

THE
ENTOMOLOGIST

An Illustrated Journal

OF

GENERAL ENTOMOLOGY.

EDITED BY RICHARD SOUTH, F.E.S.

WITH THE ASSISTANCE OF

ROBERT ADKIN, F.E.S.

W. LUCAS DISTANT, F.E.S., &c.

EDWARD A. FITCH, F.L.S., F.E.S.

F. W. FROHAWK, F.E.S.

MARTIN JACOBY, F.E.S.

W. F. KIRBY, F.L.S., F.E.S.

G. W. KIRKALDY, F.E.S.

W. J. LUCAS, B.A., F.E.S.

DR. D. SHARP, F.R.S., F.E.S., &c

G. H. VERRALL, F.E.S.

"By mutual confidence and mutual aid
Great deeds are done and great discoveries made."

VOLUME THE THIRTY-FIFTH.

?

LONDON:

WEST, NEWMAN & CO., 54, HATTON GARDEN,
SIMPKIN, MARSHALL, HAMILTON, KENT & CO., LIMITED.

—
1902.

nervure is bullated on the lower side, but not strongly. Legs fulvous; all the coxæ and trochanters, almost the apical half of the hinder femora, and the apical third of the posterior tibiæ, black; the hinder tarsi have a more yellowish paler hue, and are black at the base. Abdomen black and shining: all the segments are banded with yellow at the apex; the ventral surface, except the petiole, pale yellow.

This is an *Osprynchotus*, Spin., sec. Ashmead, non Kriechbaumer, which equals *Linoceras*, Tasch. The genus is new for the Indian fauna.

(To be continued.)

NOTES ON NEUROPTERA OF OXON AND BERKS.

BY W. J. LUCAS, B.A., F.E.S.

RECENTLY I received for inspection from Messrs. W. Holland and A. H. Hamm a box of Neuroptera (other than Odonata) collected in Berks and Oxon. Insects of this order are so seldom recorded that the list will probably prove of interest to those who are working at them. I have to thank Mr. C. A. Briggs for assisting very greatly in naming the specimens, especially the more obscure ones.

OXON.

EPEHEMERIDIA.—*Ephemera vulgata*, Thames side near Binsey, and canal side north of Oxford. *Cloëon rufulum*, Oxford. *Centroptilum luteolum*, Godstow and Oxford.

PLANIPENNIA.—*Sialis lutaria*, canal side north of Oxford, and Thames side at Binsey. *Raphidia xanthostigma*, Shotover Hill (May 28th). *Sisyra fuscata*, Thames side at Binsey (May 29th). *Chrysopa flava*, University Park, Oxford. *C. vulgaris*, taken in the Museum, Oxford (Mar. 28th). *C. perla*, near Oxford. *Panorpa germanica*, Stow Wood.

TRICHOPTERA.—*Phryganea striata*, Charlbury, Wychwood Forest. *Limnophilus lunatus*, Oxford. *Anabolia nervosa*, Oxford. *Notodobia ciliaris*, canal side north of Oxford (May 26th); not a common species. *Leptocerus cinereus*, Thames side at Binsey. *Mystacides nigra* (McLach., Trich. Eur.), canal side north of Oxford. *M. azurea* (McLach., Trich. Eur.), Thames side at Binsey.

BERKS.

EPEHEMERIDIA.—*Ephemera vulgata*, Thames side above Godstow, and Reading. *E. danica*, Reading. *Leptophlebia marginata*, Thames side above Godstow (June 1st), and Wellington College, near Reading (April 22nd.) *Centroptilum pennulatum*, Thames side near Oxford (May 27th). *Ecdyurus volitans*, Thames side above Godstow (June 1st, 1901); an interesting capture.

PLANIPENNIA.—*Sialis lutaria*, Thames side above Godstow. *Raphidia notata*, Wokingham, near Reading. *Sisyra fuscata*, Thames side above Godstow (June 1st). *Hemerobius stigma*, Wellington College. *Chrysopa vulgaris*, Wellington College. *C. septempunctata*, Ferry Hincksey. *C. ventralis*, Tubney Wood, and Wokingham. *C. perla*, Thames side near Kennington. *Panorpa communis*, Tubney Wood, and East Ilsley. *P. germanica*, Tubney Wood, Thames side above Godstow, and Boar's Hill, near Oxford.

TRICHOPTERA.—*Phrygania striata*, Reading. *Colpotaulius incisus*, Thames side above Godstow. *Grammotaulius atomarius*, Reading. *Limnophilus rhombicus*, Reading. *Notidobia ciliaris*, Thames side above Godstow (June 1st). *Goëra pilosa*, Thames side above Godstow. *Leptocerus annulicornis*, Thames side above Godstow (June 1st). *Mystacides nigra*, Thames side above Godstow, and the Kennet, Reading. *Neuroclipsis bimaculata*, Reading. *Tinodes wæneri*, Thames side above Godstow. *Lype phaeopa*, the Kennet, Reading. *Glossoma boltoni*, Thames side above Godstow.

CONTRIBUTION TO THE LIFE-HISTORY OF *LIPHYRA BRASSOLIS*, WESTW.

By F. P. DODD.

(Concluded from p. 156.)

The perfect insect comes forth in twenty-one to twenty-five days, and further astonishing developments in the life-history of this strange insect occur. Before bursting the outer shell the butterfly can be heard moving within, and shortly a sharp cracking sound announces that the burst has been effected, then either a portion of the shell, which opens in the centre in front up to the first furrow, is broken right out, or it opens sufficiently above after breaking away at the rim to admit of the imago's emergence. But who would recognize *L. brassolis* now as he crawls out? Instead of the weak drooping wings of a butterfly, he has little short appendages like a freshly-emerged moth, and lying very flat; the front wing is creamy white to extreme tip, and the edge of the hind wing projects from under this ever so little; the abdomen looks very large, a thick mass of furry-looking substance showing on each side of it to the tip; on the thorax small tufts of loose brownish scales may be noted, which easily roll off. It is soon seen that the white appearance of fore wing is caused by a dense covering of fugitive scales; there is also a small patch on each side of thorax. As the wings slowly lengthen, the density of the scales lessens sufficiently to admit of a view of the black and rich yellow colouring underneath.