

the other hand, a distinct tendency toward Molossine characters; while the ear, in all the essentials of structure, is practically identical with that of some of the species of *Nyctinomus*. Probably the questions suggested by this combination of peculiarities can only be answered after detailed study of the skeleton.

The type specimen will be presented by Mr. Thomas to the British Museum* and the spirit-specimen from Chosica to the United States National Museum.

LXXV.—*Reptiles and Batrachians collected in German New Guinea by the late Dr. Erik Nyman.* By Dr. EINAR LÖNNBERG.

DURING his visit to New Guinea last year my late friend, the Swedish botanist Dr. Erik Nyman, made a collection containing the following reptiles and batrachians, which were sent home to Upsala. It is not very large, which can easily be understood, as Dr. Nyman laid most stress on making large botanical collections, in which he succeeded. Nevertheless the zoological collection treated of in these pages is of great value, as it includes several forms new to science and also adds to the zoogeographical knowledge. All the specimens were collected in German New Guinea. The following geographical names are found on the labels:—

Stephansort.

Simbang.—In a bay at the outlet of a river, a missionary station on a hill 50 metres above the sea-level.

Sattelberg.—A missionary station about 800 metres above the sea.

Friedrich Wilhelms Hafen.

Most of the specimens are from Sattelberg. Some of the labels had, however, fallen off during transit. "Sattelberg" was written on all except one, on which "Fr. Wilhelms Hafen" was inscribed. Consequently one of the specimens recorded in this paper, for which no exact locality is given, is from Friedrich Wilhelms Hafen, but all the others are from Sattelberg. In those instances where the locality is indicated it is quite certain, and quoted from an original label

* [B.M. no. O. 3. 1. 101.—O. T.]

tied to the specimen. The fauna of Sattelberg is particularly interesting, because it is to be regarded as most typical for the interior of German New Guinea, and from that place the best specimens of the collection have been obtained.

REPTILIA.

LACERTILIA.

Gymnodactylus pelagicus, Gir.

One example, Stephansort.

Gymnodactylus louisiadensis, De Vis.

Description.—Head large; snout longer than the orbit, the diameter of which is nearly equal to its distance from the nostril, but a little shorter than its distance from the ear-opening; forehead concave, loreal region also concave, especially anteriorly; ear-opening roundish, about one third of the eye. Body and limbs rather elongate. Digits somewhat depressed at the base, strongly compressed distally. Head granular, with small tubercles on the temporal, occipital, and posterior part of parietal regions. Rostral subquadrangular, its height being about three fourths of its breadth, with a deep median cleft above; a large supranasal, separated from its fellow by a small azygous shield; nostril pierced between the rostral, the supranasal, the first upper labial, and three or four small granules; twelve upper and ten to twelve lower labials; symphyseal triangular; two pairs of chin-shields, median largest and forming a long suture behind the symphyseal; throat granular. Upper surface of arm above the elbow covered by subimbricate scale-like granules; with this exception, body and limbs covered above with small granules intermixed with small, round, feebly keeled tubercles; scales covering a fold extending on each side of the body, from axilla to groin, enlarged to similar tubercles. Ventral region covered by scales, larger and more imbricate towards the middle of the body, where their diameter is considerably greater than that of the dorsal tubercles. Male with a long uninterrupted series of femoral and præanal pores, about 30 on each side, forming a right angle in the middle, but (unlike the condition in *G. Lorix*) this series is not preceded by any additional præanal pores. A distinct præanal groove. Tail cylindrical, tapering, covered by a heterogeneous lepidosis. The proximal third bears the same kind of tubercles as on the back, but the granules between them are larger, scale-like, and subimbricate. Distally the tubercles disappear and the

scales become transversely arranged, more or less. On the lower side there is a median series of transversely enlarged shields. Reproduced tails have a less regular lepidosis. Greyish brown above, a broad, dark brown, light-edged band from eye to eye over the nape; a saddle-band of the same kind over the shoulders, and two similar ones behind each other on the back; the male with a third similar band across the loins. Tail with broad dark brown or blackish rings, which are less regular on the lower side. Lower parts of body and limbs uniformly brownish white (in spirit). Two smaller specimens, probably young of the same kind, are brown above, with narrow undulated bands of a darker shade across the back; tail as in the large specimens.

