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## Editorial

Dear colleagues,

Today a new period begins for *Meganeura*. After this edition of the newsletter, *Meganeura* will only be published on the Internet, because the ESF funding that enabled us to publish the newsletter over three years will finish at the end of 1999. As you know in September 1996 the ESF Executive Council approved the Network on Fossil Insects for a three-year period. Thank you very much to the ESF for the opportunity to begin and promote the future of this newsletter.

Dr. Gérard Masselot from the Muséum National d'Histoire Naturelle in Paris, a specialist in Ephemeroptera, has set up the *Meganeura* homepage. At this moment it is not available, because some windows are not constructed yet, but during the winter we will send you by email or by mail the new address of the newsletter.

Thank you to all colleagues who during these three years kindly collaborated with *Meganeura* by sending us articles, news, suggestions, etc. The Internet version of *Meganeura* will have two Editors: Dr. Guenter Bechly from Germany and myself. You can send your news to him or to me.

**Dr. Xavier Martínez-Delclòs**

You can obtain information on the ESF Network on Fossil Insects on the European Science Foundation Home page:  
<http://www.esf.org/fossil>

## Meganeura on the Internet

### Soon, *Meganeura* on the web !

**Gérard Masselot (Paris)**

E-mail: [gm@invfmr.org](mailto:gm@invfmr.org)  
<http://www.invfmr.org>

The third millennium will occur in approximately 200 days. Paper publications remain essential to facilitate filing, but also to maintain the scientific value of the published articles (anyone can create a web site, on any subject, to say anything; go and see the creationist's sites ...), and to give "unquestionable date" to the publications. On the other hand, the practical information, the advertisement of Congresses, for example, cannot find a better tool for diffusion than the web: rapid (even if connections are sometimes long to obtain, or if images spend a little more than one second to appear), convivial (one can go where one wants), and inexpensive: it is an essential tool. It is also an extraordinary media for popularisation which makes it possible to explain "differently", to many more readers, often ignored concepts. All alone, science, in its pretty "ivory tower", without a tool of popularisation towards the greatest number, can seem the "solitary pleasure" of researchers.

Moreover, the financing of research imposes that those who finance may know what they are financing... And who generally finances? *Meganeura* will be thus on line in a few weeks. You shall find there the entirety of the usual headings of the newsletter,

The deadline for articles for *Meganeura* no.5 (on the internet) is **15 November 1999**

but also durable practical information (on collections for example). It will be possible to consult the preceding issues. We want the site to be at the same time fast and easily accessible, but also an opened window, and sightly. We too often complain that palaeoentomology is ignored, or scorned: it is time to show that our discipline is alive, active... and dustfree!

## ESF Fossil Insects Network news

### Co-ordination Committee meeting

ESF Network on Fossil Insects ESF,  
20-22 September 1998,  
Göttingen, Germany

#### Present:

Joanne Dalton (ESF), Dr. Bruno David (observer, France), Prof. Jean-Claude Gall (chairman, France), Dr. Ed. Jarzembowski (secretary, UK), Dr. Andre Nel (France), Prof. Rainer Willmann (vice chairman, Germany), Dr. Vladimir Zherikhin (Russia), Prof. Ole Heie (Denmark) and Dr. Xavier Martínez-Delclòs (Spain).  
Invited persons (database matters/ ETI): Dr. Vladimir Blagoderov (Russia) and Dr. Thomas Hörnschemeyer (Germany).

Professor Jean-Claude Gall welcomed the Committee to the Meeting and stressed that as it is the second last meeting before the end of the Network it is important to start post-Network preparations. Professor Gall also expressed his thanks to Annette Moth-Wiklund, Joanne Dalton, Bruno David, Thomas Hornschmeyer and Xavier Martínez-Delclòs

#### 1. Apologies for absence

Apologies for absence were received from Dr. David Martill (United Kingdom) and Dr. Jan Koteja (Poland).

#### 2. Approval of Agenda

The agenda was approved.

#### 3. Minutes of Second Meeting

The draft minutes of the second Co-ordination Committee Meeting, held in Dijon, France, on 14 September 1997, were approved as a correct record of the meeting.

#### 4. Officers' reports

The officers had nothing to report.

#### 5. Budget

Joanne Dalton presented the budget and the Committee asked a number of questions. Who pays postage for the mailing of *Meganeura*? ESF. What happens if there is money left over at the end of the Network? It is reincorporated into the ESF General Budget.

The Committee discussed ways of spending unspent balances and suggested prolonging the grant scheme with a final deadline for applications on 31 January 1999. A discussion ensued on the possibility of using money to publish the proceedings of the Göttingen workshop. Professor Willmann had been offered the possibility of publishing the proceedings in the *Paleontologische Zeitschrift* in the Network was prepared to pay a sum of money. After discussion it was agreed that Professor Willmann should get further information on this before a decision could be taken.

Post-meeting note: General ESF policy is that Network funding should not be used to pay for the publishing of the proceedings of Network workshops. The ESF would approve payment for the publishing of the workshop presentations as a set of refereed papers.

The Committee decided that 46000 FF. from the grant budget and the 10000 FF. set aside for Diverse Meetings should be used for Publication and Publicity and for Data Preparation & Computing

#### 6. *Meganeura*

Xavier Martínez-Delclòs reported that the mailing list for *Meganeura* now covered over 300 people in 36 countries. Copy for No.3 was due on 31 October 1998.

