COMMISSION INTERNATIONALE DE

MICROFLORE DU PALEOZOIQUE

NEWSLETTER 24

August 1980

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Contents

1. Editorial

The General Assembly of C.I.M.P. held during the 5th International Palynological Conference in Cambridge saw several major changes in the C.I.M.P. Executive Committee which we are pleased to announce formally to our members. As a result of the postal ballot held during the early part of the year Prof Maurice Streel of the University of Liege was elected as our new President in succession to Dr Serge Jardine. Prof Streel is of course no stranger to C.I.M.P. having previously served as our Secretary General from 1971 - 1977. We look forward to the next four years of his Presidency. This newsletter does give us the opportunity to publicly register our thanks to the outgoing President, Serge Jardine, who continues on our committee as Past President. We are all grateful to Serge for his help and guidance in so many ways during the last four years.
Dr Jeanne Doubinger who was narrowly defeated in the Presidential election will continue to serve as Vice President for the next four years.

Just before the Cambridge meeting we were sorry to receive from Sven Laufeld a letter informing us that circumstances forced him to give up his duties as Chairman of the Sub Commission on Chitinozoa. All of the Executive Committee and I'm sure all members of the Sub Commission were sad about this news because Sven had been instrumental in revitalising the Chitinozoan Subcommission into one of our most active groups. We are particularly grateful to him for all of his activities and financial support which he arranged for C.I.M.P., we should make especial mention of the fact that it was Sven who was solely instrumental in organising and producing the Chitinozoan Newsletter which has generated so much interest during the last year.

We are pleased to announce that Dr Florentin Paris, University of Rennes has agreed to replace Sven as Chairman and Dr Yngve Grahn of the Geological Survey of Sweden has agreed to serve as Secretary for the Chitinozoa Subcommission.

Minor changes were also proposed in the Acritarch Subcommission in order to give them equal representation to the Chitinozoans.
Dr Michel Vanguestaine, University of Liege, will join Dr Paul Hill, in the administration of this group.

Finally Dr Geoffrey Clayton was elected Deputy Secretary General. Geoff will also act as local Secretary/Convenor for the joint meeting with AASP and C.I.M.P. in Dublin in 1982.

Most members will by now be aware that major changes also took place in heirachy of I.C.P. Prof Al Traverse being replaced by Dr Claude Cartini as President and Dr Roger E Jan du Chene taking over as Secretary/ Treasurer.

This newsletter contains the first announcement of the joint A.A.S.P./C.I.M.P. meeting in Dublin in 1982 on Palynology at the North Atlantic Margins. If you are interested in attending this meeting please complete the form enclosed and return it to the organisers as soon as possible.

For the benefit of many of the members of C.I.M.P. who were not able to attend the I.C.P. Conference in Cambridge we have decided to reproduce in the newsletter the abstracts of the papers presented during the C.I.M.P. sessions. Obviously more than one Newsletter will be needed but we have made a start in this issue by including all the Acritach and Chitinozoan papers.

Finally it is apparent from the continuing number of people who apply to join C.I.M.P. each year that we are presumably succeeding in some of our objectives. If we are to see C.I.M.P. and its activities expand we need to have a continuing flow of new members. If you know of someone you think would benefit from being a member why not inform them about the organisation and get them to write to me.

Bernard Owens
Secretary General

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2. <u>International Subcommission on Carboniferous Stratigraphy</u>

25th August - 1st September 1981

The meeting is being arranged in three parts; each can be attended independently of the others.

A. A four-day field excursion to examine fourteen stage boundary stratotypes in northern England (from low Visean to Westphalian C) of Regional Stages used in north-west Europe.

B. An indoor meeting (two days) for discussion, presentation of reports from Working Groups, invited lecturers, etc. Theme for meeting: Possible stratigraphical levels for a "Mississippian /Pennsylvanian" (i.e. mid-Carboniferous) boundary.

C. Disperse on 1st September or attend an additional excursion to see Stage boundary stratotypes in South Wales (1) and Ireland (2), which will be organised if there is sufficient demand (3 days).

Programme:

Aug. 25 - Assemble, afternoon at Leeds for coach journey to Grange-over-Sands, Cumbria, or in evening at Grange.

Aug. 26 - Visit to Holkerian, Asbian, Brigantian stratotypes and return to Grange.

Aug. 27 - Visit to Chadian, Pendleian and Chokierian-Kinderscoutian stratotypes en route to Leeds.

Aug. 28 - Visit Yeadonian, Marsdenian stratotypes.)
Aug. 29 - Visit stratotypes of Westphalian A, B and C.) Based at Leeds
Aug. 30)- Indoor meeting.)
Aug. 31))

Sept. 1 - Disperse or go on extra excursion to South Wales and Ireland (if sufficient demand).

Travel by 'bus (about £20 per head, for Aug. 26-29).

Accommodation costs will be contained in £15-20 per day, inclusive.

Registration fee of £5 suggested to cover field guidebook, postages, coffees, incidentals.

