



Bulletin

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

News from the Membership

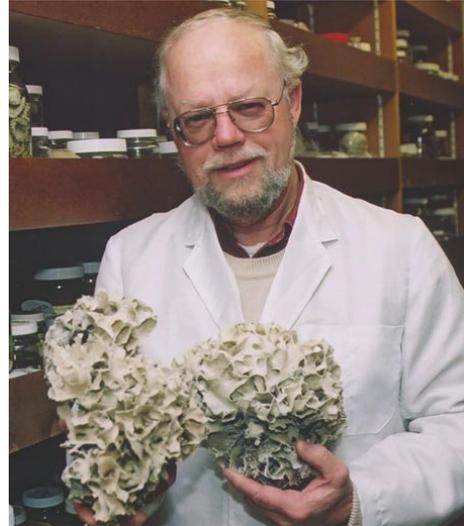
Ann-Margret Amui. I got the Brendan Keegan Memorial Studentship at the Martin Ryan Marine Science Institute and started a PhD at the National University of Ireland, Galway in October 2005. I'm still trying to figure out how to include bryozoans (o:

David Barnes. Does anyone have information on shallow bryozoa of the Seychelles? I will be there in July/August. (dkab@ucc.ie).

Björn Berning. I will be at the University of Graz (Austria) for the next three years! I'll take care of anything bryozoological that we can get at during fieldwork in Oman, Iran, Pakistan and Tanzania in a big project entitled "Palaeobiogeographic Differentiation and Biotic Gradients in the Western Indo-Pacific during the Late Oligocene to Early Miocene", coordinated by Werner Piller (Graz) and Mathias Harzhauser (NHM Vienna). However, because I'm never really satisfied with working on fossils only, I also plan to sample and compare the fossil stuff with modern material from these regions. Therefore, I'd be grateful for information on whereabouts of fossil or Recent bryozoan collections or any other hints on and photos of Western Indo-Pacific species! You can reach me at my private email address (berningb@gmx.de) until I've got a new one at Graz University in February.

Giampietro Braga and Franco Finotti have a new publication, *Bibliography on Phylum Bryozoa (Fossil and Living Organisms)* published by Edizioni Osiride, Rovereto (TN) and soon to be available from The Town Museum of Rovereto (TN-NE Italy), www.museocivico.rovereto.tn.it (See details further in this *Bulletin*).

Dennis Gordon. The New Zealand Marine Sciences Society held its annual conference in Wellington in August 2005 together with International Marine Bioinvasions, and US-NZ MARGINS in a large and successful joint conference. The IBA highlight was at the conference dinner when the New Zealand Marine Sciences Award (awarded in recognition of a person's continued and outstanding contribution to marine science in New Zealand) was given to our own Dr Dennis Gordon, NIWA scientist, described as "world renowned for his expertise in bryozoans and marine biodiversity." Dennis is shown here holding two large colonies of *Biflustra grandicella*, a common nuisance bryozoan in China that has recently appeared in New Zealand waters. (Thanks to Abby Smith and Marcus Key for alerting us to Dennis' award).



Asit K. Guha attended the International Seminar on *Northward flight of India in the Mesozoic-Cenozoic: consequences on Biotic changes and Basin evaluation* held at the Department of Geology, University of Lucknow, Lucknow - 226 007, India from 7-9 Dec 2005 and presented a paper on "Cretaceous-Tertiary bryozoan assemblages from the peninsular India."

Claus Nielsen. Dear Fellow Bryozoologist, I have been so careless to promise a report on the entoproct fauna of the Gulf of Mexico for a forthcoming large publication. My problem is that I have not been able to find any records from that area in the literature. Can anybody help? Many thanks for any help and very best wishes. Yours, Claus Nielsen (cnielsen@snm.ku.dk).

Claus Nielsen. I happened to look at the IBA website and found the list of proceedings volumes. It occurred to me that the three volumes published by Olsen & Olsen could be difficult to obtain without

further information. I have contacted the publishers, and I suggest that information about how to order and about prices be added to the text for the volumes. The volumes can be ordered from: o-o-book@post4.tele.dk at the following prices:

Recent and Fossil Bryozoa, 55.00GBP + postage

Bryozoa: Ordovician to Recent, 64.00GBP + postage

Biology and Palaeobiology of Bryozoans, 78.00GBP + postage

Aaron O'Dea. Cupuladriids have become famous here in Panama. I have had a few publications in the national press. Here is a link to an article from *La Prensa* (in spanish); also links to the Smithsonian newsletter with some of my work explained. They describe what we are up to quite well. <http://mensual.prensa.com/mensual/contenido/2005/10/15/hoy/panorama/365504.html>
http://www.stri.org/english/about_stri/headline_news/scientific_advances/article.php?id=191
http://www.stri.org/english/about_stri/headline_news/scientific_advances/article.php?id=195

Mary Spencer Jones [NHM, London] is trying to trace a copy of the following reference. It was published as a separate reprint and was presumably printed before Philippi went to Chile in the early 1850s. If anyone has access to this work, could they possibly contact Mary. Philippi R.A. *Sulle Coralline della Sicilia osservate durante gli anni 1830-1832-1837*. [No publisher or date is given.]