The Committee discussed the future of *Meganeura* particularly in view of the fact that funding for publishing would no longer be available after the end of the Network. André Nel informed the Committee that the Museum in Paris would be willing to provide space on their web site for the Newsletter. After discussion the Committee agreed that two more issues of *Meganeura* would be published. No. 3 would be available on paper and No. 4 would be available on paper and electronically.

**Action:** The ESF Secretariat will send a questionnaire to all *Meganeura* readers with No. 3 requesting information on their ability to access the Internet and their willingness to read an electronic version of *Meganeura*.

**Post-meeting note:** The Chairman approved a maximum sum of 4000 FF to cover the costs of a trip by Xavier Martínez-Delclòs to Paris to help prepare the electronic version of *Meganeura*.

#### **7. Grant scheme**

Four applications were received and three awards were made. Azar (5000 FF), Basibuyuk (5000 FF) and Mostovski (5000 FF).

It was decided that 31 January 1999 would be set as the final deadline for grant applications.

**Action:** The ESF Secretariat will inform the applicants of the decision of the Coordination Committee and advertise the final deadline for grant applications.

#### **8. Dijon Workshop**

The Committee noted the report of the Dijon workshop and Professor Gall expressed his thanks to Bruno David for the organisation of the workshop.

#### **9. Göttingen Workshop**

Professor Willmann, the workshop organiser, informed the Committee that he did not believe that the total sum budgeted for the workshop would be required. He also provided an update on the programme for the following two days.

#### **10. Portsmouth Workshop**

David Martill, the workshop organiser, was unfortunately unable to attend this meeting. This workshop, on *Palaeoecology and preservation of fossil insects*, is scheduled for September 1999. It will include a field trip to the Insect Bed (Bembridge Marls), late Eocene of the Isle of Wight.

**Action:** Edmund Jarzembowski is to liaise with David Martill to progress final details.

#### **11. Databases on Fossil Insects**

Bruno David and Thomas Hörnschmeyer reported that an agreement had been signed with ETI of behalf of the Network to develop a new programme meeting the Network requirements. The demonstration version of the software was expected by February 1999. The software would be tried out using databases in Göttingen (Hörnschmeyer), Moscow (Blagoderov) and Paris (Nel) prior to the Portsmouth meeting.

It was decided that a total 15000 FF would be set aside for a trip by Thomas Hörnschmeyer to ETI in Amsterdam, and for Vladimir Blagoderov and André Nel to travel to Göttingen in 1999 to liaise with Thomas Hörnschmeyer on the testing of the database.

#### **12. Annual Report**

The Committee noted the report and did not find any necessary modifications.

#### **13. Any other business**

There was no other business.

#### **14. Date of Next Meeting**

The next meeting of the Coordination Committee will be held in September 1999, in Portsmouth, United Kingdom.

Joanne Dalton

### **Next Co-ordination Committee Meeting**

The next meeting of the Coordination Committee and the ESF Workshop on Fossil Insects will be held in the School of Earth, Environmental and Physical Sciences at the University of Portsmouth, Portsmouth, UK from the 5-8 November 1999.

Part of the meeting will be devoted to the demonstration of the newly developed fossil insect data base. There will be a single day of papers on the palaeoecology of fossil insects and a field trip to the Isle of Wight to collect fossil insects from the Lower Cretaceous and Oligocene.

Convenors are Drs Dave Martill (Portsmouth) and Ed. Jarzembowski (Maidstone). For details of the meeting contact Dave Martill at: School of Earth, Environmental and Physical Sciences; University of Portsmouth; Burnaby Building; Portsmouth PO1 3QL; United Kingdom; Email: martilld@port.ac.uk

## **Meetings and workshops**

### **Reports of previous meetings/workshops**

#### **Amberif 1999**

**by Ryszard Szadziowski (Gdansk)**  
Email: borys@univ.gda.pl

On 25-28 March 1999 the 6<sup>th</sup> International Amber Jewellery and Watch Faire called "Amberif" was held in the Trade Centre in Gdansk. Over 370 exhibitors presented their wares. In the amber hall unique collections of beautiful amber items such as necklaces, rings, sculptures, boxes, etc. were presented. In the Paleontological Gallery, the exposition was prepared and conducted by the Museum of Amber Inclusions (University of Gdansk) with the cooperation of Mr Jacek Serafin, the Polish Entomological Society and the Natural History Museum of Cracow. Amberif '99 was visited by many

palaeontologists and inclusion collectors from Germany, Denmark, Russia, Lithuania, Ukraine, England, Switzerland and Poland. There were, among others, Prof. B. Kosmowska-Ceranowicz, Prof. Jan Koteja, Dr Y. Popov, Dr I. Sukatsheva, Dr W. Weitschat, Dr. W. Krzeminski, Dr G. Krumbiegel. On 27 March there was a seminar on amber bearing deposits, and on 28 an auction of amber inclusions. For the first time two lizards in Baltic amber, one from Lithuania and one from Poland, were proposed for sale. The Polish lizard collected at Gdansk has a well-preserved tick on its skin. It is worth noting that this is the first fossil finding of a true parasite on a vertebrate host.

### **Future meetings and workshops**

#### **The Second World Amber Congress in Beirut (Lebanon)**

**by Dany AZAR (Paris)**  
Email: azar@nmhn.fr

The first World Amber Congress was held in Vitoria-Gastiez (Alava province), Basque Country, Spain, on the 20-23 October 1998. The congress was very successful, with very luxurious preparation on all levels. It was the first time that the Alava Amber was introduced to scientists.

