

## ON NEW OR RARE VERTEBRATES FROM THE HERBERT RIVER, NORTH QUEENSLAND.

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### HALMATURUS sp.

The pademelon of the Herbert district is a member, apparently undescribed, of the *thetidis* group—of which it has the familiar haunch-stripe and red shoulders. It seems to resemble greatly *H. Wilcoxi*, McCoy ; a species not yet in the hands of the writer—further comment upon it is therefore deferred.

### PHALANGISTA VULPINA.

From the forest on the summit of Mount Echo, Mr. Broadbent, in a late trip to the Herbert Gorge, obtained a single example of a red 'possum.' In a family shewing so strong a tendency to the assumption of rufous colouring, that tint, however well marked, is, for determinative purposes, quite unreliable. Though shorter in the ear, broader across the muzzle, stronger in the teeth, and apparently longer in the limb than the ordinary *P. vulpina*, it fails to convince one that it is anything more than a variety of that animal. But as it may prove to be a permanent variety of restricted habitat, and is certainly extreme in its chromatic variation, a description of it may not be altogether useless. The usual coffee-coloured streak on the chest and throat is well developed, and, passing faintly over the side of the neck, spreads with a bright tint over the occiput, nape and mantle. On the back and outer side of the limbs the colour becomes rufous, the hair of the upper back being at the base, red, of the lower back and limbs yellow, the tips of the hairs on the body partly shining yellow, partly black, those of the limbs black. The dark rufous colouring of the upper surface ends abruptly on a line drawn from the armpit to the



knee—below this the flanks and anteriorly the lower throat are buffy yellow becoming golden-yellow on the middle of the abdomen, and bright coffee-colour before the scrotum and around the vent. The ears are pale yellow externally, and the black patch at their base is almost obsolete. The customary markings on the head are recognisable, the fore feet brown, hind feet brownish-red, major part of tail black. The fur (winter coat) is short and crisp, the coarse hair of the tail short. The size is considerably larger than in ordinary Queensland examples of *P. vulpina*, and the contrasted colouring gives the animal a very different aspect.

PSEUDOCHIRUS MONGAN, n. sp.

There is reason to fear that the describer of *Phalangista* (*Pseudochirus*) *Herbertensis* has been led into a mistake in his determination of the sexes of that *Phalanger*. It would appear that in the mountain-top scrubs of the Herbert Gorge there are two associated species of *Pseudochirus*, and that these are, curiously enough, not distinguished from each other by the natives of the locality, who give to them the common name 'Mongan.' From such community of name has probably resulted an idea that they are identical, and this, communicated to Mr. Collett, has no doubt misguided him in his determination. Trivially we may distinguish between the White-armed Mongan and the Brown Mongan; systematically we may preserve the native name in the binomial of the latter and apparently more abundant animal.

Adult male—the colour of the upper surface, from the forehead to the base of the tail, is a dark lustrous brown—the hairs of the back are greyish-brown at the base, and the majority of the longer hairs have their distal halves either dark rufous-brown or rufous-yellow, the latter yielding a ruddy sheen which is more or less lost on the limbs and entirely so on the tail. The dark brown of the upper surface descends broadly on the chin becoming however paler as it approaches the mid-line. The throat and mid-line of the chest and abdomen (including the scrotum)



are white, as are also the inside of the arm to the elbow and of the thigh to the knee. A stripe of grey separating clearly the dark brown of the upper surface from the white of the lower runs along the side of the chest and abdomen. The terminal fourth or a little more of the tail is white. The ears are narrow and short appearing but little above the fur. The muzzle is nearly devoid of hair for a space of 5 mm. behind the tip and behind the posterior edge of the nostril. The hands and feet are large, and the nude surface of the tail is beset with prickly tubercles. Length of the head and trunk  $13\frac{1}{2}$  in. (343 mm.), tail  $15\frac{1}{2}$  in. (413 mm.).

