



Nomenclatural note on three ferns from India

JAIDEEP MAZUMDAR

Department of Biological Sciences, Burdwan Town School, Burdwan-713101, India.

E-mail: jaideepmazumdar10@gmail.com

Ongoing molecular phylogenetic analyses are continuously providing better resolution of phylogenetic relations of ferns (Ebihara *et al.* 2006, Tsutsumi *et al.* 2008) and nomenclatural changes are necessary to maintain uniformity (Christenhusz *et al.* 2011). Here contemporary names are suggested for three fern species from India. Type information is provided and barcodes of digitalized specimens are given.

[Davalliaceae]

Davallodes squamata (Decne.) Mazumdar, *comb. nov.*

Cystopteris squamata Decne. in Jacquemont (1844: 178). *Araiostegia squamata* (Decne.) Fraser-Jenkins (2008: 354). Type:—INDIA. Maharashtra: north Western Ghats [as “a Carli ad Candala”], September, *V. Jacquemont* 599 (lectotype P-00645160 specimen 1 of 2, designated here; isolectotypes P-00645160 specimen 2 of 2, P-00645161, P-00645162).

Note:—Fraser-Jenkins (2008: 354) distinguished this species from *Davallodes pulchra* (D. Don Prodr. Fl. Nepalensis 11. 1825) Kato & Tsutsumi (2008: 13) following the description by Jacquemont (1844: 178), in having relatively shorter stipes, wider fronds with wider segments and thicker, less knobby rhizomes; this is evident in type specimens at P (P-00645160, 00645161, 00645162). In sheet P-00645160, plant material at left is treated as lectotype and the other one at right as isolectotype (<http://dsphoto.mnhn.fr/sonnerat/LAPI/scanH/H20081008/P00645160.jpg>). *Araiostegia* Copeland (1927: 240) is now included in *Davallodes* Copeland (1908: 33) (Tsutsumi *et al.* 2008, Christenhusz *et al.* 2011: 32) and a new combination is made here.

[Hymenophyllaceae]

Didymoglossum henzaianum (Parish ex Hook.) Mazumdar *comb. nov.*

Trichomanes henzaianum Parish ex Hooker (1861: 1). *Microgonium henzaianum* (Parish ex Hooker) Copeland (1938: 62). Type:—MYANMAR. Mawlamyine [as “Moulmein”]: Henzai basin, 60 miles from Tavoz, between Tavoz and Henzai, 1 June 1859, *C.S.P. Parish* 5 (holotype K-000974336, isotypes BM, GH).

Topotypes:—MYANMAR. Mawlamyine, 1858, *C.S.P. Parish s.n.* (K-000974333, K-000974334, K-000974335, P-00623405, P-00623406); 1 July 1858, *C.S.P. Parish s.n.* (E-00413866); 15 December 1858, *C.S.P. Parish s.n.* (E-00413864); 1859, *C.S.P. Parish s.n.* (MICH-1191074).

Note:—This species is known to occur in India (Karnataka), Myanmar, Thailand, Vietnam and Malaysia (Croxall 1986, Madhusoodanan *et al.* 1996, Fraser-Jenkins 2012). Ebihara *et al.* (2006) listed this species under *Didymoglossum* Desvaux (1827: 330), oblivious of the fact that the corresponding combination did not exist. Croxall (1986) mentioned K-000974336 as holotype, but Hooker (1861) did not designate a holotype in the protologue, reporting that the plants have been “detected by Mr. Henzai and the Rev. C.S.P. Parish, partially clothing the trunks of trees at Moulmein [Mawlamyine], 1859”. The matching information between protologue and the specimen label of holotype (K-000974336) as well as the congruence between the illustration (Hooker 1861) and the Kew specimen compel me to follow Croxall (1986) because the Kew specimen apparently served solely as basis for the species description. Also, other specimens mentioned as types at E, K, MICH, P (listed above) should be considered as topotypes as those bear different dates and are without any collection numbers.

[Tectariaceae]

Tectaria nayarii Mazumdar, *nom. nov.*

Stenosemia pinnata Copeland (1906: 146). *Heterogonium pinnatum* (Copel.) Holttum (1949: 163), not *Tectaria pinnata* (Christensen 1936[1937]: 37) Tryon & Tryon (1981: 136). Type:—PHILIPPINES. Mindanao: Zamboanga, San Ramon, 300 ft, 8 January 1905, E.B. Copeland 1601 (holotype MICH-1191022).

