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LXI.—Descriptions of thirty-one terrestrial and fluviatile Mollusca from South Africa

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canals, 21-23 $\frac{4\frac{1}{2}}{2\frac{1}{2}}$, 1 or $1\frac{1}{2}$ between lateral line and root of ventral. Uniform brownish above, silvery white below.

Total length 105 to 225 millim.

One specimen from Lagos (*H. T. Ussher*) and four from the Gold Coast (*R. B. N. Walker*). These specimens have been referred to *A. macrolepidotus* by Dr. Günther. Steindachner's *A. macrolepidotus* from Liberia (Notes Leyd. Mus. xvi. 1894, p. 63) probably belongs to the same species.

The four closely allied *Alestes*, characterized by very large scales and the very posterior position of the dorsal fin, may be distinguished as follows :—

- A. The distance between the end of the snout and the occiput much greater than the width of the head; snout projecting considerably beyond the lower jaw in the adult.
Anal 15-17; lat. l. 22-26; depth of body
 $3\frac{1}{2}$ to $4\frac{1}{2}$ times in total length *A. macrolepidotus*, C. & V.
- B. The distance between the end of the snout and the occiput not or but little greater than the width of the head; snout projecting but slightly beyond the lower jaw.
Anal 13-14; lat. l. 24-27; depth of body $3\frac{1}{2}$
to $3\frac{3}{4}$ times in total length *A. grandisquamis*, Blgr.
Anal 16-18; lat. l. 21-23; depth of body $2\frac{3}{4}$
to 3 times in total length *A. brevis*, Blgr.
Anal 15-16; lat. l. 28-29; depth of body $3\frac{1}{2}$
to 4 times in total length *A. Batesii*, Blgr.

LXI.—*Descriptions of Thirty-one Terrestrial and Fluvial Mollusca from South Africa.* By JAMES COSMO MELVILL, M.A., F.L.S., and JOHN HENRY PONSONBY, F.Z.S.

[Plates XXXI. & XXXII.]

AFTER an interval of more than two years* we are enabled to offer another contribution (the seventeenth) towards the elucidation of the non-marine Molluscan fauna of South Africa, in which are included descriptions of several species of *Ennea* and *Trachycystis*—*T. scolopendra*, perhaps, being the most remarkable Helicoid yet reported from this region. An *Achatina*, *Buliminus*, *Planorbis*, a most interesting *Fauxulus*, a *Tropidophora*, and a *Chondrocyclus* are, amongst

* Ann. & Mag. Nat. Hist. ser. 7 (Oct. 1901), vol. viii. pp. 315 sqq.

others, likewise differentiated, their discovery being mainly due to the continued indefatigable researches of Messrs. J. Crawford, J. Farquhar, and H. Burnup.

We also take the opportunity of refiguring *Hypolysia Florentiæ*, M. & P. (Pl. XXXII. fig. 13), the original drawing * not sufficiently exhibiting the salient peculiarities of the peristome.

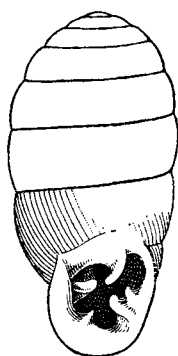
Ennea calopasa †, sp. n.

E. testa rimata, recte cylindrica, albida, pulchre subpellucente; anfractibus novem, apice obtusissimo, fere applanato, cæteris apud suturas impressis, undique longitudinaliter arcuè liratis, liris obliquis; apertura ovato-oblonga, intus alba, peristomate albo, nitido, incrassato, plicis dentibusve quinque munito: plica parietali nitida, acinaciformi, intrante, dentibus duobus labialibus acutis, superno majore, eadem basi congemminatis, dente basali parvo acuto, plica columellari conspicua, interne basin versus circumtorquente.

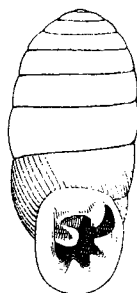
Long. 14, lat. 6 mm.

Hab. Port Shepstone, Natal (*Burnup*).

This very beautiful form, Mr. H. Burnup writes, has so far only occurred in small quantity, say in the proportion of



Ennea Albersi.

