The diatom name *Cladogramma simplex* (*Bacillariophyceae, incertae sedis*)

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Two diatom taxa currently bear the name *Cladogramma simplex*. The first is *Cladogramma simplex* (A.W.F.Schmidt) Kuntze (1898, p. 401), based on *Stictodiscus simplex* A.W.F.Schmidt (in Schmidt *et al.* 1882, pl. 74: fig. 11). The second is *Cladogramma simplex* Hajós & Stradner (1975: 928, pl. 4, figs 7, 8, pl. 28, fig. 5). Both names are valid, but the second, published much later than the first, is an illegitimate later homonym, and requires a replacement name.

The specimens used to describe the new taxa in Hajós & Stradner (1975) were "… deposited in the type collection of the Hungarian Geological Survey at Budapest XIV, Népstadion út 14 and in the Elmilab of the Geological Survey of Austria, Wien III, Rasumofskygasse 23" (Hajós & Stradner 1975: 924). The holotypes described by Hajós and Hajós & Stradner were preserved in the Hungarian Geological Survey (**HGS**), whereas the paratypes – with one exception, the holotype for *Skeletonema alternans* Stradner (in Hajós & Stradner 1975: 925, pl. 20: fig. 4) – were preserved in the Geological Survey of Austria. Marta Hajós's collection is currently stored in the Hungarian Natural History Museum in Budapest (**BP**).

The holotype of *Cladogramma simplex* Hajós & Stradner is given as "Prep. 2809/1 HGS, Plate 4, Figures 7, 8 […] DSDP Leg 29, Sample 275-2-1, 130-132 cm […] Upper Cretaceous" (Hajós & Stradner 1975: 928), which is "located in the South Pacific, at the southeast margin of Campbell Plateau" (Hajós & Stradner 1975: 913). In the Hajós collection at **BP** there are five slides numbered 2809, but only one is marked "2809/1" (Fig. 2). This is the slide that should have the holotype specimen of *Cladogramma simplex* Hajós & Stradner, i.e., the specimen illustrated in their pl. 4 as figs 7, 8 (Hajós & Stradner 1975: 928). A cursory examination of these two published images might suggest they are two different specimens but a little juggling with the orientation confirms they are indeed the same (see Fig. 1). Thus, in this case, it is this specimen, rather than the slide, that is the holotype (ICN Art. 8.1). However, a search of slide 2809/1 in BP did not reveal the holotype specimen's whereabouts and so the published image(s) alone should be taken to represent the holotype (ICN Art. 8.1). Two other specimens were found, both of which appear to be representative of *Cladogramma simplex* Hajós & Stradner (Figs 3, 4), and these can be considered as isotypes.

There is some difference of opinion as to whether the epivalves and hypovalves of some spore-genera – of which the genus *Cladogramma* is considered to be – have been assigned to different taxa; in this case, *Cladogramma* being of one kind of valve, *Pterotheca* Grunow ex Forti of the other. This understanding prompted Fenner to place *Cladogramma simplex* Hajós & Stradner as a synonym of *Pterotheca kittoniana* (Grunow) Forti (Forti 1909: 27) (Fenner 1994: 116). This synonymy has not been generally accepted [Suto *et al.* 2009: 290, "… *C. jordanii* and *C. simplex* may belong to the genus *Pterotheca* as mentioned by Fenner (1994), but it is still not clear"]. Additionally, it is also not clear if all the various species referred to *Cladogramma*, in its current circumscription, would refer to the same vegetative genus. Thus at this stage it is prudent simply to give *Cladogramma simplex* Hajós & Stradner, *nom. illeg.*, a replacement name as follows.

Cladogramma simplex (A.W.F.Schmidt) Kuntze (1898: 401)
Basionym: *Stictodiscus simplex* A.W.F.Schmidt (in Schmidt. 1882, pl. 74: fig. 11).
Note: While *Stictodiscus simplex* A.W.F.Schmidt was provided only with locality and collector data ["S. Francisco Weissfl."] and no description, the name is validated by analytical figures (ICN Art. 38.7) as it appeared prior to 1 January 1908.

Cladogramma hajosiae D.M.Williams & Buczkó, *nom. nov.*

Replaced synonym: *Cladogramma simplex* Hajós & Stradner *Initial Reports of the Deep Sea Drilling Project* 29: 928, pl. 4: figs 7, 8, pl. 28, fig. 5, *nom. illeg.* 1975.

Holotype: **BP** Slide 2809/1 ("DSDP Leg 29, Sample 275-2-1, 130-132 cm […] Upper Cretaceous"); the Hajós collection at **BP** remains the property of the Geological and Geophysical Institute of Hungary; Figs 3, 4 = isotypes.

Fenner, J. (1994). Diatoms of the Fur Formation, their taxonomy and biostratigraphic interpretations. – Results from the Harre borehole, Denmark. *Aarhus Geoscience* 1: 99-163.

Forti, A. (1909). Studi per una Monagrafia del genere *Pyxilla* (Diatomee) e dei generi affini. *Nuova Notarisia* 20: 19-34.