Note:—*H. pinnatum* is known to occur in India (Andaman Islands), Malaysia, Indonesia, and Philippines (Dixit & Sinha 2001, Fraser-Jenkins 2012). *Heterogonium* Presl (1851: 142) is subsumed in *Tectaria* Cavanilles (1799: 115) (Christenhusz *et al.* 2011). Due to preoccupation by *Tectaria pinnata* (C.Chr.) R.M.Tryon & A.F.Tryon, a new name honoring eminent Indian pteridologist Bala Krishnan Nayar (1927–2012) is proposed.

Acknowledgements

I sincerely thank Dr. M. Lehnert, editor, Phytotaxa for correcting and improving the manuscript and Miss M. Gimber, Assistant Botanist, Kew for providing useful information about specimens of *Trichomanes henzaianum* at K.

References

- Cavanilles, A.J. (1799) Botánica. *Anales de historia natural* 1(2): 89–115. (<http://www.biodiversitylibrary.org/item/4484>)
- Christenhusz, M.J.M., Zhang, X.-C. & Schneider, H. (2011) A linear sequence of extant families and genera of lycophytes and ferns. *Phytotaxa* 19: 7–54.
- Christensen, C. (1936[1937]) The collection of Pteridophyta made in Hispaniola by E.L. Ekman, 1917 and 1924–30. *Kongliga Svenska Vetenskaps Akademiens Handlingar*, n.s. 16: 1–93.
- Copeland, E.B. (1906) New Philippine ferns. *The Philippine Journal of Science* 1(Suppl. 2): 143–166.
- Copeland, E.B. (1908) New or interesting Philippine ferns III. *The Philippine Journal of Science* 1: 31–39.
- Copeland, E.B. (1927) *Davallodes* and related genera. *The Philippine Journal of Science* 34:239–257.
- Copeland, E.B. (1938) Genera Hymenophyllacearum. *The Philippine Journal of Science* 67: 1–110.
- Croxall, J.P. (1986) *Microgonium* (Hymenophyllaceae) in Malesia, with Special Reference to Peninsular Malaysia. *Kew Bulletin* 41: 519–553.
<http://dx.doi.org/10.2307/4103113>
- Desvaux, N.A. (1827) Prodrome de la famille des fougères. *Mémoires de la Société Linnéenne de Paris* 6: 171–337.
- Dixit, R.D. & Sinha, B.K. (2001) Pteridophytes of Andaman and Nicobar Islands. Bishen Singh Mahendra Pal Singh, Dehradun. 155 pp.
- Don, D. (1825) *Prodromus Florae Nepalensis*. J. Gale, London, 256 pp.
- Ebihara, A., Dubuisson, J.-Y., Iwatsuki, K., Hennequin, S. & Ito, M. (2006) A Taxonomic Revision of Hymenophyllaceae. *Blumea* 51: 221–280.
<http://dx.doi.org/10.3767/000651906x622210>
- Fraser-Jenkins, C.R. (2008) *Taxonomic revision of three hundred Indian subcontinental Pteridophytes with a revised Census-List*. Bishen Singh Mahendra Pal Singh, Dehra Dun, 685 pp.
- Fraser-Jenkins, C.R. (2012) Rare and Threatened Pteridophytes of Asia 2. Endangered Species of India—the Higher IUCN Categories. *Bulletin of the National Museum of Nature and Science. Series B* 38: 153–181.
- Holttum, R.E. (1949) The fern genus *Heterogonium* Presl. *Sarawak Museum Journal* 5: 156–166.
- Hooker, W.J. (1861) *A second century of ferns*. W. Pamplin, London, 218 pp. <http://dx.doi.org/10.5962/bhl.title.54283>
- Jacquemont, V. (1844) *Voyage dans l'Inde /par Victor Jacquemont, pendant les années 1828 à 1832; publié sous les auspices de M. Guizot, ministre de l'instruction publique*. Firmin Didot frères, Paris, 180 pp.
<http://dx.doi.org/10.5962/bhl.title.50803>
- Kato, M. & Tsutsumi, C. (2008) Generic classification of Davalliaceae. *Acta Phytotaxonomica et Geobotanica* 59: 1–14.
- Madhusoodanan, P.V., Hameed, C.A. & Rajagopal, P.K. (1996) *Microgonium henzaianum* (Parish ex. Hook.) Copel. (Hymenophyllaceae) a new record for India. *Indian Fern Journal* 13: 75–77.
- Presl, C. (1849[1851]) *Epimeliae botanicae*. A. Haase, Prague, 264 pp. <http://dx.doi.org/10.5962/bhl.title.61845>
- Tryon R. & Tryon A. (1981) Taxonomic and nomenclatural notes on ferns. *Rhodora* 83: 133–137.
- Tsutsumi, C., Zhang, X.-C. & Kato, M. (2008) Molecular phylogeny of Davalliaceae and implications for generic classification. *Systematic Botany* 33: 44–48.
<http://dx.doi.org/10.1600/036364408783887492>