

1888 Rattray, p. 551  
 1928 Frenguelli, p. 536.

Valve surface flat, slightly depressed at the centre and convex towards the border. Centre hyaline bordered by a ring of slightly larger areola. The centre is not round but a little elongated. The areola forming the ring around the hyaline space are not all of the same size and the grouping is disorderly. Frenguelli (in litt.) states a faint punctation, the same as Rattray. This could not be seen in Madryn specimen. The measurements of this variety differ to a certain extent. Various sizes have been found: 0.107, 0.116, 0.126, 0.155, 0.185 mm.. The areolation is about equal. Centre 4,  $\frac{1}{2}$  radius 3.5, border 3, outer border 5 to 6 in 0.01 mm.. This coincides with specimens from Pabellan de Pica and Frenguelli. I give measurements for the following localities in comparison with Madryn specimens:

Madryn (MM)	Diameter	0.107/0.185,	central space	0.0060/0.0075	broad
Frenguelli	"	0.207	"	—	—
Rattray	"	0.145/0.160,	"	0.0065	
Pabellan de Pica (Chile)	MM	0.1376,	"	0.0055/0.0060	

Localities 384, 386S.

Known on the south American coasts from Argentina to Brazil.

26 **Coscinodiscus commutatus** Grunow. 1884

Franz Josef. Land, p. 79

Frenguelli (1941), p. 323.

Cos. commutatus is a proper species and is not found together with Cos. Jonesianus and cannot be treated as a variety of this diatom. Cos. commutatus is found as species in estuarine surroundings. It will live in water of low salinity as well as oceanic. I believe that the real Cos. Jonesianus is a tropical diatom, that has been confused with Cos. commutatus. The areolation of the latter is coarser. Centre 5|6.  $\frac{1}{2}$  radius 7, border 10 areola in 0,01 mm.. Between 5 to 7 rows an apiculus.

Locality 384, 386R.

Found up to predominant in winter at Atlántida and in the Rio de la Plata. Brazilian coast (Müller Melchers).

27 **Coscinodiscus curvatulus** Grunow. 1878

in A. Schmidt Atlas, pl. 57, f. 33

1890 Rattray, p. 486  
 1928 Frenguelli, p. 527  
 1937 Hendey, p. 251.

Locality 384, 386R.

The diatom is found with curved and nearly straight fascicula.

- 28 **Coscinodiscus decreescens** Grunow. 1878  
 in A. Schmidt Atlas, pl. 61, f. 7-10.

Locality 420RR.

- 29 **Coscinodiscus devius** A. Schmidt. 1886 Plate I. fig. 4  
 in Schmidt Atlas, pl. 60, f. 1-4.

Schmidt in his explanation to table 60 writes: "Eigentümlich ist dieser Art so zu sagen die radiale Anordnung der Maschen nicht zur Geltung kommen zu lassen".

Mann in "Marine Diatoms of Philippines", p. 69 under *Cosc. radiatus* writes: "I do not agree with De Toni (Syl. Alg., p. 1246) that *Cosc. devius* A. Schmidt in his Atlas plate 60, f. 1-4 is a small variety of this species". (*Cos. radiatus*)

Peragallo Pourquoi Pas, p. 83

Locality 384 bottom sample, 386, 388, 420, 421 not scarce.

Diameter 0.034 - 0.086 mm. 4 areola in 0.01 5/6 - 7 on the border.

This small *Coscinodiscus* does not belong to or is a form, of *Cosc. radiatus* but a real species. There are small forms with lineatus structure or radiatus, that do not belong to *Cosc. radiatus* either.

These forms with larger areola seem to belong to *Thalassiosira* species.

- 30 **Coscinodiscus divisus** Grunow. 1878  
 Schneider Nat. Beitr. z. Kenntn. d. Kaukasus Länder, p. 125.

1889 Rattray, p. 499

1928 Frenguelli, pl. XIV, f. 11, p. 526

Locality 421. — Also coast of Uruguay and Brazil.

- 31 **Coscinodiscus excentricus** Ehrenberg. 1841  
 Phys. Abh. Akad. Wiss. Berlin, 1830, p. 146

1889 Rattray, p. 461  
 1928 Frenguelli, p. 528, pl. XV, f. 1-3  
 1937 Hendey, p. 322, meroplanktonic.

Locality 384R, 386R.  
 Diameter 0.064 mm.

32 **Coscinodiscus gigas** Ehrenberg. 1841  
 Abh. Berlin. Akad., p. 412

1884 Grunow Franz Josef Land p. 76  
 1889 Rattray, p. 541  
 1928 Frenguelli, n. 530, pl. XX, f. 1 (Diameter 0.204-0.291 mm)  
 1937 Hendey, n. 246 (Oceanic tropical - subtropical around Malvinas Isl).

Locality 421, Uruguay and Brazil coast (Müller Melchers), Río de la Plata and Atlantic Ocean (Frenguelli), Patagonian Guano (Claro).

var. ~~praetexta~~ (Janisch) Hustedt, 1938  
 Hustedt Rabenhorst Die Kieselalgen., n. 457, f. 255 and 256 b  
 1901 Janisch Gazelle, pl. III, f. 4  
 1941 Frenguelli, n. 322

Differs by small areola interspaced on the utmost border. A specific difference does not exist (Hustedt).

Diameter 0.204 - 0.248 mm., areola  $\frac{1}{2}$  radius  $3\frac{1}{2}$  to 4 in 0.01 mm. The hyaline centre seems to be more compact than in *Coscinodiscus gigas* where the hyaline stria enter far between the areola.

Locality 384F, 421, 422. Río de la Plata and Atlantic Ocean (Frenguelli), Uruguay Brasil MM

Locality 421 also found on the uruguayan and brazilian coast. (Frenguelli). Uruguay and Brazil (Müller Melchers).

33 **Coscinodiscus Hustedtii** Müller Melchers. 1953  
 New and little known Diat., p. 2, pl. 1, f. 2-5.

Marine and neritic on the uruguayan coast, Mar de Trépane (Brazil) MM. It was found in scarce quantities in the argentine South Atlantic. Later it was found in a slide by Thum of Leipzig, Plauk-

ton Bay von Bengalen. Katalog VII, N<sup>o</sup> 3389. This diatom can be considered as being of tropical seas. Found in gatherings of the Toko Maru Exped. Brazil coast. April, 1957 (19°19'N - 48°09'W) Müller Melchers.

Locality 420, 421S.

34 **Coscinodiscus Jonesianus** (Greville) Ostenfeld. 1915  
1862 New Diatoms V., p. 22, pl. 2, f. 3 Eupodiscus Jonesianus)

1915 Ostenfeld, p. 13, f. 7

1928 Frenguelli, p. 536, pl. IV, f. 1; pl. XX, f. 2

This species has been united with *Cosc. commutatus*, but both are valid species and should be kept apart. The life conditions of both are completely different. *Cosc. Jonesianus* is as far as I can see a warm water or tropical species, or of temperate water. The areola are finer and the valve is more flat. Rosette 5/6,  $\frac{1}{2}$  radius 8/9 and at the margin 13/15 areola in 0.01 mm. Halfway between centre and border a ring of spinulae, missing in *Cosc. commutatus*. Oceanic warm water species.

Locality 384R, 386R.

