Trichocolea Dumortier, 1822, nom. et orth. cons. (Jungermanniales, Bryophyta) vs Trichocoleus Anagnostidis, 2001 (Synechococcales, Cyanophyta) and Trichocolaceae H.Nakai vs Trichocolaceae T.Mai & J.R.Johansen

Michael D. Guiry, *AlgaeBase, Ryan Institute, National University of Ireland, Galway H91 TK33, Ireland* (michael.guiry@nuigalway.ie)

Jeffrey R. Johansen, Department of Biology, John Carroll University, 1 John Carroll Blvd., University Heights, Ohio 44118, USA & Department of Botany, Faculty of Science, University of South Bohemia, 31 Branišovská, 37005 České Budějovice, Czech Republic.

Truc Mai, Department of Plant and Environmental Sciences, New Mexico State University, Skeen Hall Room N127, P.O. box 30003 MSC 3Q, Las Cruces, New Mexico 88003, USA.

The genus name *Trichocolea* was introduced for two liverworts by Dumortier (1822, as 'Thricholea'). Subsequently, he replaced the spelling 'Thricholea' with 'Tricholea' (Dumortier 1829), and in 1831 (Dumortier 1831) employed three different spellings: 'Thricolea' (pp. 24, 28, 66, 98), 'Tricolea' (p. 99, Contents), and 'Tricholea' (pl. I: fig. 8). Nees von Esenbeck (1838: 88, 101, 103) changed Dumortier's spellings to 'Trichocolea' and this was the orthography accepted by bryologists other than Dumortier thereafter. Dumortier (1874: 111) strongly rejected the spelling 'Trichocolea' and treated Nees's 'Trichocolea' as a separate genus name placed in synonymy. Little (1949: 11) presented a detailed argument for accepting Nees's spelling and proposed it for conservation as *Trichocolea* Dumortier *nom. et orth. cons.*, which was accepted by the VIIIth International Botanical Congress in 1954. The family name *Trichocoleaceae* T.Nakai, based on *Trichocolea* Dumortier, was published posthumously (Nakai 1943: 201) and is currently a recognised family of the Jungermanniales (e.g., Katagiri *et al.* 2013). *Trichocolea* Dumortier currently includes 16 accepted species and about 30 names in The Plant List.

The genus name *Trichocoleus* Anagnostidis (then referred to the Oscillatoriales) was introduced for 16 species by Anagnostidis (2001: 369). An explanation of the derivation of the name was not given, nor was reference to the Dumortier name(s) made. Konstantinos Th. Anagnostidis (1925-1994) of Athens University died prior to the publication of this paper, which was based on a manuscript prepared by him for an anticipated volume on the Oscillatoriales in the *Süβwasserflora von Mitteleuropa* series. Plant and algal names with the suffix "-coleus" are generally treated as masculine and this is how Anagnostidis (2001: 369) treated all 16 names included by him.

The question arises as to whether *Trichocolea* and *Trichocoleus*, which are not isonyms, should be treated as homonyms, but as the name *Trichocolea* has been conserved with this orthography and cannot therefore be altered, the two variants can be retained as they are not spelled exactly alike (Art. 53.1, Shenzhen Code; Turland *et al.*, 2018), and as they are in entirely different and noncontiguous phyla (Bryophyta vs Cyanophyta) they are unlikely to be confused. Art. 53.2 of the Shenzhen Code (Turland *et al.*, 2018) is explicit on this point:

"53.2. When two or more names of genera or species based on different types are so similar that they are likely to be confused (*because they are applied to related taxa* or for any other reason) they are to be treated as homonyms..." [Our emphasis]

However, family names have been introduced based on each of the genera with identical spellings: *Trichocoleaceae* T.Nakai (1943) and, more recently, *Trichocoleaceae* T.Mai & J.R.Johansen (in Mai *et al.* 2018: 13). While these names appear to be isonyms, as they are based on different types, they are in fact homonyms.

