Technique for Mass Multiplication of Bethylid Parasitoid for Control of Coconut Leaf Eating Caterpillar

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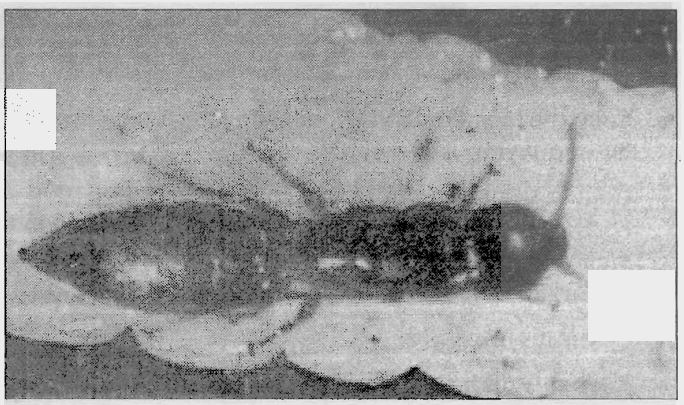
coconut leaf eating caterpillar *pisina arenosella)* periodically es severe proportions in coastal, ater and other areas in the ity of water bodies. The llars, hiding in the galleries on er side of leaves, feed on the phyll containing parenchy- tissues. Damage to the leaves the photosynthetic efficiency of lm and reflects in the yield.

logical control by the release of specific parasitoids is the major ment in the IPM schedule mended for combating the pest. matic adoption of this technique about 85-90% control of the pest field. Among the parasitoids used for field release, the rious larval ectoparasitoid, *nephantidis* is one of the most sing agents. The parasite es the caterpillar and starts eggs. The elongate eggs are glued on the sides of the host to 20 eggs are laid on a illar. Grubs hatch in about 36 and begin to feed on the body of the host. Attributes such as searching ability, capacity to e in summer when the pest its peak, and production of proportion of females make it effective. The success of a trol programme is also depended easy availability of the parasitoid ular augmentative release.

th or early sixth instar caterpillars na are the ideal host stage for thylid parasitoid. *Goniozus ntidis* can be mass multiplied in oratory on the alternate host, the rice moth larva (*Corcyra cephalonica*) also. Egg to adult period of the parasitoid is completed in 10-14 days. Adult has up to three cycles of oviposition and brood care. Eggs laid by unmated females on host produce only males. Hence mated females are to be used for mass multiplication of the parasitoid.



Goniozus nephantidis

Corcyra culture maintenance

Corcyra can be maintained in the laboratory on semolina (sooji) / wheat / pearl millet / jowar, etc. The most economic food medium can be selected depending upon the local availability and cost.