35 **Coscinodiscus oculus iridis** Ehrenberg. 1839 Place IV fig. 19  
Abh. Berlin, Akad., p. 147

1889 Rattray, p. 559

1937 Hendey, p. 249 (probably oceanic, meroplanktonic?)

1941 Frenguelli, p. 322.

Valve nearly flat sloping down at the border. Rosette 6, areola about  $2\frac{1}{2}$  in 0.01 mm. Areola of valve  $3\frac{1}{2}$  to 3 in 0.01 mm.

Diameter 0.116 to 0.155 mm.

Locality 386, 387, 416R, 417, 418R, 419S, 420, 421, 423.

Marine. Oceanic subantarctic (Müller Melchers), not rare. Brazil, M.M.

36 **Coscinodiscus obscurus** A. Schmidt. 1878  
A. Schmidt Atlas, pl. 61, f. 16

1889 Rattray, p. 513

Locality 420R.

Diameter 0.110 mm., areola  $3\frac{1}{2}$  in 0.01 mm.

37 **Coscinodiscus pacificus** Grunow. 1884  
Denk. Akad. Wiss. Wien., Vol. 48, p. 77

Schmidt Atlas, pl. 60, f. 13 (the identification of this figure from Barbados, is by Fricke in the Index to the Atlas 1902, p. 7)

1889 Rattray, p. 563

1921 Peragallo, Pourquoi Pas, p. 83 (Isles argentines)

1926 Hanna and Grant. Maria Madre, p. 142, pl. 16, f. 1

1932 Hanna Shartooth Hill, p. 184, pl. 10, f. 1

1938 Lohman Kettleman Hills, p. 82

"Four rather large beads form a rosette in the centre and this seems to be the only distinguishing feature between *Cosc. pacificus* and *Cosc. radiatus* Ehrenberg". (Hanna, p. 142).

Locality 421.

Diameter 0.128 mm., areola 5 in 0.01 mm., rosette  $3\frac{1}{2}$  in 0.01 mm.

38 ***Coscinodiscus punctiger*** (Castracane) Müller-Melehers. 1953  
Sobre alg. Diat. Plank. de Atlántida, Physis XX, Nº 59, p. 465,  
f. 2

1886 Castracane Challenger, p. 168 as *Ethmodiscus punctiger*

1907 Mann, Albatross, p. 259 as *Coscinodiscus verecundus*

1931 Gran and Angst, Puget Sound as *Coscinodiscus Angstii*

Planktonic species on the uruguayan coast, abundant in autumn less in summer. Diameter 0.044 to 0.160 mm., beading about 15/20 in 0.01 mm., spines 2.3 to 8. Oceanic and neritic. Coast of Uruguay abundant, less on the argentine and brazilian coast.

Okhotsk Sea Mann. Japan Castracane. Puget Sound Gran. New Zealand. MM. Brazil MM.

Locality 421F, 422, 423.

39 ***Coscinodiscus Rothii*** (Ehrenberg) Grunow. 1872  
Schneider Natur. Beitr. z. K. d. Kaukasus Länd., p. 125

1937 Hendey, as *subtilis*, in subpolar seas.

1941 Frenguelli as *v. normani*, p. 321

Locality 368R.

Diameter 0.133 mm.

Coast of Uruguay and Brazil.

40 ***Coscinodiscus radiatus*** Ehrenberg. 1839  
Abh. Berlin. Akad., p. 148

1924 Frenguelli, p. 157

1937 Hendey, p. 250. Oceanic, Perú current.

Locality 387, 421, 422.

Marine oceanic. Coast of Uruguay and Brazil (Müller Melchers).  
Argentina (Frenguelli).

- 41 **Coscinodiscus Vidovichii** Müller Melchers. 1953  
New and little known Diatoms. Com. Bot. Mus. Hist. Nat. Montevideo, Vol. III, Nº 30, p. 2  
Species found during many years on the uruguayan coast. M.M.  
Locality 421RR.
- 42 **Dactyliosolen antarcticus** Castracane 1886 Plate III, fig. 12  
"laevis" phase Hendey 1937.  
Challenger, p. 75, pl. 9, f. 7  
1905 Karsten Valdivia, p. 93, pl. 9, f. 11  
1909 v. Heurek Belgica, p. 29, f. 76  
1937 Hendey, p. 323, pl. 6, f. 1-3 (in both hemispheres)  
1943 Frenguelli, p. 260, pl. 1, f. 22  
Locality 386S.
- 43 **Ditylum Brightwellii** (West) Grunow. 1881  
in van Heurek Synopsis, pl. 114  
1937 Hendey, p. 284 (neritic, Malvinas, temperate and subtropic)  
1938 Frenguelli, p. 325  
Locality 388.  
Resting spore ?
- 44 **Fragilariopsis antarctica** (Castracane) Hustedt. 1913 Plate IV, fig. 21  
1886 Castracane Challenger, p. 56, pl. 26, f. 12  
1913 Hustedt Schmidt Atlas, pl. 299, f. 9-14  
1900 Clece Ofvers. K. Sc. Vet. Ak. Forh. "Atlantic Plankton", p. 932, "it was found in almost all samples from 41°S - 6°W to 32°S - 91°E"  
1913 Zimmermann Contr. Diat. Brasil., p. 136 found at Porto Alegre.  
1937 Hendey, p. 332, pl. 13, f. 11-12  
1941 Frenguelli, p. 239, pl. 1, f. 10.

Locality 386. One specimen only was found together with *Co-rethron*.

- 45 **Lauderia borealis** Gran. 1900  
 Nytt. Mag. Naturvid., Vol. 38 p. 110, pl. 9, f. 5-9.  
 1937 Hendey, p. 249 (Oceanic of high salinity, temperate seas)  
 Locality 387, 389, 421, 423.
- 46 **Leptocylindrus danicus** (Cleve). 1889  
 Pelag. Diat. f. Kattegat Kgl. Sv. Vet. Ak. Hdlg., Vol. 20, N<sup>o</sup> 2,  
 p. 15, pl. II, f. 4-5, 1894  
 1928 Frenguelli, p. 544, pl. XII, f. 11  
 1937 Hendey, p. 322 (probably neritic).  
 Locality 387F.  
 Uruguay and Brazil in plankton summer gatherings (Müller Melchers). Perú current, Drake Straits (Hendey).
- 47 **Lithodesmium undulatum** Ehrenberg. 1840  
 Abh. Berlin, Akad., p. 75  
 1928 Frenguelli, p. 520  
 Locality 385, 388, 421, 422. Not rare in these gatherings.  
 Oceanic and coastal, Uruguay and Brazil (Müller Melchers).  
 Atlantic Ocean (Frenguelli).
- 48 **Melosira** (*Paralia*) **sulcata** (Ehrenberg) Kützing.  
 1838 Ehrenberg Infus., p. 170, pl. 21, f. 5 (*Gaillonella sulcata*)  
 1844 Kützing Bacill., p. 55, pl. 2, f. 7  
 1924 Frenguelli, p. 152, pl. XIII, f. 12-15  
 1837 Hendey, p. 235 (Neritic, littoral, tychoplanktonic)  
 Locality 384 bottom sample F-421R  
 Magallanes (Cleve). Tierra del Fuego (Frenguelli). Uruguay and Brazil (Müller Melchers).
- 49 **Melosira** (*Carinaria*) (Frenguelli, 1930), Westi W. Smith 1856  
 Synopsis II, p. 59, pl. 52, f. 333  
 1874 A. Schmidt Nordsee, p. 94, pl. 3, f. 28  
 1884 Grunow Fr. J. Länd., p. 43, pl. 5, f. 44.

