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Remarks on Algal Nomenclature V

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Source: *Taxon*, Vol. 21, No. 1 (Feb., 1972), pp. 199-205

Published by: Wiley

Stable URL: <https://www.jstor.org/stable/1219270>

Accessed: 12-02-2019 22:54 UTC

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NOMENCLATURE

REMARKS ON ALGAL NOMENCLATURE V*

*Paul C. Silva***XIV. *Chloromonas*

The genus *Chloromonas* was established by W. Saville Kent (Manual 369, 401. 1881) to receive material at hand which he believed to be conspecific with *Cryptoglena pigra* Ehrenberg (Abh. K. Akad. Wiss. Berlin, Physik. Kl. 1831: 150. 1832; *ibid.* 1833: 290, pl. VII: fig. II. 1834). Kent described his organism as an ovate or conical unicell, somewhat compressed, rigid, with keel-like lateral borders, a single terminal flagellum, two bright green lateral longitudinal chromatophores, an anterior eyespot, an "oral aperture situated close to the flagellum, continued into a distinct though minute, tubular pharynx", a contractile vacuole "conspicuously developed, located centrally close to the termination of the pharynx", and the "endoplast [i.e. nucleus] occupying the median line near the pointed posterior extremity". Kent placed *Chloromonas* in the family Chrysoomonadidae, along with *Chrysoomonas* Stein, *Microglena* Ehrenb., *Cryptomonas* Ehrenb., *Nephroselmis* Stein, *Stylochrysalis* Stein, *Uvella* Ehrenb., *Chlorangium* Stein, *Hymenomonas* Stein, *Chrysoptyxis* Stein, *Epipyxis* Ehrenb., *Dinobryon* Ehrenb., *Synura* Ehrenb., *Syn-crypta* Ehrenb., and *Uroglena* Ehrenb.

As for *Cryptoglena*, from which Kent segregated *Chloromonas*, this genus was established by Ehrenberg cursorily in 1832 (Abh. K. Akad. Wiss. Berlin, Physik. Kl. 1831: 150) and formally in 1834 (*ibid.* 1833: 289). It originally comprised two new species, *C. agilis* and *C. pigra*, of which *C. agilis* was renamed *C. caerulescens* by Ehrenberg in 1834. A third species, *C. conica*, was added by Ehrenberg in 1838 (Infusionsthierchen 46, pl. II: fig. XXV). Dujardin (Infusoires 326, 333. 1841), without having observed original collections and admitting Ehrenberg's imperfect presentation of those organisms, subsumed *Cryptoglena* as a subgenus of *Cryptomonas* Ehrenberg (Abh. etc. 1831: 56. 1832), excluding *C. conica* (to which he did not assign a definite position, however). Kent (op. cit. 419) recognized *Cryptoglena* as an independent genus, but with such a circumscription as to exclude both original species and hence to be considered nomenclaturally a new genus, typified by *C. conica*. *Cryptoglena pigra*, as we have just seen, was the basis of Kent's *Chloromonas* while *C. caerulescens* was dispensed with in the following words: "The *Cryptoglena caeruleus* [sic!] of the same authority is evidently an illiciate type not referable to the present generic group, and whose true relationship is as yet doubtful."

Thus, *Chloromonas* Kent is seen to be a superfluous name for *Cryptoglena*, despite the fact that Kent adopted the latter name: he should have retained *Cryptoglena* for *C. pigra* and proposed a new name for the genus typified by *C. conica*.

* Part IV, Taxon 19: 941-945. 1970.