The adult female is, on the upper surface and inside the limbs, smoky brown with little lustre, and that chiefly on the nape and shoulder. On the loins and rump the colour deepens to a blackish-brown. Chin pale brown. Throat and behind the pouch dirty white. Rest of the lower surface brownish with admixture of much greyish-white, within the pouch chestnut.

The hands and feet are much smaller than in the male, and the nude surface of the tail is comparatively smooth. (These sexual characters are common to this species and to *P. herbertensis*.)

The skull extracted from this skin is so closely represented by the figure of that of *P. herbertensis* ♀, in Proc. Zool. Soc. 1884, p. 384, as to persuade one that it is specifically the same as the original of the figure.

But a doubt remains—the females of the two species may be so nearly alike as to require for their determination a direct comparison of skins. All doubt on this score is removed by an example of an indubitable female of *P. herbertensis* captured in the society of an adult male, and equally out of accord with Mr. Collett's description and its sombre subject. The upper surface of this sex of *P. herbertensis* is even more nearly black than in the male; the lower surface as purely and definitely white. Above the elbow the arm is encircled by a white ring, narrow but distinct. There is however no trace of a similar ring around the thigh, as developed to a greater or less extent in the mature male.



Though a decidedly larger animal than *P. mongan* its skull is distinctly smaller, somewhat shorter, and in a greater ratio narrower between the zygomatic arches across the palate and in the teeth, which however present no other appreciable difference. The frontal crests are feebler and the parietal crests rise less high and more angularly upon the sides of the cranium.

Different as the two females are side by side, it was but natural to attribute *P. mongan* ♀ to *P. herbertensis* ♂, as long as the other sex of each was absent.

#### THE BRILL.

The Brill is the Flying Phalanger of the scrubs which clothe the tops of the Main Range, north of the Herbert River. In almost all its superficial characters it is not to be distinguished with certainty from the long and well known Petaurist, *P. taguanoides*, of the forest plains; but from all Queensland examples of *taguanoides* in the hands of the writer it is externally differentiated by the shortness of its ears. This peculiarity would have failed to create more than a passing suspicion of its distinctness, had not an examination of the skull suggested by it, revealed differences which appear to show that it has some real significance. In general form and proportions indeed the skull closely resembles some Queensland crania of *taguanoides*, but structurally it differs from them all in at least one rather important particular, the size and shape of the tympanic canal. This in *taguanoides* is constantly wide, cylindrical and conspicuously exerted—in the subject under notice the free outer wall of the tube is flattened and so much adpressed as to be barely visible on the lateral aspect of the cranium when viewed from behind. The meatus is thus rendered comparatively narrow and its aperture oval. A modification in one organ naturally invites attention to another, and turning, not without expectancy, to the teeth, we find in them individually and serially indications of changes taking place which are the more valuable in that these organs are in *taguanoides* proper subject to very little variation. The molar battery is considerably shortened—its length in the upper jaw goes  $3\frac{1}{2}$  times into that of the entire skull, whereas in the



ordinary form it goes but 3 to  $3\frac{1}{2}$  in the same length. In form it differs no less; attenuation at either end together with increased convexity on its outer side renders it comparatively crescentic in shape. The alveolar tract of the premolar and canine is on the other hand sensibly concave externally—that of the whole dental series is therefore slightly undulatory, while in *taguanoides* it is uninterruptedly convex outwards. The molars, compared with those of typical skulls, have a peculiar facies arising from the obliquity of the cross valleys and much greater smoothness of the grinding surfaces. In the three foremost of the permanent molars there is but a remnant of the sharp enamel fold at the base of each of the outer cusps seen in *taguanoides*, these cusps themselves have much less asperity, and the inner cusps are reduced to a mere prominence of the border of the anterior angle of the tooth, the hinder of them having become obsolete. In contour the chief difference is presented by the last molar which is relatively narrower and more regularly trilateral.

