***Fragilariopsis kanayae* D.M.Williams & Kociolek, a new name for *Nitzschia reinholdii* Kanaya ex Barron & Baldauf and validation of *Fragilariopsis jouseae* (*Bacillariophyta*)**

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The diatom name *Nitzschia reinholdii* Kanaya first appeared in Kanaya & Koizumi but was neither fully described nor illustrated – it was simply noted as a manuscript name (Kanaya & Koizumi 1970: 58). Kanaya did offer a brief description and discussion in Japanese but made no indication of its type nor did he publish any images. Later, Barron & Baldauf provided a detailed account of *Nitzschia reinholdii*, including its nomenclatural status, and provided an illustration (Barron & Baldauf 1986: 364, pl. 2: fig. 7). They pointed out that while the name *Nitzschia reinholdii* had been used many times since the Kanaya & Koizumi paper, it had never been validated, a task they undertook. Further, Barron & Baldauf (1986: 364) wrote:

> "Wornardt (1967) provided some of the earliest good illustrations of *N. reinholdii*, but he referred to the specimens as *N. pliocena* (Brun) Wornardt. Nevertheless, Wornardt's (1967) illustrations have been referred to *N. reinholdii* Kanaya by Koizumi (1972), Schrader (1973), and most other modern workers. Both of Wornardt's (1967) illustrated specimens are labeled with hypotype numbers and are stored at the California Academy of Sciences, San Francisco. Therefore, it is proposed that figure 212 of Wornardt (1967) (CAS no. 3858) from locality 27295-29 (CAS), Harris Grade, Santa Barbara County, California, be the holotype for *N. reinholdii* Kanaya, emend. Koizumi (1972), Schrader (1973), ex Barron et Baldauf. Figure 213 of Wornardt (1967) (CAS no. 3859) from the same locality as the holotype is proposed as an isotype."

According to them, the correct name should be *Nitzschia reinholdii* Kanaya ex Barron & Baldauf (1986: 364, pl. 2: fig. 7).

What complicates matters, however, is that earlier du Saar & de Wolf (1973: 350-351) used the name *Nitzschia reinholdii* for a completely different species, which, as it was validated before Barron & Baldauf (1986), has nomenclatural priority. Another consequence is that "*Fragilariopsis reinholdii* Zielinski & Gersonde" (2002: 251) is also invalid as no description or diagnosis was provided. Thus this taxon needs a new name:

Fragilariopsis kanayae* D.M.Williams & Kociolek, *nom. nov.

Replaced synonym: *Nitzschia reinholdii* Kanaya ex Barron & Baldauf *Micropaleontology* 32: 364, pl. 2: fig. 7, 1986.

In addition to *Nitzschia reinholdii*, Kanaya mentioned two further unpublished names "*Nitzschia* (*Fragilariopsis*) *jousei* Burckle (MS)" and "*Nitzschia* (*Fragilariopsis*) *pliocena* (Brun) Kanaya (MS)", both given brief descriptions in Japanese but neither with any illustrations (Kanaya & Koizumi 1970: 59).

The name "*Nitzschia* (*Fragilariopsis*) *jousei* Burckle (MS)" was validated by Burckle as *Nitzschia jouseae* Burckle (1972: 240, pl. 2: figs 17-21). However, there was already an entity named *Nitzschia jouseana* published a little earlier by Skvortzov (1971: 97, pl. 19: figs 1-5). The epithets, although honouring the same individual are different as one (*jousei*) is substantival and the other (*jouseana*) is adjectival. In any event, Burckle's species is an extinct marine taxon that properly belongs in *Fragilariopsis*, whilst Skvortzov's is a freshwater species from the Yenisei River in Siberia.

Surprisingly, the combination *Fragilariopsis jouseae* appears never to have been validly made in spite of the name appearing in various DSDP (Deep Sea Drilling Project) reports (e.g., Expedition 306 Scientists, 2006). The following combination is therefore necessary:

Fragilariopsis jouseae* (Burckle) D.M.Williams & Kociolek, *comb. nov.

Basionym: *Nitzschia jouseae* Burckle *Beihefte zur Nova Hedwigia* 39: 240, pl. 2, figs 17-21, 1972.

The combination *Nitzschia* (*Fragilariopsis*) *pliocena* (Brun) Kanaya (in Kanaya & Koizumi 1970), made with reference to either *Nitzschia* or *Fragilariopsis*, was first validated by Mertz in 1966 as *Nitzschia pliocena* (Brun) Mertz (1966: 30, pl. 6: figs 14-20; basionym: *Fragilaria pliocena* Brun 1891: 28, pl. 14, fig. 7; pl. 17, fig. 7) and invalidly published by Scheschukova-Poretskaya as *Fragilariopsis pliocenum* (Brun) Scheschukova-Poretskaya (1959: 43*, pl. 3, fig. 6) and later validly published as *Fragilariopsis pliocena* (Brun) Sheshukova-Poretzkaya (1967: 305, pl. 47, fig. 13; pl. 48, fig. 7).

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* The name appears in a table on this page.