

One specimen of this species, as well as of *P. plicifera*, was obtained by Dr. Meyer at Laguna del Bay.

	millims.
Total length . . . . .	32
Fore limb . . . . .	20
Hind limb . . . . .	60
Distance between vent and heel . . . . .	33
Fourth toe . . . . .	17

4. A Monographic Revision of the Genera *Zephronia* and *Sphærotherium*, with Descriptions of new Species. By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

[Received December 11, 1872.]

(Plate XIX.)

In the 'Annals and Magazine of Natural History' for last November, I added eighteen species to these two genera. Subsequently I have been favoured by Mr. Wilson Saunders with a sight of his collection, in which I have discovered two new *Sphærotheria*; whilst a recent examination of the Banksian Collection in the British Museum has brought to light two examples of a fine new *Zephronia*.

As I have had some little difficulty in determining the species of these two genera, owing to their great similarity one to another, I have thought that it would facilitate the study of the group if I were to draw up a synonymic list of the described species, grouping them into sections founded upon well-marked structural characters.

In the case of some of Brandt's species (the original descriptions of which I have hitherto sought for in vain under the guidance of the references given in Gervais's 'Aptères'), I have given translations of the diagnoses as cited by M. Gervais. This I have, however, only done either when the species described is unknown to me, or when certain characters mentioned by the author indicate to which of my sections the species belongs. I have been obliged to rename one of the forms figured by Koch in his 'Die Myriapoden,' inasmuch as it does not agree with Brandt's description as cited by Gervais.

The number of species now described in the two genera will amount to fifty-one.

Order APTERA.

Suborder MYRIOPODA.

Division CHILOGNATHA.

Family GLOMERIDÆ, Gervais.

Genus SPHÆROTHERIUM, Brandt.

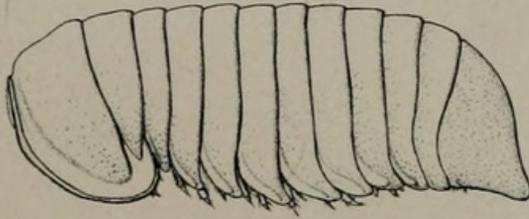
Div. 1. *Last dorsal segment having a more or less distinct external rim.*

Sect. a. *Anterior portion of the last segment abruptly thickened.*

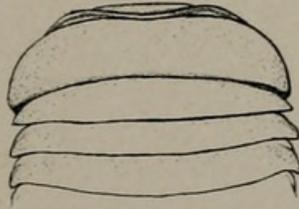
1. SPHÆROTHERIUM ROTUNDATUM.

*Sphærotherium rotundatum*, Brandt, Bull. Nat. Mosc. pl. 6, p. 198. n. 1 (1833); Koch, Myriapoden, i. pl. 19. f. 38 (1863).

1.



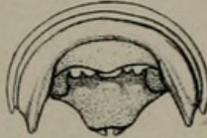
1a.



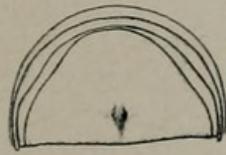
2.



4.



3.



5.



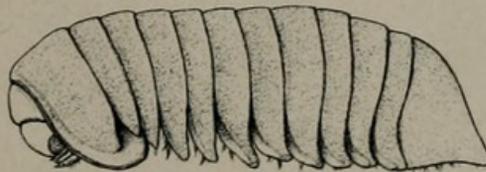
7.



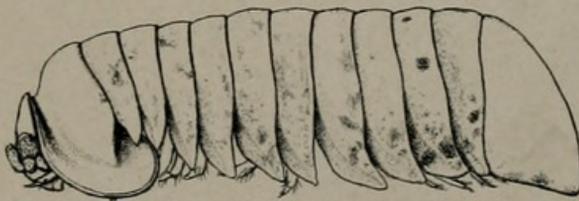
6.



8.



9.



10.





*Zephronia rotundata*, Gervais, Ann. Sc. Nat. 2nd ser. vii. p. 42 (1837).

South Africa (*Sir Andrew Smith*).

B.M.

2. SPHÆROTHERIUM GLABRUM, n. sp. (Plate XIX. figs. 1, 1 a.)

Pale castaneous, with head, nuchal plate, and posterior margins of dorsal segments dark castaneous, almost pitchy.