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The only subsequent author to follow Kent in regard to *Chloromonas* seems to be Stokes (Amer. Month. Micr. J. 8: 142, fig. 4. 1887), who described a new species, *C. pulcherrima*, but without discussing the genus. This species was transferred into *Mallomonas* by Lemmermann (ForschBer. Biol. Stat. Plön 7: 106. 1899). In the meanwhile, consideration was being given to the taxonomic position of *Cryptoglena* as typified by *C. pigra* (or, in other words, to *Chloromonas* Kent). Bütschli (Bronn's Thier-Reich 1: 820. 1884) allied it with *Coelomonas* Stein, *Gonyostomum* Diesing, ? *Vacuolaria* Cienk., *Microglena* Ehrenb., and *Chromulina* Cienk. in his new family Coelomonadina within the suborder Euglenoidina. Klebs (Z. Wiss. Zool. 55: 355. 1892) assigned it to the family Euglenida, alongside *Euglena* Ehrenb., *Phacus* Nitzsch, *Trachelomonas* Ehrenb., *Ascoglena* Stein, *Eutreptia* Perty, and *Colacium* Ehrenb., and this relationship has been generally accepted henceforth.

After *Chloromonas* Kent had slipped into taxonomic history, Gobi (Scripta Bot. Horti Univ. Petrop. 15: 232, 255. 1899/1900) segregated three species of *Chlamydomonas* (*C. globulosa* Perty, *C. reticulata* Gorosch., and *C. variabilis* P. A. Dangeard) as a new genus characterized by the lack of pyrenoids. Gobi called this genus *Chloromonas*. Wille (Nyt Mag. Naturv. 41: 149. 1903) added four new species to the genus (*C. aalesundensis*, *C. alpina*, *C. pichincha*, and *C. serbinowii*) and Schmidle (Ber. Deutsch. Bot. Ges. 21: 353. 1903) soon afterward added another (*C. palatina*). Wille later reassessed the situation and reduced *Chloromonas* Gobi to the status of a section of *Chlamydomonas* (in Engler & Prantl, Nat. Pflanzenfam., Nachträge zum 1. Teil, 2. Abt. 18. 1909).

Chloromonas was resurrected by Schiller (Arch. Protistenk. 53: 111. 1925) to receive four new species. Korshikov (Russ. Arkh. Protist. 5: 141, 158. 1926) described another species and included several more in a manuscript submitted to Pascher for incorporation in his treatment of the Volvocales for his "Süßwasser-Flora" (1927). Pascher, however, was not persuaded to accept the genus and he assimilated Korshikov's new species in *Chlamydomonas* subgen. *Chloromonas*, comprising 30 species altogether. Although Korshikov in his treatment of the Volvocales for the "Viznachnik Prsnovodnikh Vodorostei URSR" (1938) followed Pascher in not recognizing *Chloromonas* as an independent genus, other workers have accepted it: Kiselev (Trudy Sredne-Aziat. Gosud. Univ. [Tashkent] Geogr. 9: 71. 1931); Gerloff (Nova Hedwigia 4: 5. 1962); Tschermak-Woess (Österr. Bot. Z. 110: 294. 1963); Ettl (Nova Hedwigia 6: 395. 1963); Bourrelly (Algues d'Eau Douce 1: 53. 1966); and Wawrik (Nova Hedwigia 15: 532. 1968). Backed by experimental evidence, Gerloff (loc. cit.) emphasized the constancy of the presence or absence of the pyrenoid as a cytological character and, as a corollary, its importance as a taxonomic character at the generic level. He has been influential in achieving wide acceptance of *Chloromonas*.

The recent appearance of a monograph of *Chloromonas* (Ettl, Beih. Nova Hedwigia 34. 1970) suggests the need to point out to those who are not aware, and to emphasize to those who are aware, that this generic name is a later homonym and illegitimate. Ettl recognizes 135 species, most of which (124) are newly transferred from *Chlamydomonas*. Two generic synonyms are included: *Tetradonta* Korshikov (Russ. Arkh. Protist. 4: 183, 195. 1925), with the single species *T. variabilis* Korsh.; and *Platychloris* Pascher (Süßw.-Fl. 4: 138, 331. 1927), based on *Chlamydomonas minima* Pascher (Ber. Deutsch. Bot. Ges. 29: 532, pl. XIX: fig. 16. 1911) (non *C. minima* P. A. Dangeard 1888). *Tetradonta* was soon withdrawn by its proposer, who recognized it as the planozygote of a species of *Chloromonas*, which he named *C. paradoxa* (Russ. Arkh. Protist. 5: 141, 158. 1926), the binomial *C. variabilis* having been used previously by Wille when transferring *Chlamydomonas variabilis* P. A. Dangeard into *Chloromonas*. *Platychloris minima* Pascher was transferred into *Chloromonas* by Ettl (op. cit. 67).

