



SOCIETY OF AVIAN PALEONTOLOGY AND EVOLUTION

- Newsletter -

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SOCIETY OF AVIAN PALEONTOLOGY AND EVOLUTION

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Dear SAPE Members:

Today, science is under siege in many countries. Scientists and their professional societies have a major role to play influencing social change now more than ever. SAPE is no exception. Our collective research provides key insights into critical issues, from evolutionary literacy to global change. I'm happy to see that our members continue to advance knowledge about the evolution of birds at a remarkable pace, and use such knowledge to promote change in museums and universities across the globe. Birds, as charismatic organisms loved by millions of people and as consummate models for addressing a wide range of questions, are prime subjects of scientific study. Since our last newsletter, members have made numerous exciting new discoveries, published dozens of scholarly

papers and, just as importantly, have written many articles and books geared towards a general audience.

The publication of the proceedings of the 9th International SAPE Meeting in Diamante, Argentina marks a milestone for our society; this volume joins our collection of past proceedings, a tremendous resource dating back to 1985. The thirteen papers included in this volume were carefully edited by our members Carolina Acosta Hospitaleche, Jorge Ignacio Noriega, Federico Agnolin, Claudia Tambussi, and Nadia Haidr, and reviewed by many of us. On behalf of the Executive Council, I'd like to thank the editorial team and all of you who reviewed the manuscripts for such a great service to our profession and society!

Luis M. Chiappe, SAPE President

SAPE Meeting 2020

Dear colleagues,
On behalf of the Host Committee, we are pleased to invite you to the 10th International Meeting of the Society of Avian Paleontology and Evolution (SAPE), to

be held in Málaga (Spain) in 2020. At the successful SAPE Meeting in Diamante (Argentina), Málaga was identified as an excellent setting for sharing our advances in avian evolution and paleornithology. We

look forward to welcome you all to this beautiful city on the Mediterranean coast, which enjoys good weather year round. As one of the largest cities in Spain, Málaga has all the amenities necessary to host an international scientific meeting (e.g., international airport, national railway station, huge number of hotels, and exceptional food). It is also strategically located, in near distance to spectacular birding areas where we can enjoy the Iberian avifauna (including flamingos and griffon vultures) as well as renowned paleornithological sites such as Las Hoyas. Málaga also boasts a spectacularly rich cultural heritage, as this 2800-years-old multicultural city—birthplace of Pablo Picasso—is home to many art museums, archaeological sites, and historic landmarks. In addition to local birding, we have planned a two-day excursion to the Las Hoyas fossil site (Cuenca Province) and a tour of Cuenca's paleontological museum.

Save the date and look forward to more information about this meeting in our next Newsletter!

Sincerely yours,
Francisco J. Serrano and the SAPE 2020 Host Committee



PROCEEDINGS OF THE 9TH INTERNATIONAL SAPE MEETING

The proceedings of the 9th International Meeting of the Society of Avian Paleontology and Evolution, held in Diamante, Argentina, will be published in a special volume of *Contribuciones Científicas del Museo Argentino de Ciencias Naturales "Bernardino Rivadavia"* (ISSN 1666-5505). This special volume, which contains thirteen papers currently in press, was edited by CAROLINA ACOSTA HOSPITALECHE, JORGE IGNACIO NORIEGA, FEDERICO AGNOLIN, CLAUDIA TAMBUSI, and NADIA HAIDR.

The proceedings will be dedicated to DR. EDUARDO P. TONNI (Museo de La Plata, Argentina) on the occasion of his retirement.

AGNOLIN, F., BRISSÓN EGLI, F., SOIBELZON, E., RODRIGUEZ, S.G., SOIBELZON, L.H., IACONA, F., & PIAZZA, D. (IN PRESS): A new large Cathartidae from the quaternary of Argentina, with a review of the fossil record of condors in South America.

ANGST, D. & CHINSAMY, A. (IN PRESS): Ecological implications of the revised locomotory habits of the giant extinct South American birds (Phorusrhacidae and Brontornithidae).

BUFFETAUT, E. (IN PRESS): A brontornithid from the Deseadan (Oligocene) of Bolivia.

DE PIETRI, V.L., SCOFIELD, R.P., TENNYSON, A.J.D., HAND, S.J., & WORTHY, T.H. (IN PRESS): The diversity of early Miocene pigeons (Columbidae) in New Zealand.

HAIDR, N. & ACOSTA HOSPITALECHE, C. (IN PRESS): Fossil penguin beaks from the Eocene of Antarctica: new materials from La Meseta Formation.

HUME, J.P., STEEL, L., MIDDLETON, G., & MEDLOCK, K. (IN PRESS): In search of the dwarf emu: A palaeontological survey of King and Flinders Islands, Bass Strait, Australia.

MOURER-CHAUVIRÉ, C., PICKFORD, M., & SENUT, B. (IN PRESS): New data on stem group Galliformes, Charadriiformes, and Psittaciformes from the middle Eocene of Namibia.

NORIEGA, J. & MAYR, G. (IN PRESS): The systematic affinities of the putative seriema *Noriegavis santacruzensis* (Noriega et al., 2009) from the Miocene of Argentina.

SERRANO, F.J., CHIAPPE, L.M., PALMQVIST, P., LONG, J., & SANZ, J.L. (IN PRESS): Paleatmospheric changes and the major avian radiations.

TENNYSON, A.J.D., RIETH, T., & COCHRANE, E. (IN PRESS): Bird remains from an early archaeological site on Tutuila Island, Sāmoa.

VEZZOSI, R. & NORIEGA, J. (IN PRESS): About the systematic status of an old and forgotten specimen of terror bird (Phorusrhacidae: Mesembriornithinae) from the Miocene of Northwestern Argentina.

WATANABE, J. (IN PRESS): Ontogeny of macroscopic morphology of limb bones in modern aquatic birds and their implications for ontogenetic ageing.

WORTHY, T.H. & YATES, A. (IN PRESS): A review of the smaller birds from the late Miocene Alcoota local

faunas of Australia with a description of a new anatic species.

ZELENKOV, N. (IN PRESS): The revised avian fauna of Rudabánya (Hungary, late Miocene).

CALL FOR MEMBERSHIP AND DONATIONS

As SAPE enters its 32nd 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, from the Museo de La Plata, continues working mainly in Antarctica: studying new Eocene penguins that include cranial remains and fossil integument, and other Cretaceous diving birds (three unpublished skeletons from different areas of Seymour and Vega Islands). Additionally and together with MARCELO REGUERO and MARCOS CENIZO, Carolina is working on a new mandible of a pseudo-toothed bird from the middle Eocene of Seymour Island, while several students from the National University of La Plata working in her lab are advancing on penguins studies (ALEJANDRA SOSA in muscular reconstructions, NADIA HAIDR in functional morphology, MARCOS ALMADA in skeletal anatomy, and FACUNDO IRAZOQUI in predation marks. Another undergraduate student (LAURA TORRES) started last year studying otoliths recovered from Antarctic sediments.

This year, Carolina was involved in the setup of a new lab in the División Paleontología Vertebrados (Museo de La Plata) for 3D studies together with Javier Gelfo and Agustín Ruella, which includes three scanners for different material sizes and resolutions and 3D printing. Finally, the editorial work of the Special Volume of the SAPE meeting took a lot of her time this year!

NADIA SOLEDAD HAIDR is still working on her Ph.D project on functional morphology of modern and fossil penguins from Patagonia and Antarctica. At this stage, she is focusing on processing and analyzing 3D scans of penguin skeletal elements, and studying new cranial material from the Eocene of Antarctica.

JUAN DIEDERLE is working on snake-birds and ratites of South America, also with other Neogene and Quaternary fossil birds of Entre Ríos province, Argentina. His studies focus on taxonomic, paleobiological and evolutionary aspects.

