

N.N. Mikloucho-Maclay's ornithological collection at the Zoological Institute in Saint-Petersburg

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A list of 20 skeletons and 28 skulls representing 19 species of birds belonging to five orders is presented. The material was collected by N.N. Mikloucho-Maclay during his three trips to New Guinea in 1871-1877, mainly during the first one (1871-1872).

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The famous biologist, ethnographer, and anthropologist N.N. Mikloucho-Maclay (1846-1888) did not conduct special research into avian faunistics or systematics. Neither did he collect skins of birds. His profound interest in morphology, especially comparative anatomy of animals, that had been formed during the years of his study under Carl Gegenbauer and Ernst Haeckel at Jena and Leipzig, was manifested in a rather small collection of bird skeletons and their fragments assembled by him during his three trips to New Guinea (1871-1877) and later (in 1886) handed over to the Zoological Museum of the Saint-Petersburg Academy of Sciences. Most of this material was collected during the first trip in 1871-1872, when he spent 15 months on the northeastern coast of New Guinea (Astrolabe Bay). Because birds were mainly used as food, the collection is mostly represented by relatively large specimens belonging to several orders. Mikloucho-Maclay used them to prepare excellent complete skeletons on ligaments and collect a series of skulls. Also, he studied the musculature, especially syringial, and made preparations of brains of pigeons and parrots, which he illustrated in his diary (Puzanov, 1952).

He was also interested in characteristics of tongue and hyoid apparatus structure, syrinx and feet of birds representing various taxonomic groups, including parrots and passerines, as evidenced by fragments of ten skeletons collected by him in 1872 and found when the present publication was being prepared.

Unfortunately, a general list of ornithological material received from Mikloucho-Maclay or information concerning the time when it had been received have not been preserved in the archives of the Zoological Institute Department of Ornithology. Although most skeletons are supplied with primary museum labels, only two of these contain a date: 1891. Part of this material (seven skeletons and 19 skulls of representatives of six species belonging to three orders) was included in the list of Mikloucho-Maclay's zoological collections compiled by Dubinin (1952).

A detailed survey of the osteological collection in the Department of Ornithology has made it possible to enlarge this list considerably. Also, in most cases, I was able to identify the specimens more accurately. The principal diagnostic traits used were the tarsus length, bill length and shape, and, in some cases, the preserved coloration of bill rhamphotheca, as well as length and shape of claws. Comparison with skins from the main collection usually allows attribution of these skeletons to certain species. Apart from the above-mentioned fragments of ten skeletons, which include cartilages of trachea and syrinx, bones of the hyoid apparatus and hind limbs, totalling 20 skeletons and 28 skulls of 19 species of five orders, have been found. Their systematic list with collection numbers, data concerning some preserved original labels, and commentaries are given below. The systematic list follows the "Check-list of Birds of the World" by J.L. Peters, Cambridge, the English names

and some data on the distribution of subspecies follow Rand & Gillard (1967).

In conclusion, an interesting detail should be noted: most skulls have round openings; 3-4 mm in diameter and with ragged margins. They are marks left by small darts from a blowpipe with which the birds had been obtained. The openings are often located only in the occipital or parietal regions which confirms published evidence concerning the local people's skill in using this weapon.

Order GALLIFORMES – Fowl-like birds

Family MEGAPODIDAE – Megapodes

Megapodius freycinet (Gaimard, 1823) – Common Scrub Hen

Two full skeletons (coll. Nos. 1447 and 2231) with small bamboo labels on which Mikloucho-Maclay probably indicated the bird's local name, "Miliaren" (in Russian). The tarsus length (63 and 67 mm) attest to the species attribution, and data on the distribution of the New Guinean subspecies of this widely-ranging polytypic species suggest that the skeletons represent *M. f. affinis* (A.B. Meyer, 1874). This form was previously regarded as a separate species.

Order COLUMBIFORMES – Pigeons, Doves, etc.

