smallest, the third and fourth about equal, the fifth as long as the last two together. The hairs below the head are blackish. Thorax reddish brown, with indistinct grey tomentum and two yellowish stripes; the scutellum yellowish red ; the breast reddish, with brown tomentum and black pubescence. Abdomen black, long and pointed ; the second segment widest, the first and third with yellow, the second and fourth with grey hind borders, the remaining segments black with some red on the sides; underside black. Legs reddish brown with black pubescence, the fore femora stout. Wings dark brown with clear base; a clear band in the middle crossing the base of the discal cell and extending to the fifth posterior cell, another on the apex crossing the fork of the third longitudinal vein; there is also a clear space in the anal cell, and the axillary part of the wing is clear.

Length 18 mm .
Through the kindness of Mr. Verrall this species is now placed in the British Museum Collection with the species for which the genus Gastroxides was formed.
L.-On some Coccidæ in the Collection of the British Museum. By E. Ernest Green, F.E.S.
In the comprehensive 'Catalogue of the Coccidæ of the World' by Mrs. M. E. Fernald is a list of some sixty species " without description or not recognizable."

Of these, the following five names are cited from the Catalogue of the British Museum, Homoptera (1852), and credited to Walker, whose descriptions were too often inadequate for recognition :-
1469. Coccus caudatus 1489. - poterii. 1492. - sinensis.
1502. Lecanium australe. 1503. - capense.

I have been given an opportunity of examining the types of these species contained in the British Museum collection, with the following result:-

No. 1469. Coccus caudatus, Walker, Cat. Brit. Mus., Hom. p. 1085.

Represented in the National Collection by a single male, which is an unmistakable Monophlebid. The antennæ have typical whorls of hair on the nodes. There are no fleshy caudal processes. Walker speaks of abdominal bristles about five times the length of the body; but any such appendages have now disappeared. The existing characters suggest that the so-called bristles were probably in the form
of tufts of glassy filaments, such as occur in the males of Icerya, Callipappus, \&c.

Walker's published description is as follows :-
"Mas. Gracilis, nigra, albo lanuginosa: antennce filiformes, corpore duplo longiores: abdominis setce longissime: : pedes setosi: alce cinerece."
" Male. Black, slender, with a thick white covering: feelers filiform, bristly, about twice the length of the body: bristles of the abdomen about five times the length of the body: legs bristly : wings gray. Length of the body 3 lines : of the wings 4 lines. Columbia. From Dr. Cuming's collection."

No. 1489. Coccus poterii, Walker, Cat. Brit. Mus., Hom. p. 1082 ; Ray, Hist. Plant. i. p. 401 ; Kirby and Spence, Intr. Ent. i. p. 318 (4th ed.).
Walker's species is not now and never was represented in the collection. So far as Walker is concerned, the appellation is a " nomen nudum." It would appear to have been invented by that author to provide a name for the insect alluded to (loc. cit.) by Kirby and Spence in the following sentence:-"A similar neglect has attended the Coccus found on the roots of Poterium sanguisorbi." Kirby himself seems to have referred to the following note by Ray (loc. cit.) : -
" De Pimpinella sanguisorba. . . . Hujus radicis adnascitur. quibusdam in locis granum rubrum, quo utuntur tinctores ad colores carmesinum, unde sunt qui pro cocco habent, et Coccum radicum appellant."

This reference suggests identity with Margarodes polonicus, Linn. (the Chermes radicum purpureus of Geoffroy), a species said to produce a purple-red dye ( $v$. Signoret, 'Essai sur les Cochenilles,' p. 417).
No. 1492. Coccus sinensis, Walker, Cat. Brit. Mus., Hom. p. 1085.

This is represented in the collection by a series of adult females in fairly good preservation, a single mutilated male, and a mass of prepared wax labelled "Insect wax of China."

I have no hesitation in identifying this material with Ericerus pela (Chav.).

Walker's diagnosis of Coccus sinensis, transcribed below, does not agree with the characters of the female in any particular, and has probably been drawn up from the male larva or nymph. It reads as follows :-
"Picea. Elliptica: dorsum lanugine alba dense vestitum: pedes ferruginei."
"Pitchy, elliptical, thickly covered above with woolly matter : feelers submoniliform, slightly setaceous: the joints successively increasing in length: legs ferruginous, hairy. Length of body 2 lines. China. Presented by G. T. Lay, Esq."

No. 1502. Lecanium uustrale, Walker, Cat. Brit. Mus., Hom. p. 1079.

The type of this species has unfortunately been lost, and no clue remains as to its identity. Walker's diagnosis, here appended, is quite inadequate :--
"Rufum, ellipticum, transverse rugosum."
"Red, elliptical, transversely rugose. Length of body $1 \frac{1}{2}$ line. Van Diemen's Land. Presented by the Rev. T. Ewing."
No. 1503. Lecanium capense, Walker, Cat. Brit. Mus., Hom. p. 1079.

The following diagnosis (loc. cit.) gives little assistance in the identification of the species:-
" Piceum, transversum, conchiforme, transverse striatum."
"Conchiform, pitchy, a little broader than long, with transverse striæ, which are parallel to the broader side. Breadth 1 line. Algoa Bay. Above 200 specimens on bark. Presented by Dr. Pereira."

Fortunately the Museum Collection contains ample material from which I have been able to determine the insect as an undescribed species of Aspidiotus and to append the annexed formal description.

## Aspidiotus (Aonidiella) capensis (Walk.).

Lecanium capense, Walker, Cat. Brit. Mus., Hom. p. 1079 (1852).
Female puparium subcircular or oval, moderately convex, very dense and somewhat rough and corrugated. Colour deep chocolate-brown, in some examples inclining to reddish. Pellicles reddish, situate close to anterior margin, the second often concealed. Ventral scale dense, whitish. Longer diameter 2 to 2.50 mm .