- 1886 Castracane Challenger, p. 94, pl. 21, f. 16  
 1897-1908 Peragallo, pl. 119, f. 9  
 1913 Hustedt Kiesel Algen, p. 268, f. 113  
 1930 Frenguelli Océano Atl. "Carinaria", p. 290, pl. VII, f. 12-14  
 1938 " San Blás, p. 265  
 1939 " San Matías, p. 203

Locality 384F bottom sample - 387R.

Marine, neritic on algae, sometimes in plankton. MM.

50 **Nitzschia seriata** Cleve, 1883

Vega Exp., Vol. 3, p. 478

1937 Hendeby, p. 352 (South Georgia, Drake Strait, Bellinghousen sea)

Locality 387S, 388S, 389S, 420.

Marine, oceanic, united into mowing colonies (Müller Melchers). Uruguay and Brazil (MM).

51 **Pleurosigma affine** Grunow, 1880, Plate IV, fig. 23

Cleve and Grunow Arktische Diatomeen, p. 51

1928 Frenguelli, p. 507, pl. I, f. 4 (Pl. affine v. normanii)

1938 " , p. 296

Locality 420R, 422R. coast (Müller Melchers).

Species in plankton on the Argentine, Uruguayan and Brazilian in the ocean scarce. Size 0.129 x 0.024 mm. (Müller Melchers).

52 **Pleurosigma elongatum** W. Smith, 1852.

Americ. Mag. Nat. Hist. ser. 2, Vol. 9, p. 6, pl. 1, f. 4

Marine and brackish, in plankton. Not rare in summer at Atlántida, Uruguay and Brazil (MM).

Locality 387, 420.

Size 0.194 x 0.020 mm.

53 **Pleurosigma naviculaceum** Brébisson, 1854

Cherbourg Mém. Soc. Sc. Nat., p. 17, f. 7

1930 Frenguelli, p. 260, pl. I, f. 19

1938 " , p. 267



Locality 421 S.

Uruguay and Brazil (MM).

Size 0.099 to 0.126 x 0.022 to 0.026, striae obl. 16, transv. 18.

- 54 **Podosira stelliger** (Bailey) Mann. 1907  
 1854 Bailey Smithson. Contr. Knowl., Vol. 7 (Hyalodiscus stelliger)  
 1907 Mann Albatross, p. 242  
 1928 Frenguelli, p. 540, pl. II, f. 11 (Hyalodiscus stelliger)

Locality 384 bottom sample F, 386, 388.

Marine, tychoplanktonic, Uruguay and Brazil (MM).

- 55 **Rhizosolenia alata** Brightwell. 1858  
 Quart. Journ. Micr. Soc., Vol. VI, p. 96, pl. V, f. 8  
 Variety **gracillima** (Cleve) Grunow. 1881, Plate III, fig. 13.  
 Cleve Kg. Sv. Vet. Ak. Hdlg., Vol. 18, N<sup>o</sup> 5, p. 26, pl. 6, f. 78  
 Grunow as variety in v. Heurck Synop., pl. 79, f. 8  
 1937 Hendey, p. 310

Oceanic, observed also in coastal gatherings, common subantarctic in large quantities. (MM).

Locality 385, 386, 387, 388, 389, 416S, 417F, 421 Frag.

forma **indica** (H. Pérágallo) Ostenfeld. 1901

1892 Pérágallo Diatomiste, Vol. 1, p. 116, pl. 18, f. 16 (as Rh. indica)

1901 Ostenfeld Vid. Medd. nat. Foren. Kbhvn., p. 160 (as variety)

1937 Hendey, p. 311 "indica" phase. Oceanic species, more common in tropical and subtropical waters than in cold water.

Locality 386R, 417R.

Diameter 0.032 mm.

- 56 **Rhizosolenia calcar avis** M. Schultze. 1858  
 Möllers Archiv., p. 39  
 1928 Frenguelli, p. 558 Océano Atlántico  
 1938 Hendey, p. 312 (Oceanic, common in tropical seas) Peru current

Locality 385, 388

Indicator species for warm water ocean currents. Uruguay during the whole year round in single specimens. In winter on the uruguayan self. Brazil along the coast up to 11°29'N - 24°11'W.

- 57 **Rhizosolenia curvata** Zacharias. 1905, Plate IV, fig. 17  
 Archiv. f. Hydrobiologie I Heft 1.  
 1905 Karsten Valdivia, p. 97, pl. XI, f. 2 (Rh. curva)  
 1937 Hendeby, p. 314 (a typical subantarctic species)  
 Hustedt in Schmidt Atlas, 316, f. 12  
 1937 Hart, Disc. Rep., Vol. VI, p. 413/446  
 1955 Müller Melchers, Plankton Symposium UNESCO, São Paulo. Diatomeas planktonicas como indicadores de corrientes marinas.

Cells cylindrical, of heavy siliceous, curved. Connective zone two lines of dorsiventral intercalary, scalelike markings. Long, flow spine 0.045 - 0.047 mm. long. Body about 0.600 mm. long, diameter 0.058 to 0.079 mm. The greater part of the specimens were found with broken spines. In the contiguous calyptra the imprint of the spine is clearly to be seen and shows the long and sharp spine. This species is distinguished from *Rh. styliformis* by the curved body and the very long spine, as well as the wing appendices that are found below the beginning of the spine and do not touch this. I could not find any drawing of *Rh. curvata* showing these wings, neither in Karsten Valdivia or in Hart Disc. Rep. XVI. The original paper by Zacharias was not at my disposal.

Typical subantarctic species, oceanic. Finding this as far north as 36°36'S - 53°37'W called my attention. I presume that the plankton has been brought there by the Malvinas current (Falkland Islands Current). *Rh. curvata* was accompanied by typical antarctic diatoms as *Corethron*, Valdivia phase and *Fragilariopsis antarctica*. Our specimens were found out of the general habitat of this species as is Cape Horn (Hart 1937).

Oceanic subantarctic indicator species.

Locality 386F, 387, 388, 416F, 418F, 420RR, 421S.

- 58 **Rhizosolenia imbricata** Brightwell. 1858.  
 Quart. Journ. Mier. Soc., Vol. VI, p. 95, pl. 5, f. 6  
 1928 Frenguelli, p. 558  
 1937 Hendeby, p. 316 (Oceanic species in tropical and subtropical seas)

Locality 387R-421 Frag.

Known from argentine, uruguayan coast (summer) and Brazil, common.

Variety **Shrubsolei** (Cleve) Schröder. 1906  
Viertelj. Schrift Nat. Ges. Zürich, Vol. 51

1928 Frenguelli, p. 558

1937 Hendeý, p. 318 Africa in subtropical condition. Drake Strait, north of South Shetlands off Bouvet under subantarctic conditions.

This variety of less diameter and a slightly more slender spine is found in summer on the uruguayan coast. Brazil coast (MM).

