SOCIETY OF AVIAN PALEONTOLOGY AND EVOLUTION

- Newsletter -

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Secretary: VANESA DE PIETRI, Canterbury Museum,
Rolleston Ave, Christchurch 8013, New Zealand e-mail: sape.secretary@gmail.com

SOCIETY OF
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Dear friends and colleagues:

SAPE's 9th International meeting in Diamante, Argentina, was a great gathering and a very successful event. Lots of good presentations were given by many of our members and renewed collaborations resulted from getting once again together. On behalf of the Executive Council, I'd like to thank the organizers of such a great meeting!

At the General Meeting in Diamante, the members appointed a new Executive Council and decided the venue for our next meeting (see below). The attendees of the meeting (and many members via a follow up email to Secretary Vanesa De Pietri) expressed a great deal of interest in shortening the meeting cycle, from 4 years to 3 years. This would require an amendment to the SAPE's Constitution and a vote to approve the proposed amendment at the next General Meeting, in 2020. The Executive Council will be working to develop the necessary documentation for such a proposal as required by our Constitution—stay tuned!

On behalf of the new Executive Council, I take this opportunity to thank our former President (Trevor Worthy) and past Executive Council (Gerald Mayr, Gareth Dyke, Nikita Zelenkov, Eric Buffetaut, Joanne Cooper, Marco Pavia, and Paul Scofield) for many years of service. In my capacity of former Vice President, I had the pleasure of working with this great team and together we were able to establish the Cécile Mourer-Chauviré Travel Grant and to transfer our website to a new platform (http://www.sapesociety.org). Please join me in thanking them for their efforts!

Luis Chiappe, President

New Executive Council

Luis Chiappe (Natural History Museum of Los Angeles County, USA) – President
Ursula Goehlich (Natural History Museum Vienna, Austria) – Vice President (and President Elect)
Vanesa De Pietri (Canterbury Museum, New Zealand) – Secretary
Adam Smith (Bob Campbell Geology Museum, USA) – Treasurer
Carolina Acosta-Hospitaleche (Museo de La Plata, Argentina) – Member at large
Anusuya Chinsamy (University of Cape Town, South Africa) – Member at large
Wang Min (Institute of Vertebrate Paleontology and Paleoanthropology, China) – Member at large
Albrecht Manegold (Staatliches Museum für Naturkunde Karlsruhe, Germany) – Member at large
Estelle Bourdon (Natural History Museum of Denmark, Denmark) – Member at large

SAPE Meeting 2020

The next SAPE meeting will be held in Málaga, in the south of Spain. With more than 2,000 years of history and nice weather year round (annual mean temperature 18.5 C), this is one of the most attractive and visited cities in Spain, packed with monuments, museums, beaches and good restaurants. Málaga is accessible

internationally through the Málaga–Costa del Sol Airport, and well connected with other Spanish cities by means of the María Zambrano railway station. The meeting will have excursions in and around Málaga focused on ornithology (looking for flamingos and griffon vultures, for example), and a two-day excursion to the lovely city of Cuenca. There, we will visit the Early Cretaceous fossil site of Las Hoyas and its associated museum, where the holotypes of the Iberian enantiornithines (i.e. *Iberomesornis*, *Eoalulavis*, and *Concornis*) are housed. The host committee will be headed by personnel from the University of Málaga and the Autonomous University of Madrid, as Francisco J. Serrano, José Luis Sanz, Paul Palmqvist, Jesús Marugán-Lobón, Ángela D. Buscalioni and Francisco Ortega. We look forward to seeing all of you in the next SAPE meeting.

PROCEEDINGS OF THE 9TH INTERNATIONAL SAPE MEETING

The 9th International Meeting of the Society of Avian Paleontology and Evolution proceedings will be dedicated to Larry Martin (USA), in order to honour his memory and his outstanding paleornithological contributions.

Proceedings will be published in the special volume of the Revista del Museo Argentino de Ciencias Naturales. Author guidelines can be consulted at the following link: http://revista.macn.gob.ar/ojs/index.php/RevMus/about/submissions#authorGuidelines

Please submit your complete manuscript to sapemeeting2016@gmail.com before **1 November 2016.**

CALL FOR MEMBERSHIP AND DONATIONS

As SAPE enters its 31st year as a research society, maintaining current members and attracting new ones continues to be a central goal of our international society. You can join SAPE or renew your membership online with a credit card by visiting our website (http://www.sapesociety.org). Dues are $20.00 USD and cover the 4-year period up until the next SAPE meeting in Spain. Thank you for your support. Your membership dues provide opportunities for students to present their research via the Cécile Mourer-Chauviré travel grant and also provide the necessary funds to host our quadrennial meetings. You can also make donations to the society via the website. Please consider making memorial or other donations in honor of colleagues and friends. Contact SAPE President Luis Chiappe or Treasurer Adam Smith to learn more about how your donation would be used to further the scientific and educational goals of SAPE.

NEWS FROM MEMBERS AND RECENT PUBLICATIONS

ARGENTINA

CAROLINA ACOSTA HOSPITALECHE has been mainly working on Antarctic fossil birds, particularly on Sphenisciformes, Procellariiformes, Gaviiformes and Pelagornithidae. As a result, records of each group were revised and new findings were published. Carolina is currently studying new tiny humeri of penguins from the Eocene of Antarctica, while two students from the National University of La Plata are advancing their studies on penguins. Regarding Procellariiformes, Carolina has analyzed in detail new remains, proposing a new Eocene taxon from Antarctica, whereas the revision of Gaviiformes included a new phylogenetic analysis of the known specimens, and the description of new findings. Both works were performed with Javier Gelfo, the researcher with whom the findings were made in the last Antarctic campaigns. Finally, together with Marcos Cenizo and Marcelo Reguero, a complete review of Antarctic Pelagornithidae was published, and a new mandible of a pseudo-toothed bird is currently under study.

JUAN DIEDERLE, is doing a post-doc on ratites, under the supervision of Carolina and Jorge Noriega. ALEJANDRA PIRO is starting her doctoral thesis in mechanic studies of flight in modern birds, with Carolina and Diego Montalti. ALEJANDRA SOSA is starting her studies on the ontogenetic variations in the osteo-muscular skeleton of Emperor penguins. Nine advanced students from the National University of La Plata and University of Buenos Aires are collaborating with Carolina in picking tasks.

NADIA SOLEDAD HAIDR is working on her PhD project on functional morphology and anatomy of modern and fossil penguins from Patagonia and Antarctica. She is carrying out her studies at the Institute of Biology of Marine Organisms at the Patagonian National Center (IBIOMAR-CENPAT-CONICET), Argentina, under the guidance of Dr. Carolina Acosta Hospitaleche, and Dr. Flavio Quintana. She has focused on the musculature of the wing and craniomandibular complex on extant species, applying the results to fossil taxa from Patagonia and Antarctica. This year, she was part of the 9th SAPE Meeting held in Diamante.

MARÍA ALEJANDRA FERNÁNDEZ OSUNA is doing a PhD on Late Pleistocene-Holoce birds from the Tandilia Hill System archeological sites. The majority of records belong to owl pellets, and at this moment she has identified Passeriformes, Falconiformes, Tinamiformes and Charadriiformes.

CLAUDIA TAMBUSSI at CICTERRA in Córdoba continues to work with Mio-Pliocene birds of Sierras

Pampeanas at La Rioja and Cordoba in Argentina. Her research projects are predominately dealing with brain anatomy (passerines, woodpeckers and cuckoos) but she is currently close to finishing a manuscript on the skull description of the Miocene penguin *Madrynornis mirandus* from Patagonia.

FEDERICO "DINO" DEGRANGE is now living in Córdoba city, continuously working on the paleobiology of zoophagous birds, with emphasis on terror birds (Cariamiformes, Phorusrhacidae). Together with Claudia Tambussi, Lawrence Witmer and Ryan Ridgely, he is currently working on the study of the terror birds´ brain anatomy based on endocast 3D modelling using CT scans. He is also looking into the brain anatomy of birds of prey and, together with Claudia and Daniel Ksepka, he is working on the cranial anatomy of the Miocene penguin *Madrynornis mirandus*. He is also doing research with Claudia on the Mio-Pliocene birds of Sierras Pampeanas at La Rioja and Cordoba in Argentina.

