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To commemorate the 30th anniversary of the publication of the first part of **Pierce Brodkorb's Catalogue of Fossil Birds** in June 1963, the Society of Avian Paleontology and Evolution has published a 78 pages index to the complete work, which was issued in 5 parts from 1963 to 1978 in the Bulletin of the Florida State Museum.

In order to make the **Index** more readily available to workers who may have difficulties with currency exchange, one copy will be supplied gratis to any member of SAPE who requests it. Those who can, however, are asked to make a contribution to SAPE to defray printing costs. Copies are available for purchase at US \$ 10.00, or the equivalent, postage included.

The **Index to Brodkorb's Catalogue of Fossil Birds** may be ordered from:

David W. STEADMAN, New York State Museum, 3140 Cultural Education Center, Albany, NY 12230 (check or money order made to SAPE in US dollars only),

or Cécile MOURER-CHAUVIRE, Dept des Sciences de la Terre, Univ. Claude-Bernard Lyon 1, 27-43 Bd. du 11 novembre, 69622 Villeurbanne Cedex, France (bank notes in major European currencies preferred).

News from the members

ARGENTINA

Claudia TAMBUSI and Jorge NORIEGA are continuing their work mainly on Cenozoic birds from Argentina, South America. A general review of the southern South America record of fossil birds and an analysis of quantitative evolution of the Late Cenozoic bird communities of the Buenos Aires Province (Argentina) have been done. The first one will be published in the Revista Geologica de Chile and the latter was published in *Palaeo-3*.

Another recent work is based on the discovery of a presbyornithid-like bird from the Late Cretaceous (Maastrichtian) of Cape Lamb, Vega Island, Western Antarctica. It seems to reinforce the hypothesis of the southern hemisphere origin of the Anatidae, and perhaps of the entire order Anseriformes.

Jorge NORIEGA described a giant Miocene aninga, *Macranhinga paranensis*, from the "Mesopotamian" (Ituzaingo Formation) of Argentina. The paper was published in the Revista del Museo de La Plata.

NORIEGA, J.I. (1992) - Un nuevo genero de Anhingidae (Aves: Pelecaniformes) de la Formacion Ituzaingo (Mioceno superior) de Argentina. *Notas del Museo de La Plata XXI, Paleontologia*, 109, p. 217-223.

TAMBUSI, C.P., NORIEGA, J.I., and TONNI, E.P. (1993) - Late Cenozoic birds of Buenos Aires Province (Argentina): an attempt to document quantitative faunal changes. *Palaeogeogr. Palaeoclimat. Palaeoecol.*, 101, p. 117-129.

AUSTRALIA

Walter BOLES continues his work on the Oligo-Miocene deposits at Riversleigh, Northern Queensland, but the only study currently underway is directed to a small kingfisher (Dacelonidae). In order to place this taxon in the proper genus,

it has been necessary to review the validity of several modern genera. That has specifically addressed two questions: Are the Australasian species of *Halcyon* generically separable from the Afro-Asian species as *Todiramphus*? and, Are the yellow-billed kingfishers *Syma* generically separable from "*Todiramphus*"? Thus far, the evidence suggests that the answer to both questions is yes. *Syma*, in fact, is very different and may be more closely related to the paradise-kingfishers *Tanysiptera*.

A collaborative project with Mr Brian MACKNESS (University of New South Wales) began on the birds of Bluff Downs, a Pliocene site from northeastern Queensland. The taxa thus far identified for the most part represent a waterbird community very similar in composition to those of the northern Australian wetlands now found in places such as Kakadu National Park. There are, however, some very uncharacteristic taxonomic elements in this otherwise typical assemblage. Also recovered from the site are a Flamingo and a Cape Barren Goose *Cereopsis*. Since the modern distributions and habitats of these are quite different from each other and from that of northern Australia, they have added an interesting component to the palaeoenvironmental reconstruction. A preliminary paper, discussing the "normal" taxa, has been submitted to the Records of the South Australian Museum as part of the Proceedings of the Third Conference on Australasian Vertebrate Evolution, Systematics and Palaeontology (Records of the South Australian Museum).

The site at Murgon, southeastern Queensland, dated at 54 m. y., has already revealed Australia's earliest known frogs, trionychid turtles, marsupials and placental mammals, both bats and a non-volant form. The bird material, while not as plentiful as that of some of the other vertebrate groups, is proving very interesting, foremost among which are small fragments of carpometacarpus and tibiotarsus. Photographs of these have been circulated to colleagues around the world and there is general agreement that these could be passerines. If so, they would almost double the known age of songbirds. A preliminary note announcing the presence of Australia's oldest modern, non-marine birds has been submitted to *Alcheringa*.

We have learnt with sadness that Dr. Shane PARKER, from the South Australian Museum, died after a short illness.

BOLES, W. E. (1992) - Revision of *Dromaius gidju* Patterson and Rich, 1987, from Riversleigh, northwestern Queensland, Australia, with a reassessment of its generic position. Pages 195-208. In Kenneth E. Campbell, Jr., editor. Papers in Avian Paleontology. Honoring Pierce Brodkorb. *Natural History Museum of Los Angeles County, Science Series*, 36: xxxviii + 491 pp.

BOLES, W.E. (1993) - *Pengana robertbolesi*, a peculiar bird of prey from the Tertiary of Riversleigh, northwestern Queensland, Australia. *Alcheringa*, 17, p. 19-25.

BOLES, W.E. (1993) - A logrunner *Orthonyx* (Passeriformes: Orthonychidae) from the Miocene of Riversleigh, northwestern Queensland. *Emu*, 94, p. 44-49.

BOLES, W.E. (1993) - A new cockatoo (Psittaciformes: Cacatuidae) from the Tertiary of Riversleigh, northwestern Queensland, and an evaluation of rostral characters in the systematics of parrots. *Ibis*, 135, p. 8-18.

BULGARIA

In October 1992, Zlatozar N. BOEV attended the 1st International meeting of the ICAZ (International Council for Archaeozoology) Bird Remains Working Group in Madrid. A review of the Madrid meeting was published in the most outstanding Bulgarian archaeological journal [BOEV, Z. (1992) - First International meeting of Ornithoarchaeology. *Archeologia*, Sofia, 4, p. 63-64]

He continues collecting Recent birds skeletons and the collections of the National Natural History Museum reached up to 298 species and 1270 specimens.

The final work on the bird remains from the Roman town of Nicopolis-ad-Istrum was submitted for publication in Poulter, An. (Ed.): *Nicopolis-ad-Istrum, an interdisciplinary investigation*.

After many problems, he finally succeeded to get some money for his field trips for collecting bone remains of subfossil and fossil birds. He made 11 trips, 5 to Varshets (Lower Villafranchian: a total of 2030 bird bones but 798 of them are unidentifiable); 4 to Slivnitsa (New Middle Pleistocene site: a total of 39 bird bones, 10 of them unidentifiable); 2 to Zlatna Panega (New Upper Pleistocene site: 4 bones, 3 of them unidentifiable).

He also checked the animal bone material from two new Neolithic sites (Telish and Pypra), and two medieval sites (Kayluka and Storgozia), in Western Bulgaria. There were very few bird bones.

He studied the bird bones remains of two Paleolithic caves:

Morovitsa Cave: *Pyrrhocorax graculus*, *Alauda arvensis*, *Perdix perdix*, *Coturnix coturnix*, *Alectoris graeca*.

Cave n° 16 (30 000 years B.P.): *Apus melba* (an absolute dominant), *A. apus*, *Pyrrhocorax graculus*, *Corvus monedula*, *Pyrrhula pyrrhula*, *Garrulus glandarius*, *Turdus merula*, *T. philomelos*, *T. torquatus*, *Anthus trivialis*, *Passer montanus*?

Alauda arvensis, *Sitta cf. europaea*, *Rallus aquaticus*, *Crex crex*, *Porzana parva/pusilla*, *Lanius collurio*, *Loxia curvirostra*, *Accipiter nisus*, *Falco cf. vespertinus*, *Fringilla coelebs*, *C. coturnix*, *P. perdix*. These are the first Pleistocene records of these species in Bulgaria (with a few exceptions published by Bochenki in 1982).

The bird remains of another medieval site (Iskritsa, 11-12th century) were also studied.

All these bird bones finds will be published during the next years. As it is evident, the main goal for Zlatozar BOEV at this stage is to collect as much bird fossil and subfossil material as possible throughout the country. Part of it will be determined during the winter seasons (as far as his reference collection makes it possible for him to do it).

