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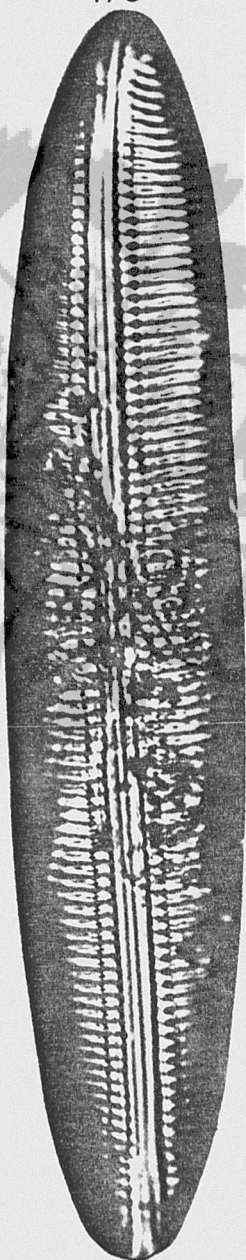
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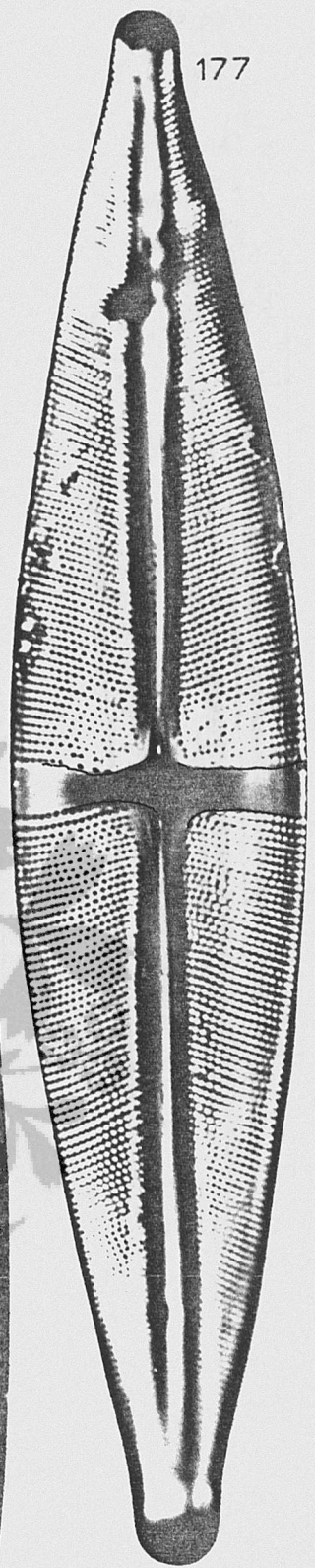
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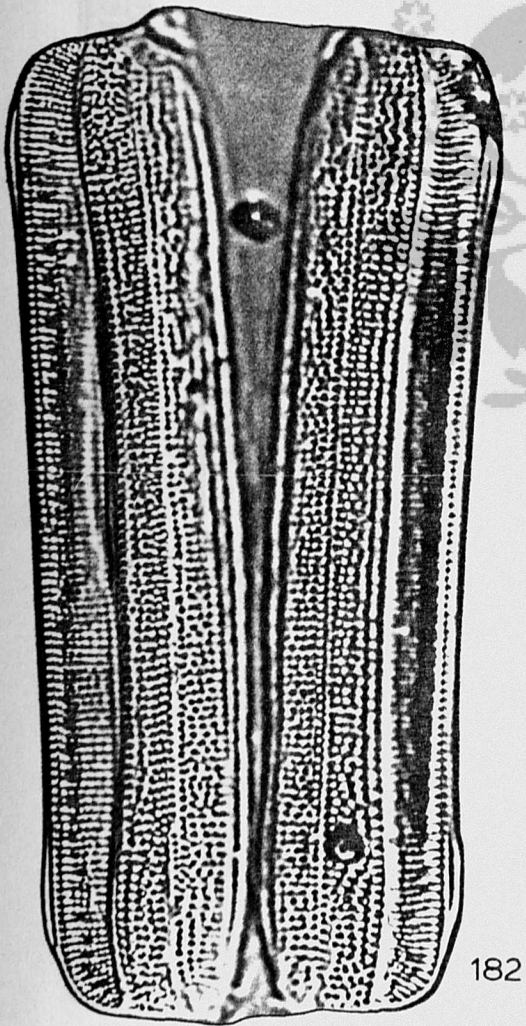
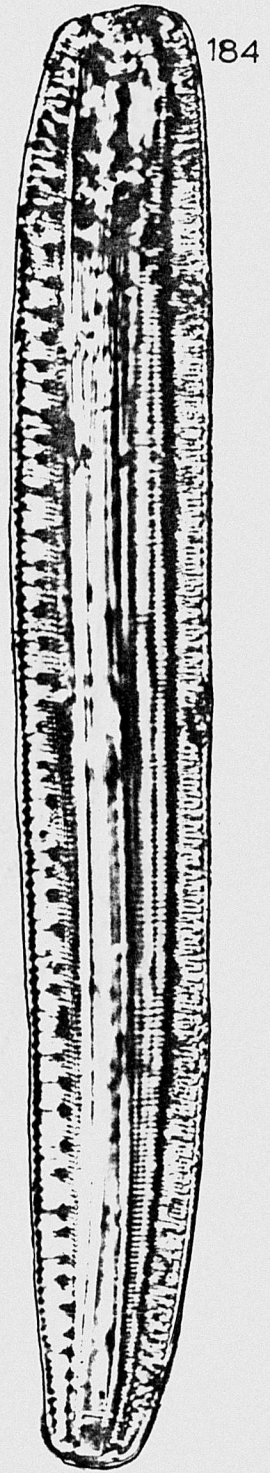
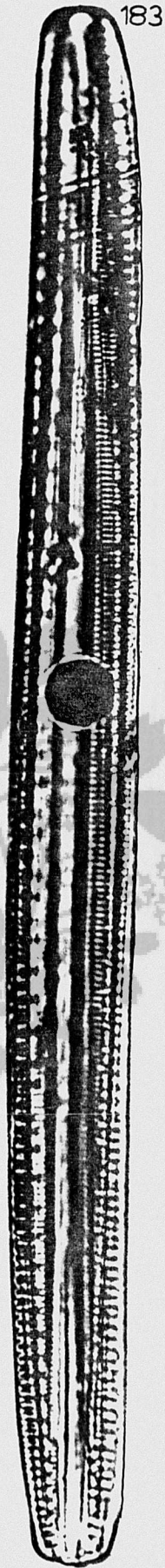
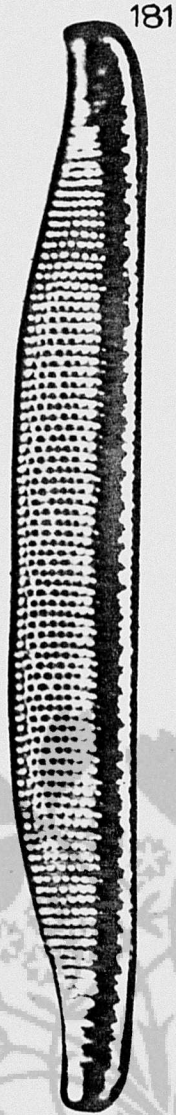
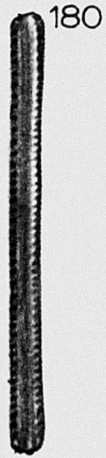
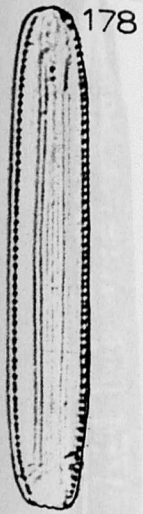