Locality 385, 387, 389

Neritic, oceanic. Uruguay, found together with the type (MM).

59 **Rhizosolenia robusta** Norman. 1861

Pritchard Infus., p. 866

1928 Frenguelli, p. 556

1937 Hendeý, p. 317 (Oceanic. Tropical and subtropical)

Locality 385, 387.

Uruguay and Brazil (Müller Melchers).

60 **Rhizosolenia semispina** Hensen. 1887

Ber. Komm. Unters. d. deut. Meere, p. 84, pl. V, f. 89

1905 Gran Nord Plankton, p. 55, f. 67b

1931 Gran Plankton Diat. of Puget sound, p. 460, f. 43a, b, c.

Gran: "The correct name of this species in this typical vegetative appearance should be *Rh. hebetata* f. *semospina*". As the Antarctic resting stages of *hebetata* like forms also occur in quite different *Rhizosolenia* species, we find it most convenient to use *Rh. semispina* as the species name".

1937 Hendeý, p. 315 (Subantarctic. S. Georgia. Cape Horn, Weddel sea)

1934 Frenguelli, p. 262, lam. III, f. 8-9

Diameter 0.0258 - 0.0344 mm. with long hollow spine, total length about 0.0860 mm. Along the spine I have noted a longer wing like apendix, that seems to be one sided, on the other side it is indistinct. The only drawing known to me of *Rh. semispina* with wings at the spine sides is by Frenguelli, 1943, plate III, f.

7. But I believe that this form should be placed with *Rh. styliformis*. L. Mangin's drawing in *Phytoplankton de l'Antarctique*, p. 53 (middle figure) gives this as *Rh. styliformis*. I have found the same kind of specimens as this figure in subantarctic materials collected by Prof. Balech. The semispina type from "Madryn" materials is very much the same as samples I had from South of Aleutian isles (49°N - 172°W) sent to me by Dr. M. S. Doty of the University of Honolulu, Hawaii. In that material the same half wing appears. It may be a transition type to *hebetata* "resting type" beginning to form the broad leaflike wings on both sides. Mangin's first figure might be such a form and not belong to *styliformis* as he gives it, he refers to figures badly drawn: "... assez mal représenté dans les dessins des divers auteurs..."

Locality 386, 387, 388F, 416, 421RR.

Oceanic. Subantarctic.

61 ***Rhizosolenia setigera*** Brightwell, 1858

Quart. Journ. Micr. Soc., Vol. 6, p. 95, pl. 5, f. 7

1928 Frenguelli, p. 556, pl. VII, f. 5 (Temperate seas)

1937 Hendey, p. 318 (Neritic favours cold waters)

Locality 420RR. Only one fragment found (diameter 0.0068 mm.)

Uruguay very scarce, Brazil common in large quantities, neritic and oceanic (Müller Melchers).

62 ***Rhizosolenia styliformis*** Brightwell, 1858 Plate IV, fig. 18

Quart. Journ. Micr. Soc., p. 95, pl. 5, f. 5

1937 Hendey, p. 320 (Oceanic. S. Georgia S. Sandwich. Bouvet. Drake Strait)

1943 Frenguelli, p. 261, pl. III, f. 10

Locality 386RR. One specimen only.

Uruguay, Brazil not known.

63 ***Schröderella delicatula*** (H. Péragallo) Pavillard, 1913

*Lauderia delicatula*, H. Péragallo. Bull. Hist. Nat. Toulouse. Vol. XII, 1888.

Pavillard, Bull. Soc. Bot. de France, Vol. 60, p. 126

1937 Hendey, p. 241 (Neritic)

Locality 385, 386, 387, 389, 420.

Uruguay common in summer, neritic but known from the Atlantic as well.

- 64 **Stephanopyxis Palmeriana** (Greville) Grunow. 1884, Plate II, fig. 8

Denkschr. Akad. d. Wiss. Wien., Vol. XLVIII, p. 38

1937 Hendey, p. 236 pelagic, favouring warm water of high salinity).

1955 Müller Melchers UNESCO Plank. Symp. Diatom. indic. p. 8

This species was found in the oceanic branch of the Brazil warm current. The specimens were very lightly silicified. This species is known from Atlántida and Punta del Este (Uruguay) in well formed chains, during winter in May. It appeared in water of high salinity. It is known as well from the North Atlantic in the Gulf stream together with *Biddulphia chinensis*. Beaufort. N. C. USA. Brazil (MM). The valves are broader and the areolation finer than *St. turris*.

Locality 388R.

As indicator of warm current (Müller Melchers).

- 65 **Stephanopyxis turris** (Greville and Arnott) Ralfs. 1861  
*Creswellia turris* Greville and Arnott, R. Soc. Edinb., Vol. XXI, 1857.

*Stephanopyxis turris* Ralfs ex Pritchard Infus., p. 826, pl. 5, f. 74

1928 Frenguelli, p. 538, pl. IV, f. 6

1937 Hendey, p. 237 (Pelagic, frequent in temperate seas)

The specimens were mostly of lesser diameter.

Locality 388, 421S.

Known in plankton from Uruguay and Brazil (Müller Melchers).

- 66 **Thalassionema nitzschioides** Grunow. 1888  
v. Heurck. Synop., p. 43

1928 Frenguelli, p. 511, var. *javanica*

1937 Hendey, p. 336

Pelagic. Neritic, also oceanic ?, found in rather large quantities.

Sometimes slightly, curved, 0.010 to 0.110 mm. long, 0.002 to 0.003 mm. broad, marginal striae 10-12 in 0.01 mm.

Locality 385, 386, 387, 388, 389, 416, 421, 422, 423.

- 67 **Thalassiothrix Frauenfeldii**, Grusow, 1880 Plate III, fig. 13  
K. Sv. Vet. Akad. Hdl., Vol. 17, N<sup>o</sup> 2, p. 109

The specimens appear in fanshaped formation and are lightly curved. Oceanic temperate species. Not common. About 0.176 mm. long.

Locality 388, 420, 421.

- 68 **Triceratium patagonicum**, A. Schmidt, 1884  
A. Schmidt Atlas, plate 82, f. 8

1924 Frenguelli, p. 155, pl. XIII, f. 17 (as *Tr. scitulum*)

1928 " " " p. 519, pl. XIII, f. 10 (" " " ")

This diatom was found by Weissflog in patagonian guano. Frenguelli describes it from Tierra del Fuego. *Triceratium scitulum* in Schmidt Atlas, pl. 83, f. 11-16 is a different type with orderly arranged rows of areolas. Frenguelli quotes on page 155:

"La irregularidad en la distribución de las células valvares como también su mayor delicadez, son las principales características que distinguen esta especie de *T. favus* Ehr., con el cual a menudo ha sido confundido".

Not only the arrangement of disorderly areola distinguish *Tr. patagonicum* from *Tr. favus* — also the character of its ecological surroundings are different. *Tr. patagonicum* has marine character and *Tr. favus* estuarian. *Tr. favus* is found at times together with *Tr. patagonicum* but only in estuarine surrounding. *Tr. favus* is not known on the uruguayan coast, it is found in scarce quantities together with other subfossil brackish diatoms (*Diploneis Smithii*, *Campylodiscus clypeus*) in Platense sediments. In Brazil, *Tr. patagonicum* is found in the harbour of Río de Janeiro, Santos, Río Grande do Sul, Cananeia, Río Guama. M. M.