During the Congress I presented suggestions to the Organising Committee on organising the Second World Congress on the Amber Inclusions and proposed Beirut (Lebanon) to hold this event. After the congress, I went to the Lebanon where I negotiated the possibilities of preparing the next congress with the Lebanese government and the Lebanese National Council of Scientific Research (CNRS). Both the Lebanese government and the CNRS were very positive and promised to provide all the financial and technical help for the next congress. Contacts were also made with the Lebanese University and the Lebanese Geological Committee who offer all their support for a successful congress.

I am glad to announce that the *Second World Congress on the Amber Inclusion* will be in Beirut, Lebanon.

The choice of Lebanon to hold the next congress is for several reasons:

- Lebanese Amber is the oldest with arthropods inclusions, and yet this amber is not well known by scientists.
- Recently more than sixty outcrops have been found in the Lebanon, and these outcrops are not protected, so such a congress could be the starting point to protect the outcrops and to create a kind of Museum holding the Lebanese material. This Museum would enable easy access to Lebanese material for scientists.
- The age of Lebanese amber (Lower Cretaceous) is very important since the Lower Cretaceous witnesses the main radiation of flowering plants and the co-evolution between insects and these plants.

The exact time and location of the Congress will be given at a later date.

**The Third International Symposium on Lithographic Limestone**  
*28 August-9 September 1999. Bergamo (Italy)*

**Information and guidelines:** Dr. Silvio Renesto. Dipart.Sienze della Terra; Universita degli Studi di Milano, via Mangiagalli, 34, I20133 Milano, Italia. Fax: 39.2.70.63.82.61; Email: renesto@imiucca.csi.unimi.it and tintori@e35.gp.terra.unimit.it

**VII International Symposium on Mesozoic Terrestrial Ecosystems**  
*26 September – 1 October 1999. Buenos Aires (Argentina)*

**Information and guidelines:** Dr. Georgina Del Fuego. Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Av. Angel Gallardo 470, (1405) Buenos Aires, Argentina. Email: simposio@muanbe.gov.ar

**XV Jornadas de Paleontología**  
*28-29 October 1999. Madrid (Spain)*

**Information and guidelines:** Dr. Isabel Rábano. Museo Geominero

Instituto Tecnológico Geominero de España, Ríos Rosas 23, 28003 Madrid, España. Fax: (Spain) + 91.349.58.17; Email: i.rabano@itge.mma.es // <http://www.itge.mma.es/paleontologia.htm>.

**XXI International Congress of Entomology**  
*20-26 August 2000. Iguassu Falls (Paraná, Brazil)*

**More information:** see Meganeura no. 2 and <http://www.embrapa.br/ice>

**XVIII International Congress of Zoology**  
*28 August – 2 September 2000. Athens (Greece)*

**Information and guidelines:** [http://www.ims.usm.edu/~musweb/icz\\_xviii/icz\\_home.html](http://www.ims.usm.edu/~musweb/icz_xviii/icz_home.html)

## The Fossil Insects Database - update

by Thomas Hörnschemeyer (Göttingen)  
Email: thoerns@gwdg.de

On 26-28 April I visited ETI in Amsterdam to discuss some problems that the programmer had with the development of the stratigraphy module.

During my visit I learned that after a long delay of the LinnaeusII development due to problems with the new versions of the Microsoft and Apple operating systems, the 2.0 version of LinnaeusII is now ready.

The development of the stratigraphy module was affected by this delay, too. Because of this we can expect a demonstration version of LinnaeusII including the stratigraphy module not before the end of June this year. The problems, due to which I was invited to Amsterdam by ETI turned out to be minor. They resulted mainly from the fact that the programmer now concerned with the stratigraphy module was not present during the visit of Bruno David and myself to Amsterdam in 1998. The programmer assured me that the work will go on quickly now. I was shown some



working models which looked quite promising.

If we really get a first running version of the software during the summer, it should be possible to have something concrete to show at the Network meeting in England.

## Electronic news

### Now on the Web!

- **From: Paleohunt@aol.com**

Have you been in contact with the California Academy of Sciences? They have, I believe, one of the largest (if not the largest) collections of Middle Miocene insects from Stewart Valley, Nevada—one of the more prolific fossil insect producers in the world. Here are a couple of links that may be of interest: <http://www.calacademy.org/> <California Academy of Sciences> and <http://www.calacademy.org/research/entomology/fossils> <ENTOMOLOGY DEPT. STEWART VALLEY FOSSIL INSECT HOLDINGS>

- **From: <http://www.gplatt.demon.co.uk/>**  
You may like to consider reviewing my own web site which is dedicated to amber, copal and all forms of fossil resin. I think you will find it's one of the most comprehensive sites on the web.