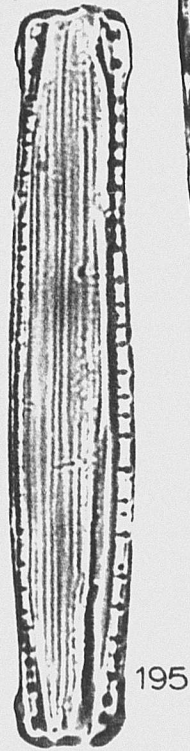
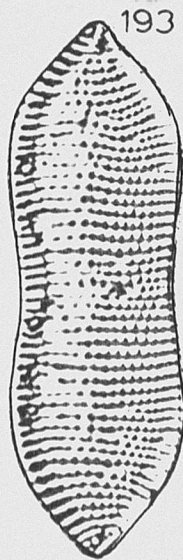
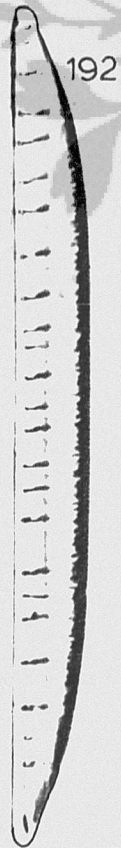
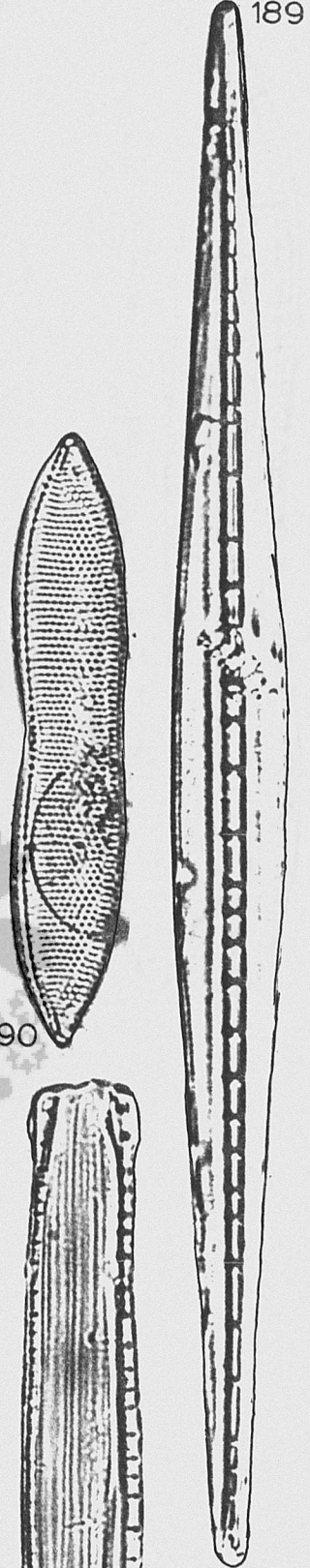
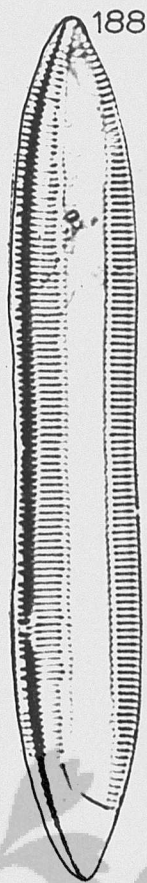
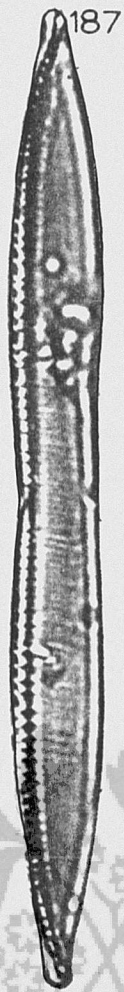
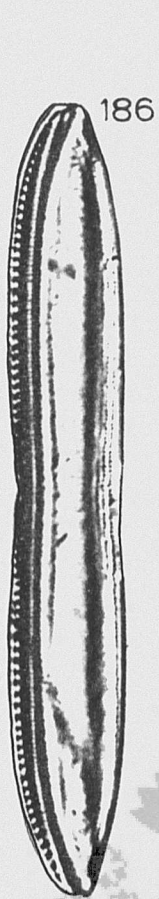
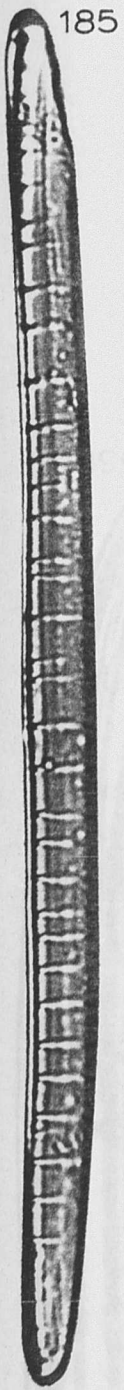
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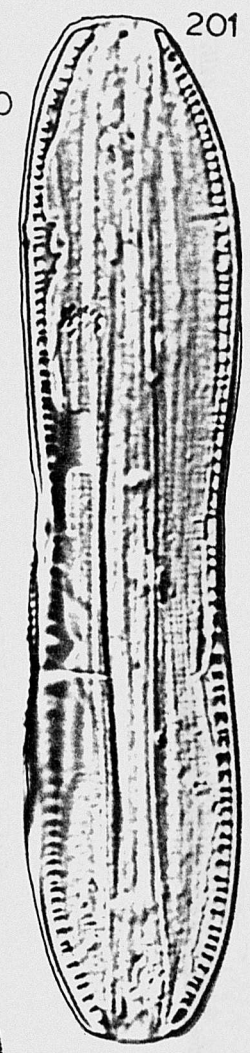
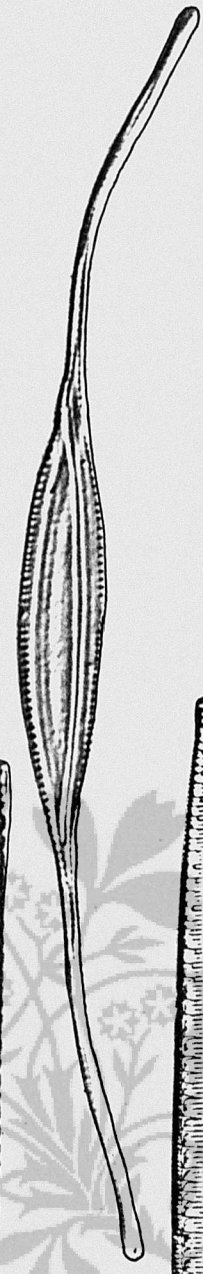
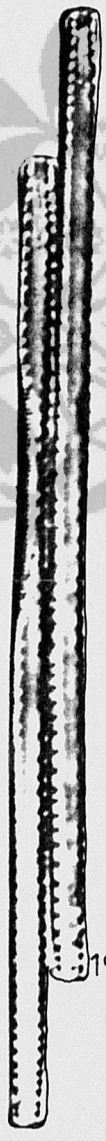
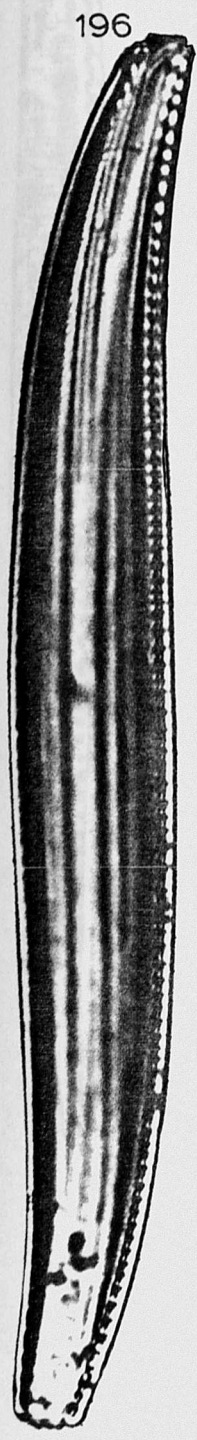


