Editors Note:

Thanks to your contributions and comments, the Foraminifera.eu-Project has seen further progress in 2013. Numbers have again increased from 2012 for example the number of integrated images from 6000 to 7600, visits from 61,000 to 96,000 and page views from 313,000 to 584,000 p.a..

Quantity is needed to bring our data-base concept to bloom. However, in 2013, we put our emphasis on quality meaning reliability of identifications, coverage in species, space and time and relevance of illustrations. In March we got permission from the Smithsonian Institution National Museum of Natural History to use all of their images. Just 111 of ~ 1500 type specimen images are integrated so far. In June Michael A. Kaminski granted the right to use all images of the IWAF proceedings published by the Grzybowski Foundation. Just 183 of ~5000 images are integrated so far. We met at the 6th ISF and later at the foram+nano group meeting of The Micropalaeontological Society. Many „smaller“ contributions of high quality were made by junior scientists, malacologists, sand collectors and amateurs, like the image to the left made by Bernard Remaud.

The Austrian Geological Survey (Holger Gebhardt) gave permission to us all their publications and those of preceding organizations. About 800 illustrations of thousands were integrated. In December we started to add images from Marcelle K. Boudagher-Fadel publications. The only integration completed is that of ~800 drawings and SEMs from Peter Frenzel's book „The benthic Foraminifera of the Rügen Chalk“ published in 2000. In 2013 we aligned our classification with that of the World Foraminifera Database and link from our species-pages to theirs.

In 2014 we want to pass the line of 9,000 images and will use the permissions given. Though we do not want to become data-clerks only and are looking forward to the work in projects and samples coming in. There will be 10+ talks starting with our presentation at Forams2014 in Chile. Our exhibition will be shown in Freiberg, Saxony.

Thank you all! Michael Hesemann
Contributions by senior scientists and institutions

Remarks and Perspectives
We view the permissions given in 2013 by prominent scientists and institutions as a substantial acknowledgement of our work and as a motivation to move on. Foraminifera.eu is viewed as an opportunity to promote publications as we just show images with basic data. Whoever wants to learn more needs to get the original publication, to which we refer on each single page (see example to the left).

As our work is based on naturalist enthusiasm and only voluntary efforts are involved it will take time to integrate the thousands of images. Nobody wants to be a data-clerk only. In 2014 we plan to integrate 1000 illustrations from major works plus 700 from own works, junior scientists and amateurs.

The Fossil Foraminifera of the Tertiary Basin of Vienna / Papp and Schmidts 1985 revision
The Geological Survey of Austria gave us the permission to us all of their publications. We completed the integration of images from Papp and Schmidts 1985 revision of the monograph by Alcide d’Orbigny (1846). It comprises ~800 illustrations including those of 80 type specimens, like the one shown to the left: *Lenticulina ariminensis* d’Orbigny, 1846. We thank Holger Gebhardt (GSA) for providing high resolution images of several publications. We will add more in 2014.

Proceedings of the Eight International Workshop on Agglutinated Foraminifera
Michael A. Kaminski gave us permission to use the images from all of the IWAF proceedings published by the Grzybowski Foundation. I started to integrate images from an article by Eiichi Setoyama. Thanks Mike+Eiichi! Setoyama, E., Kaminski, M.A., Tyszka, J., 2011: Late Cretaceous Agglutinated Foraminifera and Implications for the Biostratigraphy and Palaeobiogeography of the southwestern Barents Sea: *Paratrochamminoides heteromorphus* (Grzybowski, 1898).

Project: Atlas of Boreal Maastrichtian Foraminifera
In 2012 a project team (Dieter, Karl-Otto, Michael and Stefan) started to work on Maastrichtian material from Northern Germany with a result of 190 SEM and optical images. After 6 months Dr. Peter Frenzel, University of Jena joined in and made the proposal to build an Atlas of Boreal Maastrichtian Foraminifera, ranging from the UK to Russia. He gave permission to use the illustrations from his book: Frenzel, Peter, 2000: Die benthischen Foraminiferen der Rügener Schreibkreide (Unter-Maastrichtium, NE-Deutschland).

The Atlas comprises so far 800 illustrated entries of ~280 mainly benthic species. Courtesy of Marcelle K. Boudagher-Fadel we are able in 2014 to add many images of planktic foraminifera. Due to the limited capacities we probably will not be able to work on samples of Maastrichtian profiles from Moen and Norwich provided by Peter Frenzel. Everyone holding images of Maastrichtian forams is welcome to join in.