Attendance: All titular and corresponding members of S.C.C.S. are encouraged to attend the field excursions and general sessions. Attendance on the excursions and sessions by other interested individuals is welcome on a space-available basis. Please indicate your interests and intentions concerning the meetings on the enclosed form, and return it at your earliest convenience (before 1 September 1980) to:

W.B. Saunders
Associate Secretary S.C.C.S.
Department of Geology
Bryn Mawr College
Bryn Mawr PA 19010
U.S.A.

or:

J Pattison
Institute of Geological Sciences
Ring Road Halton
Leeds LS15 8TQ
England (UK)

3. INTERNATIONAL SYMPOSIUM ON CHITINOZOA 1982

Oslo, Norway 11 - 13 August

The first international symposium on Chitinozoa was held on Gotland, Sweden in 1974. Since then, Chitinozoa meetings have been arranged in connection with international meetings on palynology and general geology. It has been suggested that a meeting in Scandinavia would be favourable because of the well known stratigraphy of the Ordovician and Silurian rocks. Oslo is situated in the centre of a classical Lower Paleozoic reference area (the Oslo Region). Provided a sufficiently large number of chitinozoan workers are interested, a symposium will be arranged here.

The aim of the symposium is to bring together chitinozoan workers to discuss problems and techniques and present results of recent investigations.

PAPERS are warmly invited on the following general topics:

Chitinozoan morphology.

TEM and SEM techniques applied to chitinozoan studies.

Chitinozoan provincialism.

Chitinozoans in relation to lithofacies/biostratigraphy.

Other topics for papers will also be considered.

A WORKSHOP will be arranged and include poster sessions, presentation of research topics and discussions.

One day EXCURSION to Ordovician and Silurian localities in the Oslo Region is planned.

DISCUSSION MEETING

Alternatively, if too few notify their interest, it is planned to arrange a one day discussion meeting in connection with the IV. International Symposium on the Ordovician System to be held at Ringerike (north of Oslo) 20 - 23 August 1982.

It is therefore important that you notify your interest as soon as possible because the answers to the questionnaire will form the basis of either an arrangement of a three day SYMPOSIUM ON CHITINOZOA, or alternatively a one day DISCUSSION MEETING. A Circular No. 2 will inform whether a symposium or a discussion meeting will be held, and bring further details. A request for your firm commitment will be sent in early 1982.

Tove G. Bockelie

Questionnaire

Surname: First name(s):

Address:

Alternative I.

INTERNATIONAL SYMPOSIUM ON CHITINOZOA, Oslo 11-13 August 1982.

I plan to attend the Symposium .....

I will probably attend the Symposium .....

Alternative II.

One day DISCUSSION MEETING in connection with the IV. International Symposium on the Ordovician System, Ringerike 20-23 August 1982.

I plan to attend the meeting .....

I will probably attend the meeting .....

For alternative I or II:

I will not attend .....

Please return as soon as possible, but not later than December 1st 1980 to:

Tove G. Bockelie, Paleontologisk museum, Sarsgt. 1, Oslo 5, Norway

This form is to be answered by those who wish to attend an INTERNATIONAL SYMPOSIUM ON CHITINOZOA, Oslo 11-13 August 1982.

(Alternative I)

Surname: First name(s):

Address:

PAPER yes/no

Title of paper:

DEMONSTRATION yes/no

Title of demonstration:

Please return as soon as possible, but not later than December 1st 1980 to:

Tove G. Bockelie, Paleontologisk museum, Sarsgt. 1, Oslo 5, Norway.

4 ACTIVITY REPORT OF THE C.I.M.P. MEGASPORES WORKING GROUP (1980)

The revision of the different sporomorphs of Crassilagenicula and Auritolagenicula is ended and done. The publication of this part is for after 1982.

The megaspores working group met in Mons University from 2nd to 7th June 1980. Were present S. Dybova-Jachowicz, J. Karczewska, G. Lachkar, S. Loboziak and P. Pierart. All the present members have agreed about the definition of the different species of Lagenicula and Lagenoisporites. The publication of this part is for 1982. On 5th June different lectures were given:

P. PIERART. Stratigraphical and Geographical distribution of the Gondwana megaspores.

J. KARCZEWSKA. Evolution and Heterospory in vegetable kingdom.

S. DYBOVA-JACHOWICZ. Saccate pollens evolution during Upper Paleozoic and Lower Mesozoic.

P. PIERART and M.A. ROISIN. Evolution of Sporopollenin during thermic treatment.

The next meeting of the Megaspores working group will be held at Sosnowiec (Poland) in the beginning of July 1981. Will be discussing the systematic of the different sporomorphs of the Sublagenicula, the problem of the Protogula, the systematic of some Upper Devonian and Lower Carboniferous megaspores, etc .....

Mons, 8th July 1980

P. PIERART
Executive Committee Member

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5 Abstracts of papers presented at the Acritarch, Chitinozoa and Scolecodont sessions of the 5th International Palynological Conference, Cambridge, July 1980.

(see comment in Newsletter Editorial)

Scolecodont Session

POLYCHAETE JAW APPARATUSES OBTAINED WITHOUT ACID LEACHING FROM THE DEVONIAN OF IOWA, USA.

BOYER, Paul S. Department of Earth Sciences, Fairleigh Dickinson University, Madison, New Jersey 07940. USA.

