



Bulletin

Volume 2, Number 2

April 2006

(Click "Bookmarks" on left to navigate around the document)

News from the membership

Tribute to Ellinor Voigt (1911-2005)

Report on the "AustraLarwood Symposium" in New Zealand

Bryozoan Exhibition opens April 7 in Zagreb

Challenges of Cribrimorphology

Bryozoa 2007: First Circular

Defining Bryozoa the Oxford Way

Bryozoa Bookstall

American Museum of Natural History Library Goes Online

Peter William Arnold (1949-2006)

Nils Spjeldnaes has died

Recent publications

Copyright © 2006 by the International Bryozoology Association.

Paul D. Taylor, President

Judith Winston, President-elect

Timothy S. Wood, Secretary

Abigail Smith, Treasurer

Comments regarding this Bulletin should be addressed to the IBA Secretary:

tim.wood@wright.edu

Further information at www.nhm.ac.uk/hosted_sites/iba/

News from the Membership

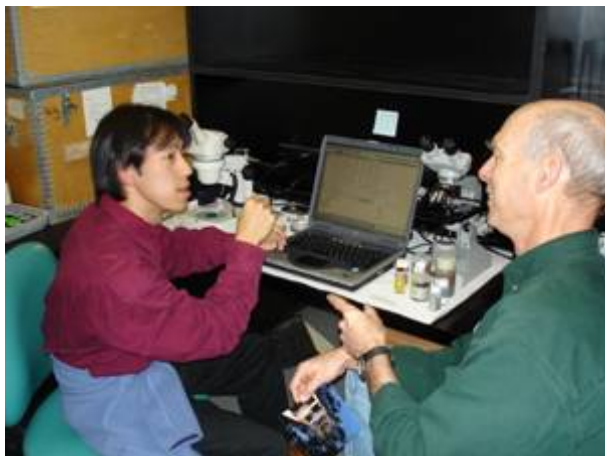
Juan Cancino . I am pleased to inform you that I have been appointed Rector of Universidad Católica de la Santísima Concepción for a 5 year period, starting January 1st, 2006.

Andrej Ernst. I am just starting a 2-year project on Devonian Bryozoa of Europe, staying in Kiel. Furthermore, I am working on different fauna from Ordovician, Carboniferous and Permian (Europe, Oman and Iran). I would welcome any cooperation on this theme!

Andrei Grishenko. At the end of January, I defended my PhD thesis: *Taxonomy and biodiversity of intertidal Bryozoa (Cheilostomata) of Akkeshi Bay, Hokkaido, Japan*. On March 24 I received the PhD diploma from Hokkaido University. Then, a few days later, I left Japan to return to Perm, Russia. Apparently, it will be impossible to continue bryozoan research at my home city of Perm. I would be very grateful to everyone who will keep in touch and to continue to sending any bryozoan literature. Also, if anyone will inform me concerning available post-doc or permanent positions available. I am very interested in finding any position (in research institutions, marine labs, museums, etc.) that would allow me to remain in science and study bryozoans. Otherwise 15 years of my work will be idle... My new address in Russia will be:

Lunacharskogo 80-28
Perm 614068
Russia
gat@mail.perm.ru, Tel.: 7-342-236-55-65

Masato Hirose recently spent two weeks at the lab of **Tim Wood** at Wright State University in Ohio to expand his knowledge of the world's freshwater bryozoans (see photo). Masato is currently a graduate student at Hokkaido University, where he works with Shunsuke Mawatari's group, including Matt Dick and (until recently) Andrei Grishenko. Masato's interest in freshwater bryozoans was kindled in high school after an encounter with the large, charismatic *Pectinatella magnifica*. He now has an impressive collection of Japanese species, including many new records in Japan.



Marcus Key. One of the students in my paleontology class showed me her new Nokia cell phone which has a "bryozoan" ring mode option. From what I know of fossil bryozoan vocalization, it sounded accurate.

Laís Vieira Ramalho. I am finishing my PhD thesis about marine Bryozoans from Rio de Janeiro State, Brazil (Museu Nacional). The samples usually from are up to 30m depth, however I also have samples from 200-600 metres. I have identified bryozoans from other places in Brazil too (São Paulo, Paraná States etc). I don't have a group of my preference.

Normally I work with Gymnolaemata and a bit with cyclostomata (when I found them). In the Museum (Museu Nacional) we made a Brazilian Bryozoan collection. Perhaps this information will be interesting, because this is the first collection about Brazilian bryozoans in a Brazilian museum. Here is the museum address:

Museu Nacional Universidade Federal do Rio de Janeiro
Departamento de Invertebrados
Quinta da Boa Vista, s/n São Cristóvão - Rio de Janeiro, RJ - Brazil.
20940-040

Matthias Obst. Dear bryozoan friends. I am a new member of the IBA and I am going to work on bryozoans for the next two years (or even longer, I hope!). I am based at Kristineberg Marine Research Station on the West coast of Sweden (<http://www.kmf.kva.se>) and I am currently participating in a large inventory of the fauna and flora in Sweden (www.artdata.slu.se). The goal of this project is to generate a detailed record of all species in Sweden and my part is to revise the bryozoans, both in freshwater and marine habitats. Although this is quite an enormous undertaking, I am very happy for this assignment - I really love bryozoans. The idea is to write a monograph on Swedish bryozoans as a part of *The Encyclopedia of the Swedish Flora and Fauna*. I have worked with taxonomy of small invertebrates before and studied the feeding mechanism of *Plumatella* during my PhD. I am also planning to use the collected material for phylogenetic analyses of bryozoan groups and combine morphological with molecular studies. If anyone is interested in samples from around Scandinavia, I would be very happy to help. My email is matthias.obst@kmf.gu.se and my website is http://www.zoologi.gu.se/kontakta_oss/gastforskare_postdoc/obst_matthias/. I am looking forward to many exciting collaborations and meetings with the bryozoan community. With best regards from Sweden, Matthias Obst



Mary Spencer Jones will be away from the Natural History Museum, London from 23rd April until mid-May, as she is being sent out to do contract work in Thailand.

