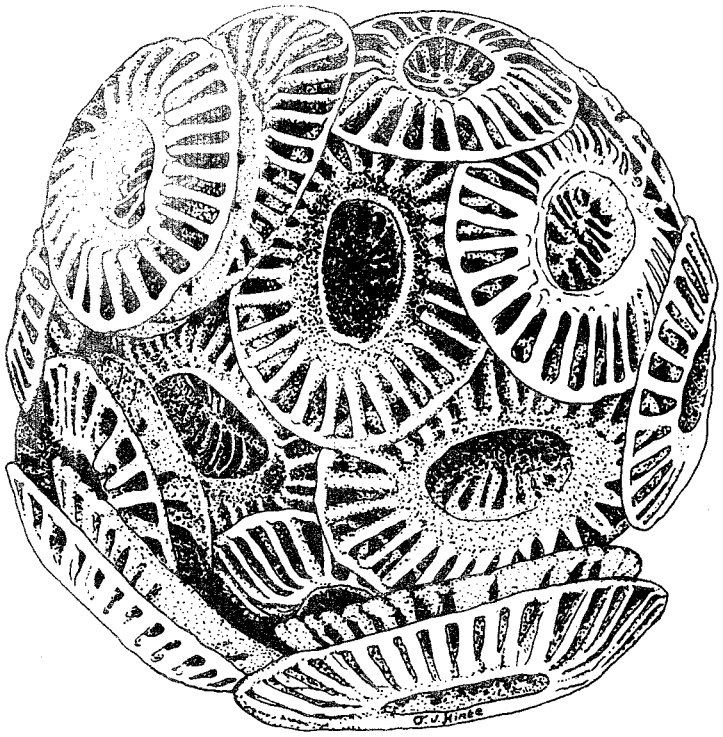
INA NEWSLETTER



INTERNATIONAL NANNOPLANKTON ASSOCIATION

VOLUME 11 NUMBER 1 1989

INTERNATIONAL NANNOPLANKTON ASSOCIATION

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!! NOTE !!

SALES OFFICE

Separate issues of the INA Newsletter can be obtained from the Secretary/Treasurer. Price per issue is:

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MEMBERSHIP

Applications for membership of the International Nannoplankton Association should be directed to the Secretary/Treasurer. Annual dues: £ 10.-/US$ 18.- Those who pay their dues in U.S. dollars are urged to send them to John Steinmetz (Marathon Oil, Expl. & Prod. Technology, P.O. 269, Littleton, Col., U.S.A.). Checks or money orders should be made out to INA; no account- or banknumber is necessary. Students can become a member for a reduced price (£ 5.-/US$ 9.--); please send a confirmation of your student-status when applying for membership.

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NEXT ISSUE

Contributions for the next issue of the INA Newsletter should be received before October 1989. Please send your contributions to: The editor of the INA Newsletter, J.R. Young (Address : see page 3).

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INFORMATION TO CONTRIBUTORS

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EDITORIAL

In the previous issue of this Newsletter I announced that both John Steinmetz and myself were looking for someone to take over our tasks. We found someone to take over the task of editor, so that this issue is the last that I shall be responsible for. The actual printing and mailing will already be done by my successor. So for all matters concerning this Newsletter, from now on you should write to:

Dr. Jeremy R. Young
Palaeontology Dept.
British Museum Nat. Hist.
Cromwell Road
London SW7 5BD
Great Britain

NOW THIS IS IMPORTANT!!!

John Steinmetz is willing to prepare one more issue of the bibliography, but this fall issue will be the final one. UNLESS WE FIND SOMEONE TO TAKE OVER THE BIBLIOGRAPHY, THE NEXT ISSUE COULD BE THE LAST ONE!!

So PLEASE if you think you might be able to compile the bibliography, alone or with some other people, or if you can think of anybody who could, please get in touch with John Steinmetz or myself. We both will give you all the help we can. Without the bibliography and taxonomic index there seems little point in continuing, and it would be such a pity to stop after all these years.

PROCEEDINGS

A limited number of the Proceedings is available to members at £35.-, (incl. p&p). The price on the open market is about £70.-, and members of the British Micropalaeontological Society can order a copy there for £42.50 if we have run out. If you want to order a copy you should send a cheque or International Money Order in the name of International Nannoplankton Association to Jeremy Young (address above). Please add a sticky label with your name and address, to reduce the work for him.

MEETINGS

Those of you who have not yet registered for the Florence Meeting should contact Simonetta Monechi as soon as possible. All details are mentioned in the previous Newsletter.

We have received two formal invitations of institutes willing to host the next Meeting: one from Salamanca, Spain, and one from Prag/Brno, Czechoslovakia. It is up to the members where the next meeting will be. There is a proposal to hold a meeting in 1990 in Czechoslovakia, and one in 1991 in Salamanca, but we need to know how members feel about this.

ERRATUM

In vol.9(2), the abstract "Early-Middle Jurassic calcareous nannofossils at the Valdorbia section (Central Apennines, Italy)" by S. Monechi and V.Reale, has been erroneously printed as being by S.Monechi and R.Viviana. The mistake was entirely mine (those foreign names!!), and I humbly apologise to the authors.

S.v.H.

REVIEW

GREUTER,W. et al., 1988. International Code of Botanical Nomenclature. Koeltz Scientific Books, Germany.

This is the latest edition of the ICBN. As each new version of the ICBN supersedes all previous editions, and the rules are retroactive, anyone dealing with nomenclature should study these new rules, and preferably have a private copy. Quite a few changes occur in this Code, some of which are important and relevant to nannoplankton specialists.

The most striking difference between this new 'Berlin' Code and previous editions is that the text is in English only, which makes the new version somewhat slimmer. A French text is in preparation, and German and Spanish versions are being considered. In this edition a list is included in the front summarising the important dates in the Code, per taxonomic group and in chronological order.

