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EDITORIAL AND ANNOUNCEMENTS
This is issue is late I am afraid - partly a result of my being distracted by other matters, and partly a result of my waiting for a couple of contributions which never materialised (all the actual contributors to this issue gave me their copy well on time). I have included for the first time an article (as opposed to review) of my own - on Quaternary Nannofossil Zonation - as an example of one type of article which I regard as being useful for the Newsletter, and unlikely to be publishable elsewhere. I would be grateful for any similar contributions. Also any comments or corrections on the range chart will be received in good spirit and published if appropriate.

PRAGUE 1991 INA CONFERENCE
The planning for this meeting is well advanced, details will be given in the Third Circular and the Abstract volume. All submitted talks were accepted.

INA BUSINESS & OFFICERS
There will be an INA business meeting at Prague to organise ourselves for the next two years. Magdy Girgis will be quitting as Secretary / Treasurer and so a replacement needs to be elected. In addition. The main posts available are Secretary/Treasurer and President - Magdy Girgis definitely intends quitting owing to pressure of other commitments, and Katharina feels that having been President since the inception of INA it is time for a change. I am willing to continue as editor, but would be happy to let anyone else do it instead.

Anybody who is interested either in doing a specific job for INA or in generally offering their services should contact the President or another officer.

Our finances are currently healthy (see accounts at the end of this issue) so we probably will not need to raise the fees.

FLORENCE 1989 INA MEETING PROCEEDINGS - update from Domenico Rio
The publication of this volume is proceeding well, albeit slower than had been hoped. All the articles are now at proof stage and actual publication should be some time this winter.

The contents list is given below [N.B. I have retyped the list so don't worry if there are minor mistakes in your title, JRY].

1. Bown, Burnett, & Gallagher - Calcareous nannoplankton evolution.
2. Cobianchi, Erba & Pirini - Evolutionary trends of calcareous nannofossil genera Lotharingius and Watznaueria during the Early and Middle Jurassic.
3. Erba, Castradori & Pirini - Compilation of Upper Triassic calcareous nannofossil ranges.
4. Reale, Baldanza, Monechi & Mattioli - Calcareous nannofossil biostratigraphy events from the Early-Middle Jurassic sequences of the Umbria-Marche area (Central Italy).
5. Bown & Ozkan - Review of calcareous nannofossil biostratigraphy and correlation across the Jurassic-Cretaceous boundary.
6. Kale & Pashalkar - Nannofossil biostratigraphy of the Utatur Group, Trichinopoly District, South India.
7. Kilasonia - Calcareous nannofossil biostratigraphy of the Upper Cretaceous of Georgia
8. Toker & Sagular - Relation between calcium carbonate concentration and nannofossils abundance in the Maastrichtian Gokdere Formation, Central Anatolia, Turkey.
9. Pospichal, Wei & Wise - Probing the limits of nannofossil stratigraphical resolution in the Southern high latitudes.
11. Lamolda & Gorostidi - Nannofossil stratigraphy record in upper Maastrichtian - lowermost Danian at Zumaya (Northern Spain)
12. Gavtdze - Palaeogene nannoplankton stratigraphy of Georgia.
14. Wei & Wise - latitudinal biogeographic gradients of Late palaeogene calcareous nannoplankton in the south Atlantic Ocean.
15. Wei - Biometric application of Discoaster multiradiatus and its biochronological utility.
16. Firth - Analysis of the taxonomic, biostratigraphy and evolutionary relationship of species of the calcareous nannofossil genus Cyclicargolithus (Bukry 1971) from the upper Eocene and Oligocene of the North Atlantic.
17. Olafsson & Villa - Reliability of sphenoliths as zonal markers in Oligocene sediments from the Atlantic and Indian Oceans.
18. Minashvili - Calcareous nannofossil biostratigraphy and correlation of oligocene and Miocene deposits of Georgia.
19. Olafsson - Oligocene / miocene morphometric variability of the Cyclicargolithus group from the equatorial Atlantic and Indian Oceans.
20. Patacca, Scandone, Bellatella Perilli & Santini - The Numidian sand event in the Southern apennines.
22. Bonci-Pirini - Presence of small Gephyrocapsa in late Miocene diatomaceous levels (S.Agata Fossil Formation, Serravalle scrivia, Allesandria, Italy).
23. Chepstow-Lusty, Shackleton & Backman - Upper Pliocene Discoaster abundance variations from the Atlantic, Pacific and Indian Oceans: the significance of productivity pressure at low latitudes.
24. Giradeau - Coccolith palaeotemperature and palaeosalinity estimates in the Caribbean Sea for Late - Middle Pleistocene (DSDP Leg 68 - Hole 502B)
25. Spaulding & Oba - Association of Late Pleistocene calcareous nannofossil assemblages and δ¹⁸O and δ¹³C isotopic exchanges, ODP Leg 117, Oman Margin, arabian Sea.
27. Okada - Biogeographic control on modern nannofossil assemblages in surface sediments of Ise Bay, Mikawa Bay and Kumano-Nada, off the coast of central Japan.
The 2nd Asian/Pacific INA Conference will be held at Yamagata University in Yamagata, Japan. The conference coincide with the last phase of the 29th International Geological Congress (IGC) which will be held in Kyoto from 24 August through 3 September, 1992. The INA Conference is not a part of the IGC and there is no need to register for IGC if you want to participate only in the INA Conference.