- 69 **Triceratium reticulum** Ehrenberg, 1844. Plate IV, fig. 32  
Ber. Berl. Akad., p. 88

1928 Frenguelli, p. 518, pl. XIII, f. 8 (as *Tr. sculptum*)

Locality 384.

Specimens are sometimes found in plankton. Species of warmer seas?

Atlantida July, 1957

II. PLANKTON GATHERINGS FROM THE ARGENTINE COASTAL SOUTH ATLANTIC, COLLECTED BY Prof. E. BALECH (Necochea)

252...	36°05'S	55°22'W...	Bay of Samborombón....	2 III	1947
253...	54°04'S	66°32'W...	Cape - Sta. Inés (Tierra del Fuego) .....	22 III	1940
282...	46°59'S	66°10'W...	Gulf of San Jorge (10 mts. deep) .....	26 IX	1949
300...	36°27'S	55°21'W...	Bay of Samborombón ...	14 VI	1939
430...	Puerto Deseado...	Sample from collection	Subantarctic Exp.		
439...	46°20'S	65°39'02"W...	Gulf of San Jorge...	4 VIII	1950

- 1 **Achnanthes brevipes** var **intermedia** (Kütz.) Cleve, 1895
- 2 **Actinocyclus australis** Grunow, 1880  
Loc. 252-430
- 3 **Actinocyclus platensis** Müller Melchers, 1953  
Loc. 252-300
- 4 **Actinoptychus Frenguelli** Müller Melchers, 1951  
Discoid with six sectors, alternating high and low.  
Diameter 0.0467 to 0.123 mm., Type 0.90 mm.  
Centre hyaline, hexagonal to round. Exterior layer, a very fine network subdivided in six sectors. The high sectors have a small spine situated at the border. Lines of 17 beads crossed obliquely by lines of beads of 15 in 0.01 mm.. The lower sectors without spines. The inner layer is somewhat like *Actinoptychus senarius*.  
9-10 areola in 0.01 mm.. Border 20-21 lines in 0.01 mm..  
Loc. 430, Planktonic, marine and neritic. Not common.
- 5 **Actinoptychus senarius** Ehrenberg, 1843.  
Loc. 300
- 6 **Actinoptychus vulgaris** Schuhmann, 1927  
Loc. 252-300

- 7 **Bacteriastrium** hyalinum var **princeps** Ikari, 1927  
Loc. 252
- 8 **Biddulphia** antediluviana var. **excavata** (W. Smith)  
Frenguelli 1945  
Loc. 430
- 9 **Biddulphia** chinensis Greville, 1866  
Loc. 252-300-430
- 10 **Chaetoceros** affinis Lauder, 1864  
Loc. 252
- 11 **Chaetoceros** decipiens Cleve, 1873  
Loc. 252
- 12 **Chaetoceros** lorenzianus Grunow, 1863  
Loc. 252
- 13 **Climacosphenia** moniligera Ehrenberg, 1843 Plate II, fig. 11.  
Berl. Akad. d. Wiss., 1841, p. 411, pl. 2, fig. VI, 1.  
  
Species of warm water to tropical seas. New for the argentine flora. It might be that it has been displaced by the Brazil warm current. It is well known along the brazilian coast. Found at Ubatuba, Arrecife da Lixa (Bahia Brazil in large quantities (Müller Melchers).  
Loc. 430
- 14 **Coscinodiscus** apiculatus Ehrenberg, 1844  
Ber. Berlin. Akad., p. 77  
Ratray, p. 570, 1884  
  
Central space distinct, hyaline, surrounded by several larger rounded areola with eye spot. From here several hyaline rays enter in between network of areolas to a certain extent. The marking round, standing alone without hexagonal network. Sometimes the areola next to the rosette are compressed.  
  
Loc. 252, 300, 430, 439.  
  
Var. **ambigua** Grunow, 1884  
Denkschr. Akad. Wiss. Wien., vol. 48, p. 75  
Similar to the species, but closed network.  
  
Loc. 300, 430.



- 15 **Coscinodiscus asteromphalus** Ehbrenberg. 1844.  
 Loc. 252  
 var. **pabellanica** Grunow. 1884  
 Loc. 252
- 16 **Coscinodiscus concinnus** W. Smith. 1856  
 Syn. Brit. Diat., Vol. II, p. 85  
 1890 Rattray, p. 531  
 1928 Frenguelli, p. 537  
 1937 Hendey, p. 246 (Neritic. Temperate, subtropical).  
 The plankton consisted only of *Cosc. concinnus* with only  
 one or two specimens of the *Cosc. radiatus* type. Cape St.  
 Inés.  
 Loc. 252, 253
- 17 **Coscinodiscus commutatus** Grunow. 1884  
 Loc. 252, 430
- 18 **Coscinodiscus devius** A. Schmidt. 1886  
 Loc. 300
- 19 **Coscinodiscus divisus** Grunow. 1878  
 Loc. 430
- 20 **Coscinodiscus excentricus** Ehrenberg. 1839  
 Loc. 252
- 21 **Coscinodiscus gigas** Ehrenberg. 1841  
 Loc. 300  
 var. **praetexta** (Janisch) Hustedt. 1930  
 Loc. 252, 300
- 22 **Coscinodiscus obscurus** A. Schmidt. 1878  
 Loc. 252
- 23 **Coscinodiscus oculus iridis** Ehrenberg. 1889  
 Loc. 252
- 24 **Coscinodiscus pacificus** Rattray  
 Rev. of *Coscinodiscus*, p. 563  
*Cosc. oculus iridis* ? var. *pacificus* Grunow  
 Denkschr. Akad. Wiss. Wien., 1884, p. 77  
 Central space absent a small rosette distinct.

Péragallo "Pourquois Pas", 1921, p. 83  
 A. Schmidt Atlas, pl. 60, f. 13, 1886 (no name!)

Loc. 300

- 25 **Coscinodiscus pellucidus** v. Heurck. 1885  
 Synopsis Diat. Belge, pl. CXXXII, f. 8

1889 Rattray, p. 580

"Central space absent. Markings punctiform, recognised with difficulty. Less crowded towards the centre."

In a slide mounted in air a very lightly, punctiform beading could be distinguished with difficulty. Mounted in Hyrax no beading could be distinguished, only a superficial yellow colour and a very small hyaline centre. Rattray gives as diameter 0.0352 to 0.045 mm.. Our valves measured 0.091 mm. New for Argentine. I do not know if this diatom may be classified as *Coscinodiscus pellucidus*, but it seems to be a cold water species. Rattray gives the habitat Davis Strait! Grunow Greenland! Magellan Straits Cleve! I have applied this name ad interim. In the very small sample they were rather frequent, mostly broken or in fragmentary state.

Loc. 430

- 26 **Coscinodiscus variabilis** Frenguelli. 1928  
 Oceano Atlántico, p. 524, pl. XIV, f. 6 to 9

Diameter 0.039 to 0.057 mm.; valve flat to the border, border descending. Rows of fasciculate radiant beads, 8 at the centre and 12 at the border in 0.01 mm., 6 to 7 fasciculi with evident intrafascicular apiculi. Frenguelli compares this species with *Cosc. pericompos* and *Cosc. elegans*.

