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News on the activities of the PalArch Foundation

André J. Veldmeijer

First of all, of course, best wishes for 2008; hopefully it will be a healthy and productive year. We are happy to start the new year with one paper in our Egyptology journal. The paper is about the results of the CT scanning of a mummy skull in the Marburg Collection (Germany). But also our palaeontological journal has a paper (‘Homo floresiensis as an island form’). The third paper in the series on Neanderthals, which came forth from a meeting in Drenthe (The Netherlands), is online too. The first two were put online in our October issue, suffering a delay of three months (as you know, our journals are published on January and July 1st only). As usual, there are various book reviews too. The Newsletter features, besides the usual topics such as ‘Egypt in Photographs’, an article on an exhibition in the AMNH, New York which focus on mythical beasts, such as dragons (cf. the exhibition in 2006 in the Teyler’s Museum, Haarlem, The Netherlands) and a report of the 10th meeting of the Dutch Vertebrate Palaeontology Group.

Due to the holidays, many people celebrate a few days off. This is, among other, reason of the delay of publishing our January 2008 issue with a few days.

We are working on changing our provider. The current one, with which we have been working for quite some years, is not only very expensive for only little webspace, but has proven to be unreliable as well. The webspace on our new provider, One.com, is much larger, which allows us to put all our publications online. We are still working on this, but if it is decided to do so, we will most likely have it all online with our next issue, i.e. July 2008.

Publications in the January Issue

Papers in PalArch’s Journal of Archaeology of Egypt/Egyptology (ISSN 1567-214X)


Book reviews PalArch’s Journal of Archaeology of Egypt/Egyptology (ISSN 1567-214X)


Papers PalArch’s Journal of Vertebrate Palaeontology (ISSN 1567-2158)

Heteren, van, A. 2008. ##. - PalArch’s Journal of Vertebrate Palaeontology 1, 1: 1-##.

Book reviews PalArch’s Journal of Vertebrate Palaeontology (ISSN 1567-2158)

News on the Archaeology of Northwest Europe

Elly Heirbaut & Natasja den Ouden

2007 is over and a fresh twelve months are ahead of us. The past year has proved to be an interesting time for archaeology. Many reports on Neanderthals made the news headlines. For instance, the biometric research performed on a 29,000 year old Romanian skull, leading to the conclusion that the Neanderthal-Human hybrid is a myth. PalArch rode the Neanderthal news wave by publishing three articles on Neanderthals in the low countries. The third (delayed) article by Jean Pierre de Warrimont on the research history of the Middle Palaeolithic sites in the Dutch and Belgian loess area is now available to download from our website.

So, as you can see, there has been a large variety of new discoveries and insights. And this is just the tip of the iceberg. We hope that in 2008 archaeology will again be in the news headlines many times and that PalArch can play an active role in doing so.
Proceedings of the 10th Meeting of the Dutch Vertebrate Palaeontology Group

John W.M. Jagt

Place and date: Natuurhistorisch Museum Maastricht, 23 November 2007.


Following a word of welcome by Fokeline Dingemans-Bakels, director of the museum, Henk Oosterink kicks off the pre-lunch session by homing in on Permian and Triassic tetrapods from the Thürringer Wald, roughly the area between Erfurt, Jena, Gotha and Gera – in short, former German Democratic Republic territory. Henk has been considering this to be a good spot to spend his holidays for some years now, and do some palaeontology and geology as well. Presented first is an outline of local geology, to get us acquainted with names of formations and members, and an overview of local museums with palaeontological collections. Strata of Permian and Triassic age are briefly discussed, their tetrapod assemblages shown and chances of finding stuff yourself (now who would not want that?) assessed. Assemblages comprise vertebrates, invertebrates and ichnofossil suites, in particular Ichniotherium. At some (disused) quarries, information panels can be found which highlight local discoveries of species such as Seymouria sanjuanensis, Diadectes abitus (is this the tracemaker?), Dimetrodon teutonis and Eudibamus cursoris. That American palaeontologists show a keen interest in these assemblages is easily explained: the Thürringer Wald area was connected to Texas during this time interval. Museums at Erfurt and Schleusingen sport tracks and traces of Chirotherium and provide ample evidence for the claim that this is the birthplace of palaeoichnology, which started here around 1830. For illustrations of typical finds (skeletons and reptilian footprints), the reader is referred to Oosterink (2007).