CHINA

YEH HSIANG-K'UEI reports that recently, a short-term excavation has been made at Linqu County, Shandong Province, in the locality of *Shandongornis shanwanensis* and other fossil birds. Several specimens of fossil birds have been found but they are incomplete.

Although more material of fossil bird has been obtained by the Chinese Paleontologists in recent years, from various localities and horizons in China, the specimen of *Shandongornis shanwanensis* is still the more complete one, the bird was thus praised by someone as "the first bird of China", it means that it is the first occurrence of complete fossil bird known in China. For this YEH Hsiang-k'uei wrote a popular science paper (in Chinese) to introduce the finding and studying courses of the specimen, and to yearn for late Professor BAO, of Department of Biology, Beijing Teachers University, and late friends MENG and BO, two paleontologists of Shandong Provincial Museum. BAO helped him in the determination of the bird, and MENG and BO convoyed the fossil bird to the Beijing Institute for study in the summer of 1976.

About the Peter Wellnoffer's note on "Missing Archaeopteryx", published in the SAPE 1992 Information Letter, YEH Hsiang-k'uei wrote a note in Chinese about this event for the Bulletin of Biology, published by the Beijing Teachers University, 1993, vol. 28, n° 2, to turn attention of Chinese biologists.

HOU LIANHAI (1993) - Avian fossils of Pleistocene from Zhoukoudian. *Mem. Inst. Vert. Palaeont. Palaeoanthr. Academia Sinica*, n° 19, p. 165-297, 95 fig., X pl. (in Chinese, English summary).

FRANCE

Although Jean Christophe BALOUET is very busy working for the United Nations Environment Program, he is a happy man to keep close to fossil birds, research, and researchers. For example, he was very happy to present a communication dedicated to the "Archaeobiogeography of the South West Pacific area, based on the sub-fossil findings from New Caledonia and neighbouring islands" for and at the XIth meeting of the Willi Hennig Society, 25-28 August 1992, in Paris, to highlight the importance of the recent anthropic factors which also are responsible for the extinction spasm dating to back to 3,000 y. B.P. at the latest, and which is so characteristic of the large tropical islands if not an unavoidable factor of today's biased biogeography. This was also an opportunity to provide access to the collections of fossil birds, including New Caledonian material, within the Paris Museum, to several specialists. The demonstrated interest for New Caledonian fossil birds might well be related to the evolutionary importance of these fauna.

In 1992, Jean Christophe has been most pleased to have Mrs Helen JAMES/OLSON's visit in Paris on her way to Madagascar and to open the collections of fossil birds she wanted to study as well as to return their hospitality which has been so great (including a big "Bonjour" to Storrs, Helen, Travis and Sidney). He will be most pleased to help them for their research as often as necessary, this offer is of course extended to other members of the SAPE.

In December 1992 and January 1993 Jean Christophe BALOUET went back to New Caledonia and made further interesting collections especially in altitude. He also could see the damages due to the attempts of pillage of some localities, including Pindaï where holes have been dug, as well as Kanumera sites from which "very large samples" have been taken, as perpetrated by "paleontologists from New Zealand, Australia, and Americans", in the presence of Père Dubois, according to the tribe who owns the site. These unfair diggings have been achieved without prior authorization of the relevant authorities, nor of the owners. Please, acknowledge this information!

One could consider the interest of international programs dedicated to biodiversity, including the New Caledonian recently extinct fauna for which a dozen new taxa still are to be described. Several recent publications, including scholar books, do relate the findings and fossil birds.

Jean Christophe hopes to be able to do further research on the archaeological remains of birds and other vertebrates in this area, to order the collections, to describe the remaining new species, and will much appreciate to see the scientific community confirm, by concrete means, its interest for the subject. As of June 1993, he has been able to put together all

the subfossils from New Caledonia within the Paleontology Institute of the Muséum national d'Histoire naturelle de Paris.

La publication de la monographie du gisement de Sansan (Miocène moyen, Sud-Ouest de la France) a pris beaucoup de retard mais Jacques CHENEVAL a pratiquement achevé la révision de l'avifaune de ce gisement. A cette occasion, la liste faunique actuellement connue subira d'importants changements, notamment pour le groupe des Galliformes, et la présence, insoupçonnée jusqu'à présent, de certains groupes tels que les Psittaciformes, sera démontrée.

Jacques a également en projet l'étude d'un beau squelette sub-complet d'oiseau provenant du gisement de Cherasco (Messinien, Italie).

Au cours du 1er Congrès Européen de Paléontologie, qui s'est tenu à Lyon en Juillet 1993, Jacques a présenté une étude taphonomique de l'avifaune de Froidefontaine (Rupélien, Nord-Est de la France).

Christine LEFEVRE spent most of the year working on the collections of the Muséum national d'Histoire naturelle. The inventory of the bird skeletal collection of the Laboratoire d'Anatomie comparée is almost completed, and all the specimens will be soon installed on compactus. She also started to work an inventory of the Milne-Edwards collection of modern specimens. This important collection of anatomical parts was separated between the Laboratoire de Paléontologie and the Laboratoire de Zoologie : Mammifères et Oiseaux of the M.N.H.N. for years, and the lack of any catalogue did not help its consultation. The whole collection is now grouped in the Laboratoire d'Anatomie comparée, and should be more easily available for the scientific community in the coming years.

Christine is still involved in a research program on archaeology and biogeography of the Western Aleutian Islands (Alaska), in collaboration with D. SIEGEL-CAUSEY (Kansas University Museum of Natural History), D. CORBETT (U.S. Fish and Wildlife Service), and S. LORING (Arctic Studies Center of the Smithsonian Institution). She presented the zooarchaeological results of the 1991 campaign at Buldir Island at the Alaskan Anthropological Association meeting in Anchorage last April. In June, she went back to Buldir Island and co-directed the excavations. Numerous bird bones were associated with mammal and fish bones, in very interesting archaeological features.

Since the last SAPE Newsletter, Cécile MOURER-CHAUVIRE, in collaboration with other research workers from the University of Montpellier, has prepared a semi-popular paper on the famous fossiliferous localities known as "Phosphorites du Quercy". This paper was intended to be published in Terra, the magazine of the Museum of Natural History of Los Angeles. Unfortunately, due to the financial difficulties of the Museum, Terra will not publish it. If among the SAPE members, somebody could suggest another magazine which could be interested in publishing this paper, Cécile would be very grateful to him.

Cécile has prepared a synthetic paper on the history of European Pleistocene avifaunas, to be published in the Proceedings of the ICAZ bird working-group conference, which was held in Madrid. She has finished a paper on a Late Pleistocene/Early Holocene avifauna from the Archaeological site of Akrotiri *Aetokremnos*, in Cyprus, and she has revised and then revised again the chapters on the Paleogene and the Pliocene of France, for the book "Tertiary Avian Localities of Europe", edited by J. MLIKOVSKY.

She also prepared a paper on a large Owl from the Paleocene of Cernay and Mont Berru, near Reims, which belongs to the family Sophiornithidae. This paper has been submitted to Palaeontology.

From mid-July to mid-August, she took again part in the excavations in the Marais de l'Ermitage, in La Réunion, Indian Ocean, under the responsibility of the Muséum d'Histoire naturelle de Saint-Denis de la Réunion. A few, but very interesting, bird remains were found, but, unfortunately, still no Solitaire, nor White Dodo!

In October and November, on the invitation of Storrs OLSON, Cécile is going to the Smithsonian Institution, in Washington, to study her new material with the osteological collections of the Division of Birds.

ALCOVER, J.A., FLORIT, F., MOURER-CHAUVIRE, C. and WEESIE, P.D.M. (1992) - The avifaunas of the isolated Mediterranean islands during the Middle and Late Pleistocene. Pages 273-283. In Kenneth E. Campbell, Jr., editor. Papers in Avian Paleontology. Honoring Pierce Brodkorb. *Natural History Museum of Los Angeles County, Science Series*, 36: xxxviii + 491 pp.

ANTUNES, M.T., and MOURER-CHAUVIRE, C. (1992) - The Roman site (2nd to 5th centuries A.D.) at Quinto do Marim near Olhao (Algarve, Portugal): Vertebrate faunas. *Setubal Aequologica*, IX-X, p. 375-382.

CHENEVAL, J. (1993) - L'avifaune mio-pliocène de la formation Pisco (Pérou). Etude préliminaire. In M. Gayet (Coord.) Paléontologie et Stratigraphie d'Amérique Latine. Table Ronde Européenne. Lyon, 7-8-9 Juillet 1992. *Docum. Lab. Géol. Lyon*, n° 125, p. 85-95.

