Plate 1: MARINE DIATOMS FROM THE AZORES

Source of Material

South East coast of Faial, Caldeira Inferno. 38° 31' N; 28° 38' W.
An open crater of small volcano, shallow and sandy. Gathered from *Pinna* (molluscs) and stones. Date: June 1st, 1981.
Sample received from Hans van den Heuvel, Leiden on March 17th, 1988.

NOTE:
Material also deposited in Rijksherbarium Leiden, the Netherlands. Aliquot sample and slide also in collection Sterrenburg, Nr. 249

Plate One:

1 *Mastogloia amoena* Brun 1895. See Brun (1895, pl. 16, fig. 53). This specimen could not be distinguished from the very similar *M. peragalli* because the partectal ring was not visible.

2 *Mastogloia amoena* var. *turgida* Brun 1895. See Brun (1895, pl. 16, fig. 50). This specimen could not be distinguished from the very similar *M. peragalli* because the partectal ring was not visible.

3 *Mastogloia splendida* (Gregory) Peragallo 1888. See Stephens and Gibson (1979, p. 508, figs. 42, 44).

4 *Mastogloia fimbriata* (Brightwell) Cleve 1895. See Foged (1975, pl. 14, figs. 1-2). Two different focus settings.

5 *Mastogloia fimbriata* (Brightwell) Cleve 1895. See Stephens and Gibson (1979, p. 505, figs. 27-28). Two different focus settings.

6 *Mastogloia pseudolatecostata* Yohn and Gibson 1982. See Witkowski, Lange-Bertalot, and Metzeltin (2000, pl. 77, figs. 5-7). Two different focus settings.

7 *Mastogloia binotata* (Grunow) Cleve 1895. See Foged (1975, pl. 12, figs. 6-7). Two different focus settings.

8 *Cocconeiopsis* sp. indet.

9 *Mastogloia binotata* (Grunow) Cleve 1895. See Stephens and Gibson (1979, p. 501, figs. 2-4).

10 *Mastogloia fimbriata* (Brightwell) Cleve 1895. See Stephens and Gibson (1979, p. 505, figs. 27-28).

11 *Mastogloia ovulum* Hustedt 1933 (partectal ring absent). See Hustedt (1933, p. 474, fig. 892).

12-15 *Rhaphoneis amphiceros* (Ehrenberg) Ehrenberg 1844. See Hendey (1964, pl. 26, figs. 1-4).

16 *Rhaphoneis amphiceros* (Ehrenberg) Ehrenberg 1844. A highly variable species, but the specimen shown here is a good match for Ross (1981, pl. 1, fig. 2) since it lacks the lateral expansion of the hyaline axial area near the apices, which is characteristic of *Delphineas surirella*.

17-18 *Rhaphoneis nitida* (Gregory) Grunow 1867. See Peragallo and Peragallo (1897-1908, pl. 83, fig. 31) and Andrews (1975, p. 217, pl. 3, figs. 52-53). This also looks very similar to a rapheless valve of *Cocconeis disculoides* (see fig. 37 on this plate) and differentiation would require SEM.

19 *Cocconeis britannica* Naegeli in Kützing 1849. See Witkowski, Lange-Bertalot, and Metzeltin (2000, pl. 39, fig. 21).

20 *Cocconeis pseudomarginata* Gregory 1857. See Hendey (1964, pl. 28, fig. 20).

21 *Cocconeis pseudomarginata* Gregory 1857. Same specimen as fig. 20 but different focus setting.

22 *Delphineis surirella* (Ehrenberg) Grunow in Cleve and Möller 1878.
This specimen is an exact match of Hendey (1964, pl. 26, fig. 13), given as *Rhaphoneis surirella*. It also appears to match Witkowski, Lange-Bertalot, and Metzeltin (2000, pl. 22, fig. 10), which is identified as *Delphineis surirelloides*. Perhaps LM is insufficient in this group of taxa.

23 *Delphineis minutissima* (?) (Hustedt) Simonsen 1987. See Hustedt in Simonsen (1987, pl. 374, fig. 13). Absence of pseudoraphe appears to eliminate small *Cocconeis* rapheless valve.

24 *Rhaphoneis amphiceros* form (?). Similar specimen in Foged (1975, pl. 9, fig. 2).

25 *Cocconeis britannica* Naegeli in Kützing 1849. See Witkowski , Lange-Bertalot, and Metzeltin (2000, pl. 39, fig. 21).

26 *Cocconeis britannica* Naegeli ex Kützing 1849. See Hustedt (1933, p. 333, fig. 786).

27 *Cocconeis scutellum* Ehrenberg 1838. This specimen is a good match for Schmidt's Atlas (1874-1959, pl. 190, fig. 17), given as “Typus”.

28 *Cocconeis ornata* Gregory 1857. See Hustedt (1933, p. 339, fig. 793).

29 *Achanathes lacus-vulcani* Lange-Bertalot and Krammer 1989. See Hustedt in Simonsen (1987,pl. 595, figs 4-6), given as *C. thienenammii*. *C. thienenammii* was transferred to *Achnanthes* and given the new name of *Achnanthes lacus-vulcani,* due to the name *A. thienenammii* being preoccupied (Lange-Bertalot and Krammer 1989).

30 *Cocconeis capensis* (Cholnoky) Witkowski in Witkowski, Lange-Bertalot and

Metzeltin 2000. See Cholnoky (1963, p. 42, pl. 1, fig. 7), given as *Cocconeis clandestina* var. *capensis*.