	♀. millim.	♂. millim.
Total length	185	203
Head	27	33
Width of head	19	23
Body	63	84
Tail	95	86*

One male, two female, and two young specimens from Sattelberg.

Gonyocephalus dilophus, Dum. & Bibr.

Two specimens, Sattelberg.

Gonyocephalus modestus, Meyer.

One specimen.

Varanus indicus, Daud.

A young specimen.

Lygosoma elegantulum, Ptrs. & Dor.

Three specimens.

Lygosoma jobiense, Meyer.

One specimen.

Lygosoma Baudinii, Dum. & Bibr.

One specimen.


* Distally reproduced.

Lygosoma rufescens, Shaw.

One specimen.

OPHIDIA.

Chondropython viridis, Schleg.

"Yamomong." Two specimens from Sattelberg. The larger is dark bluish black (in spirit), with small, widely scattered, yellow spots, which usually only occupy one scale. These spots are not systematically arranged, and are found as well on the back as on the sides. The scales in three or four of the outer rows are edged with yellow, and those in the series next to the ventrals are completely yellow, like the latter. The young specimen is entirely different in colour, being yellow with red markings. These are partly regular. A streak running from the temporal region through each eye and joining that from the other side just above the rostral; a short transverse streak between the eyes; a -shaped band on the parietal region; a round spot on the nose and two elongate rings in front of the parietal band; a longitudinal median streak beginning on the nape and extending to the tail; in connexion with the latter small subtriangular rings, often alternating with each other and with the tips pointing downwards; on the flanks numerous small rings and round spots of a paler colour than the other markings. The tip of the tail is provided with dusky spots. All these markings make the specimen deserve the epithet "beautiful" written by the collector on the label; but it seems peculiar that the young animals should have such a striking coloration, when that of the full-grown animal might be termed protective. The body of this young snake is extremely compressed. At the middle it is fully 2 centim. deep, but hardly 1 centim. broad. The back is compressed to an edge.

Enygrus asper, Gthr.

Two specimens from Stephansort.

Tropidonotus Mairii, Gray.

Two specimens, both with the frontal once and two thirds as long as broad. The number of ventrals resp. 145 and 154, and the number of caudals resp. 66 and 88.

Stegonotus modestus, Schleg.

Two specimens.

Dendrophis calligaster, Gthr.

Two specimens, one resembling var. D in Boulenger's 'Catalogue of Snakes,' the other var. G. (*ibid.*). Both are from Simbang.

Dipsadomorphus irregularis, Merr.

Two adult and one young specimen from Simbang.

PSEUDAPISTOCALAMUS, gen. nov.

This genus is allied to *Apistocalamus*, Blgr., and *Pseud-elaps* (D. & B.), Blgr.

Maxillary extending forwards fully as far as the palatines, with two grooved teeth, anteriorly followed by four grooved teeth, gradually, but feebly, decreasing in length. Head small, depressed, hardly distinct from neck. Eye very small, with round pupil. Nostril pierced in a single nasal, but the margin of the latter bordering the first labial and the internasal comparatively narrow; a large præocular, in contact with the single nasal. Body cylindrical; scales smooth, in 15 rows; ventrals rounded. Tail short; subcaudals in two rows.

Pseudapistocalamus Nymani *, sp. n.

Snout short, bluntly rounded. Rostral broader than deep, visible from above, but the visible portion hardly one fifth of its distance from the frontal; internasals rather small, about half as long as the præfrontals. Præfrontals not quite so long as the frontal. Frontal almost as broad as long, almost as long as its distance from the rostral, much shorter than the parictals; præocular single, longer than deep, forming a suture with the nasal. Normally two postoculars, upper much larger than lower, sometimes both fused to one. Temporals 1 + 2; six (or seven) upper labials, third and fourth entering the eye, sixth largest, sometimes divided; five lower labials, three in contact with the anterior chin-shields; posterior chin-shields smaller, more or less separated by a scale, which sometimes reaches the anterior chin-shields, sometimes

* In memory of the late Dr. Erik Nyman.

extends only to the middle of the posterior ones. Scales smooth, in 15 rows. Ventrals 196-205; anal divided; subcaudals 26-29. Dark bronzy brown (almost blackish in the largest specimen), somewhat iridescent above, lighter on the flanks; ventrals and subcaudals blackish brown, edged with light grey (in the youngest specimen the outer rows of scales coloured in a similar manner). Upper lip and a spot on each side of the nape yellowish, as is also a transverse band across the prefrontals from lip to lip, although the latter is less pronounced.

