

## EXPLANATION OF THE PLATES.

## PLATE XXXIV.

- Fig. 1. Female hybrid bovine, B. Born May 21, 1881.  
 2. Female hybrid bovine, C. Born March 12, 1884; one month old.  
 (Drawn April 14, 1884.)

## PLATE XXXV.

- Fig. 1. Female hybrid bovine, C. Born March 12, 1884; eleven weeks old  
 (Drawn June 1, 1884.)

3. On the Unimportance of the Presence or Absence of the Hallux as a Generic Character in Mammalogy, as shown by the gradual Disappearance of this Digit within the limits of a single Genus. By G. E. DOBSON, M.A., F.R.S.

[Received May 29, 1884.]

The presence or absence of the hallux has been so often considered by mammalogists as sufficient ground for the formation of a new genus, that any instances in which it can be shown that this digit may disappear within the limits of a single genus, the species of which are united by indissoluble bonds of common affinity, is of much interest and importance.

Of all the genera of Placental Mammals few exhibit such close affinities among the species composing them as *Erinaceus*, which may be taken as an example of a thoroughly natural genus incapable of division into subgenera or well-marked subdivisions of any kind. Nevertheless this genus has been divided, one species, *E. albiventris*, having formed the type not only of a new subgenus (*Atelerix*, Pomel), but even of a new genus (*Peroëchinus*, Fitzinger).

Although, as already pointed out in my 'Monograph of the Insectivora'<sup>1</sup>, I have long considered the absence of the hallux in *E. albiventris* of little importance, seeing that that digit presents all degrees of development in the other species, from its comparatively large size in *E. europæus* down to its rudimentary condition in *E. diadematus*, where it is only 4 mm. in length, yet, up to the time of writing this note, I was unable to find any examples in which the extent of development of this digit might be said to be truly intermediate between its condition in *E. diadematus* and *E. albiventris*. Lately, however, in a collection kindly made for me at Lagos by the Colonial Surgeon, Dr. J. W. Rowland, I found specimens of *E. albiventris* (well preserved in alcohol), which furnish all the material required.

The specimens referred to consist of examples of an adult female, in which the second upper premolars of both sides have already been

<sup>1</sup> 'A Monograph of the Insectivora, Systematic and Anatomical,' pt. i. p. 11 (1882).



shed, and a young female, a few months old, in which these teeth are well developed, although the canines have but partially descended. The adult female differs from other adult specimens of *E. albiventris* in possessing, in the left hind foot, a minute hallux represented (external to the integument) by the presence of its claw only, although in the right hind foot there is no trace of this digit externally. On the other hand, in the young female above referred to, both hind feet possess a minute hallux, which, on dissection, I find consists of the usual number of phalanges, and, although there appears to be no trace remaining of *flexores breves* muscles, yet there is a distinct flexor tendon given off to the terminal phalanx by the *flexor digitorum fibularis* (*flexor hallucis longus*), and an extensor by the *extensor hallucis longus*.

On carefully re-flecting the integument from the sole of the right foot of the adult female, I find that, while the tendons of these muscles are still represented, the phalanges of the hallux have quite disappeared, the metatarsal bone alone remaining, having its distal extremity connected with the under surface of the integument by ligamentous structures only, to which the tendon of the *extensor hallucis longus* is still attached on one side, and the very rudimentary, fascia-like slip, representing the remains of the tendon from the *flexor digitorum fibularis* (*flexor hallucis longus*)<sup>1</sup>, on the other.

Here, then, we have a digit which appears to have undergone degeneration during the life of the animal, for it is reasonable to suppose that this female when young was provided with a hallux in each hind foot, like the young one in the same collection, and, as we find complete absence of this digit in both hind feet of other specimens of this species<sup>2</sup>, we are led to believe that either they possessed halluces when young and subsequently lost them, or that we have in the specimens above described examples of a local variety<sup>3</sup> of the same species in which these digits are still persistent, though in a very rudimentary state, and that the loss of that described was due to some accident. In either case, however, we have here an interesting demonstration of the progressive disappearance of the hallux within a single genus.

<sup>1</sup> For explanation of the use of these terms for the long flexor muscle of the foot in *Erinaceus*, see my paper "On the Homologies of the Long Flexor Muscles of the Feet of Mammalia" in Journ. Anat. Phys. vol. xvii. pp. 146-148.

