

Lectotypification of *Iridaea lacera* Postels & Ruprecht, basionym of the generitype of *Kallymeniopsis* Perestenko ex Skriptsova, Shibneva & Semenenko (*Kallymeniaceae*, *Rhodophyta*)

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Recently, the taxonomic status of *Kallymeniopsis* has been under increased scrutiny. When Saunders & al. (2017) moved “*K. oblongifructa* (Setchell) G.Hansen” *nom. inval.* to *Erythrophyllum*, they speculated that the genus *Kallymeniopsis* might be a synonym of *Erythrophyllum*. But as Saunders & al. (2017) did not have a genetic sequence for the generitype *K. lacera* (Postels & Ruprecht) Perestenko, they could only speculate that this was a likely possibility (Schneider & Wynne 2019: 362). Using a three-gene analysis, Selivanova & al. (2020: 203) showed that *K. lacera* grouped with the *Erythrophyllum* clade and transferred it to *E. lacerum* (Postels & Ruprecht) Selivanova, Zhigadlova & G.W.Saunders, effectively moving the genus *Kallymeniopsis* to *Erythrophyllum*. Since that paper, Skriptsova & al. (2023: 57), also employing a multigene analysis, showed that *Kallymeniopsis* was a free-standing genus in the diverse family *Kallymeniaceae* that now fully included the *Crossocarpaceae*.

Mikhaylova & Sokolova (2020: 1124–1125) previously pointed out that when Perestenko (1975) first published her intended new generic name *Kallymeniopsis*, she failed to cite the generitype contrary to Art. 40.1 of the ICN (Turland & al. 2018). Three taxa were assigned at that time to the genus: “*K. circinnata* Perestenko”, “*K. lacera* (Postels & Ruprecht) Perestenko”, and “*K. pustulosa* (Postels & Ruprecht) Perestenko”. All of these binary designations, however, were invalid in light of the fact that the genus *Kallymeniopsis* was not yet validly published at that time (ICN Art. 35.1). Subsequently, Perestenko (1977) attempted to validate the genus, but she did not provide a full and direct reference to a validating description (ICN Art. 33.1; 38.1; 41.5, Note 1). Mikhaylova & Sokolova (2020: 1125) noted that Norris (2014) “indeliberately validated” the generic designation *Kallymeniopsis*. But in regard to this, as noted in the online *Index Nominum Algarum* (INA; <https://ucjeps.berkeley.edu/INA.html>), Norris (2014) did not cite either the page of publication of the generitype or of its basionym, *Iridaea lacera* Postels & Ruprecht; thus, the genus designation remained invalid. Most recently, Skriptsova & al. (2023: 57) inadvertently validated *Kallymeniopsis* Perestenko ex Skriptsova, Shibneva & Semenenko by providing a description of the genus, nominating the type species *Kallymeniopsis lacera* (Postels & Ruprecht) Perestenko ex Skriptsova, Shibneva & Semenenko, there inadvertently validated by citing the page of the publication of its basionym, *Iridaea lacera*, in Postels & Ruprecht’s (1840: 17) *Illustrationes algarum*. However, the type specimen of *I. lacera* has been neither designated nor depicted to date. At our request, Dr Tatiana Mikhaylova (LE) located the original material and sent us an image of it (Fig. 1). The evidence supports treating this specimen as the type of *I. lacera*. The location of “Unalaska” appears in the upper left of the type sheet agreeing with the original account’s type locality of “*In oceano pacifico septemtrionali*” (northern Pacific Ocean; Postels & Ruprecht 1840: 17). The name “Dr Mertens” also appears on the sheet, representing Karl Heinrich Mertens (1796–1830), who was responsible for making most of the botanical collections on the *Seniavin* of the Lütke Expedition of 1826–1829 (Wynne 2005, 2009).

In that Postels & Ruprecht (1840) did not designate a type for *Iridaea lacera*, and that the type locality was unspecific, we here designate the lectotype for this species from their original material (Art. 9.3) in conformity with ICN Art. 9.11 and Art. 9.12 (Turland & al. 2018).

Kallymeniopsis lacera (Postels & Ruprecht) Perestenko ex Skriptsova, Shibneva & Semenchenko, 2023.

Basionym: *Iridaea lacera* Postels & Ruprecht, *Illustrationes algarum*, p. 17, 1840.

Homotypic synonym: *Erythrophyllum lacerum* (Postels & Ruprecht) Selivanova, Zhigadlova & G.W. Saunders 2020.

Lectotype (of *Iridaea lacera* here designated): LE A0001338 (Fig. 1).

PhycoBank Registration: <http://phycobank.org/103660>

Notes: At least some specimens of *Kallymeniopsis lacera* (Fig. 2) were distributed as no. 992, *Kallymenia reniformis* var. *cuneata* J. Agardh ('*Callymenia*'), of the exsiccata *Phycotheca Boreali-Americana* (P.B.-A.; Collins & al. 1902). The specimens were collected by W.A. Setchell and A.A. Lawson in July, 1899 in Iliuliuk Bay in Unalaska, the type locality of *K. lacera*, but some P.B.-A. 992 specimens shown on the Macroalgal Herbarium Consortium Portal (<https://macroalgae.org/portal/index.php>) do not display the more narrow lacinate blades typical of the species. Further study of these specimens is warranted.