MARCOS CENIZO continues working on different lineages of Tertiary birds from Patagonia and Antarctica, but he will be mainly focused in the study of Pleistocene avifaunas from the southern South American pampas. Since December 2015, Marcos is the new director of the Museo de Historia Natural de La Pampa.

ACOSTA HOSPITALECHE, C. (2016): Evolución de las aves marinas del extremo sur de América del Sur y Antártida. – Contribuciones del MACN "Historia evolutiva y paleobiogeográfica de los vertebrados de América del Sur" XXX Jornadas Argentinas de Paleontología de Vertebrados, 6: 173-182.

ACOSTA HOSPITALECHE, C. (2016): Paleobiological remarks on a new partial skeleton of the Eocene Antarctic penguin *Palaeeudyptes klekowskii*. – Ameghiniana, 53: 269-281. ISSN 1851-8044.

ACOSTA HOSPITALECHE, C. 2016. A new species of fossil penguin from the Eocene of Antarctica. – XI Congreso Argentino de la Asociación Paleontológica Argentina. Roca, 17 al 21 de octubre de 2016.

ACOSTA HOSPITALECHE, C. CENIZO, M. & REGUERO, M. (2016): Un nuevo registro de Aves Pseudodentadas (Pelagornithidae, Odontopterygiformes) en el Eoceno Inferior de Antártida. – XI Congreso Argentino de la Asociación Paleontológica Argentina. Roca, 17 al 21 de octubre de 2016.

ACOSTA HOSPITALECHE, C., DE LOS REYES, M. REGUERO, M., & SANTILLANA, S. (2016): Fossil Penguin skin from the Eocene of Antarctica. – 9th Meeting of the Society Avian Paleontology and Evolution, Diamante del 1 al 5 de agosto de 2016.

ACOSTA HOSPITALECHE, C. & GELFO, J. (2015): New Antarctic finding of Upper Cretaceous and early Eocene Gaviiformes. – Annales de Paleontologie, 101: 315-324.

ACOSTA HOSPITALECHE, C. & OLIVERO, E. (IN PRESS 2016): Re-evaluation of the fossil penguin *Palaeeudyptes gunnari* from the Eocene Leticia Formation, Argentina: additional material, systematics and palaeobiology. – Alcheringa, 40:xx-xxx. ISSN 0311-5518

ACOSTA HOSPITALECHE, C., PÉREZ, L., MARENSSI, S., REGUERO, M. (2016): Taphonomic analysis of *Crossvallia unienwillia* Tambussi et al. 2005: significance of the oldest penguin record of Antarctica. – Ameghiniana, 53: 282-295. ISSN 1851-8044.

ACOSTA HOSPITALECHE, C. & REGUERO, M. (2016): The tiniest penguin (Aves, Sphenisciformes) from the Eocene of Seymour Island, West Antarctica. – Kuala Lumpur, August 2016, Scientific Committee of Antarctic Research.

CARRIL, J. & TAMBUSSI, C.P. (2015). Development of the Superaltricial Monk Parakeet (Aves, Psittaciformes): Embryo Staging, Growth, and Heterochronies. – Anatomical Record, 298 (11):1836-1847. DOI: 10.1002/ar.23256

CARRIL, J., RONDEROS, J.R., TAMBUSSI, C.P., & CHIALE, M.C. (2016): Jaw myogenesis of the monk parakeet: evidence of developmental reprogramming evolutionary processes in the emergence of novel muscles in Psittaciformes (Aves). – Zoology DOI: 10.1016/j.zool.2016.06.006

CARRIL, J., TAMBUSSI, C.P., DEGRANGE, F.J., BENITEZ, J., & PICASSO, M. (2016): Comparative brain morphology of Neotropical parrots (Aves, Psittaciformes) inferred from virtual 3D endocasts. – Journal of Anatomy 229: 239–251. DOI: 10.1111/joa.12325

CENIZO, M.M., AGNOLIN, F.L. & POMI, L.H. (2015): A New Pleistocene Bird Assemblage from the Southern Pampas (Buenos Aires, Argentina). – Palaeogeography, Palaeoclimatology, Palaeoecology, 420: 65-81.

CENIZO, M.M., ACOSTA HOSPITALECHE, C., & REGUERO, M. (2016): Diversity of pseudo-toothed birds (Pelagornithidae) from the Eocene of Antarctica. *Journal of Palaeontology*. ISSN 0022-3360.

CENIZO, M.M., NORIEGA, J.I. & REGUERO, M. (2016): A stem falconid bird from the Lower Eocene of Antarctica and the early southern radiation of the falcons. – Journal of Ornithology, 157: 885-894.

CENIZO, M.M., SOIBELZON, E. & MAGNUSSEN SAFFER, M. (2016): Mammalian predator-prey relationships and reoccupation of burrows in the Pliocene of the Pampean Region (Argentina): new ichnological and taphonomic evidence. – Historical Biology, 28:1026-1040.

DEGRANGE, F.J. (IN PRESS 2016): The hind limb morphometry of terror birds (Aves, Cariamiformes, Phorusrhacidae): their functional implications for substrate preferences and locomotory lifestyle. – Earth and Environmental Science Transactions of the Royal Society of Edinburgh.

DEGRANGE, F.J., CARRIL, J., DEMMEL, M., PESTONI, S., & TAMBUSSI, C.P. (IN PRESS 2016): El complejo cráneo-mandibular de Aves: forma, desarrollo y función. – *In* Morfología de Vertebrados. Conceptos, métodos y grupos de investigación en la Argentina. Editorial Eudem, Universidad Nacional de Mar del Plata.

FERNANDEZ-OSUNA, M.A, MAZANTI, D.L., & NORIEGA, J.I. (2016): Birds from the Late Pleistocene-Holocene of Tandilia Eastern ridge archeological sites (Buenos Aires, Argentina. – 9th Meeting of the Society Avian Paleontology and Evolution, Diamante del 1 al 5 de Agosto de 2016.

GELFO, J., DE LOS REYES, M., ACOSTA HOSPITALECHE, C. & REGUERO, M. (2015): Additions to the knowledge of *Notiolofos* (Mammalia: Sparnotheriodontidae) early Eocene of West Antarctica. – XII International Symposium on Antarctic Earth Science, 13 al 17 de julio de 2015. Goa, India.

HAIDR, N. & ACOSTA HOSPITALECHE. (2016): The fossa tricipitalis in penguin evolution. – 9th Meeting of the Society Avian Paleontology and Evolution, Diamante del 1 al 5 de agosto de 2016.

HAIDR, N. & ACOSTA HOSPITALECHE, C. (2016): A new penguin beak (Sphenisciformes) From the Eocene of

Antarctica: new insights for morphotypes interpretations. – 9th Meeting of the Society Avian Paleontology and Evolution, Diamante del 1 al 5 de agosto de 2016.

HAIDR, N. ACOSTA HOSPITALECHE, C. & QUINTANA, F. (2015): Análisis morfo-funcional comparativo del húmero de pingüinos piscívoros y crustacívoros. – XVI Reunión Argentina de Ornitología. Actas, 32. La Plata, 9 al 12 de septiembre de 2015.

REGUERO, M., ACOSTA BURLAILLE, L., ACOSTA HOSPITALECHE, C., AMENABAR, C., ARNAUDO E., BONA, P., BUONO M., CÁRDENAS, M., CHORNOGUBSKY, L., CONSTANTINI, O., GELFO, J., GOUIRIC-CAVALLI, S., MOLY, J., O'GORMAN, J., PUERTA P., SANTILLANA, S. & TALEVI, M. (2016): Paleontological inheritance of West Antarctica: Preliminary report of the newly found Mesozoic and Cenozoic fossil vertebrates from the James Ross Basin and Antarctic Peninsula. – Kuala Lumpur, August, 2016, Scientific Committee of Antarctic Research.

STEFFANI, I., GÓMEZ, R., & TAMBUSSI, C.P. 2016. Taxonomic reassessment of the Pleistocene Furnariidae (Passeriformes) *Pseudoseisuropsis nehuen* from the South American Pampas, a new species of the genus and phylogenetic relationships. – Journal of Vertebrate Paleontology, DOI: 10.1080–02724634.2016.110063

TAMBUSSI, C.P., DEGRANGE, F.J., CARRIL, J., & DE MENDOZA, R. (IN PRESS 2016): Anatomía virtual del cerebro y órganos de los sentidos en aves: aplicaciones en paleobiología. – *In* Morfología de Vertebrados. Conceptos, métodos y grupos de investigación en la Argentina. Editorial Eudem, Universidad Nacional de Mar del Plata.