<sup>2</sup> The hallux is altogether wanting, as determined by me by dissection; there is not even a trace of the metacarpal bone of this digit remaining in either of the hind feet of the specimens examined.

<sup>3</sup> It is interesting to note that, in these two Lagos specimens of *E. albiventris*, a small black streak is found on the white fur of the face between the eyes and on each cheek, representing the large similarly placed patches of dark-coloured fur on the face of *E. diadematus* as the rudimentary halluces represent the much more developed yet very small corresponding digits of that species, which, probably, still closely resembles the ancestral form from which both species were derived.



4. List of Coleoptera of the Families Carabidæ and Scarabæidæ collected by the late W. A. Forbes on the Lower Niger. By H. W. BATES, F.R.S.

[Received May 24, 1884.]

The following is a list of the Carabidæ and Scarabæidæ of which specimens were obtained by our much-lamented fellow-worker Mr. W. A. Forbes at various stations on the Lower Niger. Three species appear to be previously undescribed.

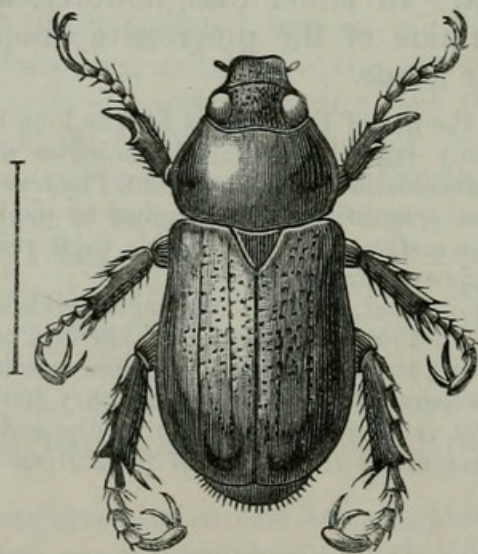
Family CARABIDÆ.

1. SIAGONA MANDIBULARIS, Guérin, Rev. Zool. 1838, p. 76.
2. SIAGONA FUSCIPES, Bonelli, Mém. Ac. Turin. 1838, p. 458.
3. SCARITES STRIATIDENS, Chaudoir, Bull. Mosc. 1855, i. p. 97.

Family SCARABÆIDÆ (LAMELLICORNIA).

4. TROCHALUS PILULA, Klug, Erman's Reise, Atlas, p. 36.
  5. ANOMALA FLAVEOLA, Burmeister, Handb. Ent. iv. 1. p. 237.
  6. ANOMALA FORBESI, n. sp.
- A. mixtæ affinis.* *Elongata, nigra; thorace et pygidio castaneo-fuscis, elytris fulvo-testaceis, femoribus rufo-testaceis; clypeo late quadrato conflenter punctato, angulis rotundatis, margine*

Fig. 1.



*Anomala forbesi.*



*sat acute reflexis, medio sinuato; thorace sparsim subtiliter punctulato; scutello nigro punctulato; elytris haud costatis, geminato striato-punctatis, interstitiis irregulariter punctatis, pygidio subruguloso haud profunde punctato.*

Long. 20 millim. ♂.

The exterior and longer claw of four anterior tarsi is bifid; terminal ventral segment strongly sinuated at the apex.

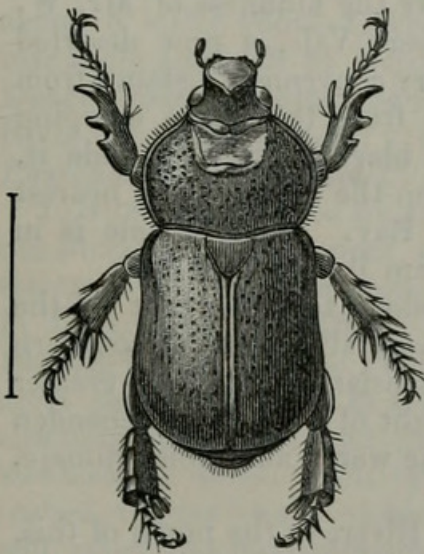
7. *ADORETUS CINERARIUS*, Burm. Handb. Ent. iv. 1. p. 476.

8. *ADORETUS RUGULOSUS*, Burm. Handb. Ent. iv. 1. p. 473.

