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## Transferring two names of *Chlamydogramme* to *Tectaria* (Pteridophyta: Tectariaceae)

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*Chlamydogramme* Holttum (1986: 157) was described mainly based on the linear sori of its type *C. hollrungii* (Kuhn in Schumann & Hollrung 1889: 8) Holttum (1986: 157). Later, Holttum (1991) added one more species to this genus, *C. elata* Holttum (1991: 556). Kramer *et al.* (1990) pointed out that *Chlamydogramme* should probably be included in *Tectaria* Cavanilles (1799: 115). Smith *et al.* (2006) synonymized *Chlamydogramme* officially with *Tectaria*. This treatment was followed by Christenhusz *et al.* (2011), PPG I (2016) and the most recent classification of *Tectaria* (Zhang & Zhang 2018) supported by molecular evidence. However, the two species still have not been transferred officially to *Tectaria*.

### *Tectaria elata* (Holttum) Li Bing Zhang & X. Zhang, *comb. nov.*

Basionym:—*Chlamydogramme elata* Holttum (1991: 556).

Type:—PAPUA NEW GUINEA. West Sepik Province: *J. R. Croft* 1735 (holotype K-000666152 (sheet 1/4)!, K-000666153! (sheet 2/4), K-000666154! (sheet 3/4), K-000666155! (sheet 4/4); isotype A-00292810!).

Notes:—*Tectaria elata* is characterized by linear sori, 5-lobed terminal lamina sections and 2–7 pinna pairs.

### *Tectaria hollrungii* (Kuhn) Li Bing Zhang & X. Zhang, *comb. nov.*

Basionym:—*Gymnopteris hollrungii* Kuhn in Schumann & Hollrung (1889: 8).

Type:—PAPUA NEW GUINEA. Augustafuss, *Hollrung* 640 (lectotype K-000666161! **designated here!**; isolectotypes BO, L-0931016!).

Homotypic synonyms:—*Gymnopteris hollrungii* Kuhn in Schumann & Hollrung (1889: 8); *Acrostichum hollrungii* (Kuhn) Baker (1891: 495); *Leptochilus hollrungii* (Kuhn) Christensen (1905: 385); *Hemigramma hollrungii* (Kuhn) Copeland (1928: 406); *Chlamydogramme hollrungii* (Kuhn) Holttum (1986: 157).

Heterotypic synonyms:—*Hemigramma grandifolia* Copeland (1911: 77). Type: PAPUA NEW GUINEA. Lakekamu, *C. King* 328 (holotype MICH-1190604!).

Notes:—*Tectaria hollrungii* is characterized by linear sori, pinna-like terminal lamina section, and 2–3 pinna pairs. We did not find any type material of *Gymnopteris hollrungii* Kuhn at B where Kuhn's types are deposited (Stafleu & Cowan, 1979). We here designate the isotype at K as the lectotype.

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## References

- Baker, J.G. (1891) A summary of the new ferns which have been discovered or described since 1874. *Annals of Botany* 5: 455–500.  
<https://doi.org/10.1093/oxfordjournals.aob.a090650>
- Cavanilles, A.J. (1799) Nuevos caractères genéricos de los Helechos por Smith. *Anales de Historia Natural* 1: 108–115.
- Christensen, C. (1906) *Index Filicum*. H. Hagerup, Copenhagen, 745 pp.
- Copeland, E.B. (1911) Papuan ferns collected by the Reverend Copland King. *The Philippine Journal of science C. Botany* 6: 65–92.
- Copeland, E.B. (1928) *Leptochilus* and genera confused with it. *The Philippine Journal of science* 37: 333–411.
- Holtum, R.E. (1986) Studies in the fern-genera allied to *Tectaria* Cav. VI. A conspectus of genera in the Old World regarded as related to *Tectaria* with descriptions of two genera. *Gardens' Bulletin (Singapore)* 39: 153–167.
- Holtum, R.E. (1991) New taxa in the *Tectaria* group (Polypodiaceae) from Malesia. *Blumea* 35: 547–557.
- Kramer, K.U., Holtum, R.E., Moran, R.C. & Smith, A.R. (1990) *Dryopteridaceae*. In: Kubitzki, K. (Ed.) *The Families and Genera of Vascular Plants. Vol. 1. Pteridophytes and Gymnosperms*. Springer-Verlag, Berlin, pp. 101–144.
- PPG I. (2016) A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54: 563–603.  
<https://doi.org/10.1111/jse.12229>
- Schumann, K. & Hollrung, M. (1889) *Die Flora von Kaiser Wilhelms Land*. Kommissions-Verlag Asher & Co., Berlin, 144 pp.
- Stafleu, F.A. & Cowan, R.S. (1979) *Taxonomical literature Vol. II*. dr. W. Junk.d.v., Publishers, The Hague, 991 pp.
- Smith, A.R., Pryer, K.M., Schuettpelz, E., Korall, P., Schneider, H. & Wolf, P.G. (2006) A classification for extant ferns. *Taxon* 55: 705–731.  
<https://doi.org/10.2307/25065646>
- Zhang, L. & Zhang, L.-B. (2018) A classification of the fern genus *Tectaria* (Tectariaceae: Polypodiales) based on molecular and morphological evidence. *Annals of the Missouri Botanical Garden* 103: 188–199.  
<https://doi.org/10.3417/2017007>