In the lower jaw the premolar is considerably smaller than in any available mandible of *P. taguanoides*. Also its subsidiary lobes both fore and aft are disproportionately smaller than the principal one. The first permanent molar is tricuspidate; the anterior moiety of the tooth, cleaved in *taguanoides* by an oblique sulcus, being here undivided—posterior to it the grinding surface of this and of the rest of the molars is formed by a series of broad shallow subcircular basins, bounded externally by much less prominent cuspidate angles than those of *taguanoides*, tilted more strongly outwards and crossing the alveolar axis more obliquely. There is further a notable difference in the shape of these lower grinders arising from the absence of the strong anterior and mesial contractions which in *taguanoides* give them somewhat the look of a series of aludels in place—in the mandible under notice the valleys are nearly of the full width of the crowns. The diastema is longer and slopes more gradually forward to the outlet of the incisive socket than in *taguanoides*. It has no trace of teeth overtly, but in this respect the animal probably varies as much as *taguanoides* itself, which has in Queensland examples from one to



three diastemal teeth, and on the other hand is said to be frequently devoid of them.

The cranial, still more the dental modifications exemplified by this skull, would doubtless have sufficed to distinguish a species had they occurred in a fossil subject, and one cannot help feeling surprise that they are not accompanied by external characters as clearly distinctive. The absence of these, and the possibility that the Herberton Petaurist may be found to vary in dentition sufficiently for its full identification with normal representatives of the species, must give us pause to await further material. At present one fails to observe a superficial character that may not be paralleled amongst the variations of the recognised species. Further material is not easily procurable. The animal inhabits a part of the Herberton Mountains haunted as yet by a wild and dangerous tribe of blacks, and the collector, Mr. Broadbent, was unable to procure more than a single specimen.

#### DROMICIA FRONTALIS, n. sp.

The occurrence of a *Dromicia* in Queensland has not, so far as the writer can ascertain, been placed on record, and no example of a species existing in the southern part of the colony is known to him. It was therefore with pleasure that he found a representative of this very interesting link-form in the Herberton collection. Three specimens caught in the same tree by a blackfellow were brought to Mr. Broadbent—all three of the same age and size. The two which are females have their pouches open, but whether they have borne young is very doubtful—from their stage of dentition they cannot be more than two-thirds grown. Immature as they are, however, they are well characterised, and cannot be confounded with *nana*, *concinna*, or *unicolor*. They may be described as *D. frontalis* ("Cubbie-cubbie" of the natives).

Fur short, not extending on to the tail; tail not incrassated at base; nails and pads of second and third toes separated; a distinct patagial fold; colour above varied, beneath uniform; size small.

On the upper surface greyish fawn, rather darker on the vertex and occiput (in one ♀ example on the nape also). Forehead



and a line passing over the eye and root of the ear pale fawn, with a darker mesial stripe (conspicuous in spirits) running forward to the muzzle. Eyelid and around the eye dark brown in a patch extending a little forwards on the face. Edge of the ear internally, and anterior half externally dark grey. Hinder half of the ear white. A dark brown streak runs down the side of the neck and expands on the fore part of the arm. On the back of the thigh is a less distinct patch of similar colour. Upper surface of manus and pes brown. All the lower surface yellowish-white. This extends over the upper lip, to the back of the ear, over the edge of the lateral fold and around the distal end of the leg.

The fur is short and silky and terminates at the rump. The base of the tail is contracted and sparsely covered with hair; it consequently appears lighter in colour than the rest of the tail on which the hair is moderately close, long and of a dark brownish grey above, recumbent, with a distinct tendency to form a fringe on either side. The under surface of the tail is more scantily clothed with shorter white hair continued centrally to an eighth of an inch from the tip, and laterally nearly to the tip. The ear is short, rounded and broad at the base, well clothed externally and fairly well internally with short hair. The muzzle is broad and obtuse. The hair on the hinder part of the face is elongated and spreads vibrissæ-like over the root of the ear. The claws are well-developed and exserted. The fleshy pads of the manus and pes are nearly smooth, the central pad of the manus and terminal pads of the pes being alone slightly striated longitudinally.