Regarding the other species that have been treated within the genus *Kallymeniopsis*, "*K. oblongifructa* (Setchell) G.I. Hansen" *nom. inval.* (see Hansen, 1997: 194), was recently transferred to *Erythrophyllum* by Saunders & al. (2017: 92) as *E. oblongifructum* G.W. Saunders. "*Kallymeniopsis circinnata*" *nom. inval.* (see Perestenko, 1977: 398), was considered a synonym of *E. lacerum* (Postels & Ruprecht) Selivanova, Zhigadlova & G.W. Saunders by Selivanova & al. (2020: 203), thus now becoming a synonym of *K. lacera*. "*Kallymeniopsis pustulosa* (Postels & Ruprecht) Perestenko" *nom. inval.* (see Perestenko, 1977: 398), was transferred to *Velatocarpus* by Perestenko (1988: 55) as *V. pustulosa* (Postels & Ruprecht) Perestenko. "*Kallymeniopsis verrucosa* A.D. Zinova & Gussarova" *nom. inval.* (see Zinova & Gussarova 1977: 26) was not validly published as at the time the genus designation was not yet validly published (ICN Art. 35.1), but in Skriptsova & al. (2023: 60), *K. verrucosa* A.D. Zinova & Gussarova ex Skriptsova, Shibneva & Semenchenko was properly validated. None of these designations require validation at this time and *Kallymeniopsis* is thus monotypic.

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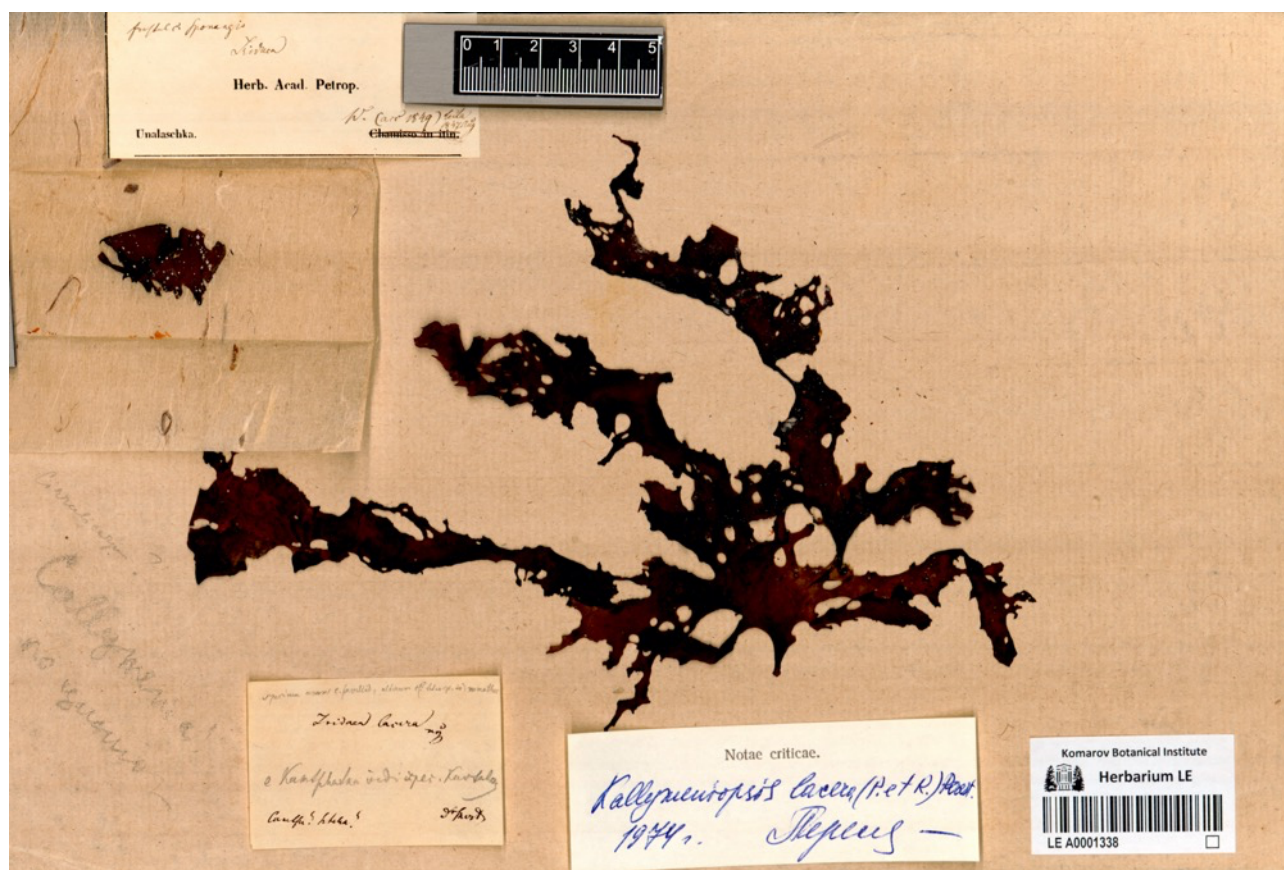


Fig. 1. Lectotype of *Iridaea lacera* Postels & Ruprecht collected by Dr Karl Heinrich Mertens [LE A0001338].



Fig. 2. *P.B.-A.* exsiccata specimen 992 (Collins & al. 1902) of *Kallymeniopsis lacera* (Postels & Ruprecht) Perstenko ex Skriptsova, Shibneva & Semenchenko [**MICH** 660511] collected near Illiliuk [sic], Unalaska in July, 1899.