Chhetri, Bijoy Chhetri & Hemant K. Badola, Pp. 11192–11200

Report of a longhorn beetle *Cyrtanops punctipennis* White, 1853 (Coleoptera: Cerambycidae) from Maharashtra, India

-- Narendra M. Naidu & Hemant V. Ghatge, Pp. 11201–11204

Butterflies of Peringome Vayakkara Panchayath, Kerala, India

-- C. Sneha, Pp. 11205–11209

A new subspecies of the Malayan Bamboo Bat (Chiroptera: Vespertilionidae: *Tylonycteris malayana eremtaga*) from the Andaman Islands, India

-- Chelmala Srinivasulu, Aditya Srinivasulu, Bhargavi Srinivasulu & Gareth Jones, Pp. 11210–11217

Small carnivores of Wayanad Wildlife Sanctuary, the southern Western Ghats, India

-- E.R. Sreekumar & P.O. Nameer, Pp. 11218–11225

Observations on the Nilgiri Marten *Martes gwatkinsii* (Mammalia: Carnivora: Mustelidae) from Pampadum Shola National Park, the southern Western Ghats, India

-- G. Anil, Navaneeth Kishor, Naseef Gafoor, Naseer Ommer & P.O. Nameer, Pp. 11226–11230

Notes

Record of the endemic orchid *Biermannia jainiana* (Asparagales: Orchidaceae: Epidendroideae) from its type locality, India

-- Krishna Chowlu & Jeewan Singh Jalal, Pp. 11231–11233

Sighting of the Common Shelduck *Tadorna tadorna* (Linnaeus, 1758) (Aves: Anseriformes: Anatidae) in Shettikeri Tank, Karnataka, India

-- Darwin Dasan Tamiliniyan, Santhanakrishnan Babu & Honnavalli Nagaraj Kumara, Pp. 11234–11236

Ceylon Kentish Plover *Charadrius alexandrinus seebohmii* breeding in Vani Vilasa Sagara, Hiriya Taluka, Karnataka, India

-- Golusu Babu Rao, Santhanakrishnan Babu, Honnavalli Nagaraj Kumara & Mahesh Bilaskar, Pp. 11237–11239

A new sight record and range extension of the Grizzled Giant Squirrel *Ratufa macroura dandolena* (Mammalia: Rodentia: Sciuridae) in the Eastern Ghats of southern peninsular India

-- Sivangnanaboopathidoss Vimalraj, Kothandapani Raman, Damodar Atmavadan Reddy, Bakthavachalam Harikrishnan, Bawa Mothilal Krishnakumar & Kanagaraj Muthamizh Selvan, Pp. 11240–11242

First record of the Dhole *Cuon alpinus* (Mammalia: Carnivora: Canidae) in Barandabhar Corridor Forest, Chitwan, Nepal

-- Saneer Lamichhane, Aashish Gurung, Chiranjibi Prasad Pokheral, Trishna Rayamajhi, Pabitra Gotame, Pramod Rai Regmi & Babu Ram Lamichhane, Pp. 11243–11244

Miscellaneous

National Biodiversity Authority