Kevin Tillbrook. I was recently invited to become involved with the Census of Coral Reefs (CReefs); one of seventeen projects of the Census of Marine Life (CoML) (see <http://www.coml.org/descrip/c-reefs.htm>). This project is an international cooperative effort to increase tropical taxonomic expertise, conduct a taxonomically diversified global census of coral reef ecosystems, and improve access to and unify coral reef ecosystem information scattered across the globe. As one of the first scientists involved in the project (and the only bryozoan worker) I attended the CReefs Site Sampling, Planning and Methodology Workshop in Hawaii at the end of February. It was phenomenal experience and extremely interesting to boot. A lot of ground was covered and many decisions made. The first collecting trip as part of this project will be in October to one of the atolls in the North West Hawaiian Islands and I have been asked to participate. All this isn't bad for someone that isn't actually making a living within academia. However, this is not really by choice. If anyone has any knowledge of potential research funding, or positions advertised that might suit my capabilities then please let me know - kevin_j_tilbrook@yahoo.co.uk

Finally, as many of you are probably aware I have had a tome of a monograph, on the cheilostomes of the Solomon Islands, in preparation for an absolute age. Well I am reliably informed that it will be published by the end of April as part of the Santa Barbara Museum of Natural History monograph series. I have a list of people to whom it will automatically be sent but just to make sure you receive a copy please let me know -
kevin_j_tilbrook@yahoo.co.uk

All the best and hope to see some of you all soon. Cheers, Kevin

Norbert Vávra. Dear colleagues, Having to retire this year (October 1st), I will continue bryozoan studies nevertheless. For the near future I can probably keep my office and laboratory facilities at the Department of Paleontology, University of Vienna; in case of any possible changes however I give my private address:

Sickingengasse 10, A-1100 Wien/Vienna, phone: 0043-1-617-21-79,
vavranorbert@eunet.at.

My bryozoan collections will be transferred to the Museum of Natural History (Vienna) in near future: Natural History Museum, Department Geology-Paleontology, Burgring 7, A-1010 Wien/Vienna. Austria.

Best regards from Vienna !

Norbert



Tribute to Ellinor Voigt (1911-2005)

Ellinor Voigt, 94, wife of the late Professor Ehrhard Voigt, died on December 27, 2005 in Hamburg, Germany.



Ellinor Voigt (1911-2005). Photograph on left by Gero Hillmer showing Ellinor with Ehrhard Voigt in Parkallee 7; photo on right by Irmgard Voigt.

Born in 1911 as Ellinor Bucerius in the city of Bremen, Germany, she grew up as an orphan, with her grandmother taking care of her and her sister Irmgard. She became an elementary school teacher in 1936. Her first husband Curt Arpe died in Russia only a few months after their marriage in 1941. Before he died, he had a premonition and asked his close friend Ehrhard Voigt, a young geology professor from Hamburg University, to take good care of his widow. This is exactly what Ehrhard Voigt did; he married Ellinor in 1947 and they had three children together (Werner, Wolfgang and Irmgard Voigt).

In the years to follow, Ehrhard Voigt was completely occupied by the task of rebuilding the desolate and destroyed Geology Department and to reorganizing the collections of Hamburg University. Ellinor was the one to hold the ground at home, and she successfully managed the poverty and crowded living conditions experienced by the family during the troubled period that followed the war. In 1955, the Voigt family was finally able to move into a new and apparently spacious residence in Parkallee 7, a place which soon was to become familiar and popular to many bryozoologist friends.

Everyone who has had the opportunity to spend time among the great bryozoan collections of Ehrhard Voigt knows that we owe this huge legacy equally to two persons: first, to the absolute belief of Ehrhard Voigt in himself and in his scientific mission, and second, to the patience and to the ability of Ellinor Voigt to organize, to balance and to keep domestic peace

and hospitality. More than once she intervened to save exhausted visitors from being overwhelmed by towering glaciers of bryozoan samples and photographs. Without the practical sense, humour and pleasant personality of Ellinor Voigt, there would have been no Voigt collection!

In the later years, their home turned more and more into a bryozoan research centre, even though the space was never sufficient for this purpose. In 1990, the eyesight of Ehrhard Voigt began to fade, and Ellinor helped her husband in editing his never-ending flow of ideas and manuscripts. Inevitably, the situation altered tragically. In 1997, Ellinor Voigt battled cancer and had to undergo treatment. She recovered, but became weak and exhausted. At the same time, the surface topography of their Parkallee 7 residence changed. Bryozoans started to overgrow not only the three working rooms reserved for them, but also the central living room and virtually every remaining corner of the apartment. Ehrhard Voigt, who slowly became blind and unsure, was feeling time heavy on his shoulders. He knew that only a few years were left to him and would not accept compromises in his drive to finish a final set of manuscripts. For Ellinor Voigt, it was too much. In 2001 she saw no solution and moved to a nursing home. Nevertheless, she did not totally abandon her husband and they continued to see each other frequently since they lived just 700 meters apart.

Ehrhard Voigt passed away in November 2004, a few months before he would have celebrated his 100th birthday (see Paul Taylor's obituary, IBA Newsletter 2005). Ellinor survived her husband for about a year. In 2003, life had been hard and painful for her, but she rallied and regained some energy towards the end, spending a peaceful and happy Christmas season in 2005 together with her elder sister and her three children. Around noontime on December 27, she went to bed to rest for just a little while, and fell asleep forever.

Gero Hillmer
Joachim Scholz
Bjoern Berning



‘AustraLarwood’, NIWA, Wellington 10 February 2006

The twelve months between April 2005 and March 2006 will go down as an exceptional period for bryozoology with no fewer than four mini-conferences. Sandwiched between the Larwood Symposia in April in Aberystwyth and March in Dublin, there was the bryozoan workshop in Linz in September and the inaugural meeting of Antipodean bryozoologists in Wellington, New Zealand. Code-named ‘AustraLarwood’, the last of these meetings constituted the largest gathering of bryozoologists in Australasia since the IBA held its international conference in Wellington eleven years ago. Then, as now, the conference organizer and host was Dennis Gordon. Ten bryozoologists gathered at NIWA on Friday 10th February. Their delight at having this opportunity to network was surpassed only by that of seeing Dennis in such good health after his coronary bypass operation just two months earlier.



Participants in the AustraLarwood Symposium. From left, the individuals in the photo are: Seabourne Rust, Michèle Prinsep, Anna Wood, Abby Smith, Rolf Schmidt, Michelle Carter, Phil Bock, Scott Lidgard, Dennis Gordon, Hamish Campbell, Paul Taylor.

The day was filled by ten talks that demonstrated the breadth of current bryozoological research while underlining how much further we still have to go. Scott Lidgard, visiting from the Field Museum in Chicago, set the ball rolling with a typically thoughtful and well-presented talk on bryozoan predators, grazers and parasites. Scott has been compiling a comprehensive database from the literature on predator-bryozoan prey couples. This now numbers 931 entries. Perhaps the most notorious bryozoan predators are pycnogonids and nudibranchs. It is surprising, therefore, that detailed records of pycnogonid predation are extremely sparse, while the dramatic decline in nudibranch diversity and abundance below about 30 m depth begs the question as to their impact on most bryozoans. Scott’s functional group approach using multidimensional scaling promises to make some sense of predator-

prey patterns in bryozoans. Preliminary results show the expected pattern of greater predation on ctenostomes and anascan cheilostomes than on the more heavily skeletonized ascophoran cheilostomes and cyclostomes.