Head smooth, shining, with two broad longitudinal sulcations, above and between which is a small reniform depression; coarse punctures sparsely distributed all over, excepting in the centre; nuchal plate smooth, flattened, with indistinct series of punctures in front; dorsal segments smooth, shining, their lateral wings coarsely punctured, especially in front; last segment coarsely and somewhat densely punctured all over, with central area somewhat tumid and outer edge projecting, especially in the centre, so as to form a sloping and consequently indistinct rim.

Length 1 inch 10 lines, width 1 inch 1 line.

Madagascar. Two specimens.

Coll. Saunders.

Allied to *S. rotundatum* and *obtusum*.

3. SPHÆROTHERIUM PUNCTULATUM.

*Sphærotherium punctulatum*, Brandt, Bull. Acad. St. Pétersb. 1841; Rec. Mém. Myriap. p. 179.

“Head subrugose, entirely marked with very close punctuations. Collar subrugose, with punctuations arranged in a row in front and scattered above. First dorsal segment and the following marked with very dense punctuations, visible to the naked eye. Last segment marked with more numerous punctuations than the others, swollen behind and thickened. No shining lines upon the centre of the last dorsal segments. Colour olivaceous; hind margins of the segments ferruginous.”

Cape of Good Hope (*Brandt*).

Appears to be referable to this section, and seems almost identical with *S. obtusum*.

4. SPHÆROTHERIUM OBTUSUM.

*Sphærotherium obtusum*, Koch, Myriapoden, i. p. 5, pl. 2. f. 5 (1863).

Port Natal (*Gueinzus*).

B.M.

Sect. b. *Anterior portion of the last segment not thickened.*

5. SPHÆROTHERIUM NIGRUM.

*Sphærotherium nigrum*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 359. n. 4, pl. 18. fig. 11 (1872).

South Africa (*Sir Andrew Smith*).

Type, B.M.

6. SPHÆROTHERIUM GROSSUM.

*Sphærotherium grossum*, Koch, Myriapoden, i. p. 5, pl. 2. f. 6 (1863).

Cape of Good Hope (*Koch*).

The external rim on the last segment of this species seems feebly developed, judging by Koch's figure.

Div. 2. *Last dorsal segment with a more or less pronounced sinus behind.*

Sect. a. *Dorsal segments roughened, dull; head and nuchal plate clothed with hair.*

7. SPHÆROTHERIUM SINUATUM.

*Sphærotherium sinuatum*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 359, pl. 18. f. 10 (1872).

Sarawak (*Wallace*).

Type, B.M.

Sect. b. *Dorsal segments roughened, dull, clothed with short hair, and with longitudinal central shining ridge.*

8. SPHÆROTHERIUM DORSALE.

*Zephronia dorsalis*, Gervais, Hist. Nat. des Insectes, Aptères, iv. p. 79 (1847).

*Zephronia pulverea*, White, Ann. & Mag. Nat. Hist. ser. 3, vol. iii. p. 405, pl. 7. f. 4, 4a, 4b (1859), type.

*Sphærotherium retusum*, Koch, Myriapoden, pl. 19. f. 36 (1863).  
Port Natal (*Gueinzus*). B.M.

Div. 3. *Last segment rounded, without external rim or depression.*

Sect. a. *A more or less continuous shining longitudinal dorsal ridge.*

9. SPHÆROTHERIUM LICHTENSTEINII.

*Sphærotherium lichtensteinii*, Brandt, Bull. Nat. Mosc. vi. p. 199. n. 3 (1833); Koch, Myriapoden, i. pl. 14. f. 29 (1863).

*Zephronia lichtensteinii*, Gervais, Ann. Sc. Nat. 2nd ser. vii. p. 43 (1837).

South Africa (*Sir Andrew Smith*).

B.M.

Group aa. *Last segment with posterior central area projecting.*

10. SPHÆROTHERIUM PUNCTATUM.

*Sphærotherium punctatum*, Brandt, Bull. Nat. Mosc. vi. p. 199. n. 4 (1833).

*Zephronia punctata*, Gervais, Ann. Sc. Nat. 2nd ser. vii. p. 43 (1837).