COOPER, A., MOURER-CHAUVIRE, C., CHAMBERS, G.K., HAESELER, A.V., WILSON, A.C. and PÄÄBO, S. (1992) - Independent origins of New Zealand moas and kiwis. *Proc. Nat. Acad. Sci. U.S.A.*, vol. 89, p. 8741-8744.

GUERIN, C., HUGUENEY, M., MOURER-CHAUVIRE, C., and FAURE, M. (1993) - Paléoenvironnement pléistocène dans l'aire archéologique de Sao Raimundo Nonato (Piauí, Brésil) : apport des mammifères et des oiseaux. In M. Gayet (Coord.) Paléontologie et Stratigraphie d'Amérique Latine. Table Ronde Européenne. Lyon, 7-8-9 Juillet 1992. *Docum.*

Lab. Géol. Lyon, n° 125, p. 187-202.

LEFEVRE, C. (1992) - Punta Maria 2. Los restos de Aves. *Palimpsesto, Revista de Arqueologia*, vol. 2, p. 71-98.

MOURER-CHAUVIRE, C. (1992) - The Galliformes (Aves) from the Phosphorites du Quercy (France): Systematics and Biostratigraphy. Pages 67-95, 14 fig. In Kenneth E. Campbell, Jr., editor. Papers in Avian Paleontology. Honoring Pierce Brodkorb. *Natural History Museum of Los Angeles County, Science Series*, 36: xxxviii + 491 pp.

GEORGIA

I. During the course of 1992, the study of the Middle Pleistocene birds from the asphaltic lake of Binagady, in the vicinity of Baku, Azerbaijan, was pursued by N. I. BURCHAK-ABRAMOVICH. In this site there are countless numbers of birds, including new extinct species and subspecies. The research workers of the Museum are sorting and studying the material gathered during the excavations of the fifties, the sixties and the beginning of the seventies. These collections belong to the Museum of Natural History of the Academy of Sciences of Azerbaijan (DJAFAROV, R., BURCHAK-ABRAMOVICH, N.I., ALEKPEROVA, N., GADJIEF, D.V., GADJIEF, G.V. and others).

Some very instructive taphonomic observations concerning the birds of Binagady were published in the works of SEREBROVSKI, P.V., DJAFAROV, R. and BURCHAK-ABRAMOVICH N.I. The study of the Binagady birds is being pursued by BURCHAK-ABRAMOVICH, N.I. in collaboration with BURCHAK-ABRAMOVICH, D.N., BOEV, Z., PANTELEIEV, A. and POTAPOVA, O.R. Other research workers may be associated with this team.

Up to the present, the fossil avifauna of Binagady includes 110 species, among which there are 4 extinct species and 4 extinct subspecies. Not only bones, but also fragments of skin, tendons, and feathers have been found. The fauna of Binagady is going to be published in a large collective monography, which will be published in Russian by the Academy of Sciences of Azerbaijan, with a detailed summary in Azerbaijani and in English.

II. The monographic description of *Caspidotornis kobystanicus* Aslanova and Burchak-Abramovich is currently being prepared. It will be placed in a distinct family. The holotype is the skull, with a lower jaw and a few cervical vertebrae. The age of the specimen is Middle Oligocene.

III. The morphological description of the skeletons of *Lyrurus mlokosiewiczzi* Tacz. and *Lyrurus tetrrix* L. has been completed. The authors have noticed morphological similarities between some bones of *L. mlokosiewiczzi* and the corresponding bones of *Tetrao urogallus*.

IV. The morphological study of the skeleton of the different species of the genus *Haliaeetus* (*H. albicilla* L., *H. pelagicus* Pallas, *H. leucoryphus* Pallas) is being continued in collaboration with the ornithologist E. G. LOBKOVNI (Kronotski Reserve, Kamchatka).

V. The study of the Pleistocene representatives of the genus *Gallus* is also being pursued:

- Description of the fossil species *Gallus karabachensis* Burchak-Abramovich and Aliev, 1988, which was found in the Middle Acheulean of the Azykh Cave, in the High Karabach. The holotype is a tarsometatarsus (BURCHAK-ABRAMOVICH, N.I. and ALIEV S., 1988, Baku, University of Azerbaijan).

- Description of *Gallus kudarensis* Burchak-Abramovich and Potapova. It comes from the Middle Acheulean of the Kudaro I Cave, in South Ossetia. The holotype is an ulna.

- Five other extinct forms of *Gallus* are going to be described :

The first one is from the Magdalenian of the Kvardjila Klde Cave, in Imeritia. The holotype is a small-sized humerus.

The second one is from the Late Paleolithic of the Georgian caves. The holotype is a coracoid.

The third one is from the Late Pliocene of the Taman faunal complex, Sand Quarry of Tsimbaly, Taman peninsula. The holotype is a very large tarsometatarsus.

The fourth one is *Gallus* sp., from the Late Paleolithic of the Georgian caves. This form has medium-sized bones.

The fifth one is going to be described at the present time. It has been found in the Late Paleolithic locality of Soungir, near the city of Vladimir, on the Kliasma river (Mestschera). The holotype is a part of a medium-sized femur. The mammalian and avian faunas associated with it include:

Lepus timidus, *Dicrostonyx* cf. *torquatus*, *Lagurus* cf. *lagurus*, *Canis lupus*, *Alopex lagopus*, *Gulo gulo*, *Ursus* cf. *arctos*, *Felis* cf. *spelaeus*, *Mammuthus primigenius*, *Equus caballus* cf. *taubachensis*, *Rangifer tarandus*, *Saiga* cf. *tatarica*, *Bison* sp., *Lyrurus tetrrix*, *Larus argentatus*.

Among the thermophilous elements have been found numerous fragments of carapace of the freshwater turtle *Emys orbicularis* (Ctakanov, 1936: Knowledge of the Sovietic homeland). According to the data of Sukatchev V.N. (1972) the flora in the vicinity of the station was at that time more thermophilous than it is now.

It is interesting to note that, in the Magdalenian fauna of the Gvardjilas Klde Cave (Western Georgia), together with *Gallus* n. sp., the following species have been found:

Ursus spelaeus, *U. arctos*, *Mustela nivalis*, *Gulo gulo*, *Cervus elaphus*, *Bison bonasus*, *Capra* sp., *Rupicapra tragus*, *Sus scrofa*, *Equus caballus*, *E. hydruntinus*, *Mesocricetus koeni*, *Erinaceus* sp., *Lyrurus mlokosiewiczzi*, *Alectoris graeca*, *Perdix perdix*, *Coturnix coturnix*, *Crex crex*, *Pyrrhula pyrrhula*, *Erythrura rubicula*, *Haliaeetus albicilla*, Undetermined Passeriformes.

Concerning the autochthony of the genus *Gallus* in the Moscow area, it is worth noting the discovery of a single femur of *Gallus* in the Neolithic of the site Voimejnaia 1, district of Chatourski, Moscow Region (Karku, A.A., 1990).

GERMANY

In June 1992, Angelika HESSE started a new position as geologist in the Museum of Natural History and Prehistory at Dessau, near Leipzig (see Changes of addresses). The research work on Miocene birds of the Nördlinger Ries (MN6) and the Steinheimer basin (MN7) is carried on. The studies of the pelicans of the Nördlinger Ries are almost finished. A special point of interest lies in the investigations of the infraspecific development of *Messelornis cristata* (Eocene).

The papers in press deal with the osteological characteristics of the Recent and fossil Gruiformes families, the mammal and bird faunas of the Nördlinger Ries and the Steinheimer basin (with E.P.J. Heizmann), and the systematic position of the genus *Aptornis*, from New Zealand (with E. Weber).

K. FISCHER is working on a small collection of fossil birds from the site of fossil man of Bilzingsleben, in Thuringia (Middle Pleistocene, Holsteinian).

On account of the 3rd symposium of the S.A.P.E. in June 1992 and the 175th anniversary of the Senckenbergische Naturforschende Gesellschaft (the holder of the Senckenberg-Museum) in November 1992, D. S. PETERS had to spend most of his time in 1992/93 with organizing, editorial and other rather technical matters.

At present he tries to do his best to get the proceedings of the Frankfurt meeting published still in 1993. The volume is a little bit behind schedule because some authors have pardonable difficulties to send their manuscripts in time and some reviewers were quite late. Unfortunately some of the papers presented in Frankfurt were not submitted for publication. None the less D.S. PETERS hopes we shall have an interesting volume. Many thanks to all contributors and reviewers!