Despite the availability of synonyms, there would seem to be good arguments to support conservation of the name *Chloromonas* Gobi. First, it has had a long albeit somewhat discontinuous history of usage. Second, it has become a large genus and adoption of a synonym would require the coining of a large number of com-

binations. In view of the fact that the earlier homonym *Chloromonas* Kent is illegitimate, there would seem to be no cogent reason for not conserving *Chloromonas* Gobi other than the matter of principle that conservation would usurp the right of priority of *Tetradonta* Korsh. and *Platychloris* Pascher. On the other hand, the point might be raised that dispensing with *Chloromonas* would obviate the anomaly of having the genus *Chloromonas* in a division (phylum) distinct from the chloromonads. In this connection it may be noted that the stem Chloromonad- was first used by Klebs (*Z. Wiss. Zool.* 55: 391. 1892) in the name Chloromonadina, an "Abtheilung" of the Flagellata in which he included *Vacuolaria* Cienk. and *Raphidomonas* Stein (taken by Klebs to include *Merotricha* Meresch. and *Gonyostomum* Diesing). It is not based on a generic name. Numerous names based on the Chloromonad- stem, with various endings designating various ranks, have been proposed subsequently to accommodate the chloromonads, the highest rank being that of phylum (Chloromonadophyta Prescott, *Algae of the Western Great Lakes Area* 421. 1951).

In proposing *Chloromonas* Gobi for conservation, it is necessary to ascertain its type. The card issued by the Index Nominum Genericorum (48/07229 issued 14 Nov. 1958) states: "T.: *C. globulosa* (Perty) Gobi (*Chlamydomonas globulosa* Perty)". Inasmuch as Gobi originally included three species in his genus and did not indicate a holotype, the designation on the I.N.G. card constitutes a lectotypification. Gerloff (*Nova Hedwigia* 4: 5. 1962), however, believing that *C. globulosa* was incapable of identification, selected as lectotype *C. reticulata* (Gorosch.) Gobi, which he considers distinctive.

(327) *Nomen conservandum propositum: Chloromonas* Gobi, *Scripta Bot. Horti Univ. Petrop.* 15: 232, 255. 1899/1900. Chlamydomonadaceae (Chlorophycophyta). Species lectotypica: *C. reticulata* (Gorosch.) Gobi (*Chlamydomonas reticulata* Gorosch. (*Bull. Soc. Imp. Nat. Moscou, sér. 2.* 5: 124, pl. III: figs. 1-9. 1891).

Nomina rejicienda proposita: Chloromonas Kent, *Manual of the Infusoria* 369, 401. 1881. *Nom. illeg.* Euglenaceae (Euglenophyta). Species typica: *C. pigra* (Ehrenb.) Kent (*Cryptoglena pigra* Ehrenberg, *Abh. K. Akad. Wiss. Berlin, Physik. Kl.* 1831: 150. 1832; *ibid.* 1833: 290, pl. VII: fig. II. 1834).

Tetradonta Korshikov, *Russ. Arkh. Protist.* 4: 183, 195. 1925. Chlamydomonadaceae (Chlorophycophyta). Species typica: *T. variabilis* Korsh. (*loc. cit.*).