CLAUDIA TAMBUSI at CICTERRA in Córdoba (Argentina) continues to work with Mio-Pliocene birds of Sierras Pampeanas at La Rioja and Córdoba in Argentina. Her research projects are predominately dealing with brain anatomy (passerines, woodpeckers and cuckoos). With FEDERICO DEGRANGE and DANIEL KSEPKA, they have completed a detailed study of the skull, muscle reconstruction, and revised the phylogenetic position of the Miocene penguin *Madrynornis mirandus*. Together with SOFIA PESTONI and

other colleagues, Claudia has finished a morpho-functional study of the trophic capacities of the Guira Cuckoo (*Guira guira*). Both manuscripts are currently under revision. Other projects include the study of birds of the Paleocene of Antarctica and of the Pliocene of the Atlantic coast of Buenos Aires, Argentina. She dedicates much of her time following up on her students, in particular those who are doing their theses and postdoctoral projects. Claudia takes this opportunity to congratulate FEDERICO DEGRANGE who, due to his undeniable abilities, achieved a well-deserved job promotion.

FEDERICO "DINO" DEGRANGE is continuously working on the paleobiology of zoophagous birds, with emphasis on terror birds (Cariamiformes, Phorusrhacidae). Using 3D modelling, together with CLAUDIA TAMBUSI, LAWRENCE WITMER and RYAN RIDGELY, he is currently working on the study of the terror birds' brain anatomy and on the evolution of cranial akinesis in Cariamiformes using biomechanical techniques such as finite element analysis. He is also doing research with Claudia on the Mio-Pliocene birds of Sierras Pampeanas at La Rioja and Córdoba in Argentina. He has also collaborated with Dr. Worthy in the study of the evolution of giant flightless birds (with emphasis in giant fowl), in the cranial anatomy of *Madrynornis mirandus* (Sphenisciformes, manuscript sent) and in the morpho-functional analysis of the cranio-mandibular complex of the Guira Cuckoo (Pestoni et al., manuscript sent).

ACOSTA HOSPITALECHE, C. & GELFO, J. (2016): Procellariiform remains and a new species from the latest Eocene of Antarctica. – *Historical Biology*. <http://dx.doi.org/10.1080/08912963.2016.1238470>.

ACOSTA HOSPITALECHE, C. & OLIVERO, E. (2016): Re-evaluation of the fossil penguin *Palaeudyptes gunnari* from the Eocene Leticia Formation, Argentina: additional material, systematics and palaeobiology. – *Alcheringa*, 40: 373–382.

ACOSTA HOSPITALECHE, C., HAGSTROM, J., REGUERO, M., & MÖRS, T. (2017): Historical perspective of Otto Nordenskjöld's Antarctic fossil penguin collection and Carl Wiman's contribution. – *Polar Record*. doi:10.1017/S0032247417000249.

- ACOSTA HOSPITALECHE, C., REGUERO, M. & SANTILLANA, S. (2017): *Aprosdokitos mikrotero* gen. et sp. nov., the tiniest Sphenisciformes that lived in Antarctica during the Paleogene. – Neues Jahrbuch für Geologie und Paläontologie, 283: 25–34.
- CARRIL, J., & TAMBUSSI, C.P. (2017): Skeletogenesis of *Myiopsitta monachus* (Psittaciformes) and sequence heterochronies in Aves. – Evolution & Development, 19: 17–28. DOI: 10.1111/ede.12211
- DEGRANGE, F.J. (2017): 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. DOI: <https://doi.org/10.1017/S1755691016000256>.
- DEGRANGE, F.J. (2017): Book Review “Vizcaíno, S.F.; Bargo, M.S.; Cassini, G.H. & Toledo, N. 2016. Forma y Función en Paleobiología de Vertebrados. EDULP, La Plata”. – Ameghiniana, 54(1): 132–133.
- DEGRANGE, F.J. (IN PRESS): Book Review “Chatterjee, S. 2015. The Rise of Birds: 225 Million Years of Evolution. 2nd Edition. Johns Hopkins University Press, Maryland”. – El Hornero.
- DEGRANGE, F.J., CARRIL, J., DEMMEL FERRERIRA, M.M., PESTONI, S., & TAMBUSSI, C.P. (2017): El complejo cráneo-mandibular de Aves: forma, desarrollo y función. In: A. VASSALLO, A. MANZANO & V. ABDALA (eds.), Morfología de Vertebrados: Conceptos, métodos y grupos de investigación en Argentina. – Editorial de la Universidad de Mar del Plata (EUEM). ISBN: 978-987-1921-87-4.
- DIEDERLE, J.M. (2017): Taxonomic status of the Neogene snakebird *Anhinga fraileyi* Campbell, 1996 (Aves, Anhingidae). – Ameghiniana, 54(3): 341–347. <http://www.bioone.org/doi/abs/10.5710/AMGH.31.12.2016.3008?journalCode=ameg>
- DIEDERLE, J.M. AND AGNOLIN, F. (2017): New anhingid (Aves, Suliformes) from the middle Miocene of Río Negro province, Patagonia, Argentina. – Historical Biology. <http://www.tandfonline.com/eprint/8yCAleB6RNJh3eBZyJAh/full>
- DIEDERLE, J.M. (2016): Body mass and locomotor habits of the smallest darter, *Anhinga minuta* (Aves, Anhingidae). – Historical Biology, 29(3): 1–7. <http://www.tandfonline.com/eprint/CyvFPpMV5Hv73qtAfaGS/full>
- HAIDR, N. & ACOSTA HOSPITALECHE, C. (IN PRESS 2017): Fossil penguins beaks from the Eocene of Antarctica: new materials from La Meseta Formation. Volumen Especial Revista del Museo Argentino de Ciencias Naturales, SAPE Meeting 2016.
- SOSA, M.A. & ACOSTA HOSPITALECHE, C. (2017): Ontogenetic variations of the head of *Aptenodytes forsteri* (Aves, Sphenisciformes): muscular and skull morphology. – Polar Biology. DOI 10.1007/s00300-017-2183-3.
- TAMBUSSI, C.P., DEGRANGE, F.J., CARRIL, J., & DE MENDOZA, R.S. (2017): Anatomía virtual del cerebro y órganos de los sentidos en Aves: aplicaciones en paleobiología. In: A. VASSALLO, A. MANZANO & V. ABDALA (eds.), Morfología de Vertebrados: Conceptos, métodos y grupos de investigación en Argentina. – Editorial de la Universidad de Mar del Plata (EUEM). ISBN: 978-987-1921-87-4.
- VARGAS, A.O., RUIZ-FLORES, M., SOTO-ACUÑA, S., HAIDR, N., ACOSTA HOSPITALECHE, C., OSSA-FUENTES, L., & MUÑOZ-WALTHER, V. (2017): The origin and evolutionary consequences of skeletal traits shaped by embryonic muscular activity, from basal theropods to modern birds. – Integrative and Comparative Biology. DOI: 10.1093/icb/ix074.
- WORTHY, T.H., DEGRANGE, F.J., HANDLEY, W.D., & LEE, M.S.Y. (2017): The evolution of giant flightless birds and novel phylogenetic relationships for extinct fowl (Aves, Galloanseres). – Royal Society Open Science, 4: 170975. <http://dx.doi.org/10.1098/rsos.170975DOI>.