The studies of Messel-birds continued and focused on some cariamids and a small very well preserved specimen. The latter appeared to be a tiny hoopoe-like bird as was suggested by Dr. Mourer-Chauviré in the course of her visit in our collection. In former publications D. S. PETERS mentioned this bird as having some similarities with todies and passeriformes.

By the way, the comprehensive book on the Messel site is now available also in English edition: SCHAAL, S. and ZIEGLER, W. (1992) - Messel. Oxford University Press.

Harald PIEPER is still working on the Madeiran fossil birds, and for the moment mostly on *Pterodroma* and *Regulus*. The work is progressing slowly but progressing.

In August 1992 a new specimen of *Archaeopteryx* has been discovered in the Solnhofen limestone quarries of the Langenthaler Haardt near Solnhofen. This is the seventh skeletal specimen, well preserved on two split slabs of Solnhofen lithographic limestone, and almost complete. The fossil belongs to one of the major companies of the local stone industry. It was possible to get the material on loan to the Bavarian State Collection where it has been prepared and is currently being studied by Peter WELLNHOFER. In several respects, new information on the anatomy, functional morphology and relationships of *Archaeopteryx* can be expected. A first detailed description will be published in the next issue of ARCHAEOPTERYX, vol. 11, 1993. An analysis of the skull morphology of *Archaeopteryx*, mainly based on the new specimen is being prepared by P. WELLNHOFER and A. ELZANOWSKI. By the middle of October 1993 the new specimen will be on display in the Paläontologisches Museum München as part of a special exhibition for the 150th anniversary of the Palaeontological State Collection of Bavaria. By January 1994, the new *Archaeopteryx* will have to go back to its owner.

HESSE, A. (1992) - A new species of *Messelornis* (Aves: Gruiformes: Messelornithidae) from the Middle Eocene Green River Formation. Pages 171-178, 10 figures. In Kenneth E. Campbell, Jr., editor. Papers in Avian Paleontology. Honoring Pierce Brodkorb. *Natural History Museum of Los Angeles County, Science Series*, 36: xxxviii + 491 pp.

HESSE, A. and HABERSETZER (1993) - Infraspecific development of various foot- and wingproportions of *Messelornis cristata* (Aves: Gruiformes: Messelornithidae). *Kaupia*, n° 3, Darmstadt.

MANN, G., MOLLENHAUER, D. and PETERS, D.S. (Eds.) (1992) - In der Mitte zwischen Natur und Subjekt. Johann Wolfgang von Goethes Versuch, die Metamorphose der Pflanze zu erklären. 1790-1990, Sachverhalte, Gedanken, Wirkungen. *Verlag Waldemar Kramer*, Frankfurt am Main.

PETERS, D.S. (1992) - Randnotizen zu einer Kongressreise nach Neuseeland. *Natur u. Museum*, 122 (9), p. 283-292.

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GREAT BRITAIN

Paul G. DAVIS is at present working on the taphonomy of feathers. Within this work he has found further evidence of the authenticity of *Archaeopteryx* (the London specimen). The initial discovery came from Hoyle and al.'s own S.E.M. photographs (see Spetner et al., *British Journal of Photography*, January 7 1987). Although this controversy is dead and buried (if you will excuse the pun) this should put the final nails in the coffin. The full paper will be presented at the 41st SVPCA in September at Cambridge, U.K., and the results then submitted to *Palaios*? In regards to this research, he would appreciate any details of feathers or feather bearing localities that members might have, or better still, photocopies of obscure references relating to feather bearing localities. His address is:

Paul G. DAVIS
 University of Bristol
 Department of Geology, Wills Memorial Building
 Queens Road, Bristol BS8 1RJ
 Fax 44 272 25 33 85.

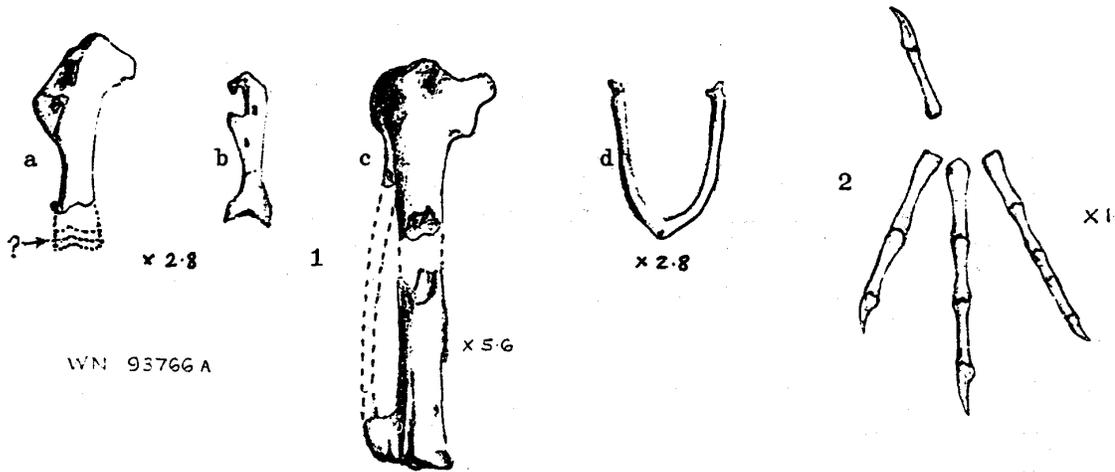
Michael DANIELS sends the following information:

On several occasions recently I had become concerned that at last, after nineteen years of ardent collecting, the avian riches of the Naze were becoming exhausted. The kilometre long section of cliff and foreshore facing the southern North Sea, is subject to much erosion and the London Clay, formed of poorly consolidated silts at this site, is very vulnerable to such forces. Thus, coupled with my own activities, which over the years have produced the remains of some 550 individual birds, there would have been little surprise if the place had been played out I need not have worried. True, lately there has been a fall in the actual numbers of birds retrieved, but the interest generated by the type acquired continues undiminished. A listing of the more important specimens should prove the point.

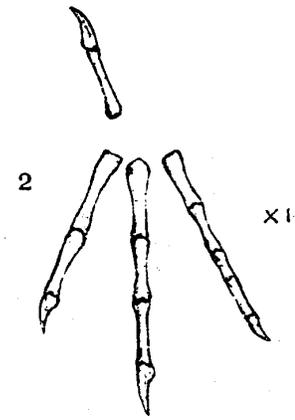
Catalogue number	Material	Size code	Affinities. Assuming possession of features reminiscent of known fossil and living bird types
WN. 92736 A	Foot including 'complete' tarsus	H	?screamerlike (Anhimidae).
92737	Various oddments including foot	I	Palaeognathous bird.
92750	Pectoral and wing remains	B	Swiftlike bird (?Treeswifts, Hemiprocnidae).
93755	Appreciable part of the skeleton	H/I	Palaeognathous bird, ? species variant.

93757	Mandible, pectoral and wing remains	D	'Coraciiform' , ?? akin to <i>Primobucco mcgrewi</i> .
93759	Tarsometatarsus and phalanges of pes	E/F	? small Gruiform.
93766 A	Pectoral and wing remains	B	Primitive swiftlike bird, ?Aegialornithidae
93770	Distal tarsus and phalanges of pes	F/G	Bird with Parrotlike tarsus, but non-characteristic skull. See my details, 1989 newsletter.
93773	Pectoral and wing remains	D	Bird probably has a narrow gape (information by reference to WN.93757, closely related ?? <i>P. mcgrewi</i> .
93776	Pectoral and wing remains	F	Probably a form of wading bird.
93777	Extensive post-cranial remains	F	? Gruiform, ?? like Porphyrio.
93780	Pectoral and wing remains	F	? waterbird, type new to collection.
93781	Phalanges and claws of pes	H	Probable Galliform type. See illustration, Fig. 2.
93783	Most of skeleton represented	H	? kingfisher like (Alcedinidae). See note 2.
93785 A	Partial skull with upper mandible plus lower rami and complete quadrate	F/G	Almost certain Coraciiform; ?? Coraciidae.
93785 B	sternum and carpometacarpus	C	? ancestral Passeriform. See note 3 and figures.
93787	Pectoral and wing remains	D/E	<i>Primobucco olsoni</i> type

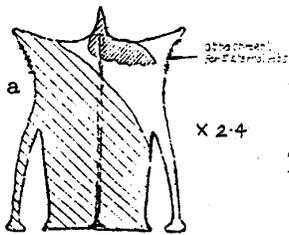
As a guide to size coding, size 'B' is about that of a Blue Tit, *Parus caeruleus*; size 'F' of a Turnstone, *Arenaria interpres* and 'I' of an Oystercatcher, *Haematopus ostralegus*.