Apart from these editorial changes, there are quite a few additions. One Article has been added, but as this is the last in the Code (Art. 76), a shift in the numbering as been avoided. The same is not true for the paragraphs of the Articles. Several new entries have shifted the existing numbering system, so that for instance the old Art.7.9 is now Art.7.11. Two Articles (66 and 67) have been deleted from the Code, but this does not seem to have any consequences in practise. Many of the changes to the Articles are in the phrasing rather than the contents, aimed at making the intention of the rule clearer. I found most of the changes improvements. Some of the old recommendations have now graduated to paragraphs of existing Articles, as was expected, and some of the new paragraphs are aimed at taking away some confusion, although I found several of these just adding confusion. One or two additions have direct consequences for the validity of species, and are therefore very important.

I shall try to summarise the main changes and additions per chapter, and their relevance to our subject (fossil and recent):

Chapter I:

Two paragraphs have been added dealing with hybrids, which changes some of the numbering. Art.3.2 dealing with form-genera is now Art. 3.3.

Chapter II:

Art.7 has been revised completely. This article deals with typification, and definitions and guidelines for holotypes, lectotypes, neotypes, isotypes and syntypes have been changed considerably. Paragraphs have been added to deal with paratypes (7.8), selection of neotypes (7.10) and other types (7.16). Recommendations 7B and 7C have been added giving precise guidelines on selection of types. I found some of these confusing, and some recommendations even seem to contradict the rules (compare for instance Rec. 7.B.1 with Art. 7.4). As this article with its recommendations now covers four pages of text, I can't quote it here, but I recommend anyone dealing with the subject to study it closely.

Four paragraphs have been added to Art.8, all dealing with the selection of types. Apart from officially regulating established practice, these all seem to apply to special cases, and are mainly relevant in dealing with existing species for which the typification is not clear.

Art.14 is another that has been changed considerably. This article deals with the conservation of taxa, which so far has not happened with any nannoplankton taxa.

Chapter III:

No dramatic changes have been made to this chapter, which deals with the nomenclature of taxa (i.e. the way in which names are formed). Changes to Arts. 18.1, 19.1 and 23.1 merely elaborate on the existing rules.

Chapter IV:

This is the most important chapter, as it deals with effective and valid publication. Several of the changes will have little effect, such as deletion of some paragraphs (32.2, 34.1.c, 34.3), or addition of some others (32.3), other than changing the numbering system. Some important changes are:

Art.37: this has been overhauled completely. It used to deal with typification of taxa of the rank of family and below, which has been changed to genus and below. Four paragraphs have been added, of which the last two are most important, and read as follows:

37.4: For the name of a new taxon published on or after 1 Jan. 1990, indication of the holotype must include one of the words 'typus' or 'holotypus', or its abbreviation, or its equivalent in a modern language.

37.5: For the name of a new species or infraspecific taxon published on or after 1 Jan. 1990 whose type is a specimen or unpublished illustration, the herbarium or institution in which the type is preserved must be specified.

The first of these two rules is followed anyway in practise, but the second is very relevant, and must not be neglected.

Art.41.3: this new paragraph is a bit puzzeling, since it seems to duplicate the existing Art. 32.1 (although it is slightly more extensive).

The new paragraphs 46.2 and 46.3 are the old recommendations 46.D and 46. E, and deal with the correct citation of taxa. There seem to be no implications for validity.

Chapter V:

Most changes deal with conservation, and are therefore not very relevant to us at the moment. One addition, however, could be relevant:

Art. 69.4: A name that has been widely and persistently used for a taxon or taxa not including its type is not to be used in a sense that conflicts with current usage unless and until a proposal to deal with it under Art. 14.1 or 69.1 has been submitted and rejected.
(The articles referred to deal with conservation and rejection.)

Chapter VI:

The changes and additions in this chapter mainly elaborate on existing rules. The one new article (Art.76) deals with the gender of generic names, and is basically the old recommendation 75.A.

This new ICBN may be ordered by sending a cheque in DMark or equivalent US$ or by quoting your credit card number (VISA, Master, Access, Eurocard, Am. Express) for DM 60.- to:

Koelz Scientific Books, P.O. Box 1360 & 1380
D-6240 Koenigstein - Federal Republic of Germany

German residents are requested to add 7% VAT, while personal members of the IAPT get a 20% discount.

SvH

Compiled by John C. Steinmetz

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1	**AIBULATOV, N. A.** Suspended matter flows off the continental margin of the Black Sea. -Mitt. Geol.-Paläont. Inst. Univ. Hamburg, 62: 55-76, 8 figs., 2 tbs.	**1987**	RECENT Mediterr. SEDIM.
2	**AKSU, A. E., MUDIE, P. J., MACKO, S. A., & DE VERNAL, A.** Upper Cenozoic history of the Labrador Sea, Baffin Bay, and the Arctic Ocean: a paleoclimatic and paleoceanographic summary. -Paleoceanography, 3 (5): 519-538, 8 figs.	**1988**	strat. QUAT TERT.U. Arctic Atlantic.N.
3	**ANDREWS, G. W.** A revised marine diatom zonation for Miocene strata of the southeastern United States. -U.S.G.S. Prof. Pap. 1481, 29 pp., 8 pls., 3 figs.	**1988**	(strat) TERT.U. America.N.
4	**APPLEGATE, J. L., & BERGEN, J. A.** Cretaceous calcareous nannofossil biostratigraphy of sediments recovered from the Galicia Margin, ODP Leg 103. -In: Boillot, G., Winterer, E. L., et al., Proc. ODP, Sci. Results, vol. 103, pp. 293-348, 29 pls., 5 figs., 5 tbs., 3 apps.	**1988**	strat.syst. CRET.M.,L. Atlantic.N.
5	**ARTHUR, M. A., DEAN, W. E., & PRATT, L. M.** Geochemical and climatic effects of increased marine organic carbon burial at the Cenomanian/Turonian boundary. -Nature, 335 (6192): 714-717, 3 figs.	**1988**	(strat) CRET.M. Worldwide
6	**AUBRY, M.-P., BERGGREN, W. A., KENT, D. V., ET AL.** Paleogene geochronology: an integrated approach. -Paleoceanography, 3 (6): 707-742, 7 figs., 5 tbs.	**1988**	strat. TERT.L. Worldwide
7	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Explanatory notes. -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 17-42, 9 figs., 7 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
8	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Sites 705 and 706. [Western subtropical Indian Ocean] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 125-232, 38 figs., 19 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT.L. Indian.Oc.
9	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 707. [Western tropical Indian Ocean] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 233-399, 42 figs., 14 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
10	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 708. [Western equatorial Indian Ocean] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 401-457, 26 figs., 11 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.

