



Transfer of Papua New Guinea's *Gleichenia hooglandii* to *Sticherus* (*Gleicheniaceae*)

L.R. Perrie¹

Key words

Gleichenia
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Abstract Based on its morphology and in accordance with modern circumscriptions of genera among the *Gleicheniaceae*, a new combination in *Sticherus* is made for the Papua New Guinean fern originally described as *Gleichenia hooglandii*.

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INTRODUCTION

Present day treatments assign the approximately 160 extant fern species of *Gleicheniaceae* C.Presl to six genera: *Dicranopteris* Bernh., *Diplopterygium* (Diels) Nakai, *Gleichenia* Sm., *Sticherus* C.Presl, the monotypic *Gleichenella* Ching which occurs in central and southern America, and the monotypic *Stromatopteris* Mett. of New Caledonia (Chinnock & Bell 1998, Mickel & Smith 2004, Gonzales & Kessler 2011, Xiaofeng et al. 2013, Perrie & Brownsey 2015, PPG I 2016, Chen et al. 2017). In his account of the *Gleicheniaceae* of Malesia, Holttum (1959) accepted just two genera for the region, *Gleichenia* and *Dicranopteris*, and treated *Diplopterygium* and *Sticherus* as *Gleichenia* subg. *Diplopterygium* (Diels) Holttum and *G. subg. Mertensia* (Willd.) Hook, respectively. All of the species placed by Holttum (1959) in *G. subg. Diplopterygium* and *G. subg. Mertensia* now have combinations in *Diplopterygium* and *Sticherus*.

However, Holttum (1967) later added a new species of *Gleichenia* for Papua New Guinea, *G. hooglandii* Holttum. He compared it to *G. erecta* C.Chr. and *G. bolanica* Rosenst., both of which he placed in *G. subg. Mertensia*, and which are now known as *Sticherus erectus* (C.Chr.) Copel. and *S. bolanicus* (Rosenst.) Copel., respectively.

METHODS AND RESULTS

Examination of online images of the type collection, *Hoogland & Schodde 7692*, and other collections attributed by Holttum (1967) to *Gleichenia hooglandii* (including paratypes: *Brass 29923* (L 3534663), Mt Wilhelm, 15 June 1959; *Hoogland & Schodde 7090* (L 3534622), Mt Sugarloaf, 15 July 1960; *Pullen 5370* (L 3534664), Kubor Range, 5 Sept. 1963; *Hoogland 9515* (L 3534658), Cromwell Mountains, 6 Aug. 1964; *Hoogland 9704* (L 3534659), Salawaket Range, 31 Aug. 1964; *Hoogland 9919* (L 3534660), Salawaket Range, 24 Sept. 1964; *Schodde 2055* (L 3534648), Mt Giluwe, 30 Aug. 1961) shows clearly that the species belongs in *Sticherus*. Herbarium abbreviations follow Thiers (updated continuously; accessed 7 June 2018).

Using the terminology of Shaw & Ranker (2011; see also Perrie & Brownsey 2015), the ultimate leaflets branch pseudodichotomously from the beta costae (rather than being pinnately arranged as in *Gleichenia* s.str. and *Diplopterygium*), while the beta costae bear costal segments (absent in *Dicranopteris*). Indeed, so obvious is the placement in *Sticherus* that herbarium specimens are frequently identified as '*Sticherus hooglandii*' (e.g., online catalogues of K, CANB p.p., L p.p.; <http://apps.kew.org/herbcat/navigator.do>, <http://avh.chah.org.au>, and <http://bioportal.naturalis.nl>, respectively; accessed 7 June 2018). However, the combination in *Sticherus* has not been published, and so it is provided here.

***Sticherus hooglandii* (Holttum) Perrie, comb. nov.**

Basionym. *Gleichenia hooglandii* Holttum, Blumea 14 (1967) 327.

Holotype. *Hoogland & Schodde 7692* (CANB 87069–87071, cross-labelled as the same specimen), Papua New Guinea, Yobobos grassland area, 6 Sept. 1960; isotypes BM 001038258, L 0051617–0051618.

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¹ Museum of New Zealand Te Papa Tongarewa, P.O. Box 467, Wellington 6011, New Zealand; e-mail: leon.perrie@tepapa.govt.nz.