Next is Anne Schulp, who notes that virtually nothing is known about dinosaurs from the Arabian Peninsula, despite the fact that strata of Mesozoic age outcrop almost everywhere. Briefly noted is fieldwork in the Sultanate of Oman (1997-1998) which yielded material of theropods, ornithopods and sauropods (Schulp et al., 2000, in prep.), after which we return to the Madar site, north of Sana’a (Jemen) where three-toed dinosaur tracks of Late Jurassic carbonates (Amran Group, c. 160 myr) had been found – carnivores, or not? This actually is the first tracksite to be documented from Arabia; it was discovered by a local journalist; it is now protected by a fence. According to Anne there is much potential locally – in December 2006, the tracksite was measured, traced (paper and pen) and cleaned, and some prospecting was done nearby. Traces show no real claws or heel impressions, so are typically ornithopod, with length/width being near equal, biped, toes rounded (U-shaped) and each trace measuring 60-70 cm. Away from this tracksite are quadruped traces left by sauropods which walked around at a leisurely pace - a small herd passed by, comprising eleven individuals. Traces are narrow gauge, so represent no titanosaurid. Plans for the future in this area include exhibits, tourist information and panels supplying additional data. That a cousin of the president regularly watches Discovery Channel and is into dinosaurs is a big bonus – fieldwork was paid for by him. Other localities in eastern Jamaica visited in December 2006 are really ‘no go areas’ for non-local people, but persistence paid off; remains of crocodiles and sea cows of Cenozoic age were unearthed.

Closer to home, Noud Peters focuses on fossil seals from Liessel and Mill (Brabant), the material being fragmentary, yet rich, which is why the species concept is sort of tricky. Presented first is the geological framework for the Peelhorst, with strata of Miocene (Tortonian), Pliocene and middle Pleistocene age – quarried underwater (by suction). The central question is, ‘How many species of seal were there in the North Sea Basin’, and how can these be recognised and distinguished on the basis of ex situ material which includes teeth, jaws, humeri and femora. The genuine seals, family Phocidae, in recent settings can be subdivided into three subfamilies, viz. Phocinae, Monachinae and Cystophorinae. For extant species, skull morphology is of prime importance, whereas fossil material is mostly postcranial, making comparisons time consuming and difficult. In close co-operation with American colleagues Irina Koretsky and Dave Bohaska, Noud compared material from Liessel and Mill with collections in their care (autumn 2006); Irina works on an ecomorphological typification of seals. Prior to the trip, the estimate was 3 or 4 species for Liessel and Mill; van Beneden (1877) was the prime source – he described Callophoca obscura, Phoca vitulinaoides and Phocanella...
pumila. However, in the States previous assumptions turned out erroneous, and in fact the material contained new species, documenting all three subfamilies in the material from Brabant. In the autumn of 2007, another new species turned up. In short, there is lots to be done still ...

Dick Mol wishes to have two talks, a brief one on the longest fossil tusk in the world, and a longer one on the ins and outs of ivory trade and on ‘what makes a custom officer tick’. In the summer of 2007, Dick visited Milia in western Macedonia, where temperatures soared to 45 degrees Celsius. There, in a sandpit, the longest tusk was prepared – a whopping 5.02 metre in total. At a local museum, another tusk of the species Mammut borsoni is on display; this is just 4.39 m in length. After this it is on to the Mammuthus Club International, Ivory Trade. Question: is vertebrate palaeontology of use to society in general? A resounding ‘yes’! The trade in mammoth ivory is revealed before our eyes, and inside information given on custom regulations as well as tips on how to recognise genuine ivory – look at growth details on cut or polished surfaces and have a redhot paperclip ready!

Next, local Belgian collector Louis Verding reports on mosasaur tooth replacement patterns, as based on material collected by himself and his friend, Dirk Cornelissen. In spite of recent publications (e.g., Caldwell, 2007) on this, or related, subject(s), Louis was still left with questions, and looked at modern pythons, also a squamate, for guidance. Presented are their own views on resorption, dentine and enamel in mosasaur teeth (of the genera Liodon and Mosasaurus, in particular) – how do they grow, under the heading ‘The life of a tooth’. Both are trying to fathom the concept and process, and show us lots of details and good pictures of teeth, tooth bases and crowns, cementum and pulp cavities. The consensus is that the tooth breaks off (or out) while it is at its strongest; a lively discussion about all of this with Lex Meijer, who did some pioneer work on this in the 1970s, ensues. This will no doubt lead to further insights into a fascinating theme.

