

Comments on two designations in the genus *Fragilaria* (*Fragilariaceae*, *Bacillariophyta*), one in *Diploneis* (*Diploneidaceae*) and replacements for two names introduced by V.S. Sheshukova-Poretskaya (1899–1990)

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In an ongoing study of the names (and taxa) in the diatom genera *Fragilaria* Lyngbye and *Synedra* Ehrenberg, a number of unusual trinomials have been encountered. This short contribution details the origin and status of two of these: ‘*Fragilaria capucina* var. *triundulata*’ and ‘*Fragilaria capucina* var. *venter*’. Both are said to have been described by Valentina Sergeevna Sheshukova-Poretskaya (Shesh.-Por., 1899–1990, see *Botanicheskii Zhurnal* 95(5): 702–710, 2010 for an obituary, portraits, and bibliography). First this necessitates a short discussion of three papers by Sheshukova-Poretskaya, two published consecutively in 1955, the third, a year later, in 1956, and the diatom names that appeared in each.

In the first 1955 paper, Sheshukova-Poretskaya (1955a), four new diatom names were published:

Name	Author	Year	Page, fig.
<i>Navicula minuta</i>	Sheshukova-Poretskaya	1955a	135, fig. 6
<i>Caloneis formosa</i> var. <i>robusta</i>	Sheshukova-Poretskaya	1955a	135, fig. 9
<i>Cymbella angustata</i> var. <i>latestriata</i>	Sheshukova-Poretskaya	1955a	136, fig. 10
<i>Nitzschia salina</i>	Sheshukova-Poretskaya	1955a	137, fig. 12

Sheshukova-Poretskaya published a second series of descriptions for the same taxa, this time including a Latin section (Sheshukova-Poretskaya 1956):

Name	Author	Year	Page, fig.
<i>Navicula minuta</i>	Sheshukova-Poretskaya	1956	78, fig. 2
<i>Caloneis formosa</i> var. <i>robusta</i>	Sheshukova-Poretskaya	1956	79, fig. 5
<i>Cymbella angustata</i> var. <i>latestriata</i>	Sheshukova-Poretskaya	1956	80, fig. 7
<i>Nitzschia salina</i>	Sheshukova-Poretskaya	1956	80, fig. 9

Regardless of the additional Latin in Sheshukova-Poretskaya (1956), the names in the earlier paper were validly published, Latin not being required for algal names published before 1st January 1958 (Art. 44.1, Turland et al. 2018).

The illustrations for each of the four taxa are not necessarily the same in both publications: *Navicula minuta*, *Caloneis formosa* var. *robusta* and *Nitzschia salina* appear to differ, while *Cymbella angustata* var. *latestriata* is the same image but printed in reverse in Sheshukova-Poretskaya (1956).

Apart from these validly published names, reference to two apparently new varieties of *Fragilaria capucina* Desmazières have been linked to either Sheshukova-Poretskaya (1955a) or the second 1955 paper, Sheshukova-Poretskaya (1955b): ‘*Fragilaria capucina* var. *triundulata*’ and ‘*Fragilaria capucina* var. *venter*’. Neither name appears in either of these publications or in Sheshukova-Poretskaya (1956). There is, however, reference to *Fragilaria construens* var. *triundulata* and *F. construens* var. *venter* in a table published in Sheshukova-Poretskaya (1955a: 140). The first name, *Fragilaria construens* var. *triundulata*, is attributed to Reichelt, presumably referring to, or meaning, *Fragilaria construens* var. *triundulata* Reichelt ex Hartz & Østrup (1899: 57, pl. 2: fig. 15); the second, *Fragilaria construens* var. *venter*, is attributed to ‘(Ehr.) Grun.’,

presumably referring to, or meaning, *Fragilaria construens* var. *venter* (Ehrenberg) Grunow (in Van Heurck 1881: pl. 45: figs 21B–23, 24B, 26A–B). Neither ‘*Fragilaria capucina* var. *triundulata*’ nor ‘*Fragilaria capucina* var. *venter*’ are validly published names.

The error seems to have begun with Hollerbach & Krasavina (1971 [reprinted 1977]), a compilation of Russian algal literature (for further details see Williams & Bukhtiyarova 2020). Both ‘*Fragilaria capucina* var. *triundulata*’ and ‘*Fragilaria capucina* var. *venter*’ appear in Hollerbach & Krasavina (1971 [1977]: 248) with reference to Sheshukova-Poretskaya (1955a) in the accompanying volume (Koeltz 1976, in the 6th reprinted paper on p. 298; the 6th reprint is Krasavina & Hollerbach 1968). The two names have also appeared in VanLandingham (1979: 4302) appended with ‘according to Gollerbach and Krasavina (1971, p. 248)’. The error seems to have been caused by misinterpreting ‘Fr. c. var. *triundulata*’ and ‘Fr. c. var. *venter*’ in the table in Sheshukova-Poretskaya (1955a: 140) as if the ‘Fr. c.’ meant *Fragilaria capucina* rather than *Fragilaria construens*.

Both ‘*Fragilaria capucina* var. *triundulata*’ and ‘*Fragilaria capucina* var. *venter*’ should be considered invalid ‘designations’ and be deleted from the record.

A further designation that has been linked to either Sheshukova-Poretskaya (1955a) or Scheschukova-Poretzkaja (1955b) – it is not clear which – is ‘*Diploneis rauhialensis*’ Sheshukova-Poretskaya. This is a misspelling of *Diploneis rouhialensis* Brander (1943: 95: fig. 1). The name was correctly spelt in Sheshukova-Poretskaya (1955b: 192), the source of the spelling error is, again, Hollerbach & Krasavina (1971: 209). Therefore, ‘*Diploneis rauhialensis*’ is merely a *lapsus*.

Two of Sheshukova-Poretskaya’s 1955 names tabulated above require replacement names:

Navicula scheschukovae D.M.Williams, *nom. nov.*

Replaced name: *Navicula minuta* Sheshukova-Poretskaya, p. 135, fig. 6, *Uchenye Zapiski Leningradskogo Gosudarstvennogo Universiteta. Leningrad, Seriya Biologicheskikh* Vol. 40 (191), 1953 [Sheshukova-Poretzkaja 1956: 78, fig. 2], *non Navicula minuta* Skvortzov 1936: 276, pl. 3: fig. 17 *nec Navicula minuta* (Cleve) Cleve-Euler 1953: 142

Registration: <http://phycobank.org/103826>

Caloneis poretzkajae D.M.Williams, *nom. et stat. nov.*

Replaced name: *Caloneis formosa* var. *robusta* Sheshukova-Poretskaya, p. 135, fig. 9 *Uchenye Zapiski Leningradskogo Gosudarstvennogo Universiteta. Leningrad, Seriya Biologicheskikh* Vol. 40 (191), 1955, *non Caloneis formosa* var. *robusta* Frenguelli 1933: 30, pl. 4: fig. 1.

Registration: <http://phycobank.org/103827>

Note: The specific epithet ‘*robusta*’ cannot be used as replacement name for this species of *Caloneis* as it is occupied by *Caloneis robusta* Cleve (1894: 55), a replacement name for the intended recombination of *Navicula robusta* Grunow, 1877, *nom. illeg. non Navicula robusta* Ehrenberg, 1840.

Etymology: both epithets, of course, honour the Russian diatomist Valentina Sergeevna Sheshukova-Poretskaya (1899–1990).

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