CONFERENCE ABSTRACTS:

- ACOSTA HOSPITALECHE, C., HAIDR, N., & REGUERO, M. (2017): Un ave limnícola-vadeadora en el Eoceno de la Isla Marambio (Antártida). – X Congreso Latinoamericano de Ciencia Antártica 2017, Punta Arenas, 4 al 7 de octubre de 2017.
- ALMADA, M. & ACOSTA HOSPITALECHE, C. (2017): Un nuevo miembro posterior de pingüino (Aves, Sphenisciformes) del Eoceno superior de Antártida. – 31 Jornadas Argentinas Paleontología de Vertebrados, Mar Chiquita, 3 al 6 de mayo de 2017.
- HAIDR, N., ACOSTA HOSPITALECHE, C., & REGUERO, M. (2017): Un nuevo cráneo de pingüino antártico y sus implicancias acerca de la diversidad de tamaños en el Eoceno de la Isla Marambio. – X Congreso Latinoamericano de Ciencia Antártica 2017, Punta Arenas, 4 al 7 de octubre de 2017.
- IRAZOQUI, F. & ACOSTA HOSPITALECHE, C. (2017): Trazas en huesos de aves del Eoceno de Isla Seymour, Antártida. – 31 Jornadas Argentinas Paleontología de Vertebrados, Mar Chiquita, 3 al 6 de mayo de 2017.
- SALUM, L., ACOSTA HOSPITALECHE, C., & AVILA, L. (2016): Os primeiros registros fossilíferos de Passariformes (Dinosauria: Aves) da Gruta do Urso, Estado do Tocantins, Norte do Brasil. – X Simpósio Brasileiro de Paleontologia de Vertebrados, Rio de Janeiro, 3–7 de octubre de 2016.
- SESTO, F. & ACOSTA HOSPITALECHE, C. (2017): Nuevo registro de Procellariiformes del Mioceno inferior de Patagonia. – 31 Jornadas Argentinas Paleontología de Vertebrados, Mar Chiquita, 3 al 6 de mayo de 2017.
- SOSA, M.A. & ACOSTA HOSPITALECHE, C. (2017): Asignación de restos craneanos de pingüinos del Eoceno de Antártida a partir de una serie ontogenética establecida sobre *Aptenodytes forsteri* (Aves, Sphenisciformes). – 31 Jornadas Argentinas Paleontología de Vertebrados, Mar Chiquita, 3 al 6 de mayo de 2017.
- TORRES, L., GELFO, J., ACOSTA HOSPITALECHE, C. & REGUERO, M. (2017): Nuevos registros de otolitos eocenos de la Formación La Meseta, Isla Marambio (Seymour), Antártida. – X Congreso Latinoamericano de Ciencia Antártica 2017, Punta Arenas, 4 al 7 de octubre de 2017.
- VARGAS, A.O., RUIZ-FLORES, M., SMITH-PAREDES, D., NUÑEZ-LEÓN, D., ACOSTA HOSPITALECHE, C., & HAIDR, N. (2017): The role of embryonic muscular activity in the skeletal evolution of vertebrates. – Meeting of the Society for Integrative and Comparative Biology. New Orleans, January 4–7, 2017.

AUSTRALIA

Dealing with small children has precluded WALTER BOLES from any hands on work with specimens (although it has kept him from fossilizing himself). He reviewed the history of the fossil record of parrots for a recently published book, *Vanished and Vanishing Parrots*, by Forshaw and Knight. Most of his time has been spent compiling a chapter on Australian avian palaeontology for the next volume of *Contributions to the History of Australasian Ornithology*, to be published within the next few months. Maybe next year will see a return to actual specimen work.

JACQUELINE NGUYEN continues her research on fossil passerines in a joint position between the Ornithology and Palaeontology sections at the Australian Museum.

Research on fossil birds is now a key part of Palaeontology at Flinders University, South Australia. ELEN SHUTE is approaching the end of her PhD thesis looking at the Pleistocene avifauna of the Nullarbor Caves. A major outcome of this was a revision of the extinct and large-giant megapodes of Australia, revealing Australia has lost half of its former megapode diversity. We look forward to the work showing faunal changes through time. WARREN HANDLEY has continued his work on endocranial anatomy of galloanseres. The first part of this project is an analysis of endocranial anatomical changes in *Chenonetta finschi* over the period marked by a reduction in relative wing length of the last 20,000 years. This was recently presented at the Conference on Australasian Vertebrate Evolution Palaeontology and Systematics held in Queenstown in New Zealand in the first week of October 2017. ELLEN MATHER has recently joined the team to undertake a PhD on the fossil accipitrids of Australia. Meanwhile, TREVOR WORTHY has finished the analyses of the relationships of giant galloanseres and their relatives, just recently published in *Royal Society Open Science*. Several major insights were made. Firstly, Galloanseres have 4 major equally ranked clades (Galliformes, Anseriformes, Gastornithiformes, and *Vegavis*). *Vegavis* is robustly excluded from Anseriformes, which has major implications for its use in calibrations. Gastornithiformes includes Gastornithidae and Dromornithidae. Within Gastornithidae, major differences between *Gastornis parisiensis* and *G. gigantea*, suggest that their congeneric status needs re-examination. In the preferred Bayesian, tip-dated analyses lithornithids are recovered as sister group to all extant palaeognaths. Lastly WORTHY et al. found that the evidence for *Brontornis* being a galloansere was misinterpreted and this taxon is related to Cariamiformes as long thought.

Further fieldwork looking at late Oligocene in the Namba Formation in the arid zone in northern South Australia has continued to reveal fossil birds including parrots, rails and passerines in addition to the usual shags and ducks. Pliocene deposits have revealed a rich assemblage of fossil trackways of flamingos and small waders.

Flinders University is also involved in the St Bathans project (E. Miocene, NZ): ELLEN MATHER completed her Honours thesis with First Class Honours on the rails. A paper describing these has just been submitted, but points of key interest are that both taxa were small and flightless and show no relationship to modern taxa. With PAUL SCOFIELD and VANESA DE PIETRI, TREVOR WORTHY reviewed the fossil record of birds from New Zealand

revealing that in the last 7 years there has been a 50% increase in the number of described pre-Quaternary fossil bird species (now 45) – with several more already in progress. New Zealand has entered a period of major exploration of its fossil faunas.

Projects on Pacific avifaunas also continue to progress for TREVOR WORTHY. That published on fossil tortoise hunting (see Hawkins et al.) reveals parallels with studies of extinct birds. Ongoing projects include Mangarevan faunas (with Stanislas Rigal and Pat Kirch) and Tongan faunas with David Burley.

BOLES, W.E. (2017): The fossil history of parrots. Pp. 1-12 in Forshaw, J. (author) & Knight, F. (artist), *Vanished and Vanishing Parrots*. CSIRO Publishing, Clayton, Vic.

BOLES, W.E. In press [2017]: A brief history of avian palaeontology in Australia. Pp. [97 pp., pagination to be confirmed] in W. E. Davis Jr, W. E. Boles, and H. F. Recher, eds. *Contributions to the History of Australasian Ornithology*, volume 3. *Memoirs of the Nuttall Ornithological Club No. 22*, Cambridge, Massachusetts.

GRELLET-TINNER, G., SPOONER, N.A., HANDLEY, W.D., & WORTHY, T.H. (2016): The *Genyornis* Egg: Response to Miller et al.'s commentary on Grellet-Tinner et al., 2016. – *Quaternary Science Reviews*, 61: 128–133. doi.org/10.1016/j.quascirev.2016.12.025

HAMM, G., MITCHELL, P., ARNOLD, L.J., PRIDEAUX, G.J., QUESTIAUX, D., SPOONER, N.A., LEVCHENKO, V.A., FOLEY, E.C., WORTHY, T.H., STEPHENSON, B., COULTHARD, V., COULTHARD, C., WILTON, S., JOHNSTON, D. (2016): Cultural innovation and megafauna interaction in the early settlement of arid Australia. – *Nature* 539: 280–283, doi:10.1038/nature20125.

HAWKINS, S., WORTHY, T.H., BEDFORD, S., SPRIGGS, M., CLARK, G., IRWIN, G., BEST, S., & KIRCH, P. (2016): Ancient tortoise hunting in the southwest Pacific. – *Scientific Reports*, 6: 38317, [6 pp & SI], doi:10.1038/srep38317.

MARKI, P.Z., JØNSSON, K.A., IRESTEDT, M., NGUYEN, J.M.T., RAHBEK, C., & FJELDSÅ, J. (2017): Supermatrix phylogeny and biogeography of the Australasian Meliphagidae radiation (Aves: Passeriformes). – *Molecular Phylogenetics and Evolution*, 107: 516–529.