John Jagt ends the post-lunch sessions by presenting a new skull of the mosasaur Mosasaurus hoffmanni, nicknamed ‘Curfiske’, collected by Jacques Severjins in 2004 at the Ankerpoort-Curfs quarry from within one metre of the K/T boundary there. This makes the specimen one of the youngest mosasours known to date, and with evidence from elsewhere (Denmark, Argentina, Antarctica) contradicts earlier views by Sullivan (1987) that mosasours became extinct during the early Maastrichtian. The new beast is also of importance in our attempt to characterise tooth and skull morphology (and their range of variation) of M. hoffmanni.

Following this, the next venue is discussed (possibly Naturalis, Leiden; spring of 2008) and participants are thanked for their input.

Cited literature


PalArch at the SVPCA

Natasja den Ouden

The 55th edition of the Annual Symposium of Vertebrate Palaeontology and Comparative Anatomy was held in Glasgow from 27 August till 1 September 2007. Hosting was the Hunterian Museum, inside the University of Glasgow, while the venue for the meetings was the Hunterian’s Zoology Museum.

The Zoology museum felt like the perfect place for hosting this event. Enjoying coffee and tea amidst the exhibits just added to the experience. This was also the area where the posters were presented, so with your cup of tea in one hand, biscuit in the other, you could casually stroll along the line of posters, look at them, and chat a little with the presenters and other participants. It was a very relaxed and pleasant atmosphere.

PalArch was there too, of course, presenting a poster on the activities of the foundation. We received some very nice comments on our work, so to everyone who took the effort to look at our poster, and especially the ones that commented on it: thank you.

Preceding the SVPCA meeting, the Symposium of Palaeontological Preparation and Conservation took place for the 16th time. It is usually held together with the SVPCA and many people attend both meetings. To start the day, Jeff Liston, who was the driving force behind both meetings, took us to the recently refurbished Kelvingrove Art Gallery and Museum. This is Britain’s most visited museum outside London and is home to a number of world famous paintings, of which Dalí’s ‘Christ of Saint John of the Cross’ is just one. But we were primarily there for the ‘Creatures of the Past’ exhibition.

John-Paul Sumner, the museum’s curator, explained how the displays were created and what choices had to be made concerning the depiction of the specimens. The exhibition includes a wide range of species from Devonian fishes to the giant Irish elk, providing a wonderful overview of Scotland’s geological past using both original fossils and reconstructions. The specimens on display are just the tip of the iceberg. There are lots more in the museum’s storage space, but unfortunately we were not able to glimpse them. The access was blocked off by the material for the upcoming Kylie Minogue exhibition.

After Kelvingrove it was time to pay the Hunterian Museum a visit. This is one of those cosy old-fashioned museums, with showcases full of fossils. You can spend hours there and still discover new things. It is smaller and less technologically enhanced than Kelvingrove, but certainly worth a visit.

A number of talks were scheduled for the afternoon. Especially interesting was the one by Nigel Larking, in which he describes how CT imaging can reveal information locked within the specimen, that cannot be seen with the naked eye.

Wednesday was the first day of the SVPCA sessions - a day full of talks about early sharks, armoured fishes and early reptiles. A good mix of detailed talks on specialised anatomical issues (for instance Marc Jones’ talk on skull joints in Spheodon and other Rhynchocephalia and Catherine Boisvert and Per Ahlberg’s talk on the pectoral fin of the near-tetrapod Panderichthys rhombolepis), and ones that use this detailed information to gain insight in the big picture (Robert Carr et al.’s talk on the contribution of placoderms to our understanding of the ontogeny and evolution of early gnathostomes and Emma-louise Nicholls’ on using sharks as indicators of trophic structure within ‘mid’ Cretaceous watermasses, among others).