The Cushman Collections
Courtsey of the Smithsonian Institution National Museum of Natural History and Brian T. Huber we are allowed to integrate images of foraminifera from the Cushman Collections. We integrated so far only 111 as we have to gather data from the original publications to fill the database properly. Ines Wendler from the University of Bremen contributed images from her 2011 publication on specimens housed in the SINMNH Wendler et al.,2011: Early evolutionary history of Tubulogenerina and Colomia, with new species from the Turonian of East Africa.

Marcelle K. Boudagher-Fadel gave permission in December to integrate images from her publications. To enlarge our coverage we started to add ~ 170 illustrations of planktonic foraminifera from her book Boudagher-Fadel, M. K.,2013: Biostratigraphic and Geological Significance of Planktonic Foraminifera. (2nd ed.)
Contributions by junior scientists

Micael Luã Bergamaschi, Brazil
Micael Luã Bergamaschi, with whom I attended the 6th International School on Foraminifera in Urbino provided images from his thesis on Pleistocene forams from the Santos Basin.

< === Bolivina inflata Heron-Allen and Earland, 1913

Samia Khabouchi Marzouki, Tunisia
Samia Khabouchi Marzouki from the Laboratory of Reproductive Biology and Development and scaleable biosystematics of the Campus University Tunis sent samples from the beaches at Oued Miliane with an interesting mix of recent and well preserved Cretaceous forams.

Recent Ammonia sp. and the Upper Cretaceous Globotruncana linneiana (d’Orbigny, 1839)

Hal Ray Tichenor, USA
Hal Ray contributed excellent SEMs of recent foraminifera from off the Mississippi Delta, Northern Gulf of Mexico from 87m of water depth:

<=== Bulimina marginata d’Orbigny, 1826
Globobulimina mississippiensis Parker, 1954

Jan Steger, Austria
Jan Steger, a MSc student of marine biology provides us continuously with valuable samples. In 2013 Jan sent us kgs of fossil rich Upper Cretaceous material from Salzburg/Upper Austria. We disintegrated the rocks, picked many forams and will do the imaging later in 2014.

Hamed Hooshmand Koochi, Italy
Hamed Hooshmand Koochi, together with Manuchehr Shahmoradi, Maryam Eydani and Shideh Shidniya provided images of Holocene foraminifera from Chabahar Bay, Iran

<=== Cycloforina

A first contribution from India by Selvin Shyam Paul
Selvin Shyan Paul contributed images taken by Prof. Addula Nallappa Reddy of recent foraminifera from the South West Indian Ocean. They are from five grab samples collected in June 2009 by ORV Sagar Kanya from 3150-4125m depth and details are published in Nadimikeri Jayaraju et al., 2010: Deep-Sea Benthic Foraminiferal Distribution in South West Indian Ocean: Implications to Paleoecology in International Journal of Geosciences, 2010, 1, 79-86 Borelis ...

Selvin Shyan Paul contributed images taken by Prof. Addula Nallappa Reddy of recent foraminifera from the South West Indian Ocean. They are from five grab samples collected in June 2009 by ORV Sagar Kanya from 3150-4125m depth and details are published in Nadimikeri Jayaraju et al., 2010: Deep-Sea Benthic Foraminiferal Distribution in South West Indian Ocean: Implications to Paleoecology in International Journal of Geosciences, 2010, 1, 79-86 Borelis ...
Some of the contributions by amateur foraminiferologists

Bernard Remaud
Sable du Monde
Bernard is a well known sand collector and creator of “Sable du Monde”. In 2013 Bernard started to contribute his excellent optical images and samples from all over the world. The image to the left shows an assemblage found at 65m water depth near Ile de Porquerolles, French Mediterranean Sea.

Roland Verreet, Germany
Roland Verreet is a dedicated photomicrographist, interested in foraminifera. Roland contributed several optical images of high quality showing tiny details.

Elphidium fichtelianum
(d’Orbigny, 1846)

Helmut Krock, Germany
Helmut Krock, a German malacologist, gave us several samples from Hungary of Badenian age - a regional stage of the Miocene. We made several images but will continue to work on his excellent material in 2014.

Planostegina granulatata Papp & Küpper, 1954

Georg Wawczyniak, Hamburg
Georg constantly shoots images of plummercells for us. In 2013 we only managed to bring online 72 fields of two plummercells produced by Dr. Karla Kreisel. They contain forams from the mid Atlantic Reykjanes Ridge. In 2014 we intend to bring more plummercells of Karl-Otto Bock online, which Georg has already photographed field by field.

