

projection. It is possible that *punctulatus* may be a distinct species; but there is not yet sufficient evidence for classing it as such.

*Chlamydephorus Gibbonsi*, W. G. Binn.

Length 47 millim., orifice  $7\frac{1}{2}$  millim. from posterior extremity. Sole not differentiated into parts, smoothish, 5 millim. broad. Tentacles (eye-peduncles) pale bluish grey. Colour pale yellowish, becoming dark grey on back, with more or less of a pale dorsal line of ground-colour. Reticulations polygonal, with the interstices minutely subdivided. Sole slightly transversely grooved. Mantle none.

Described from a specimen in the British Museum from Cape Colony (*F. P. M. Weale*).

*Apera*, the name proposed by Heynemann for this genus, will probably have to be used. *Chlamydephorus* (Harl.) was proposed for a genus of Mammalia as early as 1825.

[To be continued.]

3 Fairfax Road, Bedford Park, Chiswick, W.,  
September 16, 1890.

XLVI.—*A List of the Species of Achatina from South Africa, with the Description of a new Species.* By EDGAR A. SMITH.

IN the endeavour to identify the new form hereafter described it was necessary to find out what species were already known from the region where it was discovered. In doing this it appeared that it would be useful to get together a list of all the forms known to occur in the southern portion of the African continent. This I have done, arbitrarily limiting the area on the north at the 20th parallel.

Already as many as eighteen species have been described, and doubtless this number eventually will be increased considerably when this region, and especially the mountainous parts, has been more completely explored.

A number of the *Achatinæ* from various parts of Africa seem to differ only very slightly from allied forms, and it may fairly be anticipated that the separation of species will become more and more difficult through the discovery of intermediate forms in parts hitherto unexplored.



1. *Achatina semidecussata*, Menke.

*Achatina semidecussata*, Menke, Philippi, Abbild. vol. ii. p. 213, pl. i. fig. 1; Pfeiffer, Conch.-Cab. ed. 2, p. 336, pl. xxvii. figs. 2, 3.

*Hab.* Natal (*Menke and Brit. Mus.*).

2. *Achatina vestita*, Pfeiffer.

*Achatina vestita*, Pfeiffer, Novit. Conch. vol. i. p. 35, pl. ix. figs. 8, 9.

*Hab.* Port Natal (*Pfr.*); near Delagoa Bay (*Brit. Mus.*).

3. *Achatina granulata*, Pfeiffer.

*Achatina granulata*, Pfeiffer, Mon. Hel. vol. iii. p. 484.

*Hab.* Natal (*Pfr. and Brit. Mus.*); Cape (*Semper*).

*A. semigranosa*, Pfeiffer (Mon. Hel. vol. vi. p. 216), I regard merely as the young of *A. granulata*.

4. *Achatina varicosa*, Pfeiffer.

*Achatina varicosa*, Pfeiffer, Mal. Blätt. 1861, p. 73, pl. ii. figs. 7, 8; Novit. Conch. vol. iii. p. 490, pl. cvi. figs. 1, 2.

*Hab.* Enon, north of Port Elizabeth (*Pfr.*).

5. *Achatina biscalpta*, Smith.

*Achatina biscalpta*, Smith, Quart. Journ. Conch. vol. i. p. 349.

*Hab.* South Africa.

This species, also *A. albopicta*, *A. zebroides*, *A. dimidiata*, *A. simplex*, and *A. transvaalensis*, published in 1878, are omitted from the 'Zoological Record' of that and subsequent years.

6. *Achatina damarensis*, Pfeiffer.\*

*Achatina damarensis*, Pfeiffer, Malak. Blätt. 1870, vol. xvii. p. 31; Novit. Conch. vol. iv. p. 2, pl. cix. figs. 3, 4.

*Hab.* Damara Land (*Pfr.*).

7. *Achatina Crawfordi*, Morelet.

*Achatina Crawfordi*, Morelet, Journ. de Conch. 1889, p. 8, pl. i. fig. 3.

*Hab.* Near Port Elizabeth, Cape Colony (*Morelet*).

\* All the species, with the exception of this and the two following, are in the British Museum.



8. *Achatina Smithii*, Craven.

*Achatina Smithii*, Craven, Proc. Zool. Soc. 1880, p. 617, pl. lvii. fig. 1.

*Hab.* Leydenburg, Transvaal (*Craven*).

I had the honour of having a second species of this genus associated with my name last year by Mr. G. B. Sowerby (Proc. Zool. Soc. 1889, p. 579, pl. lvi. fig. 3). It is a small form, but belongs to the true *Achatinae*. The name being preoccupied I propose to substitute that of *A. Sowerbyi*. *Achatina Sowerbyana*, Pfeiffer, is a species of *Glandina*.

9. *Achatina transvaalensis*, Smith.

*Achatina transvaalensis*, Smith, Quart. Journ. Conch. vol. i. p. 351.

*Hab.* Eastern slope of the Drakensberg, at Leydenburg Gold-fields, Transvaal (*Smith*); not rare at Leydenburg (*Craven*).

10. *Achatina natalensis*, Pfeiffer.

*Achatina natalensis*, Pfeiffer, Proc. Zool. Soc. 1854, p. 294; Monog. Hel. vol. iv. p. 602.

*Hab.* Port Natal (*Pfr. and Brit. Mus.*); near Delagoa Bay (*Brit. Mus.*).

11. *Achatina simplex*, Smith.