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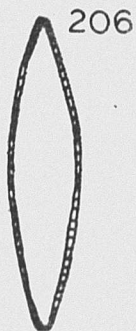
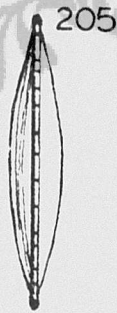
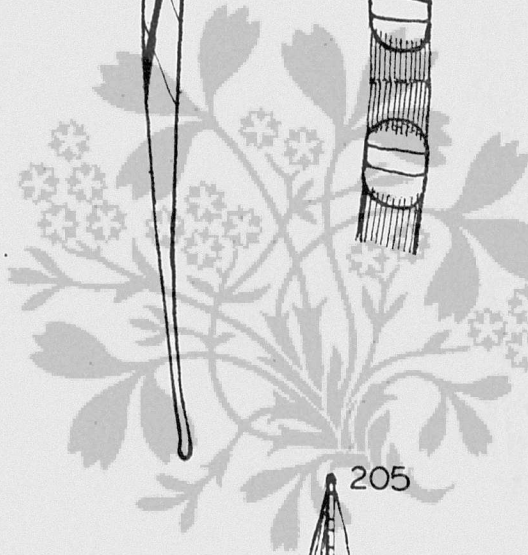
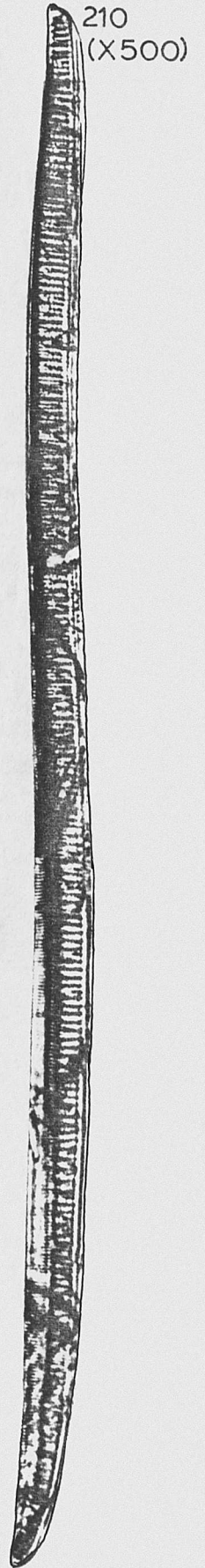
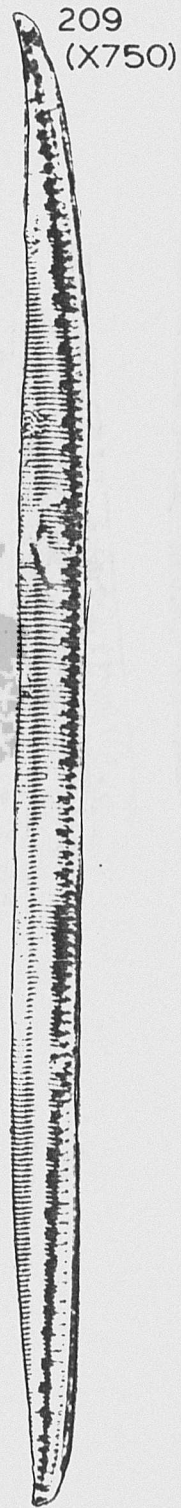


