

AN APPARATUS FOR BREEDING INSECTS

BY

J. B. M. VAN DINTHER

Laboratorium voor Entomologie, Wageningen¹⁾

For breeding insects on small isolated portions of a host plant, the apparatus here described can be used with good success. It can be fitted on the host plant in almost any desired position. The isolated part of the plant remains visible, so that observation of the insects is very easy.

The apparatus consists of the following parts (fig. 1):

- a. a cylindrical frame, consisting of two hoops of zinc (I and II) with a diameter of 9 cm, and a strip of zinc (III) 15 cm long. The hoops and the strip are 2 cm wide. The strip has 3 small round holes (diam. 0.5 cm), one in the centre and one on either side of it at a distance of 4.5 cm.
- b. a strip of celluloid (IV) 15 cm high and 30 cm long, which can be fitted round the frame in such a way that the sides overlap each other on strip III by about 1.5 cm.
- c. two separate hoops of zinc (I' and II') with a diameter of 9.2 cm and 2 cm wide, fitting round the celluloid and hoops I and II of the frame. By means of these hoops the strip of celluloid is pinched above and below between hoops I and I', and II and II' respectively.
- d. a zinc strip (III') 11 cm long and 2 cm wide, with 3 small round holes (diameter 0.5 cm), one in the centre and one on either side of it at a distance of 4.5 cm. Now the celluloid cylinder is also pinched between the strips III and III' by means of two clinchers that are pushed through the top and the bottom holes of III and III' and at the same time through the overlapping sides of the celluloid cylinder. The apparatus built up from the parts so far mentioned is shown in VII.
- e. a solid aluminium bar (V) 30 cm long and with a diameter of 0.8 cm, provided with a hole at one end, in which a small screw is fitted. The screw is pushed from the inside through the two middle holes of strips III and III', through the celluloid between the two, and screwed into the bar. In this way the cylinder is strongly fixed to the bar, which in its turn can be fixed to a support.
- f. a cheese-cloth collar, about 12 cm wide and with a diameter of 9.2 cm is fixed around one of the cylinder openings by means of a strip of plaster. After having placed the cylinder over the part of the host plant that has to be isolated, and having fixed the bar to its support, the cheese cloth collar is tied around the stem.
- g. a cover, formed by a zinc hoop (VI) 2 cm wide and with a diameter of 9.4 cm, over which a piece of fine mesh (20 threads per cm) stocking tissue has been tightened, which is fixed at the rim of the hoop by means of a strip of plaster. Before fixing the plaster, the tissue can be cemented round hoop VI by means of a celluloid or plastic solution. These viscous liquids can be obtained by dissolving celluloid in acetone or plastic in chloroform. The celluloid solution can also be used to ensure good fixation of the celluloid (IV) around the zinc frame.

The measurements of the apparatus can be varied to suit the requirements of different experiments.

¹⁾ Now at Paramaribo, Surinam.

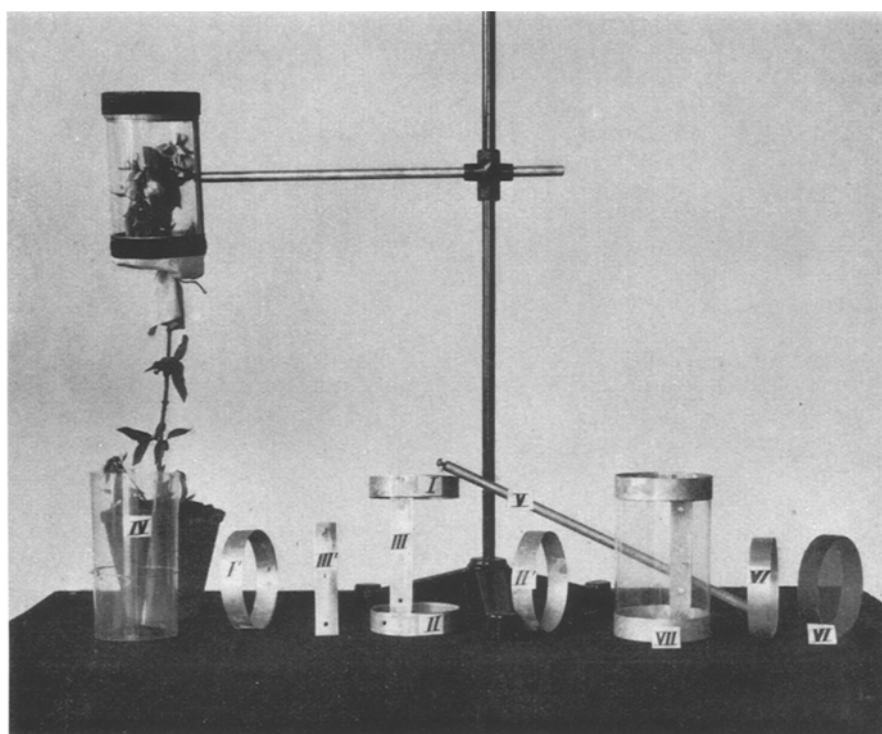


Fig. 1.

