

NOTE XI.
THE BIRDS OF BILLITON.

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The Island of Billiton is situated between Sumatra, Borneo and Java. From a geological point of view, it may be considered to be a continuation of the chain, formed by the Malay Peninsula, the Mountains of the Riouw- and Linga Archipelago and of the Island of Banka, from which latter it is separated by Strait Gaspar, while the tolerably broad Karimata Passage separates it from Borneo.

Although Billiton lies in the centre of a zoologically

*) Our readers will remember the communication in the Notes of last year, from the hand of Dr. Jentink, on the Mammals collected by Dr. A. G. Vorderman on the Island of Billiton, during the month of June 1888. Shortly afterwards the well-known Ornithologist of the Malay Archipelago published the ornithological results of the same journey, in a paper: *De vogels van Billiton*, in *"Natuurkundig Tijdschrift voor Nederlandsch Indië"* (deel L (1890), pp. 410—519). As the Mammals above mentioned are already published in our Notes, and the Natuurkundig Tijdschrift not being easily accessible to every Ornithologist, the mentioned paper, moreover, being printed in Dutch, and ornithological investigations having been the principal reason of Mr. Vorderman's visit to the island, it may be advisable and Mr. Vorderman kindly allows to publish here a brief extract from this interesting paper. The list of Birds will immediately be followed by another, enumerating the Lepidopterous Insects collected on the same trip, prepared by Mr. P. C. T. Snellen, and originally published in the *"Tijdschrift der Nederlandsche Entomologische Vereeniging"* (vol. XXXIII, p. 279, pl. 12).

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tolerably well-explored region, the fauna of this island was still unknown. That was the reason for my visit to the island in the month of June 1888, during which time I not only travelled through the greater part of it, but also chanced to cross to the neighbouring Island of Mendanao; where I spent three days in the vicinity of the light-house, situated on the mountain-ridge. This tolerably large island belongs to the same geological formation as Billiton, and is separated from this latter island by a narrow passage.

The ornithological collection, brought together during my stay on Billiton and Mendanao, contains not a single species of which the habitat is restricted to these islands. Of the 93 species, contained in the list, there are 32 which are not found in Java, 10 which are not found in Borneo, 8 are not known from Malacca, and only 5 not from Sumatra. The avifauna of Billiton, therefore, seems to agree more with that of Sumatra than with that of Malacca, less with that of Borneo, and the least with that of Java. To my and my huntsmen's astonishment we found no crows on the islands, nor any species of *Ploceus*, nor *Sturnopastor jalla* and *melanopterus*, nor *Acridotheres griseus*, all of them species which are tolerably common in Java.

FAM. FALCONIDAE.

1. *Onychaetus malayensis* (Reinw.). Billiton.
2. *Haliastur indus* (Bodd.). Billiton, Mendanao. Native name: *Lang*.

FAM. STRIGIDAE.

3. *Scops lempiji* (Horsf.). Billiton, one specimen.
4. *Ketupa javanensis* (Less.). Billiton, one specimen.

FAM. PSITTACIDAE.

5. *Palaearnis longicauda* (Bodd.). Native name: *Bajang*. Very common on both islands, generally 10

to 15 specimens together, becomes very tame and is often kept as cage-bird by the natives.

6. *Loriculus galgulus* (Linn.). Native name: *Kelin-sak*. Billiton, Mendanao, nesting in hollow trees.

FAM. TROGONIDAE.

7. *Pyrotrogon duvaucelli* (Temm.). Native name: *Pandai dare*. Billiton.

FAM. CAPITONIDAE.

8. *Chotorea versicolor* (Raffles). Native name: *Toet-toet*. Very common on both islands, all day long producing the monotonous sounds; too-too tooot, repeated several times after each other.

FAM. PICIDAE.

9. *Jyngipicus fusco-albidus*, Salvad. Billiton, one specimen.
10. *Callolophus malaccensis* (Lath.). Billiton, two specimens.
11. *Meiglyptes tukki* (Less.). Native name: *Platok badoek*. Billiton, 3 males and 1 female obtained.
12. *Micropternus brachyurus* (Vieill.). Native name: *Platok kidjang*. Very common on both islands.
13. *Sasia abnormis* (Temm.). Billiton, where it seems to be a rare species. Only one specimen obtained.

FAM. CUCULIDAE.

14. *Cacomantis sepularis*, S. Müll. Billiton. One specimen obtained.
15. *Rhopodytes sumatranaus* (Raffl.). Native name: *n'Doroe*. Very common on both islands, and not shy at all.

FAM. BUCEROTIDAE.

Buceros species. Billiton. On a high tree, I saw once two hornbills, which, with the aid of my spyglass, easily

were recognized to be *Buceros rhinoceros*. It would have been very interesting to make out if they belonged to the Sumatran form or to *B. rhinoceroides* Temm., from Borneo. Unfortunately I was not happy enough to have a shot at them, and the question, therefore, could not be dissolved.

FAM. MEROPIDAE.

16. *Merops bicolor*, Bodd. Native name: *Birik*. Not rare in Billiton.