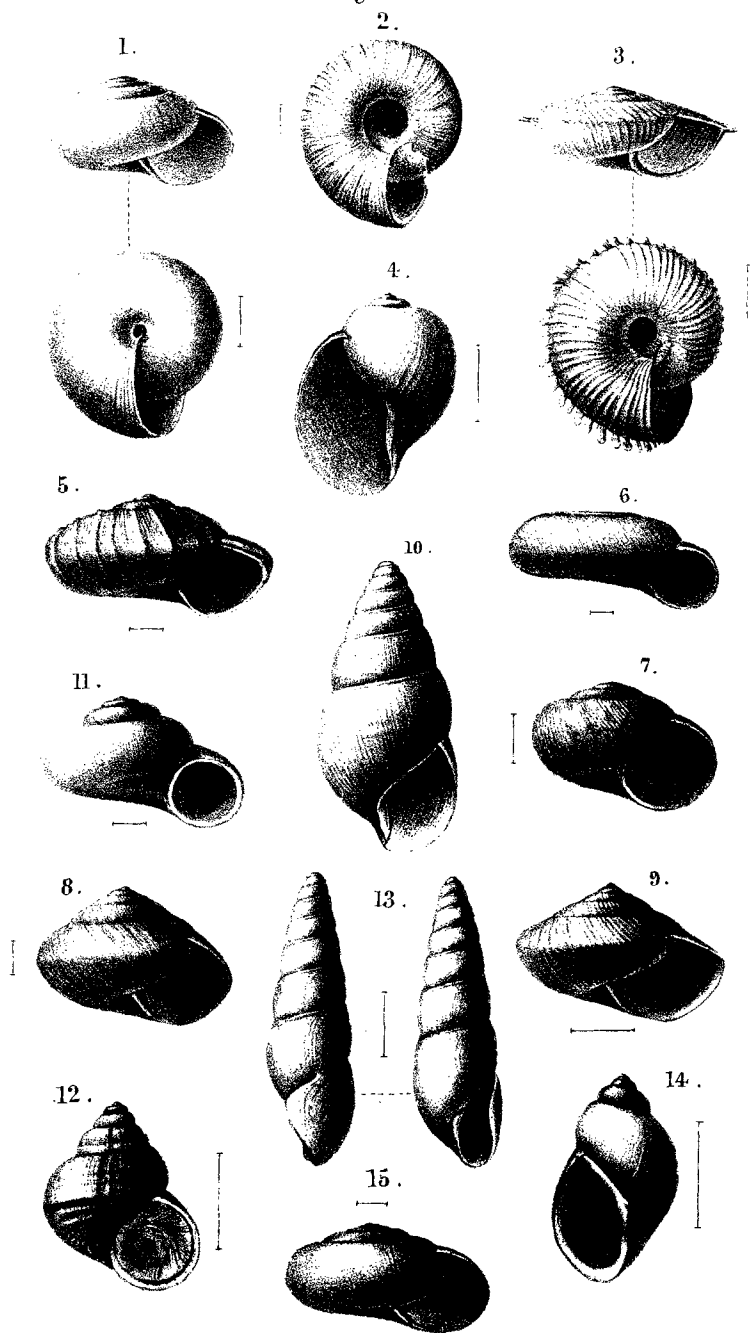


Ennea calopasa.

one to ten, as compared with the larger *E. Albersi*, Pfr., from the same locality. He has favoured us with the following comparative note, accompanied by two most accurately drawn figures:—

* *Loc. cit.* pl. ii. fig. 8.

† *καλὸς πᾶς*, altogether beautiful.



E. Albersi, Pfr.*E. calopasa*, sp. n.

(a) Labial teeth.

Two: upper smaller, lower arising nearer the peristome.		Two: lower smaller, upper arising nearer the peristome.
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(b) Columellar plaits.

With straight, club-shaped rib, nearly horizontal, or sloping slightly downwards.		With curved rib, beginning with a sharp downward turn, and curving round the base of the columellar plait.
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In addition to the above-mentioned distinctions, the form should be noticed, the contour being much straighter and the whorls far less ventricose in the smaller species, *calopasa*.

It should also be remarked that the longitudinal liræ are far more oblique around the upper than on the last two whorls.

Ennea claustraria *, sp. n. (Pl. XXXI. fig. 16.)

E. testa ovato-cylindrica, ad basin subrimata, lævissima, polita, pallide corneo-hyalina, delicata; anfractibus 8, apice obtusissimo, cæteris uniformibus, ultimo brevi; apertura lunari; peristomate albo, nitido, incrassato, serie multiplici dentium plicarumque prædito: plica parietali oblonga, obtusa, plica, potius quam dente, labiali triplici, intus V formante, dente basali remoto, sulcato, mammæformi, plica columellari interna, maxima, aperturam fere claudente.

Long. 7, lat. 3 mm.

Hab. Lower Umfolosi Drift, Zululand (*Burnup*).

An *Ennea* with most remarkable peristomatal processes, allied to *E. dædalea*, described in this paper, and even more intricately multiplex in its arrangement of teeth and plaits. Indeed, the large sulcate mammæform internal columellar plait very nearly closes up the aperture.