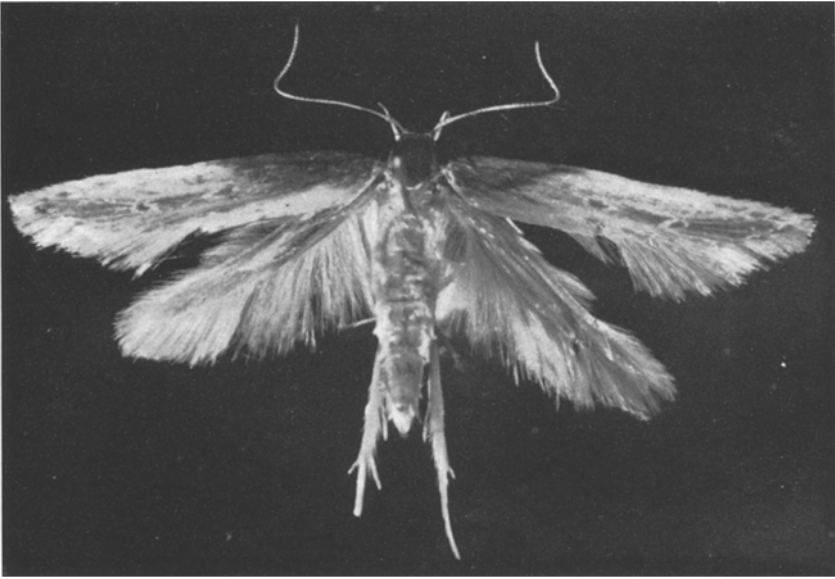


Fig. 1. *Limnaecia phragmitella* Stt (de donkere vlekken van voorrand en thorax zijn te wijten aan zgn. spekkigheid). Ware grootte (horizontaal) 15–18 mm.

Foto: W. C. Nijveldt

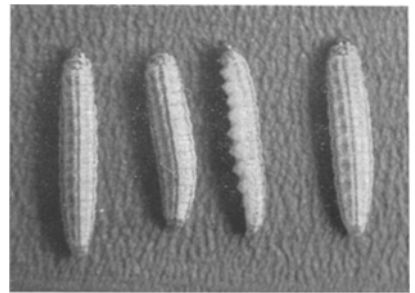
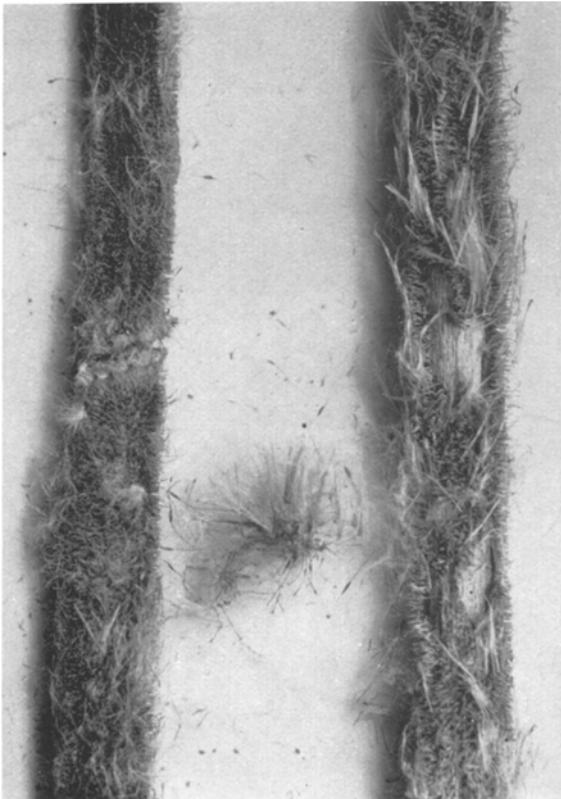


Fig. 2. Rupsen van *Limnaecia*. (Ware grootte 8 mm). *Foto: v. d. Schr.*

Fig. 3. Typha-kolven, afgevreten door de rupsen van *Limnaecia phragmitella* Stt. *Foto: v. d. Schr.*