NGUYEN, J.M.T., HAND, S.J. & ARCHER, M. (2016): The late Cenozoic passerine avifauna from Rackham's Roost Site, Riversleigh, Australia. – *Records of the Australian Museum*, 68: 201–230.

SHUTE, E., PRIDEAUX, G., & WORTHY, T.H. (2017): Taxonomic review of the Late Cenozoic megapodes (Galliformes: Megapodiidae) of Australia. – *Royal Society Open Science*, 4: 170233 [72 pp] <http://rsos.royalsocietypublishing.org/content/4/6/170233>

WORTHY, T.H., DE PIETRI, V.L., & SCOFIELD, R.P. (2017): Recent advances in avian palaeobiology in New Zealand with implications for understanding New Zealand's geological, climatic and evolutionary histories. – *New Zealand Journal of Zoology*, 43(3): 177–211.

WORTHY, T.H., DEGRANGE, F.J., HANDLEY, W.D., & LEE, M.S.Y. (2017): The evolution of giant flightless birds

and novel phylogenetic relationships for extinct fowl (Aves, Galloanseres). – Royal Society Open Science, 4: 170975. <http://dx.doi.org/10.1098/rsos.170975DOI>.

WEISLER, M.I., LAMBRIDES, A.B.J., QUINTUS, S., CLARK, J. & WORTHY, T.H. (2016): Colonisation and late period

faunal assemblages from Ofu Island, American Samoa. – Journal of Pacific Archaeology, 7(2): 1–19.

AUSTRIA

URSULA GÖHLICH recently published a catalogue on the fossil bird holdings at the Bavarian State Collection of Paleontology and Geology in Munich (Germany), which gives an overview on collection specimens available, but also including a list of published fossil bird specimens, which got lost during WW II. This fossil bird collection is dominated by Neogene, Paleogene and Quaternary fossils from Southern Germany, but also houses specimens from all over Europe, non-European countries, and the Mesozoic. This published catalogue can be downloaded online (open access) under: http://www.palmuc.de/bspg/index.php?option=com_content&view=article&id=358&Itemid=436#Zitt%2089.

Together with GERALD MAYR, Ursula published the restudy of the holotype specimen of *Petalca austriaca* from the Early Miocene of Austria, which eventually was identified to represent a loon (Gaviiformes). 50 pdf copies of this article can be downloaded for free under <http://www.tandfonline.com/eprint/unenMn6kiy3aGKz26Ucw/full>.

Furthermore, Ursula acted as co-author for several articles dealing with Miocene mammals and birds and was a co-guest editor of a special volume entitled “The Valley of Lakes in Mongolia, a key area of Cenozoic mammal evolution and stratigraphy” published in “Paleobiodiversity and Palaeoenvironment”; all 10 articles of this special volume are of free access. (<https://link.springer.com/journal/12549/97/1/page/1>).

BERNOR, R.L., GÖHLICH, U.B., HARZHAUSER M., & SEMPREBON G. (2017). The Pannonian C Hipparions from the Vienna Basin. – Palaeogeography, Palaeoclimatology, Palaeoecology, 476: 28–41. doi: [10.1016/j.palaeo.2017.03.026](https://doi.org/10.1016/j.palaeo.2017.03.026) 0031-0182

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BULGARIA

ZLATOZAR BOEV is involved in the following projects:

1) Action plan for conservation of Egyptian vulture *Neophron percnopterus* in Bulgaria”, Bulgarian society for the protection of birds (2009-2018); 2) Urgent measures to secure survival of the Egyptian vulture

(*Neophron percnopterus*) in Bulgaria and Greece. LIFE10/NAT/BG/000152, Programme LIFE+ of the European Commission (2013–2014); 3) Zooarchaeological study of the ‘Forum Serdica’ based on the remains of vertebrates from the center of Sofia

(4–19 BC) (2015–2018); 4) The Aurochs (*Bos primigenius* Bojanos, 1827) (Artiodactyla, Mammalia) in the Nature and Culture of Bulgaria; 5) 'Thracians — Genesis and Ethnic Development, Cultural Identities, Civilization Interactions and Heritage of Antiquity' — Study of animal osteological materials (wild and domestic) from Neolithic to Late Middle Ages in order to search for continuity; 6) Late Pleistocene avifauna of the Pešturina Cave (Nišava District, SE Serbia); 7) History of the National Museum of Natural History at the Bulgarian Academy of Sciences. 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".

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BOEV, Z. (2016) Peafowl, ostriches, hornbills. - Spisanie Osem, 12: 60–66.

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CHINA

MIN WANG is continuing his research about Mesozoic birds. He and his colleagues recently reported an enantiornithine bird, *Cruralispennia multidonta*, from the lowest fossil-bearing horizon in the Jehol Biota, approximately 131 million years ago. *C. multidonta*, although as one of the oldest records of the Enantiornithes, preserves many derived characters and was recovered in a relatively derived position within the Enantiornithes in their phylogenetic study. They time scaled the Mesozoic avian tree and the result showed that the divergences of the avian lineages basal to the Ornithothoraces were pushed back more than one million years. *C. multidonta* has a plough-shaped pygostyle as in Ornithuromorpha, but does not have fan-shaped rectrices, suggesting that the tail fanning and plough-shaped pygostyle are evolutionarily decoupled, contrary to previous studies. ZHONGHE ZHOU and Min presented a synthesis on the evolution of birds with information from recent fossil discoveries, highlighting issues about the taxonomy of Mesozoic birds, origin of avian flight and respiratory system of Mesozoic birds. Min and Han Hu offered a review about the evolution of jugal and quadratojugal in early birds and their dinosaurian relatives in the special issue "Understanding the Zygora: a key morphological partition in the craniofacial skeleton evolution" in the Anatomical

Record.

HAN HU has finished her PhD and is going to continue her research in Yunnan University. She and JINGMAI O'CONNOR described a new enantiornithine bird, *Monoenantiornis sihedangia*, from an ornithuromorph-dominated locality in the Jehol Biota, northeastern China. *M. sihedangia* holotype preserves free intermedium. They discussed the degree of fusion in five key compound bones and the sterna in enantiornithines on basis of varying ontogenetic stages of this avian clade, and provided a preliminary hypothesis for the sequence in which compound bones form in Early Cretaceous enantiornithines. Han and her colleagues described a well-preserved skull of a juvenile specimen of *Sapeornis*, and discussed the dentition for basal avian taxon. They reconstructed the dentition for *Sapeornis* based on a study of 71 specimens, and suggested the true dental formula to be 4-3-2 (premaxilla-maxillary-dentary teeth count).

THOMAS STIDHAM is actively working on Cenozoic birds from around the world. He and NIKITA ZELENKOV continue their collaboration on Neogene waterfowl. ZHIHENG LI and Tom are working on a wide variety of Chinese fossil birds, including their systematics, biogeography, and paleobiology, and received a Chinese NSF grant to help fund some of that research. Tom was

one of a group of international collaborators conducting a wildlife survey on the Tibetan Plateau in July, and managed to see many endemic and rare birds, but no snow leopards. He hopes to see one on next year's survey.

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FRANCE

DELPHINE ANGST is continuing to work on large fossil flightless birds with a multidisciplinary approach. She has recently finished two years of postdoc with ANUSUYA CHINSAMY in the laboratory of Biology at the University of Cape Town, where she learned bone histology. She is currently in a temporary teaching and researcher position for one year close to Paris, at the Université Versailles Saint-Quentin for the teaching and at the Laboratoire des Sciences du Climat et de l'Environnement in Saclay for the research part.