A big thank you to everyone who contributed
Exhibition “Foraminifera - witnesses of Earth history”

Our foraminiferal exhibition with about 20 posters, 30cm big sculptures by artist Anna Mandel, tools of the micro paleontologist, microscopes with mounted samples, rocks, sediments and other objects was shown in December at the mineral fair in Hamburg. It will be shown as a part of a bigger exhibition in Freiberg, Saxony. Until autumn a temporary exhibit was shown in the Calvert Cliffs Marine Museum, USA.

www.foraminifera.eu/exhibition.html

Activities in and around Hamburg

The AG Mikropaläontologie im Naturwissenschaftlichen Verein Hamburg, of which some of us are members is planning a rich year 2014 with excursions, exercises and discussing photo- and technical issues. A major subject will be foraminifera of the North Sea. We meet every 3rd Monday, 12 times a year. Find more details at www.mikrohamburg.de/ProgrammPalaeo.html

Talks in fossil clubs

Eight talks on foraminifera were held in Northern Germany at amateur clubs, conferences and the Hamburg mineral fair. Most were held in German but are offered also in English. The talks area accompanied by microscopes, specimens and washed material so that participants get a vivid impression. They may take home material, consult the webpage and contact us later via email. So far 8 talks are scheduled and more are planned for 2014. Please find more information at www.foraminifera.eu/talks.html

First slide on the subject
Foraminifera - the fascinating hobby

Foraminiferen
-das faszinierende Hobby

Workshops

Workshops are still in the phase of planning. In 2011 we organized together with AG Mikropaläontologie a successful weekend-workshop. Now it is intended to share the burden of its organization. A preliminary meeting will take place with the Geopark Norddeutsches Steinreich in February.

Talks at scientific meetings

in 2013 a short presentation of the foraminifera.eu project was made at the 6th International School on foraminifera. It was followed the same week by a talk on our concept at the spring meeting 2013 of The Micropalaeontological Society Foraminifera and Nannofossil Groups in Prague. Dr. Holger Gebhardt of the Geological Survey of Austria will present our database concept at the Forams2014 meeting with a talk and poster. It will be in the “Workshop: Electronic Foraminiferal Atlases and Databases” on 23. January 17.00-19.30h. As yet there are no further plans for 2014.

Our Memberships

AG Mikropaläontologie im Naturwissenschaftlichen Verein Hamburg
Cushman Foundation for Foraminiferal Research
Gesellschaft für Geschiebekunde
The Grzybowski Foundation
The Micropalaeontological Society
Paläontologische Gesellschaft
Projects and Working Groups 2014

Remarks  Projects and working groups are established whenever someone comes forward with an interesting project-idea, material or need for help, regardless of being a senior scientist or just an amateur. Please don’t be shy to contact us. We will tell you whether we match :) Before Christmas a young scientist from Northern California contacted us to portray local foraminifera. To get an adequate result and check the dedication of our partner :) we asked her to pick and send us 300 specimens from a single sample. It seemed to work, we are expecting an airmail-envelope from California and will do the SEM-imaging and identification in February/March.

In the „Key to species“ project we have developed a new interface for a classification key. So far it is designed for benthic foraminifera and limited to the species in the Maastrichtian Atlas. It will be tested by professionals and amateurs alike. At the moment we are working on a key to planktonic species. Comments are welcome.

Running Projects

In the project “Sternberger Gestein” we are portraying the foraminifera in the local glacial erratic rocks from Northern Germany. They are famous for their rich content of mollusks of Chattian Age. In 2013 we added just a few plates of Agglutinates and Frondicularia to foraminifera.eu/sternberg/ . To show the internal chamber arrangement we sliced single specimens.

In the „Aptian Foraminifera of the Algarve“ project we want to collect and get samples from all of the North Sea. The intention is to learn more about it’s biozones and whether they are reflected in the foraminiferal record. Excursions are planned and we are right now reading and discussing about sampling procedures.

As described on page two the project „Atlas of Maastrichtian Foraminifera“ is flourishing. In 2014 it is planned to add planktonic foraminifera.
List of Contributors

Scientists/Scientific Institutions:

Michael Hessemann
Dieter Ketelsen
Stefan Raveling
Karl-Otto Bock
Dr. Georg Rosenfeldt

Team:

Michael Hessemann
Dieter Ketelsen
Stefan Raveling
Karl-Otto Bock
Dr. Georg Rosenfeldt

Amateur foraminiferologists and scientists of other disciplines:

Tuarte Bodien and Peter Apel, Germany, near Lübeck
Adrian Broekhuis, Dorset, UK
David Clark, USA
Jan Deppermann, Germany, Hamburg
Dirk †, Germany, Kassel
Axel Cordes and Dirk Dettmers, Germany
Dirk ?, Germany, Kassel
David Clark, USA

Journals allowing reproduction of images:

Micropaleontology
Notebooks on Geology
Paleontologia Electronica

THANK YOU ALL