Sessions are rather informal and no publication of the conference other than abstracts is planned. All aspects of calcareous nannofossils as well as living nannoplanktons can be presented by oral or poster presentations. A couple of special lectures by Japanese biologists who specialize the physiology and calcification of calcareous nannoplankton as well as the classification and formation of organic scales of other golden-brown algae will be presented. A workshop to standardize the quantitative measurement of nanno-assemblage is also planned. A post-conference field excursion (leader: Dr. T. Takayama) in the Boso Peninsula to study Middle Miocene to Upper Pleistocene marine sequence is also under consideration.

Yamagata is about 3 hours from Tokyo by train and under 1 hour by plane. In addition to the new express train service just started between Narita Airport and Tokyo Station, the planned direct bullet train service between Tokyo Station and Yamagata will make a train trip to Yamagata very attractive. There are also 3 flights daily from Kyoto (Osaka Airport) to Yamagata so IGC participants will have no difficulty to join the INA Conference.

To assure receiving the second circular, please complete the following questionnaire and return it to:

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Faculty of Science  
Yamagata University  
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Before 30 August

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Forename ________________________________ Surname ________________________________

Title ________________________________ Mailing Address ________________________________

Telephone ________________________________ Fax ________________________________

(please Circle the right answer)

I plan to attend the Conference ____________________ yes ____________________ maybe
I plan to give an oral presentation ____________________ yes ____________________ maybe ____________________ no
I plan to give a poster presentation ____________________ yes ____________________ maybe ____________________ no
I plan to take part in the excursions ____________________ yes ____________________ maybe ____________________ no
BOOK REVIEW - CALcareous NannoPlankton Biocoenosis: Sediment Trap Studies
IN THE Equatorial Atlantic, Central Pacific, and Panama Basin
J.C. Steinmetz, ed. S. Honjo,

This nicely produced volume compares the calcite fluxes and species assemblages at three sites using material from a vertical array of sediment traps, as part of the Particulate Flux Experiment (PARFLUX). There are two principal parts, first a documentation of methods, and results including quantification of coccolith carbonate fluxes, second a taxonomic section documenting the nannoplankton observed. The methods section describes how ccccospheres were counted using an inverted microscope and a settling chamber, but notes that "the estimates of the numbers of ccccospheres per millilitre represent a minimum; ccccospheres less than about 10μm were not recognizable using a x40 objective lens" and "therefore, all small ccccospheres, especially Emiliania huxleyi, were not accounted for in the estimates". The coccoliths were counted using a similar method but with no apparent recognition problems. Species identification, relative abundance and state of preservation were all determined using an electron microscope. From the results of the relative abundance counts small species like E. huxleyi, Crenalithus sessilis and Gephyrocapsa oceanica were reported as frequent to abundant at most sites and depths. The minimum coccosphere count may therefore be a gross underestimate of the true value. Perhaps the author should have conducted both the coccolith and coccosphere counts using the SEM where magnification is less of a problem. By passing a known quantity of sediment trap material through a Nucleopore filter, quantitative measurements could have been made, and many of the difficulties could have been avoided.

The taxonomy section is unfortunately based upon the classification system of Tappan (1980), rather than Okada & McIntyre (1977) and subsequent papers by other authors. The Tappan system inferred too many unsubstantiated evolutionary relationships resulting in dubious family and order associations. In addition several invalid synonymies were introduced, e.g. the proposal that Florisphaera is synonymous with Deutschlandia! Steinmetz has avoided some of these errors, but there are still some howlers, for instance the inclusion of Thoracosphaera in the coccolithophorids, it has been shown from life-cycle studies that T. heimii is a calcareous dinoflagellate (Inouye & Pienaar, 1983). There are also a number of invalid names. For instance, Haptophyta, Haptophyceae = Prymnesiophyta, Prymnesiophyceae (Hibberd, 1976); Cyclococcolithus = Calcidiscus (Loeblich & Tappan, 1978); Gephyrocapsaceae = Noelaerhabdaceae (Jerkovic, 1970). Nonetheless, the actual species identifications are reliable, although the taxonomy is outdated (there is a noticeable shortage of post 1980 references in the bibliography). For instance Gliscolithus amitakarenae (Norris 1985) is illustrated as unid. sp. 1. Also Scapholithus fossilis is illustrated from shallow water sediment traps - and so presumably the modern nannoflora (reworked nannofossils occur in some deeper traps). I think these specimens, and probably those reported in the literature from surface sediments, should be assigned to Calciosolenia murrayi which incidently would take priority over Scapholithus. Despite this, the author must be complemented for the high quality of his accompanying plates, especially those at high magnification. Micropalaeontologists will doubtless welcome the emphasis on ultrastructural details of individual coccoliths.