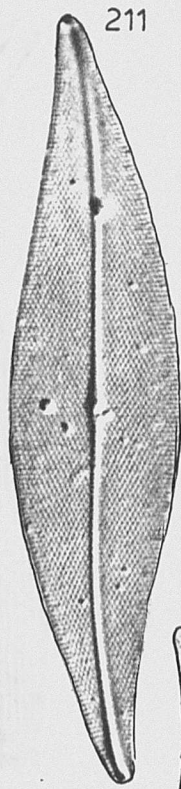




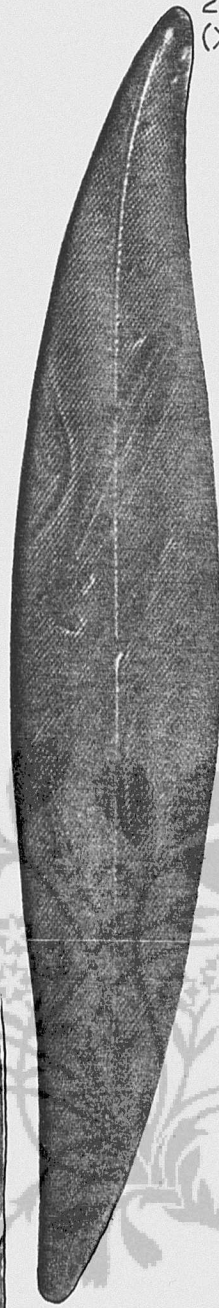
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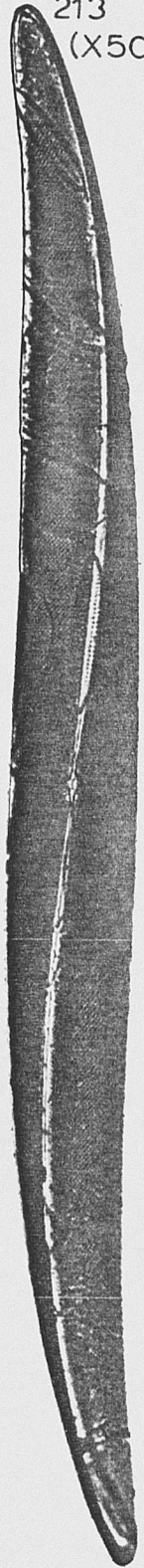