Judy Winston and the Virginia Museum of Natural History hosted a visit in December 4-11 from Paola Florez of INVEMAR (Institute de Investigaciones Marinas y Costeras) in Santa Marta, Colombia. The purpose was to finalize identifications and species descriptions for a publication Paola and Erika Montoya are completing on marine bryozoans of Colombia. They carried out the original work together as a thesis project and received a grant from the Humboldt Foundation for additional support. Paola works at INVEMAR's museum, the "Museo de Historia Natural Marina de Colombia". It was Paola's first trip to the US, and after attending a scientific meeting in Miami, she flew to Greensboro where I met her plane. The different architecture of houses here and the large number of different churches in the area impressed her, as did the snow and ice in the Blue Ridge Mountains nearby, but she said she'd be glad to get back to the warm Caribbean climate. Her taxonomic work was excellent, and I wish her great success in publishing the manuscript and continuing her studies of bryozoans.



Emmy Wöss. I wish to thank very heartily all the participants in the Linz Conference for their great interest and their contributions that made the workshop really so great. There will be a poster at the next IBA Conference about the bryozoan exhibition (Neptunschleier & Co.) from me together with the museum in Linz. The exhibition closed on Sept. 25, and was quite a success (comment of the museum).



Bryozoan Workshop, Biologiezentrum, Upper Austrian Museums, Linz: 8-10 September 2005

Paul Taylor, IBA President

A unique exhibition of bryozoans - *Neptunschleier & Co* - at the Biologiezentrum in Linz attracted over 5000 visitors between April and September 2005. The exhibition had its origins in an idea of Professor **Walter Hödl** (University of Vienna) and was brought to fruition by **Emmy Wöss**, assisted by numerous other bryozoologists and, of course, the staff of the Biologiezentrum in Linz. It would be difficult to overestimate the importance of this exhibition for a low profile group such as bryozoans and it is very apt that an associated workshop should have been organized, if only to provide bryozoologists with an excuse to visit Linz and see the exhibition for themselves. My intention here is to review the workshop itself, and not the exhibition itself nor the lavishly illustrated catalogue. For a review of the former see Scholz, J. 2005. *Neptunschleier & Co*. Die erste Bryozoenausstellung der Welt. *Natur und Museum* **135** (7/8): 190-191.



Dr. Emmy Wöss,

Twenty-five scientists and accompanying members from as far away as Ohio and Pennsylvania registered for the workshop. As they made their way through the residential streets to the Biologiezentrum in the suburbs of Linz, many would have been surprised and delighted to see a succession of large billboard posters featuring a dramatic image taken by Emmy of *Lophopus crystallinus* to advertise the exhibition. If that wasn't enough to confirm they had arrived in the right place, then the amazing 2-metre tall model of a *Lophopus* zooid confronting them immediately on entering the Biologiezentrum certainly would have been.

We were welcomed by the Director of the Biologiezentrum, Dr **Gerhard Aubrecht**, who opened the workshop by explaining the history and current aims of the Biologiezentrum. The institute combines collection-based research - the museum houses the second largest natural history collection in Austria, after Vienna - with public awareness. The second of these functions is largely achieved through special exhibitions, such as *Neptunschleier & Co*, which are held twice a year. The value of maintaining collections was brought into focus by the first two bryozoological talks. **Joachim Scholz** gave a presentation, coauthored by **Shun Mawatari** and **Bernhard Ruthensteiner**, on early collections made in Japan by the German zoologists Doederlein, Doflein and Haberer. Scientific study of these historic collections from Sagami Bay promises valuable information on changes in the bryozoan biota since industrialization. Unfortunately, **Jean-Loup d'Hondt** had to withdraw from the workshop because of illness in the family. His paper was read by Emmy Wöss. This described the neglected recent and fossil bryozoan collections of the Belgium-born naturalist Henri Milne Edwards (1800-1885) which are preserved in the MNHN, Paris. Some of Milne Edward's species turn out to be senior synonyms of established species. Relaxation of the principle of priority in the latest edition of the



Dr. Gerhard Aubrecht

International Rules of Zoological Nomenclature means that these old names can be permitted to lapse (Article 23.9).

Attention then switched to the living bryozoans of the Adriatic Sea. **Marcus Key** described collaborative work on to determine growth rates in colonies of *Pentapora fascialis* living close to freshwater submarine springs (vruljas). Observational as well as isotopic methods demonstrate remarkably rapid growth rates of over 10 cm per year! This is roughly an order of magnitude greater than previous determinations of growth rate in similar heavily-calcified erect bryozoans. The reasons for such rapid growth have yet to be established but may be connected with the richer nutrient and carbonate levels in the spring water compared to seawater. After a hearty lunch in a restaurant affording panoramic views of Linz, **Maja Novosel**, one of Marcus's collaborators in the growth rate paper, showed a spectacular film made with her husband Anđelko on Adriatic bryozoan communities. Their panoramas of underwater cliffs, which harbour the richest bryozoan faunas, were breathtaking, as were the shimmering waters of the submarine springs surrounded by the fast-growing colonies of *P. fascialis*.