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1	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 709. [Western equatorial Indian Ocean] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 459-588, 42 figs., 11 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
2	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 710. [Western equatorial Indian Ocean] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 589-656, 32 figs., 10 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
3	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 711. [Western equatorial Indian Ocean] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 657-732, 30 figs., 13 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
4	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 712 and 713. [Northern margin of Chagos Bank] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 733-845, 37 figs., 13 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
5	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 714. [Eastern shoulder of the Maldives Ridge] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 847-915, 26 figs., 12 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
6	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 715. [Eastern margin of the Maldives Ridge] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 917-1003, 31 figs., 12 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT Indian.Oc.
7	**BACKMAN, J. DUNCAN, R. A., & SHIPBOARD SCIENTIFIC PARTY.** Site 716. [Center of Maldives Ridge] -In: Backman, J., Duncan, R. A., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 115, pp. 1005-1073, 14 figs., 5 tbs. [Nannofossils by H. Okada & D. Rio]	**1988**	strat. QUAT TERT.U. Indian.Oc.
8	**BARBIN, V.** The Eocene - Oligocene transition in shallow-water environment: the Priabonian Stage type area (Vicentin, northern Italy). -Int. Subcomm. Paleog. Strat. Eocene/Oligocene Mtg., Ancona, Italy, Spec. Publ. II. 7: 163-171, 4 figs.	**1988**	strat. TERT.L. Europe.W.
9	**BARKER, P. F., KENNETT, J. P., & SCIENTIFIC PARTY.** Weddell Sea palaeoceanography: preliminary results of ODP Leg 113. -Palaeogeogr., Palaeoclimatol., Palaeoecol., 67 (1/2): 75-102, 15 figs., 1 tb. [Nannofossils by S. W. Wise, Jr.]	**1988**	strat. QUAT TERT CRET.U.,M. Antarctic
10	**BENLI, H. A.** Investigation of plankton distribution in the southern Black Sea and its effects on particle flux. - Mitt. Geol.-Paläont. Inst. Univ. Hamburg, 62 : 77-87, 2 pls., 4 figs., 1 tb.	**1987**	(syst) RECENT Mediterr. SEDIM.

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1 **BIDIGARE, R. R., SMITH, R. C., BAKER, K. S., & MARRA, J.** **1987** RECENT BIOL. ECOL.
Oceanic primary production estimates from measurements of spectral irradiance and pigment concentrations.
-Global Biogeochem. Cycles, 1 (3): 171-186, 9 figs., 2 tbs.

2 **BIRKENMAJER, K.** **1987** strat. TERT Antarctic
Oligocene-Miocene glacio-marine sequences of King George Island (South Shetland Islands), Antarctica.
-Palaeont. Polonica, 49 : 9-36, 4 pls., 8 figs., 4 tbs.

3 **BIRKENMAJER, K., & DUDZIAK, J.** **1988** strat. TERT.L. Europe.E.
Age of Palaeogene flysch in the Pieniny Klippen Belt, Carpathians, Poland, based on calcareous nannoplankton.
-Bull. Polish Acad. Sci., 36 (1): 15-24, 2 figs., 2 tbs.

4 **BIRKENMAJER, K., & DUDZIAK, J.** **1988** strat.(syst) TERT.L. Europe.E.
Nannoplankton dating of terminal flysch deposits (Oligocene) in the Magura Basin, Outer Carpathians.
-Bull. Polish Acad. Sci., 36 (1): 1-13, 4 pls., 1 fig., 1 tb.

5 **BLACKWELL, W. H., & POWELL, M. J.** **1982** strat.(syst) TERT.L. America.N.
Fossil microalgae (coccolithophorids) in the Yazoo Clay exposures at Thompson Creek, Yazoo County, Mississippi.
-Mississippi Geol., 3 (2):1-5, 15 figs.

6 **BORMAN, A. H., JONG, E. W. DE, HUIZINGA, M., & WESTBROEK, P.** **1983** RECENT BIOL.
Inhibition of $CaCO_3$ precipitation by a polysaccharide associated with coccoliths of Emiliania huxleyi.
-In: Westbroek, P., Jong, E. W. De, eds., Biomineralization and Biological Metal Accumulations. D. Reidel Publ. Co., Dordrecht, Holland, pp. 303-305, 1 fig.

7 **BOWN, P. R.** **1987** strat.syst JURA.L. PREJURA Africa.N. Atlantic.N. Europe.W.
Taxonomy, Evolution, and Biostratigraphy of Late Triassic - Early Jurassic Calcareous Nannofossils.
-Palaeont. Assoc., Sp. Pap. in Palaeont., no. 38, 118 pp., 15 pls., 19 figs., 1 app.

8 **BRZOBOHATÝ, R., ED.** **1983** strat.(syst) TERT CRET Europe.E.
Miscellanea Micropaleontologica.
-Knihovnička zemního plynu a nafty, Hodonín, Czechoslovakia, no. 4, 332 pp.
[A memorial volume dedicated to the 18th European Colloquy on Micropaleontology.]

9 **BRZOBOHATÝ, R.** **1983** (strat) TERT Europe.E.
Fish otoliths from the West Carpathian Tertiary and their biostratigraphical significance.
-Knihovnička zemního plynu a nafty, no. 4, Misc.Micropal., Hodonín, Czechoslovakia, pp. 247-266, 7 pls., 1 fig.

10 **BUBIK, M.** **1987** strat.(syst) TERT.L. Europe.E.
Oligocenní vápnitý nanoplankton menilitového souvrství s jasielskými vápenci z Bystřice nad Olší (podslezská jednotka, Západní Karpaty). (Oligocene calcareous nannoplankton of the Menilitic Formation with the Jaslo Limestones horizon from Bystrice nad Olsi (the Subsilesian Unit, the West Carpathians.)
-Knihovnička zemního plynu a nafty, no. 6b, Misc.Micropal., Hodonín, Czechoslovakia, 11/2: 45-57, 4 pls., 2 figs.
(In Czechoslovakian with English summary.)

