

Remarks on Algal Nomenclature. IV

Author(s): Paul C. Silva

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NOMENCLATURE

REMARKS ON ALGAL NOMENCLATURE. IV. *

Paul C. Silva **

XIII. Rectification of generic homonymy.

During the course of preparing entries for the Index Nominum Algarum and the Index Nominum Genericorum, numerous later homonyms in current use for genera of algae have come to my attention. Those authored by living persons have been referred to their respective authors for action, as a matter of ethics and personal consideration. Of those authored by deceased persons, only a few merit conservation, in my opinion, and proposals for these names will be made in a future paper. For the remaining homonyms, substitute names are proposed herein, as follows:

Anthodiscus Grove et Sturt (*Anthodiscina*)
Botryosphaera R. Chodat (*Botryosphaerella*)
Chloropteris Pascher (*Chloropteridella*)
Dasythamnion J. Agardh (*Dasythamniella*)
Helminthopsis Van Heurck (*Helminthopsidella*)
Klebsiella Pascher (*Klebsina*)
Pachycladon G. M. Smith (*Pachycladella*)
Philippia Kuckuck (*Portphillipia*)
Pleurodiscus Barker et Meakin (*Pleurodiscina*)
Pleuromastix Namysłowski (*Pleuromastigella*)
Pterococcus Lohmann (*Coccopterum*)
Schmidleia Wołoszyńska (*Schmidledesmus*)
Spironema Klebs (*Spironematella*)
Trichloris Scherffel et Pascher (*Trichloridella*)
Trigonidium Pascher (*Trigonidiella*)
Tubularia Brun (*Tubulariella*)

In addition, the correctness of *Dictyopyxidial* Eisenack as a substitute name for *Dictyopyxis*

Cookson et Eisenack is emphasized.

I should like to express my deep appreciation to the American taxpayers for their patience and generosity in supporting my work on the Index Nominum Algarum for the past 12 years through funds allocated by the National Science Foundation. I am especially indebted to Dr. David E. G. Irvine, who greatly stimulated the project by joining me at the University of Illinois from 1958 to 1960, and to Miss Nel C. Rem, who has been effectively contributing to the Index at Berkeley since 1962 without succumbing to the stultification inherent in such tedious, seemingly never-ending work.

Anthodiscina nom. nov. *Anthodiscus* Grove et Sturt, J. Quekett Microscop. Club, ser. 2. 3: 65. 1887. Heliopeltaceae (Bacillariophyta). Non *Anthodiscus* G. F. W. Meyer, Prim. Fl. Esseq. 193. 1818. Caryocaraceae (Spermatophyta). Type (and only) species: ***Anthodiscina floreata*** (Grove et Sturt) comb. nov. (*Anthodiscus floreatus* Grove et Sturt, loc. cit.).

This genus was described from the famous diatomite deposits of the Oamaru district, New Zealand, late Eocene in age. *Anthodiscus* G. F. W. Meyer comprises a few species from tropical South America. In the Index Nominum Genericorum (card 09128) it is erroneously placed in the Caryophyllaceae.

Botryosphaerella nom. nov. *Botryosphaera* R. Chodat, Bull. Soc. Bot. Genève, sér. 2. 7: 193. 1916. Botryococcaceae (Chlorophyta). Non *Botryosphaeria* Cesati et De Notaris, Comment. Soc. Crittog. Ital. 1: 211. 1863. Botryosphaeriaceae (Ascomycetes). Type species: ***Botryosphaerella sudetica*** (Lemm.) comb. nov. (*Botryococcus sudeticus* Lemmermann, ForschBer. Biol. Stat. Plön. 4: 111. 1896).

* Part III, Taxon 9: 18–25. 1960.