### Reviews

- **Palaeontological reviews**

**Acta Palaeontologica Polonica:** <http://www.paleo.pan.pl/acta/acta.htm>

**Fossil ans Strata:** <http://193.69.40.2/journals/en/j-285.html>

**Geobios:** <http://Geobios.univ-lyon1.fr/framemenuuk.htm>

**Ichnology Newsletter Introduction:**

<http://www.emory.edu/GEOSCIENCE/HTML/IN-98.Intro.htm>

**Lethaia:** <http://193.69.40.2/journals/en/j-109.html>

**Nature:** <http://www.nature.com/>

**Noticias Paleontológicas:** Bull. Spanish Paleont. Soc.: <http://www.uv.es/~pardomv/np/>

**Palaeontographica Canadiana:** <http://iago.stfx.ca/people/paleodiv/PalCan.html>

**Palaeontologica Electronica Journal.** You can see and read the new issue (no. 1, vol. 2, 1999\_1) of *Palaeontologica Electronica* in: <http://www.uv.es/~pardomv/presenpe.htm> or directly in: [http://www.uv.es/~pardomv/pe/1999\\_1/toc.htm](http://www.uv.es/~pardomv/pe/1999_1/toc.htm) (mirror); homepage: <http://www-odp.tarnu.edu/paleo/index.htm>

**Paleontographica Italica:** <http://www.dst.unipi.it/dst/pal/index.html>

**Palaeogeography, Palaeoclimatology, Palaeoecology:** <http://www.elsevier.nl:80/inca/publications/store/5/0/3/3/5/5/>

**Palaeontologica Polonica:** <http://www.paleo.pan.pl/pp/pp.htm>

**Paleontologicheskii Zhurnal:** <http://www.maik.rssi.ru/journals/paleng.htm>

**Palaios:** <http://www.ngdc.noaa.gov/mgg/sepm/palaios/>

**Paleobiology:** <http://www.uic.edu/orgs/paleo/paleobio.htm>

**PaleoBios:** <http://www.ucmp.berkeley.edu/museum/PBSI.html>

**Revue de Paléobiologie:** <http://www.ville-ge.ch/musinfo/mhng/page-e/paleo.htm>

**Rivista Italiana d Paleontologia e Stratigrafia:** <http://www.gp.terra.unimi.it/rivista.html>

## Paleoentomological/ entomological associations Web sites

### • Societies/Museums

**Museum of Amber Inclusions** in Gdansk (Poland) (for more information see chapter "Miscellaneous"): [www.ocean.univ.gda.pl/~zoolbez/muzeum.htm](http://www.ocean.univ.gda.pl/~zoolbez/muzeum.htm)

**Museo Nacional de Historia Natural** in Montevideo (Uruguay): [http://www.mec.gub.uy/museum/mus\\_nat/musnat.htm](http://www.mec.gub.uy/museum/mus_nat/musnat.htm)

**Museo Nacional de Ciencias Naturales** in Madrid (Spain): <http://www.mncn.csic.es/>

Museo Geominero in Madrid (Spain): <http://mma.es:8088/ODMMA/ITGE/museo.htm>

PaleoNet in London (UK): <http://www.nhm.ac.uk/hosted-sites/paleonet/>

**Sociedad Española de Paleontología** in Madrid (Spain): <http://ciencia158.udc.es/sep/>

## Miscellaneous

### News about fossil insects

#### Museum of Amber Inclusions

**by Ryszard Szadziewski (Gdansk)**  
Email: [biorys@univ.gda.pl](mailto:biorys@univ.gda.pl)

In June 1998 at the University of Gdansk, Department of Invertebrate Zoology, the Museum of Amber Inclusions was formally established. At present there are over 4000 pieces of Baltic amber with inclusions in the collection of the Museum. Almost all inclusions are gifts from amber dealers and private collectors. The total number of inclusions in our museum will be known in the next year when all amber pieces are polished and inclusions counted. Some types of the new species described recently (Diptera: Culicidae, Ceratopogonidae) are deposited in the Museum. In addition there are some inclusions from Bitterfeld and Dominican amber. Determined inclusions, some with

photos, are available on the internet: [www.ocean.univ.gda.pl/~zoolbez/muzeum.htm](http://www.ocean.univ.gda.pl/~zoolbez/muzeum.htm)

**Address:** University of Gdansk, Department of Invertebrate Zoology, Pilsudskiego 46, 81-378 Gdynia, Poland, e-mail: [biorys@univ.gda.pl](mailto:biorys@univ.gda.pl)

**Depository and publishing dates of the types described by Anton Handlirsch from the Upper Liassic of Dobbertin (Mecklenburg, Germany)**

**by Jörg Ansorge (Greifswald)**

Email: [ansorge@mail.uni-greifswald.de](mailto:ansorge@mail.uni-greifswald.de)

The first fossil insects from the Upper Liassic (Lower Toarcian - *falciferum* zone) of Dobbertin (Mecklenburg, Germany) were described by the geologist Franz Eugen Geinitz (1880, 1883, 1884, 1897, 1893) working at Rostock University.

Following this initial work the Austrian entomologist Anton Handlirsch (1906-08, 1920-21, 1939) revised the types of Geinitz and added some hundred new species from this famous locality.

Until 1969 this fossil type material was kept at the University of Rostock. After closing the Geological-Paleontological Institute there, the collection was transferred to the Institute of Geological Sciences of the Ernst-Moritz-Arndt University in Greifswald. Most of the fossil insect types (302 species) were catalogued by Herrig & Nestler (1989). While checking the collection the author found some 20 overlooked species not included in this catalogue. An updated computer based catalogue of the fossil insect types housed in Greifswald is in preparation.

12 holotypes of fossil insects from Dobbertin are housed in the Natural History Museum Wien (Austria), [Ponomarenko & Schulz (1988)]. 4 of them are counterparts of specimens housed in Greifswald.

7 holotypes (4 species of *Elcana*, 1 *Orthophlebia*, 1 *Fulgoridium* and one beetle) were housed in the Geological Institute of the University of Breslau

(Wrocław, Poland). It is not known if these specimens are still there.

