Cocoon building observed in the laboratory for the Cypress thrips, *Ankothrips mavromoustakisi* Priesner (Terebrantia Aeolothripidae)

Note 15 (Thysanoptera), released by Luigi De Marzo on February 2013 – An inspection on a further member of this family. l.demarzo@alice.it www.luigidemarzo.eu

SUBJECTS

- Cocoon building by full-grown neanides is an activity included into the life-cycle of different Aeolothripidae (Pesson, 1951; Stannard, 1968; De Marzo, 2007).
- In the instance of the Cypress thrips, *Ankothrips mavromoustakisi* Priesner, this activity is managed at soil at the beginning of a starvation period as long as six months (Addante & De Marzo, 2002; De Marzo, 2009).
- Details of cocoon building by neanides of this thrips are reported herein on the basis of new laboratory observations.
- Photograph on Fig. 2 was courteously taken by Prof. Francesco Porcelli (Bari University).

TERMINOLOGICAL REMARKS

- "*Customarily thysanopterists have called the first and second stage of the postembryonic forms of thrips larvae, and the remaining quiescent, nonfeeding, preadult instars pupae . . .*".
- This sentence of Stannard (l.c., on p. 220) means that the term "larvae" was accepted by this clever Author merely to agree with the thysanopterists' tradition.
- Actually, the entomological term "larvae" properly applies to young feeding forms of holometabolous Insects (Gordh & Headrick, 2000),
- whereas the term applied to the young forms lacking in wing buds of the heterometabolous Insects (Thysanoptera included) is "neanides".
- This agrees with the terminology suggested by some Italian entomologists (Grandi, 1951; Tremblay, 2003).

MATERIAL AND METHODS

- Neanides of *Ankothrips mavromoustakisi* in a large number were found at March 2008 in a locality of Southern Italy (Addante & De Marzo, l.c.; De Marzo, 2009);
- they were collected by squeezing flowering branches of *Cupressus sempervirens* L. on a vessel.
- Samples of about 50 neanides were distributed in three terrariums of the figured type (Fig. 1) after pollen and other plant parts had been removed by a sieve with 1 mm-large meshes.
- Four coverglasses were scattered on the terrarium floor to provide neanides with a transparent support for cocoon building.
- Activities of neanides were observed at the stereomicroscope with light filtered for infrared-rays at room-temperature of 18±2°C.

RESULTS

- Just after they had been introduced into terrarium, most neanides of each sample gained the space under the coverglasses and proceeded in building;
- first, they worked by abdomen in dragging particles of the substrate all around meanwhile they stayed suspended by legs at the glassy ceiling.
- So, each neanide obtained a cell little larger than its own body;
- subsequently, it proceeded in spinning a great number of short silky threads all around on the cell walls including the glassy window.
- Spinning organ was the pygopodium.
- A view of a group of completed cocoons is reported (Fig. 2).

CONCLUDING REMARKS

- Previous laboratory observations of the cocoon building in a member of the family Aeolothripidae were carried-out on *Melanthrips fuscus* (Sulzer) by providing pieces of blotting paper as supports for building (Fig. 3).
- Referring to the building of the preliminary cell, behaviour of *Ankothrips mavromoustakisi* neanides has been found less complex than in *Melanthrips* (Fig. 4),
- as neanides of the latter are used to assemble particles of the substrate one after another in a number of several hundreds.
- Moreover, management of the substrate by neanides of *Melanthrips fuscus* implies each building portion to be sucked by the pygopodium.
- Nevertheless, the latter is the silk spinning organ for both species.

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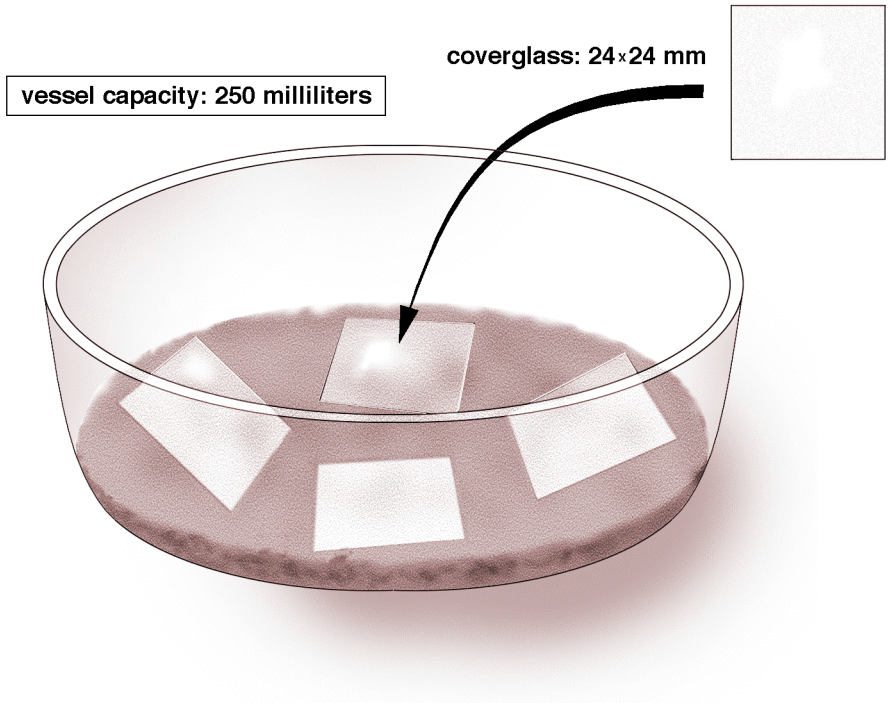