9. *TEMNORHYNCHUS CRIBRATUS*, n. sp.

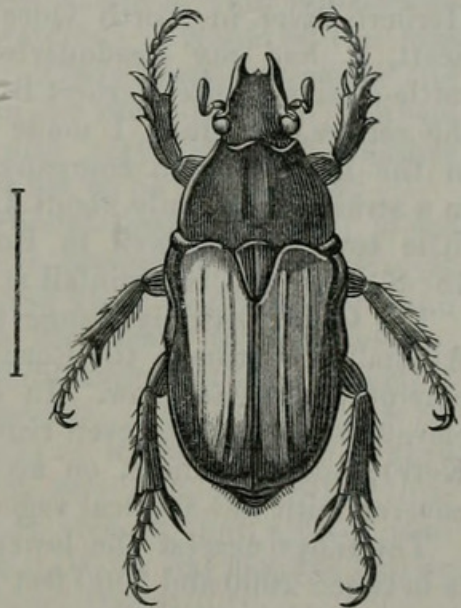
*T. retuso affinis; differt clypei lamina verticali multo altiori, apice angusta vix emarginata, thorace grossius et profundius subconfluenter punctato, antice fortius excavato-retuso, elytris punctulatis.*

Fig. 2.



*Temnorhynchus cribratus.*

Fig. 3.



*Gnathocera sericinitens.*

Long. 19 millim.

The middle of the upper margin of the anterior concavity of the thorax forms a thick rim.

10. *GNATHOCERA AFZELI*, Swartz, Schönh. Syn. Ins. i. 3. App. p. 50.

11. *GNATHOCERA SERICINITENS*, n. sp.

*Nigra, subtus nitida, supra sericeo-opaca; elytris (marginibus latis*



*suturaque exceptis*) *fulvo-ochraceis, punctato-striatis, tricostratis*; *capite fere sicut in G. afzeli*; *thorace antice rectius angustato, medio dorso late sulcato. ♂ ventre medio vitta maculari ochraceo-tomentoso.*

Long. 17 millim. ♂ ♀.

PACHNODA MARGINATA, Drury, Ill. Ins. ii. p. 59, t. 32. f. 1; var. *aurata*, Voet, Col. i. t. i. f. 6.

5. Notes upon some Mammals recently discovered in Queensland. By CARL LUMHOLTZ, M.A. of the University of Christiania.

[Received June 3, 1884.]

During the three and a half years I travelled in Queensland I no doubt spent the most interesting part of my time in the ranges near Herbert River in North Queensland. By the kindness of Mr. W. Scott, I had my headquarters at Herbert Vale, a now deserted cattle-station on the Herbert River, at a very convenient distance from the ranges, to which I made excursions from this place, camping in the mountains in company with the blacks. Herbert Vale is, in a straight line, only about 15 miles from the coast. The nearest little town is Cardwell in Rockingham Bay. Herbert Vale is in 18° S. lat.; and the rainfall at Rockingham Bay is 90 inches.

The Great Dividing Range that runs along the east coast of the Australian continent, the Cordilleras of Australia, is in the southern part of Queensland low. In North Queensland it attains a greater elevation, in one spot even rising to a height of 5400 feet (Bellenden Kerr); and it is here, on account of the warm and moist climate, covered with fine tropical vegetation.

The range nearest the lower Herbert River, to the north of this, is between 2000 and 3000 feet high, and granitic. It is covered with dense shrubs; and numerous streams and rivulets hasten down the sides of the mountains to the bottom of the valley, often forming picturesque waterfalls. Here, in these extensive mountainous scrubs that commence near Herbert Vale, the new Marsupial mammals described by Dr. Robert Collett in his paper which was read at the last Meeting of this Society, are found. The scenery is very fine; but the character of the landscape is often wild, particularly near the crest of the mountains. It is difficult to penetrate into these regions. At one moment we find ourselves before steep precipices, the ground is rough and stony, but everywhere where there is the least possibility for any thing to take root, a variety of trees, often very large, have sprung up, while frequently creeping



Dobson, G. E. 1884. "On the Unimportance of the Presence or Absence of the Hallux as a Generic Character in Mammalogy, as shown by the gradual Disappearance of this Digit within the limits of a single Genus." *Proceedings of the Zoological Society of London* 1884, 402–406.

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