** Department of Botany, University of California, Berkeley 94720, U.S.A.

A second species, *Botryosphaera planctonica*, was added to this genus in 1925 by R. & F. Chodat (Veröff. Geobot. Inst. Rübel Zürich 3: 459). In 1952 Bourrelly (in Bourrelly & Manguin, Algues d'Eau Douce de la Guadeloupe) described two additional species, *B. allorgei* and *B. chodatii*, but in 1966 (Algues d'Eau Douce 1: 202) he stated that the genus is 'sans doute monospécifique, à distribution mondiale'. Originally described as a member of the Xanthophyta, this genus was placed together with *Botryococcus* Kuetz. in the Botryococcaceae (Chlorophycophyta) by Korshikov (Viznachnik Prsnovodnikh Vodoroštei URSR. V. Protococcineae 341. 1953). Bourrelly (op. cit. 201) grouped these two genera along with others considered by Korshikov to be members of the Characiaceae, Coelastraceae, Dictyosphaeriaceae, and Palmellaceae in a family for which he adopted the name Dictyosphaeriaceae. The correct name for this family as circumscribed by Bourrelly would seem to be Botryococcaceae Wille (in Engler & Prantl, Nat. Pflanzenfam., Nachträge zum 1. Teil, 2. Abt. 32. 1909). Not only is Dictyosphaeriaceae younger (G. West, Algae 190. 1916), but it is preoccupied by Dictyosphaeriaceae Kuetzing (Sp. Alg. 512. 1849, 'Dictyosphaeriaceae'), a family erected to accommodate *Dictyosphaeria* Decaisne ex Endlicher (Gen. Plant. Suppl. 3: 18. 1843), a tropical marine siphonous green alga, as contrasted with *Dictyosphaerium* Naegeli (Gatt. Einzell. Alg. 72. 1849), the fresh-water alga considered by Bourrelly to be confamilial with *Botryosphaera* R. Chodat.

Chloropteridella nom. nov. *Chloropteris* Pascher, Arch. Protistenk. 76: 409. 1932. Oocystaceae (Chlorophycophyta). Non *Chloropteris* Montagne, Ann. Sc. Nat., Bot., sér. 3. 14: 300. 1850. Cladophoraceae (Chlorophycophyta). Type (and only) species: **Chloropteridella tetragona** (Pascher) comb. nov. (*Chloropteris tetragona* Pascher, op. cit. 411).

The type (and only) species of *Chloropteris* Montagne, *C. leprieurii* (Kuetz.) Mont. (*Cladophora leprieurii* Kuetzing, Sp. Alg. 413. 1849), is known only from the original collection made by Leprieur from a river in French Guiana. Whether it merits generic segregation from *Cladophora* is a question that can be answered only after the type material has been re-examined.

Coccopterum nom. nov. *Pterococcus* Lohmann, Ergebn. Plankton-Exped. Humboldt-Stift. IV. N: 41, 47. 1904. Pterospermaceae

(Chrysophyta). Non *Pterococcus* Pallas, Reise Russ. Reich. 2: 738. 1773. Polygonaceae (Spermatophyta). Nec *Pterococcus* Hasskarl, Flora 25(2), Beibl. 41. 1842 (nom. cons.). Euphorbiaceae (Spermatophyta). Type (and only) species: **Coccopterum labyrinthus** (Ostenf.) comb. nov. (*Pterosperma labyrinthus* Ostenfeld, Bot. Faeröes 578. 1903).

Dasythamniella nom. nov. *Dasythamnion* J. Agardh, Anal. Alg. Cont. 1: 119. 1894. Ceramiaceae (Rhodophyta). Non *Dasythamnion* Naegeli, SitzBer. K. Bayer. Akad. Wiss. München 1861(2): 326 (= key), 335. 1862. Ceramiaceae (Rhodophyta). Type (and only) species: **Dasythamniella setosa** (J. Ag.) comb. nov. (*Dasythamnion setosum* J. Agardh, loc. cit.).

In Naegeli's key *Dasythamnion* is indicated as a subgenus of *Callithamnion* Lyngbye 1819, but in the text it is treated as a genus, with three binomials being made on p. 339. *Dasythamnion tetricum* (Dillw.) Naeg. (*Ccnferva tetrica* Dillwyn) was the only species assigned to the genus with certainty, and hence is effectively the holotype or at least the only appropriate lectotype; it is usually retained in *Callithamnion*.

Dasythamnion P. Dangeard (Botaniste 35: 8. 1951) in the Rhodomelaceae was renamed *Pycnothamnion* by its author (Botaniste 36: 302. 1953).

Dictyopyxidia Eisenack, Neues Jahrb. Geol. u. Paläont., Abh. 112: 316. 1961. *Dictyopyxis* Cookson et Eisenack, Palaeontology 2: 255. 1960. Pyrrophyta. Non *Dictyopyxis* Ehrenberg, Ber. K. Akad. Wiss. Berlin 1844: 262. 1844. Coscinodiscaceae (Bacillariophyta). Type species: *Dictyopyxidia areolata* (Cookson et Eisenack) Downie et Sarjeant, Mem. Geol. Soc. Amer. 94: 110. 1965 ('1964') (*Dictyopyxis areolata* Cookson et Eisenack, loc. cit.).