If this document had been published ten years ago many of my criticisms would have been unjustified. However, this is a 1991 publication and whilst I am unaware of the events leading to its obvious delay, it is difficult to understand why it was published without bringing it up to date. The inclusion of a reference to Samtleben and Bickert (1990) implies that there was the opportunity to do so prior to publication. The fact that this was not done means the introduction into the literature of erroneous and misleading information, which in the wrong hands may perpetuate the confusion. However, knowing that these problems exist, the article is worth purchasing just for the beautiful micrographs and new species descriptions, and at $10 is very good value.

Ric Jordan, British Antarctic Survey, Cambridge

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ODP Leg 134 drilled the Vanuatu arc-ridge collision zone. Two ridges, one nearly continuous and the second composed of seamounts and guyots, are being subducted below the New Hebrides Arc. Sediments and crustal rocks of the continuous ridge have been offscraped and accreted onto the forearc during subduction, whereas the chain of guyots has produced much less deformation as it is subducted. Geochemical anomalies indicate possible channelized fluid flow along thrust faults within the accretionary prism. The nannofossil worker was Scott Staeker (FSU, Tallahassee Florida).

ODP Leg 153 drilled the Lau Basin, an actively spreading back-arc basin. The basin is older than expected (>5.6Ma) with seafloor-type spreading only occurring in the last 1Ma. Prior to this, extension occurred by repeated extensional rifting & associated local volcanism. A large variety of igneous basement rocks indicate complex heterogeneity of the mantle source. A surprising recovery of Eocene or older rhyolitic tuffs in this ocean has raised many questions as to their source. Nannofossil workers were Paula Quinterno (U.S.G.S., Menlo Park, California) & Michael Styzen (Shell Offshore, New Orleans, Louisiana).

ODP Leg 136 drilled the Hawaiian Arc, south of Honolulu. Hole 843B was cored 70m into basement to provide a test site for emplacement of an Ocean Seismic Network broadband seismometer. Nannofossils recovered immediately above basement indicate an age of late Albian to early Cenomanian. This is the first direct age date of ocean crust in Hawaiian region. John Firth was the nannofossil worker.

ODP Leg 137 re-entered hole 504B, the deepest hole drilled into oceanic basement, & cleared the hole of debris to prepare for future drilling & downhole tool experiments. No palaeontologists sailed on this cruise.

ODP Leg 138 (May 6 - July 5 1991) will drill in the eastern Pacific Ocean to study Neogene high resolution palaeoceanography. The nanofossil palaeontologists will be Jose Abel Flores (Salamanca University, Spain) & Isabella Raffi (Parma University, Italy).

ODP Leg 139 (July 10 - Sept 11 1991) will drill in the sediment covered spreading centres of the Juan de Fuca ridge and the Gorda Ridge in the north east Pacific Ocean to study submarine hydrothermal systems & hydrothermal deposits. The nanofossil palaeontologist will be Shaozi Mao (FSU Tallahassee, Florida).

ODP Leg 140 (Sept 16 - Nov. 12, 1991) will either drill in Hole 504B through the sheeted dike complex in hopes of reaching layer 3 of the ocean crust or drill a complete section of ocean crust generated at a fast spreading centre with a subduction zone. No palaeontologists will sail on this cruise.

ODP Leg 141 (Nov. 17 1991 - Jan. 13 1992) will drill the Chile Triple Junction in order to provide a history of processes during the collision of a spreading centre with a subduction zone. **Leg 141 is being staffed at this time**.

ODP Leg 142 (Jan. 18 - Mar. 19, 1992) will drill the East Pacific Rise. Mostly engineering operations will happen, such as setting a hard rock guide base on the East Pacific Rise. No palaeontologists will sail on this cruise.

ODP Leg 143 (Mar. 24 - May 19, 1992) will drill atolls & guyots to determine the Cretaceous and early Cenozoic history of the Marshall Islands region. **Staffing for this leg will begin this summer**.
ODP Leg 144 (May. 24 - July 19, 1992) will be the second atolls & guyots leg and will study the Cretaceous history of simultaneous drowning of guyots of the northwest Pacific. ** Staffing for this leg will begin this summer **.

ODP Leg 145 (July. 24 - Sept 21, 1992) will drill a North Pacific transect to study the palaeoceanography and plate reconstruction of northern high latitude Neogene and older sediments. ** Staffing for this leg will begin this summer **.

ODP Leg 146 (Sept. 26 - Nov.21, 1992) will drill the Cascadia accretionary prism, in order to determine the nature of channelled and unchannelled flow of fluids escaping from the Cascadia margin. ** Staffing for this leg will begin this summer **.