The next four talks were palaeontological. **Joachim Scholz** began by describing his work with Norbert Vavra on the Lower Oligocene cheilostomes from a locality in the Mainz Basin of Germany. Most of the tiny fragments recovered from a borehole had cellariiform colonies, a growth-form which, as Joachim stressed, is not environmentally diagnostic, being found today from shallow to very deep waters, and in lagoons, reefs etc.

During the mid Miocene, Paratethyan basins north and east of the present-day Mediterranean lost their connection with the open sea and became the sites of deposition of the peculiar carbonate deposits of the Sarmatian. **Urszula Hara, Kamil Zagorsek** and **Paul Taylor** each presented talks on Sarmatian bryozoans, Urszula dealing with faunas from the western Ukraine and Kamil those from Slovakia, while Paul (in collaboration with Urszula) focused on a peculiar Ukrainian cyclostome. Low in fossil species diversity but locally very rich in individuals, the depositional environments of the Sarmatian are equivocal: some geologists believe that brackish water environments prevailed, largely based on microfossil evidence, whereas others favour more normal marine salinities. The bryozoan faunas described by both Kamil and Urszula lack taxa such as *Conopeum* found today in brackish environments and instead include cyclostomes and cheilostomes that are more usually associated with marine conditions, notably *Tubulipora*, *Celleporina*, *Cryptostega*, *Hippadenella* and *Schizoporella*. The last of these genera is a reef-builder in Ukraine, developing multilayered colonies of up to 100 layers according to Urszula. Adding to the enigmatic Sarmatian bryozoan fauna of the Ukraine is a small, unidentified tubuliporine cyclostome apparently unique in having ancestrulae with spheroidal protoecia. This suggests that the larvae, uniquely for stenolaemates, underwent metamorphosis while still floating. However, like so much else in the Sarmatian, the ecology of 'adult' colonies remains contentious.

A poster session closed day one of the scientific proceedings. **Andrej Ernst** and his collaborators displayed an attractive poster summarizing three Permian bryozoan faunas from Iran. These fenestellid dominated faunas occur in tropical carbonates, showing that bryozoans were still present in rock-forming abundances in the tropics during Late Permian times, unlike the post-Palaeozoic where bryozoan-rich deposits are characteristically absent in the tropics. Although he was unable to attend the workshop, **Anatoly Vinogradov** submitted a poster reviewing studies on recent continental Arctic Eurasian bryozoans. It was surprising to

learn that phylactolaemate statoblasts have been recorded even from the high Arctic archipelago of Svalbard. **Jos Massard** and **Gaby Geimer** showed that there is no such thing as a holiday if you are a bryozoologist by reporting the first phylactolaemate (*Fredericella sultana*) from Crete, and indeed Greece as a whole, discovered while they were supposedly on vacation.

Dr **Peter Assmann**, Director of the Upper Austria Museums, welcomed us to an evening reception at the Landesmuseum in the town centre of Linz. Despite the tiring day, we were captivated by art historian **Gabi Kainberger** who led us on a tour through a gallery hung with Romantic and other paintings.

Freshwater bryozoans dominated day two of the workshop, beginning with **Tim Wood's** account of the extraordinary swimming zooids in an undescribed species of the ctenostome *Hislopia* from Thailand. These 'nautizooids' begin as distolateral buds with a narrow connection to the parent zooid which eventually breaks. Once freed the nautizooids swim at about 0.6 mm per second, propelled forward by their feeding currents, before attaching to a substrate using the sticky end of a specially elongated lateral bud as well as the proximal end of the nautizooid. The biology of bryozoans remains full of surprises.

Concetta Elia described her work with **Giorgia Pieroni** and **Illuminata Taticchi** on heavy metal pollution in *Cristatella mucedo* from an Italian lake. She showed how this species is a particularly good indicator of pollution because there is no confounding effect caused by biological cycles in the levels of antioxidant enzymes produced to deal with heavy metals (cf. *Lophopus crystallinus*). The same three bryozoologists co-authored the next paper, this time read by Illuminata, reporting *Plumatella similirepens* from a fish hatchery in northern Italy. Originally described by Tim Wood from Illinois, the statoblasts of this species show small differences from those of the commoner *P. repens*. Illuminata remarked that there is a need to develop biochemical methods of species discrimination in these subtly different phylactolaemates. **Johanna Troyer-Mildner** was a late withdrawal from the workshop and we will have to await publication of the workshop proceedings in a forthcoming volume of *Linzer Biologische Beiträge* to learn about her research on freshwater bryozoans from the Carinthian region of Austria that was originally scheduled for this session. The final talk by **Emmy Wöss** gave us a background to the bryozoans of the Danube and Traun river backwaters, our first destination for fieldwork.