AUSTRALIA

The 2015-2016 year has been busy for the Palaeontology group at Flinders University, South Australia, with the attendance of the SAPE conference in Diamante the high note of the period. TREVOR AND JENNY WORTHY and WARREN HANDLEY greatly enjoyed this event and meeting of our South American colleagues especially. As per all these events, catching up with colleagues from afar made for greatly enjoyable times. Excursions to the museums in Buenos Aires and La Plata were also most interesting.

The research focus at Flinders has continued to focus on galloanseres. Two papers published this year looked at dromornithids: the first conclusively demonstrated sexual dimorphism in *Dromornis stirtoni*, the world's most massive bird (Handley et al.) and the second described a new species of *Dromornis* and the cranium of *Ilbandornis* (see Worthy et al.). We also completed the *Sylviornis* project showing this giant new Caledonian bird was a stem galliform and not an adept digger (Worthy, Mitri, et al). An unexpected discovery published this year was that the Oligo-Miocene Australian bird *Wilaru tedfordi* was not a charadriiform, but instead a presbyornithid, so in one strike adding this family to the Australian fauna and extending its range many millions of years younger (De Pietri et al.). Lastly on the galloansere theme, a project re-examining the identity of eggshell referred to *Genyornis newtoni* was published, in which we cast great doubt on this, and instead suggest a more likely candidate for the layer of this eggshell is one of the several giant megapodes now extinct in Australia (Grellet-Tinner et al). Australia has two large species of *Progura* in its current inventory, but work in our lab led by ELEN SHUTE will shortly see several more species described. Trevor has also continued to dabble in projects on the New Zealand Quaternary, with one on his favourite moa (Attard et al) looking at bite force differences across the genera and another looking at the amazing NZ wrens (Acanthisittidae), the sister taxon to all passerines. This group of 5 genera and 7 species had four entirely flightless taxa until their recent extinction in the last few hundred years. Ancient mitochondrial genomes were obtained from most of the taxa and revealed the surprising result that *Pachyplichas* was the sister taxon to *Xenicus gilviventris* (see Mitchell et al). This is an analogue of the swamphen situation where the volant and highly dispersive *Porphyrio porphyrio* gave rise to the flightless *P. mantelli* and *P. hochstetteri* in New Zealand, i.e. large massive legs and reduced wings do not warrant generic distinction. Furthermore, the odd Stephens Island wren *Traversia lyalli* was found to be a deeply divergent lineage compared to *Xenicus*, mirroring the large morphological differences of the skeleton that are obscured by its drab plumage, and demonstrating that it and at least one other lineage of acanthisittid (*Dendroscansor* was not able to be assessed) had a pre-Miocene presence in NZ. Both survived during the period when maximum marine transgression (late Oligocene) was hypothesised to have totally submerged NZ, adding to the now overwhelming evidence that this 'NZ Drowning' idea (which was largely based on an absence of data) was unfounded.

We have also done a bit of interesting fieldwork looking at late Oligocene deposits in the Namba Formation in the arid zone in northern South Australia. In a couple of small expeditions, we have recovered significant numbers of bird fossils and several new taxa, finding the first articulated material for these faunas. A highlight was a new raptor a bit larger than a kite and represented by most useful parts of the skeleton, but new sites with a high density of fossils and knowledge of how to work these difficult clay deposits has the promise of many interesting discoveries in the near future

Our St Bathans project (E. Miocene, NZ) continues, with work on waders being led by Vanesa De Pietri. A couple papers published on these, herald several in the pipeline. This year ELLEN MATHER joined our group for a BSc Honours project focussed on the rails from St Bathans. A thesis on these is about to be produced, so watch this space to see what near 500 rail bones can tell you. But it seems these rails were most interesting indeed.

WARREN HANDLEY (PhD) continues to work on cranial morphology of dromornithids and anseriforms. Elen Shute (PhD) is beavering away at analyses of the Quaternary avifaunas of the Nullarbor Plain.

JACQUELINE NGUYEN currently holds a postdoctoral fellowship at the Australian Museum in Sydney, where she continues her research on Australasian fossil passerines.

ATTARD, M.R.G., WILSON, L.A.B., WORTHY, T.H., SCOFIELD, R.P., JOHNSTON, P., PARR, W.C.H., & WROE, S. (2016): Moa diet fits the bill: virtual

reconstruction incorporating mummified remains and prediction of biomechanical performance in avian giants. – Proceedings of the Royal Society Series B 283: 20152043, 9 pages plus a Supplementary Dataset. http://dx.doi.org/10.1098/rspb.2015.2043.

DE PIETRI, V.L., SCOFIELD, R.P., TENNYSON, A.J.D., HAND, S.J., & WORTHY, T.H. (2016): Wading a lost southern connection: Miocene Fossils from New Zealand reveal a new lineage of shorebirds (Charadriiformes) linking Gondwanan avifaunas. – Systematic Paleontology 14: 603-616.

DE PIETRI, V. L., SCOFIELD, R. P., ZELENKOV, N., BOLES, W. E. & WORTHY, T. H. (2016): The unexpected survival of an ancient lineage of anseriform birds into the Neogene of Australia: the youngest record of Presbyornithidae. – Open Science 3(2): 150635.

DE PIETRI, V.L., SCOFIELD, R.P., HAND, S. J., TENNYSON, A.J.D., & WORTHY, T.H. (2016): Sheathbill-like birds (Charadriiformes: Chionoidea) from the Oligocene and Miocene of Australasia. – Journal of the Royal Society of New Zealand, 46: 181-199.

GRELLET-TINNER, G., SPOONER, N.A., & WORTHY, T.H. (2016): Is the "*Genyornis*" egg of a mihirung or another extinct bird from the Australian dreamtime? – Quaternary Science Reviews 133: 147-164.

HANDLEY, W.D., CHINSAMY, A., YATES, A.M., & WORTHY, T.H. (2016): Sexual dimorphism in the late Miocene mihirung *Dromornis stirtoni* (Aves: Dromornithidae) from the Alcoota Local Fauna of central Australia. – Journal of Vertebrate Paleontology e1180298 (21 pages). DOI: 10.1080/02724634.2016.1180298.

MITCHELL, K.J., WOOD, J. R., LLAMAS, B., MCLENACHAN, P. A., KARDAILSKY, O., SCOFIELD, R. P., WORTHY, T. H., & COOPER, A. (2016): Ancient mitochondrial genomes clarify the evolutionary history of New Zealand's enigmatic acanthisittid wrens. – Molecular Phylogenetics and Evolution 102: 295-304. http://www.sciencedirect.com/science/article/pii/S1055790316301270

NGUYEN, J.M.T. (2016): Australo-Papuan treecreepers (Passeriformes: Climacteridae) and a new species of sittella (Neosittidae: *Daphoenositta*) from the Miocene of Australia. – Palaeontologia Electronica, 19: 1-13.

NGUYEN, J.M.T. & HO, S.Y.W. (2016): Mitochondrial rate variation among lineages of passerine birds. – Journal of Avian Biology, 47: 690-696.

SHUTE, E., PRIDEAUX, G., & WORTHY, T.H. (2016): Three terrestrial Pleistocene coucals (*Centropus*: Cuculidae) from southern Australia: biogeographical and ecological significance. – Zoological Journal of the Linnean Society 177: 964-1002.

SHUTE, E., PRIDEAUX, G.J., & WORTHY, T.H. (2016): The world's biggest cuckoos once roamed the Nullarbor Plain. – The Conversation 29 July 2016. https://theconversation.com/the-worlds-biggest-cuckoos-once-roamed-the-nullarbor-plain-54050

WORTHY, T. H. (2016): A case of mistaken identity for Australia's extinct big bird. – The Conversation 14 January 2016. https://theconversation.com/a-case-of-mistaken-identity-for-australias-extinct-big-bird-52856

WORTHY, T.H., HANDLEY, W.D., ARCHER, M., & HAND, S.J. (2016): The extinct flightless mihirungs (Aves: Dromornithidae): cranial anatomy, a new species and assessment of Oligo-Miocene lineage diversity. – Journal of Vertebrate Paleontology, e1031345 (21 pages). DOI: 10.1080/02724634.2015.1031345

WORTHY, T.H., MITRI, M., HANDLEY, W.D., LEE, M.S.Y., ANDERSON, A., SAND, C. (2016): Osteology supports a stem-Galliform affinity for the giant extinct flightless bird *Sylviornis neocaledoniae* (Sylviornithidae, Galloanseres). – PLoS ONE 11(3): e0150871 (62 pp). doi:10.1371/journal.pone.0150871.

