

## Shigeki Mayama and Ayako Kawashima: New combinations for some taxa of *Navicula* and *Stauroneis*, and an avowed substitute for a taxon of *Eunotia*

真山茂樹・河島綾子： *Navicula* と *Stauroneis* における数分類群の新組合せ，  
および *Eunotia* の1分類群における公認代置名

**Key index words:** *Luticola mobiliensis*, *Luticola minor*, *Placoneis explanata*, *Placoneis signata*, *Sellaphora japonica*.

*Navicula mobiliensis* var. *minor* R. M. Patrick is known as a taxon which sometimes occurs in Japanese springs and rivers (e. g. Kobayasi & Haraguchi 1969, Mayama & Kobayasi 1986). The valve structure of this taxon, clarified using a scanning electron microscope (SEM) by Mayama and Kobayasi (1986), is quite different from that of *Navicula* sensu strict (Cox 1979). *Stauroneis japonica* H. Kobayasi was described from the Ara-kawa (Ara River) (Kobayasi 1965). However, as nomenclatural type was not indicated in the original description, Kobayasi & Mayama (1986) later designated a type to validate this previously invalid name. They re-examined this species with SEM in detail, but a strong stauros, which is one of the characteristics of *Stauroneis*, was not observed. Valve characteristics of the above two taxa should be within the circumscriptions of *Luticola* Mann (in Round *et al.* 1990) and *Sellaphora* Mereschkowsky (1902), resurrected by Mann (1989) respectively.

In attempts to further describe the diatom flora of Lake Akan (Kawashima & Kobayasi 1993, 1994, 1995, 1996; Kawashima & Mayama 1997, 1998), two taxa of *Navicula* have been encountered which we believe should be assigned to *Placoneis* Mereschkowsky (1903), which was re-evaluated by Cox (1987). We hereby propose the transference of four *Navicula* taxa and one *Stauroneis* taxon to suitable genera.

*Eunotia compacta* (Hustedt) Mayama is a later homonym of *Eunotia compacta* Hustedt ex Simonsen. A new name typified by the type of the former name is given as the avowed substitute.

***Eunotia neocompacta* Mayama nom. nov. et stat. nov.**

Basionym: *Eunotia exigua* var. *compacta* Hustedt,

Bacillariophyceae (Süsswasserflora Mitteleuropas. Heft 10), p. 176. f. 225. 1930.

Synonym: *Eunotia compacta* (Hustedt) Mayama, Diatom 13: 35. 1997, non *Eunotia compacta* Hustedt ex Simonsen, Atlas and catalogue of the diatom types of Friedrich Hustedt, vol. 1. p. 40. 1987.

Lectotype: 47/8, Sarek Mountains, Sweden. (BRM) (desig. by Simonsen 1987).

For the fine structure of this taxon, see Mayama (1997).

***Luticola mobiliensis* (C. S. Boyer) Mayama comb. nov.**

Basionym: *Navicula mobiliensis* C. S. Boyer var. *mobiliensis*, Contr. Biol. Micr. Sect. Acad. Nat. Sci. Philadelphia, no. 1. p. 8. pl. 2. f. 5. 1922.

**Fig. 1.** Isotype. Mobile, Alabama. U.S.A. PH - G. C. 2955. **Fig. 2.** Same specimen drawn by Patrick & Reimer (1966. pl. 42. f. 11). Mobile, Alabama. U.S.A. PH - Boyer 747.

***Luticola minor* (R. M. Patrick) Mayama comb. nov. et stat. nov.**

Basionym: *Navicula mobiliensis* var. *minor* R. M. Patrick, Proc. Acad. Nat. Sci. Philadelphia 111: 96. pl. 8. f. 2. 1959.

**Fig. 3.** Holotype. Ridley Creek near Ganet Mill Road, approx. 1/4 mile upstream from West Chester Pike, Chester County, Pennsylvania. U.S.A. PH - G. C. 44497.

***Placoneis explanata* (Hustedt) Mayama comb. nov.**

Basionym: *Navicula explanata* Hustedt, Schweiz. Zeitschr. Hydrol. 11: 207. f. 7-8. 1948.

**Fig. 4.** Lake Akan, Hokkaido, Japan. K-1268 (our sample no.).

***Placoneis signata* (Hustedt) Mayama comb. nov. et stat. nov.**

Basionym: *Navicula gastrum* var. *signata* Hustedt, in Schmidt's Atlas Diat. pl. 403. f. 27, 28. 1936.

**Fig. 5.** Lake Akan, Hokkaido, Japan. K-1268.

***Sellaphora japonica* (H. Kobayasi) H. Kobayasi comb. nov.**

Basionym: *Stauroneis japonica* H. Kobayasi, J. Jpn. Bot. **40**: 348, 349. 1965; Diatom **2**: 97, 98. f. 13. 1986.