ODP Leg 147 (Nov.26 1992- Jan 21, 1993) will either continue operations on the East Pacific Rise (hard rock drilling) or core a complete section of oceanic crust generated at a fast spreading ridge (again hard rock drilling, this time in the Hess Deep). No palaeontologists will sail on this cruise.

To apply for participation as a shipboard scientist on an ODP cruise, send a letter of request and a resumé (curriculum vitae) to the manager of Science Operations, Ocean Drilling Program, Texas A & M University, Research Park, College Station, Texas, 77845. You will receive an application form to fill out and return to ODP.
In this issue we shall discuss the names of genera and subdivisions of genera, as dealt with in section 3 of chapter 3 of the ICBN, Articles 20 to 22.

**ARTICLE 20**

20.1: The name of a genus is a substantive in the singular number, or a word treated as such, and is written with a capital initial letter (see Art. 73.2). It may be taken from any source whatever, and may even be composed in an absolutely arbitrary manner.

20.2: The name of a genus may not coincide with a technical term currently used in morphology unless it was published before 1 Jan. 1912 and accompanied by a specific name published in accordance with the binary system of Linnaeus.

20.3: The name of a genus may not consist of two words, unless these words are joined by a hyphen.

20.4: The following are not to be regarded as generic names:

(a) Words not intended as names
(b) Unitary designation of species

This article does not seem to cause any problems. At least, I can't recall any contravention of it. The third paragraph, however, warrants some discussion. Contrary to its equivalent for specific epithets, that states that "an epithet not so joined is not to be rejected but, when used, is to be united or hyphenated", the discussion and examples accompanying this rule for generic names actually state that such a name is to be rejected. Theoretically this could be a problem, since such a name is not defined as invalid nor illegitimate in Art. 6: it appears to be an omission in the ICBN. Fortunately it is not a real problem, as the only examples I can think of (Eu-discoaster, Helio-discoaster) were published with a hyphen.

More controversial, perhaps, are some of the recommendations. Again I must stress that recommendations are not to be ignored, as they often evolve into rules.

**Recommendation 20A**

20A.1. Authors forming generic names should comply with the following suggestions:

a) To use Latin terminations insofar as possible
b) To avoid names not readily adaptable to the Latin language
c) Not to make names which are very long or difficult to pronounce in Latin
d) Not to make names by combining words from different languages
e) To indicate, if possible, by the formation or ending of the name the affinities or analogies of the genus
f) To avoid adjectives used as nouns
g) Not to use a name similar to or derived from the epithet of one of the species of the genus
h) Not to dedicate genera to persons quite unconnected with botany or at least with natural science
i) To give a feminine form to all personal generic names, whether they commemorate a man or a woman (see Rec. 73B).
j) Not to form generic names by combining parts of two existing generic names .... because such names are likely to be confused with nothogeneric names. [in hybrids].

Only a few of these stand out as necessary to keep in mind. The most common contravention of a) are generic names with Greek terminations, such as Corollithion, Rombolithion, Stephanolithion. c) may be considered subjective, but I would vote for Pseudotriquetrorhabdulus as an example. h) implies that although it is perfectly
alright to name a species after your girlfriend or your father, you should not do that with a genus. But perhaps the one least known and most important is point i), which is further discussed in Art. 73 and Rec. 73B.

I would like to refer to INA Newsletter 12(2) where I discussed the relevant part of Art.73. The recommendation is as follows:

**Recommendation 73B**

73B.1. When a new name for a genus, subgenus, or section is taken from the name of a person, it should be formed as follows:

a) When the name of the person ends in a vowel, the letter -a is added, except when the name ends in -a, when -ea is added, or in -ea, when no letter is added.

(thus *Emiliania* after Emiliani, *Hondaea* after Honda)

b) When the name of the person ends in a consonant, the letters -ia are added; when the name ends in -er, the terminations -ia and -a are both in use.

(e.g. not *Prinsius* but *Prinsia* after Prins, not *Haqius* but *Haqia* after Haq, and *Stradneria* after Stradner, not *Kamptnerius* but *Kamptneria* after Kamptner).

c) In latinized personal names ending in -us this termination is dropped before applying the procedure described under a) and b).

Unlike the equivalent recommendation for specific epithets, there is no rule that states that the use of a termination contrary to the recommendation is to be treated as an error to be corrected. So *Kamptnerius, Haqius* and *Prinsius* are the correct forms, even though *Kamptneria, Haqia* and *Prinsia* would have been preferable.

In Chapter IV on orthography, where Art. 73 is found, there are a few more rules referring to generic names. Most are not very relevant to nannoplankton (art. 75, 76.1,2), but some are helpful:

76.3: Arbitrarily formed generic names or vernacular names or adjectives used as generic names, whose gender is not apparent, take the gender assigned to them by their authors. If the original author failed to indicate the gender, the next subsequent author may choose a gender, and his choice, if effectively published (...), is to be accepted.

76.4: Generic names ending in -oides or -odes are treated as feminine and those ending in -ites as masculine, irrespective of the gender assigned to them by the original author.