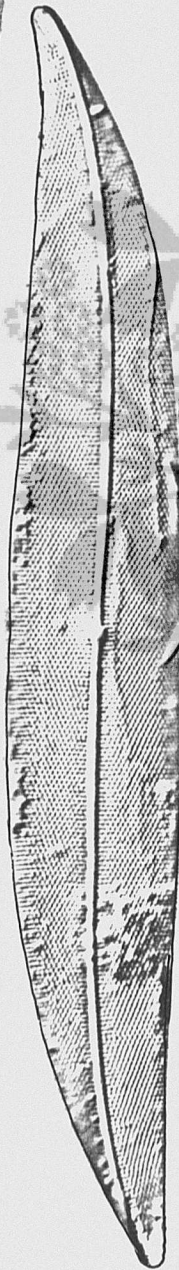
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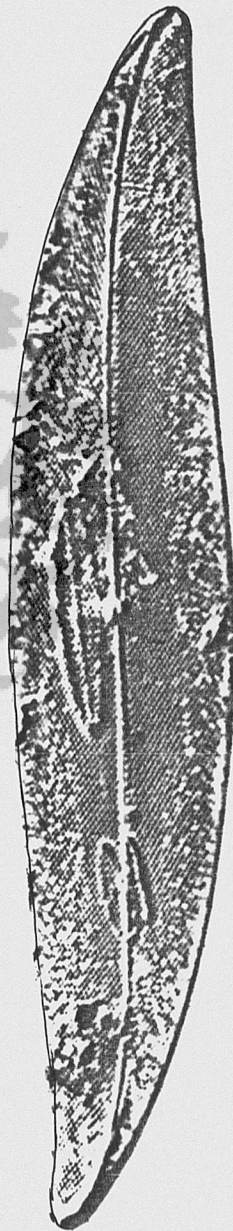
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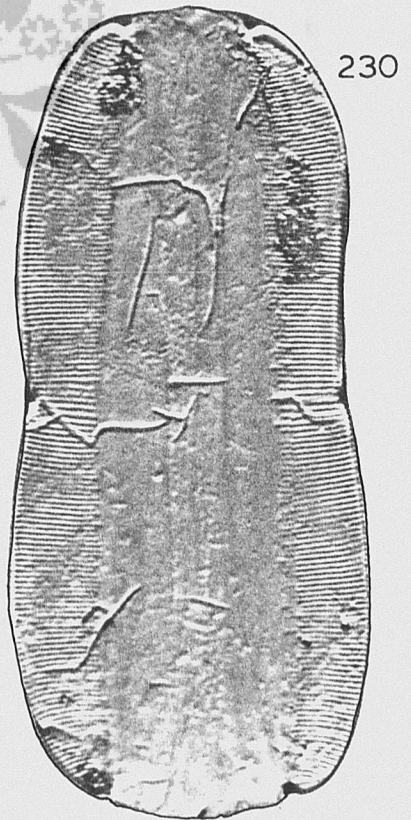
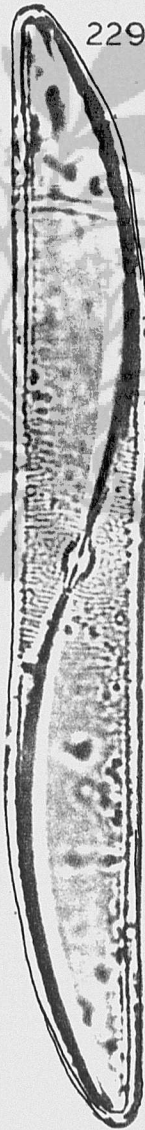
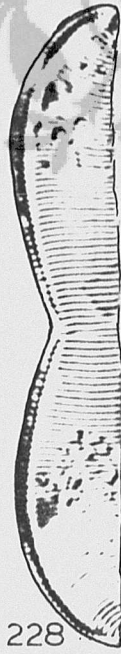
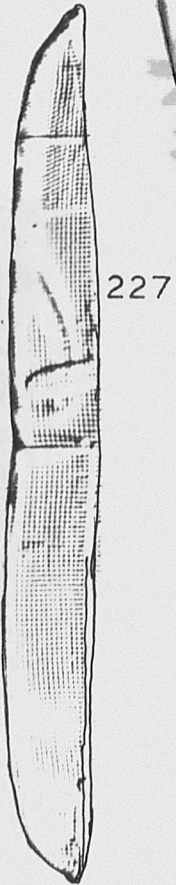
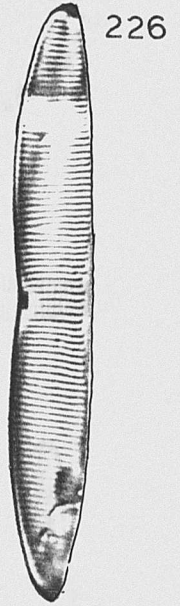
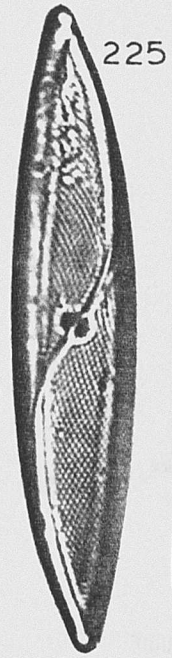
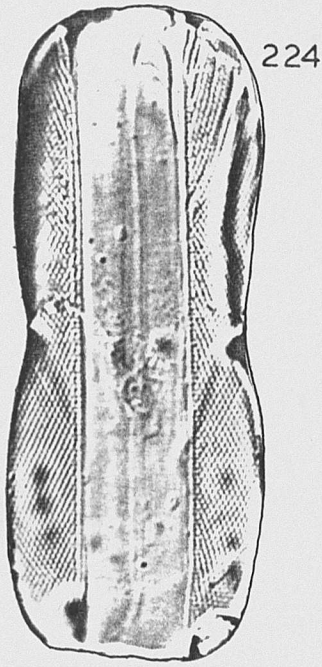
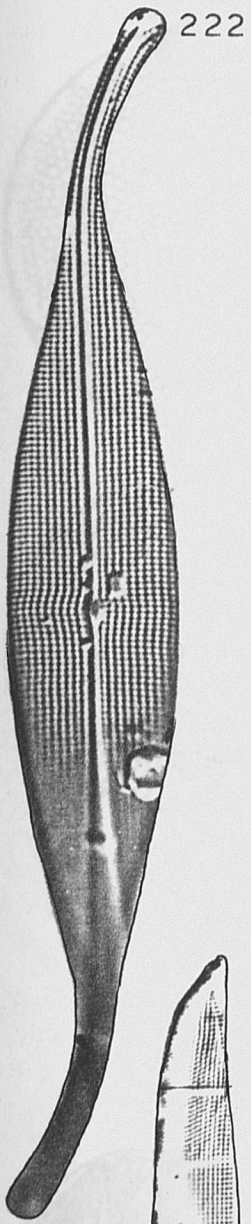
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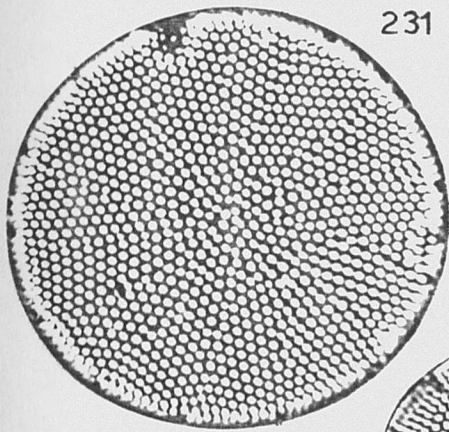