“Head almost smooth, shining, marked by very large scattered punctuations above and in the middle. A row of very strong punctuations upon the front of the collar, with others larger and scattered upon the centre. Second and the following segments marked up to their inferior and posterior margin with strong punctures, easily visible to the naked eye. Punctuations of the last arch more close, but not visible to the naked eye; the latter a little thickened and swollen to the centre of its posterior margin. Sixth and following dorsal segments marked in their centre above by a

projecting, longitudinal, smooth and shining line. Lateral process of the last segments provided with a little projecting ridge on the inner surface of their lateral laminæ. Colour olivaceous; hind margins ferruginous."

South Africa (*Sir Andrew Smith*).

B.M.

Our specimen agrees in almost every particular with the above description; the longitudinal line, however, appears not to extend above the ninth dorsal segment, but it may be concealed under the overlapping margins of the segments. In an example in Mr. Saunders's collection, the longitudinal line extends from the second to the eleventh segment, but in some of them it is feebly indicated.

Sect. *b.* *Dorsal segments without longitudinal ridge; last segment compressed.*

11. SPHÆROTHERIUM COMPRESSUM.

*Sphærotherium compressum*, Brandt, Bull. Nat. Mosc. vi. p. 198. n. 2 (1833); Koch, Myriapoden, i. pl. 19. f. 39 (1863).

*Zephronia compressa*, Gervais, Ann. Sc. Nat. 2nd ser. vii. p. 43 (1837).

South Africa (*Sir Andrew Smith*).

B.M.

12. SPHÆROTHERIUM RUGULOSUM.

*Sphærotherium rugulosum*, Brandt, Bull. Acad. St. Pétersb. 1841; Rec. Mém. Myriap. p. 179 (1841).

Outward aspect of *S. punctatum*, "of which it has also the form and colour. Anterior segments and middle of the body having upon the sides of the back some little ridges or projecting lines, very small, transverse, subparallel, and irregular. No little ridge above the insertion of the lateral laminæ of the posterior segments of the body. Sixth dorsal segment and the following more or less punctured over their whole superior surface. Last segment rugose, strongly marked with punctuations visible to the naked eye, attenuated at its posterior margin."

Cape of Good Hope (*Brandt*).

Sect. *c.* *Last dorsal segment rounded, not compressed.*

13. SPHÆROTHERIUM JAVANICUM.

*Zephronia javanica*, Guérin, Ann. Sc. Nat. 2nd ser. vii. p. 43 (1837); Iconogr. Règn. Anim. de Cuv., Ins. pl. 1. f. 2, expl. Ins. p. 5.

East Indies (*S. Stevens*).

B.M.

14. SPHÆROTHERIUM KUTORGÆ.

*Sphærotherium kutorgæ*, Brandt, Bull. St. Pétersb. p. 560 (1841).

"Dorsal segments of the body without punctuations; collar wanting punctuations on its upper surface and on its anterior margin; small transverse rugosities placed on upper surface of the lateral wings of first dorsal segment slightly developed; terminated above by a curved line or little curved crest; last segment of the

body slightly elevated, rather more projecting longitudinally at its centre."

*Hab.* unknown.

Museum of St. Petersburg.

This species may perhaps belong to the *S. titanus* group.

15. SPHÆROTHERIUM HIPPOCASTANUM.

*Zephronia hippocastanum*, Gervais, Hist. Nat. des Insectes, Aptères, iv. p. 83 (1847).

? *Zephronia actæon*, White, Ann. & Mag. Nat. Hist. ser. 3, vol. iii. p. 405. n. 1, pl. 7. f. 5, 5a, 5b (1859), type.

Madagascar (*Madame Ida Pfeiffer*).

B.M.

The differences which Mr. White gives to distinguish his species from *S. hippocastanum* are not so great as between the different examples which we possess of some other species, and I much doubt its specific distinctness. Mr. W. W. Saunders has an example measuring nearly 3 inches in length, and 1 inch 8 lines in breadth; this specimen has yellow eyes, whereas both *S. hippocastanum* and *S. actæon* are described with black eyes. I suspect the colour of the eyes, as well as of the segments of the body, varies considerably.

16. SPHÆROTHERIUM LATUM.

*Sphærotherium latum*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 358. n. 1, pl. 18. f. 3 (1872).