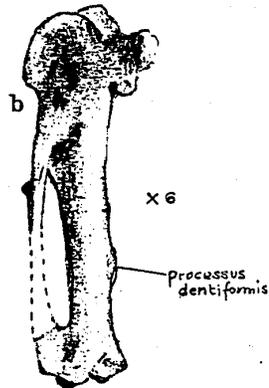
WN. 93766A



WN. 93783



x 2.4



x 6

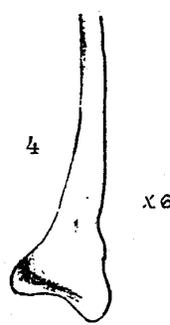
WN. 89609



WN. 93785 B

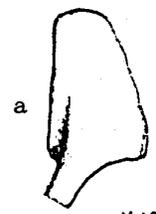


WN. 93785 B



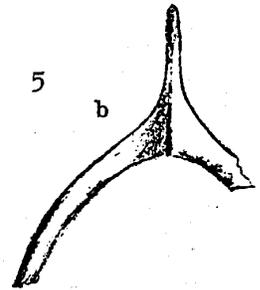
4

WN. 88583A



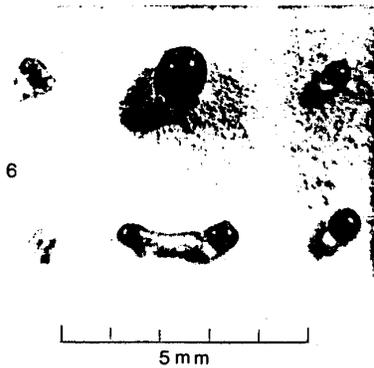
x 10

WN. 89609



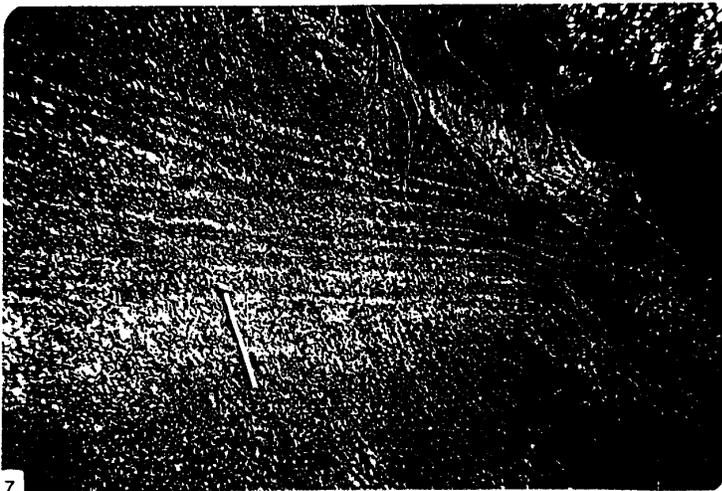
5

b



6

5mm



7

ILLUSTRATIONS

Figure 1. WN.93766A: a, humerus, palmar view; b, coracoid, dorsal view; c, carpometacarpus, external view; d, furcula, dorsal view.

Figure 2. WN.93783: toes, dorsal view.

Figure 3. WN.89609 and WN.93785B composite: a, sternum, ventral view; b, of WN.93785B: carpometacarpus, internal view.

Figure 4. WN.88583A: furcula, coracoidal end of clavicle.

Figure 5. WN.89609: furcula, a, hypocleidium, lateral view; b, same and symphysis, ventral view.

Figure 6. Tektites from Naze pocket; examples from over 100 particles obtained from one accumulation.

Notes:

1. Although both humeri were collected, the distal ends were eroded, but fortunately below the ectepicondylar processes, thus enabling my attempt to draw the complete bone and from which compare the result with illustrations of described specimens. Those of the Aegialornithidae seemed nearest, the Naze individual however, is of a size smaller than any of which I have details. Fig. 1, a-d.
2. At first I thought this bird might have ploverlike connections, but with a strange foot; then the shape of the furcula appeared similar to a diver (Gaviidae). Probably initial confusion arose due to the size of the fossil and overall, as is often the case, various elements taken individually may provide misleading indications. Ultimately, it was when I drew the quadrate and then, on the basis of this, compared it with other such illustrations, that a likely 'Coraciiform' identity emerged. From this lead I soon confirmed that indeed, this was the case, but on this occasion its Kookaburra (Dacelo) size would, in this respect, overshadow all other specimens of this type from the Naze and I suspect, from elsewhere.
3. In past editions of the newsletter I have commented on the probable existence of early Passerines, or certainly evolving types that had common ancestry with the modern order, based on Naze material. This latest specimen proved particularly important although composed of only two bones. The near perfect carpometacarpus with well developed processus dentiformis and prominent intermetacarpal tuberosity, was accompanied by most of the sternum, see Figs. 3 a and b. This bird, close to an extensively preserved individual (see information in the 1990 newsletter) and also related to at least ten others in my possession, verifies yet more important detail about the osteology of this apparently populous lower Eocene group, producing persuasive evidence concerning songbird origins. As an added ingredient to debate, I figure aspects of the furcula belonging to specimens WN.88583A and WN.89609; Figs. 4 and 5 a and b. On the minus side, the carpometacarpus is only slightly extended distally below metacarpal III and the distal tarsometatarsus confirms that the birds are zygodactyle.

Additionally, based on limited or solitary elements, I acquired a further 'tree swift', a palaeognath, three 'Coraciiform' types including another speculative *P. mcgrewi* form, one more bird with *P. olsoni* connections (19 examples from the Naze), finally, a Caprimulgid.

Even though I have always maintained accurate records as to where each of the many different types of bird emerged along and across the Naze section, attempts to determine some pattern or sequence in the way the remains were deposited on the ancient seabed, have not produced any meaningful result. The strata are much disturbed by faulting and minor folding which tends to complicate the geology of the place. From my observations, given there appears to be a gentle tilt of the beds seaward and taking into account continual cut-back of the coastline in the region, I therefore assume I must be collecting from lower horizons than in earlier years. Nevertheless, no obvious faunal change is apparent and perhaps there is none.

I consider there is ample evidence to conclude that the whole wider area that is now south-east England witnessed a massive accumulation of sediment laid down over a short space of time. Clearly, conditions that pertained during the formation of the low London Clay were greatly influenced by tectonic events, particularly volcanic activity. This latter factor I regard as primarily responsible for the circumstances that proved so catastrophic to the bird population. Wherever it has been possible to examine this particular section of the formation, temporarily inland, continuously at Walton, we find avian fossils and at each site their numbers appear equally numerous. Always there is evidence in these marine laid deposits of much outwash from the land, largely of debris of the vegetation, but also a diverse invertebrate and vertebrate fauna (even disregarding the birds): significantly and not infrequently, one uncovers patches of what appears to be winnowed embers which I conclude are of charred foliage, probably the product of conflagrations set afire by eruptive outbursts. Then there is substantive proof in the form of tektites, albeit rather rare. I have on several occasions, though not of recent years, found examples of these characteristically shaped glass objects in Naze pockets and once in association with a bird, See Fig. 6, taken from my photograph, also footnote. Locally elsewhere, in a sequence of beds immediately below those accessible at Walton, there is abundant evidence of vulcanism.

A succession of thin sedimentary units have been shown to be composed largely of ashfall material. Again I reproduce a photograph which should adequately illustrate the nature of the London Clay stratigraphy in this region, suggesting quickly changing conditions marked by phases of sedimentation of short duration. See Fig. 7.

The fact that birds, highly mobile creatures, were massacred in untold numbers over a wide area, suggests they were,

without warning, overwhelmed by some swift and deadly agency. Since the evidence for volcanism in the region is beyond question, we can, I consider, look for some manifestation of such as a prime cause of their demise. Collective poisoning on a grand scale might have occurred, but this would not account for the apparent devastation wrought on the region's vegetation, relics of which are so abundant in these low London Clay deposits. Therefore, some all consuming force, violent and fast moving, is needed to fill the role. A so called *nuée ardente* might adequately satisfy such requirements. The effect of these super-heated gas clouds has been well documented and accounts of a classic example, that which obliterated both the town and the population of St.Pierre on the island of Martinique in 1902, makes fascinating reading; (Francis, 1976). One might imagine the scene as such a searing mass annihilated everything in its path, with the birds, particularly vulnerable due to their ecology, felled as and where they flew, stood or perched. A question still to be answered concerns the means by which their remains were removed from largely terrestrial habitats, some perhaps, far inland, to their final resting place well out to sea. Great flooding is often the accompaniment to volcanic activity, sometimes as snowfields are melted or due to heavy rainfall resulting from the micro-climatic effect of the eruption. Given the casualties of such a fiery visitation, despite being literally scorched to death, their bodies may have survived virtually intact, as was apparently the case with many that died in St. Pierre. Thus, especially once the decaying process had set in, the carcasses would float-or drift readily transported in floodwaters, eventually to reach the open sea. The marine accumulation of debris charged silt supports the flooding concept and my imagination, admittedly, sees the convenience of the various factors to give weight to the scenario.