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1	**CAPO, R. C., & DePAOLO, D. J.** Plio-Pleistocene strontium isotope record from southwest Pacific Ocean DSDP Site 590B. -Trans., Amer. Geophys. Un., 69 (44): 1253.	**1988**	abstr. strat. QUAT TERT.U. Pacific.S. ISOT.
2	**CARON, C., HOMEWOOD, P., & WILDI, W.** The original Swiss Flysch: a reappraisal of the type deposits in the Swiss Prealps. -Earth-Sci. Rev., 26 (1): 1-45, 27 figs., 1 tb.	**1989**	strat. TERT.L. Europe.W.
3	**CHANG, S. S. L., & CHI, W.-R.** Neogene nannoplankton biostratigraphy in Taiwan and the tectonic implications. -Petrol. Geol. Taiwan, no. 19: 93-147, 4 pls., 10 figs.	**1983**	strat.(syst) QUAT TERT Asia.E.
4	**CHANNELL, J. E. T., RIO, D., & THUNELL, R. C.** Miocene/Pliocene boundary magnetostratigraphy at Capo Spartivento, Calabria, Italy. -Geology, 16 (12): 1096-1099, 5 figs.	**1988**	strat. TERT.U. Europe.W.
5	**CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** Explanatory notes. -In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 3-22, 8 figs. [Nannofossils by J. A. Crux]	**1988**	strat. QUAT TERT CRET.U. Atlantic.S.
6	**CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** Site 698. [Eastern edge of the Northeast Georgia Rise] -In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 87-150, 34 figs., 14 tbs. [Nannofossils by J. A. Crux]	**1988**	strat. TERT CRET.U. Atlantic.S.
7	**CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** Site 699. [Northeastern slope of the Northeast Georgia Rise] -In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 151-254, 33 figs., 10 tbs. [Nannofossils by J. A. Crux]	**1988**	strat. QUAT TERT Atlantic.S.
8	**CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** Site 700. [Western region of the East Georgia Basin] -In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 255-361, 40 figs., 12 tbs. [Nannofossils by J. A. Crux]	**1988**	strat. QUAT TERT.L. Atlantic.S.
9	**CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** Site 701. [Western flank of the Mid-Atlantic Ridge] -In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 363-482, 30 figs., 14 tbs. [Nannofossils by J. A. Crux]	**1988**	strat. QUAT TERT Atlantic.S.
10	**CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** Site 702. [Central part of Islas Orcadas Rise] -In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 483-548, 23 figs., 13 tbs. [Nannofossils by J. A. Crux]	**1988**	strat. TERT Atlantic.S.

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1 **CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** **1988** | strat. QUAT TERT Atlantic.S.

Site 703. [Meteor Rise]
-In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 549-619, 26 figs., 12 tbs.
[Nannofossils by J. A. Crux]

2 **CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** **1988** | strat. QUAT TERT Atlantic.S.

Site 704. [Southern part of Meteor Rise]
-In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 621-795, 33 figs., 12 tbs.
[Nannofossils by J. A. Crux]

3 **CIESIELSKI, P. F., KRISTOFFERSEN, Y., & SHIPBOARD SCIENTIFIC PARTY.** **1988** | strat. QUAT TERT CRET.U. Atlantic.S.

Preliminary results of subantarctic South Atlantic Leg 114 of the Ocean Drilling Program.
-In: Ciesielski, P. F., Kristoffersen, Y., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 114, pp. 797-803, 4 figs.
[Nannofossils by J. A. Crux]

4 **CIVIS, J., GONZALEZ DELGADO, J. A., ANDRES, I., ET AL.** **1988** | abstr. strat. TERT.U. Europe.W.

El contenido paleontologico de la seccion Tortoniense - Messiniense de Arroyo Trujillo (Sevilla, borde NW de la Cuenca del Guadalquivir). (The paleontological content of the Tortonian - Messinian section of Trujillo Stream (Sevilla, NW border of the Guadalquivir Basin.)
-IV Jornadas de Paleontologia, Resumenes, Univ. Salamanca, pp. 30-31.
(In Spanish)

5 **COCHRAN, J. R., STOW, D. A. V., & SHIPBOARD SCIENTIFIC PARTY.** **1988** | strat.