Traces left on bryozoan skeletons by putative predators of unknown identity were very effectively illustrated by Phil Bock (Deakin University, Melbourne). Phil's scanning electron micrographs of diverse Recent and Cenozoic cheilostomes from southern Australia showed predatory damage ranging from straight-sided cylinders, to bevelled or elliptical drillholes, and chipped scuta in *Caberea*. Some of Phil's bryozoans responded by patching the holes from within and/or budding intramural reparative zooids, occasionally reversed in polarity relative to the zooid they replaced. It was quite appropriate that arrows pointing to damaged zooids in Phil's Powerpoint had been inadvertently converted to miniature bombs by a font mistranslation. The real life zooidal bombers have yet to be apprehended.

Michèle Prinsep (University of Waikato, Hamilton) brought us up to the tea-break with a report on the work of her research group on bryozoan natural products or secondary metabolites. This sector of bryozoan research all too often bypasses bryozoologists with more mainstream interests. Michèle noted that the two phyla with the highest incidence of biological activity are sponges and bryozoans, but that very few organic chemists work on bryozoans compared to sponges. Nevertheless, bryozoans offer the prospect of discovering complex compounds of novel structure. A few, such as the well-known bryostatin 1, are proving to be of pharmaceutical value. Several related compounds called pterocellins have been isolated from the catenicellid *Pterocella* by Michèle's group. Pterocellin A showed anti-tumour activity in vitro but not, alas, in vivo.

We were joined by honorary bryozoologist Hamish Campbell (IGNS) after lunch. Abby Smith (University of Otago) opened the afternoon session by reporting about her work with Marcus Key on bryozoan skeletal mineralogy. Abby and Marcus have compiled 1049 data points from the literature, ingeniously plotting them on a figure that summarizes occupancy of mineralogical space. They found that bryozoans filled 63% of this space, a greater value than for any other phylum, apart from the molluscs. Most of the mineralogical complexity of bryozoans occurs within the cheilostomes. The hope of many geologists is that ancient organisms will reflect the chemistry of the seawater in which they lived. Seawater chemistry is known to have changed about 40 million years ago from a composition favouring calcite precipitation to one favouring aragonite. However, this transition does not seem to coincide with the evolution of aragonite skeletons in bryozoans which, according to Abby and Marcus, began about 100 million years ago.

Very rich and diverse bryozoan faunas characterise the Upper Cretaceous of northern Europe but relatively little is known about coeval bryozoans from other parts of the world. Paul Taylor (Natural History Museum, London) reported a taxonomic study with Dennis Gordon on an Upper Cretaceous bryozoan assemblage from the Chatham Islands of New Zealand, about as far away as one can get from the European centre of diversity. Containing 14 species, the Campanian–Maastrichtian Kahuitara Tuff of Pitt Island represents the most diverse Cretaceous bryozoan biota yet to be documented from Australasia. There is no obvious austral signature in the Kahuitara Tuff bryozoan assemblage, unlike the overlying Upper Paleocene-Eocene Red Bluff Tuff, and none of the genera present is endemic.

Rolf Schmidt (Museum Victoria, Melbourne) drew attention to the paucity of published records of Mesozoic bryozoans in Australia and pinpointed the Carnarvon Basin of northwestern Australia as a worthwhile target for future investigation. His limited and serendipitous collections made from a roadside locality a few years ago revealed a diverse and well-preserved bryozoan assemblage. However, the fauna has not been dated and it remains to be seen whether these bryozoans are of Cretaceous or Cenozoic age.

Seabourne Rust (University of Auckland) has recently commenced a very promising study of the Plio-Pleistocene bryozoans of the Wanganui Basin. This basin contains an exceptional succession of sediments comprising a stack of more than 40 depositional sequences, each representing about 100,000 years of sedimentation. Seabourne has so far sampled 48 sedimentary units, identifying 19 species of cyclostomes and 76 cheilostomes. All or most of the Wanganui Basin bryozoans seem to be extant species. Their diversity fluctuates from high in the shell beds (the Tainui Shellbed contains 39 species) to zero in the highstand siltstones. Three bryozoan biofacies can be distinguished. Scoring of overgrowth interactions revealed that *Celleporella* fared badly whereas *Celleporaria* did well in spatial competition.

Physically complex habitats, such as those provided by large bryozoan colonies, often harbour diverse faunal assemblages. Anna Wood (University of Otago) recently completed a Masters thesis on the communities associated with three large bryozoans: *Celleporaria agglutinans*, *Hippomenella vellicata* and *Cinctipora elegans*. She asked whether different bryozoan species supported different communities and which aspects of the bryozoans affected community composition. In total, 172 taxa belonging to 13 phyla were found living with these habitat-forming bryozoans. The communities associated with *Cinctipora* differed significantly from those of the other two species, *Cinctipora* containing more nestling forms. Anna plans to expand her work, economically important because bryozoans often form habitats for fish of commercial value, into a PhD under the supervision of Abby Smith, Keith Probert and Dennis Gordon.

As Michelle Carter's lecture title made clear, avicularia are still one of the mysteries of the bryozoan world. They are diverse in size and shape, seemingly costly to produce, distributed between taxa with no apparent pattern, and are for the most part functionally enigmatic. Michelle, who is working jointly at NIWA and Victoria University, Wellington, is using SEM and TEM to study avicularia for her doctorate. Her initial results are very promising. Stiff cilia with long rootlets, abundant mitochondria and secretory vesicles in some avicularia point to combined secretory and mechanoreceptor functions.

The day was concluded by Dennis Gordon's talk, coauthored with Paul Taylor, on two newly invasive bryozoan species in New Zealand. Audience numbers increased by 50% with the arrival of the entire marine contingent of "Biosecurity New Zealand". The first of the two species discussed by Dennis, *Membraniporopsis tubigera*, appeared suddenly in Kaipara Harbour during the summer of 2001–2002, clogging flounder nets and accumulating in drifts of up to 25 cm high along the beach. This same species was recorded at about the same time in Brazil where it also caused problems for fishermen. Another invasive species in New Zealand is *Biflustra grandicella* whose basketball-sized colonies were first seen in Golden Bay during December 2002, hindering dredging for scallops. The concern is that this species, previously known only from China, will spread into Abel Tasman National Park and out-compete the native species *Hippomenella vellicata* which supports a much more diverse associated fauna.

