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loop; C, the pedicle muscles; B, the adductor ones; A, the cardinal muscles.

Fig. 28. *Argiope cistellula*, Wood; interior of both valves as seen in dried specimens (much enlarged); A, the retractor and pedicle muscles. The position of the arms and mouth is the same as in *A. cuneata*, &c.

Fig. 29. *Morrisia anomoides* (Scacchi, sp.); enlarged: o, the ovaries seen through the transparency of the shell.

Fig. 30, 31. *Rhynchonella nigricans*, Sow. sp.; natural size.

Fig. 32-34. *Orbicula Evansii*, Dav.; enlarged.

2. DESCRIPTIONS OF EIGHTEEN NEW SPECIES OF LAND SHELLS, FROM THE COLLECTION OF H. CUMING, ESQ.

BY DR. L. PFEIFFER.

1. **HELIX AVUS**, Pfr. *H. testá umbilicatá, depressá, solidá, obliquè striatulá, nitidulá, pallide fulvá; spirá convexá, brevi; suturá levi; anfractibus 4 vix convexiusculis, sensim accrescentibus, ultimo carinato, utrinque convexiore, fascia fusca ad suturam, pallidaque ad carinam ornato, basi pallido, circa umbilicum mediocrem, pervium subcompresso; aperturá vix obliquá, subtriangulari-lunari; peristomate crasso, albo, expanso et reflexo, marginibus remotis, callo crasso junctis.*

Diam. maj. 37, min. 31, alt. 18 mill.

Hab. in insulis Philippinis.

2. **HELIX EMILIANA**, Pfr. *H. testá perforatá, conoideo-lenticulari, solidulá, supernè confertim costulatá, lineis impressis spiralibus subregulariter granulatá, opacá, lutescenti-fuscá; spirá conoideá, vertice elevato, obtusiusculo; anfractibus 6 convexiusculis, lente accrescentibus, ultimo non descendente, compressè carinato, basi convexo, radiatim striatulo, nitidulo; aperturá obliquá, angulato-lunari; peristomate simplice, recto, margine columellari ad perforationem reflexiusculo.*

Diam. maj. 16, min. 15, alt. 8 mill.

Hab. in insula Ceylon.

3. **HELIX REDFIELDI**, Pfr. *H. testá umbilicatá, conoideo-globosá, tenui, irregulariter striatá et obsoletissimè decussatá, diaphandá, nitidá, fulvo-corneá; spirá conoideá, obtusulá; anfractibus 5½ convexis, regulariter accrescentibus, ultimo inflato, non descendente; aperturá parum obliquá, lunato-rotundatá, altiore quam latá, intus margaritaceá; peristomate simplice, recto, acuto, marginibus remotis, columellari subverticali, sursum dilatato, umbilicum angustum semitegente.*

Diam. maj. 17, min. 15, alt. 14 mill.

Hab. Shang Hai, Chinæ (Mr. Fortune).

4. **HELIX NUDA**, Pfr. *H. testá vix perforatá, conoideo-depressá, tenui, radiatim striatulá, pellucidá, pallide fulvo-corneá; spirá conoideá, acutiúsculá; suturá impressá, albo-submarginatá; anfractibus 6 convexiusculis, ultimo majore, inflato, non descen-*

dente ; aperturá ferè diagonali, rotundato lunari, latiore quam altá ; peristomate simplice, recto, marginibus subconniventibus, dextro arcuatim antrorsum dilatato, columellari subrecedente, arcuato, supernè dilatato, reflexo.

Diam. maj. 11, min. $9\frac{2}{3}$, alt. 7 mill.

Hab. in Himalayah (Mr. Fortune).