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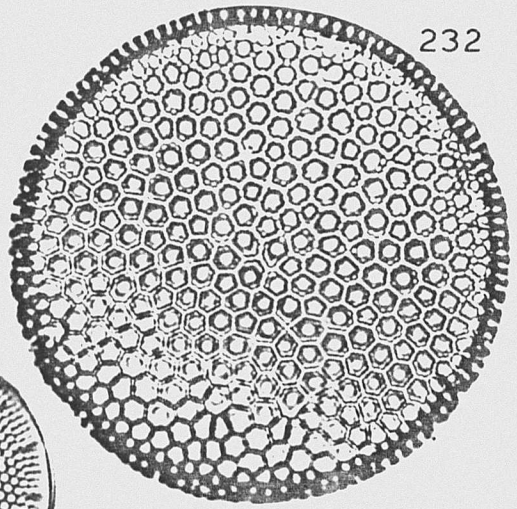


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(X1000)

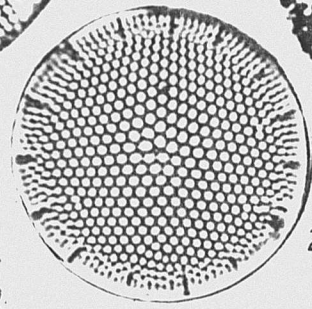




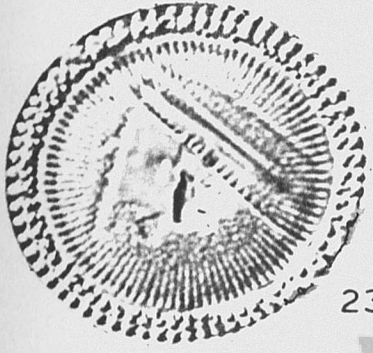
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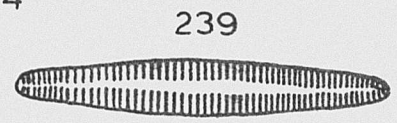
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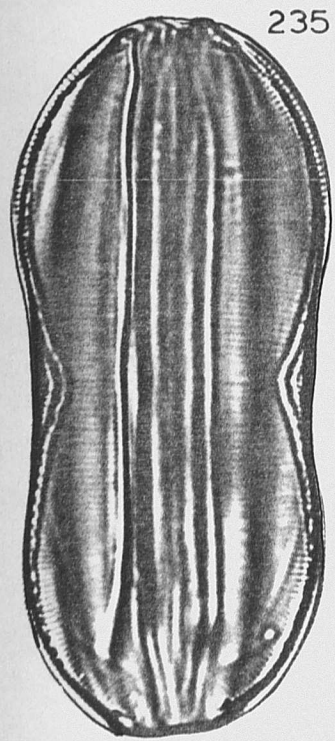
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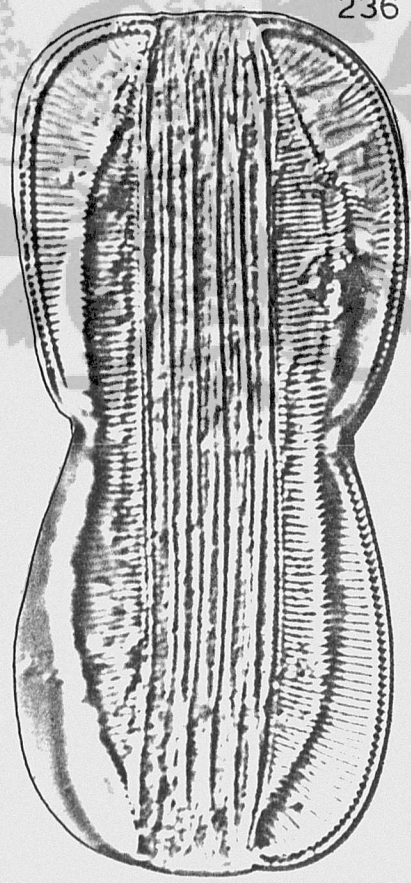
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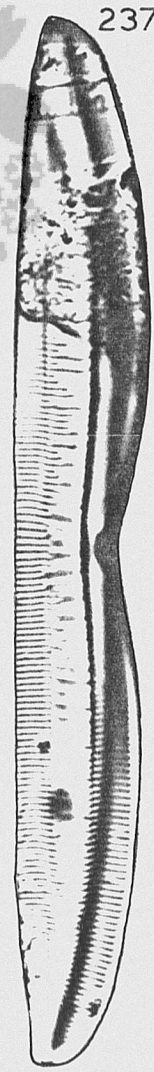
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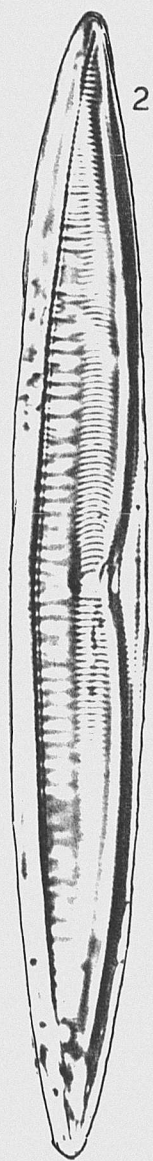
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APPENDIX 2