Samples of very poorly consolidated limestone andlime-shale inadvertently left unattended in water for two hours disintegrated. Left in the residue were numerous scolecodonts and several jaw apparatuses. The apparatuses are held together by calcite which would have dissolved, dispersing the scolecodonts, had acid been used on the samples. This accidental discovery motivated systematic collecting from the Juniper-Hill and Cerro Gordo members of the Lime Creek Formation in north-central Iowa. The source rocks are of late Frasnian to early Famennian age. Part of the section has an abundant benthic megafauna, but in certain other beds the scolecodonts are virtually the only fossils.

CALCITE IN THE MANDIBLES OF A MARINE POLYCHAETE

BOYER, Paul S

Department of Earth Sciences
Fairleigh Dickinson University
Madison, New Jersey 07940, USA.

Calcite forms a thick pad on the anterior-ventral surface of the mandibles of Eunice aphroditois (Pallas) (Annelida, Polychaeta, Eunicida, Eunicea). The calcite pads apparently serve as an abrasive in feeding; they are possibly renewed by continuous calcite deposition. Mandibular calcite pads are not usually recognized in the fossil record because they are destroyed during the leaching of limestones for the recovery of scolecodonts. Even without their preservation, it may be possible to infer the presence of calcite pads on large fossil mandibles with broad anterior-ventral surfaces. Such examples should be interpreted as organs of grazing rather than carnivorous predation.

LOWER WENLOCK POLYCHAETE FAUNA FROM GOTLAND, SWEDEN

BERGMAN, Claes

Department of Historical
Geology and Palaeontology
Solvegatan 13, S-223 62
Lund, Sweden

As a base for the present work, a section (Vattenfallet section) through the lower Wenlock of Gotland is used. In 1882 Hinde described annelid remains from the uppermost part of the very same section. The present author has discussed taxa identified by Hinde and reconstructed polychaete jaw apparatuses. The ontogeny of some selected species is also demonstrated. The abundance and taxonomic diveristy through the section is coupled with an environmental interpretation.

LOWER JURASSIC SCOLECODONTS FROM THE VICENTINIAN ALPS (NORTHEASTERN ITALY)

VAN ERVE, A.W.

Laboratory of Palaeobotany
and Palynology
Heidelberglaan 2,
Utrecht, The Netherlands.

Scolecodonts were reported for the first time in 1855 by Massalongo from the Eocene of Monte Bolca in the Vicentinian Alps (northeastern Italy).

In order to celebrate the 125th birthday of the art of Scolecodontology, material from the Vicentinian Alps is again presented. The presence of relatively rich and well-preserved scolecodont assemblages in the Noriglio Grey Limestone Formation (late Pliensbachian - early Toarcian in age; Van Erve, 1977) enabled the present author to describe, figure and reconstruct the jaw apparatuses of polychaetes of the family Dorvilleidae Chamberlain, 1919. Since the present material constitutes the stratigraphically oldest reported occurrence so far of representatives of the family Dorvilleidae Chamberlain, 1919, with this also important information has become available from the view-point of the volution of this very family.

SCOLECODONTS AND CHITINOZOA FROM THE INDIAN PENINSULA

VISWANATHIAH, M.N.
VENKATACHALAPATHY, V.

Department of Geology
Manasa Gangotri
Mysore, India

The rocks presently designated as the Badami Group occur unconformably over the steeply dipping clastic and carbonate rocks of late Precambrian-Cambrian age known as the Kaladgi Group in the Southern Indian Peninsula. Covering an area of 3000 sq. km, these clastic deposits dominantly occupy the provinces of Karnataka and Maharashtra. Several of the quartzarenites have revealed, amongst others, stratigraphically diagnostic scolecodonts and Chitinozoa for the first time in this part of the Indian basin. As many as 23 different taxa of scolecodonts are recognised, belonging to such genera as Anisoceratites, Drilonereisites, Leodicites, Ildraites, Marphysaites, Nereidavus, Staurocephalites, Ungulites, Arabellites, Eunicites, Keltnerites, Oenonites, and other indeterminable types. The 15 species of Chitinozoa recorded are classifiable under Desmochitina, Cyathochitina, Lagenochitina and Ancyrochitina. It is presumed that these scolecodonts and Chitinozoa are related to the first ever distinctly known microfauna in this Indian basin and for that matter in Asia; the majority of which are assignable to identical taxa occurring in other continents. The chitinozoan forms in general distributed in western Newfoundland of Canada, the Cedarberg Formation of South Africa, the Russian Platform of the USSR and the Ordovician formations of Bolivia and Belgium, appear to be identical to the chitinozoans of the presently described region. The scolecodonts too on the other hand distributed exclusively in Montagne Noire of France, bear identity to the ones recorded from this basin. Few forms of course are exclusively classic to the Indian basin. As is true in all other parts of the world, the scolecodont and chitinozoan microfaunal distribution in the Indian basin is considerably limited to early Phanerozoic history. The scolecodonts and chitinozoan occurrences substantiate an Ordovician age for the Badami Group of sediments, and not Precambrian as considered hitherto in the absence of other macro and microfossil evidence.

Acritarch Session

SILURIAN ACRITARCHS FROM THE TYPE WENLOCKIAN AND LUDLOVIAN OF SALOP, ENGLAND

DORNING, Ken J.

