

Plate 21. MARINE DIATOMS FROM THE GALAPAGOS ISLANDS

Source of Material

Galapagos Islands, Santa Cruz. A very sparse sample collected by J.A. Broadhead August 16th, 1986.

Galapagos Islands, Santa Cruz. Sample 1, from Academy Bay (Puerto Ayora), south coast of Santa Cruz; skimming of thin surface film resulting from rising tide. Collected by Tui de Roy August 9th, 1991.

Galapagos Islands, Santa Cruz. Sample 2, from Academy Bay (Puerto Ayora), south coast of Santa Cruz; from thick silty mud covered in greenish algal slime on flat rock ledges at low tide. Collected by Tui de Roy August 9th, 1991.

Galapagos Islands, Santa Cruz. Sample 3, from Academy Bay (Puerto Ayora), south coast of Santa Cruz; from greenish-brown slime on mooring rope. Collected by Tui de Roy August 9th, 1991.

Sample #1 one bottle - very sparse.

Sample #2 four bottles - one unbleached (HCL rinsed); one heavy fraction; one sieved under 38 μ m and one sieved over 38 μ m.

Sample #3 four bottles - same sequence as for sample #2.

These samples are kept in the private collection of Stuart R. Stidolph and will eventually be deposited in the collections of NIWA, Wellington, New Zealand.

Plate Twenty-one:

- 1 *Actinocyclus ralfsii* (W. Smith) Ralfs in Pritchard 1861. See Peragallo and Peragallo (1897-1908, pl. 113, fig. 1), which agrees well with this specimen.
- 2 *Actinocyclus ehrenbergii* Ralfs in Pritchard 1861. See Peragallo and Peragallo (1897-1908, pl. 114, fig. 1).
- 3 *Actinoptychus adriaticus* Grunow 1863. See Hendey (1971, p. 376) where he noted that all the Galapagos specimens had 6 sectors.
- 4 *Azpeitia neocrenulata* (VanLandingham) G. Fryxell and T.P. Watkins in Fryxell, Sims and Watkins 1986. See Fryxell, Sims, and Watkins (1986, p. 18, fig. 30, 2A).
- 5-6 *Azpeitia nodulifer* (Schmidt) G. Fryxell and P.A. Sims in Fryxell, Sims, and Watkins 1986. See Fryxell, Sims, and Watkins (1986, p. 19, fig. 30, 3-4).

- 7 *Biddulphiopsis membranacea* (Cleve) von Stosch and Simonsen 1984. See Stosch and Simonsen (1984, p. 15, pl. 9).
- 8 *Achnanthes manifera* Brun 1895. See Brun (1895, pl. 16, fig. 87); also Schmidt's Atlas (1874-1959, pl. 415, fig. 18) and Hustedt (1955, p. 18, pl. 6, fig. 8).
- 9 *Achnanthes longipes* Agardh 1824. See Henvey (1951, p. 42, pl. 1, fig. 4). Also a good match for *A. yaquinensis*, described by McIntire and Reimer (1974). Also see Toyoda, Nagumo, and Tanaka (2005) for additional SEM study of *A. yaquinensis*. Differences between these species and others may require SEM.
- 10 *Achnanthes kuwaitensis* Henvey 1958. See Henvey (1958, p. 55, pl. 6, figs. 8-10) and Henvey (1970, p. 129, pl. 6, figs. 63-64).
- 11 *Achnanthes* sp. indet.
- 12 *Achnanthes citronella* (A. Mann) Hustedt in Schmidt et al. 1937. See Schmidt's Atlas, (1874-1959, pl. 415, fig. 5) and Foged (1975, p. 7, pl. 9, fig. 13). Meister (1935, p. 98, pl. 6, fig. 53) gives a similar specimen from Nagasaki as *Cocconeis citronella*. However, Meister's identification appears not to agree with the original description and the figures given by A. Mann (1925, p. 61, pl. 13, figs. 3-6) as a doubtful new species, *Cocconeis citronella*. According to VanLandingham (1968b, p.773), *Cocconeis citronella* A. Mann is a synonym of *Achnanthes citronella* A. Mann (1925) Hustedt comb. nov. 1937 in Schmidt's Atlas (1874-1959, pl.415, figs. 3-8).
- 13 *Odontella aurita* (Lyngbye) Agardh 1832. See Schmidt's Atlas (1874-1959, pl. 122, fig. 4) and also W. Smith (1856, p. 49, pl. 45, fig. 319), given as *Biddulphia aurita*.
- 14 *Campylodiscus fastuosus* Ehrenberg 1845. See Henvey (1951, p. 78, pl. 17, fig. 2) and Henvey (1971, p. 408).
- 15 *Campylodiscus ralfsii* W. Smith 1853. See Peragallo and Peragallo (1897-1908, pl. 56, fig. 4) and also Henvey (1970, p. 161, pl. 5, fig. 53).
- 16 *Campylodiscus samoensis* Grunow in A. Schmidt et al. 1875. See Peragallo and Peragallo (1897-1908, pl. 54, fig. 7). VanLandingham (1968b, p. 666) gives this as *C. incertus*.
- 17 *Amphora* sp. indet. This is a good match for Schmidt's Atlas (1874-1959, pl. 27, fig. 59), for which Schmidt says "forms still to be identified".
- 18 *Amphora bigibba* Grunow in Schmidt et al. 1875. See Ricard (1977, pl. 6, fig. 16) whose specimen of 6 x 30µm agrees well with this specimen of 5.0 x 33.75µm
- 19-20 *Amphora hustedtii* Z. Levkov 2009. See Meister (1937, p. 264, pl. 8, figs. 2-4). Meister's

species was renamed in VanLandingham (1968a, p. 166) as *A. triconfusa* VanLandingham nom. nov. but this is not a formal emendation and therefore Meister's name stands. Ricard (1975, p. 202, pl. 2, fig. 15a-b) described *A. quinquegibba* as a new species but it is a synonym of *A. hustedtii* Meister. What appears to be the same species is shown as *Undatella lineata* in Paddock and Sims (1980, p. 169, figs. 10-34).

- 21 *Amphora gigantea* var. *nodosa* Tempère and Peragallo 1914. See Peragallo and Peragallo (1897-1908, pl. 45, fig. 2) given as a questionable identification but which is close to this specimen.

Magnifications: fig. 1: x500; fig. 7: x750; figs. 8, 12: x2000; all others: x1000.

Scale Bar: scale bar is 60 microns for fig. 1; 40 microns for fig. 7; 15 microns for all figures at x2000; 30 microns at x1000

