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Research Article

A new combination in *Sphaeropteris* (Cyatheaceae) and neotypification of *Cyathea jacobsii*

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Abstract: A new combination is made for *Cyathea jacobsii* Holttum under the genus *Sphaeropteris* Bernh. as *Sphaeropteris jacobsii* (Holttum) R. Kr. Singh. In addition, neotype is designated for the name *Cyathea jacobsii* Holttum.

Keywords: *Cyathea jacobsii*, Holotype, Indonesia, Malaysia, Tree fern

Introduction

Sphaeropteris Bernh. is represented by 106 species, distributed mainly in Australia, Indian subcontinent, South China to Southeast Asia, South Pacific and New Zealand (POWO, 2024). Few species are distributed in tropical America. In Indonesia (Republic of Indonesia), the genus is represented by 48 species, namely *S. aeneifolia* (Alderw.) R.M.Tryon, *S. agatheti* (Holttum) R.M.Tryon, *S. alternans* (Hook.) R.M.Tryon, *S. angiensis* (A.Gepp) R.M.Tryon, *S. angustipinna* (Holttum) R.M.Tryon, *S. arthropoda* (Copel.) R.M.Tryon, *S. assimilis* (Hook.) R.M.Tryon, *S. atrospinosa* (Holttum) R.M.Tryon, *S. atrox* (C.Chr.) R.M.Tryon, *S. auriculifera* (Copel.) R.M.Tryon, *S. celebica* (Blume) R.M.Tryon, *S. elmeri* (Copel.) R.M.Tryon, *S. felina* (Roxb.) Pic.Serm., *S. glauca* (Blume) R.M.Tryon, *S. integra* (J.Sm. ex Hook.) R.M.Tryon, *S. jacobsii* (Holttum) R.Kr.Singh, *S. ledermannii* (Brause) R.M.Tryon, *S. leucotricha* (Christ) R.M.Tryon, *S. lunulata* (G.Forst.) R.M.Tryon, *S. magna* (Copel.) R.M.Tryon, *S. moluccana* (R.Br. ex Desv.) R.M.Tryon, *S. obscura* (Scort.) R.M.Tryon, *S. papuana* (Ridl.) R.M.Tryon, *S. parvifolia* (Holttum) R.M.Tryon, *S. persquamulifera* (Alderw.) R.M.Tryon, *S. pilulifera* (Copel.) R.M.Tryon, *S. polypoda* (Baker) R.M.Tryon, *S. procera* (Brause) R.M.Tryon, *S. pukuana* (M.Kato) Lehnert & Coritico, *S. pulcherrima* (Copel.) R.M.Tryon, *S. rosenstockii* (Brause)

R.M.Tryon, *S. runensis* (Alderw.) R.M.Tryon, *S. sarasinoru m* (Holttum) R.M.Tryon, *S. senex* (Alderw.) R.M.Tryon, *S. setifera* (Holttum) R.M.Tryon, *S. squamulata* (Blume) R.M.Tryon, *S. strigosa* (Christ) R.M.Tryon, *S. tenggerensis* (Rosenst.) R.M.Tryon, *S. teysmannii* (Copel.) R.M.Tryon, *S. tomentosa* (Blume) R.M.Tryon, *S. tomentosissima* (Copel.) R.M.Tryon, *S. trichodesma* (Scort.) R.M.Tryon, *S. trichophora* (Copel.) R.M.Tryon, *S. tripinnata* (Copel.) R.M.Tryon, *S. tripinnatifida* (Roxb.) R.M.Tryon, *S. verrucosa* (Holttum) R.M.Tryon, *S. wallacei* (Mett.) R.M.Tryon and *S. werneri* (Rosenst.) R.M.Tryon, of which *S. agatheti*, *S. parvifolia*, *S. persquamulifera*, *S. pukuana*, *S. sarasinorum*, *S. senex*, *S. setifera*, *S. strigosa*, *S. tenggerensis*, *S. teysmannii*, *S. tripinnatifida* and *S. verrucosa* are endemic (POWO, 2024). However, *Cyathea jacobsii* Holttum needs to be transferred to the genus *Sphaeropteris* Bernh. Therefore, following recent circumscription of *Sphaeropteris*, a new combination is proposed here for *Cyathea jacobsii* under the genus *Sphaeropteris* as *S. jacobsii* (Holttum) R.Kr.Singh. Holotype and isotypes for the name *Cyathea jacobsii* Holttum are no longer extant. Since no original material has been found, the 1958 M. Jacobs 5788 specimen at L (L0051305) is designated here as the neotype to fix the identity and to avoid the misapplication of name. I followed the guidelines and recommendations of Article 9 in Turland et al. (2018).

New combination

Sphaeropteris jacobsii (Holttum) R.Kr.Singh, *comb. nov.*

≡ *Cyathea jacobsii* Holttum, Reinwardtia 8: 499. 1974.

Holotype: Indonesia, Sumatra, Province of Lampung, Tanggamus, 1200–1300 m, *s.d.*, *M. Jacobs 8113* (L, not extant); isotypes BO, K (not extant).

Neotype (designated here): Malaysia, Ranau, British North Borneo, Mount Kinabalu, South slope, along path Tenompok-Kambarangan-Paka Caves-summit, 1800–2000 m, 19 October 1958, *M. Jacobs 5788* (L0051305!, Figure 1); isoneotype (L0051306, Figure 2).

Distribution: Indonesia and Malaysia.

Notes: The above neotype is required since all original material seems lost. In the protologue of *Cyathea jacobsii*, Holttum (1974) cited type information as “TYPUS: *M. Jacobs 8113*, S. Sumatra, Prov. Lampung, G. Tanggamus, 1200–1300 m (L; dupl. BO, K)”. Presently, no original material of *C. jacobsii* Holttum is extant at BO, K and L. The specimen collected by M. Jacobs in the year 1958 from Malaysia, British North Borneo, Mount Kinabalu at L (L0051305) is chosen here as neotype, because this specimen is annotated by R.E. Holttum as “*Cyathea jacobsii*”.

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Figure 1: Neotype of *Cyathea jacobsii* Holttum (L0051305, © Naturalis Biodiversity Center, Leiden)



Figure 2: Isoneotype of *Cyathea jacobsii* Holttum (L0051306, © Naturalis Biodiversity Center, Leiden)

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