Pallab Research
58 Robertson Road
Walkley Bank
Sheffield S6 5DX, England

Palynological assemblages have been examined for acritarchs from the Wenlockian Buildwas Formation, Coalbrookdale Formation and Wenlock Limestone from Coalbrookdale, Ape Dale and Wenlock Edge, and the Ludlovian Elton Beds, Bringwood Beds, Leintwardine Beds and Whitcliffe Beds from the area west of Ludlow, including Mortimer Forest. The acritarchs from the Wenlockian and Ludlovian are of excellent preservation and throughout much of the section there is a great diversity in the number of species present. Concurrent range zones have been established on the basis of selected acritarch taxa to give a refined biostratigraphic zonation; examination of acritarchs from other sections in the Welsh Borderlands and Wales show this zonation to be of use over a wide area.

MIDDLE AND UPPER CAMBRIAN AND LOWER ORDOVICIAN ACRITARCHS FROM RANDOM ISLAND, EASTERN NEWFOUNDLAND.

MARTIN, Francine

Institut Royal des Sciences
Naturelles de Belgique,
Dep. Pal.,
rue Vautier, 31-1040 Bruxelles.

An inventory of Middle and Upper Cambrian and Lower Ordovician acritarchs from Random Island, eastern Newfoundland, is presented; the rocks form part of the Avalon Platform and have close affinities with the Anglo-Welsh area. Six acritarch assemblages (microfloras A1 to A6) are recognised and their stratigraphic ranges related to the corresponding trilobite zones. In the Manuels River Formation, of Middle Cambrian age, microflora A1 (with Aldara n. sp. and Eliasum llaniscum) begins at least as low as the Paradoxides hicksii Zone (older strata not yet sampled), and A2 (with Timofeevia phosphoritica and Vulcanisphaera n. sp.) in the succeeding Paradoxides davidis Zone. The Elliott Cove Formation is mostly of Upper Cambrian age but includes at its base the Lejopyge laevigata Zone, highest Middle Cambrian. Microflora A2 traverses the Middle/Upper Cambrian boundary; its upper limit and the base of A3 (with Cristallinium n. sp. and Veryhachium dumontii), are localised in strata devoid of macrofossils between the Olenus Zone and the Parabolina spinulosa Zone. A4 (with Trunculumarium revinium and Dasydiacrodium caudatum) begins in the upper part of the P. spinulosa Zone and extends, questionably, into the Leptoplastus Zone. The limits of A5 (with Vulcanisphaera africana and Arbusculidium n. sp.) approximate to those of the Peltura Zone. The Clarenville Formation is essentially of Tremadocian, probably Lower Tremadocian, age but may possibly include some latest Cambrian strata. All samples containing A6 (with Arbusculidium destombesii and Vulcanisphaera capillata) are from the Clarenville Formation. The major palynological change in the succession A1 to A6 occurs in the late Upper Cambrian and within A5. Previously described taxa include species reported mainly from the Cambrian of Spain, Belgium and Czechoslovakia, and from the Tremadoc of Bell Island (eastern Newfoundland), England, Belgium, southwestern France, Algeria, Libya and Morocco.

CAMBRIAN AND ORDOVICIAN ACRITARCHS FROM THE MANX GROUP OF THE ISLE OF MAN.

MOLYNEUX, Stewart G.

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Ring Road Halton
Leeds LS15 8TQ, UK.

Acritarch assemblages from the Lower Palaeozoic Manx Group of the Isle of Man are illustrated. Three assemblages are recognised, of which the oldest is probably late Cambrian in age, the second is late Tremadoc or early Arenig in age, and the youngest is Arenig to possibly early Llanvirn in age. A number of new taxa are illustrated, as well as taxa not previously recorded from the British Isles. These assemblages show strong affinities with assemblages which have been described from Belgium, France, Czechoslovakia, East Germany, North Africa and eastern Newfoundland.

ACRITARCH ASSEMBLAGE FROM THE DEVONIAN AND EARLY CARBONIFEROUS OF WESTERN AUSTRALIA.

PLAYFORD, Geoffrey

Department of Geology and Mineralogy
University of Queensland
Brisbane, Austrialia 4067.

Well-preserved and often prolific assemblages of marine microphytoplankton (acritarchs) occur in a number of subsurface sedimentary units in the Carnarvon and Canning Basins located in the northwestern sector of Western Australia. The Gneudna Formation (early Frasnian) of the Carnarvon Basin has yielded a taxonomically distinctive suite comprising some 56 species of which the majority are considered to be new; some ubiquitous elements also occur, however, including Stellinium micropolygonale, Duvernaysphaera spp., 'Cymatiosphaera pentaster/tetraster', and Unellium spp. In the Canning Basin to the north, acritarchs are also represented in the palynoflora of the Gogo Formation (of Givetian?-Frasnian age) and in that of the Fairfield Formation (latest Famennian-Tournaisian). The Gogo assemblage has certain elements in common with that of the Gneudna, while the Fairfield assemblage is distinct from either. Visean marine sediments have yielded only sparse acritarchs in conjunction with profuse miospore floras.

LOWER SILURIAN ACRITARCHS FROM VILLICUM, PROVINCE OF SAN JUAN, ARGENTINE PRECORDILLERA, ARGENTINA.

POTHE DE BALDIS, Elba Diana

Servicio Geologico Nacional,
Santa Fe 1548, (1060),
Capital Federal, Argentina.