FAM. ALCEDINIDAE.

17. *Alcedo meninting*, Horsf. Native name: *Peninting itam*. Billiton, along the small rivulets, but much rarer than the very common *Ceyx innominata*.
18. *Pelargopsis leucocephala* (Gm.). Native name: *Tidaut kalak*. Along the banks of the Lingang River, Billiton.
19. *Ceyx innominata*, Salvad. Native name: *Peninting merah*. Billiton, along rivulets.
20. *Caridagrus concretus* (Temm.). Native name: *Kekoewai*. Not rare in the interior of Billiton.
21. *Sauropatis chloris* (Bodd.). Native name: *n'Kakë*. Billiton and Mendanao, along the beach.
22. *Sauropatis sancta* (Vig. & Horsf.). Native name as above. Billiton and Mendanao.

FAM. CORACIIDAE.

23. *Eurystomus orientalis* (Linn.). Native name: *Tiong batoe*. Tolerably common on both islands. Iris brown, bill and feet lively red, eyelids red.

FAM. EURYLAEMIDAE.

24. *Eurylaemus javanicus*, Horsf. Native name: *Sempoer oedjan*. Tolerably common all over in Billiton; his voice is compared by the sound of falling rain.
25. *Eurylaemus ochromelas*, Raffl. Native name: *Sempoer oedjan darat*. Billiton.

26. *Cymborhynchus macrorhynchus* (Gm.). Native name: *Sempoer oedjan soengai*. Billiton. Two specimens, both with white spots on the three outermost pairs of tailfeathers.

FAM. CAPRIMULGIDAE.

27. *Caprimulgus affinis*, Horsf. Native name: *Ko-long*. Common in Billiton.
28. *Caprimulgus concretus*, Bp. Native name: *Kolong*. One specimen from Billiton.

FAM. CYPSELIDAE.

29. *Collocalia fuciphaga* (Thunb.). Billiton. I shot one specimen on the plain at the northern foot of the Tadjem Mountain. No informations about the nesting places could be obtained from the natives.
30. *Dendrochelidon longipennis* (Rafin.). Native name: *Kelajang kclépitoet*. Billiton, very common near Begantong in the interior.

FAM. HIRUNDINIDAE.

31. *Hirundo javanica*, Sparrm. Native name: *Kelajang*. Billiton, Mendanao. Plentiful at Tandjong Pandan, where it is found nesting in the open galleries of the European dwelling-houses.
32. *Hypothymis azurea* (Bodd.). Native name: *Boeroeng taroem*. Very common in Billiton.
33. *Leucocerca javanica* (Sparrm.). Native name: *Gandarassi*. Billiton, not common.
34. *Terpsiphone affinis* (Hay). Native name: *Boeroeng tali kepang*. Billiton.

FAM. ARTAMIDAE.

35. *Artamus leucorhynchus* (L.). Billiton, Mendanao.

FAM. CAMPEPHAGIDAE.

36. *Pericrocotus ardens*, Boie. Billiton.

37. *Irena cyanea*, Begbei. Native name: *Mas kapor*.
Mendanao.

FAM. LANIIDAE.

38. *Myiolestes obscurus* (Horsf.). Billiton. One male collected.
39. *Hyloterpe brunneicauda*, Salvad. Billiton.

FAM. NECTARINIIDAE.

40. *Prionochilus percussus* (Temm.). Native name:
Pentis koembang. Billiton, not very common.
41. *Prionochilus thoracicus* (Temm.). Billiton.
Only one specimen obtained.
42. *Prionochilus maculatus* (Temm.). Native name:
Pentis koedong. Billiton.
43. *Dicaeum trigonostigma*, Scop. Native name:
Pentis, of the female: *Pentis binaloeng*. Billiton.
44. *Aethopyga sifaraja* (Raffl.). Native name:
Kelajoet. Billiton, not common.
45. *Nectarophila hasseltii* (Temm.). Native name:
Kelajoet. Billiton.
46. *Chalcostetha insignis* (Jard.). Native name:
Kelajoet. Billiton.
47. *Anthreptes malaccensis* (Scop.). Native name:
Kelajoet. Billiton, Mendanao.
48. *Chalcoptaria singalensis* (Gm.). Native name:
Kelajoet. Billiton.
49. *Arachnothera longirostra* (Lath.). Native name:
Tjotjapan. Billiton.

FAM. MELLIPHAGIDAE.

50. *Jora viridissima*, Bp. Native name: *Poenai ara*.
Billiton, common.
51. *Phyllornis sonneratii* (Jard. & Selby). Native
name: *Boeroeng daun*. Billiton.
52. *Phyllornis icterocephala*, Less. Native name:
Boeroeng daun. Billiton.

FAM. BRACHYPODIDAE.

53. *Pycnonotus analis* (Horsf.). Billiton.
 54. *Pycnonotus plumosus*, Blyth. Native name:
 Berébë. Billiton.
 55. *Pycnonotus pusillus*, Salvad. Native name:
 Berébë. Billiton.
 56. *Jole olivacea*, Blyth. Native name: *Berébë*. Bil-
 liton; Iris in adult and young white.
 57. *Brachypodius melanocephalus* (Gm.). Native
 name: *Pélintang*.
 58. *Criniger phaeocephalus* (Hartl.). Native name:
 Berébë irang. Billiton.