This genus was described from Upper Jurassic deposits in Western Australia as a microfossil of uncertain position. Eisenack later (op. cit.) related it to the dinoflagellates on the basis of its girdle-like depression. In a postscript to the same paper, he proposed the substitute name *Dictyopyxidia* because *Dictyopyxis* was a homonym, but without citing the earlier homonym. Loeblich, Jr. & Loeblich III (Univ. Miami, Inst. Mar. Sc., Stud. Trop. Oceanogr. 3: 25. 1966) consider *Dictyopyxidia* a 'nomen vanum' (which they define as an invalid, but intentional change in spelling of a previously validly published name), but the existence of *Dictyopyxis*

Ehrenberg 1844 causes *Dictyopyxidina* to be the correct name for this genus.

Helminthopsidella nom. nov. *Helminthopsis* Van Heurck, Treat. Diat. 450, 455. 1896. Fragilariaceae (Bacillariophyta). Non *Helminthopsis* Heer, Fl. Foss. Helvet. 116. 1877. Fossil (Jurassic) Fucaceae (Pyrrophyta). Type species: **Helminthopsidella weissflogii** (Van Heurck) comb. nov. (*Helminthopsis weissflogii* Van Heurck, loc. cit.). Other species: **Helminthopsidella sokolii** (Hanna et Brigger) comb. nov. (*Helminthopsis sokolii* Hanna et Brigger, Occas. Pap. Calif. Acad. Sc. 45: 16, pl. 3: figs. 6, 7. 1964). **Helminthopsidella drepanodes** (Schrader) comb. nov. (*Helminthopsis drepanodes* Schrader, Beih. Nova Hedwigia 28: 12, pl. 9: fig. 12; pl. 28: fig. 8. 1969). **Helminthopsidella elachista** (Schrader) comb. nov. (*Helminthopsis elachista* Schrader, op. cit. 13, pl. 28: fig. 6). **Helminthopsidella ortha** (Schrader) comb. nov. (*Helminthopsis ortha* Schrader, op. cit. 13, pl. 11: fig. 2).

This genus of diatoms was originally referred to the Biddulphiaceae, but on the basis of additional material Schrader has related it to the Fragilariaceae (Fragilariaceae). *Helminthopsis sokolii* was described from Barbados diatomite, the remaining four species from deposits in the Oamaru district of New Zealand; all are late Eocene.

Klebsina nom. nov. *Klebsiella* Pascher, Arch. Protistenk. 73: 322. 1931. Euglenaceae (Euglenophyta). Non *Klebsiella* Trevisan, Atti Accad. Fis.-Med.-Statist. Milano, ser. 4. 3: 105. 1885. Enterobacteriaceae (Schizophyta). Type (and only) species: **Klebsina alligata** (Pascher) comb. nov. (*Klebsiella alligata* Pascher, loc. cit.).

Klebsiella Trevisan has as its type species the pathogenic organism of lobar pneumonia. The name is also preoccupied in zoological nomenclature: *Klebsiella* F. Meunier, Bull. Mus. Natl. Hist. Nat. [Paris] 14: 245. 1908 (fossil insects).

Pachycladella nom. nov. *Pachycladon* G. M. Smith, Roosevelt Wild Life Bull. 2: 137. 1924. Oocystaceae (Chlorophycophyta). Non *Pachycladon* J. D. Hooker, Handb. N.Z. Fl. 724. 1867. Cruciferae (Spermatophyta). Type species: **Pachycladella umbrina** (G. M. Smith) comb. nov. (*Pachycladon umbrinus* G. M. Smith, loc. cit.). Other species: **Pachycladella minor** (Chudybowa et Chudyba) comb. nov. (*Pachycladon minus* Chudybowa

et Chudyba, Acta Hydrobiol. [Kraków] 7: 300. 1965).

Pachycladon J. D. Hooker is a small but well-known genus endemic to New Zealand (cf. e.g., H. H. Allan, Flora of New Zealand, vol. 1. 1961).

Pleurodiscina nom. nov. *Pleurodiscus* Barker et Meakin, J. Quekett Microscop. Club, ser. 4. 1: 252. 1944. Bacillariophyta. Non *Pleurodiscus* Lagerheim, Vid.-Selsk. [Kristiania], Math.-Naturv. Kl. 1895(5): 15. 1895. Zygnemataceae (Chlorophycophyta). Type (and only) species: **Pleurodiscina pantocsekii** (Barker et Meakin) comb. nov. (*Pleurodiscus pantocsekii* Barker et Meakin, loc. cit.).