The species looks rather actinocycolid. Specimens are found in many plankton gatherings on the Argentine and Uruguayan coast. The Brazilian specimens are doubtful?

Loc. 252

- 27 **Coscinodiscus Vidovichii** Müller Melchers. 1953

Loc. 439. This locality, 46°20'S - 65°39'W, is the furthest south known up to now (Müller Melchers).

- 28 **Cyclotella striata** (Kützing) Grunow. 1880  
 Loc. 252

- 29 **Ditylum Brightwellii** (West) Grunow, 1881  
Loc. 252, 300
- 30 **Lithodesmium undulatum** Ehrenberg, 1840  
Loc. 252
- 31 **Melosira** (Paralia) **sulcata** (Ehrenberg) Kützing, 1844  
Loc. 253, 300
- 32 **Pleurosigma naviculaceum** Brébisson, 1854  
Loc. 252
- 33 **Podosira maxima** (Kützing) Grunow, 1880  
Kogl. Sv. Vet. Akad. Hålg., Vol. 17, N<sup>o</sup> 2, p. 118  
1939 Frenguelli, Diat. Rada Tilly, p. 196  
Sometimes found in plankton, Uruguay: Punta del Este, La  
Paloma harbour, Brazil: Cananeia, Mar de Trépaude (Mül-  
ler Melchers).  
Loc. 300
- 34 **Podosira stelliger** (Baley) Mann, 1907  
Loc. 252, 300
- 35 **Raphoneis amphiceros** Ehrenberg, 1844  
Ber. Berlin. Akad., p. 87  
1924 Frenguelli, Tierra del Fuego, p. 131, pl. X, f. 17-19  
1951 Müller Melchers, Actinoptychus Frenguelli, p. 322  
Coastal forms, known on the Argentine, Uruguayan and Bra-  
zilian coast.  
Loc. 430
- 36 **Rhabdonema arcuatum** (Lyngb.? Ag.) Kützing, 1844 Plate II fig.  
9, 10.  
Bacill., p. 127, pl. 16, fig. VI  
Neritic coastal form. Abundant at Puerto Quequen, Prov.  
Buenos Aires, Argentina.  
Loc. 253
- 37 **Rhizosolenia calcar avis** M. Schultze, 1858  
Loc. 282, 300
- 38 **Rhizosolenia imbricata** var. **Shrubsolei** (Cleve) Schröder, 1906  
Loc. 252

- 39 *Rhizosolenia semispina* Hensen. 1861  
Loc. 252, 430
- 40 *Thalassiosira decipiens* (Grunow) Joergensen. 1905  
Hydrogr. Biol. Invest. Norv. Fjord p. 96  
Neritic, temperate form. Rare on these coasts. Never found  
in chains.  
Loc. 252
- 41 *Thalassionema nitzschioides* Grunow. 1880  
Loc. 300
- 42 *Thalassiothrix longissima* Cleve et Grunow. 1880  
Kgl. Sv. Vet. Akad. Hdlg., Vol. 17, N<sup>o</sup> 2, p. 108  
1937 Hendeby. South Seas, p. 335-36 (Arctic and suban-  
tartic)  
Solitary specimens are known in plankton from the uruguayan  
coast (Müller Melchers).  
Loc. 252-430
- 43 *Triceratium patagonicum* A. Schmidt. 1885  
Loc. 252, 282

### III. — URUGUAYAN COAST

"La Oceanografía frente a las costas del Uruguay" Dr. F. de Buen  
Anales del Museo de Historia Natural, 2<sup>a</sup> Serie, Vol. VI, N<sup>o</sup> 1,  
1953, Montevideo.

#### "PALOMA"

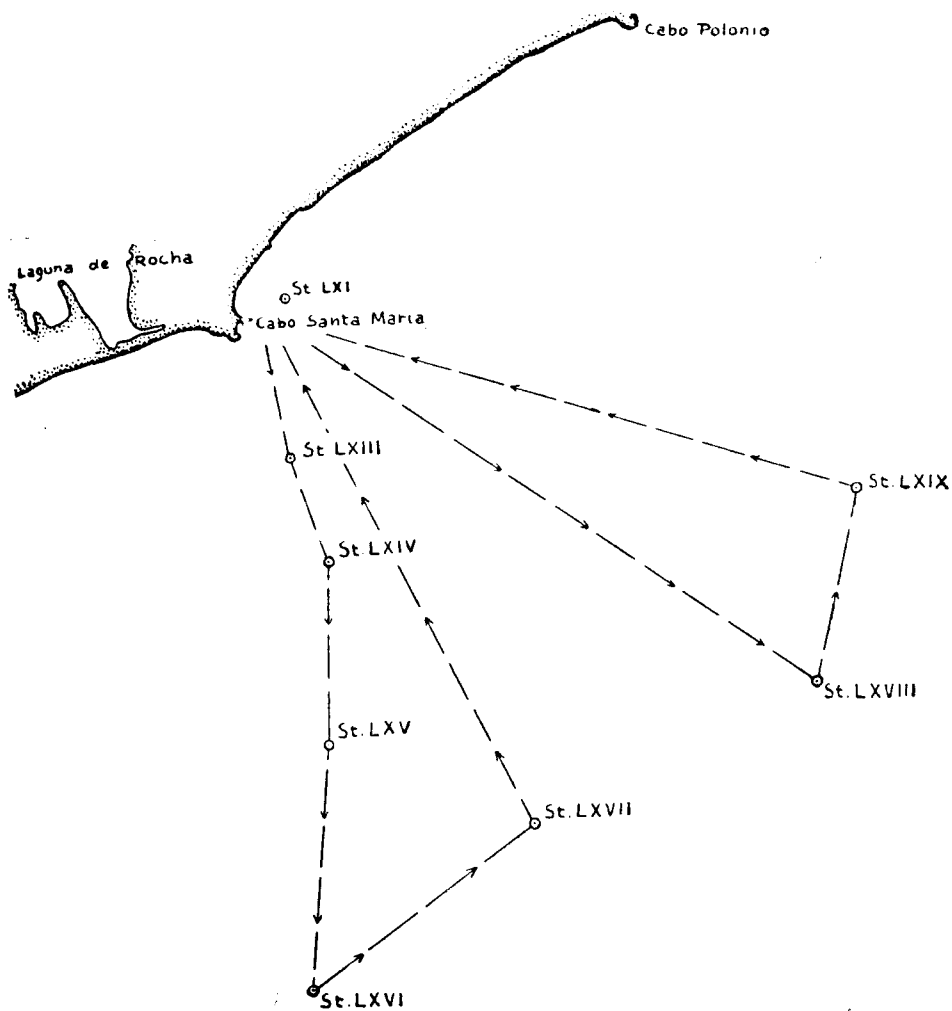
307	.....	34°50'S	---	54°03'W	.....	May/25/1953
308	.....	34°59'S	---	54°03'W	.....	"
309	.....	35°11'S	---	54°03'W	.....	"
310	.....	35°03'S	---	53°51'W	.....	"
311	.....	34°56'S	---	53°35'W	.....	"
312	.....	34°46'S	---	53°32'W	.....	May/28/1953