Even Emmy's detailed talk could not have prepared us for the extraordinary freshwater bryozoan biota we found at a site where a small lake (Weikerlsee) flowed into a backwater stream of the Danube. Those of us with little experience of freshwater bryozoans were astounded to see luxuriant, grey-coloured growths of *Plumatella fungosa* on a sunlit, rocky platform, as well as numerous vermiform colonies of *Cristatella mucedo* and other species clinging to twigs. Back in the Biologiezentrum we had the opportunity to observe the colonies feeding. Particularly intriguing was the static lophophore of *C. mucedo*, quite unlike those of marine bryozoans with their flicking tentacles.

The final day of the workshop consisted of an excursion to the Salzkammergut west of Linz. At the Mondsee we sampled phylactolaemates and the ctenostome *Paludicella* which were attached to rubber tyres on a jetty and to the undersides of water-lily leaves, taking them for observation to the nearby Institute of Limnology of the Austrian Academy of Sciences. The institute's director, Professor **Thomas Weisse**, welcomed us to this impressive lakeside

facility, explaining the varied research programmes that are undertaken. He and Professor **Uwe Humpesch** led tours of the laboratories, boathouse and library. Professor Humpesch then accompanied us to a river site (Wangauer Ache) a few kilometres along the road to witness a fascinating demonstration by a small company, UWITEC, of benthic sampling using a freeze corer. By pouring liquid nitrogen into a cylinder it was possible to freeze a column of river gravel. The extracted gravel was essentially an ice-cemented conglomerate, sufficiently solidified to be cut with a rocksaw which sliced cleanly through the cobbles held together by the ice. The details of UWITEC's products can be found at: <http://www.uwitec.at>.

After a pleasant picnic lunch provided by UWITEC we travelled to a small alpine lake called the Gosausee. Here the party divided into biologists and palaeontologists. The biologists were successful in finding the first examples of freshwater bryozoans in this lake, while the palaeontologists sampled the Triassic Dachsteinkalk from scree material next to the footpath that encircles the lake. Although bryozoans have been recorded previously in this reef limestone of Norian and Rhaetian age, they have never been formally studied and it is hoped that some of the samples collected will, after thin sectioning, provide new data on the depauperate Triassic bryozoan fauna. In the fossil shop at Gosausee we were able to observe locally collected specimens not only from the Triassic but also from the overlying Cretaceous Gosau Formation which is famous for its rich marine fauna.

A touristic visit to the UNESCO World Heritage site of Hallstatt rounded off the day and the workshop as a whole. Should you wish after death to have your skull painted with a floral motif and exhibited to the public for the entrance price of 2 Euros, then move to Hallstatt. There is so little space for graves here that, after about 20 years buried in the cemetery, each corpse is disinterred, the skull painted and added to a decorative arrangement of crania and long bones in a small building next to the Catholic church.

By all criteria this was a very successful workshop. The Biologiezentrum in Linz were friendly and accommodating hosts, providing us with excellent facilities even though they have no bryozoologists on their own staff. Emmy Wöss organized the diverse programme of events to perfection. A personal highpoint for me as a palaeontologist unfamiliar with the mysteries of freshwater bryozoans was the opportunity to collect and observe living phylactolaemates. We can count ourselves very fortunate nowadays to have such meetings as the Linz bryozoan workshop plus the Larwood Symposia to bridge the three-year gaps between International Conferences of the IBA.



Participants at the Bryozoa Workshop at Linz



Ernie Aescht



Concetta Elia



Hubert Blatterer



Andrej Ernst



Gaby Geimer



Otto Girsch



Urszula Hara



Marcus Key



Gerald Maier



Jos Massard



Maya Novosel



Giorgia Pieroni



B. Ruthensteiner



Joachim Scholz



Paul Taylor



Mina Taticchi



Tim Wood



Emmy Wöss



Kamil Zágorček



Alexandra Zieritz

Photos by Otto Girsch, Joachim Scholz,
Paul Taylor, and Jürgen Plass.



News from the IBA Advisory Council

In June the International Bryozoology Association launched the *IBA Bulletin*, a quarterly electronic publication distributed on-line. Response to the *Bulletin* has been enthusiastic. People have written to say they appreciate the more timely news, information, and reference citations. The color layout is attractive, delivery is almost instantaneous, and of course there are no printing or postage costs.

Recently IBA President Paul Taylor asked members of the Advisory Council what they thought we should do about the annual "Newsletter" booklet that is traditionally mailed to the membership each spring at an average cost per member of around US\$5. Should it now be discontinued? If so, should we make a corresponding adjustment in membership fees?

In their responses Council members offered good ideas, and a general consensus was reached on the following points:

- We should retain the *IBA Bulletin* as an electronic publication, replacing the annual Newsletter that has traditionally been mailed to the membership.
- A hard copy of the membership list may still be useful to members, and this could be distributed after each triennial conference (perhaps together with a full conference report);
- Official hard copies of the *IBA Bulletin* should be retained for archival purposes, and back issues should be posted on the IBA website;
- Suggested membership fees should be maintained at the current level.
- Membership fees should continue to be voluntary, or else encouraged as a donation (which really amounts to the same thing).
- Money saved by eliminating printing and postage of the annual Newsletter should be used to defray student expenses at IBA conferences.