5. **HELIX MINERVA**, Pfr. *H. testá umbilicatá, sublenticulari, solidá, subtiliter et confertim striatá, carinatá, nitidulá, luteá, fasciis 2 nigro-castaneis supra et infra carinam ornatá; spirá brevi, convexá, obtusá; suturá lineari; anfractibus 4 sensim accrescentibus, vix convexiusculis, ultimo non descendente, basi, præsertim antice, convexo, circa umbilicum angustum, conicum, subcompresso; aperturá diagonali, rotundato-lunari, intus submargaritaceá; peristomate simplice, recto, marginibus remotis, supero antrorsum subarcuato, columellari subverticali, sursum dilatato, patente.*

Diam. maj. 25, min. $22\frac{1}{2}$, alt. 12 mill.

Hab. in insulâ Celebes?

6. **HELIX REHBEINI**, Pfr. *H. testá imperforatá, globosá, solidá, minutissimè striatulá, sub epidermide non nitente, virenti-luteá albá, plerumque fasciis saturatè castaneis pluribus latis cinctá; spirá conoideo-semiglobosá, obtusulá; anfractibus $4\frac{1}{2}$ modicè convexis, rapidè crescentibus, ultimo rotundato, anticè breviter descendente, circa columellam vix declivem, latam, albam, subexcavatam nigricante; aperturá diagonali, lunato-rotundatá, intus albidá; peristomate albo, expanso-reflexiusculo, intus subincrassato.*

Diam. maj. 27, min. 23, alt. 20 mill.

Hab. in insulis Philippinis.

7. **HELIX EVA**, Pfr. *H. testá imperforatá, trochiformi, solidá, subtiliter et confertim striatá, vix nitidulá, carneá, sursum fasciá fusco-violaceá ornatá vel omnino fusculá; spirá conicá, acutiusculá; suturá impressá; anfractibus 5 vix convexis, ultimo non descendente, acutè carinato, basi convexiusculo, medio impresso; aperturá perobliquá, lunato-rhombéd; peristomate fusco-limbato, marginibus subparallelis, supero expansiusculo, basali arcuato, medio angulum obsoletum formante, incrassato, breviter reflexo.*

Diam. maj. 14, min. 12, alt. 9 mill.

Hab. in insulis Novis Hebridibus.

8. **HELIX ISODON**, Pfr. *H. testá angustè umbilicatá, conoideo-lenticulari, solidá, undique minutè granulatá, castaneo-fuscá; spirá latè conoideá, obtusulá; anfractibus 5 vix convexiusculis, lentè accrescentibus, ultimo carinato, anticè perdeflexo, strangulato et scrobiculato, basi convexo; aperturá ferè horizontali, auriformi; peristomate fusculo, subincrassato, reflexo, marginibus callo alte elevato flexuoso, medio laminam linguæ-*

formem emittente junctis, dextro valdè curvato, bidentato, basali declivi, unidentato, dentibus subæqualibus, validis.

Diam. maj. 19, min. $17\frac{1}{2}$, alt. $10\frac{2}{3}$ mill.

Hab. in Columbiâ occidentali.

9. **BULIMUS JANUS**, Pfr. *B. testâ imperforatâ, dextrorsâ vel sinistrorsâ, subfusiformi-oblongâ, solidâ, vix nitidulâ, luteâ-fasciis 3 extus opace viridibus, intus nitide atro-castaneis, peristoma non uttingentibus, basali latissimâ, varicibusque castaneis sparsis ornatâ; spirâ conicâ, acutiusculâ; anfractibus 6-7 convexiusculis, ultimo $\frac{2}{3}$ longitudinis subæquante, basi attenuato; columellâ verticali, strictâ; aperturâ obliquâ, semi-ovali, basi subangulatâ; peristomate subincrassato, breviter reflexo, albo, marginibus callo nigro-castaneo junctis.*

Long. 47, diam. 20 mill.

Hab. in Novis Hebridibus.