## "ANTARES"

338	.....	34°55'S	—	55°30'W	.....	July/20/1953
408	.....	35°00'S	—	55°39'W	.....	"
412	.....	35°04'S	—	55°44'W	.....	"

## PLANKTON GATHERINGS FROM CUTTER "PALOMA"

- 1 **Actinocyclus octanarius** Ehrenberg. 1838  
Loc. 310
- 2 **Actinocyclus platensis** Müller Melchers. 1953  
Loc. 307, 308, 309, 310, 311, 312. Found in large amounts during December at Atlántida. Found till Río Grando do Sul, Brazil I have not been able to determinate how far up the brazilian coast this species is found in great quantities, but it is found off Río de Janeiro (not common) Müller Melchers.
- 3 **Asterionella japonica** Cleve. 1878  
Cleve and Möller Diat., N° 307  
1928 Frenguelli, Océano Atlántico, p. 510  
Loc. 309. Scaree on the uruguayan coast.
- 4 **Bacteriastrum hyalinum** var. **princeps** Ikari. 1927  
Loc. 309, 310, 311
- 5 **Biddulphia chinensis** Greville. 1866  
Loc. 308, 309, 311, 312
- 6 **Cerataulina pelagica** (Cleve) Hendey. 1937  
Plankt. Diatoms of S. Seas, Discovery Rep., XVI, p. 279  
Loc. 310. A neritic diatom of warmer seas. Tropical. Scaree on the uruguayan coast. One specimen only was found.
- 7 **Chaetoceros affinis** Lauder. 1864  
Loc. 309, 310
- 8 **Chaetoceros brevis** Schütt. 1895  
Ber. Deut. Bot. Ges., Vol. 13, p. 38 f, 4



Situación de las Estaciones (St.) en la Campaña Oceanográfica de mayo de 1951 (De Buen; Oceanografía Costas Uruguayas p. 19)

St	LXII	305	St	LXVI	309
	LXIII	306		LXVII	310
	LXIV	307		LXVIII	311
	LXV	308		LXIX	312

- 1937 Hendey, S. Seas, p. 302 (Common in the Atlantic Ocean)
- Loc. 309. Temperate to subtropical species (Müller Melchers).
- 9 **Chaetoceros compressus** Lauder. 1864  
Transact. Micr. Soc. N. S., Vol. XII, p. 78, f. 6  
1928 Frenguelli, p. 551  
1937 Hendey, p. 300  
Loc. 309, 310. Known from Uruguay and Brazil (Müller Melchers).
- 10 **Chaetoceros constrictus** Gran. 1897  
Norske Norfhavs Exp., p. 17, pl. 1, f. 11-13  
Loc. 308, 309. With resting spores.
- 11 **Chaetoceros curvisetus** Cleve. 1873  
Loc. 308, 309. With resting spores. 310
- 12 **Chaetoceros decipiens** Cleve. 1873  
Bih. Kbh. Sv. Vet. Ak Hdlg., Vol., N<sup>o</sup> 13  
Loc. 309, 310, 311. Oceanic cold water species. Winter form on the uruguayan coast.
- 13 **Chaetoceros debilis** Cleve. 1894  
1937 Hendey, S. Seas, p. 305 (Observed off Malvinas Isl.)  
Loc. 309. Neritic, eurihalin Müller Melchers. In great quantities during January at Atlántida, 1956, MM. Brazil, Cananea, MM.
- 14 **Chaetoceros densus** Cleve. 1901  
Seas. Distr. Atlan. Plankton Organ., p. 299  
New for Uruguay, Argentina and South Atlantic. Known from North Atlantic and adjacent seas. Gibraltar in summer, Pavillard. Danish Exp., South of England, Gulf of Viscaya, entrance to Gibraltar, North Africa. "M. Sars" Deep Sea Exp. K. R. Gaarder.  
Loc. 310
- 15 **Chaetoceros didymus v. protuberans** Gran and Yendo. 1914  
Loc. 309 with resting spores. 310, 311

- 16 **Chaetoceros lorenzianus** Grunow. 1863  
Neritic, temperate and tropical (Cupp). A well known species on the uruguayan coast during nearly the whole year.  
Loc. 307, 308, 310, 311, 312 (forma singularis)
- 17 **Coscinodiscus asteromphalus** Ehrenberg. 1844  
Ber. Berlin. Akad., p. 77  
1898 Rattray, p. 549  
1928 Frenguelli, p. 534  
1937 Hendey, p. 243  
Loc. 307, 311, 312
- 18 **Coscinodiscus concinnus** W. Smith. 1856  
Loc. 309
- 19 **Coscinodiscus excentricus** Ehrenberg. 1841  
Loc. 308
- 20 **Coscinodiscus Granii** Gough. 1905  
N. S. Fisheries Invest., 1902-1903  
Valve discoid, cuneiform with small rosette. Areola 8-10 in 0.01 mm.. Two small processes.  
Neritic. Known from uruguayan and brazilian coast (M. M.)  
Loc. 308, 311
- 21 **Coscinodiscus perforatus** Ehrenberg. 1844 Plate I. fig. 2  
Ber. Berlin. Akad., p. 78  
Argentine, brazilian and uruguayan coast (Müller Melchers)  
Loc. 309
- 22 **Coscinodiscus punctiger** (Castracane) Müller Melchers. 1953  
Loc. 312
- 23 **Coscinodiscus radiatus** Ehrenberg. 1841  
Loc. 307, 309, 311, 312
- 24 **Coscinodiscus Rothii** (Ehrenberg) Grunow  
Schneider Naturw. Ber. Kaukasus Id. p. 125



1930 Hustedt Kiesel Algen, p. 400  
 1941 Frenguelli, Río de la Plata, p. 321

Loc. 309

- 25 **Coccinodiscus stellaris** Roper, 1858  
 var. *symbolophorus* (Grun.) Jorgensen, 1905  
 Hydr. Biol. Invest. Norw Fjord., p. 196  
 1928 Frenguelli, p. 528 (as "symbolophoroides")  
 1930 Hustedt Kiesel Algen, p. 396  
 1937 Hendey, p. 243 (Widely distributed throughout the  
 southern ocean, South Georgia)  
 Loc. 312, Oceanic, temperate. Found frequent in July gatherings  
 on uruguayan coast (Müller Melchers).
- 26 **Dactyliosolen mediterraneum** H. Pérégallo, 1892  
 Diatomiste, Vol. I, p. 104, Lam. XIII, f. 8-9  
 New for the South Atlantic, Neritic. Found on uruguayan  
 coast, Brazil, Cananeia (Müller Melchers).  
 Loc. 310, 312
- 27 **Ditylum Brightwellii** (West) Grunow, 1881  
 Loc. 307, 308. Frequent round Falkland Isl. (Hendey). Urugua-  
 yan coast, Brazil up to 29°24'S - 31°48'W (Müller Melchers).
- 28 **Eucampia zodiacus** Ehrenberg, 1839  
 Ber. Berlin. Akad., p. 151  
 1937 Hendey, S. Seas, p. 286 (Perú current)  
 Neritic, Uruguay and Brazil (Müller Melchers).
- 29 **Guinardia flaccida** (Castracane) H. Pérégallo, 1892  
 Diatomiste, Vol. I, p. 107, Lam. XIII, f. 3  
 New for the South Atlantic (Müller Melchers)  
 Neritic also oceanic, Uruguay at Atlántida sometimes in  
 quantities during the winter, Brazil at Cananeia during  
 January to April in large amount (MM).  
 Loc. 310, 312
- 30 **Hemiaulus sinensis** Greville, 1865  
 Ann. Mag. Nat. Hist., Vol. 16, N° 591  
 1955 Müller Melchers, p. 8.