Some concern was expressed regarding the amount of work required to produce a quarterly publication. However, assembling the *Bulletin* hardly compares to the huge time commitment required to produce and mail the annual booklet. If a future Secretary finds a quarterly publication too much of a burden, cutting back to a semiannual publication would be an option.

Elected members of the Advisory Council are: Juan Cancino, Dennis Gordon, Hugo Moyano, Hans Arne Nakrem, Aaron O'Dea, Beth Okamura, María Cristina Orellana, Joanne Porter, Antonietta Rosso, Priska Schäfer, Rolf Schmidt, Abby Smith, Paul Taylor, Kevin Tilbrook, Judy Winston, Timothy Wood, and Patrick Wyse-Jackson



Current Status of the Collection of Ehrhard Voigt

Joachim Scholz

Professor Voigt (1905-2004) has left the International Community of bryozoologists with a massive legacy of the most comprehensive collection worldwide of Cretaceous bryozoans. His enormous bryozoan collection occupies thousands of cavity slides, and boxes. The Bryozoan Centre of Senckenberg, which has been supported in its foundation by two IBA resolutions in 1995 and 1998 respectively, owes its existence to the Voigt collection that was bequeathed to us.



Figure 1. The collection of Prof. Voigt in the central collection store, visited by Dr. Alexandre Magno Feitosa Sales (left) and Prof. Andre Herzog Cardoso (right), Universidade Regional do Cariri, Brazil.

After his death in November 2004 at age 99, Prof. Voigt's collection was transported to Frankfurt on February 4, 2005, occupying 180 large carton boxes (Fig 1) which contain bryozoans and bryozoan literature and, furthermore, 40 large drawers (Fig. 2), and numerous separate carton boxes. In the latter, E. Voigt kept his type specimens and originals.

We did not unpack these boxes when they arrived, because of a fire protection renovation that will last for several months (all walls are currently removed and about to be rebuilt). The complete Recent and fossil bryozoan collection (together with several other collections of the Senckenberg Institute) had to be transferred into the central collection store. This was done in September. Some minor parts of the bryozoan collection are still accessible for research, but most of it, including nearly the whole E. Voigt collection, is inaccessible for a while, or only with major effort.

The bryozoology is currently encrusting a relict habitat in the University of Frankfurt's physics department. We expect to move back to the renovated rooms of the bryozoology section in April or May 2006. The types and originals of the Voigt collection should thus be accessible in the second half of 2006. To arrange the whole E.V. collection in a modern collection system, including its incorporation in the Internet database system SESAM developed in Senckenberg (so that the overview is available to the internet user) will probably occupy a whole professional lifetime. For the new arrangement, we expect several hundred thousand sample boxes to be counted, and re-labelled.

Any research project dedicated to the Voigt collection is very much welcome, so please come and join us after our resurrection later in 2006.



Figure 2. The unique multilaminar E. Voigt growth form of sample boxes (up to 5 laminae) in one of 40 large cabinet drawers. These drawers went as they were, and as E. Voigt had left them, to Frankfurt. The drawers are, aside from type specimens, the very core of the Voigt legacy

The Collection of Recent Bryozoans in Hamburg, Germany: A Brief Status Report

Joachim Scholz

In January 2005, Dr. HARALD SCHLIEMANN, Professor emeritus at the zoological Institut and Museum of Hamburg, distributed an open letter to the international science community, referring to the changing situation of the zoological Museum of Hamburg university. The letter was reprinted in *Bryozoa 2004*. It stated that the collections were at risk, due to plans by the University administration to move the Zoological Institute and Zoological Museum to another building that lacked sufficient space for all of the collections.

This letter of Prof. SCHLIEMANN, and related activities of other colleagues from Hamburg created an immediate response from scientists from all over the world in support of the museum. For example, Prof. Teruaki Nishikawa, an ascidian and hemichordate taxonomist from Nagoya, Japan, wrote on Jan 31, 2005:

“... So far I have repeatedly asked for loans of specimens deposited there even for more than hundred years, and fortunately I had some opportunities to stay there to examine the specimens. Whenever I examined the specimens thanks to the kind help of the curator, I always felt deep gratitude and great respect for the museum and for those who have continuously supported its huge collection for a long long time. My respect is due directly to the museum and the university, but also to the citizens of Hamburg or the people (as tax-payers) of your country to understand the necessity to support the museum’s fundamental activities. In this sense, the presence of the museum itself has a symbolic meaning, as well as scientific utility in the long term.”

This and other national and international activities have fortunately stopped for now the plans to abandon parts of the collections. This does not mean that there is a long-term guarantee for their safety, as Hamburg colleagues told me in December 2005, but the situation is under ongoing negotiations, and there is some reason to hope that the issue will be resolved.

Yet, this belongs to the realm of the future. So what about the current state of the art concerning especially the bryozoans in the zoological collections in Hamburg?

Within the scope of the German GBIF (Global Biodiversity Information Facility), JUERGEN KASELOWSKY (who is no longer involved in bryozoology) had visited the Hamburg zoological collection of bryozoans in 2004.