Male puparium small, narrow, tapering slightly to posterior extremity. Colour and texture as in female; posterior extremity slightly paler. Length 1.25 mm .; breadth 0.50 mm .

Adult f.-Dried examples deep purple-brown. Broadly oval. A conspicuous submarginal series of long stout hairs on cephalothorax (fig. 1, p. 376). Rudimentary antennæ with several stout curved bristles. A ventral series of from four to six stout blunt spines on each side, each spine arising from a

Fig. 1.


Fig. 2.

Fig. 3.


Fig. 5.


Fig. 4.


## Aspidiotus capensis.

Fig. 1.-Early adult 9 , ventral view.
Figs. 2, 3.-Ventral spines of adult $q$.
Fig. 4.-Pygidium of adult $\$$.
Fig. 5.-Marginal squames.
conspicuous circular plate (figs. 2, 3), those on thoracic area much smaller than the others. These spines are easily detachable and are often missing, especially in older examples, when the circular base remains and has the appearance of a large circular pore. Pygidium (fig. 4) normally with six stout, prominent, bluntly rounded lobes. In some examples the lobes are very irregularly developed, one or more being often missing. Margin beyond the lobes strongly incrassate and irregularly cristate. Paraphyses more or less obscured by and merged in the thickened margin. Squames broad, stout, truncate, almost as large as the lobes, not fimbriate, apparently tubular, with a deep cleft on one side of the tube (fig. 5). No circumgenital glands. Some minute circular pores scattered irregularly over the surface of the pygidium. Length 0.75 to 1.50 mm .

On undetermined plant. Algoa Bay. Collected by Dr. Pereira.

Allied to Aspidiotus cladii, Mask., which it resembles closely in colour and texture of puparium and in nature of pygidial squames, but from which it may be separated by the much shorter paraphyses and more conspicuous lobes of the pygidium.
Lecanium (Paralecanium) expansum, var. metallicum, Green.

> Lecanium expansum, Green, "Catalogue of Coccidæ," Ind. Mus. Notes, vol. iv. no. 1 (1896); Coccidæ of Ceylon, part iii. p. 235 (1904).
> Lecanium evanansu, var. metallicum, Green, "On some Javanese Coccidæ," Ent. Month. Mag., Sept. 1904, p. 205.

The collection contains some beautiful examples of a Lecanium from Singapore that, in favourable lights, displays a wonderful iridescent golden film on the dorsum. Mieroscopic examination proves the insect to be identical with L. expansum, var. metallicum (loc. cit.), though these specimens are even more iridescent than the typical examples from Java. They were collected by Mr. H. N. Ridley, of the Singapore Botanic Gardens, on Myristica (nutmeg).

I have also received on loan from Mr. R. Newstead, of Chester, a single specimen of what is evidently the same species and variety, though I have been unable to examine it microscopically. This specimen is labelled "On shrub in Jungle, Malay Peninsular, Butsib Berar, 2500 ft. Coll. Annandale, 28, VIII. 01."

The dorsum in all the examples is distinctly marked with polygonal plates, as in the type. In those from Singapore the centre of each plate is bare of the golden film; but in the single example from the Malay Peninsula only the marginal series of plates shows this character, the discal plates

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being completely coated. Prepared specimens show the stippled margin noted in typical examples of the variety. All the specimens are broadly oval, narrowed at anterior extremity. Length varying from 6 to 8.50 mm ., and breadth from 5 to 7 mm .

## LI.-Five new Rhinolophi from Africa. By Knud Andersen.

In working out a revision of the Ethiopian species of the genus Rhinolophus I find the following new forms in the collection of the British Museum to need description :-

## Rhinolophus empusa, sp. n.

Short diagnosis.-Anterior upper and middle lower premolars placed in the tooth-row. Sella wedge-shaped (deltoid). Horseshoe as broad as muzzle. A conspicuous dark patch under each eye. Forearm 48 mm .

Nose-leaves.-Horseshoe covering the muzzle laterally; a small tooth-like projection on each side of median notch; underlying leaf easily visible all round. Sella wedge-shaped; breadth at base about three fourths of vertical height ; lateral margins plainly converging (with a scarcely perceptible constriction in the middle) towards the summit, which is subacutely pointed. Posterior connecting - process long, pointed, slightly curved forwards, as an erect horn, about five sixths the vertical height of the sella, thus projecting far beyond the summit of the sella. Lateral margins of lancet concave in the middle, tip behind constriction about $2 \cdot 3 \mathrm{~mm}$.

Ears.-Rather short, scarcely reaching tip of muzzle, when pressed forwards along the sides of the head. Tip obtusely pointed. Outer margin concave below the tip. Notch on outer margin shallow, almost rectangular. Extreme breadth of ear somewhat greater than the distance from the notch to the tip.

Wings.-5th metacarpal longer than 4th. 1st joint of 4 th finger equal to three fifths the length of 1st joint of 3rd finger. On the folded wing the tip of the 1st joint of the 5 th finger reaches as far back as the posterior point of the elbow ; tip of 1st joint of the 3rd finger falling only a trifle short of the same point. Plagiopatagium inserted at base of metatarsus.

Tail.-Much longer than tibia, about the same length as the combined 1 st and 2 nd joints of the 4 th finger. Tip of tail projecting 2 mm . beyond the membrane (a character


Green, Edward Ernest. 1904. "On some Coccidae in the collection of the British Museum." The Annals and magazine of natural history; zoology, botany, and geology 14, 373-378.

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