Family COLUMBIDAE – Pigeons and Doves

The first list (Dubinin, 1952) mentioned only three skulls of *Columba* sp. I found two boxes with skulls, one of them (coll. No. 2637) with four skulls of four species, another one (coll. No. 2803) with four skulls of three species, and was able to identify just two species of these seven. To identify the remaining skulls, they should be compared especially with more complete osteological collections of Columbidae. Apart from these skulls, three complete skeletons of different species of pigeons were found.

Subfamily TRERONINAE – Fruit Pigeons

Ducula pinon jobiensis (Schlegel, 1871) – Japen Imperial Pigeon

A complete skeleton on ligaments (coll. No. 2709) and two skulls (coll. No. 2803) belong to this large pigeon (tarsus length, 38.7

mm; exposed culmen, 28.5 mm). It inhabits forests of Japen Island and the northern coast of New Guinea up to Huon Gulf in the east, and also Manam and Karkar Islands.

Ducula zoeae (Lesson, 1826) – Banded Imperial Pigeon

A complete skeleton on ligaments (coll. No. 2710) of this monotypic species (tarsus length, 33.4 mm; exposed culmen, 26.5 mm).

Subfamily COLUMBINAE – Pigeons

Geopelia striata papua (Rand, 1942) – New Guinean Zebra Dove

One of the skulls in the box with coll. No. 2637 belongs to this small dove (length of exposed culmen, 14.3 mm; width of the bill at base, 3.7 mm). The bird nests in southern and eastern New Guinea, including Mikloucho-Maclay Coast.

Subfamily GOURINAE – Crowned Pigeons

Goura victoria beccarii (Salvadori, 1876) – Victoria Crowned Pigeon Beccari

A full skeleton (coll. No. 2708) with well-preserved original label: "*Goura Victoria*, N. Guinea, 1874, Maclay". Large birds (tarsus length, 104 mm) of this subspecies nest on the northern coast of New Guinea from the Siriwo River to Astrolabe Bay and also in southeastern New Guinea in the Collingwood Bay region.

Order PSITTACIFORMES – Parrots, Lories, etc.

Family PSITTACIDAE – Parrots, Lories, etc.

Subfamily CACATUAEINAE – Cockatoos

Probosciger aterrimus (Gmelin, 1788) – Palm Cockatoo

The species is represented by a full dissembled skeleton (coll. No. 922) and a complete one on ligaments (coll. No. 390), six skeletons on ligaments without skulls (coll. Nos. 2724-2729) and 11 skulls (coll. Nos. 2746-2748, 2751, 2758-2764). Most northern coast of New Guinea including Mikloucho-Maclay Coast is inhabited by the subspecies *P. a. stenolophus* (van Oort, 1911). The first list (Dubinin, 1952) included three skeletons and 12 skulls of this bird (referred to as *Microglossus aterrimus*).

Cacatua galerita (Latham, 1790) – White or Sulphur-crested Cockatoo

A full skeleton on ligaments (coll. No. 2754), skull and bones of a right wing and right hind limb on ligaments (coll. No. 2756), as well as two skulls (coll. Nos. 2723 and 2755). Specimen No. 2756 has a reddish (decoloured) heavily damaged original label made of cloth and paper with an inscription which is no longer legible. The later museum label reads: "April 1872, Maclay Coast, Otshelnichestvo Cape".

Currently, the White Cockatoos of New Guinea are attributed to a single subspecies *C. g. triton* (Temminck, 1849). Dubinin (1952) mentioned two skeletons and one skull of *Cacatua alba* (= *C. galerita*).

Subfamily PSITTACINAE – Macaws, Parrots

Psitttrichas fulgidus (Lesson, 1830) – Vulturine Parrot

The species is represented by a skull without lower mandible (coll. No. 2752). The species attribution is evidenced by a typically elongate skull and a long bill (49 mm to the fore edge of the nostril without rhamphotheca).

Larius (= *Lorius*, = *Eclectus*) **roratus** (P.L.S. Müller, 1776) – Red-sided Eclectus Parrot

Full skeleton of a male on ligaments (coll. No. 403) and skull of a female (coll. No. 2738). The sex of birds is determinable due to a well-preserved colour of rhamphotheca of the upper mandible, red in male and black in female. New Guinean birds are attributed to the subspecies *L. r. pectoralis* (P.L.S. Müller, 1776).