The conference dinner, held at a Malaysian restaurant in downtown Wellington, provided a convivial end to a very productive day and prepared the group well for the following day's fieldtrip to Castlepoint in the Wairarapa. IBA members who attended the 1995 international conference will remember Castlepoint from the mid-conference excursion. As a rule, if the weather is fine in Wellington it will be raining in the Wairarapa, and vice versa. The sunshine that greeted us in Wellington on the morning of the fieldtrip was not a good omen but in the event only one heavy shower dampened our enjoyment of the dramatic seascape and fossil-laden cliffs of Castlepoint. The journey back to Wellington was punctuated by stops at a small chocolate factory, where the temporary disappearance of Rolf left us fearing that he had suffered the same fate as Augustus Gloop in 'Charlie and the Chocolate Factory', and several locations used in the filming of the 'Lord of the Rings' trilogy, including Rivendell, home of the elves and a swingbridge also visited by the IBA in 1995.

This meeting was unanimously agreed to have been a great success and credit must go to Dennis Gordon for his foresight and organizational prowess. Plans are already being made for a second Australasian bryozoan meeting in 2008.

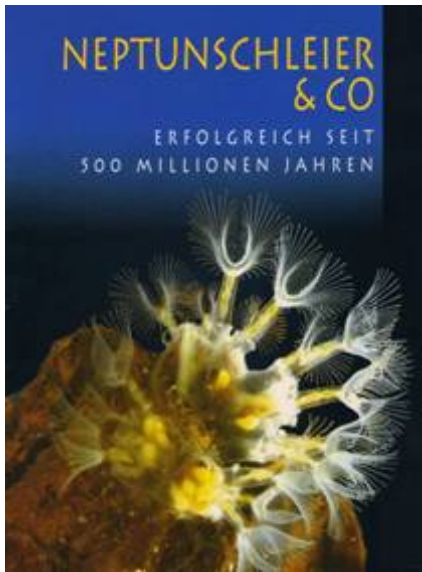
Paul D Taylor

Bryozoan Symposium

Programme

- 0900 Welcome and Introduction
Dennis Gordon, NIWA, Wellington
- 0905 Bryozoan consumers: predators, grazers, and parasites
Scott Lidgard, Field Museum, Chicago, Illinois
- 0930 Microdurophagy — styles of predation on bryozoans
Philip E. Bock, Deakin University, Melbourne
- 0955 Chemical investigations of New Zealand marine bryozoans
Michèle Prinsep, University of Waikato, Hamilton
- 1020 Morning Tea [followed by break until symposium resumes at 1300 h]
- 1300 Patterns in bryozoan mineralogy: what we know and why it matters
Abigail M. Smith, University of Otago, Dunedin
Marcus M. Key Jr, Dickinson College, Carlisle, Pennsylvania
- 1325 Australasia's most diverse Cretaceous bryozoan fauna — Kahuitara Tuff, Pitt Island
Paul D. Taylor, Natural History Museum, London
Dennis P. Gordon, NIWA, Wellington
- 1350 Filling the gaps: K/T Boundary Bryozoa of northwestern Australia
Rolf Schmidt, Museum Victoria, Melbourne
- 1415 Plio-Pleistocene Bryozoa of the Wanganui Basin: a preliminary look
Seabourne Rust, University of Auckland
- 1510 Afternoon tea
- 1540 Epifaunal communities of frame-building bryozoans, Otago Shelf
Anna Wood, Otago University, Dunedin
- 1615 The mysterious bryozoan avicularium — electron-microscope observations
Michelle Carter, Victoria University of Wellington/NIWA
- 1640 New alien-invasive bryozoans affecting New Zealand livelihoods
Dennis P. Gordon, NIWA, Wellington
Paul D. Taylor, Natural History Museum, London

Bryozoan Exhibition Opens April 7 in Zagreb



The magnificent bryozoan exhibition, Neptunschleier & Co. is alive and well. Originated by Emmy Wöss, the display of fiberglass models, fossils, and photos was a centerpiece of the Biologiezentrum in Linz, Austria for six months in 2005. Now Maja Novosel has successfully organized a move of the entire exhibition to the Croatian Natural History Museum in Zagreb. The move was assisted by Emmy along with Dr. Gerhard Aubrecht and Mag Stephan Weigl from the Biologiezentrum.

An opening ceremony is planned for **7 PM on Friday, April 7** at the Museum in Zagreb. All IBA members are invited!! Emmy is currently working to include representatives of the Austrian embassy in Zagreb to heighten the visibility of this special exhibition and to support possible transfers to other museums in the future.

Neptunschleier & Co. will be on display until June, 2006. Says Maja, “The Croatian Natural History Museum is looking forward to introducing Croatian public (and students) to these incredible animals.”



Challenges of Cribrimorphology

(Editor's note: The following paragraphs are excerpted (with kind permission) from a letter from IBA member Paul Whittlesea.)

I have been building a detailed map of part of the geology of east Norfolk. Thank God for GPS! The task would have been well nigh impossible to attempt without this! (Most of the exposures are inter-tidal and intermittent, and there are virtually no landmarks that can be used in most parts of the survey area. Moreover, the map area is slowly being submerged as sea level rises and will probably be inaccessible within a decade.)

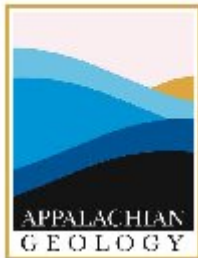
I am also revising the Late Campanian and Lower Maastrichtian cribrimorph fauna of Norfolk. It is very hard to reconcile what has been published with what I have been finding: one holotype has gone missing (though the paratypes remain) and rather too many of the others consist of small zoarial fragments (10-20 autozoecia!) stuck to mahogany slides. Doubtless, that was a convenient thing to do in the past. But in retrospect, trimming every specimen to the size of a postage stamp to create a “standard” size specimen was not a clever idea. It is very difficult to assess the range of variation in the species concerned and some of the official diagnoses and descriptions contradict each other or use unquantifiable terms for characters that are present with varying frequency. E.g. some diagnoses to species in the

same genus refer to “constantly paired avicularia” and others to “frequently paired avicularia”. But in the formal description for the same two species referred to, the assignment of the character frequency is reversed! Besides, at what point does “frequent” become “constant”? I have too often found large zoaria where quite literally, one half lacks the diagnostic feature and the other half possesses it. It does not take too much imagination to realise how the specimen would be treated if it were broken along the junction between the two areas! This tends to be a more severe problem in highly speciose genera, but I can see myself upsetting a few people with my results.