Platychloris Pascher, *Süssw.-Fl.* 4: 138, 331. 1927. Chlamydomonadaceae (Chlorophycophyta). Species typica: *P. minima* Pascher (*Chlamydomonas minima* Pascher, *Ber. Deutsch. Bot. Ges.* 29: 532, pl. XIX: fig. 16. 1911; non *C. minima* P. A. Dangeard, *J. Bot. [Morot]* 2: 415, figs. 1-6. 1888).

In a genus with several hundred species, homonymy is to be expected, and *Chlamydomonas* is not an exception. Almost all homonymy up to the year 1960 has been rectified, especially by the monographers Gerloff (*Arch. Protistenk.* 94: 311-502. 1940) and Huber-Pestalozzi (*Phytoplankton des Süßwassers*, 5. Teil. 1961). When transferring species involved in homonymy into *Chloromonas*, Ettl did not always adopt the earliest available legitimate epithet. The following cases should be considered:

Chloromonas cylindrica (Schiller) Gerloff et Ettl in Ettl, *Beih. Nova Hedwigia* 34: 145. 1970. *Chlamydomonas cylindrica* Schiller, *Österr. Bot. Z.* 99: 114, fig. 10. 1952. Non *Chlamydomonas cylindrica* R. Chodat, *Bull. Soc. Bot. Genève, sér. 2.* 12: 294, fig. 1. 1921; nec *Chlamydomonas cylindrica* Pascher, *Arch. Protistenk.* 69: 126, fig. 20. 1930 [= *C. cylindrus* Gerloff, *Arch. Protistenk.* 94: 471. 1940, *nom. nov.*]. The Schiller basionym has been renamed twice: *Chlamydomonas pseudocylindrica* by H. Ettl & O. Ettl (*Arch. Protistenk.* 104: 104. 1959); and *Chlamydomonas schilleri* by Huber-Pestalozzi (*Phytoplankton des Süßwassers* 5: 400. 1961). The earliest available legitimate epithet is thus *pseudocylindrica*, and I propose the new combination *Chloromonas pseudocylindrica*.

Chloromonas komma (Pascher) Gerloff et Ettl in Ettl, *op. cit.* 111. *Chlamydo-*

monas komma Pascher, Explor. Parc Natl. Albert, Mission H. Damas 19: 82, text-fig. 20 B, C. 1949. Non *Chlamydomonas komma* Skuja, Acta Horti Bot. Univ. Latv. 7: 49, fig. 52. 1934. The Pascher basionym was renamed *Chlamydomonas prona* by H. Ettl & O. Ettl (Arch. Protistenk. 104: 104. 1959). The earliest available legitimate epithet is thus *prona*, and I propose the new combination *Chloromonas prona*.

Chloromonas maculata Korshikov ex Ettl, op. 130. *Chlamydomonas korschikoffii* Pascher, Süsw.-Fl. 4: 192, 308, fig. 277a. 1927 (as *korschikoffia* on p. 308, corrected to *korschikoffi* on p. IV). *Chloromonas maculata* Korshikov in Pascher, op. cit. 308, pro syn. Pascher, in assimilating Korshikov's manuscript species into his treatment of the Volvocales for the "Süswasser-Flora", was faced with the prior binomial *Chlamydomonas maculata* Playfair (Proc. Linn. Soc. N.S.W. 43: 518, pl. LV: figs. 15-17. 1918). He therefore changed the epithet of Korshikov's species to *korschikoffii*. Within the genus *Chloromonas*, the correct name is thus *C. korschikoffii* (Pascher) comb. nov. The binomial employed by Ettl must be considered a superfluous new name.

Chloromonas oblonga (Anachin) Gerloff et Ettl in Ettl, op. cit. 87. *Chlamydomonas oblonga* Anachin, Arch. Protistenk. 73: 131, fig. 1. 1931. Non *Chlamydomonas oblonga* E. G. Pringsheim, Arch. Protistenk. 69: 97, figs. 9-11. 1930. The Anachin basionym was renamed *Chlamydomonas infirma* by Gerloff (Arch. Protistenk. 94: 476, 490. 1940). The earliest available legitimate epithet is thus *infirma*, and I propose the new combination *Chloromonas infirma*.