*E.g.: Flabellites oblongus, Ceratolithoides arcuata*, but *Ceratolithoides aculeus*, since the latter is a noun!

I shall skip the rules dealing with the names of subdivisions of genera, since these are not normally used in nannoplankton literature. That then only leaves the supra-generic taxa to be discussed next time.

**REFERENCES:**


Heck, S. E. van, 1990: The ICBN: things you need to know - 2. INA Newsl. 12/2, 8-10
WRITING AND TALKING - IN ENGLISH AS YOUR SECOND OR THIRD LANGUAGE

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In the following I will mix the hints from two short papers on publishing and giving talks by H.J. Oertli (Pau; personal communication) with my own experience from much reading and from many meetings and conferences.

Remember the "what, why, when, how, where and who" that served Rudyard Kipling as "six honest serving-men" that "taught me all I knew".

What you want to write/talk about will depend on what you have been working on lately - new observations?, new ideas?, new aspects in an old debate?, a long due overview? Avoid an exact repetition of something you have talked or written about before - unless you expect a quite different audience and/or readership. Think of the prospective audience: what aspects of your research will interest them most? An INA audience will be interested in more details about the distribution of coccoliths, the presence or absence of marker species etc. than your country's Geological Society (and less interested in the regional geology).

Why you want to give a talk or publish a paper may differ from occasion to occasion. These days very few people get travel funds to attend a conference unless they contribute at least an abstract and a talk or poster. You may need a certain number of publications to advance your career. Most important, and often the background for the best talks or publications: you have exciting new results and you want to share them with your colleagues. You might hope to inspire others, to start a debate. Experience tells that very rarely will you get much response from your peers: little or no discussion after your talk - especially if you used up all your allocated time! Little or no response either to your written statements, even if you send reprints to all those that should be interested. So keep within the time allowed and, if possible, structure your talk so that an intelligent audience will have questions. As for publications: do initiate a correspondence on topics you are interested in after reading a paper. And keep hoping your colleagues will do the same.

When you talk and/or publish will not depend solely on when you have something to talk or write about or when you think you know all about a certain topic that there is to know. You may be working in a team that has finished its study and wants/has to publish its results. Good teamwork is stimulating and there will be colleagues to read your part critically - also in their own interest! You may want to publish or talk about a partial result of a thesis or other voluminous study. Do so, by all means. So many theses are never published and preparations for an early talk or publication may make you realise that important aspects of the study have not yet been addressed. If you realise that a colleague is working on the same topic as you there are several choices: you hurry and publish first, you give up and assume that he/she will do a better job or you contact your colleague and propose a co-operation. I suggest the latter: you may win a friend. The first possibility is more likely to leave you if not with an enemy at least with a rather unhappy colleague.

When you want to attend a meeting or are invited to give a talk or write a paper about a topic you are known/assumed to master better than other colleagues available, you might not really have something new and decide to adapt an old theme to the different audience/readership. You also may decline the invitation.

How? Many scientists find it useful to start a new investigation with a kind of table of contents and, in so doing, roughly follow the editor's IMRaD: Introduction, Materials/Methods, Results and Discussion. The same is useful when preparing a talk.

But, do not forget the title! The title is the first thing any prospective listener or reader will encounter of your efforts. Often he/she will decide from the title alone whether or not to attend your lecture or read your paper. Thus it should contain most of the key-words you want your talk/paper to be registered by. In our case, state the kind and the age of the flora you discuss (Miocene calcareous nannofossils), what your main interest...
is (biostratigraphic study of; taxonomy of; biogeography of; etc) and, if relevant, where your material came from (North Atlantic; Georgia; South China Sea etc.).

The introduction will include the state of the art before you started your research. There should be a definition of the gap in our knowledge you want to fill and how you intend to do this.

What type of materials and methods have you carried out your investigations with? Describe new techniques used, discuss possible errors and explain how you arrived at your results.

The chapter on results should only include the results of YOUR studies, not a mixture of known and new. Discuss also your problems and results that do not correspond to an initial hypothesis that you might have had.

In the discussion/conclusion part of your talk/paper point out the significance of your results. You can make comparisons between previous and your studies. Also, you may find that your results can be interpreted in different ways.

Finally, you will have to prepare a reference-list, acknowledgments, an abstract and illustrations. For the reference list you will be grateful for your discipline in updating a list on your wordprocessor or on cards with the complete entries of the references that you consulted during the study. You are likely to have received the help of colleagues and friends in the course of your investigation: acknowledge it. Or, if their scientific contribution was significant, invite them as co-author(s).

After an informative title, an informative abstract is very important. A prospective reader or listener can turn to the abstract first before deciding to attend your lecture or to read your paper. Thus it should include enough of your results to make a reader curious to go on reading or to attend your talk.