This genus of fossil diatoms was described from Eocene deposits of Singhiliwsky, U.S.S.R. *Pleurodiscus* Lagerheim, after suffering a period of disrepute, is currently considered an acceptable genus of Zygnemataceae, characterized by each cell having two discoid plastids. Lagerheim's inconclusive (and probably erroneous) association of his Norwegian material with Wolle's *Zygnema purpureum* on the basis of purple cell sap led such workers as Czurda and Skuja to relegate *Pleurodiscus* to the synonymy of either *Zygnema* or *Zygogonium*, but Transeau's re-establishment of the genus on the basis of discoid plastids, ignoring the pigmentation of the cell sap, has been followed by recent workers (cf. Bourrelly, Algues d'Eau Douce 1: 380. 1966).

Pleuromastigella nom. nov. *Pleuromastix* Namyslowski, Bull. Int. Acad. Sc. Cracovie, Cl. Sc. Math. et Nat., sér. B, 1913: 97. 1913. Trimastigaceae (Protomastigineae). Non *Pleuromastix* Scherffel, Arch. Protistenk. 27: 113. 1912. Type (and only) species: **Pleuromastigella vermiformis** (Namyslowski) comb. nov. (*Pleuromastix vermiformis* Namyslowski, loc. cit.).

Pleuromastix Scherffel, originally described as a chrysomonad, was grouped with *Mono-mastix* Scherffel (described in the same paper as *Pleuromastix*) to form a new cryptophycean family, Monomastigaceae, by Huber-Pestalozzi (Das Phytoplankton des Süßwassers 3: 2–8. 1950). Skuja (Symb. Bot. Upsal. 9(3): 344. 1948), followed by Papenfuss (A Century of Progress in the Natural Sciences, 1853–1953, p. 165. 1955), aligned the Monomastigaceae with the Chloromonadophyceae rather than with the Cryptophyceae. Hollande (in Grassé, Traité de Zoologie 1: 521. 1952)

assigned *Pleuromastix* to the Ochromonadidae among the chrysomonads.

Portphillippia nom. nov. *Philippia* Kuckuck, Wiss. Meeresunters. N.F., Abt. Helgoland 17(4): 19. 1929. Elachistaceae (Phaeophyta). Non *Philippia* Klotzsch, Linnaea 9: 354. 1834. Ericaceae (Spermatophyta). Type (and only) species: **Portphillippia australis** (J. Ag.) comb. nov. (*Elachistea australis* J. Agardh, Lunds Univ. Årsskr. 17 (Afd. 3, nr 4): 13. 1882).

Philippia Kuckuck was named for Port Phillip, Australia, the type locality of its only species. In renaming the genus *Philippiella* (Silva, Taxon 8: 63. 1959), I neglected to take advantage of the opportunity to correct the spelling. The existence of *Philippiella* Spegazzini (Rev. Fac. Agron. y Vet. La Plata 1897: 566. 1897), a monotypic genus of Caryophyllaceae from Patagonia, has now come to my attention, providing another opportunity to correct the original orthographic error. Both *Philippia* Klotzsch and *Philippiella* Spegazzini commemorate Rudolf Amandus Philippi (1808–1904), the renowned Chilean botanist.

Schmidledesmus nom. nov. *Schmidleia* Woloszyńska, Hedwigia 55: 197. 1914. Scenedesmaceae (Chlorophycophyta). Non *Schmidleia* Lauterborn, Allg. Bot. Z. 19: 98. 1913. Chlorobacteriaceae (Schizophyta). Type (and only) species: **Schmidledesmus elegans** (Woloszyńska) comb. nov. (*Schmidleia elegans* Woloszyńska, loc. cit.).

This genus is known only from Lake Victoria, Africa. *Schmidleia* Lauterborn was placed in the synonymy of *Pelodictyon* Lauterborn (described in the same paper as *Schmidleia*) by Van Niel (in Bergey's Manual of Determinative Bacteriology, ed. 6, p. 870. 1948), but Skuja (Nova Acta Reg. Soc. Sc. Upsal. ser. 4. 16(3): 34. 1956) maintains the two as distinct genera.

Spiromematella nom. nov. *Spiromema* Klebs, Z. Wiss. Zool. 55: 350. 1892. Flagellata. Non *Spiromema* Rafinesque, Fl. Tellur. 4: 92. 1838 ('1836'). Lauraceae (Spermatophyta). Nec *Spiromema* Lindley, Bot. Reg. 26: Misc. 26. 1840. Commelinaceae (Spermatophyta). Type (and only) species: **Spiromematella multiciliata** (Klebs) comb. nov. (*Spiromema multiciliatum* Klebs, op. cit. 350, pl. 16: fig. 9).