Chloromonas platyrhyncha Korshikov ex Ettl, op. cit. 127. *Chlamydomonas pseudoplatyrhyncha* Pascher, Süsw.-Fl. 4: 192, 308, fig. 277b. 1927 (as *platyrhyncha*, corrected on p. IV). *Chloromonas platyrhyncha* Korshikov in Pascher, op. cit. 308, pro syn. In Pascher's treatment of *Chlamydomonas* in his "Süswasser-Flora", he described two different species under the name *C. platyrhyncha*. The first one (p. 271) was accredited to Korshikov and the accompanying figure was said to be "nach Korschikoff". This appears to be the original place of publication. The second species (p. 308) was accredited to Pascher, with *Chloromonas platyrhyncha* Korshikov given as a synonym and with the appropriate figure indicated "nach Korschikoff". Again, this seems to be the original place of publication. In the "Berichtigungen" on p. IV of the "Vorbemerkungen", Pascher corrected the epithet of the second species to *pseudoplatyrhyncha*. Within the genus *Chloromonas*, therefore, the correct name of this species is *C. pseudoplatyrhyncha* (Pascher) comb. nov. Korshikov (Viznachnik Prsnovodnikh Vodorostei URSR. IV. Volvocineae 108. 1938) proposed a new epithet, *polychloris*, as a substitute for *platyrhyncha* of the second species, but in view of Pascher's correction it is superfluous. Moreover, the binomial *Chlamydomonas polychloris* used by Korshikov is preoccupied by *C. polychloris* Pascher et Jahoda (Arch. Protistenk. 61: 277, fig. 29. 1928). The binomial employed by Ettl must also be considered a superfluous new name.

Chloromonas playfairii Ettl, op. cit. 113. *Chlamydomonas maculata* Playfair, Proc. Linn. Soc. N.S.W. 43: 518, pl. LV: figs. 15-17. 1918. Non *Chloromonas maculata* Korshikov ex Ettl, op. cit. 130. Although the correct name for this species should have been *Chloromonas maculata*, this combination cannot now be applied because of its prior use as a new (and superfluous) name for *Chlamydomonas korschikoffii* Pascher (see above). Moreover, the epithet *playfairii* cannot be employed because it is superfluous, Ettl having been obligated to adopt the epithet *maculata*, which at that time was available. A new name thus seems necessary within *Chloromonas*, and I propose *Chloromonas eumaculata*.

Chloromonas truncata (Pascher et Jahoda) Gerloff et Ettl, in Ettl, op. cit. 73. *Chlamydomonas truncata* Pascher et Jahoda, Arch. Protistenk. 61: 272. fig. 25.

1928. Non *Chlamydomonas truncata* Fritsch et Rich, Ann. Bot. 41: 96, fig. 3. 1927. The Pascher & Jahoda basionym was renamed *Chlamydomonas monstruosa* by Gerloff (Arch. Protistenk. 94: 475, 495. 1940). The earliest available legitimate epithet is thus *monstruosa*, and I propose the new combination *Chloromonas monstruosa*.