During the last year she worked on several projects on fossil large terrestrial birds, using multidisciplinary approaches, with several collaborators. She recently published on the first bone histology of the dodo in *Scientific Reports* with Anusuya Chinsamy, Julian Hume and Lorna Steel. This work provided important new information on the ecology of this enigmatic bird, and had quite a lot of media impact. She also published with Eric Buffetaut, Carmelo Corral and Xavier Pereda-Suberbiola on the description of the first pelvis of *Gargantuavis* found in Spain (Laño) which increased the geographical separation of this Late Cretaceous bird. Delphine has also been involved in the recent published work led by Romain Amiot on the isotopic fractionation of oxygen between bird bone phosphate and drinking water, which will allow us to estimate the palaeotemperature more accurately using bird bones. Finally, Delphine published with Eric Buffetaut a book entitled *Paleobiology of Giant Flightless Birds* published by ISTE and Elsevier. This book proposes a review of the knowledge about the ecology of the Dinornithiformes, the Aepyornithiformes, the Dromornithidae, the Phorusrhacidae, the Brontornithidae, the Gastornithidae and *Gargantuavis*. A French version of this book is in progress.

Other studies on modern and fossil large ground birds are in progress. Delphine's 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. 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 and submitted to *Journal of Anatomy* 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. Finally, Delphine began a new study of the poorly known taxon *Gastornis russelli*, from the Paleocene of France, with interesting implications about ontogenetic changes in *Gastornis*.

ESTELLE BOURDON is presently working on the paleontological collections at the Paris Museum (MNHN). She is finishing various projects from her previous postdocs. She is currently involved in the study of new Eocene vertebrate faunas from Morocco.

ERIC BUFFETAUT's revision of Ameghino's *Callornis giganteus* and *Liornis floweri* has now appeared in *Palaeovertebrata*. His description of a brontornithid specimen from the Oligocene of Bolivia is in press at the *Revista del Museo argentino de Ciencias naturales* (proceedings of the SAPE meeting in Diamante).

Eric's work on Cretaceous birds is going on, with the study (with Delphine Angst) of the new *Gargantuavis* femur from Cruzy (which strongly suggests that *Gargantuavis* is a basal ornithurine, as shown at the meeting of the European Association of Vertebrate Palaeontologists in Munich) and the description of the beautifully preserved enantiornithine from the Late Cretaceous of Henan (China), which, following a work session with Jingmai O'Connor in Beijing, should finally

be ready soon.

Eric has recently joined forces with GERALD MAYR to study various avian fossils from the Paleocene Menat locality in central France. Some of them have been briefly mentioned in the past, one has turned up unexpectedly at the Natural History Museum in Marseille, and others have been collected recently. Although the preservation of the bones is often rather poor, they appear to be the oldest known articulated Tertiary bird specimens and some show exceptional soft tissue preservation.

Eric has been invited by Marcelo Sánchez (Paläontologisches Institut und Museum, Universität Zürich) to study remains of large birds from the Santa Cruz Formation of Patagonia, which are part of a large, but hitherto largely forgotten collection of Santa Cruz vertebrate fossils acquired in the late 19th century by the Swiss engineer Theodor Allemann. Several taxa appear to be represented.

Eric has also been involved in research of a more historical nature on the «elephant birds» from Madagascar. This includes a paper trying to assess the reliability of Flacourt's famous report on the *Vouron patra* (and reaching the conclusion that the survival of Aepyornithiformes until the mid-seventeenth century is indeed plausible), to be published in the proceedings of the *As Aves na História Natural, na Pré-História e na História* meeting, held in Lisbon in 2015 and to be published soon. Also about elephant birds, Eric has published a paper on the *Aepyornis* egg models, complete with embryo, produced in the 1860s by Louis Auzoux, a French physician specializing in the production of anatomical models. Although based on enlarged hen's eggs, they are the first attempts to produce life-size models of eggs and embryos of fossil amniotes.

ANTOINE LOUCHART moved during 2017 from the team «Paleo-genomics» and the National Platform of Paleogenetics (Palgene) to the Geology Laboratory (Université Lyon 1 and Ecole Normale Supérieure de Lyon). In this new affiliation, he finished, in collaboration with colleagues in paleogenetics, one of several studies on ancient DNA of extinct island birds, the publication of which is soon to be submitted. Works on teeth were achieved, including the description of a tooth from the early Cretaceous of France, assigned to the Archaeopterygidae. Work on pseudoteeth is submitted. In parallel, a collaboration on the late Miocene birds of Abu Dhabi (in collaboration with John Stewart and Faysal Bibi) is ready for submission for a special volume (monograph). A contribution on birds from the Siwaliks is in a final phase, and will be part of a monograph. Antoine supervised research internship by paleontology student Ségolène Riamon, on early Miocene birds from Uganda, which revealed a number of early records for interesting taxa in this poorly known period and region; two articles are planned based on this work. Other projects are continuing as well, including on various localities of France and Africa, and studies on insular birds.

CÉCILE MOURER-CHAUVIRÉ is going to put an end to her research activity at the University Claude Bernard, Lyon-1. She will deeply miss her friendly relationships with the other avian palaeontologists. During the last year she has worked on several papers which are not issued yet. Among these is the study of the Early Pleistocene birds from Ceyssegues, with the description of a new species of eagle dedicated to her late colleague and friend, Claude Guérin. The only papers issued are those concerning the Middle Pleistocene birds from the

Grotte des Rhinocéros, at Casablanca, Morocco. The avifauna includes a complete humerus of *Phoebastria albatrus*, the short-tailed albatross, which at the present time only breeds on Torishima and Minami-kojima Islands, south-east of Japan. A form related to this albatross has already been reported from the Late Pliocene of Ahl-al-Oughlam, in Morocco. The occurrence of *P. albatrus* confirms that this species was still present in the North Atlantic during the Middle Pleistocene. Cécile's new e-mail address is: cecile.mourer@gmail.com

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GERMANY

GERALD MAYR, in collaboration with PAUL SCOFIELD, VANESA DE PIETRI, and ALAN TENNYSON, spent much of 2017 in the studying penguins from the Paleocene of New Zealand. The description of a very large species has already been published and that of two others is pending. In addition, Gerald wrote a chapter on birds in a forthcoming book on the Messel fossil site.

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HUNGARY

Although EUGEN (JENŐ) KESSLER announced last year that he would stop working, he has continued with his

research activities. A paper on the evolution of the water bird fauna of the Carpathian Basin has been published,

another on the evolution and osteology of European owls and bone disease will be published this year. He also published an educational book in Hungarian.

KESSLER, E. (J.) (2017): Water bird fauna in the Carpathian Basin from the beginnings through historical times. – *Ornis Hungarica*, 25(1): 70–100.

ITALY

In the last year, Marco Pavia continued the study of birds from African sites, in particular Buia (Eritrea), Langebaanweg, and Kromdraai B (South Africa). The analysis of the fossil birds coming from the new excavations at Kromdraai B, the type-locality of the Early Pleistocene *Paranthropus* in the Cradle of Humankind (Gauteng), is still ongoing and all the material already excavated is now checked and it will be published in the next months. The study of Italian fossil birds is still going on, now focusing on some Late Miocene remains. He is still busy with the organizing the fossil and recent skeleton collections at the Torino University and in local projects on extant birds, including the collaboration with Gary Woelker (Texas A&M University) about the evolution of European bird species, their relationships with Africa, also inferred by the study of blood parasites. At the end of September he will be busy with the organization of the XIX Italian ornithological Congress, which will be in Torino.

MEIJER, H.J.M., PAVIA, M., MADURELL-MALAPEIRA, J., & ALBA, D.M. (2017): A revision of fossil eagle owls (Aves: Strigiformes: *Bubo*) from Europe and the description of a new species, *Bubo ibericus*, from Cal Guardiola (NE Iberian Peninsula). – *Historical Biology*, 29 (6): 822–832. <http://dx.doi.org/10.1080/08912963.2016.1247836>.

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mollusks and vertebrates from Moncucco Torinese, north-western Italy. – *Paleoecological and paleoclimatological implications*. *Palaeontologia Electronica*, 20.1.10A: 1–66.