*Achatina simplex*, Smith, Quart. Journ. Conch. vol. i. p. 350.

*Hab.* Port Natal.

12. *Achatina Burnupi*, sp. n.

*Hab.* The Drakensberg, north of Natal, at 5000 to 6000 feet.

13. *Achatina dimidiata*, Smith.

*Achatina dimidiata*, Smith, Quart. Journ. Conch. vol. i. p. 348.

*Hab.* Eastern slope of the Drakensberg, at Leydenburg Gold-fields, Transvaal (*Smith*); not rare at Leydenburg (*Craven*).

14. *Achatina zebra* (Chemnitz).

*Achatina zebra* (Chemnitz), Reeve, Conch. Icon. vol. v. pl. vii. fig. 23; Pfeiffer, Conch.-Cab. ed. 2, pl. ii. fig. 3.

*Hab.* George District, Cape Colony, and Natal (*Krauss*); Caffraria (*Reeve*).



*A. obesa*, Pfeiffer, said to be from "West Africa," is probably only a stunted form of this species.

15. *Achatina aurora*, Pfeiffer.

*Achatina aurora*, Pfeiffer, Proc. Zool. Soc. 1854, p. 294; Monog. Hel. vol. iv. p. 602.

*Hab.* Port Natal (*Pfr.*).

16. *Achatina planti*, Pfeiffer.

*Achatina planti*, Pfeiffer, Novitat. Conch. vol. ii. p. 160, pl. xliii. figs. 1, 2.

*Hab.* Cape Natal (*Pfr.*).

17. *Achatina ustulata*, Lamarck.

*Achatina ustulata*, Lamarck, Reeve, Conch. Icon. pl. xii. fig. 40; Férussac, Hist. Nat. Moll. pl. cxxv. figs. 1, 2.

*Hab.* George District, Cape Colony (*Krauss*).

18. *Achatina Kraussi*, Reeve.

*Achatina Kraussi*, Reeve, Conch. Icon. pl. vi. fig. 21; Pfeiffer, Conch.-Cab. ed. 2, p. 329, pl. xxiii. fig. 2; Krauss, Südaf. Moll. p. 81.

*Hab.* On the right bank of the Koega River, near Algoa Bay (*Krauss*).

This species, according to Krauss, is not found in Natal, as stated by Reeve.

19. *Achatina immaculata*, Lamarck.

*Achatina immaculata*, Lamarck, Férussac, Hist. Nat. Moll. pl. cxxvii.; Pfeiffer, Mon. Hel. vol. iv. p. 600.

*Hab.* Cape Delagoa (*Pfr.*); Port Natal and Zulu country (*Brit. Mus.*).

*Description of the New Species.*

*Achatina Burnupi.*

Testa elongato-ovata, subtenuis, epidermide nitida, flavo-olivacea induta, hic illic strigis saturationibus ornata, prope suturam flava, et circa medium anfr. ultimi zona obscura cincta; anfractus 8, leviter convexi, superiores granulati, ultimus elongatus, lævis, lineis incrementi paulo obliquis striatus, antice vix descendens; apertura inverse auriformis, intus pallide cærulescens, opalescens, longit. totius  $\frac{1}{2}$  æquans; columella rectiuscula, antice oblique truncata, callo tenui albido induta.

Longit. 71 millim., diam. 39; apertura 35 longa, 18 lata.



This is a rather slender species, in general proportions somewhat resembling Reeve's representation of *Bulimus Thompsoni* (Conch. Icon. pl. xxiv. fig. 158). It is moderately thin and clothed with a yellowish-olive glossy epidermis, exhibiting at short intervals oblique streaks of a darker tint and close to the suture becoming decidedly yellow, so that the upper edge of the last whorl appears to be bordered with that colour. The three uppermost volutions, which have lost the epidermis, are pale brown. All the whorls excepting the last are sculptured with spiral and oblique striæ, forming a rather fine granulation. The body-whorl is rather long and ornamented only with lines of growth which are well marked and slightly puckered at the suture. A faint band is noticeable just above the middle, and several other transverse lines parallel with it are also observable on close inspection.

This species resembles *A. simplex*, Smith, in the absence of colour-markings and in the size of the apical whorls, but differs entirely in its more elongate form. This is particularly apparent in the body-whorl and aperture.

The above description is based on a single specimen recently presented to the British Museum by Colonel J. H. Bowker. It was collected on the Drakensberg, north of Natal, at an elevation of 5000 to 6000 feet, by Mr. Henry E. Burnup, after whom I have named the species.

XLVII.—*Summary of Researches into the Anatomy and Histology of Nemertines, with Contributions to their Classification.* By Dr. OTTO BÜRGER\*.

NEMERTINES used to be commonly classed with the Platyhelminthes, and thus brought into the closest relationship with the Turbellaria; only a small number of authors, among whom von Siebold† must be mentioned, placed them at an early period among the Annelids. M'Intosh, however, was one of those who held this view, to which he gives expression in prefixing to the whole of his monograph the title 'The British Annelids.—Part I. Nemerteans.' Yet it is only within the last ten years that the views with regard to the proper position of the group have undergone a more extensive

\* Translated from the 'Zeitschrift für wissenschaftliche Zoologie, Bd. L. Hefte 1 and 2, June 1890, pp. 248-260; whole paper, *ibid.* pp. 1-277, with ten plates and twelve woodcuts in the text.

† V. Siebold, 'Lehrbuch der vergleichenden Anatomie,' 1848.



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