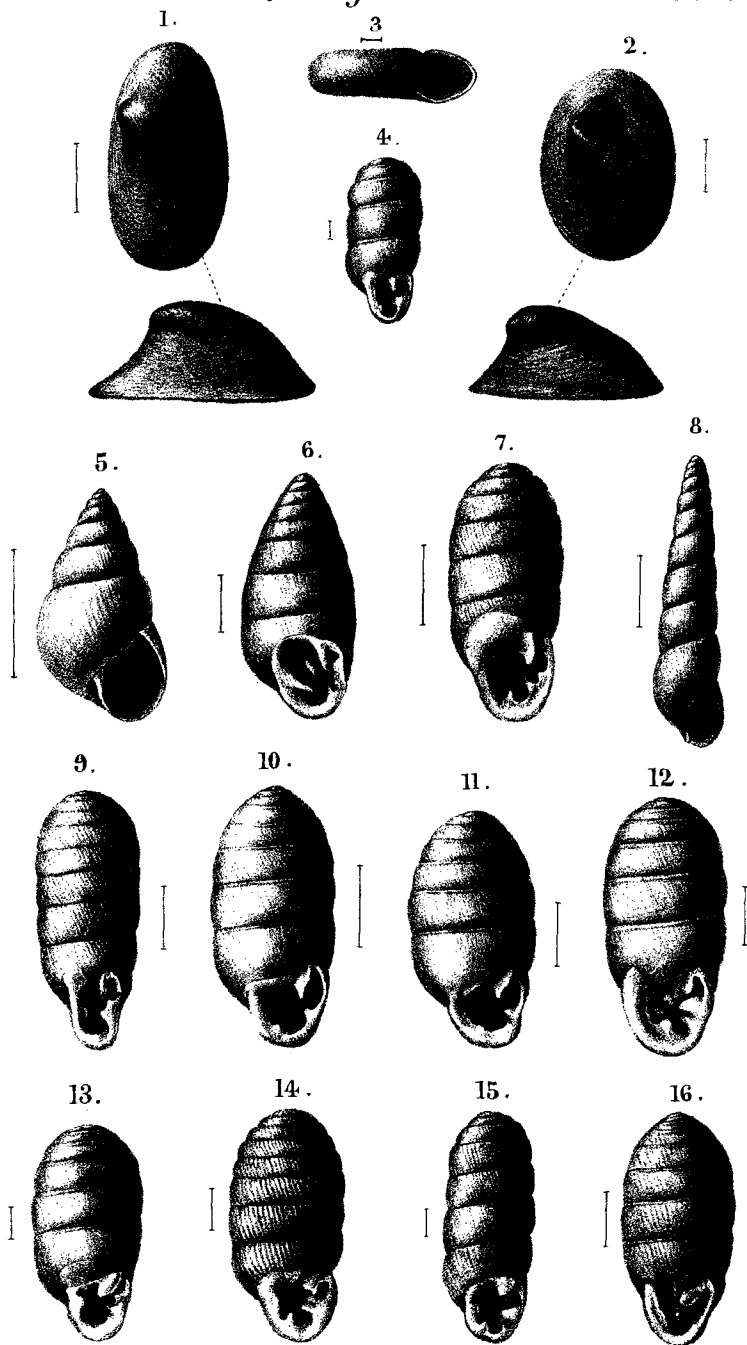
Ennea craterodon †, sp. n. (Pl. XXXI. fig. 9.)

E. testa cylindrica, oblonga, breviter rimata, solidula; anfractibus 9-10, apice valde obtuso, cæteris fere rectis, apud suturas impressis, undique longitudinaliter arcte striatis, striis obliquissimis; apertura angusta, ovato-triangulari; peristomate apud basin producto, dentibus plicisve quatuor prædito: plica parietali magna, recta, haud multum intrante, dente labiali bifido, inferiore præstante; columella undique incrassata, plica columellari interna, mamillata.

Long. 9, lat. 3 mm.

* *Claustrarius*, protected by a claustrum or barrier.

† *κραερόδων*, strong-toothed.



Hab. Maeström Forest, Bedford (*Farquhar*).

With the form of *E. Leppani*, Stur., the arrangement of plaits in *E. craterodon* is quite different, the labial tooth being also more developed. A basal process is also present. *E. Arnoldi*, Stur., is like in form of peristome, but the whorls in that species are far more tumid and it is also smaller in every detail.

Ennea dædalea, sp. n. (Pl. XXXI. fig. 12.)

E. testa cylindrica, subrimata, polita, albo-lactea, hyalina, tenui; anfractibus 7-8, apice obtuso, planato-depresso, cæteris tumidulis, nitidissimis, perlævis; apertura subcirculari; peristomate multum incrassato, nitido, plicis dentibusve magnopere complicato: plica parietali oblonga, labiali trifurcata, incurva, multum intrante, dente basali brevi, intus duplicato, plica columellari apud medium profunde sulcata, intus extensa, margine columellari perincrassato.

Long. 8, lat. 3.50 mm.

Hab. Lower Umfolosi Drift, Zululand (*Burnup*).

A species with remarkably elaborate mouth-processes, almost closing the roundish aperture, and suggesting the specific title proposed. These processes consist of:—(i.) a simple, oblong, internal, parietal plait; (ii.) a multiplex labial, thrice-divided and curving inwards; (iii.) a small, simple, basal tooth; and (iv.) a columellar plait, wholly internal, large, and subdivided centrally by a deepish furrow. The surface is white and polished, with the slightest sign of longitudinal striation at the extreme base only. It is a very distinct form.

Ennea genialis, sp. n. (Pl. XXXI. fig. 14.)

E. testa cylindrica, subrimata, pellucida, albo-vitrea, apice obtusissimo; anfractibus 9, apud suturas multum impressis, tumidulis, undique longitudinaliter arcte liris, liris superne obliquis, apud anfractum penultimum fere, apud ultimum omnino, rectis; apertura orbiculari; peristomate albo, nitido, incrassato, plicis dentibusve quatuor munito: plica parietali bifida, multum intrante, labiali furcata, incurva, dente basali parvo, simplici, plica columellari omnino interna, magna, mammæformi, margine columellari incrassato.

Long. 5, lat. 2 mm.

Hab. Patana, Zululand (*Burnup*).

The chief peculiarities of this very refined little *Ennea* appear to consist in the bifid parietal and curious scimitar-like, incurved, and duplicated labial plait; the longitudinal

liræ are also to be noted, being very oblique on the upper whorls, and gradually merging into straightness over the body-whorl.