Alltogether, the Hamburg catalogue of bryozoans, including also brachiopods and phoronids, contains 1,881 specimen numbers. The first number was noted in 1890, the last one attributed in 1985. During WWII, 390 numbered samples of the catalogue were lost and probably destroyed.



Figure 3. Part of the extensive Bryozoa collection at Hamburg. Red labels indicate holotypes.

In accordance with the project goals of GBIF, Juergen has been focussing on the type specimens only. Aside from numerous Phylactolaemata (collections KRAEPELIN and WIEBACH), several specimens of the German South Polar expedition determined by KLUGE, and specimens of the so-called “Hamburg Magalhaensische Sammelreise” (det. CALVET) have been labelled as “types.” According to the catalogue, 74 bryozoan specimens of the Hamburg collection are types and/or originals. Among those, Juergen was able to validate 5 holotypes, and 41 syntypes.

These results are open to anyone in the Internet database system SESAM developed by the Senckenberg Institute and Museum. Please click <http://sesam.gbif-evt3.senckenberg.de/page/index.htm>, and “search” in “GBIF Bryozoa – ZIM Hamburg”.

(for further informations: see also: http://www.biologie.uni-hamburg.de/zim/niedere1/index_e.html).

In summary, the collection is in a very good condition (see Figure 1), and certainly deserves our continued attention, and future studies.



Reassembled Trepostomes and the Search for the Largest Bryozoan Colonies

Roger J. Cuffey (*Penn State Univ*) & Ronny L. Fine (*Dayton, Ohio*)

Reassembled *Heterotrypa frondosa*

Ordovician strata around Cincinnati are world-famous for their abundant bryozoan fossils, some of which occur so close to one another that their broken edges can be matched like puzzle pieces and glued back together, thus reassembling the original colony so that its maximum dimension can be measured.

Three extremely large *Heterotrypa frondosa* bryozoans, found immediately next to each other in the Corryville shale on Powerline Drive in Florence (16 km southwest of downtown Cincinnati), were reassembled by Fine, identified by Cuffey, published by the Ohio Department of Natural Resources' Division of Geological Survey (Cuffey & Fine 2005 *Ohio Geology*), shown in the photograph below, and donated to the Cincinnati Museum Center. The specimens occupied a combined volume of 77x53x18 cm, originally a single large colony later fractured, or intersecting growths from three separate founding larvae, with the largest adult specimen having a maximum dimension of 66 cm. Additional large colonies of this species, though smaller than these, have been found elsewhere near Cincinnati (Waugh & Erickson 2002).



Overview of the *Heterotrypa frondosa* bryozoans reassembled by Fine, laid out as they were found very close together in the outcrop, and showing the lettuce-like fronds, low-slung growth across the ancient substrate, and erect fronds growing upward above the first-formed portions. Photograph originally appeared in *Ohio Geology* (Cuffey & Fine 2005), reprinted here courtesy of the Ohio Geological Survey.

Largest Colony Records

The unusually large size (maximum dimension ~0.8 m) of these reassembled trepostomes stimulated us to search the available literature for other extremely large bryozoan colonies. Initially, none larger were seen; after our paper (Cuffey & Fine 2005) appeared, a couple of larger records were found (thanks to Paul Taylor and Ken McKinney for those references). Possibly, additional reports of still larger colonies may be embedded in monographs not yet read. Both experience and modeling suggest that most mature colonies were under ~15-20 cm in size, hence 0.2 m seems a reasonable lower limit for our search. Another measurement than maximum colony dimension might be desirable, like total skeletal biomass/biovolume, but such data appear generally unavailable; in fact, finding any data on maximum sizes proved surprisingly difficult.

LARGEST BRYOZOAN-COLONY RECORDS

Reassembled bryozoans from Cincinnati area (maximum dimension ~0.8 m):

TREPOSTOME:

<i>Heterotrypa frondosa</i>	Ordovician, Kentucky-Ohio	Cuffey & Fine 2005; Waugh & Erickson 2002
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A few other unusually large bryozoans have been reported, almost as large as the Powerline Drive *Heterotrypa frondosa* but not quite (maximum dimension in the 0.2-0.7 m range):

TREPOSTOMES:

<i>Heterotrypa patera</i>	Ordovician, Alabama	McKinney 1971
<i>Monotrypa benjamini</i>	Silurian reef-flank, Pennsylvania	Cuffey 1989
<i>Heterotrypa enormis</i>	Devonian, Siberia	Mezentseva 2000
<i>Leptotrypella asterica</i>	Devonian, upstate New York	Boardman 1960; Kloc 1983
<i>Tabulipora carbonaria</i>	Permian, Kansas	Cuffey 1967
<i>Tabulipora sp. unident.</i>	Permian, Greenland	Håkansson & Madsen 1991; Key et al 2002

FENESTRATES:

<i>Archimedes valmeyeri</i>	Mississippian, Illinois	Snyder 1991
<i>Archimedes owenanus</i>	Mississippian, Illinois	Snyder 1991
<i>Fenestella spp.</i>	Permian reef, Texas - New Mexico	Wood et al 1996
<i>Polypora spp.</i>	Permian reef, Texas - New Mexico	Wood et al 1996

CYCLOSTOME:

<i>Pennipora anomalopora</i>	Cretaceous, Netherlands	Taylor & Voigt 1999
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CHEILOSTOMES:

<i>Celleporaria gambierensis</i>	Oligocene-Recent, southern Australia	Hageman et al 2003
<i>Celleporaria palmata</i>	Pliocene, Rhodes	Spjeldnaes & Moissette 1997
<i>Celleporaria agglutinans</i>	Recent, New Zealand	Bradstock & Gordon 1983
<i>Adeonellopsis sp. unident.</i>	Recent, New Zealand	Smith et al 2001
<i>Schizoporella errata</i>	modern reefs, Bermuda	Cuffey & Fonda 1976

PHYLACTOLAEMATE:

<i>Pectinatella magnifica</i>	modern freshwater lakes, North America	Hyman 1959
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(19th-century reports say “several feet in diameter”, but those seen and photographed personally in late 20th-century are smaller)

Two other bryozoans are recorded as slightly larger than our reassembled *Heterotrypa frondosa*, with maximum dimension about a meter, and that size documented by photograph or measurement:

TREPOSTOME:

<i>Stenopora tasmaniensis</i>	Permian, Tasmania	Reid 2003
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FENESTRATE:

<i>Archimedes wortheni</i>	Mississippian, Illinois	Snyder 1991
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Two (or three) additional bryozoans are also noted as in the 1-m size range, but their dimensions are only stated in passing, without further documentation, so that some uncertainty remains:

FENESTRATE:

unidentified fenestrate frond	Mississippian mud-mound, New Mexico	Kirkby et al 2000
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CYCLOSTOME:

<i>Hyporosopora portlandica</i>	Jurassic patch-reef, England	Fürsich et al 1994
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(cheilostome):

(*Celleporaria gambierensis* [see above] is also stated in this manner, although the actual numbers given are smaller).

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Hans Hass' "Reteporiden": A Neglected Classic?

Ken McKinney

Emmy Wöss wrote on behalf of Hans Hass in the previous IBA Bulletin to ask if his 1948 work has ever been cited or discussed by anyone since its publication. To my dismay, I found that I had cited it only once. It deserves far more recognition than it has gotten.

Beitrag zur Kenntnis der Reteporiden (Zoologica Stuttgart 101:1-138, 10 pls.) is in my view a neglected classic. First, a confession: I haven't read it all, because my ability to read German has deteriorated at a variable rate but continuously since I finished graduate school. Reading it end to end would simply have taken more time than I could give at any one time after I discovered it in the 1980s.

The majority of the paper is an analysis of zooidal budding geometries of *Sertella* and the varying mesh geometries that result, including surface area increase with progressively more compact crinkling of the mesh. The mathematical treatment of several aspects of growth is detailed and fascinating. It seems remarkably prescient to approaches taken in the 1970s and more recently. But it is more than an innovative work in mathematical morphology and ecology.

Plate 2 has photographs of a diver in a diving bell as well as others showing scuba. Is it one of the earliest biological works in which scuba diving observations were used? If not, surely it must at least be either the earliest or one of the first publications in which bryozoans were the specific target of underwater photographs, beautifully framed. *Sertella* in the Adriatic and Mediterranean is portrayed in the volume at all scales available at the time, from field observations of environmental distribution to photomicrographs of ancestrulae and thin sections of soft parts. There is even a photograph of a full spiral revolution along a colony margin (Pl. 8, fig. 41) as though the colony at that point started to develop overall morphology similar to *Archimedes*.

Emmy indicated that there is a question of whether it is worthwhile to translate this marvelous work into English. Count me in as a solid YES. I would love to read it accurately and fully, without running it through my slow and faulty filter of mediocre German comprehension.

Follow-up note from Emmy Wöss: In summary, nine people responded to my request in either knowing this work or being very interested in a translation of this thesis, written in German language, into English. A translation could be done e.g. by a bilingual marine biologist here in Austria, but, up to this moment, there is no idea of financing of this possible project.



Recent Books

Re-description and revision of Smitt's "Floridan Bryozoa" in the Collection of the Museum of Comparative Zoology, Harvard University.

Author: Judith Winston

Publisher: Virginia Museum of Natural History (Memoire 7).
Martinsville, VA 24112 USA.