XV. *Centrospora*.

Centrospora Neergaard 1942 (Fungi-Hyphomycetes) has been proposed for conservation against *Centrospora* Trevisan 1845 (Algae-Phaeophyta) by Deighton (Taxon 19: 948. 1970). The proposer states that "Details of the name *Centrospora* Trevisan are given in the Index Nominum Genericorum, where it is cited as a rejected name vs. *Areschougia* Harvey (1855)." To the contrary, the I.N.G. card says that *Centrospora* Trevisan is a "Substitute name for *Areschougia* Meneghini 1844 (non Harvey 1855, *nom. cons.*) q.v." The conservation of *Areschougia* Harvey 1855 retroactively makes *Areschougia* Meneghini 1844 illegitimate. Consequently, *Centrospora* Trevisan (Nomencl. Alg. 42. 1845) has retroactively been made a legitimate name for the genus to which Meneghini applied the name *Areschougia*. This genus was lectotypified with *A. stellaris* (J. Aresch.) Menegh. (*Elachista stellaris* J. Aresch.) by Silva (Univ. Calif. Publ. Bot. 25: 283. 1952). In establishing *Areschougia*, Meneghini (Giorn. Bot. Ital. 1: 293. 1844) was following, at a higher taxonomic level, the lead of J. Areschoug (Linnaea 16: 231. 1842), who divided the species of *Elachista* Duby 1830 into two unnamed sections. Subsequently, Reinke (Ber. Deutsch. Bot. Ges. 6: 17. 1888) established the genus *Symphoricoccus* based on a new species, *S. radians*. Kuckuck (in Skottsberg, K. Svenska Vet.-Akad. Handl. [ser. 4] 61(11): 24: 1921) concluded that *S. radians* Reinke was conspecific with *Elachista stellaris* J. Aresch. and thus made the combination *S. stellaris*. Prior to the conservation of *Areschougia* Harvey 1855, Kylin (Lunds Univ. Arsskr. N.F. Avd. 2. 43(4): 49. 1947) correctly adopted the name *Areschougia* Meneghini for the genus typified by *Elachista stellaris* in preference to *Symphoricoccus* Reinke. Although there is not universal agreement as to the generic distinctness of *Elachista stellaris*, those workers who wish to set it apart from *Elachista* as typified by *E. scutulata* (J. E. Smith) J. Aresch. should be allowed to use the currently correct name, *Centrospora* Trevisan. There exists the combination *C. stellaris* (J. Aresch.) Trev.

XVI. *Hormophora*.

At the time that Jurilj (Acta Bot. Croat. 16: 95 1957) established *Hormophora*, a genus comprising two species of diatoms epizoic on Adriatic copepods, he discussed the possibility that it might be congeneric with *Pseudohimantidium* Hustedt et Krasske (in Krasske, Arch. Hydrobiol. 38: 272. 1941), based on a planktonic diatom from the Pacific Ocean off the coast of Chile. Voigt (Vie et Milieu 9: 53-57. 1958), working with material from the digestive tract of a fish, *Box salpa* (L.), from the Adriatic, described a second species of *Pseudohimantidium* (*P. adriaticum*) and a variety of the type species (*P. pacificum* var. *minor*). After seeing Jurilj's paper, Voigt published a supplementary note (Vie et Milieu 10: 199-203. 1959) in which he confirmed the congeneric status of *Hormophora* and *Pseudohimantidium*, pairing *H. zavodnikia* with *P. pacificum* var. *minor* and *H. rogallii* with *P. adriaticum*. Recently, Simonsen (Beih. Nova Hedwigia 31: 377-394. 1970) has reconsidered *Pseudohimantidium* and placed it together with a new genus *Protoraphis* in a new family, Protoraphidaceae. Neither Voigt nor Simonsen adopted Jurilj's epithet for the second species, despite its priority, presumably because the dimensions cited and scales used by Jurilj were deemed erroneous. Nonetheless, Simonsen's statement that "Die Form [*H. rogallii*] ist mit Voigts Art iden-

tisch" requires the adoption of Jurilj's epithet, thus: *Pseudohimantidium rogallii* (Jurilj) comb. nov. (*Hormophora rogallii* Jurilj, op. cit. 96, fig. 2). It may be mentioned that *Hormophora* Jurilj, regardless of its taxonomic validity, is a later homonym of *Hormophora* J. Agardh (Anal. Alg. 77. 1892), an Australian member of the Kallymeniaceae (Rhodophyta). For purposes of the Index Nominum Genericorum, I hereby designate *H. rogallii* as the lectotype of *Hormophora* Jurilj.