The largest specimen measures about 445 millim. in total length; tail about 47 millim. This specimen is a female and contains eggs measuring about 13 millim. in length.

Three specimens from Sattelberg.

BATRACHIA.

E C A U D A T A.

Rana papua, Less.

Three large and five half-grown specimens from Sattelberg. The interorbital breadth compared with that of the upper eyelid seems to be variable, and to be greater in old specimens.

Cornufer corrugatus, A. Dum.

Several specimens from Sattelberg.

Mantophryne robusta, Blgr.

A fine specimen from Sattelberg. This species was described in 1898 from specimens collected on St. Aignan Island, British New Guinea.

Hyla eucnemis, sp. n.

Tongue broadly heart-shaped, nicked and free behind. Vomerine teeth in two large but confluent groups, behind the level of the choanæ, which are large, but not quite so large as the patches of vomerine teeth. Head large, about as broad as long. Snout subtriangular, the tip truncate, longer than the diameter of the orbit; canthus rostralis very distinct, curved; loreal region concave. Interorbital space broader than the upper eyelid. Tympanum distinct, about two thirds the diameter of the eye. A glandular fold extending from the eye backwards above the tympanum. Three outer fingers extensively webbed, the membrane reaching the disks of the

second and fourth; disks about the same size as the tympanum; toes entirely webbed; subarticular tubercles well developed. The hind limb being carried forward, the tibio-tarsal articulation reaches just beyond the eye. Upper surfaces of body and head very minutely granulate; belly and lower surfaces of thighs coarsely granulate. Throat covered with scattered warts; a series of similar warts along the margin of the lower jaw. A well-developed denticulated fringe along the outer side of the forearm and the outer finger; a similar fringe along the outer side of the tarsus and the outer toe. Heel with a triangular dermal appendage; some smaller dermal flaps near the vent. Colour (in spirit) dark plum above, uniform, with the exception of some very indistinct cross-bands on the hind legs; light below. The largest specimen measures 67 millim. from snout to vent.

Two specimens from Sattelberg.

With regard to the great development of the web between the fingers, this species resembles *Hyla gracilentata*, Ptrs., but differs from it in so many characteristics that there can hardly be any close relationship between them.

Hyla dolichopsis, Cope.

A large specimen from Sattelberg, and a young from which the following notes are taken:—

The vomerine teeth being wanting, this little frog might be classed as belonging to the genus *Hylella*.

Tongue almost round, nicked and free behind. Head longer than broad. Snout longer than the eye; canthus rostralis indistinct, rounded; loreal region concave. Interorbital space much broader than the upper eyelid. Tympanum distinct, two thirds the diameter of the eye. Fingers webbed at the base; toes nearly entirely webbed. Disks smaller than the tympanum. The hind limb being carried forward, the tibio-tarsal articulation reaches the tip of snout. Upper surface of head granulate; back and upper surface of fore legs also granulate, but less coarsely; a fold over the tympanum. Belly coarsely granulate; lower surface of thighs less so. Colour (in spirit) dark bluish brown, light below; a white streak along the margin of the lower jaw to the axilla; a less distinct similar streak along the outer side of the tarsus.

Hyla obsoleta, sp. n.

The most striking characteristic of this form is that the tympanum is completely covered by the granular skin, so that no trace of it can be seen outwardly.