The illustrations are an important part of many papers and almost all talks. In an illustration for a publication you can include many details. If at all possible, do not use the same illustrations for a talk, however, since such details will not be readable behind the first two rows of the audience, be it as a slide or as a transparency. With the latter you can improve matters and you may save the situation by highlighting, with a feltpen and in large letters, the information that you want to get through to your audience. Do not try to include more than about ten lines of text on a slide.

I support the inclusion of the names of fossils under their illustration on a plate. This makes it easier for the reader to compare forms without having to refer to a legend which may be several pages away. Also, one can compare a figure with the name directly with a microscopic view instead of having to follow a triangle with the eye for the same purpose of correlating picture, name and microscope view. If Cambridge University Press could produce such plates back in 1985 in Plankton Stratigraphy (Bolli et al.), this should be possible in many publications now - but one has to insist with the editor(s). The author then has to place the nicely written/printed name directly under the illustration. If you do not have a laser printer, ask a colleague with access to such a magic machine to do this for you. If you send a typewritten list of the names you need, this will not take much more time than an extended coffee break or two.

While you write your first draft, do not stop for stylistic, orthographic or other uncertainties but leave blanks to be filled in later. Compose provisional drafts for figures. Once completed you will have to continue with a first, second, third etc. revision of your manuscript. Once you feel reasonably happy with the results of your efforts, submit it to colleagues and friends. The former will comment on the scientific content, the latter may pick up passages difficult or impossible to understand. Both may improve your English. [and whenever possible get a native English speaker to read it - ed.]. Do not despair if your masterpiece comes back heavily annotated - this is a hard experience but perfectly normal. Rewrite the paper and, if necessary, repeat the submitting process.

Where you publish will depend on the content and the length of your MS. A major journal is a guarantee for a wide distribution of your paper. A specialist journal is advisable, when your results are likely to be of interest only for other specialists. Be sure to follow exactly the guidelines for authors.
Where you talk - well, these words have been written specially for those who intend to give a talk or talks at the forthcoming INA conference in Prague. You may find them useful also on other occasions.

**DO'S AND DONT’S IN TALKS**

Do imagine what would happen to our english/american colleagues if they gave their talks in your language....They will appreciate your efforts to do it in english, even if you make mistakes or cannot find one or the other word during your talk.

Do not give a talk by reading aloud a manuscript intended for print. You are likely to read too fast for a non-english/american audience to follow. Also, sentences constructed for reading are often too complicated to be grasped when listening. By the time one understands, the talker is already several sentences further and one has lost the connection. From this follows:

Do prepare a special text to read if you are one of those persons who feel happier with a complete text than with notecards containing only keywords or no written notes at all. The structure can be the same, following the above mentioned IMRaD schedule, but the text should contain less detail and simpler sentences.

Do illustrate your talk with informative and readable transparencies and/or slides (see above). This allows your colleagues whose english is very rudimentary to grasp at least some of the content of your investigation. Make up readable illustrations with the main conclusions (not more than 10 lines on a slide or transparency).

Do limit your illustrations to 1/minute. Imagine how many slides/ transparencies pass before the eyes of an audience during a day. How many of them are you able to recall the next day?

Do prepare yourself for the talk. Get an idea how much you can say in 10, 15, 20 or however many minutes you have. Make sure you reach the conclusions in time. If you always run out of time at the end and thus are likely not to reach the conclusions, bring them at the very start of your talk. This takes away any suspense as to what your conclusions might be but it is better than leaving your listeners uninformed and in suspense at the end of your talk.

Do talk loudly to your audience rather than mumbling into a manuscript. Try to make eye-contact with friends or other attentive listeners in the audience from time to time.

Do face your audience, even while showing slides. If you have many slides you are likely to show your back to the public most of the time while explaining the slide. One way of avoiding this is to make the slides self-explanatory: include the name of the fossil you want to show on the illustration; write out an explanation or figure-text (in big letters!) and include it in the illustration before you prepare the slide.

Do face your audience when showing transparencies. This is easier than when showing slides, since you can point with a transparent arrow or with a pointed pencil to the part of the illustration you are talking about on the transparency itself. You do not need to turn around to the projected picture of the transparency. So please don’t.

Do keep within the time allowed for your talk or stop early, if otherwise there is no time for discussion.

And finally, do remember that most of the listeners and other speakers are not perfect presenters either nor do they master the english language perfectly. By keeping to most of the do’s and don’t’s listed here you can be
certain that your talk will be better than most talks I have listened to in the past 30 years. I am looking forward to that.

SOME ADDITIONAL SUGGESTIONS OF THE EDITOR
- For most nannoplankton work the bulk of the data can be summarised on distribution charts and text discussion can be limited to points of particular interest.

- Information on preservation and abundance of the flora and on the relative abundance of individual taxa should always be given.

- Be very careful when quoting ages in Ma to also give the relevant zonal information this is based on - some papers by well known workers are virtually useless because all results are related solely to an "absolute" time scale.

- In talks transparencies made by photographing plates of black and white light micrographs do not work, rephotographing the specimens with colour film is far more effective.