It is to some extent comparable with *E. differens*, Sturany. A few examples.

Ennea himerothales *, sp. n. (Pl. XXXI. fig. 13.)

E. testa rimata, breviter cylindriformi, nitida, fere lævi, delicata, subpellucida; anfractibus 7, apicalibus obtusissimis, cæteris inflatis, supernis angustis, penultimo latiore, apud suturas sub lente utrinque oblique striatis, striis in medio evanidis, ultimo anfractu lævissimo; apertura anguste trigonali; peristomate albo, nitido, dentibus plicisve sex instructo: plica parietali lata, haud intrante, truncatula, dente labiali bifurcato, parte superiore minore, dente basali inconspicuo, parvo, dente columellari calloso, incrassato, subtus plica interna grandi, mamillata, prædito.

Long. 4, lat. 2 mm.

Hab. Port Shepstone, Natal (*Burnup*).

A shining nearly transparent little *Ennea*, shortly cylindrical in form, and smooth, excepting just round the sutures of the upper whorls, where, with a lens, slight oblique striation is discernible, the body-whorl being quite smooth. The peristomatal processes are six in number—a truncate parietal plait, two labial bifurcate teeth on a common base, a small basal tooth, a columellar one much thickened, and below this last a mamillate plait.

Ennea montana, sp. n. (Pl. XXXI. fig. 15.)

E. testa cylindrica, doliiformi, parva, subperforata, vitrea, vel incrassata; anfractibus 7, apicalibus obtusissimis, omnibus apud suturas multum impressis, in medio ad suturas utrinque oblique rudistriatis, striis apud medium anfractum evanidis; apertura trigona; peristomate centrali, albo, incrassato, dentibus plicisve quatuor munito: plica parietali conspicua, dente labiali bifido, parvo, subtus acuto, dente basali minore, plica columellari interna.

Long. 3.50, lat. 1.20 mm.

Hab. Mountain Drive, Grahamstown (*J. Farquhar*).

A very neat cylindrical species, the trigonous aperture placed more centrally in position than is the case in any other species we can recall.

Ennea sylvia, sp. n. (Pl. XXXI. fig. 4.)

E. testa minuta, recto-cylindrica, rimata, nitida, delicata, lævi, apice

* *ἡμεροθάλης*, delightful.

obtusum; anfractibus 5-6, fere rectis; apertura subrotunda; peristomate albo, nitido, incrassato, plicis dentibusve quatuor munito: plica parietali dentiformi, parva, acuta, dente labiali bifido, acuto, basali et columellari minoribus, obtusatis, plica subtus columellam minime interna, mammæformi.

Long. 1.75, lat. .75 mm.

Hab. Maeström Forest, Bedford (*J. Farquhar*).

An excessively minute smooth species of but few whorls, straightly cylindrical, and with the dental arrangement very prominently disposed upon the upper surface of the peristome. *E. Pentheri*, Sturany, appears much of the same magnitude and form, but the whorls in that species are more ventricose, and the peristomatal processes differ in the simple labial tooth, the basal being altogether absent.

*Ennea triglochis**, sp. n. (Pl. XXXI. fig. 11.)

E. testa cylindrica, rimata, paullum obesa, lævi, nitidissima, subhyalina, pallide straminea; anfractibus 8, quorum apicales $1\frac{1}{2}$ globulares, perlæves, lubrici, cæteris tumidulis, sub lente arcute et tenuissime leviter striatis, striis in speciminibus quibusdam apud basin fere evanidis, ultimo anfractu cæteros longitudine superante; apertura fere rotunda; peristomate nitido, crassiusculo; dentibus plicisve quatuor munito, tribus magis conspicuis: plica parietali acinaciformi, acuta, prominula, intrante, dente labiali parvo sed conspicuo, acuto, basali perparvo, plica columellari omnino interna, obtusa.

Long. 9.50, lat. 4 mm.

Hab. Botha's Hill, Maritzburg, Natal (*Burnup*).

A pale, straw-coloured, lubricous species, not unlike a *Pupina* superficially, and to which, judging from the figure, *E. sejuncta*, Stur., seems akin. It possesses the same character of oral teeth and plaits as do *E. cionis*, *juxtidentis*, M. & P., &c., but is much larger in every part. The labial tooth is acute, the basal often almost obsolete. It is a very distinct addition to the genus.

Ennea virgo, sp. n. (Pl. XXXI. fig. 10.)

E. testa mediocri, obeso-cylindriformi, hyalina, lævissima, polita; anfractibus $8\frac{1}{2}$ -9, apice obtuso, cæteris minime ventricosulis; apertura lunari; peristomate tenui, albo, nitido, paullum incrassato, plicis dentibusve quatuor instructo: plica parietali acinaciformi, fere semicirculari, dente labiali simplici, acuto, incrassato, basali minore, inconspicuo, plica columellari interna, haud magna, omnino mammæformi.

Long. 11, lat. 4 mm.

* *τριγλῶχis*, a thrice-pointed lance.

Hab. Lower Umfolosi Drift, Zululand (*Burnup*).