AUSTRIA

URSULA GÖHLICH is still working on finishing a manuscript on Miocene penguins from Peru and is currently restudying together with Gerald Mayr the holotype fossil of *Petralca*. First results of the latter project were presented at the EAVP meeting 2016 in Haarlem (the Netherlands) as well as at the SAPE meeting 2016 in Diamante (Argentina). She also contributed to a paper of MARCO PAVIA et al. about a giant insular form of Neogene Anseriformes, which was recently submitted. Beside these, she co-authored some papers on large and small mammals from the Oligo- and Miocene of Mongolia and Austria.

DAXNER-HÖCK, G., HARZHAUSER, M. & GÖHLICH, U.B. (2016): Fossil record and dynamics of late Miocene small mammal faunas of the Vienna Basin and adjacent basins, Austria. – Comptes Rendus Paleovol (published online September 2015).

SEMPREBON, G.M., RIVALS F., FAHLKE, J.M., SANDERS, W., LISTER, A.M. & GÖHLICH, U.B. (2016): Dietary reconstruction of pygmy mammoths from Santa Rosa Island of California. – Quaternary International, 406: 123-136.

GÖHLICH, U.B. & MAYR, G. (2016): The alleged auk *Petralca* is a loon. – Abstracts of the 9th Meeting of the Society of Avian Paleontology and Evolution: p.14. (Diamanté, Argentina, 1.-5.8.2016)

GÖHLICH, U.B. & MAYR, G. (2016): Revisiting a controversial fossil bird: the alleged auk *Petralca* is a loon. – Programme and Abstract Book of the 14th Annual Meeting of the European Association of Vertebrate Palaeontologists: p.133 (Haarlem, The Netherlands, 6.-10.7.2016)

SALIARI, K., SCHMITSBERGER, O., NEUGEBAUER-MARESCH, C., FLADERER, F.A.; PENZ, M. & GÖHLICH, U.B. (2016): Linking archaeology and palaeontology: tracing Pleistocene humans' activities through the analysis of (mega-)fauna remains from the Vienna area, Austria. – Abstracts of the Young Natural History Scientists 3rd Meeting. Museum of Natural History Paris: 22-23 (Paris, France, 2.-6.2.2016)

TISCHLINGER, H., GÖHLICH, U.B. & RAUHUT, O. (2015): Raubdinosaurier (Theropoda) – in: Arratia, G., Schultze, H.-P., Tischlinger, H. & Viohl, G. (eds.): Solnhofen – Ein Fenster in die Jurazeit, part 2: 481-490; München (F. Pfeil press)

BULGARIA

ZLATOZAR BOEV is involved in the following projects: "Action plan for conservation of Egyptian vulture *Neophron percnopterus* in Bulgaria", Bulgarian society for the protection of birds (2009-2018); and "Zooarchaeological study of "Forum Serdica" based on the remains of vertebrates from center of Sofia City (16-18th c. A. D.)". He is also the scientific tutor of three PhD candidates [Dimitar Plachiyski: "Distribution of Eurasian Capercaillie (*Tetrao urogallus* Linnaeus, 1758) in Bulgaria depending on the landscape-ecological habitat characteristics"; Dobromir Dobrev: "Distribution and ecology of the Gryffon vulture (*Gyps fulvus* Hablizl, 1783) in Bulgaria"]; Volen Arkumarev: "Movement and individual range of the Gryffon Vulture (*Gyps fulvus* Hablizl, 1783) in Bulgaria".

BOEV, Z. (2016): Bibliography of the natural-history publications of Ivan Mitev. – In: Mitev, I. 2016. Collected Works, Vol 1. Bulgarian Nature. Logis Publ. House, Sofia, 7-10. ISBN 978-954-8289-10-8. [In Bulg., Eng. sum.].

BOEV, Z. (2016): Biodiversity of vertebrates in Sofia Valley based on their bone remains in "Forum Serdica" in the center of Sofia City (16th-18th century A. D.). – Journal of the Bulg. Acad. Sci., 3: 16-22. [In Bulg., Eng. sum.].

BOEV, Z. (2016): Biography of Ivan Mitev (1973-2008). – In: Mitev, I. 2016. Collected Works, Vol 1. Bulgarian Nature. Logis Publ. House, Sofia, 11-24. ISBN 978-954-8289-10-8. [In Bulg., Eng. sum.].

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BOEV, Z. (2016): Safary on the Square (Animals of Forum Serdica in Sofia in 16-18th centuries. - Journal Eight: 8. [In Bulg.].

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NEDYALKOV, N. & BOEV, Z. (2016): Diet of Barn owl (*Tyto alba*) and Tawny owl (*Strix aluco*) in Central Anatolia, Turkey. – Sandgrouse, 38: 79-81.

CHINA

ZHONGHE ZHOU is initiating the Scientist Studio Project later this year. The team consists of colleagues from multidisciplinary background and the project are well founded by the government. Zhonghe is now finishing a project with Yanhong Pan () and Mary Higby Schweitzer, and they are working on the exceptional preservation of the Jehol vertebrates. Specifically, they have just submitted a manuscript about the discovery of β-keratin from a confuciusornithid specimen, which documents the first such report and shed new light on molecular preservation within normally labile tissues preserved in ancient fossils.

JINGMAI K. O'CONNOR is collaborating with colleagues from Tsinghua University, and they are working on the origin of flight, a hotly debated issue. They are not just focusing on the flight-related morphological features preserved in the fossils, and also conducting wind tunnel experiments using models of primitive birds and their closest dinosaurian relatives. That study would further increase the knowledge about flight origin during the dinosaurs-bird transition. Jingmai and her colleagues reported a new pengornithid, *Chiappeavis magnapremaxillo*, which preserves strong evidence that enantiornithines possessed aerodynamic rectricial fans. The consistent co-occurrence of short pygostyle morphology with clear aerodynamic tail fans in the Ornithuromorpha, the Sapeornithiformes, and now the Pengornithidae strongly supports inferences that these features co-evolved with the rectricial bulbs as a ''rectricial complex''. Jingmai described a new basal ornithuromorph *Dingavis longimaxilla*, which has an elongated rostrum. The rostral elongation in *Dingavis longimaxilla* is achieved primarily through the maxilla, whereas neornithines elongate the premaxilla. Notably, in the rostrum of *Xinghaiornis*, the most 'longirostrine' Early Cretaceous ornithuromorph, the premaxilla and maxilla contribute to the rostrum equally. These lineages together highlight the diversity of configurations in which early birds experimented with rostralization of the skull.

ZHIHENG LI has just finished his postdoc in the University of Texas at Austin, and join the research team as an Associate Professor in IVPP recently. He is now working on numerous birds from a few Miocene localities in Linxia Basin, Gansu Province and also in Yunnan Province. Recently, he reported a new Old World vulture, Mioneophron longirostris, from the Late Miocene of China. The specimen is the oldest record of Gypaetinae from Eurasia or Africa. A reexamination of the geographic and temporal distribution of most Old World vultures from Neogene deposits indicates a diverse radiation, coincident with early-to mid-Miocene grassland expansion for Gypaetinae. The new fossil provides further temporal constraints on avian subclade diversification. It is also consistent with an emerging pattern of profound recent shifts in avian diversity and distribution more generally. Zhiheng published papers about the method of diffusible iodine-based contrast-enhanced computed tomography. In that study, two iodine-based contrast agents, iodine-ethanol (I2E) and iodine-potassium iodide (I2KI) in neutral buffered

formalin, were applied to avian cephalic specimens to investigate their effectiveness. They found that the two solutions had markedly different results for staining of mineralized skeletal tissues.

THOMAS STIDHAM is working on multiple Cenozoic birds from different localities around China and elsewhere around Asia and the world. He and Jaelyn J. Eberle recently published their study about the palaeobiology of high latitude birds from the early Eocene greenhouse of Ellesmere Island, Arctic Canada. The presence of these extinct birds at both mid and high latitudes on the northern continents provides evidence that future increases in climatic warming (closer to Eocene levels) could lead to the establishment of new migratory or resident populations within the Arctic Circle. He also recently published a new species of stem stiff-tailed duck from the Miocene of Nevada (USA) and has another new species of diving duck from Nevada in press (2017) with Nikita Zelenkov. His paper on new Pliocene birds from Myanmar (Burma) also is in press for later this year.

