



Else Hoff's (fl. 1907–1925) collection of birds from the island of New Britain, Melanesia, with notes on the possibly extinct rail *Gymnocrex plumbeiventris intactus* (Aves: Rallidae)

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Abstract: A collection of 29 birds from the island of New Britain is described. It was made by Else Hoff in 1908 and perhaps in surrounding years, but certainly before 1927, and is now deposited in the National Museum in Praha, Czechia.

Keywords: Historical ornithology, extinct birds, Bismarck Archipelago, German New Guinea, Papua New Guinea

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Introduction

The island of New Britain (36.520 km²) lies in northern Melanesia, north-east of New Guinea. The island is volcanic, mostly covered with tropical rain forest (Bryan & Shearman 2015).

The exploration of the bird fauna of New Britain started in the 1870s, when passing traders and missionaries, and a German scientific expedition onboard the *Gazelle* collected a few specimens that found their way to museums in London, United Kingdom (Sclater 1873, 1877), Berlin, Germany (Cabanis & Reichenow 1876), and Sydney, Australia (Ramsay 1877), respectively. Occasional collecting continued, which allowed Reichenow (1899) to publish the first comprehensive review of the avifauna of New Britain.

Currently, 214 species of birds were recorded from New Britain, including 29 vagrants and two introduced species (Tarburton 2013). Still, the avifauna of New Britain is less known, and its knowledge is based on occasional visits of collectors in the past or observers in present times (e.g. Finch & McKean 1987, Eastwood 1995, Bishop & Jones 2001, Davis et al. 2018). Thus, Else Hoff's collection from the early 20th century is a welcome addition to our knowledge of the birds of New Britain.

Museum acronyms: NHMUK = Natural History Museum, Tring, United Kingdom; NMP = National Museum, Praha, Czechia; ZMB = Museum für Naturkunde, Berlin, Germany.

The collector and her collection

Else (or Elsie) Maria Hoff was born in Praha, Bohemia, Austria-Hungary (now: Czechia), on an unknown date (probably in the 1870s–1880s) and was wife of Ernst Adalbert Hoff (*fl.* 1907–1925), with whom she lived in the Bismarck Archipelago from 1907–1921. Ernst Hoff was manager of the Maulapao plantation near Herbertshöhe (now: Kokopo; 04.34°S, 152.27°E) in northern Gazelle Peninsula of Neu-Pommern (now: New Britain) in 1907–1909, when he purchased the Kolube plantation (03.33°S, 15.78°E) south of Lambu on the western shores of Neu-Mecklenburg (now: New Ireland), becoming independent and wealthy planter (Baumann 2002, Beaulieu 2021). At that time, both Neu-Pommern and Neu-Mecklenburg were parts of the German protectorate Deutsch-Neuguinea (Hiery 2002). Following the World War I, in 1920, Deutsch-Neuguinea was mandated to Australia by the League of Nations. Subsequently, in 1921, all German settlers in New Britain were questioned by Australian authorities¹, their properties were expropriated, and nearly all German settlers were forced to leave the region (Baumann 2002). This also concerned Mr. and Mrs. Hoff, who moved to Berlin, Germany (Baumann 2002, Beaulieu 2021).

On 25 February 1925, Else Hoff donated 118 artefacts to NMP (Beaulieu 2021). We may assume that her donation of 29 bird skins to NMP took place the same day. However, the specimens were recorded in the Accession catalogue only in 1926 under numbers 3636/1926 through 3654/1926, and twenty of them were stuffed and placed on exhibit. Some specimens were left unidentified and nothing about this rare collection was published.

During my tenure as the research curator of the bird collection at NMP (2003–2018) I located all of Hoff's specimens, and reidentified them. Label data showed that five specimens had exact dates of collection (all falling in May–December 1908), that two specimens had exact locality ("Matanatar Plantation" in both cases), and that all were said to be collected in Neu-Pommern. This is in accord with the above-mentioned data on the life of Mr. and Mrs. Hoff in the Bismarck Archipelago. Note that the Maulapao plantation was adjacent to the Matanatar plantation (Collins 1925). Thus, I assume that all birds (but see comments on the *Paradisaea* specimen below) were collected during Hoff's stay in New Britain in 1907–1909.² There is no evidence that she would collect birds in New Ireland, although she did collect artifacts there (Beaulieu 2021).

Mr. and Mrs. Hoff lived in or close to Herbertshöhe (now: Kokopo; 04.34°S, 152.27°E) in northern Gazelle Peninsula of Neupommern (New Britain) in 1907–1909. At that time, Herbertshöhe was the capital of Neupommern. Considering that Germans settled only in the Gazelle Peninsula, which they deforested in part and turned into plantations (Meyer 1909, Sack 1986), it is probable that all Hoff's birds (but see below for the *Paradisaea* specimen) were collected in the Gazelle Peninsula.

Full list of Hoff's specimens is given in Appendix. The sequence of taxa, and nomenclature follow Gill et al. (2024).

