

Contribution to the study of the Brazilian Trypaneidae or fruit-flies

by

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With plates 1 and 2.

In the preceding Portuguese paper the authors discuss the specimens of *trypaneidae*, found in the collections of the Institute of Manguinhos and of the Museum of Natural History in S. Paulo, and describe some species and varieties.

The most important form is the *Anastrepha (Dacus) fraterculus*, described by WIEDEMANN in 1830. He included it in the genus *Dacus*, LOEW in *Trypeta* and SCHINER in the genus *Anastrepha*, established by him and now generally accepted. It is known to exist in Mexico, Cuba, Porto Rico, Peru, Brazil and Paraguay, where it is extremely injurious to guavas and peaches. It has also been found in the fruits of *Passiflora quadrangularis* and the recently introduced *Diospyrus kaki* from Japan.

The species is evidently a very variable one. Several of the forms, described as new species, are likely to be only varieties. This applies to *A. suspensa*, *ludens*, *hamata*, *inte-*

gra, *consobrina* and *pseudo-parallela* of LOEW, *obliqua* MACQUART and perhaps *peruviana* of TOWNSEND. Even *parallela* WIEDEMANN, though apparently differing in size and direction of the long veins (as pointed out by LOEW), is connected by intermediate forms.

Variation occurs principally in the design of the wing, composed of three, mostly brown, bands: a short one in the basal half of the fore margin, another in the shape of an S, running obliquely through the wing, and a third one, like an inverted V, situated near the apex and beneath the second one. They are interconnected or partially obliterated in varying degrees. The different forms are not geographical varieties, as they often occur in very distant regions.

The specimens examined represent five new types; four: Var. A, B, C, D, correspond to the types of WIEDEMANN, LOEW, VAN DER WULP and BEZZI and one is similar to

var. *soluta* BEZZI. The different forms are illustrated by reproduction of the drawings (found in the papers of these authors) and of the wings in the present specimens (from microscopical preparations). Size, habitat and dimensions of these are carefully given.

The study of all these forms leads to the conclusion, that the example, given by LOEW (who founded new species on small differences), ought not to be followed. There is only one specimen not connected with the others by intermediate forms. Of this the authors give a description, calling it: *A. fenestrata*. It comes from the Amazon and may be a new species or only a rather aberrant variety.

All these considerations seem unimportant by themselves, but they are of interest for the questions of the fixity of the existing species and the formation of new ones.

There is another indigenous species of *Anastrepha*, the *serpentina* WIED., injurious to *Mammea americana* L. and *Sapota achras* MILL., as verified by HERRERA and TAVARES. COSTA LIMA bred it from *Lucuma cainito* A. D. C. and *Mimusops coricaea* MIQ. The synonymy and a photograph of the characteristic wing are given (Fig. 20).

Of the genus *Hexachaeta* LOEW (1873) one species, described by WIEDEMANN (1830) as *Trypeta eximia*, was also observed

in two specimens from near Rio; they show a tendency to varying. Synonymy, descriptions and a photograph of the wings are also given.

Follows a discussion of the genus *Plagiotoma* LOEW (1873), with a key for the described and new brasilian forms. So far as it is known, the first stages of these flies are found in galls of composites of the genus *Vernonia*, as verified by LOEW, R. V. IHERING and the authors. Two forms of LOEW, *biseriata* and *obliqua*, were found in Brazil and the authors describe three more, differing in the number of black dots on the apical end of the notum and also in the design of the wings, as shown by photographs. However the question, if those different forms ought to be considered good species or only varieties, remains open and may be solved by rearing more specimens.

The authors then give a catalogue of the genus *Apyrgota* HENDEL (1913), subfamily *Pyrgotinae*. They describe a new species, *personata*, which might be mistaken for a *Trypeta*. A catalogue of the genus *Anastrepha* with synonymy and literature ends the paper.

An index of the literature consulted and an explanation of the plates follows the portuguese text and might be consulted there.