I think that a large part of the problem is that during the Late Cretaceous Norfolk was only intermittently in contact with the rest of the gene pool in the English Southern Province and with northwest Europe. Species migrated into the area during times of high sea level stands from the south or when there were reversals in current directions in the southern North Sea that brought in “typical” northwest European continental taxa. In the interim species differentiated and an endemic fauna developed. A preliminary account of results would have been a good talk for the Larwood symposium, but it will have to wait.



Appalachian
STATE UNIVERSITY



IBA Conference: July 2-7, 2007

Steve Hageman has assembled the First Circular for the 2007 IBA Conference to be held in Boone, North Carolina. The Circular is now posted at the conference website, www.iba.appstate.edu. Here you will find descriptions of the venue, program schedule, travel information, accommodations, food, field trips, workshops, and more. There are also many useful links and a place for people to sign up to receive future announcements.



Defining Bryozoa the Oxford way

Paul D. Taylor, IBA President

A fascinating series on British television called *Balderdash and Piffle* has been looking at words in the English language, with particular reference to the *Oxford English Dictionary* (OED). The OED is stated to be ‘the accepted authority on the evolution of the English language over the last millennium. It is an unsurpassed guide to the meaning, history, and pronunciation of over half a million words, both present and past.’

My curiosity got the better of me and I checked how the OED defined Bryozoa. Here is their definition copied from the OED website:

The lowest class of molluscs, consisting of compound or 'colonial' animals formed by gemmation, each individual having a distinct alimentary canal. Also called *Polyzoa*. In the sing. an individual animal of this class.

It is alarming enough to think that bryozoans are molluscs in the eyes of this venerable source of linguistic authority, let alone the lowest class of this completely distinct phylum.

To rub salt into the wound, the OED summarizes the origin of the words Bryozoa and bryozoan as follows:

1847-9 TODD *Cycl. Anat. & Phys.* IV. 50/1 The differences between a Bryozoon and an ordinary polype. **1856** GOSSE *Marine Zool.* II. 1 It has been usual [hitherto] to include the Polyzoa (or Bryozoa, as they are sometimes termed) in the class Zoophyta. **1876** BENEDEN *Anim. Parasites* 61 Many bryozoa spread themselves over marine animals. **1883** *Harper's Mag.* Dec. 107/1 The rick bryozoon..incrusted the various parts with its silvery growth.

Hence **Bryozoan** *a.*, belonging to the *Bryozoa*; also as *n.*, one of the *Bryozoa*.

1872 DANA *Corals* i. 19 The lowest tribe of Mollusks, called Bryozoans, which produce delicate corals, sometimes branching and moss-like. **1878** BELL *Gegenbauer's Comp. Anat.* 132 All the persons of a Bryozoan colony are not equally well developed.

There is no mention of Ehrenberg (1831) or any of the other standard references. Although the final sentence raised a smile, the OED's neglect of the author of Bryozoa is an inexplicable oversight.

Needless to say I will e-mail the editors of the OED in the hope that they will rewrite the entry for Bryozoa when next they revise words beginning with the letter 'B'. I will also ask them to include an entry for the word 'bryozoology', especially as 'bryology' is already there for our botanical colleagues. To support this case it would be useful to know when the word bryozoology was first used in print. This is where the help of the IBA membership comes in – what is the oldest use of the term bryozoology? I suspect it pre-dates the formation of the IBA in the 1960s but am unsure by how many years. Please send me your suggestions.

Paul D. Taylor (pdt@nhm.ac.uk)

From: Paul Taylor [mailto:pdt@nhm.ac.uk]
Sent: 12 January 2006 14:43
To: OED3
Subject: OED entry for Bryozoa

Dear Sir

Following this week's broadcast of *Balderdash and Piffle* on BBC2, I checked the on-line OED definition of 'Bryozoa' which are the group of animals I have specialized in for over 30 years.

The current entry for Bryozoa states:

"The lowest class of molluscs, consisting of compound or 'colonial' animals formed by gemmation, each individual having a distinct alimentary canal. Also called *Polyzoa*. In the sing. an individual animal of this class. "

Bryozoans are not a class of molluscs (Phylum Mollusca) but belong to a phylum of their own (Phylum Bryozoa). This phylum name has been in existence since 1831 when Ehrenberg first formally named the Bryozoa, and has been in general use for most of that time. A good short summary of the early nomenclatorial history of the Bryozoa, with full bibliographical details, can be found in the following reference:

Boardman, R.S., Cheetham, A.H. & Cook, P.L. 1983. Introduction to the Bryozoa. Pp. 3-48 [bibliography pp. 593-615]. In: Boardman, R.S. et al. (eds) *Treatise on Invertebrate Paleontology. Part G. Bryozoa. Revised. Volume 1*. Geological Society of America and University of Kansas Press, Boulder and Lawrence. ISBN 0-8137-3107-0

The term 'gemmation' is seldom used nowadays, having been replaced by 'budding'.

I would be grateful if this information could be placed on file in readiness for the next revision of this part of the OED. Please do not hesitate to contact me if you require any further information.

Yours

Paul D Taylor

Dear Dr Taylor,

Thank you so much for this most helpful information about the term Bryozoa. It would appear that our nineteenth-century predecessors were perhaps less than rigorous in their researches in this instance, and clearly also much has changed since the entry was first drafted, so we will be very pleased to have your information ready on file for the time when our science team come to work on the revision of the entry.

If you have any comments to make on the following definitions from the current editions of the Shorter Oxford English Dictionary and Oxford Dictionary of English respectively, and would have time to send them to us, we would also find this most helpful:

"Bryozoan: A member of the group Bryozoa (now regarded as comprising the phyla Ectoprocta and Entoprocta) of lophophorates, which form colonies often suggesting mossy growths."

"Bryozoa: A phylum of sedentary aquatic invertebrates that comprises the moss animals. Also called Ectoprocta, Polyzoa."

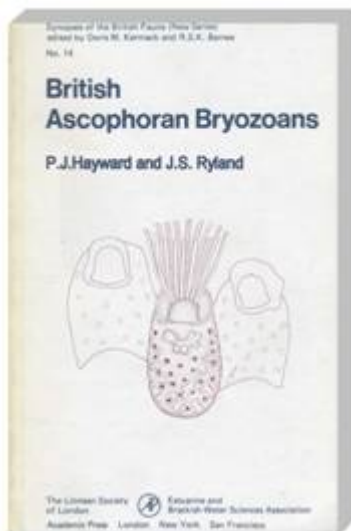
We are most grateful to you for taking the time to send us this material.