Lastly, to deal with the final stage of the birds' journey to become the rather unique objects of fossilization and to offer an explanation as to why Naze avian specimens are so rarely, if ever, found articulated. Along with birds, remains of fishes are common in these low London Clay strata, especially the teeth of sharks. The prospect of a feast may have attracted a great gathering of scavengers off-shore and in respect of the teeth, such may have been shed not necessarily during the actual feeding process, more likely lost in frenzied conflicts aroused by the arrival of so many delicacies to be shared amongst highly predacious competitors. In the final analysis therefore, I believe that most Naze avian fossils, usually found collected in a jumbled state, often with individual bones broken or fragmented, represent the undigested remains of meals taken long ago. A banquet held in the wake of a natural phenomenon and at the expense of a whole community subjected to some violent and catastrophic assault.

Footnote. Those interested in the lower Eocene, London Clay, may wish to learn that I did acquire one spherical example of these distinctive glass shards, retrieved from a sample of beach concentrates taken from below the cliffs at Warden Point on the island of Sheppey, middle and upper level of the formation.

References: Francis, P. 1976. Volcanoes. Penguin Books. 368 pp. Interesting general account of these phenomena.

MOLDOVA

I. GANEA communicates the following information: Besides the investigations which were undertaken in some regions of the Republic of Moldova (Vulcaneshti, Rishkani, Edinets), some excavations were carried out in the vicinity of the town Belgorod-Dnestrovskii, Ukraine. There were found more than 60 fragments of bones belonging to petrified birds. Approximately 35 of them can be determined up to family, genus, and even species.

Two scientific papers were presented to publication. The first one, by I. GANEA and N. I. BURCHAK: "The present situation in the researches concerning fossil birds from the genus *Gallus* in Moldova, Ukraine, and Caucasus" has been published in the Scientific Bulletin of the Academy of Sciences of Moldova (Biological and Chemical series), n° 5, 1992. A short systematical analysis of the fossil birds from the genus *Gallus* discovered in Moldova, Ukraine and Caucasus is carried out in this paper.

Although in the last 30 years there were described some new species from that genus, such as *Gallus karabachensis* Burchak and Aliev, *Gallus kudarensis*, Burchak and Potapova, etc... the real taxonomic position is not yet clear. A supplementary scientific study in that field is required. The fossils of *Gallus* sp., discovered in the deposits of Neogen and early Anthropogen tell us eloquently about the domestication of the hen in different regions of Europe.

Another paper by Burchak, N.I., Ganea, I.M., and Shushpanov: "A new species of hen from the genus *Gallus*, found in the Late Pliocene deposits in Moldova" was submitted to publication in the same journal. In this paper is described a new species of *Gallus* from the Late Pliocene, the holotype of which is a tarsometatarsus. According to its dimensions, it is similar to *Lagopus lagopus*. The shaft of the tarsometatarsus is graceful. The index of the shaft size is 9.6, the index of the contractile part is 62.5. This new species differs from *Gallus* sp., which was discovered in Pleistocene deposits in the vicinity of the village of Trinca, both by its dimensions, and by its geological age.

THE NETHERLANDS

Après 5 ans d'enseignement et de gestion de projets à l'Université d'Ouagadougou (Burkina Faso) les activités actuelles de Peter D.M. WEESIE incluent la rédaction de deux publications, l'une sur les oiseaux d'eau du Sahel Burkinabe, et l'autre sur les rapaces d'une savane soudanienne au sud du Burkina Faso. Pour le reste, Peter est toujours impliqué dans la coopération entre les Universités d'Ouagadougou et de Groningen, et la mise sur pied d'une "Ecole de Recherche" en écologie tropicale.

Il espère dans l'avenir, trouver le temps d'étudier les oiseaux fossiles trouvés au cours des fouilles de ces dernières années en Sardaigne.

NEW ZEALAND

Joseph McKEE has continued to collect vertebrates from Pliocene Tangahoe Formation, near Hawera, North Island of New Zealand. Several marine bird specimens have been discovered during the past year, mainly as concretions, which have still to be prepared. In one of these specimens, the hollow bones have been infilled with calcite which may be a problem in the acid preparation of this material. Joseph would appreciate any advice that other members of the SAPE could give him on preparing such material. Another specimen is a mixture of bird and seal bones that have accumulated together during the deposition of the Tangahoe Formation.

One of the Pliocene shearwaters reported last year is probably a member of the genus *Puffinus*, about the size of the modern *P. creatopus*, but the bones are of a more solid build than the bones of *P. creatopus*.

T. H. WORTHY has been concentrating on his Palaeofaunal surveys from cave deposits of various South Island regions selected for differing climates. In 1992-3 many sites on Takaka Hill in northwest Nelson were excavated to give several thousand fossils up to 30,000 years old. Of particular interest is a *Sceloglaux* site wherein about 6000 bones of about 30 vertebrate taxa are represented, mostly birds. We found parts of three *Harpagornis* skeletons in one site all dating to the last glacial period. Work was also carried out in North Canterbury with the excavation of several small owl deposits, a couple pitfall type cave deposits, and a swamp. 10 m² of swamp revealed 1000 bones of about 30 individual moas, mainly *Pachyornis elephantopus* and *Emeus crassus*. The site is interesting as very close to the famous Pyramid Valley site but differs in age, being older. Work continues but the different fauna is paralleled by a differing palaeoflora from associated pollens.

Many more bones of the New Zealand pink-eared duck *Malacorhynchus scarletti* (previously only known from the type premaxilla and mandible fragment) have come to light after a re-examination of anatid bones in the Pyramid Valley swamp collections at the Canterbury Museum. T.H. WORTHY is in the process of describing these.

HOLDAWAY, R.N., and WORTHY, T.H. (1993) First North Island fossil record of kea, and morphological and morphometric comparison of kea and kaka. *Notornis*, 40 (2), p. 95-108.

WORTHY, T.H. (1993) - A review of fossil bird bones from loess deposits in eastern South Island, New Zealand. *Records of the Canterbury Museum*, 10 (8), p. 95-106.

WORTHY, T.H. (1993) - Fossils of Honeycomb Hill. *Museum of New Zealand Te Papa Toi*. 56 pp.

WORTHY, T.H. (1993) - Submarine fossil moa bones from the northern South Island. *Journal of the Royal Society of New Zealand*, 23 (3).

WORTHY, T.H., and HOLDAWAY, R.N. (1993) - Quaternary fossil faunas from caves in the Punakaiki area, West Coast, South Island, New Zealand. *Journal of the Royal Society of New Zealand*, 23 (3).

POLAND

Zygmunt BOCHENSKI finishes the preparation of the "Catalogue of fossil and subfossil birds of Poland" (Oligocene - Modern Ages). The paper will be published in winter. His popular book on fossil birds is nearly ready, but due to financial difficulties, it will be published in 1994. Together with Teresa TOMEK he prepares a paper on the Late Pleistocene - Holocene bird remains from 5 Austrian caves (more than 70 taxa all together).

Zbigniew M. BOCHENSKI described the Late Pleistocene bird remains from Piekary and submitted the paper to the monograph of that locality which was to be prepared by the Archaeological Museum in Warsaw. Most of his time last year was devoted to completing a paper on the osteology of Grebes. Together with Teresa TOMEK, Zlatozar BOEV, and Ivan MITEV, he prepared a paper "Patterns of bird bone fragmentation in pellets of the Tawny Owl and the Eagle Owl and their taphonomic implications" and submitted it to *Ata zool. Cracov*. The paper will be published this winter.

Teresa TOMEK identified more than 50 bird taxa in a bone material from the Late Pleistocene (last interstadial of

the Vistulian) locality "Oblazowa 2". The list of the species, together with comments, constitutes a part of the paper by Nadachowski et al. (in prep.) dealing with the whole fauna from this locality. She continues also her work on the Recent bird fauna of North Korea.