New for the South Atlantic. Neritic and oceanic. Warm water and tropical species.

Uruguay during the winter months, not abundant; Brazil, Ubatuba, abundant, found up to 16°06'S - 38°35'W (Müller Melchers).

Loc. 307, 309

31 **Lauderia borealis** Gran. 1900

Nyt. Mag. Naturv., Vol. 38, p. 150

Loc. 312 single cells, doubtful?

32 **Leptocylindrus danicus** Cleve. 1889

Pelag. Diatoms f. Kattegat, p. 51

1928 Frenguelli, p. 544

1937 Hendey, S. Seas, p. 322 (Neritic, often found under oceanic conditions. Those from Drake Strait were particularly small).

Santos, Brazil (MM). Uruguay not rare (MM).

Loc. 308, 310, 311, 312, 307 var. **minimus**?

33 **Lithodesmium undulatum** Ehrenberg. 1840

1928 Frenguelli, p. 520

Loc. 309, 310, 312. Neritic temperate species. Not common Uruguay, Brazil (Müller Melchers).

34 **Nitzschia seriata** Cleve. 1883

Loc. 307, 308, 310. Uruguay, Brazil (MM), 16°06'S - 38°35'W (MM).

35 **Pleurosigma affine** Grunow. 1880

1938 Frenguelli, p. 296

Loc. 307, 312. Neritic not rare in uruguayan plankton. Brazil (MM).

36 **Rhizosolenia alata** Brightwell

var. **gracillima** (Cleve) Grunow. 1881

Frequent in winter plankton Uruguay (MM). Santos, Cananeia, Brazil, 24°48'S - 46°44'W (MM).

- Loc. 308, 309, 310, 312  
forma **indica** (H. Pérágallo) Ostenfeld. 1901  
Loc. 307, 308, 309, 310, 311. 0.028 mm. to 0.038 mm. diameter.  
Oceanic, more common in tropical and subtropical waters.
- 37 **Rhizosolenia robusta** Norman. 1861  
Uruguay, warm water species, mostly in summer, not common MM. Brazil, Santos, Ubatuba (16°06'S - 38°35'W) Müller Melchers.
- 38 **Rhizosolenia Bergonii** H. Pérágallo. 1892  
Diatomiste, Vol. I, p. 110, Lam. XV, f. 5  
1937 Hendeý, S. Seas, p. 312 (Oceanic. Tropical and subtropical)  
Uruguay not common, sporadic. Brazil, Mar de Trepande, Ilheos (Müller Melchers).  
Loc. 308, 310, 311, 312
- 39 **Rhizosolenia imbricata** var. **Shrubsolei** Schröder. 1906  
Loc. 307, 308, 309, 310, 311
- 40 **Rhizosolenia calcar avis** M. Schultze. 1858  
Frequent on uruguayan coast, also on brazilian: warm water species.  
Loc. 307, 308, 309, 310, 311
- 41 **Schröderella delicatula** (H. Pérágallo) Pavillard. 1913  
Loc. 309, 310, 312 in scarce mells.
- 42 **Stephanopyxis turris** (Greville and Arnott) Ralfs. 1861  
Loc. 308, 309, 310, 312
- 43 **Thalassiosira decipiens** Jorgensen  
Loc. 309 accidental
- 44 **Thalassiothrix mediterranea** Pavillard. 1916  
Loc. 309, 310 311
- 45 **Thalassiothrix longissima** Cleve and Grunow. 1880

Loc. 308, 311

46 *Thalassionema nitzschioides*

Loc. 307, 308, 309, 310, 311, 312

PLANKTON GATHERINGS FROM TRAWLER "ANTARES"

1 *Actinocyclus crassus* v. Heurck. 1881

Loc. 408

2 *Actinocyclus octanaria* Ehrenberg. 1838

Loc. 408

3 *Actinocyclus curvatus* Janisch. 1878

A. Schmidt Atlas, Table 57, f. 31

1890 Rattray, Rev. *Actinocyclus*, p. 145 (as *A. subocellatus*)

Cape of Good Hope, Grunow. Kerguelen Island Challenger Grove. Heard Island Challenger dredgings Rae. Table Bay Schmidt. The species seems to be of southern seas and cold water habit. Diameter 0.1235 to 0.1594 mm.. Colour pale gray. Central area distinct, subcircular, markings 9 areola in slightly curved rows, hexagonal. Border distinct, striae 12. Pseudonodule circular, surrounded by a single band, nodule 0.00261 (Rattray).

Loc. 408 not common.

4 *Actinocyclus platensis* Müller Melchers. 1953

Loc. 408

5 *Actinoptychus senarius* Ehrenberg. 1843

Loc. 338, 408

6 *Actinoptychus vulgaris* Schumann. 1867

Loc. 408

7 *Bacteriastrum* var. *princeps* Ikari. 1927

Loc. 408

8 *Biddulphia rhombus* var. *atlantica* Frenguelli. 1930

1930 Costa Atlántica, p. 305, pl. II, fig. 7

Loc. 408, 338

9 *Chaetoceros decipiens* Cleve. 1863

Loc. 408

- 10 **Chaetoceros lorenzianus** Grunow. 1863  
Loc. 408
- 11 **Coscinodiscus asteromphalus** Ehrenberg. 1844  
Loc. 408, 412
- 12 **Coscinodiscus commutatus** Grunow. 1884  
Loc. 408, 338
- 13 **Coscinodiscus concinnus** W. Smith. 1856  
Loc. 412
- 14 **Coscinodiscus divisus** Grunow 1886  
Loc. 412
- 15 **Coscinodiscus excentricus** Ehrenberg. 1841  
Loc. 408, 412
- 16 **Coscinodiscus lineatus** Ehrenberg. 1841  
Loc. 408, 412, 338
- 17 **Coscinodiscus oculus iridis** Ehrenberg. 1839  
Loc. 412
- 18 **Coscinodiscus sublineatus** Grunow. 1884  
Denkschr. Akad. Wiss. Wien., Vol. 48, p. 85  
Franz Josef Land, White sea, Cold water type (Grunow).  
1930 Frenguelli, Costa Atlántica, p. 300, pl. VII, f. 5-6  
Loc. 338
- 19 **Coscinodiscus punctiger** (Castracane) Müller Melchers. 1953  
Loc. 338, 408 412
- 20 **Coscinodiscus radiatus** Ehrenberg. 1841  
Phys. Abh. Akad. Wiss. Berlin 1839, p. 148  
Loc. 412
- 21 **Coscinodiscus stellaris** Roper. 1858  
Quart. Jour Mier. Soc., Vol. VI, p. 21  
1890 Rattray, Rev. Coscinodiscus, p. 493 (Antaret., Ice Barrier, Challenger)  
1937 Hendeby, S. Seas, p. 243 (South Georgia)  
Loc. 412
- 22 **Ditylum Brightwellii** (West) Grunow. 1881  
Loc. 408