Yours sincerely,

Juliet E. A. Field (Mrs)
(Senior Editor, OED)



Bryozoan Bookstall



Mary Spencer Jones (Natural History Museum, London) has been given several old copies of P.J. Hayward and J.S. Ryland (1979 edition) No. 14, *British Ascophoran Bryozoans* from the Synopses of the British Fauna series.

These old edition copies are free, as long as recipients pay for the postage and packing. P&P per copy will be:

UK£3.00 - UK

UK£4.50 - Europe

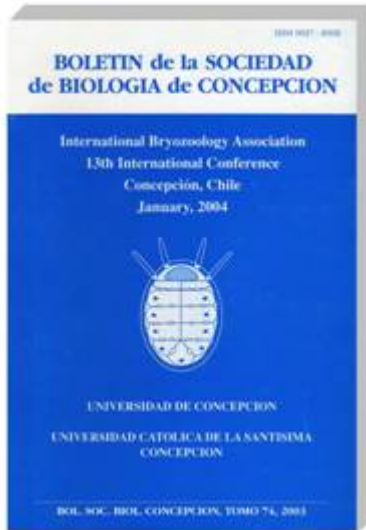
UK£7.00 - Zone 1 - USA, Canada, etc.

UK£7.00 - Zone 2 - Australia, NZ, Japan, etc.

If anyone would like a copy of this volume, please contact Mary Spencer Jones, Natural History Museum, London, (m.spencer-jones@nhm.ac.uk)

Other titles that might be available are: No. 3 *Marine Isopods*, No.12 *Sipunculans*, No.13 *Phoronids*, No. 16 *Forminiferans*, No.17 *Brachipods*. If anyone has an interest in these, then please email Mary. (But do it quickly before she leaves for Thailand!).

More books & reprints ↓



Juan Cancino says he still has copies of the Abstracts of the papers presented in the IBA Conference held in Chile. Anyone wishing to receive a copy should contact Juan at jcancino@ucsc.cl.



Judy Winston writes: Our new building is coming along and we will be moving sometime this summer. For those who prefer hard copies, I still have some of older reprints of mine from AMNH and other journals which the newer members of the IBA might not have. If you e-mail me with your snail-mail address, I'll be glad to send copies of the following as long as they hold out (less to move):

- 1973 Dudley, J. E. A note on the taxonomy of three membraniporine ectoprocts from Chesapeake Bay. **Chesapeake Sci.** 14: 282-284.
- 1977 Winston, J. E. Chapter 7, Feeding In: R. M. Woollacott and R. L. Zimmer, eds, The Biology of Bryozoans. New York, Academic Press, pp. 233-271.
- 1977 Winston, J. E. Distribution and ecology of estuarine ectoprocts: a critical review. **Chesapeake Sci.** 18: 34-37.
- 1982 Winston, J. E. Drift plastic -- an expanding niche for a marine invertebrate. **Mar. Pollut. Bull.** 13: 348-351.
- 1984 Winston, J. E. Mimosella bigeminata (Bryozoa, Ctenostomata): an addition to the Caribbean bryozoan fauna. **Bull. Mar. Sci.** 35: 90-94.
- 1984 Winston, J. E. Why bryozoans have avicularia -- a review of the evidence. **Amer. Mus. Novit.** no. 2789: 1-26.
- 1984 Winston, J. E. Shallow-water bryozoans of Carrie Bow Cay, Belize. **Amer. Mus. Novit.** no. 2799: 1-38.
- 1984 Best, B. A. and J. E. Winston. Skeletal strength of encrusting cheilostomes. **Biol. Bull.** 167: 390-409.
- 1985 Håkansson, E. and J. E. Winston. Interstitial bryozoans: unexpected life forms in a high energy environment. In: C. Nielsen and G. P. Larwood, eds. Bryozoa: Ordovician to Recent. Fredensborg, Olsen & Olsen, pp. 121-126.
- 1986 Winston, J. E. and B. F. Heimberg. Bryozoans from Bali, Lombok, and Komodo. **Amer. Mus. Novit.** no. 2847: 1-49.
- 1986 Winston, J. E. A checklist of coral-associated bryozoans. **Amer. Mus. Novit.** no. 2859: 1-39.
- 1987 Landman, N. H., W. B. Saunders, J. E. Winston, and P. J. Harries. Incidence and kinds of epizoans on the shells of live Nautilus. In: W. B. Saunders and N. H.

Landman, eds. *Nautilus: the Biology and Paleobiology of a Living Fossil*. New York, Plenum, pp. 163-177.

1988 Winston, J. E. The systematists' perspective. **Calif. Acad. Mem.** 13: 1-6.

If that's not enough – I still have a few of Mary Rogick's Antarctic bryozoan reprints. I'm sure she would have preferred them to be used:

Studies on Marine Bryozoa:

VI. Antarctic *Escharoides*

XI. Antarctic *Osthimosiae*

XII. *Porella*.

XIII. Two new genera and new species from Antarctica.

XIV. *Dakaria*. Bryozoa of the Antarctic (1965 checklist).



American Museum of Natural History Library Online

The screenshot shows the website for the American Museum of Natural History Research Library Scientific Publications. At the top, it features the museum's logo and name. Below this, there is a 'Browse by Series' section with links to 'American Museum Novitates', 'Anthropological Papers of the American Museum of Natural History', 'Bulletin of the American Museum of Natural History', and 'Memoirs of the American Museum of Natural History'. A 'Search' section includes a search box, a 'Search' button, and an 'Advanced Search' link. Below the search box are radio buttons for 'Novitates', 'Anthropological Papers', 'Bulletin', 'Memoirs', and 'All Publications'. To the right of the search options, there is a note: 'To find a particular volume series:3407 (will find Novitates 3407) series:1 AND 2 (will find v.1, article 2) **The word AND must be capitalized**'. On the far right, there is a vertical sidebar with the museum's logo and a paragraph of text: 'AMNH scientific publications disseminate the results of laboratory investigations and fieldwork conducted by museum scientists and their colleagues in the areas of zoological systematics, paleontology, geology, evolution, and anthropology. This collection includes full-text PDFs of current and back issues of AMNH scientific series. For information about ordering print copies of these publications, click here.' At the bottom of the page, there is contact information for the Department of Library Services, including the address 'Central Park West at 79th St., New York, NY 10024', the copyright notice '© American Museum of Natural History, 2006', and the text 'Powered by DSpace'. An email address 'dspace@lists.amnh.org' is also provided for comments or questions.