Acritarchs from Lower Silurian hematitic levels in the locality of Villicum, province of San Juan, are described. Twenty-six genera and forty-seven species, which include thirty-four known from other countries, are presented. A new genus is described. The association shows a predominance of Veryhachium trispinosum, with some morphological variability. This dominance would mark a Lower Silurian age in Precordillera, because this form appears as the dominant, and sometimes only, acritarch in several formations dated as Llandoverian by graptolites. Eupoikilofusa tenuistriata n. comb. is next in order of importance. Eisenackidium, with six spcies: E. cruciatellatum Cr.; E. duplex Cr.; E. triplodermum Cr.; E. valentinum Cr. and two new species, appear as significant element in the association. The high percentage of previously known forms gives the association a cosmopolitan character.

The few chitinozoa found in the preparations show great morphological similarity to those described from the Lower Silurian of Brazil.

PROGRESS IN IRISH LOWER PALAEOZOIC STRATIGRAPHIC PALYNOLOGY

SMITH, David G.

Department of Earth Sciences
Open University
Milton Keynes, MK7 6AA,England

The results of a five-year research programme into the application of palynology to the problems of Irish Lower Palaeozoic stratigraphy are reviewed. Although productive samples are not abundant, there have been considerable improvements in dating and correlation. Irish Cambrian rocks lack megafossils, but acritarchs have assisted in proving Lower, Middle and Upper Cambrian strata. Ordovician rocks remain better dated by invertebrates.

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but a single locality has yielded a well preserved assemblage of acritarchs and Chitinozoa from a poorly consolidated clay. Scarce occurrences of trilete spores and acritarchs have proved some unexpectedly thick early to mid Silurian sequences in south-central Ireland. Well preserved Cambro-Ordovician and mid Silurian acritarchs accompany early Carboniferous acritarchs in a Courceyan (Lower Carboniferous) mudstone, providing evidence of the former existence of more abundantly palyniferous Lower Palaeozoic strata in Ireland.

BIOSTRATIGRAPHY OF UPPER FRASNIAN TO LOWER FAMENNIAN ACRITARCHS IN THE TYPE AREA OF THE DINANT SYNCLINORIUM, BELGIUM.

VANGUESTAINE, M.

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Paleobotanique et Paleopalynologie
Place du Aout, 7,
B-4000 Liege, Belgium

A reexamination of acritarchs from the section at Senzeilles - type section for the Frasnian-Famennian boundary - permits a biozonation which was not thought possible by Stockmans and Williere (1974). The stratigraphic distribution observed at Senzeilles is compared with that of acritarchs from other sections in the Dinant Synclinorium.

BIOSTRATIGRAPHY OF THE NORTH AMERICAN DEVONIAN ORGANIC-WALLED MICROPHYTOPLANKTON FLORA

WICANDER, Reed

Department of Geology
Central Michigan University
Mount Pleasant, Michigan, USA 48859

Three hundred and eighty-seven species (forty-six named or illustrated only as sp.) of organic-walled microphytoplankton from the North American Devonian have been published or are in press. These have been described from the following thirteen geographic areas of North America: the Great Slave Lake, Alberta, Saskatchewan, and Ontario, Canada; Oklahoma, Iowa, Illinois, Tennessee, Kentucky, Indiana, Michigan, Ohio, and New York, USA.

To date, the species are distributed stratigraphically as follows: fifty-eight are restricted to the early Devonian (Gedinnian, Siegenian, Emsian), one hundred and two are restricted to the middle Devonian (Eifelian, Givetian), and one hundred and seventy are restricted to the late Devonian (Frasnian, Famennian). Additionally, twenty-six occur in both the early and middle Devonian, fifteen occur in both the middle and late Devonian, and sixteen range from the early through late Devonian.

In addition to the North American stratigraphic range, a synonymy, the original description, an illustration of the holotype, plus the North American geographic and geologic distribution are included for each of the three hundred and eighty-seven species so far reported in the literature. It is clear that much work still remains to be done on the North American Devonian organic-walled microphytoplankton flora, both stratigraphically and taxonomically. This is especially true for the early Devonian.

It is hoped this synthesis will be helpful in comparing North American organic-walled microphytoplankton floras to other parts of the world, and in serving as a reference for future North American Devonian organic-walled microphytoplankton studies.

CONOCHITINA SYMMETRICA TAUGOURDEAU ET DE JEKHOWSKY, A GUIDE FOSSIL TO THE LOWER ORDOVICIAN.

ACHAB, Aicha — Institut National de la Recherche Scientifique, INRS-Petrole, Ste-Foy, Quebec, Canada GIV 4C7

MILLEPIED, Pierre — Compagnie Francaise de Petroles, 114 Cours Gallieni, 33404 Talence, France

Conochitina symmetrica was first described in 1960 by Taugourdeau and de Jekhowsky from Zone 2 of the Ordovician of Sahara.

In 1961, Benoit and Taugourdeau recognized this species in the "Complexe argilo-greseux inferieur" of AMg_1 well in the Sahara, below a level with Arenig graptolites, establishing the regional stratigraphic value of this species.

Recently C. symmetrica has been found in the Lower Arenig of the Levis Formation of Quebec, more specifically in the Tetragraptus approximatus Zone, thus defining more precisely the stratigraphic range of this species and its value as a tool for long distance correlation.