The length of the head and body is 1·7 inch (43 mm.), of the tail 1·65 inch (42 mm.).

#### NINOX BOOBOOK, var. LURIDA.

Taking due heed of the possibility that the little owl to be noticed may be a dwarfed variety of *N. boobook*, the writer refrains from giving it a specific name; at the same time he is induced to point out its distinctive features by a wish to maintain the usefulness of Mr. Sharpe's key to the genus.

Synoptical characters.



Breast spotted.

Head uniform, brown.

Belly chestnut-brown, densely spotted.

*Adult males*—head and all the upper surface, including wing and tail-coverts, deep smoky brown ; uniform or tending to coffee-brown on the hind neck and scapulars—the latter with a large white spot on each outer web and frequently a smaller one on the inner. One or two small buffy spots on each side of the hind neck. Primary coverts dark brown. Quills dark brown washed with rufous on the inner edge as far as the notch, and imperfectly barred on the inner web with more or less distinct and elongated spots not reaching the edges. Inner secondaries with a series of white or buff spots on the inner webs, outer secondaries not or very indistinctly barred with buff on the outer web. Forehead grey ; loreal pencils whitish with black shafts and tips. Fore part of cheeks and chin impure white ; ear-coverts brown ; a narrow eye-brow and post-auricular are rufous ; middle of throat rufous, each feather with a blackish central streak. Rest of the under surface chestnut brown, uniform or fading to buffy white around and before the vent. Each feather with a spot of white on either web, the spots diminishing in size but remaining distinct as far forwards as the hinder edge of the throat. Leg feathers short, fawn or coffee-brown. Under tail-coverts similar in colour with a spot of white on each web most distinct on those of the basals. Under wing-coverts rufous, the outer mottled and streaked with dark brown. Edge of the wing buffy white. Bill black to a very variable extent from the base, lead-colour in life. Feet dusky, white in life. Total length 11 inches, wing 8·25, tail 5, tarsus 1·25, middle toe 1·33.

*Hab.*—Dark thick scrubs, a few miles from Cardwell.

Two specimens.

NINOX RUFA, *Gould.*

Three adult examples of this fine owl occur in the collection. It is difficult to conceive its identity with *N. strenua*, Gld., and until connecting forms present themselves it is more convenient to name both in our lists.



## VARANUS, sp.

Teeth obtuse, sub-compressed ; snout broad, depressed, measured from the anterior angle of the eye equal to the distance therefrom to the anterior border of the ear-orifice ; tail depressed at the base, moderately compressed posteriorly ; scales of the head large, flat, irregular in size and shape, largest between the orbits, those of the supraorbital and temporal regions smaller ; no enlarged series of supraorbitals ; scales of the back oval, much longer than broad, tectiform, of the tail keeled and subspinose, the median pair above elevated, strongly keeled and forming a subspinose groove ; abdominal scales in 86 rows, smooth and flat ; nostril nearer to the tip of the snout than to the angle of the eye ; canthus rostralis rather sharp ; grey above with darker spots of two or three scales each on the sides, confluent into reticulating lines on the back ; under surface with numerous pale grey transverse bars ; base of tail above varied with paler scales, for the rest uniform.

*Locality*—Herbert River ; collected by Mr. K. Broadbent.

Notwithstanding the perfect smoothness of the abdominal scales, and also entire absence of enlarged superocular scales, one cannot dismiss a suspicion that this is a local variety of *V. prasinus*. On one side of the head a single superocular scale, broader than long, is surrounded by a ring of smaller scales ; on the other side even this faint approach to a serial differentiation of the scales is wanting, certainly a very different state of things to that which obtains in *V. prasinus*. However, a notice of the lizard, if further examples prove it to be really *prasinus*, will at least serve to record the presence of that species on the mainland of the colony.





De Vis, Charles Walter. 1887. "On new or rare vertebrates from the Herbert River, north Queensland." *Proceedings of the Linnean Society of New South Wales* 1, 1129–1137.

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