The collection of Recent bird skeletons, stored at the Institute of Systematics and Evolution of Animals in Krakow, contains now about 870 species represented by complete skeletons (nearly 10 % of the Recent bird fauna of the world). European fauna is especially well represented. The exchange of specimens is highly appreciated.

BOCHENSKI, Z. (1992) - [History of European Owls]. *Przegląd zoologiczny*, Wrocław, 36 (1-4): p. 77-90 (in Polish with English summary).

BOCHENSKI, Z. (1993) - Bird fauna from Bir Tarfawi. In: F. WENDORF, R. SCHILD, A.E. CLOSE (Eds.). Egypt during the Last Interglacial. *Plenum Press*, New York, p. 159-185.

RUSSIA

The enigmatic relatively big flightless Coniacian (Late Cretaceous) land bird *Kuszolia mengi* (Kuszoliidae), known after three synsacra and other fragments from afforested coastal plains of the SW margin of the ancient Asia (Uzbekistan) was recently referred by L. A. NESSOV to the order Patagopterygiformes. If the systematic position of this bird was correctly determined, not only one but two families now belong to this extinct order, which was represented during the Coniacian both in the Old and the New World, in the Northern as well as in the Southern Hemisphere. It is probable that flightless Patagopterygiformes came from SW Asia to NE Africa on the floating woods which were carried by passatic currents on the Tethys Ocean, then these birds possibly crossed the not very wide Atlantic, using islands and peninsulas, and achieved South America. The path from South to North America across the Panama Strait (having strong latitudinal passatic currents) and then through areas of high latitudes of the Beringia (especially in cold Coniacian times, before the thermic maximum of the Late Santonian - Early Campanian) and across all Asia looks not so probable.

Coniacian ornithofaunas of coastal plains with Patagopterygiformes in Patagonia and SW Asia also had a variety of Enantiornithines. Among them in SW Asia, L.A. NESSOV and A.V. PANTELEEV recognized two species which had coracoids similar in shape and size to that of the type-species of *Enantiornis*, from the Maastrichtian of South America.

In the summer of 1993, L. A. NESSOV tried to find tracks of early birds on numerous bedding surfaces with well preserved near-shore and subaerial ripple-marks of brackish water reservoir (Batylykh Formation), of Valanginian or Barremian-Middle Aptian age, situated in an area, at the North of the junction of Lena and Viluj rivers (Northern Siberia). In the same region of relatively high latitude, he tried to find also feather imprints in many outcrops of the Eksenyakh, Khatyryk, Agraphena, and Chirimyj Formations (Aptian-Coniacian), but without success.

A.V. PANTELEEV and L.A. NESSOV finished the description of the carpometacarpus of a new genus and species of small procellariiform, which lived in the Middle Eocene tropical or subtropical sea with high bioproductivity and phosphorite deposition, in the area of the locality Dzheroy II, in Central Kizylkum (Uzbekistan).

A.A. YARKOV (Volgograd District Museum) found new fragmentary bird bones in the Kamyshin Formation (Paleocene) of the Volga river basin, and also an enigmatic, relatively big hollow bone fragment, with some bird features, in the Campanian of the locality Polunino, in the Volgograd District.

SOUTH AFRICA

Philippa HAARHOFF has recently published a paper on fossil mousebirds. She is presently writing a popular article on mousebirds for a local ornithological popular journal and other than that, much of her time is devoted to re-organizing the Vertebrate collections (Cenozoic) of the South African Museum in preparation for computerization.

HAARHOFF, P.J. (1993) - Latest Pliocene Mousebirds (Aves, Coliidae) from Olduvai Gorge, Tanzania. *Annals of the South African Museum*, vol. 103 (4), p. 191-211.

SPAIN

During the last year, Lluís GARCIA y PETIT has identified some bones from the prehistorical and protohistorical sites of Els Colls (Tarragona, Upper Paleolithic), La Balma Margineda (Andorra, Neolithic), Turo de Can Olive (Barcelona, Iberian period), Balma del Gall (Barcelona), and La Moleta del Remei (Tarragona, Iberian period). He also studied the material from the Roman sites Camping Lucentum, Palacio Llorca, and Parque Naciones (Alacant).

Recently, he began the study of the bird remains from La Bora Gran (Girona, Upper Paleolithic), and Campos

Santos (Almeria, Chalcolithic).

Since October 1992 he carries on his work on avian paleontology at the Museu de Zoologia de Barcelona.

Une nouvelle hypothèse a été proposée par A. LACASA-RUIZ, de l'Institut d'Estudis Ilerdencs, à Lleida, pour expliquer l'origine possible des plumes chez les Dinosauriens proto-aviens. L'endothermie étant admise pour ces petits animaux, les plumes seront le résultat évolutif en réponse à certains agents sélectifs dans les biotopes particuliers de ces proto-aviens. Cette hypothèse va être prochainement publiée.

Après de nouvelles investigations sur *Noguerornis*, oiseau incomplet provenant des calcaires lithographiques du Montsec (Lleida, Espagne), du Crétacé inférieur (Berriasien sup.- Valanginien inf.), A. LACASA-RUIZ, de l'Institut d'Estudis Ilerdencs, et L. CHIAPPE (Frick Fellowship of the American Museum of Natural History, Dept. of Vertebrate Paleontology), durant la visite de ce dernier chercheur à l'Institut d'Estudis Ilerdencs, ont découvert de nouvelles données sur la structure du squelette, qui font de *Noguerornis* un oiseau quelque peu différent de ceux qui ont été trouvés dans le début du Crétacé. Ces deux chercheurs vont essayer de mettre en évidence les relations possibles entre *Noguerornis* et les grands groupes d'oiseaux mésozoïques ; celui-ci avait été décrit par LACASA en 1989 mais sans attribution phylogénétique.

SWEDEN

Tommy TYRBERG does not have much to report for the last year, having been mostly working with Recent birds. He is continuing his studies on the Pleistocene avifauna of the Palearctic, and at the moment he is working on the changes in distribution of forest birds and sea birds during the last (Würmian/Weichselian) glacial cycle.

Recently he has the pleasure of Francisco HERNANDEZ here on a visit. He has been working on subfossil material at the Naturhistoriska Riksmuseum in Stockholm this summer.

MILBERG, P. and TYRBERG, T. (1993) - Naïve Birds and Noble Savages - a review of Man-caused prehistoric extinctions of Island birds. *Ecography*, 17, p. 2.

UNITED STATES

Gainesville

In January 1993, Bob CHANDLER was in New York to work with Luis CHIAPPE, post-doc in Vertebrate Paleontology, at the American Museum of Natural History, on a description of a new Middle Miocene tinamu from Santa Cruz, Argentina. The manuscript has been submitted to American Museum Novitates for publication. The tinamu is named after its collector, Barnum Brown, who collected the specimen in 1899.

Bob CHANDLER was in the field in Ecuador with a group from the Florida Museum of Natural History during late April through May, collecting birds and fossils. The trip was very successful and, hopefully, there will be other excursions in the near future.

This summer, he received a grant to do underwater paleontology in the Santa Fe River, Florida, at the type locality of *Titanis walleri*. This will be a part of a larger project, which is a revision of the phorusrhacoids.

Bob is starting the last year of an NSF post-doc at the Florida Museum of Natural History, and, hopefully, there will be two additional years of museum funding for his position.

Steve D. EMSLIE currently is affiliated with the Florida Museum of Natural History, Gainesville, with a courtesy appointment as Assistant Curator. He received NSF funding last year to study the systematics and taphonomy of Late Pliocene fossils from Richardson Road Shell Pit, reported in the last newsletter. This summer Steve has been working on the systematics of the fossil cormorant that is well-represented at this site. So far, the cormorant appears to be a new species most closely related to the living Brandt's Cormorant (*Phalacrocorax penicillatus*) found only on the Pacific Coast of North America today. The fossil species may be another of many extinct species of seabirds from the early to late Pliocene of Florida that suggest a productive, upwelling marine environment. This upwelling may have ended with the closure of the Panamanian land bridge in the late Pliocene. A paper on the systematics of the new species will be completed later this fall and will be followed by additional studies on the taphonomy of the site next summer.

In addition to this research, Steve continues to visit Antarctica each year and will be returning to King George Island in November. He is hoping to initiate research on abandoned penguin rookeries in this area and obtain radiocarbon dates on surface and subsurface bones to estimate time of colonization and abandonment of these colonies. Steve also has been completing taphonomic studies of bone accumulation in penguin, cormorant, and other seabirds colonies that will

aid his research on the fossil deposits in Antarctica and at Richardson Road. In the past year, one paper has been published on two puebloan avifaunas. Two other papers on the taphonomy of cave deposits are in press. Correspondence to Steve for the next year should be addressed to: Florida Museum of Natural History, University of Florida, Gainesville, FL 32611, phone (904) 392-1721.