Fig. 1 – Technical details of the terrarium employed to study cocoon building by neanides of *Ankothrips mavromoustakisi* Priesner.

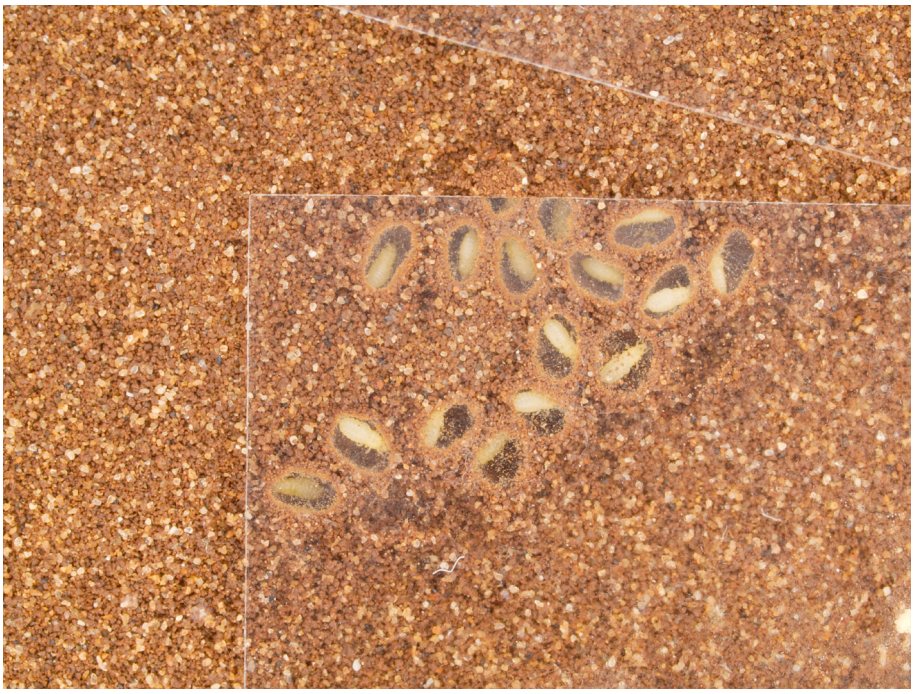

Fig. 2 – *Ankothrips mavromoustakisi* Priesner: group of cocoons built under a coverglass on the floor of one terrarium. Photography by Prof. Francesco Porcelli.

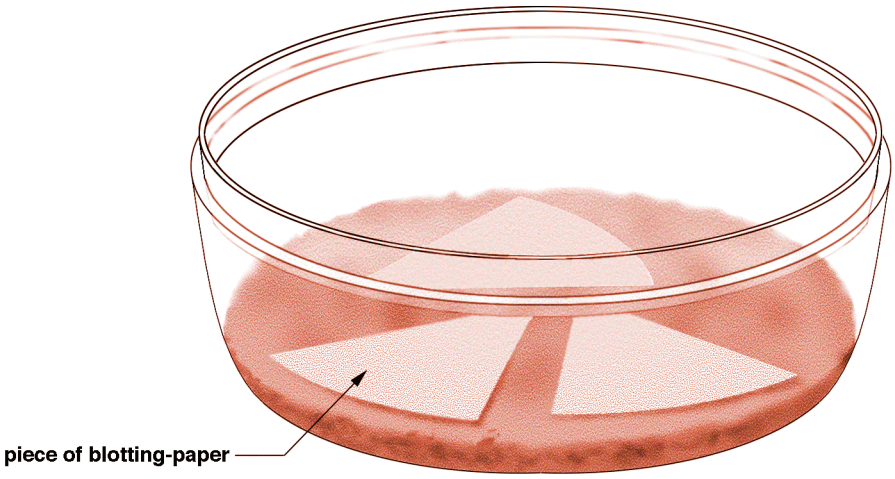

Fig. 3 – Technical details of the type of terrarium previously employed for studying cocoon building by neanides of *Melanthrips fuscus* (Sulzer).

Fig. 4 - *Melanthrips fuscus* (Sulzer): second-instar neanide engaged in building its pupal cell (redrawn from De Marzo, 2004).