Art. 18 of the ICN (Shenzhen Code; Turland *et al.*, 2018) fortunately provides for such an eventuality:

"18.1. The name of a family is a plural adjective used as a noun; ..., when formation from the genitive singular of a generic name results in a homonym, -aceae may be added to the nominative singular."

Accordingly, it is sufficient to correct *Trichocoleaceae* T.Mai & J.R.Johansen, to *Trichocoleusaceae* T.Mai & J.R.Johansen in accordance with Art. 18.1 while maintaining the authorship and date of publication.

We are particularly grateful to Dr John McNeill (Honorary Associate, Royal Botanic Garden, Edinburgh, Scotland) for his sage advice on this matter.

- Anagnostidis, K. (2001). Nomenclatural changes in cyanoprokaryotic order Oscillatoriales. *Preslia, Praha* 73: 359-375.
- Dumortier, B.C. (1822). *Commentationes botanicae*. Observations botaniques, dédiées à la Société d'Horticulture de Tournay. pp. [i], [1]-116, [1, tabl., err.]. Tournay: Imprimerie de Ch. Casterman-Dieu, Rue de pont No. 10.
- Dumortier, B.C. (1829). *Analyse des familles des plantes*, avec l'indication des principaux genres qui s'y rattachent. pp. 1-104. Tournay: Imprimerie de J. Casterman, Ainé.
- Dumortier, B.C. (1831). *Sylloge Jungermannidearum Europæ indigenarum:* earum genera et species systematicé complectens. Pp. [1]- 100. Tornaci Nerviorum: typis J. Casterman.
- Dumortier, B.C. (1874). *Hepaticae Europae*. Jungermannideae Europae post semiseculum recensitae, adjunctis hepaticis. Pp. [1]-, 4 pls. Bruxelles et Lipsiae: apud C. Muquardt, nunc H. Merzback.
- Katagiri, T., Sadamitsu, A., Miyauchi, H., Tsubota, H & Deguchi, H. (2013). Taxonomic studies of the Trichocoleaceae in Southeast Asia. III. The genus *Trichocolea* Dumort. *Hattoria*, 4: 1-41, 12 figs.
- Komárek, J. & Anagnostidis, K. (2005). Süsswasserflora von Mitteleuropa. Cyanoprokaryota: Band/Volume 19. Teil/2nd Part: Oscillatoriales. pp. 1-759. München: Elsevier Spektrum Akademischer Verlag.
- Little, E.L., Jr. 1949. Nomina conservanda proposals in Hepaticae. The Bryologist 52(1): 1-22.
- Mai, T., Johansen, J.R., Pietrasiak, N., Bohunická, M. & Martin, M.P. (2018). Revision of the Synechococcales (Cyanobacteria) through recognition of four families including Oculatellaceae fam. nov. and Trichocoleaceae fam. nov. and six new genera containing 14 species. *Phytotaxa* 365(1): 1-59, 23 figs.
- Nakai, T. (1943). A list of Prof. Nakai's papers with indices to names of plants and plant-groups published as new to science by him. Tokyo. Pp. i-viii, 1-256, errata 1-4 [Not seen.]
- Nees von Esenbeck, C.G. 1838. *Naturgeschichte der europäischen Lebermoose*: mit besonderer Beziehung auf Schlesien und die Oertlichkeiten des Riesengebirgs. Drittes Bändchen. pp. [4] 1-593. Breslau: bei Grass, Barth und Comp.
- Turland, N.J., Wiersema, J.H., Barrie, F.R., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Knapp, S., Kusber, W.-H., Li, D.-Z., Marhold, K., May, T.W., McNeill, J., Monro, A.M., Prado, J., Price, M.J. & Smith, G.F., editors (2018). *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code)* adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. *Regnum Vegetabile*, Vol. 159. pp. [i]-xxxviii, 1-253. Glashütten: Koeltz Botanical Books.