Notes on selected taxa

Most of specimens collected by Hoff (see Appendix) belong to the taxa commonly found in New Britain (Mayr & Diamond 2001, Tarburton 2013). Some records deserve comments, which are given here.

1 Declarations by Mr. and Mrs. Hoff are deposited in the National Archive of Australia under numbers G257, 171, and G257, 172 (see also Nagle 2002: 18).

2 At the same time, Otto Meyer (1877–1937), German missionary, studied birds on the island of Watom, located just off the Gazelle Peninsula (Stresemann 1938). It is possible that Else Hoff and Otto Meyer knew each other.



Fig. 1. *Gymnocrex plumbeiventris intactus* (Sclater, 1869). Specimen MNP P6V-030223. Photo: J. Mlíkovský, April 2024.



Fig. 2. *Gymnocrex plumbeiventris intactus* (Sclater, 1869). Specimen MNP P6V-030223, detail of the head and neck. Photo: J. Mlíkovský, April 2024.

Metallic Pigeon *Columba vitiensis* Quoy & Gaimard, 1832

This species is known only as a vagrant in New Britain (Tarburton 2013, Baptista et al. 2020), with the first known record from 1969 (Diamond 1971). Hoff's specimen (NMP P6V-003307), probably collected during 1907–1909, is thus the first historical record of this species for New Britain.

Bare-eyed Rail *Gymnocrex plumbeiventris* (Gray, 1862)

Gymnocrex rails is a species complex inhabiting New Guinea region from Sulawesi (Schlegel 1866, White & Bruce 1986) and Talaud Islands (Lambert 1998) in the west to the mainland New Guinea in the east (Taylor & Perlo 1998). The records in Melanesia north and east of New Guinea have been limited to a single breeding record from the island of Karkar (04.64°S, 145.97°E) between New Guinea and New Britain in 1914 (Rothschild & Hartert 1915, Diamond & LeCroy 1979), and to a bird allegedly collected in Solomon Islands in the 1860s (Sclater 1869). Mayr (1933, 1949) speculated that Sclater's specimen originated from New Ireland, Bismarck Archipelago, rather than from the Solomon Islands.

Hoff's specimen from northern New Britain (NMP P6V-030223) is thus the third from the region and supports the view that *Gymnocrex plumbeiventris* inhabited, or still inhabits, Bismarck Archipelago.

The taxonomic status of the form inhabiting the Bismarck Archipelago is uncertain. Sclater (1869: 123) described the form allegedly inhabiting the Solomon Islands as *Rallus intactus*, noting its similarity to *Rallus plumbeiventris*, a species then known only from the island of Misool, Southwest Papua, Indonesia (Gray 1862).³ Subsequently, *intactus* was synonymized with *plumbeiventris* (Sharpe 1894, Mathews 1927, Taylor & Perlo 1998), but Knox & Walters (1994) restudied its holotype in NHMUK, concluding that it is different from *plumbeiventris*, and that it probably represents a valid form, perhaps a subspecies of *plumbeiventris*, inhabiting either Solomon Islands or the Bismarck Archipelago.

Sclater (1869) said that *intactus* differs from *plumbeiventris* in having bills shorter, and in slight differences in plumage coloration. The alleged difference in bill length was not confirmed (Lambert 1998),⁴ and the alleged differences in plumage coloration are difficult to assess until seasonal, sexual, age and individual variations are better understood. However, Taylor & Perlo (1998) noted that wing length in *Gymnocrex plumbeiventris* from New Guinea is 187–200 in eight specimens of both sexes, while it is 173 mm in the holotype of *intactus* (Sclater 1869; value recalculated from inches), and 180 mm in Hoff's specimen (my measurement). This indicates that the birds collected on islands north-east of New Guinea are shorter-winged than those from the mainland New Guinea, and that they belong to a form taxonomically different from that inhabiting the mainland New Guinea. Preliminarily, I suggest treating this form as a subspecies called *Gymnocrex plumbeiventris intactus* (Sclater, 1869).

Hoff's specimen was probably collected in 1907–1909 in the Gazelle Peninsula of the island of New Britain. This lends support to Mayr's (1933, 1949) conjecture that the holotype of *intactus* was collected in the Bismarck Archipelago, not in the Solomon Islands as originally thought. If so, this form is currently known from two specimens, one collected in the 1860s on an unknown island, perhaps on New Ireland, and the other collected in 1907–1909 in northernmost New Britain.⁵ It may still survive unnoticed in the Bismarck Archipelago or be extinct. If the taxonomic status of *Gymnocrex* rails from the Bismarck Archipelago is confirmed, then Hoff's specimen should be added to my catalogue of extinct and nearly extinct birds deposited in NMP (Mlíkovský 2012).

3 The holotype of *intactus* (NHMUK 1887.1.20.12; Warren 1966) was figured by Sclater (1869, pl. 10), and Gould & Sharpe (1888, unnumbered plate; see text to that plate).

4 In Hoff's specimen, the bill has a length 48.5 mm (exposed culmen) and 28.3 mm (from the anterior end of nostrils); my measurements.