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-In: Cochran, J. R., Stow, D. A. V., et al., Proc. Init. Rep. (Pt. A) ODP, vol. 116, pp. 13-28, 13 figs., 1 tb.
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7	**WISE, S. W., JR.** **1983** Coccolith biostratigraphy of Deep Sea Drilling Project Leg 71 cores. -Antarctic J. of U.S., 18 (5): 150-152, 2 figs., 1 tb.	strat. QUAT TERT CRET JURA.U. Atlantic.S.
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Axopodorhabdus atavus (GRÜN, PRINS, & ZWEILI 1974) BOWN 1987; p. 60-61 (ex Staurorhabdus?).	A377-7
Biscutum depravatus (GRÜN & ZWEILI 1980) BOWN 1987; p. 46 (ex Axopodorhabdus).	A377-7
Biscutum grandis BOWN 1987; pp. 44, pl. 6, figs. 4-6; pl. 13, figs. 23-25; text-fig. 11. Portugal, Brenha; Britain, BGS Mochras Borehole; Italy, Longobucco; Argentina, Picun Leufu; Tunisia, Djebel Zaghouan; Pliensbachian to Toarcian.	A377-7
Biscutum intermedium BOWN 1987; p. 47, pl. 6, figs. 7-10; pl. 13, figs. 26-28; text-fig. 14. Portugal, Brenha; Southern Germany, Badenweiler and Trimeusel; Britain, BGS Mochras Borehole; Argentina, Picun Leufu; late Toarcian to Bajocian.	A377-7
Biscutum planum BOWN 1987; pp. 45-46, pl. 6, figs. 16-18; pl. 14, figs. 5-6. Timor, mid-Pliensbachian.	A377-7
Bucanthus BOWN1987; p. 35. Type species: Bucanthus decussatus BOWN 1987.	A377-7
Bucanthus decussatus BOWN 1987; pp. 35-36, pl. 2, figs. 10-11; pl. 12, figs. 13-14. Type species of Bucanthus BOWN 1987. Timor, mid-Pliensbachian.	A377-7
Bussonius leufuensis BOWN & KIELBOWICZ in BOWN 1987; pp. 71-72, pl. 10, figs. 15-18; pl. 15, figs. 11-12. Argentina, Picun Leufu, Toarcian.	A377-7
Calyculus depressus BOWN 1987; p. 55, pl. 7, figs., 11-12; text-fig. 15. South Germany, Unterstürmig and Trimeusel, early Toarcian.	A377-7
Carinolithus magharensis (MOSHKOVITZ & EHRLICH 1976) BOWN 1987; pp. 58-59 (ex Hexalithus).	A377-7
Craterolithus FIRTH 1988, p. 854. Type species: Craterolithus hoerstgensis (MÜLLER 1970) FIRTH 1988.	A380-8
Craterolithus hoerstgensis (MÜLLER 1970) FIRTH 1988; p. 854 (ex Cyclococcolithus). Type species of Craterolithus FIRTH 1988.	A380-8
Crepidolithus granulatus BOWN 1987; p. 17, pl. 1, figs. 12-15; pl. 12, figs. 7-8. Portugal, Brenha, early Sinemurian to Toarcian; also North Atlantic, DSDP Site 547 and Britain, BGS Mochras Borehole.	A377-7
Cyclagelosphaera brezae APPLEGATE & BERGEN 1988; p. 314, pl. 20, figs. 1-3. Northeast Atlantic, Galicia Margin, ODP holes 638B and 638C, early to late Valanginian.	A375-4
Discoaster praebifax WEI & WISE 1989; pp. 11-12, fig. 3. South Atlantic, DSDP sites 361, 536, and 537, early and middle Eocene, zones CP12 and CP 13; also the Paris Basin, zone CP 12.	A388-1
Discorhabdus criotus BOWN 1987; pp. 49-50, pl. 6, figs. 6-9; pl. 14, figs. 9-10; text-fig. 11. South Germany, Ballrechten, Badenweiler, and Trimeusel; Portugal, Brenha; Britain, BGS Mochras Borehole.	A377-7
Eiffellithus primus APPLEGATE & BERGEN 1988; pp. 314-315, pl. 11, figs, 1-12, 14. Northeast Atlantic, Galicia Margin, ODP holes 638B, 638C, and 639A , early to late Valanginian.	A375-4
Eiffellithus striatus (BLACK 1971) APPLEGATE & BERGEN 1988; p. 315 (ex Chiastozygus).	A375-4

Eiffellithus windii APPLEGATE & BERGEN 1988; p. 315, pl. 10, figs., 1-6, 8. Northeast Atlantic, Galicia Margin, ODP holes 638B and 638C, middle Valanginian to late Hauterivian.	A375-4
Gephyrobiscutum WISE 1988, p. 172. Type species: Gephyrobiscutum diabolum WISE 1988.	A388-8
Gephyrobiscutum diabolum WISE 1988, pp. 172-175, pl. 1, figs. 1-6; pl. 2, figs. 1-5. Type species of Gephyrobiscutum WISE 1988. South Atlantic, Falkland Plateau, DSDP Hole 511, lower Campanian.	A388-8
Heliolithus bukryi WEI 1988, pp. 90-91, pl. 1, figs. 1-12. Southwest Atlantic Ocean, Rio Grande Rise, DSDP Site 516, late Paleocene, Zone CP5; also northwest Pacific Ocean, Zone CP5 and France, Pont Labau, Zone CP6.	A387-11
Lotharingius imprimus BOWN 1987; pp. 63-64, pl. 9, figs. 13-15; pl. 14, fig. 30; pl. 15, fig. 1; text-fig. 16. North Atlantic, DSDP Site 547, early Toarcian.	A377-7
Lotharingius primigenius BOWN 1987; p. 63, pl. 9, figs. 11-12; pl. 14, figs. 28-29; text-figs. 13, 16. North Atlantic, DSDP Site 547, late Pliensbachian to early Toarcian.	A377-7
Mazaganellaceae BOWN 1987; pp. 37-38. New family.	A377-7
Mazaganella BOWN 1987; p. 38. Type species: Mazaganella pulla BOWN 1987.	A377-7
Mazaganella protensa BOWN1987; p. 39, pl. 9, figs. 1-5; pl. 14, figs. 24-25; text-fig. 8. North Atlantic, DSDP Site 547, early Pliensbachian.	A377-7
Mazaganella pulla BOWN 1987; pp. 38-39, pl. 8, figs. 10-18; pl. 14, figs. 22-23; text-fig. 8. Type species of Mazaganella BOWN 1987. North Atlantic, DSDP Site 547, Sinemurian to Pliensbachian.	A377-7
Mitrolithus lenticularis BOWN 1987; pp. 28, 30, pl. 4, figs. 4-7; pl. 12, figs. 29-30. Timor; Portugal, Brehna; North Atlantic, DSDP Site 547; Britain, BGS Mochras and BGS Trunch boreholes; Tunisia, Djebel Zaghouan; late Sinemurian to early Toarcian.	A377-7
Nannoconus ligius APPLEGATE & BERGEN 1988; pp. 315-316, pl. 13, figs. 1-10, 15. Northeast Atlantic, Galicia Margin, ODP holes 638B and 640A, late Hauterivian to early Barremian.	A375-4
Parhabdolithus liasicus DEFLANDRE 1952 ssp. distinctus BOWN 1987; pp. 30-31, pl. 4, figs. 10-15; pl. 13, figs. 5-8. Portugal, Brenha; North Atlantic, DSDP Site 547; Britain, BGS Mochras and Trunch boreholes, and Hock Cliff; Argentina, Picun Leufu; Timor; Hettangian to Oxfordian.	A377-7
Parhabdolithus liasicus DEFLANDRE 1952 ssp. liasicus BOWN 1987, p. 31; pl. 4, figs. 16-17; pl. 13, figs. 9-10. Portugal, Brenha; North Atlantic, DSDP Site 547; Britain, Hock Cliff, and BGS Mochras and Trunch boreholes; Argentina, Picun Leufu; Timor; Sinemurian to Pliensbachian.	A377-7
Sollasites arctus (NOËL 1973) BOWN 1987; pp. 52-52 (ex Polypodorhabdus).	A377-7
Stephanolithion bigotii DEFLANDRE 1939 ssp. brevispinus WIND & WISE in WISE 1988; p. 175. Holotype: Stephanolithion bigotii DEFLANDRE 1939 (short lateral spines) in WISE 1983 [A199-8], p. 549, pl. 34, fig. 3. South Atlantic, Falkland Plateau, DSDP Holes 330 and 551, early Tithonian - Oxfordian.	A388-8
Thoracosphaera geometrica (JAFAR 1983) BOWN 1987; pp. 82-83 (ex Prinsiosphaera).	A377-7