Most of the holotypes of *Elcana* (Saltatoria: Elcanidae) from Dobbertin are housed in the Natural History Museum of Humboldt University Berlin. In addition about 10 non Elcanidae types are kept in Berlin too. The material was borrowed in the 1930s by Friedrich Eberhard Zeuner while working at the British Museum of Natural History. After World War II the material was brought back to Germany by the late Walter Georg Kühne (paleontologist at Freie Universität Berlin) and was deposited in the Natural History Museum of Humboldt University, never finding its way back to Rostock.

The Mesozoic insects described by Handlirsch are often cited with a wrong indication of the publishing year. Therefore the issue dates of the separate parts are given here.

The huge handbook „*Die fossilen Insekten und die Phylogenie der rezenten Formen*“ by Anton Handlirsch was published in parts between May of 1906 and July of 1908.

- part 1-10 = page 1 - 160 (plate 1 - 9) - May 1906
- part 11-20 = 161 - 320 (plate 10 - 18) - June 1906
- part 21-30 = 321 - 480 (plate 19 - 27) - August 1906
- part 31-40 = 481 - 640 (plate 28 - 36) - October 1906
- part 41-50 = 641 - 800 (plate 37 - 45) - February 1907
- part 51-60 = 801 - 960 (plate 46 - 51) - June 1907
- part 61-70 = 961 - 1120 - November 1907
- part 71-80 = 1121 - 1280 - January 1908
- part 81-90 = 1281 - 1430 - July 1908

The chapter *Palaeontologie* by Anton Handlirsch in C.W.M. Schroeder: *Handbuch der Entomologie Part III* was published in 1920-1921.

- pp. 117 - 208 = 1920
- pp. 209 - 306 = 1921

The paper „*Neue Untersuchungen über die fossilen Insekten mit Ergänzungen und Nachträgen sowie Ausblicken auf phylogenetische, palaeogeographische und allgemein biologische Probleme. II. Teil*“ was published in February 1939 (posthumously as Handlirsch died in 1935) in *Annalen des Naturhistorischen Museums in Wien*. The description of new taxa in this paper is based exclusively on material from Dobbertin.

#### References

- Geinitz, F. E.** (1880): Der Jura in Mecklenburg und seine Versteinerungen. - *Zeitschrift der deutschen geologischen Gesellschaft*, 22: 510 - 535, 1 plate; Berlin.
- Geinitz, F. E.** (1883): Die Flözformationen Mecklenburgs. - *Archiv des Vereins der Freunde der Naturgeschichte Mecklenburg*, 37: 7 - 151, 6 plates; Güstrow.
- Geinitz, F. E.** (1884): Über die Fauna des Dobbertiner Lias. - *Zeitschrift der deutschen geologischen Gesellschaft*, 36: 566 - 583, 1 plate; Berlin.
- Geinitz, F. E.** (1887): Neue Aufschlüsse der Flözformation Mecklenburgs. IX. Beitrag zur Geologie Mecklenburgs. IV. Jura. - *Archiv des Vereins der Freunde Naturgeschichte Mecklenburg*, 41: 194 - 208, 1 plate; Güstrow.
- Geinitz, F. E.** (1894): Die Käferreste des Dobbertiner Lias. - *Archiv des Vereins der Freunde der Naturgeschichte Mecklenburg*, 48: 71 - 78, 1 plate; Rostock.
- Handlirsch, A.** (1906 - 08): *Die fossilen Insekten und die Phylogenie der rezenten Formen*. 1430 pp., 51 plates; Leipzig (Engelmann).
- Handlirsch, A.** (1920 - 21): Kapitel 7. Palaeontologie. - C. *Schroeder Handbuch der Entomologie*, III: 117 - 304; Jena (G. Fischer).
- Handlirsch, A.** (1939): Neue Untersuchungen über die fossilen Insekten. II. Teil. - *Annalen des Naturhistorischen Museums in Wien*, 49: 1 - 240, 16 plates; Wien.
- Herrig, E. & Nestler, H.** (1989): Katalog der paläozoologischen Typen. - *Wissenschaftliche Beiträge der Ernst-Moritz-Arndt-Universität Greifswald*: 80 pp., 13 figs.; Greifswald.
- Ponomarenko, A. G. & Schulz, O.** (1988): Typen der Geologisch - Paläontologischen Abteilung: Fossile Insekten. - *Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien*, 6 (Paläozool. 1): 1 - 39, 14 plates; Wien.



## Notices

### Dr. Guenter Bechly

Email: gbechly@lycosmail.com

Some recent unpublished results of my current paleoentomological research (the referring papers are in prep.):

**Upper Carboniferous (Namurian) of Hagen-Vorhalle in Germany:** A redescription of the oldest known dragonflies (with C. Brauckmann and W. Zessin) yielded several new results about their morphology. The most important points include the discovery of segmented gonopods and a paired penis in *Namurotypus sippeli* (male), and of a long ovipositor and prothoracic winglets (!) in female *Erasipteroides valentini* (female).

**Solnhofen limestones (Upper Jurassic of Germany):** First record of the Mecoptera family Bittacidae (= Neorthophleidiidae) after three complete specimens; rediscovery and redescription of *Stenophlebia* casta after several specimens; several new species of dragonflies incl. the first sphenophlebiid, a new small species of *Tarsophlebia*, a new small aeschnidiid, and a giant new *Aeschnogomphus* species. Finally a revision of the enigmatic taxon *Sternarthron* showed that it is not a synonym of *Propygodlampis* ("Chresmoda" sensu auct), but without doubt indeed represents a strange arachnid as already supposed by Haase about 100 years ago.