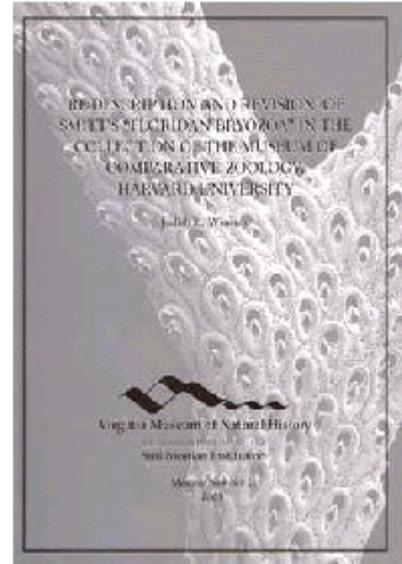
Softcover 150 pages

Full page plates, measurement charts

\$30.00 ISBN 1-884549-22-5

This monograph describes and updates the nomenclature and classification of the "Floridan Bryozoa" collected in 1862-69 by L. F. de Pourtalès and named by F. A. Smitt in 1872-73. This material, now in the Museum of Comparative Zoology, includes specimens of 68 species, upon which (in addition to those recognized by Smitt), are based 15 new species and four new genera. Four new families are also proposed to accommodate the new taxa in the modern classification of this group. All species are illustrated by large, detailed SEM images

Order from: Virginia Museum of Natural History
1001 Douglas Avenue
Martinsville, VA 24112
Tel. 276-666-8600
Fax: 276-632-6487
www.books@vmnh.net



Bibliography on Phylum Bryozoa (Fossil and Living Organisms)

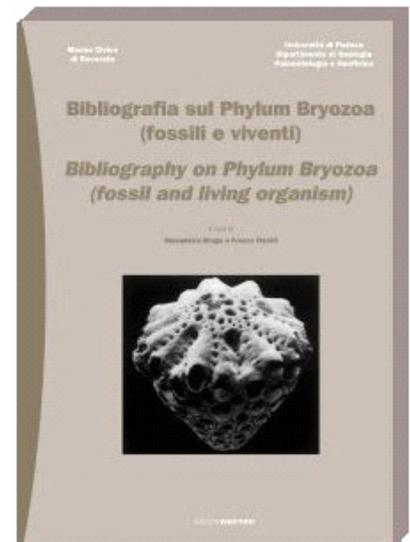
Authors: Giampietro Braga and Franco Finotti

Publisher: Edizioni Osiride, Rovereto (TN), Italy.

214 pages, plus eight introductory pages in Italian and English.

€15

The bibliography has 3,480 entries spanning 1786 through 2004, including both marine and freshwater bryozoans. The book is available through the bookshop of The Town Museum of Rovereto (TN-NE Italy). To request the book, Giampietro suggests that you send a fax to +39.0464.439487, or an e-mail to museo@museocivico.rovereto.tn.it or else visit the web site www.museocivico.rovereto.tn.it and follow the instructions in the e-shop pages.



LARWOOD MEETING 2006

You are warmly invited to attend this annual one-day meeting that is being hosted by Patrick Wyse Jackson and Margret Steinhorsdottir.

Presentations (both verbal and poster) on any aspect of bryozoological research are welcome, particularly from students. We also welcome reports of on-going research, as well as papers on completed projects. Please send a 500 word abstract saved as a MS Word file to Patrick Wyse Jackson (wysjcknp@tcd.ie) by February 1st. Talks will be 20 minutes long. Facilities for PowerPoint and 35mm slides and overheads are available.

Venue: Department of Geology, Trinity College, Dublin, Ireland

Date: Friday 10th March 2006

Registration fee: 20 Euros (payable on the day) which includes tea, coffee, lunch (sandwiches) and a buffet dinner in the Wyse Jackson home in the evening.

Accommodation in Dublin: the best way to find and book accommodation is to check the website: www.visitdublin.com/accommodation

Getting to Dublin: Cheap flights to Dublin are available from most British and European airports. Check the webpages for RyanAir; Easy Jet; Aer Lingus and/or British Midland.

A programme will be sent by e-mail to registered delegates in mid-February. If a large number of presentations are offered then it is possible that some delegates will be asked to bring posters instead.

We have not organised a field excursion for Saturday as many folk may wish to enjoy the cultural and culinary delights of the city instead.



Information from the Natural History Museum

Mary Spencer Jones & Paul Taylor

Visiting

If anyone is considering a trip to the NHM, then will you please notify Paul Taylor or Mary Spencer Jones well in advance of your visit. New security arrangements for scientific visitors require that anyone coming for more than the odd day now has to have a photo-pass. This means that paperwork has to be completed, sent to departmental offices, signed by the Keeper and transferred to security well before you arrive. Also both Paul and Mary have other duties, some taking them off-site, and so will not necessarily be in the museum if you try to visit at short notice. Having said this, we do want you all to keep on coming!

If you arrive at the museum before 10.00 am, you will need to sign in at the Bronze Gate, which is located on Exhibition Road, just south of the entrance to the NHM Earth Galleries. If you arrive after 10.00 am, then you can enter through the main entrance as before and report to the reception desk on the left.

Loans

As previously explained in the last bulletin, there are still problems in sending out wet loans due to new worldwide regulations. If you want to look at wet material, then you should consider visiting the NHM personally. We are also experiencing some difficulties with dry loans to Australia and the USA, due to their Customs, so please take this into account as well.

Donating material

We welcome donations of new material to the NHM collections, but it is advisable to contact us about these in advance as you now have to sign a transfer of title form, which we can email to you. The form basically states that you have collected the material legally.



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.

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