Lastly, this species has also been discovered in collections from the O_2 Zone of the Canning Basin of Australia. The occurrence of C. symmetrica in the Australian Arenig shows that this epcies may turn out to be a guide fossil to the basal Ordovician.

THE INTERNAL STRUCTURES OF SPECIES OF LAGENOCHITINA AND CONOCHITINA (CHITINOZOA).

BOCKELIE, Tove G. — Paleontologisk museum, Sars gt. 1, Oslo 5, Norway.

The internal structures of three chitinozoan species are described based on scanning electron microscope studies of dissected tests. All species have a prosome consisting of an oral cylindrical part with transverse lamellae (the tube). The prosome widens aborally to form a conical part (the skirt). The length and shape of the prosome varies within a species. The thickness of the prosomal wall and lamellae, and the position of the lamellae in the prosome varies amongst the species. In addition to a prosome, the Lagenochitina species also possess an operculum. These variations in micromorphology are discussed.

SILURIAN CHITINOZOA AND SCOLECODONTS FROM THE TYPE WENLOCKIAN AND LUDLOVIAN OF SALOP, ENGLAND.

DORNING, Ken J. — Pallab Research, 58 Robertson Road, Walkley Bank, Sheffield S6 5DX, England

Palynological assemblages have been examined for chitinozoa, scolecodonts and foraminifera from the Wenlockian Buildwas Formation, Coalbrookdale Formation and Wenlock Limestone from Coalbrookdale, Ape Dale and Wenlock Edge and the Ludlovian Elton Beds, Bringewood Beds, Leintwardine Beds and Whitcliffe Beds of the area west of Ludlow. Well preserved chitinozoa and scolecodonts are

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recorded from the majority of samples from the Wenlockian and Ludlovian, while foraminifera are recorded from occasional samples throughout the sequence. Detailed examination of the chitinozoa has shown that many species have a restricted stratigraphic distribution; a zonation scheme has been established for the Wenlockian and Ludlovian that can also be recognised in sections in the Welsh Borderland and Wales.

ON THE AFFINITY OF CHITINOZOA.

GRAHN, Yngve — Geological Survey of Sweden, Box 670, S-751 28 Uppsala, Sweden

AFZELIUS, Bjorn A. — Wenner Gren Institute, Norrtullsgatan 16, S-113 45 Stockholm, Sweden

Hitherto, overall morphology has been used as a major argument for placing Chitinozoa with protozoans, while their mode of occurrence suggests that they might have been eggs and egg capsules of marine metazoans. The object of this study was to investigate whether the chitinozoan vesicle has any ultrastructural similarity to Recent organisms. Four species of Ordovician Chitinozoa from the Isle of Oland, Sweden, Cyathochitina stentor, Desmochitina minor, Lagenochitina esthonica, and Lagenochitina tumida, were examined using transmission electron microscopy. The texture of the vesicle wall may be homogeneous or granular and may also contain denser zones. Chitinozoan ultrastructures such as pore channels and "empty spaces" were revealed for the first time. The results support the interpretation of chitinozoans as eggs and egg capsules of marine invertebrates, and possibly also of fish.

CHITINOZOANS FROM THE DEVONIAN OF A SHALLOW GAS WELL IN NORTHEASTERN OHIO, USA.

HUTTER, Terry — Bellaire Research Center, Shell Oil Company, Houston, Texas 7701, USA.

One thousand three hundred and forty feet of Upper and Middle Devonian beds recorded in Ohio Rubber Company's borehole (ORCO No. 1) were examined for Chitinozoans and found to contain two distinct fossil-bearing intervals. The upper chitinozoan interval is restricted to the Marcellus and lower Olentangy shales, while the lower interval lies directly above the Silurian-Devonian unconformity in the lower Columbus-Delaware limestone. A new chitinozoan genus, possibly of environmental and evolutionary significance, is also described.

CHITINOZOA: SOME ASPECTS OF THEIR PHYLOGENY AND TAXONOMY.

PARIS, Florentin — Universite de Rennes, Laboratoire de Paleontologie et de Stratigraphie et C.A.E.S.S., Rennes Cedex 35042, France.

The problems of Chitinozoan phylogeny and taxonomy are reconsidered in the light of a detailed study of a large number of specimens (two thousand whole rock samples, yielding in total several hundred thousand individuals). The material is selected from many Paleozoic formations of Western Europe, whole age assignment ranges from the lower Arenig to the upper Emsian. The

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intensive use of scanning electron microscopy has revealed numerous new details concerning the morphology and structure of the Chitinozoa. On the basis of these data, the evolutionary trend of certain structural features in the Chitinozoa has been studied at a specific, generic and supra-generic level. A hypothetical reconstruction of the phylogeny of this group is proposed. A hierarchy in the criteria of identification is established and applied to the generic and supra-generic classification of the Chitinozoa. The oral tube differentiation, the existence of structures such as the carina, the copula, the "siphon" and the outer layer ornamentation are considered as first order criteria.

A POSSIBLE RELATIONSHIP BETWEEN CHITINOZOA AND TINTINNIDS.

REID, Philip C.
JOHN, Anthony W.G.