FAM. TIMELIIDAE.

59. *Mixornis gularis* (Raffl.). Native name: *Sepom-pong*. Billiton.
 60. *Cyanoderma erythropterum* (Blyth). Billiton.
 61. *Macronus ptilosus*, Jard. & Selby. Native name:
 Sepompong gadoek. Billiton.
 62. *Drymocataphus nigricapitatus* (Eyt.). Native
 name: *Boeroeng pélandoek*. Billiton.
 63. *Brachypteryx malaccensis*, Hartl. Native
 name: *Boeroeng pélandoek*. Billiton.
 64. *Setaria pectoralis* (Salvad.). Billiton.

FAM. PITTIIDAE.

65. *Pitta cucullata*, Hartl. Native name: *Popak*.
 Billiton, common.

FAM. SYLVIIDAE.

66. *Orthotomus borneensis*, Salvad. Native name:
 Kroedjik. Billiton.
 67. *Orthotomus cineraceus*, Blyth. Native name:
 Kroedjik. Billiton.
 68. *Orthotomus ruficeps* (Less.). Native name:
 Kroedjik. Billiton.

69. *Orthotomus flavoviridis*, Moore. Native name: *Kroedjik*. Billiton. Hitherto only known from Malacca.
70. *Cisticola cursitans* (Frankl.). Native name: *Ketoppi*. Billiton.

FAM. SAXICOLIDAE.

71. *Kittacincla macroura* (Gm.). Native name: *m' Boeroek*. Billiton.
72. *Copsychus mindanensis* (Gm.). Native name: *Moerai*. Billiton, Mendanao.

FAM. STURNIDAE.

73. *Calornis chalybaea* (Horsf.). Native name: *Perling*. Billiton.
74. *Gracula javanensis* (Osb.). Native name: *Tiong*. Billiton, Mendanao.

FAM. ORIOLIDAE.

75. *Oriolus indicus*, Briss. Billiton.

FAM. TRERONIDAE.

76. *Treron nasica*, Schleg. Native name: *Poenai koenok*. Billiton. The colors of the naked parts are as follows: anterior part of bill Naples-yellow, posterior part wine-red. Loral part, space round the eye and behind the latter pale yellowish green, iris orange yellow, feet wine-red, nail pale horn-color, bottom of feet dirty yellow. On the plate, contained in the work on the Sumatra-Expedition, the colors of these parts are inaccurate.
77. *Treron vernans* (Linn.). Native name: *Poenai daun*. Billiton, Mendahao.
78. *Treron fulvicollis* (Wagl.). Native name: *Poenai sawang*. Billiton.
79. *Ptilonopus jambu* (Gm.). Native name: *Poenai djamboe*. Billiton.

80. *Carpophaga aenea* (Linn.). Native name: *Pēr-gum*. Billiton, Mendanao.

81. *Carpophaga bicolor* (Scop.). Billiton.

FAM. COLUMBIDAE.

82. *Spilopelia tigrina* (Temm.). Native name: *Tē-koekoer*. Billiton.

FAM. GOURIDAE.

83. *Chalcophaps indica* (Linn.). Native name: *Limbokan*. Billiton.

84. *Calloenas nicobarica* (Linn.). Native name: *Boeroeng djoenai*. This pigeon is not found in Billiton, but on some small neighbouring islands, for instance in Poeloe Lima in the Gaspar Strait, where no beasts of prey and no monkeys are found.

FAM. ROLLULIDAE.

85. *Rollulus roulroul* (Scop.). Native name: *Siauw*. Billiton.

FAM. PERDICIDAE.

86. *Areoturnix plumipes* (Hodgs.). Native name: *Poejo*. Billiton, one specimen.

87. *Excalfactoria chinensis* (Linn.). Billiton. A male specimen obtained.

FAM. GLAREOLIDAE.

88. *Glareola isabella*, Vieill. Billiton.

FAM. SCOLOPACIDAE.

89. *Numenius phaeopus* (Linn.). Billiton and Mendanao.

FAM. ARDEIDAE.

90. *Herodias intermedia* (v. Hasselt). Billiton. One specimen shot on the Lingang River.

91. *Butorides javanica* (Horsf.). Native name:
Roetjau. Billiton.

FAM. CICONIIDAE.

92. *Leptoptilos javanicus* (Horsf.). Native name:
Bango. Billiton, on the sand-banks near Cape Roe.

FAM. PELECANIDAE.

93. *Fregata aquila* (Linn.). Native name: *Bientajong*.
Billiton. On the neighbouring Island of Lankwas
and probably on other small islands, this bird
is passing the night in great number. The fact,
that never a nest of these birds was found, caused
the belief amongst the natives, that this bird flies
so extremely high up in the air to drop his egg,
that this latter breeds out while dropping, and
that, in stead of the egg, the young bird reaches
the sea.