HAN HU is at the last stage finish her her PhD dissertation. She has just published a paper about a new enantiornithine bird from the Early Cretaceous Jehol Biota, and reported a preliminary hypothesis for the sequence in which compound bones form in Early Cretaceous enantiornithines. Han Hu has just submitted another manuscript about the dentition of the basal pygostylian *Sapeornis*. Due to the bad preservation, little is known about the dentition of *Sapeornis*, and inaccurate description occurred in previous studies. By working on handful specimens housed in IVPP and the Shandong Tianyu Museum of Nature, Han Hu and her colleagues presented a detailed work on this issue, and other cranial elements of this taxon.

MIN WANG is working on some specimens from the Jehol Biota. He and his collogues reported the oldest known avian gastric pellet from the Jehol Biota. The gastric pellet consisting of fish bones are produced by an enantiornithine bird, and their study suggests the alimentary tract of some enantiornithine resembled that of extant avians in having efficient antiperistalsis and a two-chambered stomach with a muscular gizzard capable of compacting indigestible matter into a cohesive pellet. Just recently, their manuscript about the morphological and phylogenetic study of this pellet-bearing enantiornithine has been accepted. By collaborating with colleagues, Min described new specimens from the Jehol Biota, further increasing the understanding of the diversity of this avifauna.

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LI, Z., KETCHAM, R. A., YAN, F., MAISANO, J. A., & CLARKE J. A. 2016. Comparison and evaluation of the effectiveness of two approaches of diffusible iodine-based contrast-enhanced computed tomography (direct) for avian cephalic material. – Journal of Experimental Zoology Part B: Molecular and Developmental Evolution.

O'CONNOR, J. K., WANG, M., & HU, H. 2016. A new ornithuromorph (Aves) with an elongate rostrum from the Jehol Biota, and the early evolution of rostralization in birds. – Journal of Systematic Palaeontology, 1-10.

O'CONNOR, J. K., WANG, X., ZHENG, X., HU, H., ZHANG, X., & ZHOU, Z. 2016. An enantiornithine with a fan-shaped tail, and the evolution of the rectricial complex in early birds. – Current Biology 26, 114-119.

STIDHAM, T. A., & EBERLE, J. J. 2016. The palaeobiology of high latitude birds from the early Eocene greenhouse of Ellesmere Island, Arctic Canada. – Scientific Reports 6:20912.

STIDHAM, T. A., & HILTON, R. P.. 2016. New data on stiff-tailed duck evolution and dispersal from a new species of diving duck (Anseriformes: Anatidae: cf. Oxyurinae) from the Miocene High Rock Caldera in north-west Nevada, USA. – Papers in Palaeontology 2:41-58.

WANG, M., Hu, H., & LI, Z. 2016. A new small enantiornithine bird from the Jehol Biota, with implications for early evolution of avian skull morphology. – Journal of Systematic Palaeontology 14, 481-497.

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WANG, M., ZHOU, Z., & Sullivan, C. 2016. A fish-eating enantiornithine bird from the Early Cretaceous of China provides evidence of modern avian digestive features. – Current Biology 26, 1170-1176.

WANG, M., & ZHOU, Z. 2016. A new adult specimen of the basalmost ornithuromorph bird *Archaeorhynchus spathula* (Aves: Ornithuromorpha) and its implications for early avian ontogeny. – Journal of Systematic Palaeontology, 1-18.

DENMARK

ESTELLE BOURDON is a Carlsberg postdoctoral fellow at the Natural History Museum of Denmark.

BOURDON, E. & LINDOW, B. (2015): A redescription of *Lithornis vulturinus* (Aves, Palaeognathae) from the Early Eocene Fur Formation of Denmark. – Zootaxa, 4032 (5): 493–514.

RICQLES, A.D., BOURDON, E., LEGENDRE, L.J. & CUBO, J. (2016): Preliminary assessment of bone histology in the extinct elephant bird *Aepyornis* (Aves, Palaeognathae) from Madagascar. – Comptes Rendus Palevol, 15 (1-2): 205–216.

BOURDON, E., MOURER-CHAUVIRÉ, C. & LAURENT, Y. (2016): Early Eocene birds from La Borie, southern France. – Acta Palaeontologica Polonica, 61 (1): 175–190.

WALSH, S.A., MILNER, A.C. & BOURDON, E. (2016): A reappraisal of *Cerebavis cenomanica* (Aves, Ornithurae), from Melovatka, Russia. – Journal of Anatomy, 229 (2): 215–227.

GOLD, M.E.L., BOURDON, E. & NORELL, M.A. (2016): The first endocast of the extinct dodo (*Raphus cucullatus*) and an anatomical comparison amongst close relatives (Aves, Columbiformes). – Zoological Journal of the Linnean Society, 177 (4): 950–963.
MOURER-CHAUVIRÉ, C. & BOURDON, E. (2016): The *Gastornis* (Aves, Gastornithidae) from the Late Paleocene of Louvois (Marne, France). – Swiss Journal of Palaeontology, 135 (2): 327–341.
BOURDON, E., KRISTOFFERSEN, A.V., & BONDE, N. (2016): A roller-like bird (Coracii) from the Early Eocene of Denmark. – Scientific Reports, 6 (34050): 1–9. DOI: 10.1038/srep34050.

FRANCE

DELPHINE ANGST is continuing to work on large fossil flightless birds, with a multidisciplinary approach. She is currently doing a second year of her postdoc with Anusuya Chinsamy in the laboratory of Biology at the University of Cape Town in order to learn bone histology. She is doing several projects using this method. Her work on the bony crests of guinea fowl is in progress, and this work will allow us to have a better understanding of this structure (construction, function, ontogeny…) so as to better understand the similar structures in fossil birds such as dromornithids. The first bone histology study of the Dodo, done in collaboration with Anusuya Chinsamy, Julian Hume and Lorna Steel, is now finished and the paper will be submitted soon. This work will provide important new information about the ecology of this enigmatic subfossil bird. In parallel, a bone histology study of the large ground birds, including Aepyornithidae, Gastornithidae, Dinornithiformes and Ratites is in progress with Anusuya Chinsamy and Aurore Canoville. A complementary and more complete study of the bone growth pattern of the Aepyornithidae is currently in progress in collaboration with Anusuya Chinsamy, Ursula Göhlich and Aurore Canoville. Moreover, the first sampling of Phorusrhacidae was done in order to do the first bone histology study of this group. This work will be finished during the next year.

Delphine published this year a new method to estimate the locomotion type of the ground birds, like graviportal (walker) or cursorial (runner) using the ratio between the maximum length and the minimum width of the tarsometatarsus. Because this method uses only two easy measurements of one bone, it is easier to apply in the fossil record. Using this method, a new study was done on the locomotion of the largest ground birds of South America: the Phorusrhacidae and the Brontornithidae. This work is currently finished and will be submitted during the next month.

Associated to these works, other studies were done on fossil giant ground birds more generally, including several publications with Eric Buffetaut on new specimens of *Gargantuavis* from two localities in southern France, and a general review of *Gargantuavis* and the beginning of a new study of the poorly known taxon *Gastornis russelli*, from the Paleocene of France, with interesting implications about ontogenetic changes in *Gastornis.* A paper was recently published on the oxygen fractionation between bird eggshell calcite and body water, which could be used on the fossil record in order to estimate the origin of the water ingested by birds and therefore help to estimate the palaeoenvironment.

ERIC BUFFETAUT's palaeornithological activities have been largely devoted to the Late Cretaceous giant bird *Gargantuavis*, with several papers with Delphine Angst on new specimens from two localities in southern France, and a general review of that taxon – which is already somewhat outdated because of the discovery, in the course of excavations at the Cruzy locality, of a remarkably well preserved femur that will provide much new information about both the locomotion and the systematic position of *Gargantuavis*.

Also with Delphine, Eric has begun a reassessment of the poorly known taxon *Gastornis russelli*, from the Paleocene of France, with interesting implications about ontogenetic changes in *Gastornis*.