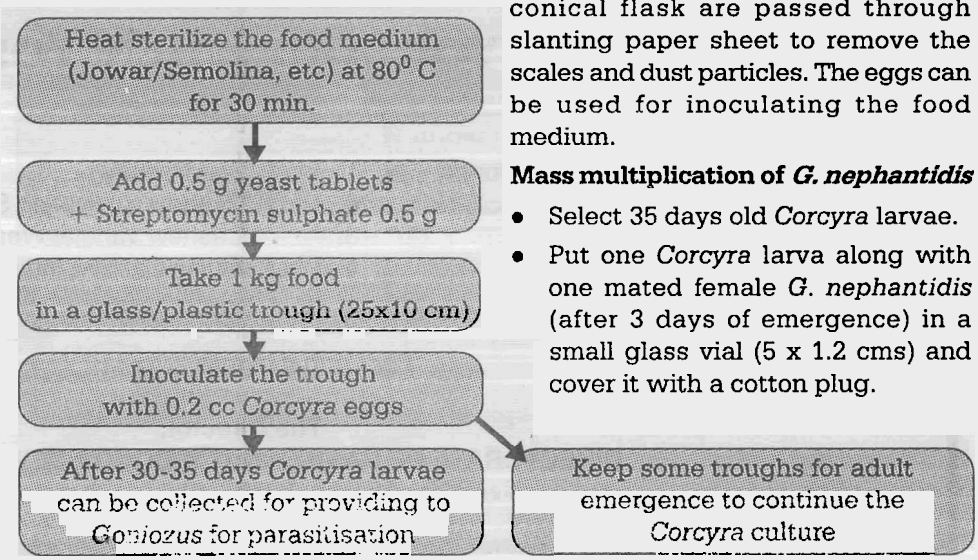
Corcyra egg collection

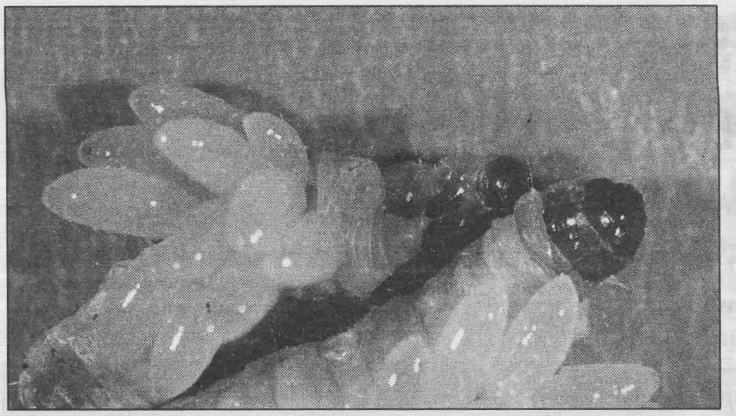
Put the adult *Corcyra* moths in a cylindrical plastic jar (15 x 12 cms), the bottom portion of which is removed and replaced with a nylon mesh. Cover the top part also with the nylon mesh. Keep the jar over a funnel, the tail portion of which is introduced to a conical flask. The eggs collected in the conical flask are passed through slanting paper sheet to remove the scales and dust particles. The eggs can be used for inoculating the food medium.

Mass multiplication of *G. nephantidis*

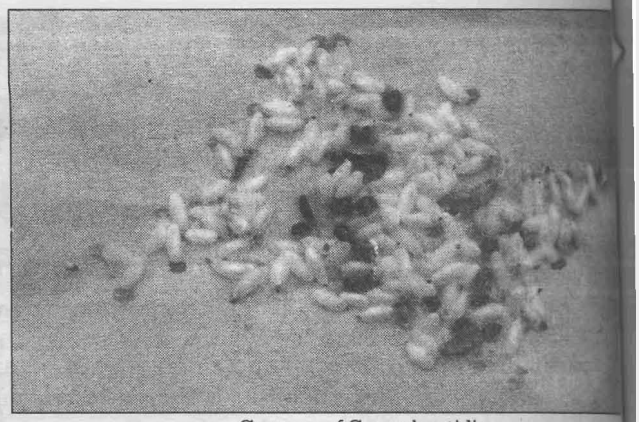
- Select 35 days old *Corcyra* larvae.
- Put one *Corcyra* larva along with one mated female *G. nephantidis* (after 3 days of emergence) in a small glass vial (5 x 1.2 cms) and cover it with a cotton plug.

Steps in the *Corcyra* culture maintenance





Goniozus nephantidis *larvae developing on* Corcyra



Cocoons of G. nephantidis

- Keep the inoculated vial for 3-6 days for egg laying in a tray.

  Collect the larvae of the host with eggs of *G. nephantidis* from all the vials and transfer them onto a tissue paper (20 *Corcyra*/paper).
- Cover it with a net.
- Keep this under ordinary table lamp in a plastic tray on a pad of cotton.
- Precaution should be taken to avoid the attack of lizards, ants, rats, etc.
- After 3 days in light, remove all damaged / unwanted larval parts and clean the cocoons of *Gonizus.*
- Transfer one such paper containing cocoons to a test tube (15 x 2.5 cms) provided with honey soaked in cotton or honey droplets on wax-coated paper.
- The adults of *Goniozus nephantidis* emerge from cocoons in another 3-5 days. There will be 150-2[illegible] *Goniozus* per test tube.
- After 3 days of emergence they [illegible] be released in the field as per [illegible] norms or can be used for furt[illegible] multiplication.
- After rearing continously for [illegible] generations on *Corcyra* lar[illegible] *Opisina* (the natural host lar[illegible] must be provided as host in or[illegible] to maintain the parasitic poten[illegible]