The American Museum of Natural History Library has announced the availability of the complete legacy of the museum's scientific publications. Both back issues and current-ongoing issues have been digitized and all publications are now openly available on the Web at: <http://digitallibrary.amnh.org/dspace>

AMNH scientific series disseminate the results of work conducted by museum scientists and their colleagues, such as John and Dorothy Soule, Ken McKinney, Pete Hayward, Judy Winston, Eckart Håkansson, and others. Subject areas include zoological systematics, paleontology, geology, evolution, and anthropology.

These publications are made available using DSpace, an open source digital repository system. For more information, please visit <http://www.dspace.org>

This project is the result of close collaboration between the AMNH Library and the AMNH Science Senate and has been completed with the generous support of the Andrew W. Mellon Foundation.

Comments and evaluations are welcome: libref@amnh.org .



In a related note, **Mary Spencer Jones** alerts IBA members that *Sherborn's Index Animalium* has recently been put on the web at <http://www.sil.si.edu/digitalcollections/indexanimalium/>

Peter William Arnold (1949-2006)

We learned recently of the sudden death of IBA Member Dr. Peter William Arnold, March 7 in Townsville, Queensland, Australia. Dr. Arnold was Senior Curator of Tropical Natural History at the Museum of Tropical Queensland. He joined Museum in 1987 and was considered an exceptional marine biologist. IBA members may remember Peter from the 1995 Conference in Wellington. He was 57.



Within the area of marine biology Dr. Arnold held wide interests. According to an article in the *Townsville Bulletin*, “his most notable achievements relate to: describing the snubfin dolphin (a new species), documenting the behavior, distribution, and interactions of minke whales in order to develop effective management by dive operators in the swim-with-whales tourism industry in the Great Barrier Reef, and collection of deep-sea fauna and identification of new species, with particular focus on bryozoans.”



Nils Spjeldnaes has died

Nils Spjeldnaes has died from cancer in a hospital in Oslo. News of his passing reached us March 30 from several sources within the Bryozoa community.

Nils was one of the participants in the first, pre-IBA conference of bryozoologists in Stockholm during 1965. He was also the first official President of the IBA, between 1968 and 1971, the equivalent post being designated ‘Chairman’ from 1965-1968 and held by Alan Cheetham.

Nils’ widow, Karin, may be reached at the following address:

Karin Spjeldnæs
Odinsgaten 25
N-0266 Oslo
NORWAY



Recent Publications

The following list includes works published since the previous issue of the IBA Bulletin. As always, members are encouraged to support future compilations by continuing to send complete citations to the IBA secretary at any time. Reprints will be gratefully received by the IBA archivist, Mary Spencer Jones.

- Anderson, M. J., C. E. Diebel, et al. (2005). Consistency and variation in kelp holdfast assemblages: Spatial patterns of biodiversity for the major phyla at different taxonomic resolutions. *Journal of Experimental Marine Biology and Ecology* 320(1): 35-56.
- Bader, B. and P. Schaefer (2005). Impact of environmental seasonality on stable isotope composition of skeletons of the temperate bryozoan *Cellaria sinuosa*. *Palaeogeography, Palaeoclimatology, Palaeoecology* 226(1-2): 58-71.
- Barnes, D. K. A. and P. Kuklinski (2005). Low colonisation on artificial substrata in arctic Spitsbergen. *Polar Biology* 29(1): 65-69.
- Beaman, R. J., J. J. Daniell, et al. (2005). Geology-benthos relationships on a temperate rocky bank, eastern Bass Strait, Australia. *Marine and Freshwater Research* 56(7): 943-958.
- Bigey, F. P. (2005). Paleocological aspects in Devonian Bryozoa. (Abstract). International Conference Devonian terrestrial and marine environments: from continent to shelf. IGCP Project/SDS joint field meeting, Novosibirsk.
- Bigey, F. P. (2005). Evolution des principaux groupes de bryozoaires au Phanérozoïque : données actuelles. (Abstract). Congrès franco-québécois de Zoologie, Montréal.
- Boaventura, D., A. Moura, et al. (2006). Macrobenthic colonisation of artificial reefs on the southern coast of Portugal (Ancao, Algarve). *Hydrobiologia* 555: 335-343.
- Bowden, D. A. (2005). Seasonality of recruitment in Antarctic sessile marine benthos. *Marine Ecology Progress Series* 297: 101-118.
- Cheetham, A. H., Joann Sanner, Paul D. Taylor, Andrew N. Ostrovsky. (2006). Morphological differentiation of avicularia and the proliferation of species in mid-Cretaceous Wilbertopora Cheetham, 1954 (Bryozoa: Cheilostomata). *Journal of Palaeontology* 80(1): 49-71.
- Cope, K. H., John E. Utgaard, John M. Masters, and Rodney M. Feldman (2005). The fauna of the Clayton Formation (Paleocene, Danian) of southern Illinois: a case of K/P survivorship and Danian recovery. *Bulletin of the Mizunami Fossil Museum* 32: 97-108.
- Cuffey, R. J. (2005). Rare bryozoans in the Shriver Formation (Lower Devonian) at Bald Eagle State Park (central Pennsylvania). *Geological Society of America Abstracts with Programs* 37(1): 82.
- Cuffey, R. J., & Dade, W. B. (2005). Ecozonation of bryozoans across siliciclastic coastal environments (Holocene; Wallops and Chincoteague Islands, Delmarva Peninsula). *Friedman Geoscience Conference 2005* (Northeastern Science Foundation, Troy, N.Y.) Abstracts: 7.
- Dick, M. H., Andrei V. Grischenko and Shunsuke F. Mawatari (2005). Intertidal Bryozoa (Cheilostomata) of Ketchikan, Alaska. *Journal of Natural History* 39(43): 3687-3784.
- Ernst, A. & Hrouda, F. (2005): Die fossile Bryozoensammlung des Museums für Naturkunde der Stadt Gera. *Veröffentlichungen Museum für Naturkunde der Stadt Gera, Naturwissenschaftliche Reihe*, **32**: 152-156.