Glossy, white, and semitransparent, absolutely smooth throughout, with the peristomatal processes less developed than in the majority of its genus. The allies of this beautiful new form would seem to be *E. sejuncta*, Stur., from which it differs entirely in contour, while *E. Planti*, Pfr., and *Queketti*, M. & P., are both larger and possess slight longitudinal striation, of which there is no trace in *E. virgo*.

Ennea Warrenii, sp. n. (Pl. XXXI. fig. 7.)

E. testa rimata, cylindrica, albo-calcareo, apice obtuso-conico; anfractibus (apicali incluso) 8, tribus ultimis fere rectis, omnibus longitudinaliter obliquissime striatis; apertura rotunda; peristomate albo, nitido, incrassato, quatuor plicis dentibusve munito: plica parietali recta, acinaciformi, intrante, dente labiali bifurcato, acuto, superno minore, dente basali parvo, acuto, plica columellari omnino interna, mammariformi.

Long. 10, lat. 4.50 mm.

Hab. Lower Umfolosi Drift, Zululand (*Warren*).

A few examples of a conspicuous chalky-white form, with conspicuous lip, possessing four processes, as described above. The apex is obtusely conical, and the three lowest whorls are almost straight and uniform. Smaller in all its parts, but allied to *E. Albersi*, Pfr. At Mr. Burnup's request we name this interesting species after its discoverer, the Director of the Maritzburg Museum.

Zonitoides Cupido, sp. n. (Pl. XXXII. fig. 1.)

Z. testa depresso-conica, anguste umbilicata, delicata, hyalina, cornea; anfractibus $5\frac{1}{2}$, apice parvo, laevi, caeteris apud suturas haud profunde excavatis, ventricosulis, laevibus, nitidis, sub lente irregulariter longitudinaliter oblique striatulis; apertura effuse lunari, peristomate tenuissimo, columella ad marginem paululum reflexa.

Alt. 3.50, diam. 6 mm.

Hab. Lower Umfolosi Drift, Zululand (*Burnup*).

Of the same character as the North-American species *Z. arboreus*, Say, and its immediate allies, from all of which this very delicate, shining, and vitreous-horny species differs in its narrow umbilicus and slightly excavate whorls. It belongs to a group hitherto regarded as foreign to or adventitious in the South-African fauna, but we imagine will be ultimately shown to be really indigenous.

Trachycystis centrifuga, sp. n. (Pl. XXXII. fig. 9.)

T. testa conico-depressa, anguste umbilicata, tenuissima, hyalina, periostraco corneo, olivaceo-fusco omnino contacta; anfractibus 5, quorum duo apicales grandes, elevati, mamillati, cæteris ventricosulis, periostraco undique longitudinaliter oblique costellifero indutis, interstitiis spiraliter sub lente tenuistriatis, ultimo anfractu ad peripheriam acute carinato et regulariter fimbriato; apertura ovato-lunata, peristomate tenui, margine columellari supra umbilicum triangulatim reflexo, basi convexa.

Alt. 5, diam. 8·75 mm.

Hab. Maeström Forest (*Farquhar*).

Akin to *T. Planti*, Pfr., *T. actinotricha*, M. & P., &c., while differing from all in detail.

*Trachycystis glebaria**, sp. n. (Pl. XXXII. fig. 15.)

T. testa ovata, profunde sed anguste umbilicata, spira depressa, tenui, cornea, subpellucida; anfractibus 5, apice lævi, albescente, omnibus ad suturas impressis, ventricosis, longitudinaliter minutissime et arcte striatis, nitidiusculis; apertura lunata, peristomate tenui, marginem apud columellarem vix reflexo.

Alt. 2, diam. 3·50 mm.

Hab. Pinetown, Natal (*Burnup*).

A small but neatly formed species, with much depressed whorls, umbilicus narrow but deep, surface horny, seemingly smooth, but microscopically longitudinally striolate. Allied to *T. Glanvilleana*, Ancey.

Trachycystis laticostata, sp. n. (Pl. XXXII. fig. 5.)

T. testa parva, profunde umbilicata, depresso-conica, tenui, subhyalina, sed periostraco rudi, fuscato, omnino contacta; anfractibus 5, quorum 1½ apicales vitrei, læves, globulares, cæteris irregulariter et crasse laticostatis, costulis obliquis, rudibus; apertura fere rotunda, peristomate tenui, simplici.

Alt. 2, diam. 4 mm.

Hab. Maeström Forest, Bedford, Cape Colony (*Farquhar*).

Covered with a rough fuscous-black epidermis, and peculiarly rudely and broadly ribbed for so small a shell.

Trachycystis oreina†, sp. n. (Pl. XXXII. fig. 8.)

T. testa parva, conico-pyramidata, obtecte umbilicata, albo-cinerea, tenui, periostraco fusco-olivaceo, omnino contacta; anfractibus 5,

* *Gleba*, a small clod of earth, from the resemblance.

† *ὀρείωνος*, inhabiting heights.

apicali globulari, parvo, lævi, cæteris apud suturas impressis, paullum gradatis, undique longitudinaliter obliquistriatis, striis irregularibus, rudis; apertura lunata, peristomate tenui, margine columellari umbilicum triangulatim superimpendente.

Alt. 2·75, diam. 5 mm.

Hab. Mountain Drive, Grahamstown (*J. Farquhar*).

A plain species with dark brown epidermis and coarse irregular ribbing.

Trachycystis patera, sp. n. (Pl. XXXII. fig. 6.)