This new combination was prepared by Hiromu Kobayasi in his lifetime.

**Fig. 6.** Isotype. Station 93, Ishima-gawa (Ishima River), Saitama Pref., Japan. H. K. T-80.

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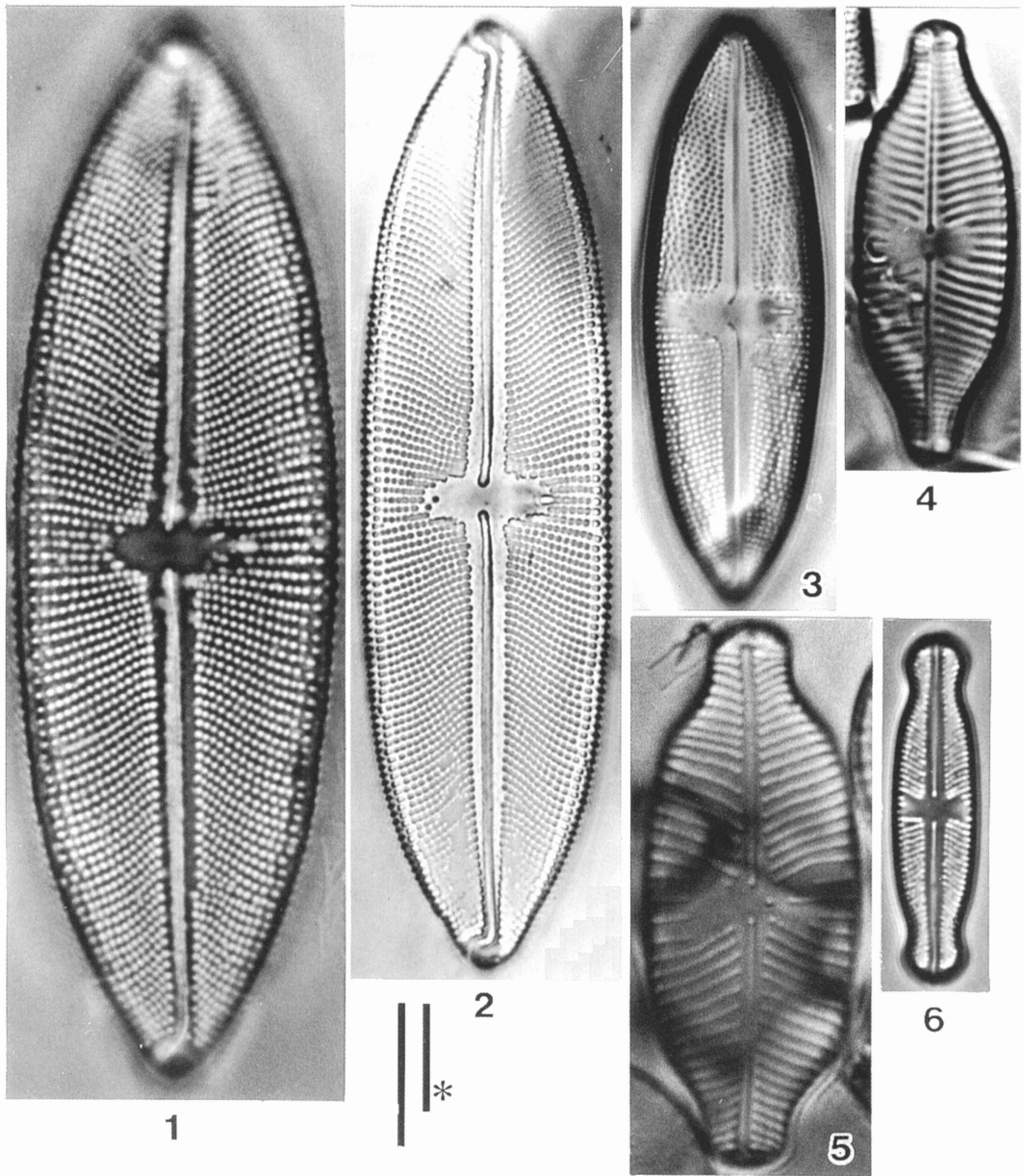
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Figs 1, 2. *Luticola mobiliensis*. (Fig. 1. Isotype). Fig. 3. *Luticola minor*. (Holotype). Fig. 4. *Placoneis explanata*.  
 Fig. 5. *Placoneis signata*. Fig. 6. *Sellaphora japonica* (Isotype).

Scale bars = 10  $\mu$  m, without asterisk for Figs 1, 3-6 and with for Fig. 2.