Thursday is dinosaur day. Well, not completely, because the talks on marine reptiles and pterosaurs were also scheduled for today. But they all fall within the same category of high-profile coolness and it’s no wonder that the most spectacular talk was held this day. Vincent Fernandez, Paul Tafforeau and Eric Buffetaut’s lecture on 3D imaging of enigmatic tiny eggs with embryos from the Lower Cretaceous of Thailand using phase contrast X-ray synchrotron micromography was simply stunning. Using this X-ray technique, this research team was able to digitally dismantle the eggs to reveal their internal secrets. And it went even further than that. They were able to digitally isolate all of the embryo’s bones, and because they could...
obtain a 3D image, the bones could be turned to every angle and viewed separately. The animated demonstration at the end of the talk received a big ‘wow’ and even applause from the audience.

On the morning of the last day of the sessions the dinosaur theme continued. Highlight here was the talk by Kent A. Stevens and Eric D. Wills on kinematic constraints on the reconstruction of dinosaur gaits. They managed to compute a species’ most efficient gait, and compared them with gaits observed with extant animals and information from the fossil record (e.g., trackways). Their talk concluded with a hilarious animation of T-rex showing off his newly computed gate by walking to the music of The Bee Gees’ ‘Stayin’ Alive’.

The afternoon was reserved for the mammal talks, of which Eleanor Weston and Adrian Lister’s talk on brain size and insular dwarfism stood out for me. Their research on the brain sizes of Madagascar’s extinct dwarf hippos will prove very important in understanding the forming of island species in mammals.

By Friday afternoon a full schedule of talks had come to an end, but still on the agenda was the symposium dinner and the field trip. Unfortunately I wasn’t able to attend both of these activities, but I am sure they would have been excellent - just like all the other evening activities which were greatly enjoyed (such as the whisky tasting event, judging by the numerous hung over faces the next morning).

Overall, this was definitely a very good symposium, not in the least due to the enormous effort from the organisation, and especially Jeff Liston, to make sure everything went well. It was great to see some old faces, meet some new ones and feel inspired by all of the research currently being undertaken.

The next SVPCA meeting will be in Dublin, hosted by University College Dublin and the National Museum of Ireland.
Egypt in photographs

Monsters in Manhattan and Haarlem

Brian L. Beatty

This past two years has seen the opening of two exhibitions in world class natural history museums that, instead of focusing on the wonders of real nature, focus on mythical beasts, such as dragons. In 2006, an exhibit titled ‘Dino’s en draken’ was opened at the Teyler’s Museum in Haarlem, The Netherlands. Beginning this past May 26 and lasting until January 6, 2008, an exhibit titled, ‘Mythic Creatures’, with a similar focus is on display at the American Museum of Natural History in New York City, USA. Both of these exhibits have attracted significant public attention in their home countries, and, having personally had the pleasure of attending both exhibits, I thought it would be of interest to highlight not only some of their similarities and differences, but also explore the purpose they serve to our science and the public education in the sciences.

The ‘Dino’s en draken’ exhibit focuses on three cultural facets of fossils: 1) Fossils as the historical inspiration for monster myths, 2) fossils as magical or medicinal objects, and 3) fossils in the origins of palaeontology. The ‘Mythic Creatures’ exhibit at the AMNH is, as the title suggests, principally focused on the creatures of myth themselves, with abundant references to aspects of natural history that have inspired or influenced these stories. While these two exhibits have very different foci in a deep sense, they both portray something near and dear to most palaeontologists and, indeed, most people – monsters.

One might ask, why would a credible museum display such obviously unreal things? Aside from the popularity of monsters of legend, it is especially timely because of the recent blossoming of the study of ancient palaeontology. Recent works by Adrienne Mayor and others (Mayor, 2000; Mayor, 2005; Solounias & Mayor, 2004) have highlighted the role that fossils have played in shaping stories, myths and legends in the deeper history of human civilization. In fact, it was Adrienne Mayor that advised much of the content of the exhibit at the Teyler’s Museum, and can be seen in video on display in the AMNH exhibit.