- Gluchowski, E. (2005). Epibionts on upper Eifelian crinoid columnals from the holy cross mountains, Poland. *Acta Palaeontologica Polonica* 50(2): 315-328.
- Goetz, S., H. Loeser, et al. (2005). Reef development on a deepening platform: two Early Cretaceous corallgal patch reefs (Cati, Llacova Formation, eastern Spain) compared. *Cretaceous Research* 26(6): 864-881.
- Gordon, Dennis P, Laís V. Ramalho, & Paul Taylor. 2006. An unreported invasive bryozoan that can affect livelihoods – *Membraniporopsis tubigera* in New Zealand and Brazil. *Bulletin of Marine Science* 78(2): 331-342.
- Gorjunova, R. V. (2005). Bilunar zoecia in the Paleozoic bryozoan *Fistulipora elegantula* Nikiforova, 1933 (Stenolaemata, Cystoporida). *Paleontological Journal* 39(5): 498-507.
- Gruhl, A., P. Grobe, et al. (2005). Fine structure of the epistome in *Phoronis ovalis*: significance for the coelomic organization in Phoronida. *Invertebrate Biology* 124(4): 332-343.
- Guha, A. K. and K. Gopikrishna (2005). New smittinid (Bryozoa, Cheilostomata) species from Tertiary sequences of western Kachchh, Gujarat, India. *Freiberger Forschungshefte C 507: Paläontologie, Stratigraphie, Fazies* 13: 11-25.
- Hastings, A. K., & Cuffey, R.J. (2005). Small open slender-coral (Tetradium) thickets in the Mid-Ordovician of central Pennsylvania. *Geological Society of America Abstracts with Programs* 37(1): 82.
- Hepburn, C. D. and C. L. Hurd (2005). Conditional mutualism between the giant kelp *Macrocystis pyrifera* and colonial epifauna. *Marine Ecology Progress Series* 302: 37-48.
- Herrera-Cubilla, A., Matthew H. Dick, Joann Sanner, and Jeremy B. C. Jackson (2006). Neogene Cupuladriidae of tropical America. I. Taxonomy of recent *Cupuladria* from opposite sides of the Isthmus of Panama. *Journal of Paleontology* 80(2): 245-263.
- Hondt, J.-L. d. and G. Breton (2005). Une nouvelle introduction dans le Bassin d'Arcachon: le Bryozoaire Cheilostome intertropical *Caulibugula zanzibarensis* Waters, 1913. *Bull. Soc. géol. Normandie et Amis du Muséum du Havre* 92(1): 19-22.
- Hondt, J.-L. d. and M. Goyffon (2005). On the electrophoretic variability of some benthic invertebrates from Scandinavian coasts. Contribution to the systematics of the Alcyonidiidae (Bryozoa). *Bulletin de la Societe Zoologique de France* 130(3): 287-302.
- Hynes, M. P. and R. J. Cuffey (2005). Bryozoan species and roles in the Stobo crinoid-bank bioherm (Lower Mississippian, south-central Indiana). *Abstracts with Programs - Geological Society of America* 37(5): 80.
- Hynes, M. P. and R. J. Cuffey (2005). Bryozoan species and roles in the Stobo crinoid-bank bioherm (Lower Mississippian, south-central Indiana). *Geological Society of America Abstracts with Programs - Geological Society of America* 37(5): 80.
- Jablonski, D. (2005). Evolutionary innovations in the fossil record: The intersection of ecology, development, and macroevolution. *Journal of Experimental Zoology* 304B(6): 504-519.
- Jackson, P. N. W., A. Ernst, et al. (2006). *Thamniscus* King, 1849 (Fenestellida, Bryozoa); William King's original specimens and their bearing on the genus concept. *Paleontological Journal* 40(1): 75-78.
- Kalita, G. and M. M. Goswami (2006). Ectoproctan fauna of Deepar wetland of Assam, India. *Zoos Print Journal* 21(1): 2123-2125.
- Konar, B. and K. Iken (2005). Competitive dominance among sessile marine organisms in a high Arctic boulder community. *Polar Biology* 29(1): 61-64.
- Malecha, P. W., R. P. Stone, et al. (2005). Living substrate in Alaska: Distribution, abundance, and species associations. *American Fisheries Society Symposium*: 289-299.

- Marti, R., M.-J. Uriz, et al. (2005). Spatial and temporal variation of natural toxicity in cnidarians, bryozoans and tunicates in Mediterranean caves. *Scientia Marina* 69(4): 485-492.
- McCartney, J. A., R. J. Cuffey, et al. (2005). Bryozoan species composition of the unusual siliciclastic fenestrate-rich mud-mound at Langston Gap (Latest Mississippian, northeastern Alabama). *Geological Society of America Abstracts with Programs* 37(5): 80.
- Moyano G., H. I. (2005). On the Nazca plate bryozoans with emphasis on Desventuradas islands. *Ciencia y Tecnologia del Mar* 28(1): 75-90.
- Moyano, H. I. (2005). A century of antarctic bryozoology since the Belgian Antarctic Expedition 1904, to the 13th IBA International Conference, Concepcion, Chile, 2004. *Gayana* 69(1): 122-138.
- Proz, P.-A. (2005). Collections of the geology and paleontology departments of the Geneva Museum of Natural History. 86. F.-J. Pictet collection (Porifera, Bryozoa). *Revue de Paleobiologie* 24(1): 393-401.
- Pushkin, V. I. and L. E. Popov (2005). Two enigmatic bryozoans from the Middle Ordovician of the East Baltic. *Palaeontology (Oxford)* 48(Part 5): 1065-1074.
- Sampei, Y., O. Abe, et al. (2005). Paleosalinity in a brackish lake during the Holocene based on stable oxygen and carbon isotopes of shell carbonate in Nakaumi Lagoon, southwest Japan. *Palaeogeography, Palaeoclimatology, Palaeoecology* 224(4): 352-366.
- Seo, J. E. and Y.-H. Gong (2005). Two new records of smittinids (Bryozoa: Gymnolaemata: Cheilostomata) from Korea. *Korean Journal of Systematic Zoology* 21(2): 219-225.
- Stachowicz, J. J. and R. B. Whitlatch (2005). Multiple mutualists provide complementary benefits to their seaweed host. *Ecology (Washington D C)* 86(9): 2418-2427.
- Tanner, J. E. (2005). Three decades of habitat change in Gulf St Vincent, South Australia. *Transactions of the Royal Society of South Australia* 129(Part 1): 65-73.
- Taylor, P. D. and O. Vinn (2006). Convergent morphology in small spiral worm tubes ('*Spirorbis*') and its palaeoenvironmental implications. *Journal of the Geological Society, London* 163: 225-228.
- Tops, S., A. Curry, et al. (2005). Diversity and systematics of the Malacosporea (Myxozoa). *Invertebrate Biology* 124(4): 285-295.
- Webb, G. E. (2005). Quantitative analysis and paleoecology of earliest Mississippian microbial reefs, Gudman Formation, Queensland, Australia; not just post-disaster phenomena. *Journal of Sedimentary Research* 75(5): 877-896.
- Wood, T. S. (2005). *Loxosomatoides sirindhornae*, new species, a freshwater kamptozoan from Thailand (Entoprocta). *Hydrobiologia* 544: 27-31.