This genus was first isolated from fresh-

water ponds and later from soil samples (Goodey, Proc. Zool. Soc. London 1916: 318. 1916). Klebs regarded it as a flagellate of uncertain relationship, conjecturing on the probability that it represented a transition between flagellates and ciliates. In the fourth edition of Doflein's Lehrbuch der Protozoenkunde (1916, p. 637) a new family Spiromemidae was erected for it in a group appended to the flagellates, called 'Ciliatenähnliche Flagellaten'. In the fifth edition of that work (1928, p. 697) Spiromemidae is treated in a group appended to the Polymastigina, called 'Viergeisselige Flagellaten von unsicherer Stellung'. In both botanical and zoological nomenclature it is a later homonym. *Spiromema* Raf. is generally considered a synonym of *Cassytha* Linnaeus 1753. *Spiromema* Lind. was renamed *Rectanthera* by Degener (Fl. Haw. 1: Fam. 62. 1932) but was placed in the synonymy of *Callisia* Linnaeus 1758 by Woodson (Ann. Missouri Bot. Gard. 29: 154. 1942). In zoological nomenclature, *Spiromema* Meek (Smithson. Misc. Coll. 7 (Art. 8 = no. 177): 19, 35. 1864) is a genus of Cretaceous ctenobranchs (Mollusca). *Spiromema* Vuillemin (C. R. Acad. Sc. [Paris] 140: 1568. 1905), the genus created to accommodate the spirochaete of syphilis, was renamed *Treponema* by Schaudinn (Deutsch. Med. Wochenschr. 31: 1728. 26 Oct. 1905) and *Microspironema* by Stiles & Pfender (Amer. Med. 10: 936. 2 Dec. 1905). *Spiromema* L. Léger et E. Hesse (C. R. Acad. Sc. [Paris] 174: 328. 1922), a genus of microsporidians, was renamed *Spirospora* by Kudo in 1925 (Science 61: 366) and *Spirillonema* by Wenyon in 1926 (Protozoology, pp. 739, 747).

Trichloridella nom. nov. *Trichloris* Scherffel et Pascher in Pascher, Süßsw.-Fl. 4: 88, 103. 1927. Non *Trichloris* Fournier ex Benth, J. Linn. Soc. London, Bot. 19: 102. 1881. Gramineae (Spermatophyta). Type (and only) species: **Trichloridella paradoxa** (Scherffel et Pascher) comb. nov. (*Trichloris paradoxa* Scherffel et Pascher, op. cit. 104, fig. 66).

This rarely observed genus is placed in the Pyramimonacées (Volvocales) by Bourrelly (Algues d'Eau Douce 1: 39. 1966), but I prefer to include it in the Polyblepharidaceae of the class Prasinophyceae. *Trichloris* Fournier ex Benth, comprising two species from Mexico, is by some authors referred to *Chloris* O. Swartz 1788.

Trigonidiella nom. nov. *Trigonidium* Pascher, Arch. Protistenk. 76: 412. 1932. Oocystaceae (Chlorophycophyta). Non *Trigonidium* Lindley, Bot. Reg. t. 1923. 1837. Orchidaceae (Spermatophyta). Type (and only) species: **Trigonidiella galea** (Pascher) comb. nov. (*Trigonidium galea* Pascher, op. cit. 414).

Trigonidium Lindley comprises about 14 species from Central and tropical South America.

Tubulariella nom. nov. *Tubularia* Brun, Diatomiste 2: 88. 1894. Fragilariaceae (Bacillariophyta). Non H. Roussel, Fl. Calv. ed. 2. 98. 1806. Ulvaceae (Chlorophycophyta). Type species: **Tubulariella pistillaris** (Brun) comb. nov. (*Tubularia pistillaris* Brun, loc. cit.). Other species: **Tubulariella tabellarioides** (Schrader) comb. nov. (*Tubularia tabellarioides*

Schrader, Beih. Nova Hedwigia 28: 20, pl. 10: fig. 6. 1969). **Tubulariella totarae** (Schrader) comb. nov. (*Tubularia totarae* Schrader, op. cit. 19, pl. 28: fig. 13).

This genus is yet another representative of the rich flora of the diatomite deposits in the Oamaru district of New Zealand. *Tubularia* H. Roussel, a heterogeneous assemblage of plants, has been lectotypified with *Ulva intestinalis* L. [= *Enteromorpha intestinalis* (L.) Nees] by Silva (Univ. Calif. Publ. Bot. 25: 296. 1952). Among older names of algae there are several binomials of *Tubularia* Linnaeus (Syst. Nat. ed. 10. 1: 646, 803. 1758). This genus as to type is an anthomedusan hydroid (the type genus of the family Tubulariidae). The algae that have been included in it are referable to *Acetabularia* Lamouroux 1812, *Galaxaura* Lamouroux 1812, and *Botryocladia* (J. Ag.) Harvey 1853.