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TAXONOMIC REFERENCES

- Cleve, P. T. 1894-96. Synopsis of the Naviculoid Diatoms. Asher & Co. Amsterdam.
- Cleve-Euler, A. 1951-55. Die Diatomeen von Schweden und Finnland. Kungliga Svenska vetenskapsakademiens handlingar, **2** (1), 163. (Teil I, Centricae, 1951); **4** (1), 158. (Teil II Arraphideae, Brachyraphidae, 1953); **4** (5), 225. (Teil III, Monoraphideae, Biraphideae I, 1953); **5** (4), 232. (Teil IV. Biraphideae II, 1955); **3** (3), 153. (Teil V. Schluss. 1952).
- Cleve, P. T. and A. Grunow. 1880. Beitrage zur Kenntniss der arctischen Diatomeen. Kongliga Svenska Vetenskaps-Akademiens Handlingar, Bd. 17, Nr. 2, 121 S., 7 Taf.
- Drebes, von G. 1974. Marines Phytoplankton. Eine Auswahl der Helgolander Planktonalgen (Diatomeen, Peridineen) 151 Abbildungen. Georg Thieme Verlag Stuttgart. 181 pp.
- Foged, N. 1974. Freshwater diatoms in Iceland. *Bibliotheca Phycologica* **15**, 1-118. 36 Plates.
- Foged, N. 1975. Some Littoral Diatoms from the Coast of Tanzania. *Bibliotheca Phycologica* **16**, 1-68. 31 plates.
- Foged, N. 1978. Diatoms in Eastern Australia. *Bibliotheca Phycologica* **41**, 1-138. 48 plates.
- Foged, N. 1979. Diatoms in New Zealand, the North Island. *Bibliotheca Phycologica* **47**, 1-128. 48 plates.
- Foged, N. 1981. Diatoms in Alaska. *Bibliotheca Phycologica* **53**, 1-188. 64 plates.
- Germain, H. 1981. Flore des Diatomees. Diatomophycees eaux douces et saumaitres du Massif Armoricaain et des contrees voisines d'Europe occidentale. Societe Nouvelle des Editions Boubee.
- Hartley, B. 1986. A check-list of the freshwater, brackish and marine diatoms of the British Isles and adjoining coastal waters. *J. mar. biol. Ass. U. K.* **66**, 531-610.

- Hendey, N. I. 1964. An introductory account of the smaller algae of British coastal waters. V. Bacillariophyceae (diatoms) Fishery Investigations. Ministry of agriculture, Fisheries and Food (Ser. 4), 5, 317.
- Hustedt, F. 1930. Bacillariophyta (Diatomeae). Die Susswasser-Flora Mitteleuropas. A. Pascher, Heft 10, 466 Fig. S. 1-875. (zweite Auflage). Gustav Fischer, Jena.
- Hustedt, F. 1931-37. Die Kieselalgen Deutschlands, Osterreichs und der Schweiz unter Beruecksichtigung der ubrigen Lander Europas sowie der angrenzenden Meeresgebiete. Dr. L. Rabenhorst's "Kryptogamen-Flora von Deutschland, Osterreich und der Schweiz." Band 7, Teil 2, Lief. 1-6, S. 1-845, Fig. 543-1179. Akademische Verlagsgesellschaft m. b. H., Leipzig.
- Hustedt, F. 1961-66. Die Kieselalgen Deutschlands, Osterreichs und der Schweiz unter Beruecksichtigung der Ubrigen Lander Europas sowie der angrenzenden Meeresgebiete. L. Rabenhorst's "Kryptogamen-Flora von Deutschland, Osterreich und der Schweiz." Band 7, Teil 3, Leif. 1-4, S. 1-816, Fig. 1180-1788. Akademische Verlagsgesellschaft m. b. H., Leipzig.
- Krammer, K and H. Lange-Bertalot. 1986a. Susswasserflora von Mitteleuropa. 2/1. Teil: Naviculaceae. Gustav Fischer Verlag.
- Krammer, K and H. Lange-Bertalot. 1986b. Susswasserflora von Mitteleuropa. 2/2. Teil: Bacillariaceae, Epithemiaceae, Surirellaceae. Gustav Fischer Verlag.
- Kutzing, F. T. 1844. Die Kieselalgen. Bacillarien oder Diatomeen. Nordhausen. Reprint 1983 by Koeltz Scientific Books.
- Lange-Bertalot, H. and K. Krammer. 1989. Bibliotheca Diatomologica. "Achnanthes" eine Monographie der Gattung mit Definition der *Cocconeis* und Nachtragen zu den Naviculaceae. Band 18. J. Cramer.
- Molder, K. and R. Tynni. 1969. uber Finnlands Rezente und Subfossile Diatomeen III. Bull. Geol. Soc. Finland 41, 235-251.
- Molder, K. and R. Tynni. 1970. Uber Finnlands Rezente und Subfossile Diatomeen IV. Bull. Geol. Soc. Finland 42, 129-144.
- Molder, K. and R. Tynni. 1971. Uber Finnlands Rezente und Subfossile Diatomeen V. Bull. Geol. Soc. Finland 43, 203-220.

