

**Article IX.—SOME NOTES ON TRANSFORMATIONS
OF AUSTRALIAN LEPIDOPTERA, MADE BY THE
LATE HENRY EDWARDS, WITH NOTES AND
ADDITIONS.**

By WILLIAM BEUTENMÜLLER.

It is with melancholy pleasure that I present the following notes on some transformations of Lepidoptera, made by my deceased friend, Mr. Henry Edwards, during his last visit to Australia in 1889-'90. To these notes I have added the descriptions of the cocoons of *Discophlebia catocalina* Feld. and *Pelora oxleyi* McL., as was originally intended by Mr. Edwards, to complete the present paper, otherwise all the notes are his, except those in brackets. In the 'Victorian Naturalist,' Volume VII, 1890, p. 20, Mr. Edwards announced his intention of publishing a "Bibliographical List of Transformations of Australian Lepidoptera." This work was begun by Mr. Edwards shortly before his death, but unfortunately was not completed. I am now continuing Mr. Edwards's MSS. notes of this work, and hope to have the same ready for publication before long.

***Discophlebia catocalina* Feld.**

Cocoon.—Oblong oval, formed of fine fragments of earth and with a few grains of the excrements of the larva, neatly and firmly agglutinated. The interior is lined with a thin case of silk, and the imago escapes not at either of the extreme ends, but from the upper side, near the larger end of the cocoon. Length, 30 mm.; width, 17 mm.

Pupa.—Chestnut brown, smooth, rather short and swollen anteriorly.

One cocoon, Coll. Hy. Edwards, Am. Mus. Nat. Hist.

***Darala acuta* Walk.**

Cocoon.—Composed of two layers, the inner one consisting of finely spun silk, rather loosely and irregularly woven; the outer

one of coarse silk, amongst which the larval hairs are thickly intermingled. These hairs are short, spiny, bright chestnut in color, and extremely poisonous when penetrating into the skin. They are difficult to extract and cause the flesh to smart and ache for several days. The silk of the outer cocoon is pale chestnut. Length, 60 mm.; width, 25 mm.

The cocoon is mostly found beneath the bark of *Eucalyptus*, and on the side of attachment only the inner cocoon is seen; through this the pupa is clearly visible. This is pale pitchy in color, rather short, rounded in front and wrinkled over its whole surface.

[One example, Victoria, Australia, Coll. Hy. Edwards, Am. Mus. Nat. Hist.—W. B.]

***Pelora oxleyi* McL.**

Cocoon.—Oval, flattened on the side of attachment and almost as broad as long, dark brown in color, with a grayish coating of glutinous matter; surface rather smooth. In appearance the cocoon resembles that of a *Limacodes*, in fact it is almost inseparable. The imago, when ready to make its escape, cuts out a circular piece at the end of the cocoon, as is also the case with other species of *Limacodidae*. Length, 15 mm.; width, 11 mm.

Five specimens, Victoria, Australia, Coll. Hy. Edwards, Am. Mus. Nat. Hist.

Mr. Edwards once told me that the larva feeds on *Eucalyptus robusta*, and gives out a very viscid humor when disturbed.

***Rhinogyne calligama* Feld.**

Cocoon.—Closely, but finely spun, with many extraneous materials mixed with the outer coat. If the larva is placed in a box to transform, part of the paper lining will be used, and if leaves or dry twigs be present, they also will be sparingly utilized. The color is dull pale brown. Length, 35 mm.; width, 18 mm.

Pupa.—Rounded in front, cylindrical, covered with tawny bristly hairs, very finely punctured and slightly shining over the whole surface. The color is pale pitchy. Length, 28 mm.

[One cocoon, Victoria, Australia, Coll. Hy. Edwards, Am. Mus. Nat. Hist.—W. B.]

Oiketicus omnivorus *Fereday.*

Larva.—Head and three following segments sordid white, the head being thickly spotted with brown dots, irregularly placed. Second, third and fourth segments with a double rather broad line, of which the edges are irregular, narrowing at the base of the fourth segment, until the second lines are almost united. There are also two lateral lines, and between these another series of irregularly placed brown spots. The rest of the body is concealed within the case and is pitchy brown. The feet are sordid white at their base and pitchy at their tips. Mouth-parts pitchy. Length, 20 mm.

Clania tenuis *Rosenst.*

Larval Case.—Somewhat resembling in appearance that of *Entometa ignobilis* Walk., but much smaller, and composed of very much smaller twigs, all nearly equal in length and regularly united. The imago is difficult to raise, as indeed are all the *Psychidæ*. The cases are common on fences in the neighborhood of Melbourne, but the imago is very rarely seen. Length, 18 to 24 mm.

[Nine specimens, Coll. Hy. Edwards, Am. Mus. Nat. Hist.—W. B.]

Endoxyla cinerea.

Pupa.—General color pale chestnut brown, darkest posteriorly and over the head and thorax. The segments are slightly corrugated and have each a double row of raised roughened points, projected in the form of a ridge. Beneath the posterior of the abdominal legs is marked by a roughened ovate space. The anal segment is smooth, with a double furrow. The cremaster is rough, short, swollen, with a series of small points beneath. Head and thorax very glossy, wrinkled, the former rugosely punctate in front. Wing cases thin, the margins thickened, with the course of the veins indistinctly marked.

[Length of male, 75 mm.; width, 18 mm. Of female, 90 mm.; width, 24 mm.]

Nine specimens, Adelaide, Australia, Coll. Hy. Edwards, Am. Mus. Nat. Hist.

The species stands by this name in the Edwards Collection, though I do not know the authority. According to Mr. Edwards's notes, it is the species so common and destructive to *Eucalyptus* trees in the neighborhood of Adelaide. He has found as many as sixteen empty pupa cases sticking out of one tree. It is paler in color than *E. eucalypti*, and much larger.—W. B.]

Thyridopteryx herrichii *Westw.*

Pupa.—Pitchy black, fusiform, slightly swollen about the head parts, which are very finely punctate. Abdominal segments shining anteriorly, but roughened and dull on the posterior half. Cremaster very short, bifurcate, bent under; spiracles large, wart-like, very rough. Length, 12 mm.

[One specimen, Victoria, Australia, Coll. Hy. Edwards, Am. Mus. Nat. Hist.—W. B.]

Antheræa helena *Scott.*

Cocoon.—Very closely and thickly spun, rather large and more elongate in form than that of *A. eucalypti*. Color bronze brown, very glossy and with a large quantity of glutinous matter mixed with the outer coat. Leaves and twigs are generally associated with the cocoon. It is difficult to define the difference in words, but an experienced eye will soon detect the difference between this and the cocoon of *A. eucalypti*. Length, 45 mm.; width, 28 mm.

[One specimen, Sidney, N. S. W., Coll. Hy. Edwards, Am. Mus. Nat. Hist.—W. B.]

Antheræa janetta *White.*

Egg.—Oval, very slightly flattened on the upper side, rather glossy, cream white, without markings. They are 2 mm. in length and a little more than half as broad. About 150 eggs are deposited by the parent.

Antheræa eucalypti *Scott.*

Egg.—Larger than the preceding species, though exactly like it in form, color dirty white, rather than cream color, the surface under a high power, showing traces of very fine-waved sculptures. The eggs are always laid on the edges of a leaf.