Eric's work on South American giant birds has resulted in a revision of Ameghino's taxa *Liornis floweri* (interpreted as junior synonym of *Brontornis burmeisteri*) and *Callornis giganteus* (a chimera based on phorusrhacid and brontornithid material), to be published soon in *Palaeovertebrata*. The description of the brontornithid specimen from the Oligocene of Bolivia in the Paris Natural History Museum will be submitted to the proceedings of the SAPE meeting in Diamante. This remarkably organized meeting was also an excellent opportunity to make useful comparative observations on the fossil bird collections in Buenos Aires and La Plata.

Eric's work on the history of palaeornithology has focussed on what is apparently the first discovery of phorusrhacid remains, by the French palaeontologist Auguste Bravard in the 1850s, in the Miocene beds along the Paraná river in Entre Rios province (Argentina). Also of historical interest was the rediscovery, with the help of Ilja Nieuwland, of a much forgotten collection of moa bones at the Teylers Museum in the Netherlands, purchased in the 1850s and which appears to be among the first collections of New Zealand giant birds to have reached continental Europe.

ANTOINE LOUCHART, in the team «Paleo-genomics» and the National Platform of Paleogenetics (Palgene) at the Ecole Normale Supérieure de Lyon, continued works on ancient DNA of extinct island birds. The publication of one of them has been delayed, some more time being needed to obtain sufficiently replicated results, but submission should be done in the next few months. Antoine is also finishing works on bird teeth and pseudoteeth, one of them being eventually published just last September (teeth of *Hesperornis* and *Ichthyornis*; Dumont *et al.* 2016). Other projects are continuing as well, including on various localities of France and Africa.

CÉCILE MOURER-CHAUVIRÉ and Estelle Bourdon have published in the Swiss Journal of Palaeontology a paper on the *Gastornis* remains from the Late Paleocene of Louvois. This *Gastornis* is different from the two other species previously described in the Paleocene of Western Europe, *G. parisiensis* and *G. russelli*, which implies that three different forms of this genus were living simultaneously in this area. In addition this material shows the existence of a sexual dimorphism. The small cuckoo *Chambicuculus pusillus*, from the late Early or early Middle Eocene of Tunisia, was described from a distal part of tarsometatarsus. New material includes an omal part of coracoid which substantiates the attribution of this genus to the recent family Cuculidae. *Chambicuculus* is the oldest Cuculidae known so far and

it is morphologically more advanced than the other stem cuculids known in Europe and North America. At the moment Cécile is finishing the manuscript on the new bird material collected by Martin Pickford and Brigitte Senut in the Eocliff locality, in Namibia, dating from the late Middle Eocene (Bartonian). This new material confirms the presence of the extinct family Paraortygidae, and new remains of the small parrot *Namapsitta* show that this genus can be attributed to the recent family Psittacidae. Lastly a few remains can be attributed to a Charadriiform closely related to the recent family Turnicidae which includes the Buttonquails and the Lark Button quail. Cécile and her co-authors would like to submit this paper for the special issue of the Revista del Museo Argentino de Ciencias Naturales. The paper on the Early Eocene birds of La Borie, which had been reported as online in the 2014 SAPE newsletter, has been published in the journal Acta Palaeontologica Polonica in the first number of 2016.

ANGST, D., BUFFETAUT, E., LÉCUYER, C. & AMIOT, R. (2015): A new method for estimating locomotion type in large ground birds. – Palaeontology, 59: 217-223.

ANGST, D. & CHINSAMY, A. (2016): Ecological implications of the revised locomotion of the South American giant birds: *Paraphysornis* and *Brontornis*. – SAPE meeting 2016, Diamante.

ANGST, D. & CHINSAMY, A., STEEL, L. & HUME, J.P. (2016): New insights into the life history of the dodo from bone histology. –SAPE meeting 2016, Diamente.

BOURDON, E., MOURER-CHAUVIRÉ, C. & LAURENT, Y. (2016): Early Eocene birds from La Borie, southern France. – Acta Palaeontologica Polonica, 61 (1): 175–190.

BUFFETAUT, E. (2015): Des *Mille et une nuits* aux oiseaux géants malgaches. – Pour la Science, 447: 70-74.

BUFFETAUT, E. (2015): From the dodo to *Gargantuavis*: insular giant birds through time and space. - P. 9 in Figueiredo, S. (ed.) : I Congresso Internacional – As Aves na História Natural, na Pré-História e na História. Centro Português de Geo-História e Pré-História, Lisboa.

BUFFETAUT, E. (2016): From Charles Darwin's comments to the first mention of South American giant fossil birds: Auguste Bravard's catalogue of fossil species from Argentina (1860) and its significance. – Bulletin de la Société géologique de France, 187: 41-53.

BUFFETAUT, E. & ANGST, D. (2015): Le monde perdu de l'île Maurice. – Pour La Science, 453: 70-75.

BUFFETAUT, E. & ANGST, D. (2016): The giant flightless bird *Gargantuavis philoinos* from the Late Cretaceous of southwesterne Europe: a review. – In KHOSLA, A. and LUCAS, S. G. (eds.) Cretaceous Period: Biotic Diversity and Biogeography, Vol. 7145–50 pp.

BUFFETAUT, E. & ANGST, D. (2016): Pelvic elements of the giant bird *Gargantuavis* from the Upper Cretaceous of Cruzy (southern France), with remarks on pneumatisation. – Cretaceous Research, 66: 171-176.

BUFFETAUT, E., ANGST, D., MECHIN, P., & MECHIN-SALESSY, A. (2015): New remains of the giant bird *Gargantuavis philoinos* from the Late Cretaceous of Provence (south-eastern France). – Palaeovertebrata, 39: 1-6

BUFFETAUT, E., PEREDA-SUBERBIOLA, X., & ANGST, D. (2015): First Iberian record of the giant Late Cretaceous bird *Gargantuavis*. – P.12 in FIGUEIREDO, S. (ed.): I Congresso Internacional – As Aves na História Natural, na Pré-História e na História. Centro Português de Geo-História e Pré-História, Lisboa.

DUMONT, M., TAFFOREAU, P., BERTIN, T., BHULLAR, B.A., FIELD, D., SCHULP, A., STRILISKY, B., THIVICHON-PRINCE, B., VIRIOT, L., & LOUCHART, A. (2016): Synchrotron imaging of dentition provides insights into the biology of *Hesperornis* and *Ichthyornis*, the "last" toothed birds. – BMC Evolutionary Biology, 16: 178. DOI 10.1186/s12862-016-0753-6.

LAZZERINI, N., LÉCUYER, C., AMIOT, R., ANGST, D., BUFFETAUT, E., FOUREL, F., DAUX, V., BETANCORT, J.F., FLANDROIS, J-P., SANCHEZ MARCO, A. & LOMOSCHITZ, A. (2016): Oxygen isotope fractionation between bird eggshell calcite and body water. – Science of Nature, 1–15.

MOURER-CHAUVIRÉ, C. & BOURDON, E. (2016): The *Gastornis* (Aves, Gastornithidae) from the Late Paleocene of Louvois (Marne, France). – Swiss Journal of Palaeontology, 135 (2): 327–341.

MOURER-CHAUVIRÉ, C., ESSID, E.L., KHAYATI, H., MARIVAUX, L., MARZOUGUI, W., TEMANI, R., VIANEY-LIAUD, M & TABUCE, R. (2016): New remains of the very small cuckoo, *Chambicuculus pusillus*, (Aves, Cuculiformes, Cuculidae) from the late Early or early Middle Eocene of Djebel Chambi, Tunisia. – Palaeovertebrata, 40 (1)-e2: 4 p., doi: 10.18563/pv.40.1.e2

GERMANY

In 2015, Gerald Mayr finished a book on avian evolution, which will be published in November 2016 (http://eu.wiley.com/WileyCDA/WileyTitle/productCd-111902076X.html). Gerald is currently preparing a chapter on birds for a new book on the Messel fossil site, which will be published in 2017.

MAYR, G. (2016): Avian Evolution: The Fossil Record of Birds and its Paleobiological Significance. Wiley-Blackwell, 293 pp.