T. testa minuta, depressa, discoidali, perspective umbilicata, electrino-cornea, tenui; anfractibus 6-7, apicali minuto, lævi, cæteris arcissime sub lente longitudinaliter striatulis, striis fere rectis, apud suturas rotunde excavatis, ventricosulis; apertura depressolunata, peristomate tenui, simplici.

Alt. ·75, diam. 2·15 mm.

Hab. Maeström Forest, Bedford, Cape Colony (*J. Farquhar*).

Minute, but characteristic, and bearing a superficial resemblance in some points to the British *Gonyodiscus rotundatus*, Müll., than which it is much smaller, and very minutely and closely longitudinally striolate.

Trachycystis permeata, sp. n. (Pl. XXXII. fig. 2.)

T. testa profunde et sat late umbilicata, depressa, cinerea, tenui, epidermide omnino olivaceo-cornea contexta; anfractibus 5, quorum apicalis parvus, globularis, lævis, cæteris apud suturas rotunde excavatis, ventricosulis, undique arcte longitudinaliter obliquilatis, liris inæqualibus, ultimo ad peripheriam obtuse carinato; apertura rotundo-lunari, peristomate tenui, margine columellari tenui, simplici.

Alt. 2·50, diam. 4·50 mm.

Hab. Pinetown, Natal (*Burnup*).

Conspicuous for its depressed contour, deep and fairly wide umbilicus, and roundly hollowed out sutures. We do not know any species quite comparable.

Trachycystis scolopendra *, sp. n. (Pl. XXXII. fig. 3.)

T. testa depressa, paullulum conica, umbilicata, cinereo-fusca, hyalina, tenuissima, undique periostraco corneo induta; anfractibus 6, apicali minuto, mamillato, cæteris periostraco longitudinaliter irregulariter obliquilato præditis, anfractu ultimo apud

* *Scolopendra*, a centipede.

peripheriam iris brevibus, sed latis, pulcherrime expansis et frondosis induto, infra peripheriam ad basin convexo, et simili modo ac superne lirato; apertura rotundo-lunari, peristomate tenui, margine columellari paullum supra umbilicum reflexo.

Alt. 6, diam. 13 mm. (sp. min.).

„ 7.50, „ 15 „ (sp. maj.).

Hab. Port Shepstone, Natal (*Burnup*).

Five examples, a characteristic one being now figured; the largest of all that has been yet found is unfortunately imperfect, having the wonderful frondose extension of the epidermis worn away. These processes are thin, horny, hyaline, short but broad, and give a very striking and bizarre effect, rendering this one of the most strange and easily distinguishable of South-African Helicoids.

Trachycystis simplex, sp. n. (Pl. XXXII. fig. 7.)

T. testa ovato-conica, tenui, anguste sed profunde umbilicata, cinereo-olivacea, undique periostraco corneo, tenui, induta; anfractibus 5, apicali parvo, depresso, mamillato, cæteris undique arcte longitudinaliter obliquiliratis; apertura ovato-lunata, peristomate rotunde effuso, tenui, margine columellari supra paullum incrassato, umbilicum partim obtegente.

Alt. 6.20, diam. 9 mm.

Hab. Pondoland (*J. Farquhar*).

A simple species, thin, with horny epidermis or periostracum, very finely longitudinally lirated throughout. Akin to the typical series of the genus, e. g., *bisculpta*, Bens., and *Burnupi*, M. & P.

Opeas McBeani, sp. n. (Pl. XXXI. fig. 8.)

O. testa attenuata, fusiformi, delicata, subpellucida, pallide straminea; anfractibus 10, quorum duo apicales mammosi, cæteris apud suturas impressis, tumidulis, longitudinaliter undique minute obliquistriatis; apertura parva, labro tenui, margine columellari fere recto, crassiusculo, nitido, albo.

Long. 9.50, lat. 2 mm. (sp. max.).

Hab. Boksberg, Transvaal (*Burnup*).

Differing from its near ally *Subulina strigilis*, M. & P.*, in its more globular apical whorls, finer striation, and smaller aperture. In that species, too, the last whorl is not so prolonged proportionately and the upper whorls are less ventricose than in this new form.

* Ann. & Mag. Nat. Hist. ser. 7, vol. viii. p. 318.

Buliminus (Pachnodus) Burnupi, sp. n.
(Pl. XXXI. fig. 5.)

B. testa oblongo-ovata, obtecte umbilicata, parum nitida, pallide gilva, fere lævi; anfractibus 7, apicali parvo, obtuso, cæteris longitudinaliter indistincte obliquistriatis, ultimo cæteros longitudine superante (9 mm.); apertura ovata, peristomate tenui, paullum effuso, columella recta, margine columellari albo, supra umbilicum leviter reflexo.

Long. 16, lat. 8 mm. (sp. min.).

„ 17, „ 9.50 „ (sp. maj.).

Hab. Lower Umfolosi Drift, Zululand (*Burnup*).

A distinctive form, which with much satisfaction we dedicate to its discoverer, whom we congratulate at the same time on the most promising results of his first explorations in a hitherto almost untried country.

Fauxulus Crawfordianus, sp. n. (Pl. XXXI. fig. 6.)