For anyone that has been to both museums, the immediate thought when it comes to comparison is their vast differences in size. The AMNH is a huge museum, probably one of the largest publicly accessible structures in Manhattan. The Teyler’s Museum, in contrast, is a very old, smaller building in the middle of Haarlem, The Netherlands. (My apologies, but I feel it appropriate to point out that Manhattan was originally the Dutch colony, New Amsterdam, and that the neighborhood, Harlem, is just north of the AMNH - isn’t it fitting that these two exhibits are found here, one postdating the other?) The exhibits themselves share much in common. They share many of the same featured beasts, including the now commonly cited example of ancient palaeontology of the legend of the griffin and the historical finds of Protoceratops bonebeds in Mongolia. Amid tales of dragons (from various giraffe, rhino, and other skulls), giants (from proboscidian fossils), sea ser-
pents (from fossils of archaeocete whales, specifically the Basilosauridae), and others, both exhibits have artifacts and fossils on display making these legends tangible to visitors. Both exhibits have sufficient, if not excessive, texts to backup their claims, which may be passed over by the casual observer but are essential to the experience of the more intensely interested scholar. If there are any differences in these exhibits, it is their setting and the artifacts in their collections that they have put on display. They both have substantial historical/cultural artifacts related to mythological beasts, but the AMNH simply has more due to its size and bank account. Because of this, the AMNH exhibit has a more diverse coverage of mythical beasts much more personal and reflective. For someone interested in the historical and social meaning behind mythical beasts, the setting of the Teyler’s Museum exhibit was much more conducive to contemplation than the halls of the AMNH full of screaming school kids. In addition, the theme of fossils as magic and medicine adds a very important cultural facet to the exhibit mostly lacking in the AMNH one, including the many uses of fossils such as crinoid stems as beads in North America and ground fossils as ‘dragon bone” medicine in China. The rest of Teyler’s Museum itself is a treasure, one of the most beautiful artifacts of the intellectual history of science I have have ever seen.

Likewise, models made of mythological beasts for both exhibits are well-made and impressive, with the major difference being the size and number of models in the AMNH exhibit. What the Teyler’s Museum exhibit lacks in size and number, it makes up for in historical ambiance and more densely-packed spaces, full of fossils. The AMNH Mythical Beasts exhibit takes up only a small portion of the exhibit space of the vast AMNH, yet it still takes up several times more floor space than the Dino’s en draken exhibit. But this space is more open, usually with one large model and a case or two of specimens as central pieces, surrounded by lighting and walkways to permit large numbers of visitors. While this is necessary at the AMNH, the smaller spaces with more densely-packed specimens and models at the Teyler’s Museum, along with its rich historical setting makes this exhibit from all over the world.

Skeleton of Protoceratops from Mongolia on display in “Mythic Creatures”. Fossils of Protoceratops could be found in both exhibits for their part in the explanation of griffin mythology. (© Mick Ellison/AMNH)
I applaud both exhibits for their attention to this deep history of ours, and I feel lucky to have seen them both. It is difficult to be critical of these exhibits, for they stimulate the same curiosity for monsters that peaked my interest as a child, which I suppose is quite common among vertebrate palaeontologists. In fact, if taxon naming is any measure of personal interest, vertebrate palaeontologists are the only taxonomists I have yet found that have named species after monsters of books and legends. My personal favorite is ‘Osteoborus orc’ (Webb, 1969), named for the monsters of the Tolkien novels, as well as the numerous Paleocene mammals described by Leigh Van Valen (Van Valen, 1978). The fact that such esteemed scientists would find themselves naming species after beasts of legend and fiction is testament to the notion that though the public may be entertained by the fantastic beasts of legend, exhibits such as these are treasured by many scientists as well. If there is any criticism I can afford these exhibits, it is that I would prefer that they become permanent fixtures in their home institutions so that the public can learn about separating science and pseudoscience...and so that I can continue to see them myself!

For more information about these exhibits, you can read the book review of the book that accompanied the Teyler’s Museum exhibit published in PalArch in 2006 by A. Veldmeijer (Veldmeijer, 2006). For more on the AMNH exhibit, Mythic Creatures, follow the link to: http://www.amnh.org/exhibits/mythiccreatures.

Cited literature

Colophon

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Call for papers

We would like to focus on our ongoing call for papers. Many of our readers are already aware of it, but for those who just to know us we would like to point out that all contributions are welcome that fall within the wider thematic framework of the journal.

This includes papers on archaeology of Egypt/Egyptology, archaeology of northwest Europe and palaeontology and related disciplines such as archaeobotany, archaeozoology, museology, systematics, taphonomy, the history of science and any subject that relates to these fields.

Contributions can take the form of, for instance, excavation reports, material studies, databases etc. PalArch is especially, but not exclusively, suitable for submission that involves large amounts of data.

Submission of papers

The rules for submissions for our scientific issues can be found under the heading ‘Information’ at the website. Please contact the managing editor of the Newsletter for guidelines on Newsletter articles.