XVII. *Uva*.

Printz (in Engler & Prantl, Nat. Pflanzenfam. ed. 2. 3: 61. 1927) merged four genera within the Volvocaceae, namely, *Uva* Playfair 1914, *Pyrobotrys* Arnoldi 1916, *Chlamydosphaera* Shkhorbatov 1923, and *Chlamydotrys* Korshikov 1924. He was not certain, however, of the biological validity of the combined genus (which he called *Uva*), speculating that its members might be biflagellate representatives of the reputedly quadriflagellate *Spondylomorom* Ehrenberg 1848. E. Pringsheim (Österr. Bot. Z. 107: 425-438. 1960) reversed the doubt, accepting the genus *Chlamydotrys* but remaining skeptical regarding *Spondylomorom*, pointing out that the possession of four flagella by a cell of a colony had not been shown with certainty. He rejected *Pyrobotrys* because of Arnoldi's incomplete and unclear description, but did not give his opinion of either *Uva* or *Chlamydosphaera*. Bourrelly (Algues d'Eau Douce 1: 86. 1966) recognizes both *Spondylomorom* and *Uva*, placing them in the Spondylomoraceae, a family segregated from the Volvocaceae by Korshikov (Russ. Arkh. Protist. 2: 173, 178. 1923). *Uva* Playfair, however, is a later homonym of *Uva* J. Burman ex Kuntze (Rev. Gen. 1: 7. 1891). Kuntze, not accepting Linnaeus's "Species Plantarum" (1753) as the starting point for botanical nomenclature, resurrected Burman's name (1737) in opposition to *Uvaria* Linnaeus 1747 (Annonaceae). The correct name for the spondylomoraceous genus is thus *Pyrobotrys* Arnoldi (Yubileinyi Sbornik Prof. K. A. Timiryazeva 57. 1916), which is the name employed by Huber-Pestalozzi (Phytoplankton des Süßwassers 5: 610. 1961). The type species of *Uva* Playfair should thus be called *Pyrobotrys casinoensis* (Playfair) comb. nov. (*Uva casinoensis* Playfair, Proc. Linn. Soc. N.S.W. 39: 108, pl. II: fig. 13. 1914).

XVIII. Rectification of specific homonymy

Ceramium horridulum nom. nov. *Ceramium horridum* Setchell et Gardner, Proc. Calif. Acad. Sc. ser. 4. 12: 777, pl. 26: figs. 49, 50; pl. 79. 1924. Non *C. horridum* Meneghini, Giorn. Bot. Ital. 1: 184. 1844.

This species, distinctive among members of the genus along the Pacific coast of North America, is known only from the Gulf of California. The Meneghini species, based on material from Sicily and Dalmatia, was placed in the synonymy of *Ceramium ciliatum* (Ellis) Ducluz. by Ardissonne (Mem. Soc. Crittog. Ital. 1: 118. 1883).

Chondria intertexta nom. nov. *Chondria intricata* Okamura, Icon. Jap. Alg. 2: 180, pl. XCIX: figs. 10-18. 1912. Non *C. intricata* (Lamour.) C. Agardh, Syn. Alg. Scand. xviii. 1817 (*Laurencia intricata* Lamouroux, Ann. Mus. Hist. Nat. [Paris] 20: 131, pl. 9: figs. 8, 9. 1813). Nec *C. intricata* Kützinger, Phyc. Gen. 437. 1843.

Laurencia intricata, the basionym of the binomial which preoccupies the name given by Okamura to his Japanese species, applies to a currently recognized *Laurencia* from the West Indies. Kützinger (Sp. Alg. 854. 1849), when transferring his *Chondria intricata* to *Laurencia*, changed the epithet to *setacea* in view of the prior existence of Lamouroux's species.