5 The specimen from the Karkar Island (formerly Dampier Island) probably belongs to the nominotypical *plumbeiventris*, although its bill is extremely short (Lambert 1998).

Variable Goshawk *Accipiter hiogaster* (S. Müller, 1841)

As judged from body size and coloration (cf. Ferguson-Lees & Christie 2001, Hoyo et al. 2020), Hoff's undated specimen (NMP P6V-042388) belongs to the subspecies *A. h. dampieri* (Gurney, 1882), an endemic of New Britain and satellite islands (Ferguson-Lees & Christie 2001, Hoyo et al. 2020). Its size shows that it is a male (wing length = 176 mm in the museum specimen).

Raggiana Bird-of-paradise *Paradisaea raggiana* (Sclater, 1873)

There are no modern records of *Paradisaea* birds-of-paradise from Bismarck Archipelago, including the island of New Britain. However, ZMB possesses a specimen of *Paradisaea minor* Shaw, 1809 (ZMB 2000.11239) allegedly from "Thileniushafen" (06.28°S, 150.32°E) in southern New Britain, but this record is considered incorrect (Stelbrink et al. 2022).

Hoff's specimen (NMP P6V-041279) is a male, collected on 2 August 1908 at an unspecified locality. *Paradisaea raggiana* is distributed in eastern New Guinea, i.e. close to New Britain (Stelbrink et al. 2022). Its occurrence in New Britain is thus possible. Considering that birds of the forests of New Britain are still less known, it is possible that a population of *P. raggiana* lives there, or at least was living there in the early 20th century. On the other hand, skins of the birds-of-paradise were traded since ever (Stresemann 1954, Andaya 2017), and it is not possible to exclude the possibility that Hoff was given or purchased the specimen from a trader or another person and that the specimen was collected in New Guinea, not in New Britain. However, there is no evidence that Hoff collected or obtained birds from elsewhere that in New Britain, so that her *Paradisaea* specimen should be preliminarily understood as a possible record from New Britain.

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APPENDIX

Full list of Hoff's specimens. The sequence of taxa, and nomenclature follow Gill *et al.* (2024).

HEMIPROCNIIDAE

Hemiprocne mystacea (Lesson & Garnot, 1827): NMP P6V-122126 (skin)

CUCULIDAE

Chrysococcyx lucidus (Gmelin, 1788): NMP P6V-102089 (mount)

Centropus violaceus (Quoy & Gaimard, 1832): NMP P6V-002408 (mount)

COLUMBIDAE

Columba vitiensis Quoy & Gaimard, 1832: NMP P6V-003307 (mount)

Ducula rubricera (Bonaparte, 1854): NMP P6V-109086 (skin)

RALLIDAE

Hypotaenidia philippensis (Linnaeus, 1766): NMP P6V-030225 (mount) and P6V-100401 (mount)

Gymnocrex plumbeiventris (G.R. Gray, 1862): NMP P6V-030223 (mount)

ACCIPITRIDAE

Accipiter hiogaster (S. Müller, 1841): NMP P6V-042388 (mount).

Icthyophaga leucogaster (Gmelin, 1788): NMP P6V-101014 (skin; ad.)

BUCEROTIDAE

Rhyticeros plicatus (Pennant, 1781): NMP P6V-102540 (skin), and P6V-109090 (skin; ad. ♀)

ALCEDINIDAE

Todiramphus macleayii (Jardine & Selby, 1830): NMP P6V-002500 (mount).

Todiramphus sanctus (Vigors & Horsfield, 1827): NMP P6V-002514 (mount)

Ceyx lepidus (Temminck, 1836): NMP P6V-002503 (mount)

MEROPIIDAE

Merops philippinus Linnaeus, 1767: NMP P6V-002579 (skin)

Merops ornatus Latham, 1801: NMP P6V-002575 (mount)

PSITTACIDAE

Electus roratus (P.L.S. Müller): NMP P6V-102025 (skin; ♀), and P6V-102026 (skin; ♂)

Lorius hypoinochrous (G.R. Gray, 1859): NMP P6V-041371 (mount; collected on 2 Aug. 1908)

Trichoglossus haematodus (Linnaeus, 1771): NMP P6V-041360 (mount)

PITTIDAE

Erythropitta erythrogaster (Temminck, 1823): NMP P6V-002600 (mount; juv.), P6V-002601 (mount), and P6V-122127 (skin; collected on 20 Dec. 1908)

PARADISAEIDAE

Paradisaea raggiana (Sclater, 1873): NMP P6V-041279 (mount; ♂, collected on 2 Aug. 1908)

NECTARINIIDAE

Leptocoma aspasia (Lesson & Garnot, 1828): NMP P6V-104932 (mount; ♂, collected on 27 May 1908 at Matanatar Plantation), and P6V-104933 (mount; ♂, collected on 27 May 1908 at Matanatar Plantation)

Cinnyris jugularis (Linnaeus, 1766: NMP P6V-104935 (mount; ♂), and P6V-104936 (mount; ♂)