Institute for Marine Environmental Research
Prospect Place, The Hoe
Plymouth, Devon, England

Chitinozoa show similarities in their morphology to flask-shaped cysts which have been found in present-day plankton and marine sediments. This grouping of flask-shaped cysts includes forms which have been found within tintinnid loricae. The structure of tintinnid and other flask-shaped cysts will be discussed in relation to chitinozoan morphology, drawing attention to similarities and differences. Seasonal and geographical distribution of these cysts in present-day plankton will be described and interpreted in relation to hydrography. If the suggested relationships between tintinnids and chitinozoa are confirmed, our results may assist the palaeoecological interpretation of fossil assemblages.

THE SILURIAN OF THE MEHAIGNE VALLEY (BRABANT MASSIF, BELGIUM): STRATIGRAPHY AND CHITINOZOA.

VERNIERS, Jacques

Laboratorium voor Paleontologie
R.U.G. Krijgslaan 271 S8
B-9000 Gent, Belgium.

In the valleys of the Mehaigne and its affluent, the Burdinale (eastern part of the Brabant Massif) a lithostratigraphic column of 2100m thickness has been reconstructed with 700m of sediments described in detail.. Eight informal formations and sixteen members are defined. The sediments are of a flysch-type, which were deposited in a miogeosynclinal trough. Detailed study of the sedimentary features permits tracing of a single bed over several kilometres and accurate correlation of different sections, even though the area has been much folded and faulted.

Lower to Middle Wenlockian graptolites in the middle part of the sequence have been described by J. Verniers and B. Rickards (1978). Moderately well preserved Chitinozoa from 75 samples belong to 50 species and can be used to define 15 assemblage zones. Comparison with Gotland and Wales allows dating of these zones from the Middle Llandoverian to the top of the Lower Ludlow; one sample contains an Upper Ordovician assemblage. Aspects of the palaeoecology of Chitinozoa in flysch-type sediments and of the palaeogeography are discussed.

6a Report on British Palaeobotany and Palynology 1978-1979

This edition, the third report in the series, compiled by Prof.W.G. Chaloner and Anne Sheerin was issued in May 1980. It lists news of British palaeobotanists and palynologists, their research activities etc., together with a cross referenced list of individual workers with current addresses, their research activities and publications with British palaeobotanical and palynological publications arranged in stratigraphical order.

Copies can be obtained by writing to Prof. W.G Chaloner, Dept of Botany, Bedford College, University of London, Regents Park, London NW1 4NS.

Price £1 including postage.

6b Caniers de Micropaleontologie

"Les Spores du Devonien de Libye" by Arlette Morean Benoit

This largely taxonomic study of Devonian sediments from thirty boreholes in the Rhadames Basin of Libya is published in two parts 1979(4) and 1980(1). It contains descriptions of 151 taxa including 9 new species and 11 new combinations and contains a total of 23 plates.

Further details of price and how to order from Centre National de la Recherche Scientifique, 15 Quai Anatole France, 75700 PARIS, France.

6c SPECIAL PAPERS IN PALAEONTOLOGY No. 24

DINOFLAGELLATE CYSTS AND ACRITARCHS FROM THE EOCENE OF SOUTHERN ENGLAND

by

J.P.BUJAK, C.DOWNIE, G.L.EATON, and G.L.WILLIAMS

Dinoflagellate cysts are abundant and diverse in the Eocene of southern England, with many species having restricted stratigraphic ranges. Thirteen dinoflagellate assemblage zones are formally proposed, three in the London Clay, five in the Bracklesham Beds, and five in the Barton Beds. Five genera and twenty species of dinoflagellates are erected, generic transfers are made for sixteen species, and the diagnoses of six genera and four species are emended. One genus and two species of acritarchs are also erected. The new genera are Cerebrocysta, Dapsilidinium, Hemisphaeridium, Lentinia, Paucisphaeridium, and Quadrina.

82 pp. 22 pls, Cover Price £15.00 or US $36.00
Published in May 1980

Copies may be obtained from the following sources depending on whether you are a member of the Palaeontological Association (Costs in brackets)

A. For members of the Palaeontological Association

To: (1) For Ordinary & Student Members

Dr J.C.W. Cope
(Membership Treasurer)
Palaeontological Association)
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University College
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Great Britain (£11.25 or 27.50 US Dollars)

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Dr C. H.C.Brunton
(Institutional Membership
Palaeontological Association)
Department of Palaeontology
British Museum (Natural History)
Cromwell Road
LONDON, SW7 5BD
England (£15 or 36 US Dollars)

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To: B.H.Blackwell Ltd
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The Palaeontological Association also still has a limited stock of the following previous "Special Publications in Palaeontology". Available as above.

Smith & Butterworth 1967 "Miospores in the coal seams of the Carboniferous of Great Britain. Price £8

Jenkins W.A.M. 1969. Chitinozoa from the Ordovician Viola & Fernvale Limestones of the Arbuckle Mountains, Oklahoma. £2.

6d PALINOLOGIA, vol. 1, 1979

Date of publication: Diciembre 1979

available from

Instituto Palinologico
Apartado 543
Leon
Spain

Price 2500 pesetas and postage

CONTENTS

6e AUSTRALIAN MESOZOIC DINOFLAGELLATES

A catalogue of 287 high quality 35 mm colour transparancies. The catalogue contains photographs of all the extant holotypes and/or paratypes of Mesozoic dinoflagellates and acritarch species described by Isabel C. Cookson and her co-authors Alfred Eisenack and Georges Deflandre between 1955 and 1974. In addition a few species described more recently by Roger Morgan and John Filatoff are included.