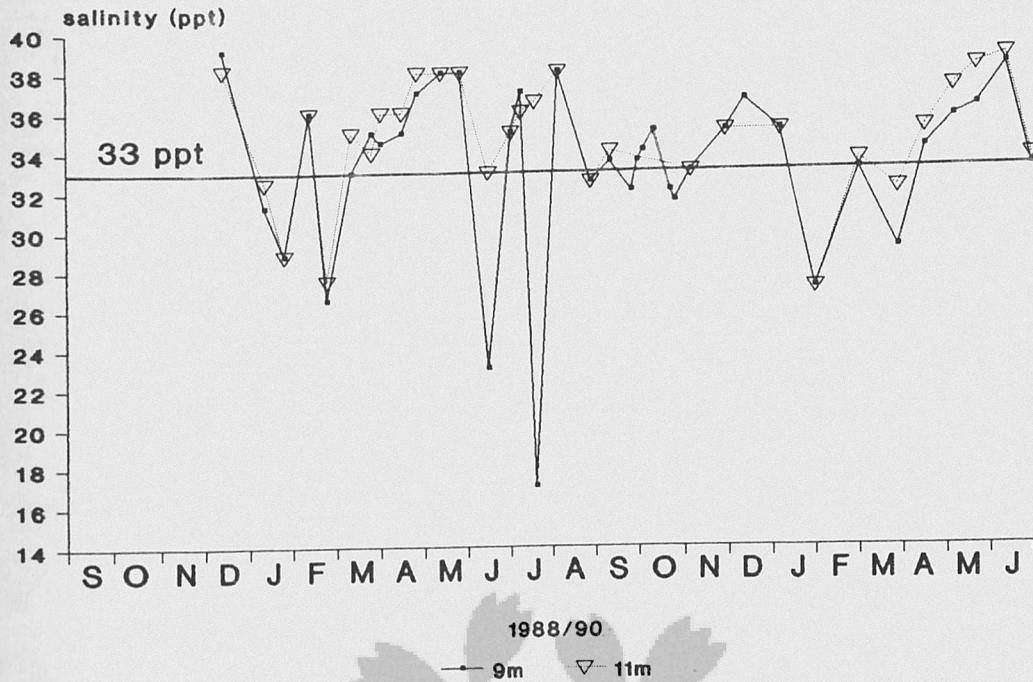
- Molder, K. and R. Tynni. 1972. Uber Finnlands Rezente und Subfossile Diatomeen VI. Bull. Geol. Soc. Finland **44**, 141-149.
- Molder, K. and R. Tynni. 1973. Uber Finnlands Rezente und Subfossile Diatomeen VII. Bull. Geol. Soc. Finland **45**, 159-179.
- Paddock, T. B. B. 1988. *Plagiotropis* Pfitzer and *Tropidoneis* Cleve, a summary account. Bibliotheca Diatomologica. #volume ?# J. Cramer.
- Pankow, H. 1976. Algenflora der Ostsee. II Plankton (einschl. benthischer Kieselalgen). Gustav Fischer Verlag.
- Peragallo, H. and M. Peragallo. 1897-1908. Diatomees Marines de France, et des Districts Maritimes Voisins. Paris et Grez-sur-Loing.
- Ross, R. 1963. The Diatom Genus *Capartogramma* and the identity of *Schizostauron*. Bulletin of the British Museum (Natural History). Botany **3**(2), 49-92.
- Schmidt, A. 1874-1956. Atlas der Diatomaceen-Kunde, heft 1-105. Leipzig: R. Reisland.
- Simonsen, R. 1987. Atlas and Catalogue of the Diatom Types of Friedrich Hustedt. vol. 1-3. J. Cramer.
- Tynni, R. 1975. Geological Survey of Finland, Bulletin 274. Uber Finnlands Rezente und Subfossile Diatomeen, VIII. Geologinen Tutkimuslaitos.
- Tynni, R. 1980. Geological Survey of Finland, Bulletin 312. Uber Finnlands Rezente und Subfossile Diatomeen, XI. Geologinen Tutkimuslaitos.
- Van Heurck, H 1880-5. Synopsis des Diatomees des Belgique. Dukajuet Cie.
- Van Landingham, S.L. 1967-79. Catalogue of the Fossil and Recent Genera and Species of Diatom and their Synonyms. Parts II, V-VIII. Vanduz: J. Cramer.

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APPENDIX 3



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Seasonal variation of salinity measured at the sediment/water interface at 9m and 11m depth from September 1988 to June 1990. Salinity was determined by conductivity measurement using a portable electrode and meter (Philips PW 9504/00). This data appears to be erroneous as salinity measurements collected by the Clyde River Purification Board (pers. comm.) show that levels within Loch Goil do not normally exceed 33 ppt. Consequently I doubt the accuracy of both the magnitude and the seasonal variation in salinity levels. I have not included this data in my analysis.