**Crato limestones (Lower Cretaceous of Brazil):** First record of pseudoscorpions and whip-spiders (Amblypygi); first record of "waterstrider-like phasmatodeans" (*Propygodlampis* = "Chresmoda" sensu auct.) for the New World; several new dragonfly taxa incl. a large new petalurid; several new Ephemeroptera larvae incl. a giant Protoligoneuria; and various new insect taxa, e.g. a very broad aquatic bug and a strange locust with short hind legs and incredibly prolonged middle legs. The most exciting discovery is a new insect

order which seems to belong to the stemgroup of Ephemeroptera. This most interesting latter new taxon is represented by one adult with a strange palaeopteroous wing venation, and several very curious larvae with abdominal gills, laterally (!) flattened body (like a gammarid), and articulated curved wingpads like certain paleozoic groups (e.g. Prottereisma), the wingpads of the hindwings are only slightly smaller than those of the forewings which corresponds to the hardly reduced hindwings of the adult.

**Baltic amber:** First record of the mayfly genus *Baetisca* for the Old World, of which all extant species exclusively live in the New World region (with A. Staniczek); description of a new dryinid wasp of the tribe Bocchini (with H.U. Pfretzschner); revision of amber odonates with description of new taxa from Baltic amber, incl. a calopterygoid and an amphipterygid (!).

**Dominican amber:** Revision of amber odonates and description of new taxa, incl. a tiny new species of the coenagrionid genus *Ischnura*, which ranks among the smallest odonates of all times.

### Insectes du Miocène moyen du Bassin Dacique (Europe Centrale, partie de la Paratétys Centrale)

**Florian Marinescu (Bucarest)**  
Institut Géologique de Roumanie

Dans des travaux ordinaires de micropaléontologie, on a préparé un échantillon d'argile marneuse, pour obtenir des tests de foraminifères. A côté de ceux-ci on a trouvé de nombreux insectes complets et fragmentaires, tous pyritisés. Ces fossiles gardent donc les détails morphologiques les plus fins. Parmi ceux-ci, se rencontrent des Diptères, des Hyménoptères (dont de nombreux Cynipidae et Formicidae), de petits Coléoptères (Curculionidae, entreautres), des Myriapodes, et diverses larves.

Ce matériel provient de la vallée de la Simnicel près du village Feteni, département de Vâlcea (Carte géologi-

que 141 d, Râmnicu Vâlcea, Romanian Geological Survey, 1999, Bucarest). Il s'agit donc d'un secteur central de la zone méridionale de Roumanie, sur le bord gauche de la rivière de l'Olt, près de la ville de Râmnicu Vâlcea. Les dépôts sont d'âge sarmatien (sous-étages du Volhynien et du Bessarabien inférieur), donc de la partie supérieure du Miocène moyen (11-12 M.a.).

Un autre site, toujours du Miocène moyen, mais légèrement plus ancien (- 14-15 M.a., Badémien inférieur) a livré, de la même façon, des petits restes d'insectes, mais moins bien conservés, dans de la limonite. Cet autre gisement livre surtout des Hétéroptères.

L'étude de ces restes ne fait que commencer. Ces insectes proviennent d'une région où ce type de fossiles n'a été jamais signalé, ni même supposé, et n'a donc jamais été recherché.

#### Mesozoic amber spiders – material/ research collaboration

by David Penney (UK)

Email: david.penney@man.ac.uk

Although the Cenozoic is well documented in terms of fossil spiders from Baltic, Bitterfeld, Mexican and Dominican Republic ambers, the same is not true for the Mesozoic. In fact, to my knowledge, only one Mesozoic amber spider has been described and named (Eskov and Wunderlich, 1994). A colleague and I are hoping to undertake a study of the Mesozoic spider fauna in the near future, and I am currently working on specimens kindly loaned to me by Andrew Ross (BMNH) and David Grimaldi (AMNH).

If any palaeontologist colleagues reading this have collections of, or come across in the future, spiders preserved in Mesozoic ambers, I would be very grateful if you would consider allowing me to borrow them for research purposes. Alternatively, a collaborative research project could be arranged. Any assistance in the acquisition of specimens will be gratefully received and duly acknowledged in

resulting publications. I can be contacted on the above e-mail address, or by ordinary mail at: The Zoology Department, The Manchester Museum, The University of Manchester, Oxford Road, Manchester, M13 9PL, UK.

#### Reference:

**Eskov, K.Y. & Wunderlich, J.** 1994. On the spiders from Taimyr ambers, Siberia, with the description of a new family and with general notes on the spiders from the Cretaceous resins. *Beiträge zur Araneologie*, 4: 95-107.

## Books notices and book reviews

**Burger, J.F. (Ed.)** 1999.- *Contributions to the knowledge of Diptera*. A Collection of Articles Commemorating the Life and Works of Graham B. Fairchild. Provides a collection of over 27 articles on diptera written by world authorities, dealing with the taxonomy, biology and ecology of insects belonging to the families Tabanidae, Psychodidae (including Phlebotominae), Simuliidae and Muscidae. *Memoirs on Entomology*, International 14., USA, 656 pp.

**Ebermann, E.** 1998.- *Arthropod Biology: Contributions to Morphology, Ecology and Systematics*. Reihe Biosystematics and Ecology Series 14, Austria, 384 pp.