This catalogue was prepared by Robin J. Helby and Alan D. Partridge to provide high quality reproductions of the original types described in the pioneering studies of Cookson. This was done to enable modern workers to review Cookson's work in the light of recent advances in the understanding of dinoflagellate cysts, to show those morphological features which are now considered important for identification and classification, and to provide a ready tool for palynologists to gain a better appreciation of the species involved.

The 35 mm transparencies contained in this collection represent hours of painstaking restoration of the original palynological slides many of which are deteriorating and multiple photography of each specimen to obtain the best possible reproduction.

The Earth Resources Foundation within the University of Sydney is considering printing a second edition of the catalogue and is seeking orders from interested parties. The first edition of 30 sets has been sold out to Universities, petroleum exploration companies and consultants both in Australia and internationally. Any person or organisation wishing to obtain a copy can do so by sending a cheque for US $225 or Australian $200 made payable to the University of Sydney to:-

The Secretary
The Earth Resources Foundation
Department of Geology & Geophysics
The University of Sydney
NSW 2006
Australia

Delivery will take from 6 - 10 weeks from the date of receiving order as production has to be done commercially.

6f Genera File of Fossil Spores

J.Jansonius and L.V. Hills, Special Publication - Dept of Geology, University of Calgary, Calgary, Canada. T2N 0Z7.

This widely used set of index cards documenting spore genera throughout the stratigraphic column is still available. It systematically deals with each genus, giving not only the original diagnosis but also details of subsequent emendations. The original set of almost 3300 cards was issued in 1976 and has been expanded since then by 4 annual supplements giving a total of 3800 cards for the file.

If you are interested in this index file which has considerable uses for both company and individual palynologists, write to Dr L V Hills, Dept of Geology, University of Calgary, Calgary, Alberta, Canada T2N 0Z7.

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7. Directory of Members - Appendix 3. August 1980

New Members

BERGMAN Claes Mr Dept of Historical Geology & Palaeontology Solvegatan 13 S.223 62 LUND Sweden	Silurian polychaete jaws from Scandinavia
DAWSON Carol A. Amoco Production Company Denver Region Security Life Building Denver Colorado 80202 U.S.A.	Carboniferous miospores from Montana, U.S.A.
DIGIACOMO Estela B. de Maraven S.A. Fillal de Petroleos de Venezuela S.A. Exploracion y Produccion Apartado 829 Caracas 1010 A Venezuela	
LE HERISSE A. Mr Laboratoire de Stratigraphie et Paleontologie Universite de Rennes - Beaulieu 35000 RENNES France	Lower Devonian spores, acritarchs and chitinozoa from Laval Synclinorium Armorican Massif
LOCQUIN Marcel Dr Laboratoire de Micropaleontologie Ecole Practique des Hautes Etudes 8 Rue de Buffon 75005 PARIS France	Chitinozoa
NADER Amer. D. Mr Dept of Geology University of Aston in Birmingham Birmingham B4 7ET England	Carboniferous miospores
PACLTOVA, Blanka. Prof Dept of Palaeontology Charles University PRAHA 2 Albertor 6 Czechoslovakia	
SCOTT Andrew Dr. Dept of Geology Chelsea College of Technology Manresa Road LONDON England	Carboniferous miospores, megaspores and palaeobotany

VAN GIJZEL Pieter Dr.
Geomicrophotometry Research
Core Laboratories Inc.
7501 Stemmons Freeway
Box 47547
Dallas
Texas 75247
U.S.A.

Organic geochemistry and fluoresence microscopy

WILLIAMS John E. Dr.
Exploration and Production Research
B.P. Research Centre
Chertsey Road
Sunbury on Thames
Middlesex

Palaeozoic - Mesozoic palynology

WELSH, Anthony Mr.
National Coal Board
Yorkshire Regional Laboratory
Golden Smithies Lane
Wath upon Dearne
Rotherham
South Yorkshire S63 7EW

WICANDER, Read Dr.
Dept of Geology
Central Michegan University
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Upper Palaeozoic microplankton

Changes of Address and Research Interests

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BAXENDALE Bill Dr.
Amoco Production Company
Amoco Building
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Denver
Colorado 80202
U.S.A.

Carboniferous floras and upper Palaeozoic palynology

CRAMER Fritz H. Dr
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Spain

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Instituto Palinologico
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FILATOFF John Dr.
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KNABE Keith Dr.
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NAMBUDIRI Vasu Mr.
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University of Dar es Salaam
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Dar es Salaam
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RASUL Syed Dr
Dept of Geology
Trinity College
Dublin 2
Eire

PIERART Pierre Prof.
Servia de Biologie et d' Ecologie
Universite de l'Etat a Mons
Avenue du Champ de Mars 24
7000 MONS
Belgium

1. Carboniferous-Permian palynology
2. Sporopollenin Chemistry
3. Megaspore Systematics

TURNER Robert, E. Dr
Amoco Canada Petroleum Co
444 7th Avenue SW
Calgary
Alberta
Canada T2P OY2

The following have withdrawn from C.I.M.P. Membership during the last year.

Dr Finn Bertelsen
Dr Ronald Charpentier
Dr Karl Newman