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PAVIA, M., MANEGOLD, A., & HAARHOFF, P. (2015): New early Pliocene owls from Langebaanweg, South Africa, with first evidence of *Athene* south of the Sahara and a new species of *Tyto*. – *Acta Palaeontologica Polonica*, 60 (4): 815–828.

BOANO, G., VINALS, N., DURANTE, A., & PAVIA, M. (2015): Apparent sympatry of *Stiphornis pyrrholaemus* Schmidt & Angehr, 2008 and *S. xanthogaster* Sharpe, 1903 (Passeriformes: Muscicapidae) in Gabon, and taxonomic implications. – *Zootaxa*, 4032 (1): 127–133.

GHINASSI, M., OMS, O., PAPINI, M., SCARCIGLIA, F., CARNEVALE, G., SANI, F., ROOK, L., DELFINO, M., PAVIA, M., LIBSEKAL, Y., BONDIOLI, L., COPPA, A., FRAYER, D.W., & MACCHIARELLI, R. (2015): An integrated study of the *Homo*-bearing Aalat stratigraphic section (Eritrea): An expanded continental record at the Early-Middle Pleistocene transition. – *Journal of African Earth Science*, 112: 163–185.

JAPAN

JUNYA WATANABE has been working on the Pleistocene birds from Shiriya, northeast Japan, with his colleagues. The assemblage includes more than 1000 avian bones, representing at least 37 non-passeriform species (including Phasianidae, Anatidae, Podicipedidae, Gaviidae, Hydrobatidae, Diomedidae, Procellariidae, Phalacrocoracidae, Scolopacidae, Laridae, Alcidae, Apodidae, Columbidae, and Accipitridae). After visiting a few American museums for identification, he is currently

preparing manuscripts on the paleoavifauna. Also, he began to work on several avian fossils from Pleistocene deposits near Tokyo, which includes a few species in common with the Shiriya localities.

WATANABE, J. (2017): Quantitative discrimination of flight ability in fossil Anatidae from skeletal proportions. – *The Auk* 134: 672–695.

NEW ZEALAND

PAUL SCOFIELD and VANESA DE PIETRI at Canterbury Museum in Christchurch have been working on Palaeogene Penguins, Cenozoic Charadriiformes, and the phylogenetic relationships of Holocene sub-fossil

taxa. Vanesa has continued her collaboration with NIKITA ZELENKOV publishing on late Miocene rails from southwestern Russia. In a recent publication in the *New Zealand Journal of Zoology* published with TREVOR

WORTHY, Paul and Vanesa summarised the last 10 years of research into New Zealand. Since 2010, there has been a 50% increase in the number of described fossil bird species (now 45) for the pre-Quaternary. We concluded that “only about half the known taxa in the St Bathans Fauna have been described and work addressing the remaining taxa is ongoing, and multiple new species are likely to be described in the next 5 years. This new fossil diversity is not restricted to the early Miocene—ongoing work will lead to the description of several new Paleogene taxa in the near future and many Pliocene taxa await description as well. Truly, this is an age of discovery for the fossil record of birds in New Zealand.”

Last November, Vanesa, together with Paul and Gerald Mayr, received a three-year research grant to work on the ecological and taxonomic diversity of shorebirds (Charadriiformes) since the Eocene. This project also includes several collaborators across the globe, such as Nikita Zelenkov in Russia and Trevor Worthy in Australia. As a result, Paul and Vanesa have recently returned from a five week study trip to Europe funded by the New Zealand Royal Society’s Marsden Fund and the ongoing results of this trip will be published over the next couple of years.

JACOB BLOKLAND has just completed a master thesis at the University of Canterbury supervised by PAUL SCOFIELD on early Sphenisciformes from the Paleocene of the Chatham Islands, 700km east of Christchurch.

ALAN TENNYSON (Vertebrate Curator, Museum of New Zealand Te Papa Tongarewa, Wellington) has continued annual fieldwork at the St Bathans Miocene fossil site with colleagues Paul Scofield, Vanesa De Pietri, Trevor Worthy and others. His collaborations with an Otago University genetics team and Te Papa colleague LARA SHEPHERD continue, with a focus on seabirds, and he has carried out several live petrel population surveys on offshore islands. He continues to chair the Birds New Zealand taxonomic committee and is also heavily involved with the redevelopment of the natural history galleries at Te Papa.

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.

DE PIETRI, V.L., SCOFIELD, R.P., TENNYSON, A.J.D., HAND, S.J., & WORTHY, T.H. (IN PRESS): The diversity of early Miocene pigeons (Columbidae) in New Zealand. – *Contribuciones Científicas del Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”*.

GROSSER, S., SCOFIELD, R.P., & WATERS, J.M. (2017): Multivariate skeletal analyses support a taxonomic distinction between New Zealand and Australian *Eudyptula* penguins (Sphenisciformes: Spheniscidae). – *Emu-Austral Ornithology*, 117: 276–283.

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- JADWISZCZAK P. & ROTHSCCHILD, B.M. (2017): The first evidence of an infectious disease in early penguins. – *Historical Biology* (in press).
- JADWISZCZAK, P. & MÖRS, T. (2017): An enigmatic fossil penguin from the Eocene of Antarctica. – *Polar Research*, 36(1): 1291086.
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RUSSIA

- KOVALCHUK, O.M., GOROBETS, L.V., SYROMYATNIKOVA E.V., DANILOV, I.G., TITOV, V.V., KRAKHMALNAYA, T.V., REKOVETS, L.I. & ZELENKOV, N.V. (2017): Vertebrates from the Pontian of the Shkodova Gora locality (Northwestern Black Sea region, Upper Miocene). – *Paleontological Journal*, 51 (4): 414–429.
- STIDHAM, T.A. & ZELENKOV, N.V. (2016): North American–Asian aquatic bird dispersal in the Miocene: evidence from a new species of diving duck (Anseriformes: Anatidae) from North America (Nevada) with affinities to Mongolian taxa – *Alcheringa*, 41: 222–320.
- ZELENKOV, N.V. (2016): Evolution of bird communities in the Neogene of Central Asia, with a review of the Neogene fossil record of Asian birds – *Paleontological Journal*, 50(12): 1421–1433.
- ZELENKOV, N.V. (2016): The first fossil parrot (Aves, Psittaciformes) from Siberia and its implications for the historical biogeography of Psittaciformes. – *Biology Letters*, 12: 20160717.
- ZELENKOV, N.V. (2017): Revision of non-passeriform birds from Polgárdi (Hungary, Late Miocene). 3. Neoaves. – *Paleontological Journal*, 51(2): 203-213.
- ZELENKOV, N.V. (2017): Early Cretaceous enantiornithine birds (Aves, Ornithothoraces) and establishment of the Ornithuromorpha morphological type. – *Paleontological Journal*, 51(6): 628–642.
- ZELENKOV, N.V. (2017): Finds of fragmentary bird skeletons in the middle Miocene of the Northern Caucasus – *Doklady Biological Sciences*, 477(3).
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SWEDEN

PER ERICSON continues to work on the systematics of birds using primarily molecular data. He is employing genomic methods for phylogenetic reconstructions and phylogeography, but also for studying the genetic foundations for physiological and morphological adaptations. Most recently he has begun to study these aspects in the bowerbird family (Ptilonorhynchidae). Due to administrative duties the last several years his work must be conducted at a slower pace than preferred, however.

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THE NETHERLANDS

SANDER GUSSEKLOO recently published a paper in the journal *Evolution* on the cranial morphology and fenestration at the basal bifurcation in modern birds:

I.R. & DUMONT, E.R. (2017): Functional and evolutionary consequences of cranial fenestration in birds. – *Evolution*, 71(5): 1327–1338.

