Fig. c. *Heliothrips phaseoli* Right half of tergum of second abdominal segment, x 361.

Fig. d. *Zygothrips americanus* sp. nov.—Head and prothorax of female, x 99.

PLATE 9.

Fig. a. *Glyptothrips flavescens* gen. et sp. nov., female.—Head and prothorax, x 117.

Fig. b. *Glyptothrips flavescens* Right antenna, x 255.

Fig. c. *Glyptothrips flavescens* Portion of occiput, showing sculpture, x 515.

THE STANFORD EXPEDITION TO BRAZIL, 1911.

J. C. BRANNER, *Director*.

LIST OF HISTERIDÆ AND BUPRESTIDÆ.

BY WM. M. MANN,
Bussey Institution, Harvard University.

Among the material collected by the Expedition many families are represented by only a few species. These lots, as well as those more extensive, have been placed in the hands of specialists in the respective groups for identification. When these have been returned without notes, it seems advisable to list the species to supply data on distribution, most of the specimens being from regions in which few collections have been made.

The Histeridæ were determined by Mr. George Lewis of Tunbridge Wells, England, the Buprestidæ by Mr. Charles Kerremans of Brussels, Belgium.

HISTERIDÆ.

Oxyterus maximus L.

Abuná, and Madeira-Mamoré R. R. Camp 39. Taken flying in evening.

Lioderma devium Mars.

Madeira-Mamoré R. R. Camp 39. One specimen.

Lioderma 4-dentatum Fab.

Abuná, Rio Madeira.

Hololepta jamariei Mars.

Madeira-Mamoré R.R. Camp 39.

Trypanæus spiniger Mars.

Abuná. Beneath bark.

- Trypanæus noxia* Mars.
Abuná. Beneath bark.
- Trypanæus nasicornis* Mars.
Abuná. Beneath bark.
- Xylonæus fallax* Mars.
Madeira-Mamoré R. R. Camp 43.
- Hister cavifrons* Mars.
Porto Velho, Rio Madeira.
- Hister punctifer* Payk.
Baturité Mts. (Ceará).
- Hister curvatus* Mars.
Porto Velho, Rio Madeira.
- Saprinus pavidus* Er.
Porto Velho and Camp 41 Rio Madeira.
- Saprinus milium* Mars.
Natal (Rio Grande do Norte). Very common in dung.
- Omalodes conicollis* Mars.
Madeira-Mamoré R. R. Camp 39.
- Omalodes foveolatus* Mars.
Madeira-Mamoré R.R. Camp 39, and Porto Velho.
- Omalodes amazonius* Mars.
Abuná, Rio Madeira.
- Phelister hæmorrhæus* Mars.
Porto Velho.
- Phelister confusaneus* Mars.
Independencia (Parahyba).
- Phelister fairmairei* Mars.
Natal (Rio Grande do Norte).
- Isolomalis hispaniolus* Mars.
Pará. Beneath bark.
- Epierus kraatzii* Sch.
Abuná, Rio Madeira. Beneath bark.
- Epierus vagans* Mars.
Abuná, Rio Madeira.
- Carcinops misella* Mars.
Abuná. Beneath bark.

BUPRESTIDÆ.

Euchroma gigantea Linn.

Several specimens from Abuná, and Camp 39, Madeira-Mamoré R.R. Two specimens were taken at Abuná, Bolivia. Found on trunks of the silk-cotton tree (*Ceiba* sp.)

Pelecopselaphus lateralis Waterh.

Two specimens, Madeira-Mamoré R.R. Camp 39.

Chrysesthes tripunctata Fab.

One specimen, Madeira-Mamoré R. R. Camp 28.

Chrysobothris amazonica Kerr.

Madeira-Mamoré R. R. Camp 39. (Matto Grosso).

Chrysobothris sexpunctata Fab.

Abuná and Madeira-Mamoré R. R. Camp 39. (Matto Grosso).

Chrysobothris cordicollis Cast. Gory.

Abuná, Rio Madeira (Matto Grosso).

Actenodes nobilis Linn.

Common at Porto Velho, Rio Madeira (State of Amazonas). Ovipositing in recently cut timber.

Taphrocerus angustus Gory.

Independencia (Parahyba).

Agrilus mansuetus Cast. Gory.

Abuná and Madeira-Mamoré R.R., Camps 39 and 41.

Agrilus arnus Gory.

Abuná, Rio Madeira.

Agrilus umbartus Har.

Numerous specimens taken by sweeping, at Independencia (Parahyba).

Agrilus niger Cast. Gory.

Natal (Rio Grande do Norte).

Agrilus frigidus Gory.

Madeira-Mamoré R. R., Camp 28. (Matto Grosso.)

Agrilus cearicus Kerr.

Natal (Rio Grande do Norte).

Agrilus madeiricus Kerr.

Abuná and Madeira-Mamoré R.R., Camp 28.

Agrilus temeratus Wat.

One specimen. Porto Velho, Rio Madeira.

Agrilus oblitus Wat.

One specimen. Madeira-Mamoré R.R., Camp 39.

Agrilus molestus Wat.

Independencia (Parahyba). One specimen taken by sweeping.

MITES ASSOCIATED WITH THE OYSTER-SHELL SCALE (*LEPIDOSAPHES ULMI* LINNE).

By H. E. EWING and R. L. WEBSTER.

INTRODUCTION.

The fact that mites frequently attack scale insects and so play an important part in the natural control of those insects, is by no means new, and most of the literature on this subject is not of very recent date. The observations of Walsh (1868), Shimer (1868), followed by other notes by Riley (1873), show us that the importance of these mite enemies was even better appreciated in a general way then, than at present. Some further careful observations by Lignières (1893) in Europe threw much more light on the exact relations of two of the most common mites which are found under the oyster-shell scales, many of which observations the present writers have been able to verify in the work reported on in this paper.

The notes on which this paper is based were made by the writers in Iowa, largely in the vicinity of Ames, although by no means restricted to that locality. The determinations of the mites are on the authority of Mr. Ewing. This paper represents a part of a larger article on the oyster-shell scale, to be published at some future time as a bulletin from the Iowa Agricultural Experiment Station, but it was thought best to present this portion of the work in advance.

NATURE OF MITE ATTACKS.

The most efficient mite found attacking the oyster-shell scale in Iowa is one which feeds for the most part on the eggs of the scale insect, although it feeds also on the insects themselves. This mite is *HemisarcOPTES malus* (Shimer). Another mite, *Monieziella entomophaga* (Laboulbène), which was about as common under

HOOD—THYSANOPTERA.

HOOD—THYSANOPTERA.