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Timorella BOWN 1987; pp. 34-35. Type species: Timorella cypella BOWN 1987.	A377-7
Timorella cypella BOWN 1987; p. 35, pl. 5, figs., 7-10; pl. 13, figs. 17-18. Type species ofTimorella BOWN 1987. Timor, mid-Pliensbachian.	A377-7
Vekshinella mitcheneri APPLEGATE & BERGEN 1988; p. 317, pl. 23, figs. 7-9. Northeast Atlantic, Galicia Margin, ODP holes 638B,638C, and 639A, early Valanginian to late Barremian.	A375-4
Vekshinella parallela (WIND & CEPEK 1979) APPLEGATE & BERGEN 1988; pp. 316- 317 (ex Rhabdolekiskus).	A375-4
Vekshinella pseudocarinolithus APPLEGATE & BERGEN 1988; p. 317, pl. 16, figs. 1-9. Northeast Atlantic, Galicia Margin, ODP holes 638B and 638C, early Valanginian to Hauterivian.	A375-4
Watznaueriales BOWN 1987; p. 61. New order.	A377-7

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Species names in alphabetical order.

arctus, Sollasites
atavus, Axopodorhabdus
bigotii ssp. brevispinus, Stephanolithion
brezae, Cyclagelosphaera
bukryi, Heliolithus
criotus, Discorhabdus
cypella, Timorella
decussatus, Bucanthus
depravatus, Biscutum
depressus, Calyculus
diabolum, Gephyrobiscutum
geometrica, Thoracosphaera
grandis, Biscutum
granulatus, Crepidolithus
hoerstgensis, Craterolithus
imprimus, Lotharingius
intermedium, Biscutum
lenticularis, Mitrolithus
leufuensis, Bussonius
liasicus ssp. distinctus, Parhabdolithus
liasicus ssp. liasicus, Parhabdolithus
ligius, Nannoconus
magharensis, Carinolithus
mitcheneri, Vekshinella
parallela, Vekshinella
planum, Biscutum
praebifax, Discoaster
primigenius, Lotharingius
primus, Eiffellithus
protensa, Mazaganella
pseudocarinolithus, Vekshinella
pulla, Mazaganella
striatus, Eiffellithus
windii, Eiffellithus

New genus names.

Bucanthus
Craterolithus
Gephyrobiscutum
Mazaganella
Timorella

New supergeneric names.

Family Mazaganellaceae
Order Watznaueriales

* = Invalid

++++++++++++++++++++++++++++Corrections++++++++++++++++++++++++++++++++

A322-3: The abstract by S. Monechi and V. Reale in INA Newsl. 9 (2), p. 56 was erroneously printed as S. Monechi and R. Viviana.

A366-7: An unintended duplication of reference A347-10.

SOME NEW NANNOFOSSIL TAXA

O. Varol and M. Jakubowski

ABSTRACT

Three new genera Rectapontis, Palaeomicula and Praeprinsius are described and eight new combinations, Calculites anfractus, Rectapontis compactus, Rectapontis sisyphus, Palaeomicula maltica, Palaeomicula quadrisphena, Praeprinsius africanus, Praeprinsius dimorphosus and Praeprinsius tenuiculus are introduced.

INTRODUCTION

This study aims to clarify some selected taxonomic problems and provides a taxonomic background for our forthcoming publications. The newly introduced genera belong to three different families: Coccolithaceae (Praeprinsius), Polycyclolithaceae (Paleomicula) and Zygodiscaceae (Rectapontis). Terminology used in this study follows Varol (in press).

TAXONOMY

Calculites anfractus (JAKUBOWSKI) n. comb.

Basionym: 1986 Phanulithus anfractus JAKUBOWSKI, p. 41, pl. 1, figs. 20-23.

Remarks: It is recognised that Phanulithus WIND and WISE in WISE and WIND (1977) is a junior synonym of Calculites PRINS and SISSINGH in SISSINGH (1977) (see van HECK, 1979).

Rectapontis VAROL and JAKUBOWSKI, n. gen.

Type species: Zygodiscus compactus BUKRY, 1969.

Diagnosis: An elliptical coccolith consisting of a single wall of inclined elements and a bridge alligned with the short axis of the ellipse.

Derivation of name: Recta (Lat.): straight; Pontis (Lat.): bridge.

Description: Rectapontis has a single zeugoid (inclined elements) wall and a bridge along the short axis of the ellipse. There is no cover in the central area. The wall does not show any birefringence while the bridge occasionally shows birefringence under cross-polarised light.

Remarks: The species assigned to Rectapontis have been wrongly placed within Zygodiscus BRAMLETTE and SULLIVAN (1961), whose type species is a typical Palaeocene coccolith with a double wall. According to PERCH-NIELSEN (1985), Mesozoic forms with a single wall should not be assigned to Zygodiscus. Glaukolithus REINHARDT 1964 was proposed as an alternative. However, the type species Glaukolithus diplogrammus DEFLANDRE in DEFLANDRE and FERT, 1954 was described from Neogene sediments but is believed to be reworked. It is, therefore, difficult to establish the true nature of G. diplogrammus

and we suggest that this generic name be ignored. Zeugrhabdotus REINHARDT (1965) differs from Rectapontis in having a cover in the central area whereas Loxolithus NOEL (1965) is characterised by the absence of any central structure. Tranolithus STOVER (1966) is easily distinguished from Rectapontis in having massive blocks covering part or all of the central area.

Rectapontis compactus (BUKRY) n. comb.

Basionym: 1969 Zygodiscus compactus BUKRY, p. 59, pl. 34, figs. 1-2.

Rectapontis sisyphus (GARTNER) n. comb.