North Madagascar (*L. Bouton*).

Type, B.M.

17. SPHÆROTHERIUM KLUGII.

*Sphærotherium klugii*, Brandt, Bull. Acad. St. Pétersb. p. 360 (1841).

"Head entirely covered with punctuations. Collar provided on its front margin with a series of points, without punctuations at its centre and behind. First dorsal segment strongly punctured in front, slightly at its centre, and not at all behind. The others up to the last strongly marked in front and at the middle by very large punctures, smooth at their hind margin. Segments 6 to 11 somewhat sloping at their hind margin. The last segment entirely punctured, including its hind margin. The colour appears to be dark olivaceous, with the posterior margin of the segments ferruginous."

Cape of Good Hope.

Museum St. Petersburg.

18. SPHÆROTHERIUM CONVEXUM.

*Sphærotherium convexum*, Koch, Myriapoden, i. p. 31, pl. 14. f. 27 (1863).

New Holland (*Koch*).

19. SPHÆROTHERIUM ELONGATUM.

*Sphærotherium elongatum*, Brandt, Bull. Nat. de Mosc. vi. p. 199. n. 5 (1833); Koch, Myriapoden, i. pl. 14. f. 28 (1863).

*Zephronia elongata*, Gervais, Ann. Sc. Nat. 2nd ser. vii. p. 43 (1837).

Cape of Good Hope.

Coll. W. W. Saunders.

## 20. SPHÆROTHERIUM DE LACYI.

*Zephronia (Sphærotherium) de lacyi*, White, Ann. & Mag. Nat. Hist. ser. 3, vol. iii. p. 406. n. 4, pl. 7. f. 2, 2a (1859).  
New Zealand (*Macgillivray*). Type, B.M.

## 21. SPHÆROTHERIUM NEPTUNUS.

*Sphærotherium neptunus*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 358. n. 2, pl. 18. f. 6 (1872).  
Madagascar (*Madame Ida Pfeiffer*); Natal (*Gueinzus*).  
Type, B.M.

Sect. d. *Dorsal segments covered with minute pustules.*

## 22. SPHÆROTHERIUM FRATERNUM. (Plate XIX. fig. 2.)

*Sphærotherium fraternum*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 359. n. 3 (1872).  
Victoria, Australia (*Dr. Howitt*). Type, B.M.

Sect. e. *Lateral wings of first dorsal segment with laminæ broad and thin, marginal ridge feebly developed; dorsal segments without pustules.*

## 23. SPHÆROTHERIUM KOCHII, n. sp.

*Sphærotherium punctatum*, Koch, Myriapoden, i. p. 43, pl. 19. f. 37 (1863), but not of Brandt.  
Java. B.M.

Koch says that the head and nuchal plate are somewhat darker than the dorsal segments: this is markedly the case in our example.

## 24. SPHÆROTHERIUM MICROSTICTUM.

*Sphærotherium microstictum*, Brandt, Bull. Acad. St. Pétersb. (1841); Rec. Mém. Myriap. p. 178 (1841).

"Head smooth, marked by scattered punctures, scarcely any on its upper margin. Collar punctured in front only, with punctuations in a row, without punctuations above; some scattered punctures upon the first dorsal segment. Second, third, fourth, and fifth segments finely punctured in front only, very nearly smooth over all the rest of their surface;" remaining segments, "with the exception of the last, punctured in front and in the centre. Hind margin of the last segment very nearly straight; this segment rounded, convex, moderately sloping, entirely marked with fine and close punctuations. Colour olivaceous; margins of the segments ferruginous."

Cape of Good Hope (*Brandt*); sp. ead.? hab. —? B.M.

We have portions of two large examples, differing much in depth of colour, but both apparently referable to this species.

Div. 4. *Last dorsal segment bearing a triangular excrescence in the middle of its posterior area.*

## 25. SPHÆROTHERIUM TITANUS.

*Sphærotherium titanus*, Brandt, Bull. Acad. St. Pétersb. (1840).  
*Hab.* unknown. Museum of St. Petersburg.