10. **BULIMUS FULIGINEUS**, Pfr. *B. testâ imperforatâ, oblongâ, solidâ, longitudinaliter striatâ et concentricè irregulariter subsulcatâ, fuliginè; spirâ convexo-conicâ, obtusulâ; suturâ profundâ, pallidâ; anfractibus 5 modicè convexis, rapidè accrescentibus, ultimo $\frac{3}{5}$ longitudinis æquante, basi attenuato; columellâ carneâ, subtortâ, basi subtruncatâ; aperturâ vix obliquâ, elongato-auriformi, intus lividâ; peristomate undique expansiusculo, margine dextro medio impresso, intus subdentato.*

Long. 38, diam. 16 mill.

Hab. in Novis Hebridibus.

11. **BULIMUS BLANDI**, Pfr. *B. testâ perviè et angustè umbilicatâ, turratâ, tenuiusculâ, obliquè confertim filoso-striatâ, opacâ, calcarè; spirâ elongatâ, infra apicem latum, obtusum attenuatâ; suturâ vix impressâ; anfractibus 17 planis, ultimo subangulato, $\frac{1}{7}$ longitudinis subæquante; aperturâ vix obliquâ, subtetragonâ; peristomate simplice, recto, margine columellari supernè reflexiusculo.*

Long. 22, diam. 7 mill.

Hab. Baranguilla in Andibus Columbianis (*Bland*).

12. **PARTULA GLUTINOSA**, Pfr. *P. testâ subumbilicatâ, subpyramidatâ, solidâ, lævigatâ (sub lente vix decussatulâ), epidermide fulvâ, nitidâ, quasi glutinosâ obductâ; spirâ elevato-conicâ, apice acutâ; suturâ lævi; anfractibus 5, superis planis, ultimo spiram subæquante, convexiore, basi quasi saccato; columellâ leviter arcuatâ, supernè vix plicatâ; aperturâ ferè verticali, oblongâ, obliquè protractâ; peristomate lato, intus calloso, violaceo-fusco limbo, marginibus subparallelis.*

Long. 19, diam. 10 mill.

Hab. — ?

13. **PARTULA DENTIFERA**, Pfr. *P. testâ subumbilicatâ, ovato-conicâ, solidâ, sublævigatâ, parum nitidâ, pallide stramineâ; spirâ conicâ, apice acutiusculâ; suturâ marginatâ; anfractibus*

$5\frac{1}{2}$, summis planis, penultimo convexiore, ultimo spirá vix brevior, convexo, anticè medio impresso; columellá subverticali, vix plicatá; aperturá vix obliquá, angustá, obversè auriformi; peristomate valdè incrassato, albo, patente, marginibus subparallelis, dextro supernè valdè curvato, medio tuberculum acutum, dentiforme gerente.

Long. $21\frac{1}{2}$, diam. 10 mill.

Hab. —?

14. *ACHATINA IOSTOMA*, Pfr. *A. testá fusiformi-ovatá, tenui, undique æqualiter granulatá, parum nitidá, fulvá, strigis obscuris, latis, subangulatis, castaneis ornatá; spirá conicá, supernè attenuatá, pallidá, apice obtusá; suturá subcrenatá; anfractibus $7\frac{1}{2}$ vix convexiusculis, ultimo spiram paulò superante, basi subattenuato; columellá leviter tortá, basi obliquè et breviter truncatá; aperturá verticali, angustè semiovali, intus pallide lilacíná, nitidá; peristomate simplice, margine dextro regulariter arcuato.*

Long. 128, diam. 56 mill.

Hab. Fernando Po (Fraser).

15. *ACHATINA GLUTINOSA*, Pfr. *A. testá ovato-conicá, tenuiusculá, longitudinaliter striatá, subunicolore fulvá; spirá conicá, sursum attenuatá, apice obtusiusculá; anfractibus $7\frac{1}{2}$, mediis lineis spiralibus subdecussatis, ad suturam submarginatam profundè striatis, ultimo spiram paulò superante, sublævigato, glutinoso-nitente; columellá plicato-tortá, basi abruptè truncatá; aperturá obliquá, ferè ovali, intus lilacéa, margaritacéa; peristomate simplice, fusco-limbato, margine basali arcuato.*

Long. 98, diam. 45 mill.

