Validation and comments on some names in Round & al. *The Diatoms*, 1990

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Frank Round (1927–2010), Richard Crawford & David Mann's monograph, *The diatoms*. *Biology and morphology of the genera* (Round & al. 1990) was a major advance in diatom taxonomy, the long gestation of which is described in Mann (2013). It included a much-revised classification and 18 new genera. Some 1222 names (including synonyms) are mentioned in the text, and 284 new combinations are included, of which 274 were by David Mann solely or with colleagues. A few of these names present minor nomenclatural difficulties that require resolution, but without upsetting the taxonomic *status quo*.

The genus *Pteroncola* R.W.Holmes & Croll, 1984 was described for a single new species *Pteroncola marina* R.W.Holmes & Croll (Holmes & Croll 1984: 268, pl. 1: figs 3–9; pl. 2: figs 10–15) discovered on the feathers of diving birds particularly the Common Murre [*Uria aalge* (Pontoppidan, 1763)], a guillemot, in Monterey Bay, California (Croll & Holmes1982, Holmes & Croll 1984). Round* (in Round & al. 1990: 380, figs a–c), realising that *P. marina* had earlier been described as *Dimeregramma inane* Giffen (1970, 91: figs 20–22, Sea Point, near Cape Town, South Africa), proposed the binary designation "*Pteroncola inane*" but failed to validate it as he did not provide full and direct reference to the page or plate of the valid publication of the supposed basionym. I propose to validate the correct name for the type of *Pteroncola* as follows:

Pteroncola inanis (Giffen) Round ex Guiry, *comb. nov.*
Basionym: *Dimeregramma inane* Giffen *Botanica Marina* 13(2): 91, figs 20–22, 1970.
Registration: http://phycobank.org/106602
Type locality: "in aquis marinis Oceani Atlantici apud promunturium Sea Point dictum prope oppidum Cape Town Africae Meridionalis." [Sea Point, near Cape Town, South Africa.]
Type: "praeparatum no. 602 in collectione GIFFEN " [now in the Giffen collection at **SANDC**]. Giffen also specifies "Iconotypus: figurae nostrae no. 20–22."
Etymology: *inanis, -e* is a third declension Latin adjective meaning empty, void, useless, or vain, and as such is declinable.
Note: One other species it currently referred to the genus *Pteroncola*, *P. carlinii* Almandoz & Ferrario (2014: 189, figs 1–15, King George Island, South Shetland Archipelago, Antarctica). Almandoz & Ferrario (2014) also provided a revised genus description of *Pteroncola*. The combination *Pteroncola hyalina* (Kützing) Gusliakov was proposed by Gusliakov & al. (1992: 28, pl. XXIII [23]: figs 1-6; pl. XXIV [24]: figs 1-6) although Almandoz & al. (2014: 188) later commented "…this is a controversial taxon that has more traditionally been considered as member of the genus *Fragilaria* Lyngbye (Hasle & Syvertsen 1981)." *Pteroncola* species have been found epizoically on bird feathers, epiphytically on macroalgae, epilitically on stones, and in the plankton (Almandoz & al. 2014), so it is not confined to marine bird feathers.

The beautifully named genus *Lyrella* Karayeva, 1978 [type: *Lyrella lyra* (Ehrenberg) Karayeva] was expanded considerably by David Mann in Round & al. (1990: 460, 671) with 51 new combinations and referred to an eponymous new family and order. One of these new combinations was unfortunately based upon a valid but illegitimate name, *Navicula venusta* Janisch ex Cleve (Cleve 1895: 56), a later homonym of the fossil *Navicula venusta* Pantocsek (1889: 54, pl. 5: fig.

* Round credited Linda Medlin with recognising the synonymy and notes that the "type slide" was "checked."

81). However, in accordance with ICN Art. 58.1 (Madrid Code, Turland & al. 2025), *Lyrella venusta* D.G.Mann (in Round & al. 1990: 673) can be treated as a new name and attributed solely to David Mann, but as it is a replacement name, the type remains that of *Navicula venusta* Janisch ex Cleve (Galapagos, Gazelle Expedition).

Fallacia semilyrata (Simonsen) D.G.Mann ex Guiry, *comb. nov.*
Basionym: *Navicula semilyrata* Simonsen (in Hinz & al.) *Diatom Research* 27(2): 87, no fig., 2012.
Illustration: Simonsen (1959: pl. 11: figs 13, 14)
Type: "SIM5/16. Stoller Grund Profil, Rinne 9 m, grauer Sand, helle Oberfläche [Schleswig-Holstein, Germany], 26 January 1955, Di116." (**BRM** ex **B**).
Registration: http://phycobank.org/106603
Note: As noted by Hinz & al. (2006: 87), Round & al. (1990: 669) introduced the designation "*Fallacia? semilyrata"*, an intended combination of *"Navicula semilyrata"* Simonsen (1959: 78), invalid at that time as it lacked designation of a type. *Navicula semilyrata* Simonsen was later validated by Simonsen (in Hinz, Simonsen, & Crawford 2012: 87) by designation of a type. Bąk, Witkowski & Lange-Bertalot (2006: table 1 on p. 297) included "*Fallacia semilyrata* Simonsen" but did not inadvertently validate the name. I have not come across any other records of this marine "grey sand"-dwelling species.