## 26. SPHÆROTHERIUM STIGMATICUM, n. sp. (Plate XIX. fig. 3.)

Dull testaceous; eyes, antennæ, and legs greenish olivaceous. Head smooth, shining in front and coarsely punctured, deeply sinuated behind; nuchal plate smooth, with central area slightly projecting and forming a double oval; dorsal segments depressed, smooth, scarcely perceptibly punctured behind, their lateral wings finely but densely punctured; last segment finely rugose, shining behind, somewhat compressed at the sides; its posterior margin somewhat projecting, and just above it a well-marked subtriangular raised spot.

Length 1 inch 4 lines, width 9 lines.

Madagascar. Two examples.

Coll. Saunders.

Evidently allied to *S. titanus*, but having the dull aspect of *Zephronia innominata*.

The following species are of doubtful location:—

## 27. SPHÆROTHERIUM OVALE.

*Julus ovalis*, Linnæus, Amœn. Acad. iv. p. 253. n. 36, pl. 3. f. 4 (1788).

*Julus ovatus*, Fabricius, Sp. Ins. i. p. 528. n. 1.

China.

This species, unless the type turns up, will never be identified with certainty. It appears to be a narrow species, probably not unlike *Zephronia innominata* in form.

## 28. SPHÆROTHERIUM GRONOVII.

*Sphærotherium gronovii*, Brandt, Rec. Mém. Myriap. p. 180.

*Oniscus cauda subrotundata*, &c., Gronov. Zooph. p. 233. n. 995, pl. 17. f. 4, 5 (1764).

*Julus ovalis*, Latreille, Hist. Nat. des Crust. et Ins. vii. p. 64. n. 1, pl. 59. f. 5, 6.

“Seas of Norway and England” (*Gronov*).

But for the antennæ, which are those of a *Sphærotherium*, this might have been identified with *Zephronia chitonoides*. It is probably allied to *S. neptunus*.

## Genus ZEPHRONIA, Gray.

Div. 1. *Species with teeth on back of head.*

## 1. ZEPHRONIA BRANDTII.

*Sphæropæus brandtii*, Humbert, Myr. de Ceylan, in Mém. de la Soc. Phys. et d'Hist. Nat. de Genève, xviii. pt. i. p. 38, [*Zephronia b.*] pl. 3. f. 15 (1865).

Ceylon (*Thwaites & Purdie*).

B.M.

## 2. ZEPHRONIA CHITONOIDES.

*Zephronia chitonoides*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 354. n. 1, pl. 18. f. 2, 2a (1872).

Madras and Ceylon (*Sir A. Smith*).

Type, B.M.

## 3. ZEPHRONIA RUGULOSA.

*Zephronia rugulosa*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 355. n. 2, pl. 18. f. 1 (1872).  
Ceylon (*R. Templeton*). Type, B.M.

## 4. ZEPHRONIA NOTICEPS. (Plate XIX. fig. 4.)

*Zephronia noticeps*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 355. n. 3 (1872).  
Ceylon (*E. W. Janson*). Type, B.M.

Div. 2. *Species without teeth on back of head.*

Sect. a. *First dorsal segment with lamina of lateral wing narrow; lateral marginal ridge feebly developed.*

## 5. ZEPHRONIA TESTACEA.

*Julus testaceus*, Olivier, Enc. Méth., Ins. vii. p. 414.  
*Zephronia testacea*, Gervais, Ann. Sc. Nat. 2nd ser. vii. p. 43 (1837).  
*Sphærotherium testaceum*, Brandt, Rec. Mém. Myriap. p. 181 (1841).  
Madagascar; sp. ead.? hab. — ? B.M.

## 6. ZEPHRONIA NIGRINOTA.

*Zephronia nigrinota*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 356. n. 8, pl. 18. f. 9 (1872).  
Sikkim (*Dr. Hooker*); Assam (*Warwick*), Type, B.M.

## 7. ZEPHRONIA HETEROSTICTA.

*Zephronia heterosticta*, Newport, Ann. & Mag. Nat. Hist. ser. 1, vol. xiii. p. 265 (1844).  
India (*W. Elliot*). Type, B.M.

## 8. ZEPHRONIA INERMIS.

*Sphæropœus inermis*, Humbert, Myr. de Ceylan, in Mém. de la Soc. Phys. et d'Hist. Nat. de Genève, xviii. pt. 1, p. 39, [*Zephronia i.*] pl. 3. f. 16 (1865).  
Ceylon (*R. Templeton*); Madras (*Sir A. Smith*). B.M.