Comments. Another full skeleton of a small parrot with a body length measuring about 15 cm, is in the possession of the Saint-Petersburg Zoological Institute. It has a museum label with only the collector's name, "Mikloucho-Maclay". But this label is very different from other primary museum labels dating from 1891 and was apparently written much later. Apart from the dimensions (tarsus length, 11 mm; bill to cere, 13.3 mm; depth of upper mandible at fore edge of nostril, 6.8 mm; its width at the same level, 7.9 mm), the red bill rhamphotheca and the shape of the bill exclude the possibility of attributing this skeleton to parrots of New Guinea or Australia. Based on this trait

combination, this bird is most similar to representatives of the African genus *Agapornis*. There is good reason, then, to believe that this specimen must not be associated with Mikloucho-Maclay's collections.

Order CUCULIFORMES – Cuckoos, etc.

Family CUCULIDAE – Cuckoos, etc.

Subfamily CENTROPODINAE – Coucals

Centropus menbeki menbeki (Lesson & Garnot, 1828) – Great Coucal

A full skeleton on ligaments (coll. No. 2768) with original label presenting apparently the local name of the bird, "Dum" (in Russian). The identification of subspecies is based on the bird's large size: tarsus length, 63 mm; exposed bill, 45 mm; depth of bill at fore edge of nostril, 22 mm.

Order PASSERIFORMES – Perching birds

Family MELIPHAGIDAE – Honeyeaters

Philemon novaeguineae (Müller, 1843) – New Guinea Friar Bird or Leatherhead

The species is represented by a full skeleton on ligaments (coll. No. 2889). A bill compressed laterally and smoothly curved downwards with a sharp ridge somewhat widened at the base is typical of this species. The tarsus length is 39.6 mm, bill length to skull, 44 mm, and that to the fore edge of the nostril, 24 mm. Birds from Japen Island and northern coast of New Guinea from the valley of the Mamberamo River in the west up to Huon Bay in the east are attributed to the subspecies *Ph. n. jobiensis* (Meyer, 1875).

Family PARADISAEIDAE – Birds of Paradise

Paradisaea minor (Shaw, 1809) – Lesser Bird of Paradise

A full skeleton on ligaments (coll. No. 2888) with a primary label: "Bird of Paradise, 1871/72, MM Coast". It is rather similar in dimensions (tarsus length, 45.8 mm; exposed bill, 33 mm) to the related species *P. guilielmi* (Cabanis, 1888) inhabiting mountain forest of Huon Peninsula. But the angle formed with the boundary of feathers at the lower mandible and larger claws suggest that

the skeleton represents *P. minor*. Mikloucho-Maclay Coast is populated by *P. m. finschi* (Meyer, 1885).

Family **CORVIDAE** – Crows, magpies, etc.

Corvus tristis Lesson & Garnot, 1827 – Gray or Bare-faced Crow

A full skeleton on ligaments (coll. No. 2951) and a skull (coll. No. 2952) certainly belong to the birds of this monotypic species: tarsus length, 59.6 mm; exposed bill, 59.3 and 60.5 mm; bill depth at base, 26.0 and 28.0 mm. The first list (Dubinin, 1952) referred to this skeleton by an old name: *Gymnocorax senex*.

Corvus orru orru (Bonaparte, 1851) – Australian or Papuan Crow

Three skulls (coll. Nos. 2946-2948) in one box with original label "Raven" (in Russian) and a full skeleton on ligaments (coll. No. 2949) with double (cloth-and-paper) original label with a barely distinguishable inscription in ink repeated on the museum label: "Raven, March 1872, Maclay Coast, Otshel-nichestvo Cape". Information concerning locality and dimensions of birds (tarsus length, 52 mm; bill length to skull, 58-63 mm) suggest that they belong to the abovementioned

species. In Dubinin's list (1952), this skeleton was attributed to *Corvus enca* (Horsfield, 1822), Little Crow, which is smaller than the Australian Crow and, moreover, does not live in New Guinea.

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