GUSSEKLOO, S.W., BERTHAUME, M.A., PULASKI, D.R., WESTBROEK, I., WAARSING, J.H., HEINEN, R., GROSSE,

UNITED KINGDOM

In February/March 2017, JULIAN PENDER HUME travelled to King Island and Kangaroo Island to continue work on the extinct dwarf emus. Fossil material and egg shell were discovered on both islands, which will help resolve some of the outstanding ecological issues of these recently extinct birds. In May, he visited Rodrigues Island where multiple nesting sites of the extinct giant saddleback tortoise *Cylindraspis vosmaeri* were discovered by a local when digging a septic pit. This is the first record for the Mascarenes, and a preliminary excavation revealed egg clutches, new born tortoises and remains of Rodrigues Rail *Erythromachus leguati*, a reported predator of tortoise eggs and young. An excavation of the site is planned for October 2017. In July, he participated in a National Geographic funded trip to Mauritius to try and relocate the fossil sites reported by Etienne Thirioux in the late 19th/early 20th centuries. Thirioux collected 100s of fossil bird specimens, including the most complete dodo in the world, but failed to disclose exactly where he was collecting. The trip was successful and a Nat. Geo. report will appear soon. A 1980s collection of Aldabara Atoll Pleistocene fossil material has now been worked up with the first paper in review. Results have proved to be most interesting in terms of sea level changes and repeated colonisation events. JPH also continues his work on the historical aspect of bird extinctions, with a paper on Laysan Rail *Zapornia palmeri*, extinct 1944, just published (see below), and another on the Pink-headed Duck *Rhodonessa caryophyllacea*, extinct 1948, in review. This information came too late for inclusion in the recently published (August 2017) 2nd edition of *Extinct Birds*, which is available at Amazon, many bookshops or direct from Bloomsbury Publishing.

DANIEL FIELD received his PhD from Yale in 2016, and is now a tenure-track Research Fellow in the Milner Centre for Evolution at the University of Bath. He welcomed his first two PhD students in October 2017: Juan Benito Moreno, and Albert Chen. Daniel continues to focus primarily on avian macroevolution, with specific interests in the earliest stages of the crown bird radiation, and the fate of birds across the K-Pg boundary. Outside of research, he is an avid birder and wildlife photographer.

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FIELD, D.J. (2017): Big-time insights from a tiny bird fossil (Commentary). *Proceedings of the National Academy of Sciences*, 114(30): 7750–7752. doi:10.1073/pnas.1710941114.

FIELD, D.J. (In Press): Preliminary paleoecological insights from the Pliocene avifauna of Kanapoi, Kenya: implications for the ecology of

Australopithecus anamensis. – Journal of Human Evolution.

FIELD, D.J., BOESSENECKER, R., RACICOT, R., ÁSBJÖRNSDÓTTIR, L., JÓNASSON, K., HSIANG, A.Y., BEHLKE, A.D., & VINTHER, J. (2017): The oldest marine vertebrate fossil from the volcanic island of Iceland: A partial right whale skull from the high latitude Pliocene Tjörnes Formation. – Palaeontology. doi:10.1111/pala.12275

HUME, J.P. (2017): Extinct Birds, 2nd edition. – London: Helm. 608 pp.

HUME, J.P. (2017): Undescribed juvenile plumage of the Laysan Rail or Crake *Zapornia palmeri* (Frohawk, 1892) and a detailed chronology of its extinction. – Wilson Journal of Ornithology, 129(3): 429–446.

HUME, J.P. & TAYLOR, C. (2017): A gift from Mauritius: William Curtis, George Clark and the Dodo. – Journal of the History of Collections, doi:10.1093/jhc/fhw033

NOWAK-KEMP, M. & HUME, J.P. (2017): The Oxford Dodo. Part 1: the museum history of the Tradescant dodo:

ownership, displays and audience. – Historical Biology, 29(2): 234–247. DOI: 10.1080/08912963.2016.1152471

NOWAK-KEMP, M. & HUME, J.P. (2017): The Oxford Dodo. Part 2: from curiosity to icon and its role in displays, education and research. – Historical Biology, 29(3): 296–307. DOI: 10.1080/08912963.2016.1155211

WINTERS, R., HUME, J.P., & LEENSTRA, M. (2017): A famine in Surat and dodos on Mauritius: a long lost manuscript rediscovered. – Archives of Natural History, 44(1): 134–150.

WOOD, J. R., ALCOVER, J.A., BLACKBURN, T.M., BOVER, P., DUNCAN, R.P., HUME, J.P., LOUYS, J., MEIJER, H.J. M., RANDO, J.C., & WILMHURST, J.M. (2017): Island extinctions: patterns, processes, and potential for ecosystem restoration. – Environmental Conservation. <https://doi.org/10.1017/S037689291700039X>

USA

Connecticut

DANIEL KSEPKA continues to enjoy his tenure at the Bruce Museum and also migrates annually through the collections American Museum of Natural History, Field Museum, and Smithsonian Institution where he holds Research Associate positions. He divides his research time equally between his favorite group of birds, penguins, and the rest of the avian tree of life. Currently, Ksepka serves as co-PI on two NSF projects, “Collaborative Research: Advancing Bayesian Phylogenetic Methods for Synthesizing Paleontological and Neontological Data” and “All Birds: A Time-scaled

Avian Tree from Integrated Phylogenomic and Fossil Data”. His most important research project, however, is studying the ontogeny of his new son Michael.

KSEPKA, D.T., STIDHAM, T.A., & WILLIAMSON, T.E. (2017): Early Paleocene landbird supports rapid phylogenetic and morphological diversification of crown birds after the K–Pg mass extinction. – Proceedings of the National Academy of Sciences, 114: 8047–8052.

California

After 40+ years at the Natural History Museum of Los Angeles County, former President of SAPE KEN CAMPBELL has retired. He will continue to work on some remaining projects over the next year at LACM, especially with the teratorns and woodpeckers (with Zbigniew Bocheński) from Rancho La Brea. He has been deeply involved in research on the geological history of the Amazon Basin, which has taken much time away from his work with fossil birds. He also intends to get back to the functional morphology of birds once the current projects’ research is completed. He expresses his regret at not being able to attend the last meeting of SAPE in Argentina, a result of time conflicts.

DAN LEWIS has a new book coming out in April from Yale; about a quarter of it relates to avian paleontology in Hawaii – in particular to Ptaiochen pau, the Stumbling Moa-Nalo. Storrs Olson and Helen James figure prominently in the chapter, which is essentially a story about the effects of native Hawaiians on prehistoric avifauna. Here’s a link to the forthcoming book (the cover art isn’t yet done, but should be soon): <http://yalebooks.yale.edu/book/9780300229646/belonging-island>

LUIS CHIAPPE (Dinosaur Institute, Natural History Museum of Los Angeles County, NHMLA) continues to collaborate with FRANCISCO “KIKO” SERRANO (Universidad de Malaga/Dinosaur Institute, NHMLA) and ALYSSA BELL (Dinosaur Institute, NHMLA) (see below). His ongoing collaboration with many Chinese colleagues (particularly, Liu Di and Meng Qinjing from the Beijing Natural History Museum) continues to be

focused on the diverse avifauna from the Jehol Biota. Recently, he has also started to collaborate with LIDA XING (China University of Geosciences) on spectacular avian inclusions in Myanmar amber. Additionally, he and SARA BERTELLI (CONICET, Argentina) received funding for a project focused on the K-P avifaunal turnover in northwestern Argentina. Luis is supervising two graduate students (NATE CARROLL and BECKY WU, both USC/NHMLA), who are working on evo-devo projects related to early feathers and avian teeth, respectively.

FRANCISCO “KIKO” SERRANO and LUIS CHIAPPE continue their research on the aerodynamic properties of Early Cretaceous birds, which has been focused on the stem pygostylian *Sapeornis*, as well as several enantiornithines (*Junornis*, *Concornis*, *Eoalulavis*, *Bohaiornithidae*). In addition, Kiko and Luis are collaborating with WANG MIN (IVPP, Beijing) exploring the evolution of aerial strategies among Pengornithidae (Enantiornithes).