F. testa anguste rimata, cylindrico-fusiformi, lævi, subnitente, tenui, fusca; anfractibus 8-9, apicali mamillato, cæteris apud suturas impressis, fere lævibus, sub lente obliquissime longitudinaliter striatis, ultimo infra peripheriam abbreviato; apertura rotunda; peristomate albo, nitido, circumreflexo, continuo, sexplicato: plicis duabus parietalibus, acinaciformibus, una inferiore, acuta, intrante, duabus labialibus longe intrantibus, superiore obliqua, inferiore fere recta, dente basali subinterno, mammæformi, plica columellari acinaciformi, valde intrante.

Long. 8, lat. 3.75 mm.

Hab. Mossel Bay (*J. Crawford*).

A particularly fine and interesting dextral species of *Fauxulus* allied to *Pupa Layardi*, Bens. The peristomatal processes, six in number, are unusually complicated, as described in detail above. We have pleasure in connecting with it the name of Mr. J. Crawford, through whose kind instrumentality we have received so many new forms from South Africa.

Achatina parthenia *, sp. n. (Pl. XXXII. fig. 10.)

A. testa oblonga, nitida, lævi, tenui, læte et pallide stramineo-olivacea, superne carneo-suffusa; anfractibus 8, quorum apicalis fere immersus, globularis, lævis, cæteris apud suturas impressis, gradatulis, ventricosus, quatuor supernis (apicali excluso) sub lente minutissime decussatulis, in antepenultimo fere evanidis,

* πάρθενος, a virgin.

duobus ultimis lævibus, nitidis; apertura ovata, peristomate tenui, paullum effuso, columella basin versus truncatula, tenui. Long. 38, lat. 19 mm.

Hab. Lower Umfolosi Drift, Zululand (*Burnup*).

Of the same group as *A. penestes*, M. & P., *transvaalensis*, Smith, and *Livingstonei*, M. & P., but very distinct from all, differing both in form and coloration from any described species. The shining stramineous hue, with a blend of olive, is peculiar; this is periostracal, the dead white of the shell itself showing through in occasional patches. The upper whorls with aid of a lens are seen to be most finely decussate; this gradually becomes evanescent, till the last two whorls appear quite smooth. Four examples, one immature.

Isidora compta, sp. n. (Pl. XXXII. fig. 14.)

I. testa ovato-oblonga, læte electrina, nitida, delicata; anfractibus 4, apicali diaphano, lævi, minuto, globulari, tribus supernis castaneis, omnibus tumidis, apud suturas impressis, ultimo rapide accrescente, sub lente arcissime longitudinaliter tenuistriato; apertura ovata, peristomate paullum effuso, incrassato, marginato. Long. 14, lat. 6 mm.

Hab. Boksberg, Transvaal (*Burnup*).

A brightly coloured species, in which the longitudinal lines of growth are characteristic, opaque spaces alternating at intervals irregularly with subhyaline patches. It is more comparable with such Australian *Physæ* as *concinna*, Ad. & Angas, or *Grayi*, E. A. Sm., than with any of the well-known South-African forms.

Physa zuluensis, sp. n. (Pl. XXXII. fig. 4.)

P. testa rimata, rotundo-ovata, succineo-vitrea, delicatissima; anfractibus 5, supra abbreviatis, apice ipso albo-mamillato, cæteris ad suturas impressis, ultimo permagno, rapidissime accrescente, supra subsquarroso; apertura ovato-oblonga, peristomate tenuissimo, paullum apud basin prolongato, margine columellari crassiusculo.

Alt. 10, diam. 7 mm.

Hab. E. Zululand (*Burnup*).

P. natalensis, Krauss, seems the nearest ally to this species, the very extended and strongly shouldered body-whorl being characteristic.

Ancylus (Ferrissia) gordonensis, sp. n.
(Pl. XXXI. fig. 2.)

A. testa ovata, cornea, tenui, apud marginem pallidiore, pellucida,

conica, apice antice prominulo, subacuto, sinistraliter inclinante, superficie, præcipue apud apicem, undique radiatim tenuissime striata, intus nitida, cornea, margine lacteo.

Alt. 3, long. 6, diam. 5 mm.

Hab. Gordon Falls, Natal.

This interesting addition to the South-African fauna differs from the two *Ancyli* hitherto described from this region, viz. *caffer*, Krauss, and *transvaalensis*, Craven, not only in form, but above all in the minute radiating striolations: the apex, inclining to the left, is placed well forward, the texture thin, and substance horny, pellucid. We have, towards the elucidation of this species, studied the elaborate paper of Mr. Bryant Walker on the Eastern North-American *Ancyli**, in which the genus is subdivided into two sections, viz.:—

(a) *Lævapex*.—Shell usually depressed, apex obtuse or subacute, smooth.

(b) *Ferrissia*.—Shell usually elevated, apex acute, radially striate.

It is therefore to the second of these subdivisions that this species, as also the next, belongs.

Ancylus (*Ferrissia*) *stenochorias* †, sp. n.
(Pl. XXXI. fig. 1.)

A. testa anguste oblonga, tenui, olivacea, conica, corneo-hyalina, intus omnino pallide cornea, nequaquam pallidi-marginata, apice antice prominulo, sinistraliter inclinante, obtuso, superficie radiatim obscure striatula.

Alt. 3, long. 8, diam. 4·50 mm. (spec. maj.).