Basionym: 1968 Zygodiscus sisyphus GARTNER, p. 34, pl. 14, fig. 15; pl. 18, figs. 17-19; pl. 21, fig. 6; pl. 22, figs. 5-6; pl. 23, figs. 17-18; pl. 25; figs. 19-22; pl. 26, fig. 6.

Palaeomicula VAROL and JAKUBOWSKI, n. gen.

Type species: Tetralithus quadrisphenus WORSLEY, 1971.

Diagnosis: A nannolith composed of four triangular to subrectangular wedge-shaped elements whose peripheral edges form a square outline in plan view. The sutures between the elements diagonally bisect the square outline and are generally straight or occasionally, inclined.

Description: This square-outlined nannofossil has strongly birefringent elements and the sutures between them define a swastica under cross-polarised light. A notch may or may not be present at each corner of the square but this depends upon the shape of the elements.

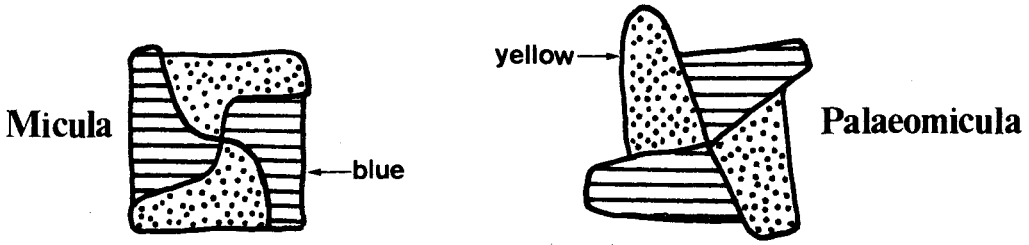

Fig. 1 Micula and Palaeomicula: Cross-polarised, Gypsum plate (1λ), Standard orientation.

Remarks: Palaeomicula is distinguished from the ill-defined Tetralithus GARDET, (1955) by having all its elements strongly birefringent under cross-polarised light, whereas Tetralithus has two birefringent and two non-birefringent elements. This new genus differs from Quadrum PRINS and PERCH-NIELSEN in MANIVIT et al. (1977) by having sutures which diagonally bisect the square outline, in Quadrum the sutures are perpendicular to the peripheral edges. Palaeomicula is distinguished from Micula VEKSHINA (1959) by having wedge shaped elements. The colour distribution of Palaeomicula under cross-polarised light, with a gypsum plate inserted in the light-beam,

in the standard orientation (at an angle of 45° to the polarization direction), is opposite to that of Micula (see Fig. 1). Together with this structured distinction, the new genus has a distinctly different stratigraphic range: Micula (upper Coniacian to Maastrichtian), Quadrum (Turonian to lower Maastrichtian), Palaeomicula (Kimmeridgian to Hauterivian).

Palaeomicula maltica (WORSLEY) n. comb.

Basionym: 1971 Tetralithus malticus WORSLEY, p. 1313, pl. 2, figs. 9-11.

Remarks: P. maltica differs from P. quadrisphena by having triangular to subtriangular wedge-shaped elements and in possessing notches in the corners of the square outline.

Occurrence: WORSLEY (1971) reported P. maltica from Kimmeridgian to Hauterivian but we have so far only recorded it from lower Berriasian sediments in low latitude areas.

Palaeomicula quadrisphena (WORSLEY) n. comb.

Basionym: 1971 Tetralithus quadrisphenus WORSLEY, p. 1313, pl. 2, figs. 12-14.

Remarks: P. quadrisphena is distinguished from P. maltica by having subrectangular wedge-shaped elements, each being joined at right angles to the side of each succeeding element in a spiral fashion.

Occurrence: WORSLEY (1971) reported P. quadrisphena from the Berriasian to the Valanginian but we have so far only observed it in the lower Berriasian of low latitude areas.

Praeprinsius VAROL and JAKUBOWSKI n. gen.

Type species: Biscutum? tenuiculum OKADA and THIERSTEIN, 1979.

Diagnosis: Elliptical to circular placolith consisting of a monocyclic distal shield and a double-cycled proximal shield. The single tube cycle is strongly birefringent, whereas the shields show no birefringence under cross-polarised light. The central area may or may not be closed.

Description: This small placolith is constructed of a monocyclic distal shield which generally possesses zig-zag sutures between its elements. In earlier forms the zig-zag sutures are very strong, but, later forms show weaker zig-zag sutures. The distal shield usually consists of approximately 8 to 20 non to slightly, sinistrally imbricated elements and is larger than the double-cycled proximal shield, which is formed by the same number of non-imbricated elements. The tube cycle is strongly birefringent whilst the shields are non-birefringent under cross-polarised light.

Remarks: Praeprinsius is distinguished from Prinsius HAY and MOHLER (1967) and Toweius HAY and MOHLER (1967) by possessing a single tube cycle and non-birefringent shields (under cross-polarised light) whereas Prinsius and Toweius have double tube cycles and birefringent proximal shields (under cross-polarised light). Praeprinsius differs from Markalius BRAMLETTE and MARTINI (1964) and Geminilithella BACKMAN (1980) by having a double-cycled proximal shield whereas Markalius and Geminilithella have only single cycle proximal shields. Praeprinsius is distinguished from Biscutum BLACK in BLACK and BARNES (1959) and Neobiscutum VAROL (1989) by its double-cycled proximal shield. Futyania VAROL (1989) has a single cycled proximal shield and a distally extended tube cycle whereas in Praeprinsius the tube cycle does not extend distally and it has double cycled proximal shield. Finally Coccolithus SCHWARZ (1894) and Calcidiscus KAMPTNER (1950) differ from Praeprinsius by possessing birefringent proximal shields. Coccolithus also differs in the greater number of elements on the shields, and the sutures between the elements are straight. Calcidiscus further differs from Praeprinsius in possessing a single cycle proximal shield and in lacking a tube cycle.

Praeprinsius africanus (PERCH-NIELSEN) n. comb.

Basionym: 1981 Prinsius africanus PERCH-NIELSEN, p. 842-843, pl. 3, figs. 3,5,6,8,9.

Praeprinsius dimorphosus (PERCH-NIELSEN) n. comb.