ALYSSA BELL has been working on several research projects including quantitative methods to identify modern birds that can most accurately be used as analogs for hesperornithiforms (accepted for publication in Palaeogeography, Palaeoclimatology, and Palaeoecology). She is also continuing her work in descriptive morphology of the hesperornithiforms *Parahesperornis* and *Fumicollis*, the latter through work with a student in Kansas.

MAUREEN WALSH (Dinosaur Institute, NHMLA) traveled twice to Beijing to prepare avian fossils from

the Jehol Biota. She continues to develop her skills and familiarity with these fossils and their preservation, as well as the ability to identify forgeries. She is also learning about histological techniques.

SANZ, J.L., CHAMERO, B., CHIAPPE, L.M., MARUGÁN-LOBÓN, J., O'CONNOR, J., ORTEGA, F., & ESCASO, F. (2016): Aves. In POYATO-ARIZA, F.J. & BUSCALIONI, A. D. (eds.), *Las Hoyas: A Cretaceous Wetland*, pp. 183–189. – Verlag Dr. Friedrich Pfeil, Munich.

SERRANO, F.J., PALMQVIST, P., CHIAPPE, L.M., & SANZ, J.L. (2017): Inferring flight parameters of extinct Mesozoic birds through multivariate analyses of forelimb skeletal elements in their living relatives. – *Paleobiology*, 43: 144–169.

Florida

DAVE STEADMAN and his students continue to do field projects involving Miocene sites in Florida, and Quaternary sites in The Bahamas and the Dominican Republic. Here are publications from 2015–2017, in order to catch up from not responding to the last couple of years of SAPE Newsletters.

SOTO-CENTENO, J.A. & STEADMAN, D.W. (2015): Fossils reject climate change as the cause of extinction of Caribbean bats. *Nature Scientific Reports* | 5: 7971 | DOI: [10.1038/srep07971](https://doi.org/10.1038/srep07971)

STEADMAN, D.W. & FRANKLIN, J. (2015): Changes in a West Indian bird community since the late Pleistocene. *Journal of Biogeography* 42:426–438. DOI: [10.1111/jbi.12418](https://doi.org/10.1111/jbi.12418)

STEADMAN, D.W., OSWALD, J.A., & RINCÓN, A.D. (2015): The diversity and biogeography of late Pleistocene birds from the lowland Neotropics. – *Quaternary Research*, 83: 555–564. doi.org/10.1016/j.yqres.2015.02.001

FRANKLIN, J., FREID, E.H., RIPPLINGER, J., MARCANO-VEGA, H., & STEADMAN, D.W. (2015): Regional variation in Caribbean dry forest tree species composition. – *Plant Ecology*, 216:8 73–886. DOI: [10.1007/s11258-015-0474-8](https://doi.org/10.1007/s11258-015-0474-8)

STEADMAN, D.W. & HASTORF, C.A. (2015): Prehistoric birds from the Lake Titicaca region, Bolivia: long-term continuity and change in an Andean bird community. – *Wilson Journal of Ornithology*, 127: 359–375. doi.org/10.1676/14-127.1

OSWALD, J.A. & STEADMAN, D.W. (2015): The changing diversity and distribution of Neotropical songbirds

Idaho

KARI PRASSACK continues her role as park paleontologist and curator at Hagerman Fossil Beds National Monument in Idaho, USA. In 2016, she established the Hagerman Paleontology, Environments, and Tephrochronology (PET) Project with a current focus on developing a tephrostratigraphic framework from which to more accurately map Hagerman's fossil localities across time and space. One of her hopes with this project is to begin work on the landscape paleoecology of Hagerman's birds similar to what she has done at Olduvai Gorge in Tanzania. Kari continues her work on the Olduvai birds and is currently affiliated with the Olduvai Geochronology and Archaeology Project. She has a paper coming out later this year that presents the first published data on birds from Olduvai's Middle Bed II deposits. Kari continues her focus on Hagerman's Carnivora as well, which has resulted in the description of a new species of otter (Prassack,

XING, L., O'CONNOR, J.K., MCKELLAR, R.C., CHIAPPE, L.M., TSENG, K., LI, G., & BAI, M. (2017): Mid-Cretaceous juvenile enantiornithine preserved in Burmese amber. – *Gondwana Research*, 49: 264–277.

SERRANO, F.J. & CHIAPPE, L.M. (2017): Aerodynamic modeling of a Cretaceous bird reveals thermal soaring capabilities during early avian evolution. – *Journal of the Royal Society Interface*, 14: 20170182. <http://dx.doi.org/10.1098/rsif.2017.0182>

LIU, D., CHIAPPE, L.M., HABIB, M., SERRANO, F.J., ZHANG, Y., & MENG, Q. (2017): Flight Aerodynamics in Enantiornithines: Information from a New Chinese Early Cretaceous Bird. – *PLoS ONE*, 12(10): e0184637.

since the last ice age. – *The Auk*, 132: 836–862. doi.org/10.1642/AUK-15-74.1

OSWALD, J.A., BURLEIGH, J.G., STEADMAN, D.W., ROBINSON, S.K., & KRATTER, A.W. (2015): Historical climatic variability and geographic barriers as drivers of community composition in the biodiversity hotspot. – *Journal of Biogeography*, 43(1): 123–133. DOI: [10.1111/jbi.12605](https://doi.org/10.1111/jbi.12605)

KRYSKO, K.L., NUÑEZ, L., STEADMAN, D.W. & LEE, D.S. (2015): Molecular phylogeny of Caribbean dipsadid (Xenodontinae: Alsophiini) snakes, including the first record from the Cay Sal Bank, The Bahamas. – *Zootaxa*, 4028: 441–450. doi.org/10.11646/zootaxa.4028.3.9

STEADMAN, D.W., ALBURY, N.A., KAKUK, B., MEAD, J.I., SOTO-CENTENO, J.A., SINGLETON, H.M., & FRANKLIN, J. (2015): The vertebrate community on an ice-age Caribbean island. – *Proceedings of the National Academy of Sciences, USA*, 112(44): E5963–E5971 [doi/10.1073/pnas.1516490112](https://doi.org/10.1073/pnas.1516490112)

TAKANO, O.M. & STEADMAN, D.W. (2015): A new species of woodcock (Aves: Scolopacidae: *Scolopax*) from Hispaniola, West Indies. – *Zootaxa*, 4032 (1):117–126. doi.org/10.11646/zootaxa.4032.1.6

WHITING, E.T., STEADMAN, D.W. & KRIGBAUM, J. (2016): Paleocology of Miocene crocodylians in Florida: insights from stable isotope analysis. – *Palaeogeography, Palaeoecology, Palaeoclimatology*, 451: 23–34. doi.org/10.1016/j.palaeo.2016.03.009

2016 in JVP) and the current description of an unusual canid that may have eaten a bird or two in life. She is involved in another canid-related project, but since this is SAPE, she will leave it at that!

PRASSACK, K.A., PANTE, M.C., NJAU, J.K., & DE LA TORRE, I. (in press): The paleoecology of Pleistocene birds from Middle Bed II, at Olduvai Gorge, Tanzania, and the environmental context of the Oldowan-Acheulean transition. – *Journal of Human Evolution*.

PRASSACK, K.A., WALKUP, L.C., HART, W.K., & WAN, W. (2017): Getting our ducks (and otters, beavers, and peccaries) in a row: new research by the Hagerman Paleontology, Environments and Tephrochronology (PET) Project at Hagerman Fossil Beds National Monument, Idaho. – Abstracts of the 2017 GSA Annual Meeting, Seattle, WA, USA.

South Carolina

ADAM SMITH continues as Curator of Clemson University's Campbell Geology Museum in Clemson, South Carolina. He has been working on an exhibit on Giant Flightless Birds, describing material from the

Eocene of Egypt and North America, and describing new material representing a giant pelagornithid from South Carolina.