Hab. Ebb en Vloed, Port Elizabeth.

The extreme narrowness of this little shell, we think, is of specific value. The radiating striæ are very obscure and only discernible with the aid of a lens. We have seen several examples, all precisely alike.

Planorbis leucochilus ‡, sp. n. (Pl. XXXI. fig. 3.)

P. testa parva, depressa, cornea, tenui, subhyalina, lævigata; anfractibus quatuor, tumidulis, suturis utrinque subimpressis, discis ambobus simillimis, paulum rotundatis; apertura depresso-lunata, peristomate tenui, albescente.

Alt. ·70, diam. 2·50 mm.

Hab. Killarney Lake, Pietermaritzburg, Natal (*Burnup*).

* 'Nautilus,' vol. xvii. no. 2, p. 13, and no. 3, pp. 25 sqq.

† στενοχώρια, narrowness of space.

‡ λευκός, χείλος, white-lipped.

Most akin to *P. Anderssoni*, Ancey, this little species may be distinguished by the conspicuous whiteness of its lip and aperture. We have seen about a dozen examples, all uniformly similar in every detail. The superficies is perfectly smooth, substance clear hyaline-corneous.

Tropidophora comburens, sp. n. (Pl. XXXII. fig. 12.)

P. testa anguste umbilicata, conico-pyramidata, fere lævi, parum nitida, solidiuscula, stramineo-brunnea, et castaneo-suffusa; anfractibus 5, quorum duo apicales cinereo-lividi, læves, cæteris ventricosis, ad suturas angustissime livido-tinctis, ultimo rapide accrescente, lævi, spiraliter trizonato, zonis castaneis, quarum centrali maxime distincta, nigro-brunnescente, regione umbilicari spiraliter pulcherrime multilirata; apertura circulari, peristomate albo, nitido, crassiusculo, paullum reflexo, fere continuo; operculo calcareo, spirali, nucleo excentrico.

Alt. 11, diam. 10 mm. (sp. min.).

„ 13, „ 11 „ (sp. maj.).

Hab. Makawe, Zululand (*Burnup*).

From the common *T. ligata*, Müll., this exceedingly handsome species differs, (a) in form, being narrower throughout, especially in the body-whorl; (b) in width of umbilicus, the perforation being both small and not particularly deep; (c) in clearer definition of the spiral liræ surrounding the umbilicus at the base of the body-whorl; (d) in colour; the principal spiral band at the periphery is of a livid black, this being well-defined—two others, which might be termed secondary or spurious zones, conspicuous for suffused bright scorched chestnut and burnt-sepia coloration, run equidistantly one on either side of the central band and parallel with it, the effect being very pleasing. The operculum is normal. Several examples.

Chondrocyclus exsertus, sp. n. (Pl. XXXII. fig. 11.)

C. testa parva, gradata, depresso-conica, latissime umbilicata, albo-calcareo, periostraco omnino olivaceo contexta; anfractibus 5, quorum apicalis minutus, globularis, cæteris apud suturas excavatulis, ventricosis, sub lente minute striatis, ultimo anfractu expanso, infra peripheriam planato-declivi, umbilico perspectivunculo; apertura rotunda, peristomate tenui, simplici, continuo, denique evoluto.

Alt. 2·20, diam. 4 mm.

Hab. Umkomaas and Umbogintwini, Natal (*Burnup*).

A distinct and select addition to the operculate fauna of Natal, differing from its ally, the well-known *C. convexiusculus*, Pfr., not only in colour and sculpture, but in its gradately conical spire and general elevation.

We may add that the type examples of the above, together with the types of nearly all our previously described species from South Africa, will be placed in the British Museum (Natural History).

EXPLANATION OF THE PLATES.

PLATE XXXI.

- Fig. 1. *Ancylus stenochorias*.
- Fig. 2. — *gordonensis*.
- Fig. 3. *Planorbis leucochilus*.
- Fig. 4. *Ennea sylvia*.
- Fig. 5. *Buliminus Burnupi*.
- Fig. 6. *Fauxulus Crawfordianus*.
- Fig. 7. *Ennea Warreni*.
- Fig. 8. *Opeas McBeani*.
- Fig. 9. *Ennea craterodon*.
- Fig. 10. — *virgo*.
- Fig. 11. — *triglochis*.
- Fig. 12. — *dædalea*.
- Fig. 13. — *himerothales*.
- Fig. 14. — *genialis*.
- Fig. 15. — *montana*.
- Fig. 16. — *claustraria*.

PLATE XXXII.

- Fig. 1. *Zonitoides Cupido*.
- Fig. 2. *Trachycystis permeata*.
- Fig. 3. — *scolopendra*.
- Fig. 4. *Physa zuluensis*.
- Fig. 5. *Trachycystis laticostata*.
- Fig. 6. — *patera*.
- Fig. 7. — *simplex*.
- Fig. 8. — *oreina*.
- Fig. 9. — *centrifuga*.
- Fig. 10. *Achatina parthenia*.
- Fig. 11. *Chondrocyclus exsertus*.
- Fig. 12. *Tropidophora comburens*.
- Fig. 13. *Hypolysia Florentiæ*.
- Fig. 14. *Isidora compta*.
- Fig. 15. *Trachycystis glebaria*.