Tongue broadly rounded anteriorly, nicked and free behind. Vomerine teeth in two small well-separated groups between the choanæ. Snout subtriangular, longer than the diameter of eye, truncate at the tip; canthus rostralis distinct; loreal region concave; interorbital space broader than the upper eyelid. Fingers with a short web at the base; toes nearly entirely webbed; disks about half the diameter of the eye. A slight cutaneous fold with a row of tubercles along the outer side of the forearm; a less pronounced row of tubercles along the outer side of the tarsus; a short dermal appendage at the heel. The hind limb being carried forward, the tibio-tarsal articulation reaches beyond the snout. Upper surfaces minutely granulate; a fold from the eye to the axilla; another fold across the throat. Belly and lower side of thighs granulate. Colour (in spirit) dark brown above, light below, without markings. From snout to vent 34 millim.

A single specimen from Simbang.

Hyla impura, Peters & Doria.

Habit slender. Tongue subelliptic, slightly nicked and free behind. Vomerine teeth in two obliquely transverse series between the choanæ. Head longer than broad; snout longer than the diameter of the eye, rather acuminate; canthus rostralis angular, loreal region concave; interorbital space broader than the upper eyelid. Tympanum distinct, but small, about half the diameter of the eye. Fingers nearly free, a short web at the base of the outer fingers. Second finger longer than the first, which has a brown wart on its inner side in the male; disks of fingers somewhat smaller than the tympanum. Toes broadly webbed, the web reaching the disks of the fifth and third toes; disks of the toes smaller than those of the fingers; subarticular tubercles well developed. A large inner metatarsal tubercle connected by a short web with the hallux, thus producing the impression of a rudimentary toe; another small metatarsal tubercle at the base of the third toe. The hind limb being carried forward along the body, the tibio-tarsal articulation reaches between the eye and the snout. A cutaneous fold along the side from above the tympanum, another fold across the throat. Skin minutely granular above, coarsely granular on the belly and under the thighs; scattered granules on the throat and a row of similar granules along the forearm. Greyish brown (in spirit), with some irregular darker brown markings; there is, however, no anal blotch as described in *H. impura*.

This species is represented by a single female specimen

from Sattelberg, which agrees well with *Hyla impura* as described by Mehely (Termeszetr. Füzetek. 1898).

The herpetology indicates, as other branches of zoology, the mixed origin of the fauna of Papuasia. There are ancient forms, such as Gekkonidæ, Typhlopidae, and Boidæ, the members of which have had time to become widely distributed, cosmopolitan so far as the climatical conditions allow it. Others originating from Asia reach their extreme limit, in a south-easterly direction, in Papuasia (and Australia), as, for instance, *Dendrophis*, *Dipsadomorphus*, *Tropidonotus**, and Ranidæ. Another group has reached New Guinea from Australia, and there become checked from further distribution: Hylidæ is typical in this respect. This family, being chiefly † Australian and South-American, has extended from the latter to North America, and from there to Eurasia, as its distribution clearly shows. This family is thus a typical representative of Australia in the fauna of Papuasia. But the great number of endemic genera and species in the herpetological fauna of Papuasia indicates its long isolation.

BIBLIOGRAPHICAL NOTICE.

The Story of Bird-life. By W. P. PYCRAFT.
London: George Newnes, Ltd., 1900. Pp. 244.

THIS recent addition to the "Library of Useful Stories" is by a rising ornithologist whose name is well known to specialists by the admirable work which he is doing in the physiology and comparative anatomy of birds. We believe that this is about his first appearance before the general public, and we hope it will not be the last, for he has succeeded in compressing a large amount of useful elementary information respecting birds, much of which is not easily accessible in a convenient form elsewhere, into a very moderate compass. The structure of birds, especially of the wings and feathers, their courtship, nests, migration, geographical distribution, pedigrees, &c. are discussed in an easy and attractive style in twelve chapters. There is also a series of text-illustrations, among others a restoration of *Archæopteryx*, and two full-page illustrations, "The summer home of the Ruff and Reeve" and "The love-display, or 'showing off,' of the Great Bustard, *Otis tarda*." Those interested in the latter subject will find a beautiful group of Great Bustards in the Ornithological Gallery of the Natural History Museum at South Kensington. We congratulate Mr. Pycraft on the production of this interesting little book, for it is not every specialist who is able to write successfully and popularly on his subject, as well as scientifically.

W. F. K.

* The two former perhaps on driftwood or by the agency of man, the last by swimming.

† Like *Cystignathidæ*.