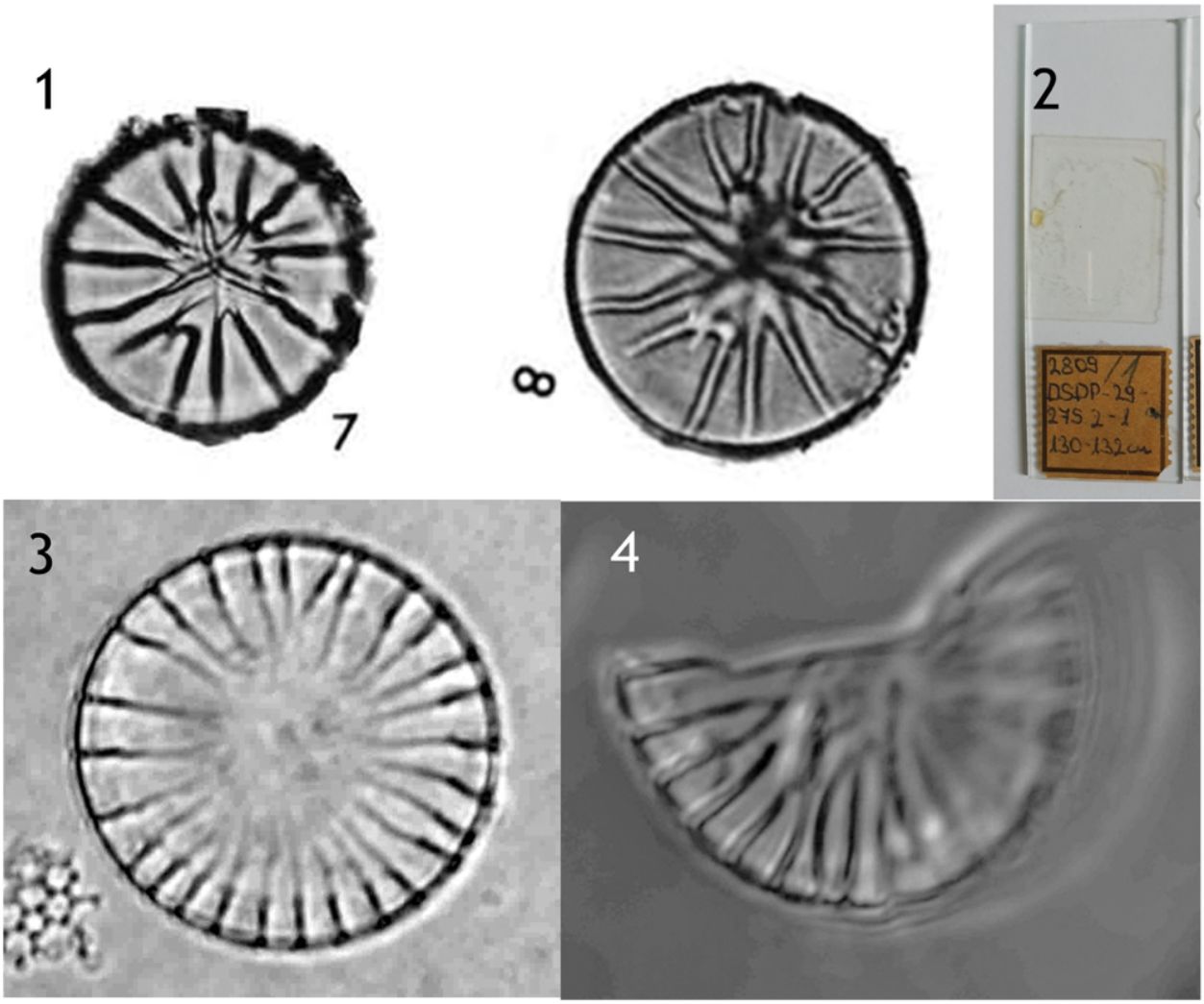
Hajós, M. & Stradner, H. (1975). Late Cretaceous Archaeomonadaceae, Diatomaceae, and Silicoflagellatae from the South Pacific Ocean, Deep Sea Drilling Project, Leg 29, Site 275. *Initial Reports of the Deep Sea Drilling Project* 29: 913-1009; http://www.deepseadrilling.org/29/volume/dsdp29_26.pdf

Kuntze, O. (1898). *Revisio Generum Plantarum*. Part III. Leipzig.

Schmidt, A. (1882). *Atlas der Diatomaceen-kunde*. Aschersleben, Commissions-Verlag Von Ludwig Siever's Buchandlung Series II (Heft 19), pls 73-76.

Suto, I., Jordan, R.W. & Watanabe, M. (2009). Taxonomy of middle Eocene diatom resting spores and their allied taxa from the central Arctic Basin. *Micropaleontology* 55: 259-312.

Van Heurck, H. (1882). *Synopsis des Diatomées de Belgique*. Atlas. Ducaju & Cie., Anvers. pls 78-103.



Figs 1-4. ***Cladogramma hajosiae.*** Fig. 1: Images from Hajós & Stradner (1975, pl. 4: figs 7, 8), the holotype. The two images are of the same specimen. Hajós & Stradner (1975, pl. 4, fig. 7) is on the left, Hajós & Stradner (1975, pl. 4, fig. 8) is on the right rotated to align with Hajós & Stradner (1975, pl. 4: fig. 7); Fig. 2: Holotype slide 2809 /1; Figures 3, 4: Specimens of *Cladogramma hajosiae* from the holotype slide (Fig. 3: Valve diameter = 16.9 µm; Fig. 4: Valve diameter = 17.5 µm, England Finder = Q46/2).