New York

In June of 1993, Allison V. ANDORS helped John M. RENSBERGER and others from the University of Washington to collect, for exhibition at the Burke Museum, two assemblages of fossil footprints from Middle Eocene fluvial siltstones of the Chuckanut Formation in the North Cascades near Bellingham, Washington. Present on the surface of one 5- by 10-foot slab, which was removed from a logging road embankment, are approximately 12 footprints of a medium-sized, tetradactyl, heron-like wading bird, some 17 hand- and footprints of a small, turtle-like quadruped with sprawling gait, 2 or more traces of an unidentified, apparently tridactyl vertebrate, and scattered leaf impressions. Additional footprints of a smaller, three-toed bird and of a medium-sized mammal were recovered from another siltstone layer nearby. These assemblages include what appear to be the oldest traces of birds to be found in Washington State. Long exploited for coal, and known for its rich, warm temperate to subtropical flora, including palmettos and other angiosperms, ferns, conifers, and scouring rushes, the Eocene Chuckanut Formation has previously produced one identified vertebrate, a testudinoid turtle, but no other vertebrate ichnofossils. The Slide Member of the Chuckanut Formation, which yielded the tracks, is interpreted as the deposits of a sluggish, west-directed meandering river system and its adjacent floodplain.

The recent research activities of François VUILLEUMIER concern the evolution of steppe birds of Patagonia, and the convergence versus non-convergence in birds living in beech (*Nothofagus*) forests of the southern hemisphere.

About the first topic, the main goal of this research is to unravel the modalities of evolution of steppe birds of Patagonia. To this end, F. VUILLEUMIER carried out field work in the Argentine Provinces of Rio Negro, Chubut, La Pampa, and Neuquén in November 1992. During a transect from the Atlantic Coast westward to the foothills of the Andes he studied target taxa in a number of genera that present speciation and distributional problems. In November 1993 he plans to carry out another transect, in southern Argentine Patagonia (Province Santa Cruz). The information gathered during these transects is being published in a series of papers, preliminary to a comprehensive analysis of zoogeography, modes of speciation, and evolutionary history of all the birds living in Patagonian steppes. Even though relatively poor in bird species, Patagonian steppes are challenging to an evolutionary biologist, because a number of taxa are either relict of early episodes of evolution, or in the process of speciating. Field work is complemented by museum studies of skins and laboratory studies of protein variability.

For the second topic, the main goal is to verify the concept that birds living in isolated patches of *Nothofagus* forests in the southern hemisphere show various instances of ecomorphological convergence, whether pair-wise convergence or community convergence. Toward this end, in the last few years all southern hemisphere forests containing *Nothofagus* have been visited at least once (southern South America, New Zealand, Tasmania, mainland Australia, New Guinea, New Britain, and New Caledonia). Furthermore, in order to obtain some kind of extra-*Nothofagus* "control", other forest areas with more or less similar bioclimatic conditions have been visited in the northern hemisphere, including some with northern beeches (*Fagus*): Denmark, Poland, and France in Europe, Japan and China in eastern Asia, northwestern Australia, and southeast Alaska and forests in New York State in North America. Field work is now virtually complete, and museum work, involving measuring large number of specimens for statistical analyses, is now underway.

San Francisco

Sylvia HOPE is preparing a publication on the systematics of the Corvidae based primarily on osteology. She is also continuing study of new fragmentary bird fossils from the Lance Formation, including a review and revision of previously described fossils. As a byproduct of this study some useful comparisons are emerging on the osteology of the shoulder girdle.

St. Louis

Now starting his third year at Washington University in St. Louis, Tab RASMUSSEN remains primarily occupied with the study of fossil mammals. There are, however, a few bird projects underway. A paper describing new Miocene birds from South America is forthcoming in a book published by the Smithsonian Institution and edited by Richard Kay

and his colleagues based on their fieldwork in the La Venta badlands, Colombia. The new La Venta bird fossils include: (1) a partial skeleton of a somewhat hoatzin-like bird that will be referred to *Hoazinoides magdalenae* Miller, 1953, known previously by a partial cranium. The new specimen comprises fragmentary remains of the coracoid, ulna, radius, carpometacarpus, tibiotarsus, tarsometatarsus, and ungual phalanges. The bird lacks hoatzin specializations such as the fused coracoid and sternum, and it has unique adaptations of the distal tarsometatarsus, thereby warranting placement in a new family, with affinities to hoatzins, touracos, and cuculids. (2) a right humerus of a new species of jacamar (Galbulidae), about the size of *Jacamerops uarea*, the largest living species of the family. (3) an entire left tarsometatarsus of a new species of limpkin (but congeneric with modern *Aramus*) found by Carlos VILLAROEL of the Universidad Nacional de Colombia. (4) the distal tarsometatarsus of a large stork, possibly related to Jabiru.

RASMUSSEN is slowly working on dozens of new bird specimens from Egypt, in collaboration with Fritz HERTEL, of the University of California, Los Angeles, and Elwyn SIMONS, of Duke University. The new Egyptian birds come from a late Eocene locality in the Fayum region, making them older than those previously described from the Oligocene beds of the Fayum. These Eocene African birds comprise mainly a diverse waterbird assemblage. Among the more interesting elements is a distal tarsometatarsus of the supposed Fayum "ratite" that will prove illuminating in phylogenetic assessments of this poorly known group.

Finally, during the early summer of 1993, RASMUSSEN initiated a long-term field project in the Uinta Basin of Utah. Fossil recovered during the first season include about one dozen associated avian post-crania from the Uinta Formation, the first birds from the type locality of the Uintan Land Mammal Age (Middle Eocene). These will be studied in the near future.

Washington

Storrs OLSON and Helen JAMES took consecutive trips to Hawaii in February in search of more extinct birds. Storrs first went to the island of Lanai to explore a lava tube that had been found the year before and recovered the first significant remains of extinct birds from Lanai: a complete moa-nalo skeleton (apparently the same *Thambetochen* as on Molokai and Maui) and two skeletons of flightless ibises. One of the ibises even had bits of skin and feathers still associated with it. The ibis with feathers is definitely a new species and the second specimen of ibis is a different species from the first, which has several interesting ramifications. Then Storrs went to hurricane-ravaged Kauai, where Iniki had done a good job of churning up some sand dunes, but exposed no significant new bones that we didn't already know about. But the storm has removed about four feet of sand from another big moa-nalo fossil in a huge sandstone boulder that Storrs had tried unsuccessfully to dig out last summer. A day with a concrete saw, hammers, chisels, and some much appreciated help from local volunteers produced a 100 pound slab of rock with a bird in it that is slowly being prepared by acid etching.

Helen JAMES collected more bird bones from lava tubes on the island of Hawaii. These included many more individuals of rails and the big flightless goose found last year, a very different crow from any seen so far, and a bizarre, very large new species of drepanidine. Helen went to Madagascar for the month of August to search for more fossil localities there.

Storrs and Helen were very pleased to have ZHOU Zhonghe, of the Institute of Vertebrate Paleontology of the Academia Sinica in Beijing, as a house guest for several weeks this spring during his visit to the Smithsonian. We shall miss his fine Chinese cooking.

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Cécile Mourer-Chauviré would like to inform the SAPE members of the publication of two new Information Letters.

TD NEWS

Taphonomy and Diagenesis Newsletter

This Newsletter is edited by Dr. Christiane DENYS and Dr. Yannicke DAUPHIN. It has been created to facilitate once or twice a year exchanges between researchers working on Taphonomy and Diagenesis of modern and fossil microvertebrate accumulations in continental domain. To receive this Newsletter, please contact:

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WISHBONE

Newsletter of the ICAZ Bird Working Group

During the first meeting of the ICAZ Bird Working Group, in Madrid, in October 1992, was decided the publication of a Newsletter, so ornitho-archaeologists could keep in touch during the long inter-conference periods. The aim of this publication is an exchange of useful information. This newsletter is open for everyone who wants to ask something to colleagues, for those who want to publish data that could help others, e.g. with identification problems, for those who want to share new publications, extraordinary finds or ideas. To receive this Newsletter, please contact:

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This information letter has been compiled by Cécile Mourer-Chauviré, Secretary of the SAPE. A contribution of ten US dollars, or the equivalent in other currencies, for assisting in defraying xerocopies and mailing expenses, will be highly appreciated (banknotes in major currencies preferred).