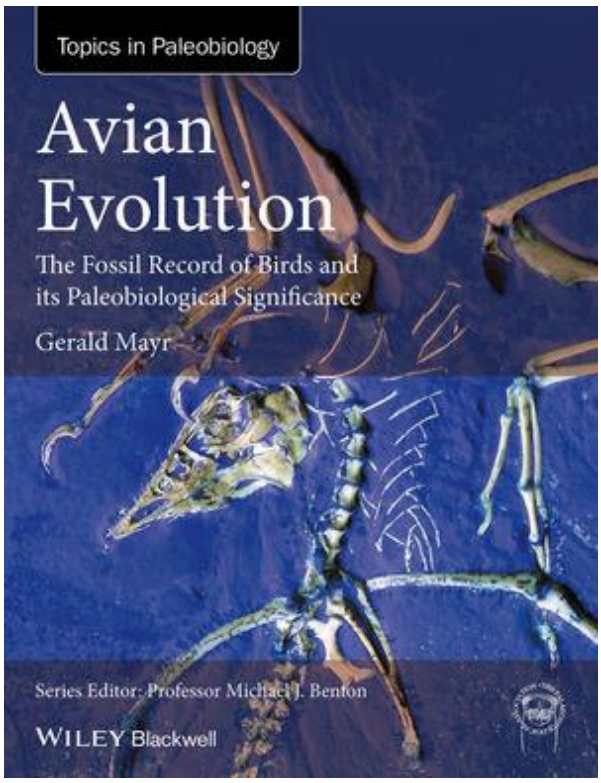
MAYR, G. (2016): Fragmentary but distinctive: three new avian species from the early Eocene of Messel, with the earliest record of medullary bone in a Cenozoic bird. – Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen, 279: 273-286.

MAYR, G. (2016): Variations in the hypotarsus morphology of birds and their evolutionary significance. – Acta Zoologica, 97: 196-210.

MAYR, G. (2016): The early Eocene birds of the Messel fossil site: a 48 million-year-old bird community adds a temporal perspective to the evolution of tropical avifaunas. – Biological Reviews, doi: 10.1111/brv.12274.

MAYR, G. (2016): On the taxonomy and osteology of the Early Eocene North American Geranoididae (Aves, Gruoidea). – Swiss Journal of Palaeontology, 135: 315-325.

MAYR, G. (2016): Osteology and phylogenetic affinities of the middle Eocene North American *Bathornis grallator* – one of the best represented, albeit least known Paleogene cariamiform birds (seriemas and allies). – Journal of Paleontology, 90: 357-374.



MAYR, G. (2016): Avian feet, crocodilian food and the diversity of larger birds in the early Eocene of Messel. – Palaeobiodiversity and Palaeoenvironments, doi: 10.1007/s12549-016-0243-2.

MAYR, G. & GOEDERT, J. L. (2016): New late Eocene and Oligocene remains of the flightless, penguin-like plotopterids (Aves, Plotopteridae) from western Washington State, U.S.A. – Journal of Vertebrate Paleontology, e1163573-2.

MAYR, G., PITTMAN, M., SAITTA, E., KAYE, T.G., VINTHER, J. (2016): Structure and homology of *Psittacosaurus* tail bristles. – Palaeontology, doi: 10.1111/pala.12257.

MAYR, G. & SCOFIELD, R.P. (2016): New avian remains from the Paleocene of New Zealand: the first early Cenozoic Phaethontiformes (tropicbirds) from the Southern Hemisphere. – Journal of Vertebrate Paleontology, 36: e1031343. DOI: 10.1080/02724634.2015.1031343.

VINTHER, J., NICHOLLS, R., LAUTENSCHLAGER, S., PITTMAN, M., KAYE, T.G., RAYFIELD, E., MAYR, G. & CUTHILL, I.C. (2016): 3D camouflage in an ornithischian dinosaur. – Current Biology.

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HUNGARY

EUGEN (JENŐ) KESSLER finished his active teaching and research activities. He now summarizes research, especially on the origin and evolution of birds. He published two papers in the last year, and two educational books in Hungarian.

KESSLER, J. (E.) (2015): Osteological guide of songbirds from Central Europe. – Ornis Hungarica 23(2): 62-155.

KESSLER, J. (E.) (2016): Dinoszauruszok és ősmadarak [Dinosaurs and basal birds]. – Ed. Publio, pp.130 (printed and e-books)

KESSLER, J. (E.) (2016): Picidae in the European fossil, subfossil and recent bird faunas and their osteological charasteristics. – Ornis Hungarica 24(1): 96-114.

KESSLER, J. (E.) (2016):Az ősmadarak és utódaik nyomában [Basal birds and their offspring]. – Ed. Publio, pp.116 (printed and e-books)

JAPAN

JUNYA WATANABE is finishing his PhD course at Kyoto University, with a defense scheduled in early October. His PhD research was a comparative study of the postnatal skeletal ontogeny in five species of modern aquatic birds (*Calonectris leucomelas*, *Ardea cinerea*, *Phalacrocorax capillatus*, *Larus crassirostris*, and *Cerorhinca monocerata*) focusing on: 1) the establishment of ontogenetic ageing criteria for avian fossil and skeletal specimens based on macroscopic morphology and surface textures of long bones; 2) the relationship between the ontogenetic trajectories and evolutionary variability of the avian limb proportion; and 3) their implications for the evolution of flightlessness in birds. Resultant papers are forthcoming, and the first part is to be submitted to the proceedings volume of the last meeting in Diamante. He is looking for an opportunity for collaborations to make use of his ontogenetic series.

Revision of fossil birds from Pleistocene fissure-filling deposits of Shiriya, northeast Japan, is currently undertaken by Junya Watanabe, Hiroshige Matsuoka, and Yoshikazu Hasegawa. They have published descriptions of a flightless duck and a large murre, which are unique components of the paleoavifauna, and are preparing for additional publications.

WATANABE, J. & MATSUOKA, H. (2015): Flightless diving duck (Aves, Anatidae) from the Pleistocene of Shiriya, northeast Japan. – Journal of Vertebrate Paleontology, 35(6): e994745. Available from http://www.tandfonline.com/eprint/FECSdjTqsNuv5gedPmNY/full.

WATANABE, J., MATSUOKA, H. & HASEGAWA, Y. (2016): Two species of *Uria* (Aves: Alcidae) from the Pleistocene of Shiriya, northeast Japan, with description and body mass estimation of a new species. – Bulletin of the Gunma Museum of Natural History, (20): 59–72. Available from http://www.gmnh.pref.gunma.jp/research/no_20/bulletin20_2.pdf.

NEW ZEALAND

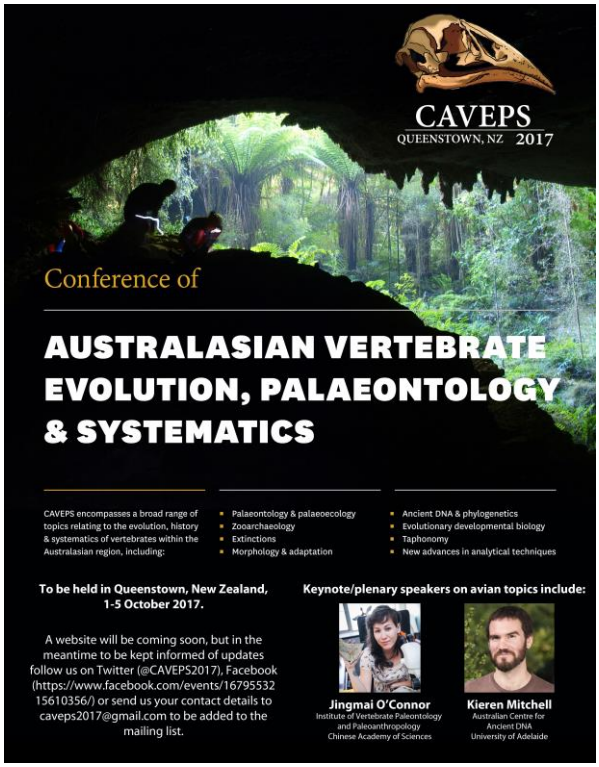
PAUL SCOFIELD and VANESA DE PIETRI at Canterbury Museum in Christchurch have had a busy and productive year. They have continued excavations in the St Bathans' Early Miocene lacustrine sites in collaboration with Trevor Worth and Alan Tennyson. Vanesa has led research on Oligo-Miocene shorebirds from St Bathans and northern South Australia. With Gerald Mayr Paul has described a Paleocene phaethontiform from North Canterbury. In collaboration with Kieren Mitchell (University of Adelaide), Jamie Wood and Nic Rawlence (Otago University), Paul and Vanesa have been involved in sequencing ancient DNA from Holocene fossils and comparing molecular phylogeny with traditional osteology; and this work has resulted in several publications. The group have also published on neuroanatomical evolution in penguins, FEA engineering studies of moa feeding and bulk bone metabarcoding. To top it all off Paul has recently published with Jamie Wood and others on the origin and timing of New Zealand's earliest domestic chickens. Work continues on St Bathans and on several Paleocene fossil penguins.