**Grandcolas, P. (Ed.)** 1997.- *The Origin of Biodiversity in Insects: Phylogenetic Tests of Evolutionary Scenarios*. Mus.Nat.Hist.Nat. Paris, 354 pp., 10 col.plat., 166 fig.

**Grodnitsky, D.I.** 1999.- *Form and Function of Insect Wings: The Evolution of Biological Structures*. Johns Hopkins UP, USA, 280 pp., 76 illust.

**Hiroshi Abe** 1998.- *Rhomognathine mites: taxonomy, phylogeny, and biogeography*, 228 pp., Hokkaido UP, Japan.

**Jamieson, B.G.; Dallai, R. & Afzelius, B.A. (Ed.)** 1999.- *Insects: Their Spermatozoa and Phylogeny*. Science Publishers/Enfield, 570 pp.

**Kosmowska-Ceranowicz, B.; Pielinska, A.; Kulicka, R.; Leciejewicz, K.; Kwiatkowska, K. & Geirlowski, W.** 1998.- *Amber. Treasure of the ancient seas*. Warszawa, 30 pp.

**Kristensen, N.P.** 1998.- *Handburch der Zoologie, Band 4/35: Lepidoptera, Part 1: Evolution, Classification and Biogeography*. De Gruyter, 491 pp.

**Lozovsky, V.R. & Esaulova, N.K.** 1998.- *Permian-Triassic Boundary in the continental series of East Europe*. Moscow, GEOS Press, 219 pp.

**Menzel, P. & D'Aluisio, F.** 1998.- *Man eating bugs. The Art and Science of Eating Insects*. Ten Speed Press, USA, 192 pp.

**Peñalver, E.** 1998.- *Estudio tafonómico y paleoecológico de los insectos del Mioceno de Rubielos de Mora (Teruel)*. Instituto de Estudios Turolenses, Teruel, 177 pp.

**Pickett, J.A.** 1999.- *Insect plant interactions and induced plant defences*. Novarti Foundation Symposia, Wiley, 320 pp.

**Poinar, G.O. & Poinar, R.** 1999.- *The Amber Forest: A Reconstruction of a Vanished World*. Princeton U.P., 216 pp, 130 col. Pla., 190 b/w illus., 28 line illust.

Princeton University have the following press release on their web site which gives some tantalising details of George Poinar's forthcoming book (sent by G.Platt).

"The authors demonstrate great knowledge of many fascinating biological and socioeconomic aspects of amber. They write well and convey their enthusiasm for the subject with skill. The book is engaging and educational." —Peter Grant, Princeton University, author of *Ecology and Evolution of Darwin's Finches*. In Jurassic Park, amber fossils provided the key to bringing dinosaurs back to life. Scientists in the movie extracted dinosaur blood from mosquitoes preserved for millions of years in amber—hardened tree resin—and used the blood's DNA to revive the creatures that terrified audiences around the globe. In this book, George and Roberta Poinar use amber for a similar act of revival—only they bring back an entire ecosystem. The Poinars are world leaders in the study of amber fossils and have spent years examining the uniquely rich supply that has survived from the ancient forests of the Dominican Republic. They draw on their research here to reconstruct in words, drawings, and spectacular colour photographs the ecosystem that existed on the island of Hispaniola between fifteen and forty-five million years ago. The result is the most accurate picture scientists have yet produced of any tropical forest of the past. The specimens examined by the Poinars reflect amber's extraordinary qualities as a medium for preservation. Millions of years ago, countless plants, invertebrates, and small vertebrates were trapped in the sticky resin that flowed from the trees of ancient forests and, as that resin hardened into translucent, golden amber, they were preserved in almost perfect condition. Samples analysed and illustrated here include a wide range of insects and

plants—many now extinct—as well as such vertebrates as frogs, lizards, birds, and small mammals. There are even frozen scenes of combat: an assassin bug grappling with a stingless bee, for example, and a spider attacking a termite. By examining these plants and animals and comparing them to related forms that exist today, the authors shed new light on the behaviour of these organisms as well as the environment and climate in which they lived and died. The Poinars present richly detailed drawings of how the forests once appeared. They discuss how and when life colonised Hispaniola and what caused some forms to become extinct. Along the way, they describe how amber is formed, how and where it has been preserved, and how it is mined, sold, and occasionally forged for profit today. The book is a beautifully written and produced homage to a remarkable, vanished world.

**Weitschat, W. & Wichard, W.** 1998.- *Atlas der Pflanzen und Tiere mi Baltischen Bernstein*. Verlag Dr. Friedrich Pfeil Verlag München, 256 pp. 92 pls. with ca 650 colour photos, 96 handdrawings, ISBN 3-931516-45-8.

**Wunderlich, J.** 1999.- *Fossile Spinnen im Bernstein und Kopal* (In Inclusion, 29). A modern work on fossil spiders in amber usable also for beginners and for determination – was lacking up to now. In the spring of 1999 the third volume about fossil spiders in amber should be published (ca 500 pp, several hundred drawings, numerous photographs, mostly in colour). About 150 fossil species and numerous genera in amber and copal are described for the first time, partly also in English, mainly from Baltic amber.

Besides the scientific part, description keys are given, the families in question are characterised and general biological questions are discussed, e.g. How did the fossil spider live? Which biotopes and what kind of prey did they prefer? Where did their kin survive? (They live e.g. in North America or even in the southern hemisphere?) Fossil egg sacs and spider threads are described and figured.

Price: 72 \$US (=129 DM). Publishing House Joerg Wunderlich; Hindenburgstr. 94; D-75334 Straubenhardt, Germany.