Group aa. *Front of head hairy.*

## 9. ZEPHRONIA GLABRATA.

*Zephronia glabrata*, Newport, Ann. & Mag. Nat. Hist. ser. 1, vol. xiii. p. 264 (1844).  
Philippine Islands. Type, B.M.

Group ab. *Head and nuchal plate hairy.*

## 10. ZEPHRONIA LUTESCENS. (Plate XIX. fig. 5.)

*Zephronia lutescens*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 356. n. 9 (1872).  
India (*Mrs. Hamilton*). Type, B.M.

Allied to the preceding, but with head, nuchal plate, and front of first dorsal segment setose; the nuchal plate and dorsal segments comparatively broader and much less punctured.

Group *ac.* *All the body hairy.*

11. ZEPHRONIA IGNOBILIS. (Plate XIX. fig. 6.)

*Zephronia ignobilis*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 357. n. 10 (1872).

Java (*Argent*).

Type, B.M.

12. ZEPHRONIA PILIFERA. (Plate XIX. fig. 7.)

*Zephronia pilifera*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 357. n. 11 (1872).

Ceylon (*R. Templeton*).

Type, B.M.

Sect. *b.* *First dorsal segment with lamina of lateral wing broad; lateral marginal ridge feebly developed.*

13. ZEPHRONIA CORRUGATA. (Plate XIX. fig. 8.)

*Zephronia corrugata*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 355. n. 4 (1872).

Ceylon (*R. Templeton*).

Type, B.M.

14. ZEPHRONIA HERCULES.

*Sphæropæus hercules*, Brandt, Bull. Nat. Mosc. vi. p. 200. n. 1 (1833); Koch, Myriapoden, p. 31, pl. 2. f. 4 (1863).

*Hab.* —? Berlin Museum (*Koch*).

This species is remarkable for the peculiar elongation of the lateral wings of first segment.

15. ZEPHRONIA OVALIS.

*Zephronia ovalis*, J. E. Gray in Griffith's Animal Kingdom, Ins. pl. 135. f. 5 (not *Julus ovalis*, Linn.).

*Sphæropæus insignis*, Brandt, Bull. Nat. Mosc. vi. p. 200. n. 2 (1833).

Java (*Argent*).

Type, B.M.

M. Gervais seems to have doubted whether this was a *Sphærotherium* or a *Zephronia*. He first quoted it as synonymous with *S. javanicum*, and subsequently as a distinct species under the name of *Z. insignis* (see 'Aptères,' pp. 82 & 85).

16. ZEPHRONIA TIGRINA.

*Zephronia tigrina*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 356. n. 6, pl. 18. f. 7 (1872).

"East Indies" (*S. Stevens*).

Type, B.M.

17. ZEPHRONIA ZEBRAICA.

*Zephronia zebraica*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 356. n. 7, pl. 18. f. 4 (1872).

Near Bombay (*Col. Whitehill*).

Type, B.M.

## 18. ZEPHRONIA BANKSIANA, n. sp. (Plate XIX. fig. 9.)

Dorsal segments, excepting the first, palish chestnut, spotted and blotched with pitchy; head, nuchal plate, and first segment dark chestnut, more or less varied with black; eyes pale greenish.

Head shining, densely but finely punctured in front; nuchal plate with anterior ridge and row of ill-defined punctures; folded anterior ridge of first dorsal segment unusually thick, lateral wing broad, with feebly developed ridge; dorsal segments for the most part smooth and polished, but with their front edge and anterior half of lateral wings somewhat rugose; anterior half of last segment finely and densely punctured.

Length 2 inches, width 1 inch.

*Hab.* unknown.

Coll. Banks in B.M.

Allied to *Z. sulcatula* and *Z. zebraica*.

## 19. ZEPHRONIA VERSICOLOR.

*Zephronia versicolor*, White, Ann. & Mag. Nat. Hist. ser. 3, vol. iii. p. 405. n. 3, pl. 7. f. 3, 3a, 3b (1859); Humbert, Myr. de Ceylan, in Mém. de la Soc. Phys. et d'Hist. Nat. de Genève, xviii. pt. 1, p. 41, pl. 3. f. 17 (1865).