ALAN TENNYSON (Vertebrate Curator, Museum of New Zealand Te Papa Tongarewa, Wellington) has continued his field work at the important Miocene St Bathans fossil site. This work is primarily with Paul Scofield and Vanesa De Pietri (both Canterbury Museum) and Trevor Worthy (Flinders University). The excavations are at a smaller level than in many previous years but we are still finding plenty of new worthwhile discoveries. He continues to collaborate with genetic researchers (primarily Nic Rawlence, Otago University) and Lara Shepherd (Te Papa) on various phylogenetic studies, particularly shags and prions. He is involved in seabird conservation research and chairs the Birds New Zealand committee on bird taxonomy. Te Papa museum is beginning to renew its long-term exhibitions, so a lot of work during the next year will be going into redesigning the natural history displays.

A new book of natural history writing by BRIAN GILL, "The Unburnt Egg: More Stories of a Museum Curator" (Awa Press) was published in July 2016. A sequel to "The Owl that Fell from the Sky" (2012), "Unburnt Egg" contains 14 stand-alone stories involving natural history specimens (land vertebrates) Brian came to know during his curatorial career at Auckland Museum. History, personalities and biology are woven in to make engaging tales for anyone with an interest in nature and museums. Several stories touch on palaeontological themes. One is devoted to Walter Mantell, Richard Owen and early discoveries of moa remains. Another discusses New Zealand's Holocene fossil record of terrestrial vertebrates and details discoveries of bones of New Zealand sea-lions in northern sand-dunes that showed the species once bred there. A third story gives the background behind the discovery of three of the few known whole moa eggs. A theme throughout the book is shining a light on the work of natural history curators and explaining the value and relevance of museum collections. Books cost $NZ38 (less tax for export copies) and are available from the New Zealand publisher (www.awapress.com; postage half-price on overseas orders) or from international book suppliers.

JAMIE WOOD (Landcare Research, Lincoln) continues to run an ancient DNA laboratory where this year two PhD candidates began performing research relating to prehistoric birds and bird evolution: Alex Boast working on analyses of kakapo coprolites, and Tess Cole working on phylogenetics of ancient and modern crested penguins.

New Zealand is also preparing to host the next Conference of Australasian Vertebrate Evolution, Palaeontology, and Systematics (CAVEPS), next year in Queenstown! The first circular will be sent out shortly.



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SPAIN

FRANCISCO J. SERRANO defended his thesis entitled "Ecomorphology and evolution of the avian flying system: Aerodynamic implications for the flight of stem birds" in 2015 at the University of Málaga (Spain). At the present, Francisco is an external postdoctoral researcher granted by Los Ángeles County Natural History Museum (California, USA). In the last year, together with Luis Chiappe, José Luis Sanz, Paul Palmqvist and John Long, he had been studied the effects that the paleoatmospheric variations could have on the evolution of bird´s flight. Currently, Francisco and Luis Chiappe are working on the aerodynamic performance of the early Cretaceous sapeornithids.

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SWEDEN

PER ERICSON regrets he couldn't attend the meeting in Argentina. He continues to work on the systematics of birds using molecular data. Most recently his research group is employing genomic methods in the phylogenetic and phylogeographical studies but also for studying physiological and morphological adaptations as well as genome evolution. Due to administrative duties the last several years his work must be conducted at a slower pace than preferred, however. On a side note, he is particularly happy to see a paper on a Mesozoic bird from China (in collaboration with Johan Dalsätt and Zhonghe Zhou) finally appear in print.

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UNITED KINGDOM

In 2015, JULIAN PENDER HUME returned to Beanka, Madagascar and assisted in completely excavating a fossil lemur cave. The site has shown to be the richest deposit of the extinct sloth lemur *Babakotia* yet discovered, and also contains a possibly new species of extinct giant coua *Coua* sp. JPH continues to work on the Mascarene avifauna. New discoveries include a new *Pterodroma* petrel from Rodrigues Island and a new *Dryolimnas* rail from Mauritius. Another large marsh deposit has also been surveyed which will form part of a new major excavation in 2017. A large amount of fossil material was collected on Aldabra in 1974 and is presently being worked up. It contains almost every element of the extinct gadfly petrel *Pterodroma kurodai* described by Harrison and Walker, plus a series of subfossils representing bird taxa from the island around 5,000 YBP. The results will be published in a palaeontological overview paper along with a specific paper on *P. kurodai* showing that this taxon is valid. A second edition of Extinct Birds, with JPH as the sole author, is now in press and will be published in spring of 2017. The increase in extinct species since the first edition, both from the palaeontological and ornithological record has, according to Bloomsbury Press, increased the number of pages to a maximum that can be published in a single volume. Sadly and based on the current trends of bird extinctions, a third edition, likely due around 2022, will have to be a two volume set. How shameful that are our actions are still the primary cause of this!

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USA

Connecticut

DANIEL KSEPKA continues his work at the Bruce Museum, where he divides his research efforts amongst projects dealing with fossil penguins, avian brain evolution, and molecular divergence dating. Recently, Dan was fortunate to be co-PI on the NSF award "Collaborative Research: Advancing Bayesian Phylogenetic Methods for Synthesizing Paleontological and Neontological Data" which will support his work with Tracy Heath and Rob Meredith on new models for phylogenetic inference and to apply them to a large penguin dataset. In order to share the remarkable story of penguins with the wider public, Dan will serve as curator for an upcoming exhibition on Penguin Evolution that will showcase ancient and modern penguin specimens.

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Los Angeles

LUIS CHIAPPE's research on early birds continues to focus on the spectacular avifauna of the Jehol Biota of northeastern China. His book on these Cretaceous birds, *Birds of Stone*—co-authored by Meng Qingjin—was just published by Johns Hopkins University Press (https://jhupbooks.press.jhu.edu/content/birds-stone).
Alyssa BELL (Natural History Museum of Los Angeles County, NHM) and Luis continue to be involved with projects related to the evolution of hesperornithiforms (some including the late Larry Martin) and together with Francisco SERRANO (University of Malaga), he is studying the aerodynamics of pre-modern birds. Luis' graduate student, Nate Carroll (NHM and USC), is working on avian amber inclusions from the Cretaceous of Myanmar and elsewhere.

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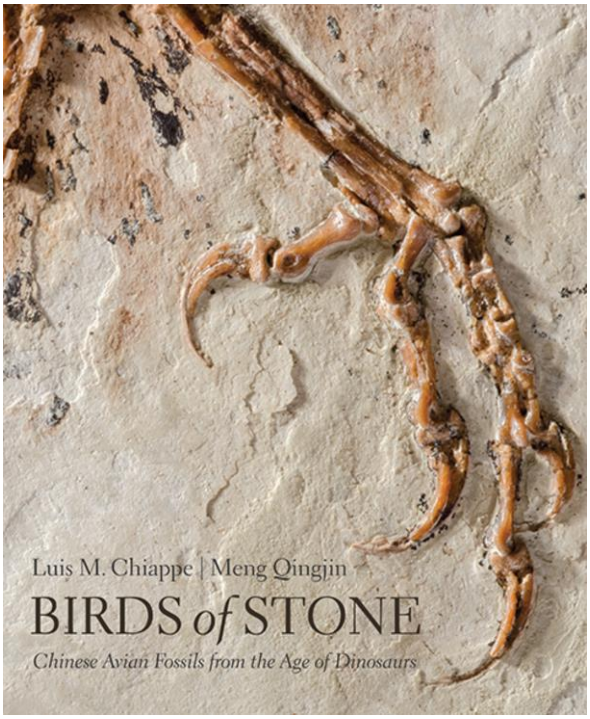

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South Carolina

Adam Smith recently took over as Curator of Clemson University's Campbell Geology Museum in Clemson, South Carolina and is continuing projects on avian encephalization and synchrotron-based histology started during postdoctoral fellowships at NESCent and the Field Museum. Ongoing projects also include descriptions of new avian fossil material from the Eocene of Egypt and North America and fieldwork in South Carolina and North Dakota.

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