Hab. in Africâ occidentali (Fraser).

16. *ACHATINA DESHAYESI*, Pfr. *A. testá turrito-ovatá, tenuiusculá, sublævigatá, nitidá, corneo-fuscá; spirá elongatá, convexá, apice obtusulá; suturá simplice, subprofundá; anfractibus 7 convexis, ultimo $\frac{2}{5}$ longitudinis subæquante, basi rotundato; columellá subtortá, latè et obliquè truncatá; aperturá vix obliquá, rhombeo-semiovali; peristomate simplice, obtuso, margine dextro subrependo.*

Long. 11, diam. 5 mill.

Hab. in insulâ Ceylon.

17. *ACHATINA CERA*, Pfr. *A. testá oblongo-turritá, tenui, subtiliter et regulariter striatá, nitidá, pellucidá, pallide cereá; spirá rectilineari, apice obtusá; suturá mediocri, minutè crenulatá; anfractibus 8 vix convexis, ultimo $\frac{1}{4}$ longitudinis vix superante, infra medium subangulato; columellá curvatá, abruptè truncatá; aperturá obliquá, oblongá; peristomate simplice, recto, margine dextro leviter arcuato.*

Long. 14, diam. $4\frac{2}{3}$ mill.

Hab. Fernando Po (Fraser).

18. *HELICINA* *SUBLÆVIGATA*, Pfr. *H. testá conoideo-depressá, solidulá, sublævigatá, nitidulá, unicolore rubellá vel albidá, subtus violaceo zonatá; spirá breviter conoidea, vertice obtusulo; anfractibus 5 vix convexiusculis, ultimo latiore, peripheriá obsoletè angulato; aperturá diagonali, subsemiovali; columellá brevi, simplice, callum crassiusculum, circumscriptum retrorsum emittente; peristomate simplice, breviter expanso, margine basali ferè rectilineari, ad columellam subdentato. Operculum tenue, corneum.*

Diam. maj. 8, min. $6\frac{1}{2}$ alt. 5 mill.

Hab. in Novis Hebridibus.

3. NOTES ON THE *DIDUNCULUS*, A SPECIES OF PIGEON SUPPOSED TO BE PECULIAR TO THE NAVIGATOR'S ISLANDS. BY LIEUT. THE HON. F. WALPOLE, R.N. COMMUNICATED BY J. H. GURNEY, ESQ., F.Z.S.

May 25.

Lieut. Walpole always saw this bird (when in its natural state) either perching on trees or flying about them,—feeding by day and roosting by night among the branches. He never saw them on the ground, though he has seen places where they appeared to have been scratching, either for roots or for other food. The crops of the specimens which he examined were, however, generally filled with green berries, which grew in clusters on a species of ash. The number of specimens so examined was considerable, as the birds formed Lieut. Walpole's principal food while on these islands. He found the flesh most excellent, though in colour darker even that of the English wood-pigeon. The flight of the *Didunculus* is mostly limited to a transit from wood to wood, as they rarely attempt to pass from one island to another,—the distance between the islands varying from ten to eighty nautical miles.

Though their flight appears to be inferior to that of most pigeons, it is of the same swooping and continuous character.

They retire late to roost, but are not nocturnal.

They are generally seen either in pairs or in small flocks. The largest flock seen by Lieut. Walpole consisted of nine.

In the breeding season they pair and retire to the interior of the islands, where they nest amongst the rocks.

Lieut. Walpole does not know the colour or number of the eggs, but states that the young are naked and helpless.

The male bird is superior to the female in size, colour, and carriage, but does not attain his full plumage until the second year.

The natives of the Samoan Islands are fond of keeping the *Didunculi* tame as pets, either taking them from the nest, or, when older, with bird-lime.

They attach the bird by a long string fastened round one leg to a stick about two feet in length, with a fork at the end, which is stuck generally in the wall inside the hut, but sometimes in the ground outside.