Peradenia, Ceylon (*Thwaites*). Three specimens. Type, B.M.

Group *ba.* *Head and nuchal plate hairy.*

## 20. ZEPHRONIA LEOPARDINA. (Plate XIX. fig. 10.)

*Zephronia leopardina*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 356. n. 5 (1872).

Ceylon (*R. Templeton*).

Type, B.M.

My observation respecting the hairiness of this *Zephronia* was to some extent erroneous, the real hairs being confined to the head and nuchal plate. A microscopical examination of the dorsal segments shows them to be to all appearance merely dirty.

Group *bb.* *All the body hairy.*

## 21. ZEPHRONIA CASTANEA.

*Zephronia castanea*, Newport, Ann. & Mag. Nat. Hist. ser. 1, vol. xiii. p. 265 (1844).

Philippine Islands (*Cuming*).

Type, B.M.

Group *bc.* *A narrow projecting (but not shining) interrupted longitudinal ridge from first to last segment (neither included).*

## 22. ZEPHRONIA INNOMINATA.

*Zephronia innominata* (Newport), Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 357. n. 12, pl. 18. f. 8 (1872).

Philippine Islands (*Cuming*).

Type, B.M.

May at once be distinguished from *Z. castanea* by its paler colour, narrower and more distinctly punctured dorsal segments, longitudinal ridge, and broader terminal joint of antennæ.

Sect. c. *Lamina of lateral wing broad, marginal ridge feebly developed; second to eleventh dorsal segments multisulcate.*

23. ZEPHRONIA SULCATULA.

*Zephronia sulcatula*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. x. p. 357. n. 13, pl. 18. f. 5 (1872).  
Borneo (*W. Jeakes*). Type, B.M.

EXPLANATION OF PLATE XIX.

- Fig. 1. *Sphærotherium glabrum*, profile.  
1 a. — — —, anterior segments from above.  
2. — — — *fraternum*, profile.  
3. — — — *stigmaticum*, perspective view from behind.  
4. *Zephronia noticeps*, head, nuchal plate, and anterior segments, enlarged; front view.  
5. — — — *lutescens*, profile.  
6. — — — *ignobilis*, profile, enlarged.  
7. — — — *pilifera*, profile.  
8. — — — *corrugata*, profile.  
9. — — — *banksiana*, profile.  
10. — — — *leopardina*, profile.

5. Descriptions of Eight new Species of Land and Marine Shells from various Localities. By GEORGE FRENCH ANGAS, Corr. Mem. Z.S., F.R.G.S., F.L.S., &c.

[Received December 16, 1872.]

(Plate XX.)

1. EUTHRIA ARACANENSIS, n. sp. (Plate XX. fig. 1.)

Shell ovately fusiform, solid, transversely ridged, the interstices finely transversely striate, the ridges stronger in front, pale olivaceous brown, ornamented with longitudinal irregular chestnut markings; whorls 9 to 10, strongly angulate and nodose in the middle, excavated above, and slightly rounded below; aperture ovate, nearly half the length of the shell, angulate posteriorly, pale flesh-colour; outer lip crenulate, finely sulcate within; columella strongly arcuate, with a moderate posterior callus; the rostrum slanting, recurved.

Length 2 inches, diam. 1 inch (*coll. Hanley*).

*Hab.* Aracan.

2. HELIX (SEMICORNU) SILENUS, n. sp. (Plate XX. fig. 2.)

Shell deeply and perspectively umbilicated, rather thin, globosely depressed, pale brown, minutely and very finely punctately striate; spire immersed; whorls 5, rounded, rapidly increasing, the last inflated, a little flattened at the upper part, descending considerably in front, and somewhat angulated round the umbilicus; aperture oblique, rhomboidly lunate; peristome thin, whitish; margins approximating, the right flexuous, narrowly expanded; the columellar margin rounded, expanded, and slightly reflexed.

Maj. diam. 7, min. 6; height 5 lines.

*Hab.* New Ireland.



Butler, Arthur G. 1873. "A monographic revision of the genera *Zephronia* and *Sphærotherium*, with descriptions of new species." *Proceedings of the Zoological Society of London* 1873, 172–182.

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