The conserved type of *Didymosphenia* Mart.Schmidt, 1899, *nom. et typ. cons*. (*Cymbellaceae*) is *Didymosphenia geminata,* the supposed basionym of which is "*Echinella geminata*" Lyngbye (1819: 219, pl. 70 D). However, the latter is an invalid pre-starting-point name as the type of *Echinella* Acharius, 1810, *nom. inval*. [devalidated] is *Echinella radiosa* Acharius, *nom. inval*., currently referred to *Closterium lunula* Ehrenberg & Hemprich ex Ralfs, the type of *Closterium* Nitzsch ex Ralfs, 1848 (*Closteriaceae)*. *Didymosphenia geminata* can be treated as a new name and cited as *Didymosphenia geminata* Mart.Schmidt (in A.W.F. Schmidt 1899: pl. 214: figs 7–10). A type does not appear to have been designated:

Lectotype (here designated): A.W.F. Schmidt 1899: pl. 214: figs 10 [valvar view], "Collin Hill, Irland, Engl. Rec. SW (Thum!)"
Registration: http://phycobank.org/106608
Paralectotype**:** A.W.F. Schmidt 1899: pl. 214: figs 7, 9, "Devonshire, Rec. sw (Thum!)" [Devonshire, SW England].
Note: "Collin Hill" is a locality in the Antrim Hills, County Antrim, Northern Ireland. It is also known as Colin, *Collann Mór*, or Big Collin Hill. The Irish word *colann* may be a cognate form of *cuilleann*, a slope, or European Holly (*Ilex aquifolium* L.). "Thum" refers to Eduard Thum (1847–1926), a German microscopist and mounter of diatoms, known for his high-quality and intricate diatom slides and was not necessarily the collector. It is not known who the collector of the Irish material was, but there were numerous naturalists active in the Belfast area at the time (Praeger 1949).

Petroneis baileyana (Grunow ex A.W.F.Schmidt) Guiry, *comb. nov.*
Basionym: *Navicula baileyana* Grunow ex A.W.F.Schmidt ('*Baileyana'*) *Jahresbericht der Kommission zur Untersuchung der deutschen Meere in Kiel* 2: 88, pl. 1: fig. 31, 1874.
Registration: http://phycobank.org/106604
Replaced synonym: *Navicula granulata* Bailey, 1854: 10, fig. 16, *nom. illeg., non Navicula granulata* Ehrenberg, 1836: 220, pl. 3: fig. 2, *nec Navicula granulata* Brébisson (in Donkin), 1858: 17, pl. III [3]: fig. 19, *nom. illeg.*
Type locality (for *Navicula granulata* Bailey): "Halifax, Nova Scotia".
Type**:** "Lectotype" **FH**.

Synonym: *Petroneis granulata* D.G.Mann (in Round & al.) 1990: 674.
Note: *Petroneis granulata* D.G.Mann (in Round & al. 1990: 674) was based upon an illegitimate name, *Navicula granulata* Bailey, 1854 (*non Navicula granulata* Ehrenberg, 1836). *Petroneis granulata* can be treated as a new name, but it would be superfluous as the name *Navicula baileyana* Grunow 1874, a replacement name for *Navicula granulata* Bailey, was available. The genus and species status of *Navicula baileyana* var. *septentrionalis* Østrup (1895: 437, pl. VI [6]: fig. 65 [as 37 in text, as '*bayleana'*], from Greenland, remains to be established.

Round & al. (1990: 220 included in *Odontella* several "*Biddulphia* species", including *Odontella mobiliensis*. Sims & al. (2018: 6) indicate that *Odontella mobiliensis* Bailey is the basionym of *Trieres mobiliensis* (Bailey) Ashworth & Theriot. The name *Odontella mobiliensis* was first introduced by Bailey (1851: 6), but no morphological description was provided, only an indication of habitat "Freshwater ditch … south of Savannah …Odontella Mobilensis, B., with spicules of sponge". Later in the same publication, however, Bailey (1851: 40, pl. 2: figs 31, 35) formally described what appears (Sims & al. 2021: 6) to be the same entity as "*Zygoceros (Denticella?) mobiliensis*" Bailey from several localities including Savannah. Grunow (1884: 58) used the name *Odontella mobiliensis* but inexplicably attributed the name to William Smith. Sims & al. (2018: 6) seemingly treat *Odontella mobiliensis* Bailey as a valid name despite the lack of a morphological description or illustration, which is justified by Art. 38.3 (Turland & al. 2025): "The requirements of Art. 38.1(a) are not met by statements describing properties such as purely aesthetic features, economic, medicinal or culinary use, cultural significance, cultivation techniques, geographical origin, or geological age." As there is no exclusion of *ecological* details being acceptable as a validating description, *Odontella mobiliensis* Bailey is valid and has equal priority with *Zygoceros mobiliensis* Bailey if both are indeed based upon the same type, as appears to be the case, at least partially (Sims & al. 2018: 6). As "first revisers" Ashworth & Theriot (in Ashworth & al. 2013: 1220-1) have effectively, if inadvertently, selected *Zygoceros mobiliensis* Bailey as having priority by nominating it as the basionym of *Trieres mobiliensis* (Bailey) Ashworth & Theriot, the type of *Trieres* Ashworth & Theriot. The type of *Trieres* is thus the type of *Zygoceros mobiliensis* Bailey presumably at **FH** (J.W. Bailey, coll. 882, "*Zygoceros* sp."?).

Written in fond memory of Professor Frank Round, a gentleman and a gentle person, who contributed so much, and enjoyed everything.

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