Laurencia caraibica nom. nov. *Laurencia nana* Howe in Britton et Millspaugh, Bahama Fl. 566. 1920. Non *L. nana* (C. Ag.) Greville, Alg. Brit. lii. 1830 (*Chondria nana* C. Agardh, Flora 10: 643. 1827).

This species, originally described from the Bahamas, has also been reported from Jamaica (Taylor, Mar. Alg. Trop. Amer. 622. 1960). *Chondria nana*, originally found growing on *Cystoseira* at Trieste, was considered a small form of *Laurencia paniculata* (C. Ag.) J. Ag. by J. Agardh (Sp. Alg. 2: 756. 1863), but it needs to be investigated.

Cladophora nipponica nom. nov. *Cladophora zostericola* Martens, Tange Ost-Asien 112, pl. I: fig. 3. 1866. Non *C. zostericola* Crouan fr. in Schramm et Mazé, Essai Class. Alg. Guadeloupe 38. 1865.

PTERYGOPHYLLUM BRID. — NOMEN REJICIENDUM ET ILLEGITIMUM

Marshall R. Crosby*

Miller (1971) states that the generic name *Pterygophyllum* Bridel (1819) is legitimate and typified by *P. quadrifarium* (Sm.) Brid. Thorough examination shows that *Pterygophyllum* was published as a *nomen novum* for *Hookeria* Smith (1808*b*) and therefore must be typified by *H. lucens* (Hedw.) Sm.

When Bridel (1819: 149) published *Pterigophyllum*, the original spelling, he included as a synonym "Hookeria Smith. Act. Societ. Linn. Lond. 9. p. 276," referring to Smith (1808*b*: 275). This alone is enough to indicate that *Pterygophyllum* was published as a *nomen novum*, but examination of the rest of Bridel (1819) reveals more clearly how he intended for *Pterygophyllum* to be used.

Was it Bridel's intent to publish *Pterygophyllum* as a substitute for *Hookeria* Sm.? One way of answering this is to ask if Bridel's concept of *Pterygophyllum* matches Smith's concept of *Hookeria*. An examination of the diagnoses published by the two authors shows that they are very similar.

"Peristomium duplex. Exterius, dentes sedecim lanceolato-lineares. Interius, membrana in processus sedecim lineares uniformes (difformesve?) fissa. Calyptra mitraeformis, integra, glabra." — (Bridel, 1819: 149).

"Capsula ovata, reticulato-punctata, e perichaetio squamoso, laterali. Peristomium exterius dentibus sedecim: interius membranaceum, sedecim-dentatum. Calyptra celluloso-reticulata, integra." — (Smith, 1808*b*: 275).

In the still broad generic concepts of the early nineteenth century, these diagnoses clearly encompass the same taxon. To be sure, the information provided seems meager today. However, using the data in Smith's diagnosis one can key out his genus *Hookeria* in Bridel's synoptic key to genera (Bridel, 1819: xii-xviii). The genus keys to *Pterygophyllum*. Thus on the basis of the written diagnoses Bridel's *Pterygophyllum* encompasses Smith's *Hookeria*.

Another way of determining whether Bridel's concept of *Pterygophyllum* matches Smith's concept of *Hookeria* is to compare the species which each author included in his genus. A comparison of the two treatments is provided in Table 1. Since this discussion is concerned primarily with *Pterygophyllum*, the 15 species which Bridel (1819) treated under this name are listed in the first column in the order of their appearance. The second column lists the 10 (not 7 as stated by Miller, 1971) species treated as *Hookeriae* by Smith. (1808*b*). These appear opposite the corresponding entry for Bridel. A careful reading of Bridel (1819) shows he treated 7 of Smith's species in 1819 — 6 (not 4 as stated by Miller, 1971) in *Pterygophyllum* and one in *Leskea*. For completeness the basionym and current disposition, according to *Index Muscorum*, of each name under discussion is given in the last two columns of the table.

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