- For INA audiences include plenty of pictures of coccoliths.
A QUATERNARY NANNOFOSIL RANGE CHART
Jeremy R. Young, The Natural History Museum, London

Quaternary nannofossils have been carefully and intensively studied over the past twenty years (references below) resulting in a zonation scheme which is remarkable in at least three ways. First, it has very fine resolution, around 200,000 years. Second, the zonation appears to be very reliable throughout low latitudes. This is indicated both by consistency of sequence of events (compare e.g. Matsuoka and Okada 1989 and Rio et al 1990) and by correlations with oxygen isotopes and magnetostratigraphy (e.g. Backman & Shackleton 1983, Thierstein et al 1977). Third, it is based on rather subtle events, there is no great change in nannofloras during the Pleistocene.

The range chart (Figure 1) summarises the development of quaternary nannofossil assemblages and the zonation based on this development. The diagram is almost entirely based on published work with limited input from my own experience.

DISTRIBUTION NOTES

Reticulofenestra spp. - this includes all reticulofenestrid coccoliths without slits or bridge (common names R.minutula , Crenalithus doronicoides, Dictyococcites productus, etc.). Range of large (56.5-9 μm) variety from Pujos (1985 = G.doronicoides var.3), Takayama & Sato (1986 = Reticulofenestra sp. A), Matsuoka & Okada (1989 = Reticulofenestra sp. A).

Pseudoemiliania lacunosa - during the Pleistocene the larger circular forms of this species become more abundant relative to smaller elliptical forms e.g. Gartner (1977), Matsuoka & Okada (1989). A detailed study of this trend is in preparation (Negri et al in press).

G.protohuxleyi - different authors give rather varying distribution patterns for this taxon so acmes of it may not be stratigraphically useful.

Small Gephyrocapsa - general grouping of Gephyrocapsa species <3.5 μm, such as G.aperta, G.ericsonii, and G.sinuosa, can include G.protohuxleyi (N.B. More sophisticated definitions of the group are possible, see Matsuoka & Okada 1990). The acme around the NN20/21 boundary is based Verbeek (1990), with support from Pujos-Lamy (1977), Breheret (1978) and Matsuoka & Okada (1990). It is now well established that the group occurs down to the mid-Pliocene (e.g. Driever 1989).

Larger Gephyrocapsa species - Matsuoka and Okada (1990) suggested that three evolutionary cycles of development of larger Gephyrocapsa could be recognised in the Pleistocene, and there is abundant confirmatory evidence for the pattern they describe in other studies (Samtleben 1980, Rio 1982, Bergen 1984, Takayama & Sato 1986, Rio et al 1990). It is thus possible to use phylogenetic definitions of the species (cf. Young 1990 fig. 7/C). In any given larger Gephyrocapsa assemblage a range of morphotypes occurs but the presence of characteristic end member morphotypes enables most assemblages to be rapidly assigned to one of the evolutionary cycles/species. On the chart I have used the designations of Matsuoka & Okada (Gephyrocapsa spp. A-D) and the species names which seem most appropriate/valid, short synonymies are given below for them and outlines of their characteristics.

Calcidiscus macintyrei - Various criteria have been proposed for subdividing the genus Calcidiscus, for the purpose of Quaternary stratigraphy separation of specimens >10 μm across, as C.macintyrei, has proven most successful (e.g. Rio et al 1990).

Umbilicosphaera - The medium sized (4-8 μm) species U.sibogae (syn U.mirabilis) is rather characteristic of the Pleistocene but appears to evolve gradually from the small (2-4 μm) Neogene species U.jafari. (my. obs.).
The elliptical species *U. hulburtiana* has only occasionally been recorded (e.g. Biekart 1989, Matsuoka & Okada 1989), so its range is uncertain.

*Coccolithus pelagicus* - the shift to higher latitudes (>35° cf. Nishida 1980) of this species has been widely noted, e.g., McIntyre & Be (1967), Raffi & Rio (1979), Nishida (1980). Pujos (in press) discusses possible interpretations of occasional lower latitude occurrences.

*Helicosphaera inversa* - This species was described by Gartner (1977), the restricted range in the late Pleistocene is confirmed by e.g. Takayama & Sato (1986), and Matsuoka & Okada (1989). It is distinguished from *H. sellii* by having a bar which points toward the wing.

**TAXONOMIC NOTES - LARGER GEPHYROCAPSA SPECIES**

N.B. Taxonomic references for the other species can be found in Perch-Nielsen (1985).

*G. spp. A & B / Gephyrocapsa caribbeanica* Boudreaux & Hay 1967


**Characteristic morphotype;** Bridge steeply inclined (40-60°) to the transverse axis, central opening narrow to nearly closed. Coccolith length up to 7μm. The group is often divided into *G. caribbeanica* and *G. oceanica* on the basis of central opening size.