Basionym: 1969 Biscutum? dimorphosum PERCH-NIELSEN, p. 318, pl. 32, figs. 1-3a, 4; text-fig. 1.

Praeprinsius tenuiculus (OKADA and THIERSTEIN) n. comb.

Basionym: 1979 Biscutum? tenuiculum OKADA and THIERSTEIN, p. 521-522, pl. 1, figs. 1-2; pl. 9, figs. 1-8.

Rotelapillus crenulatus (STOVER, 1966) PERCH-NIELSEN, 1984

Remarks: Specimens of R. crenulatus are generally misplaced within the Jurassic species Stephanolithion laffittei NOEL (1957) which has two radial bars in the central area. R. crenulatus has a round to broadly elliptical outline and eight radial bars in the central area. These forms are restricted to Cretaceous sediments and do not resemble the original description or illustrations of S. laffittei. The use of the name S. laffittei for forms with eight radial bars in the central area must be abandoned in favour of R. crenulatus.

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JOINT GLOBAL OCEAN FLUX STUDY - PARTICIPATION OF NANNOPLANKTON WORKERS

Time series sediment traps allow particles settling through the water column to be collected over periods of several months, so it is possible to record directly the seasonal fluxes of matter from the ocean surface to the bottom sediment (Honjo et al 1980). Their development provided the inspiration for the Joint Global Ocean Flux Study. This is a major international collaborative research program combining sediment trap sampling with surface oceanographic observations, bottom sampling, remote sensing and numerical modelling. The broad objective is to integrate observations from the various data sources in order *"to identify and quantify the physical, chemical, and biological processes controlling biogeochemical cycling in the ocean, and their interaction with the global atmosphere."* (Anon 1984).

The calcareous nannoplankton are obviously a critical component of these fluxes, and following the satellite detection of coccolithophore blooms (Holligan et al 1983) they have become of topical interest to oceanographers; study of blooms is an explicit component of the program. In addition the combination of observations, sample sets and background data available should make the JGOFS material exceptionally rewarding for study of nannoplankton ecology, productivity, preservation, and taxonomy.

The program is likely to be as important for studies of living nannoplankton as the DSDP / ODP has been for the study of their ancestors. One of the many differences between JGOFS and ODP is, however, the relative lack of corporate bureaucracy, so nannoplankton workers in JGOFS need to develop contacts with each other directly. AS A CONTRIBUTION TOWARD THIS I WILL INCLUDE IN THE NEXT ISSUE AS FULL A LIST AS POSSIBLE OF RELEVANT WORKERS, IF YOU ARE INVOLVED PLEASE LET ME KNOW.

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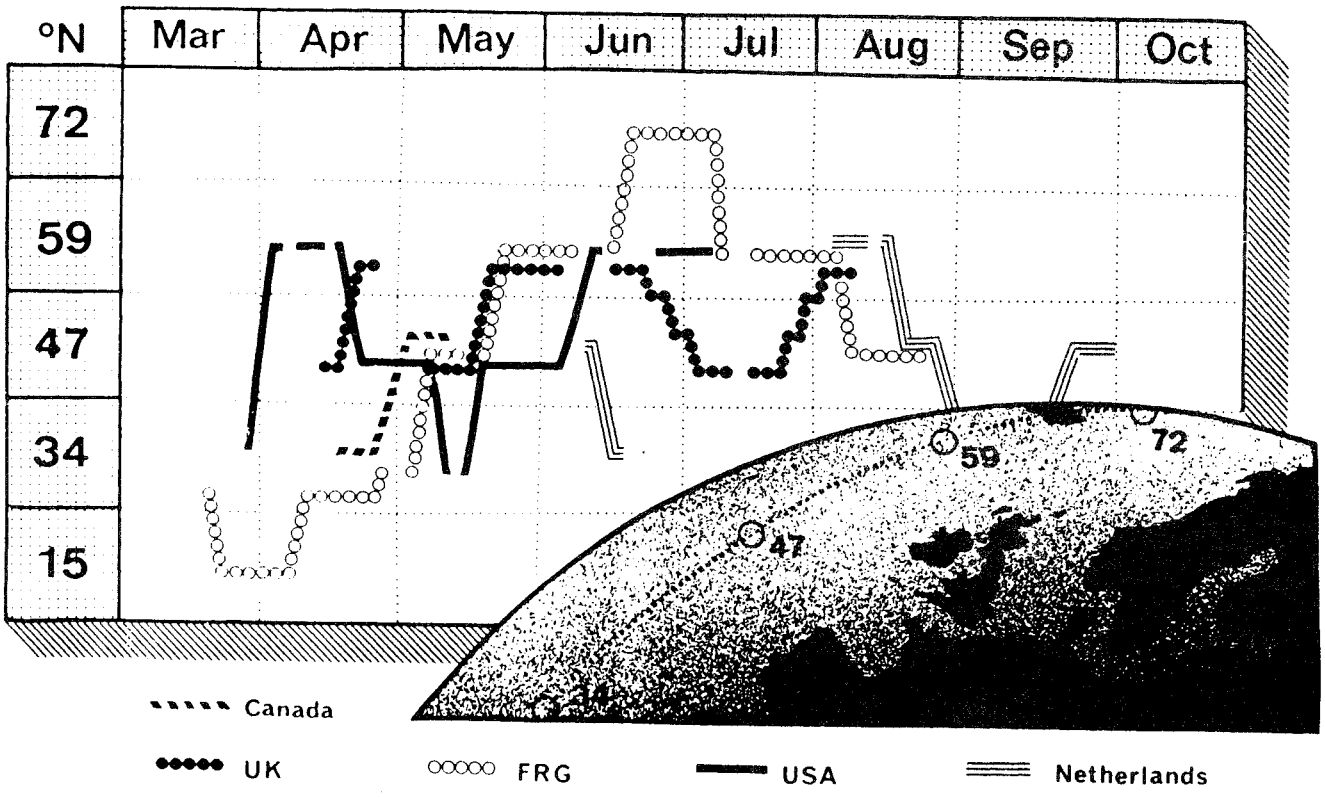

JGOFS Pilot Study in the North East Atlantic, 1989. Cruise transects and stations around 20° W (except Canada, 55-40° W) with NASA aircraft overflights at 34°, 47° and 59° N between late April and early June.

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