## Library

Papers, reviews and bulletins received by the Editor.

### Papers published in 1997

**Angus, R. B.** - Challenges and rewards in the identification of Pleistocene fossil beetles, with the description of a new species of *Hydraena* Kugelann (Coleoptera: Hydraenidae) from the Hoxnian Interglacial. In A.C.Ashworth, P.C.Buckland & J.P.Sadler (eds.), *Studies in Quaternary Entomology - An Inordinate Fondness for Insects*. Quaternary Proceedings 5: 5-14.

**Ashworth, A. C.** - The beetle fauna during the last glaciation in the Chilean lake region. Program and Abstracts for the II Southern Connections Congress, Valdivia, Chile. *Noticiero de Biología*, 5: 87.

**Ashworth, A. C., Harwood, D. M., Webb, P. N., & Mabin, M. G. C.** - A weevil from the heart of Antarctica. In A.C.Ashworth, P.C.Buckland & J.P.Sadler (eds.) *Studies in Quaternary Entomology - An Inordinate Fondness for Insects*. Quaternary Proceedings 5: 15-22.

**Austin, J.J.; Ross, A.; Smith, A.B.; Thomas, R.H. & Fortey, R.A.** - Absence of amplifiable DNA from insects in amber: implications for the recovery of geologically ancient DNA. *Proc. Roy. Soc. London*, B 264: 467-474.

**Bandel, K.; Shinaq, R. & Weitschat, W.** - First insect inclusions from the amber of Jordan (Mid Cretaceous). *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 80: 213-223.

**Bown, T.M.; Hasiotis, S.T.; Genise, J.F., Maldonado, F. & Brouwers, E.M.** - Trace fossils of Hymenoptera and other insects and paleoenvironments of the Claron Formation (Paleocene and Eocene), Southwestern Utah. *U.S. Geol. Surv.Bull. (USA)*, 2153: 42-58.

**Disney, R.H.L. & Ross, A.J.** - Abaristophora and Puliciphora (Diptera: Phoridae) from Dominican amber (Oligocene) and revisionary notes on modern species. *Eur. J. Ent.*, 93: 127-135.

**Genise, J.F.** - A fossil termite nest from the Marplatan stage-age (late Pliocene) of Buenos Aires province, Argentina, as paleoclimatic indicator. *Palaeog. Palaeoclim., Palaeoecol.*, 136: 139-144.

**Herczek, A. & Popov, Y.A.** - On the mirid genera *Archeofulvius* CARVALHO and *Balticofulvius* n.gen. from the Baltic amber (Heteroptera: Miridae, Cylapinae). *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 80: 189-195.

**Herczek, A. & Popov, Y.A.** - New peculiar representatives of the Isometopinae from the Baltic amber (Heteroptera: Miridae). *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 80: 189-195.

**Klimaszeewski, S.M.** - New psyllids from the Baltic amber (Insecta: Homoptera, Aphalaridae). *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 80: 157-171.

**Laza, J.H.** - Signos de actividad atribuibles a dos especies de *Acromyrmex* (Myrmicinae, Formicidae, Hymenoptera) del Pleistoceno en la provincia de Buenos Aires, República Argentina. Significado paleoambiental. *Rev.Univ.Guarulhos, Geociencias*, 2(6): 56-62.

**Miller, S.E.** - Late Quaternary Insects of Rancho La Brea, California, USA. In: *Studies in Quaternary Entomology - An Inordinate Fondness for Insects*. Quaternary Proceedings no. 5, John Wiley & Sons Ltd., 185-191.

**Podenas, S.** - New *Macrochile* Loew, 1850 (Diptera, Tanyderidae) from the Baltic amber. *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 80: 173-177.

**Ross, A.J.** - Insects in amber. *Geol.Today*, 13(1): 24-28.

**Szadziewski, R. & Grogan W.L.** - Biting midges from Dominican amber. II. Species of the tribes Heteromyiini and Palpomyiini (Diptera: Ceratopogonidae). *Memoirs of the Entomological Society of Washington*, 16: 254-260.

**Wichard, W.** - Schlammfliegen aus Baltischem Bernstein (Megaloptera, Sialidae). *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 80: 197-211.

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**Andersen, N.M. & Poinar, Jr. G.O.** - A marine water strider (Hemiptera: Vellidae) from Dominican amber. *Ent.scand.*, 29(1): 1-9.

**Anderson, J.M.; Anderson, H.M. & Crickshank, A.R.I.** - Late Triassic Ecosystem of the Molteno/Lower Elliot biome of southern Africa. *Palaeontology*, 41(3): 387-421.

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- Golub, V.B. & Popov, Y.A.** - Cantacaderid lace bugs from the Baltic Amber (Heteroptera: Tingidae, Cantacaderinae). *Mitt.Geol.Paläont.Inst.Univ.Hamburg*, 81: 223-250.
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### Acknowledgements in this issue

We are indebted to J. Ansorge, A. Arillo, D. Azar, G. Bechly, D. Briggs, J. Dalton, M.S. Engel, T. Hörnschemeyer, E. Jarzembowski, J. Koteja, F. Marinescu, G. Masselot, A. Mones, A. Nel, D. Penney, E. Peñalver, G. Platt, G.O. Poinar and R. Szadziewski, and to all those who submitted papers to the editor, for their collaboration in *Meganeura No. 4*.

**The views expressed in *Meganeura* are those of the authors and do not necessarily represent those of the European Science Foundation.**

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