*G. sp. D / Gephyrocapsa oceanica* Kamptner 1943

*Gephyrocapsa oceanica* Kamptner 1943 p.45, figs.4-5; Samtleben 1980, p.111, pl.15/5-8.


**Characteristic morphotype;** Bridge at moderate angle (20-40°) to transverse axis, lower angle in later forms. Central opening wide. Coccolith length up to 6μm.

*G. sp. C / Gephyrocapsa omega* Bukry 1973


*Gephyrocapsa oceanica* sp. rodella Samtleben 1980, p.112, pl.15/9-11.


**Characteristic morphotype;** Bridge at low angle (15-30°) to transverse axis. Central opening moderately wide. Coccolith length up to 5μm.

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Compiled by William G. Siesser

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Amithalithina sigmundii POSPICHAL & WISE 1990c, pp. 626-627, pl. 5, fig. 3. Maud Rise; early to middle Eocene.


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Cyclicargolithus gammation (BRAMLETTE & SULLIVAN) SHAFIK 1990, p. 483; (ex Coccolithus).

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Psyktosphaera firthii POSPICHAL & WISE 1990a, pp. 474-476, pl. 5, figs. 1a-1d. Maud Rise, Weddell Sea; lower Maestrichtian.

Reticulofenestra orangensis (BUKRY) SHAFIK 1990, p. 486; (ex Coccolithus?).

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Calcispheres

Calcispheres


Carnicalyxia tabellata JANOFSE 1990, pp. 262-263. Italy; lower Carnian.


Pentadinellum oblatum KEUPP 1990a, pp. 283-284; Bermuda; Holocene.

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NEW TAXA

Calcareous Nannoplankton Genera

Amithalithina
Bicolumnus
Psyktosphaera

Calcareous Nannoplankton Species

carterae var. dentata, Pleurochrysis
covingtonii, Corollithion
firthii, Psyktosphaera
neocoronum, Biscutum?
ovatus, Bicolumnus
sigmundii, Amithalithina
watkinsii, Neocrepidolithus

Calcisphere Genera

Carnicalyxia
Pentadinellum
Wallia
Wallidinellum

Calcisphere Species

dalei, Wallidinellum
irregularis, Obliquipithonella
melloi, Wallia
oblatum, Pentadinellum
patagnoica, Scrippsiella
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USA ACCOUNT

INCOME

OPENING BALANCE

SUBSCRIPTIONS AND SALES OF BACK ISSUES

INTEREST

TOTAL

US $ 2309.00

2741.00

149.00

5199.00

BALANCE

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CURRENT MEMBERSHIP

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<td>TOTAL MEMBERSHIP</td>
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INA Newsletter 13/1 - 1991
NEWSLETTER - ADVICE TO CONTRIBUTORS

TYPES OF CONTRIBUTION
The newsletter is essentially informal and contributions of any type submitted in any form will be considered, if not necessarily accepted. The following notes are a guide to possibilities rather than a set of directions.

A. BIBLIOGRAPHIES: These are produced by the bibliographers. Any suggestions, reprints of articles, and details of omissions should be sent to them directly.

B. ARTICLES: Short articles on any aspect of nannoplankton work are welcomed. Discussion, review, synthesis, and methodology articles are particularly welcome. Any articles with scientific content may be reviewed and should be submitted at least two months before the final copy deadline. The newsletter is a valid publication for taxonomic articles.

C. REVIEWS: Reviews of books, equipment items, or computer software and conference reports are welcome. To avoid duplication the idea may be suggested to the editor in advance of submission.

D. NEWS, & NOTES: Any news items, on forthcoming conferences, research projects, new appointments are welcome.

SUBMISSION PROCEDURE
Two copies should be sent of all submissions. Include Fax number if available, for proof checking. News items and initial drafts of articles can be sent in draft form. Other items should be sent either as proof ready copy or on computer disc.

PROOF READY COPY: Submit on A4 paper (210x297mm) with 2.5cm left, right and top margins, 3.5cm bottom margin. Single spacing, 15point (elite) text. If possible use a laser printer.

SUBMISSION ON DISC: Include print-out and details of system used. I can easily handle the following. IBM/MS-DOS, any format, 5.25" or 3.5", discs (ideal 5.25", 1.2 Mb). Text as WordPerfect, WordStar, Smart, DCA-RFT, Navy DIF, MultiMate, or ASCII files (ideal WordPerfect 5.0 or DCA-RFT). MacIntosh, 3.5" discs, Ms-Word, MacWrite or ASCII files. Amstrad, 3"discs, Locoscript, Wordstar, Tasword or ASCII files. Any alterations to the text, other than for spelling or very minor mistakes, will be checked with the author.

DIAGRAMS: Should be submitted as very clean computer printouts, photographs or photocopies of final size, do not send large or delicate originals.

REFERENCES: Use standard (World List) abbreviations, and format of examples below. ODP & DSDP volumes should be treated as periodicals using the following abbreviations: IRDSDP; Proc. ODP Init. Rep.; Proc ODP Sci. Res.