31 *Cocconeis placentula* Ehrenberg 1838. See Hustedt (1933, p. 347, fig. 802b) and Patrick and Reimer (1966, p. 284, pl. 15, fig. 7).

32 *Cocconeis britannica* Naegeli in Kützing 1849. See Van Heurck (1880-1885, pl. 30, fig. 1) and Hustedt (1933, fig. 786).

33 *Cocconeis placentula* Ehrenberg 1838. See Foged (1987, pl. 8, fig. 4).

34 *Cocconeis californica* var. (?). See Riaux-Gobin and Compère (1996, p. 95, figs. 10-18). Possible variation of *C. californica*. The reference shows this species to be extremely variable with regards valve ornamentation.

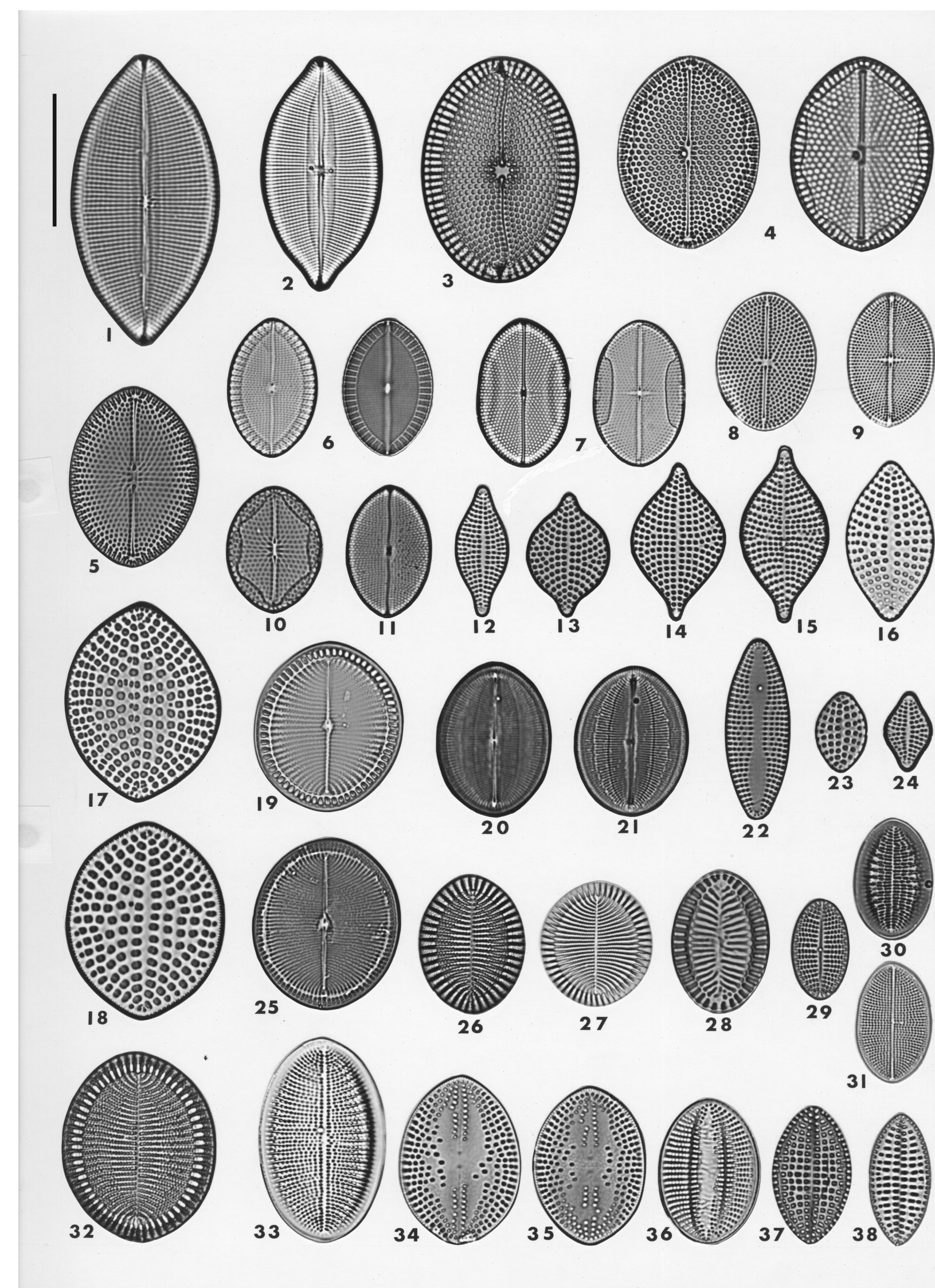
35 *Cocconeis californica* Grunow in Van Heurck 1880. See Riaux-Gobin and Compère (1996, p. 95, figs. 10-18)

36 *Cocconeis peltoides* Hustedt 1939. See Hustedt in Simonsen (1987, pl. 376, figs. 3-4, 9-10).

37 *Amphicocconeis disculoides* (Hustedt) De Stefano and Marino 2002. See Hendey (1964, pl. 28, fig. 21), given as *Cocconeis disculoides*. See also De Stefano and Marino (2002).

38 *Amphicocconeis disculoides* (?) (Hustedt) De Stefano and Marino 2002. See Hendey (1964, pl. 28, fig. 21), given as *Cocconeis disculoides*. See also De Stefano and Marino (2002).

Magnifications: fig. 1: x2000; fig. 2: x1500; all others: x1000
Scale Bar: scale bar is 30 microns for figures at x1000; 20 microns for fig. 2; 15 microns for fig. 1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