

INSECT PESTS OF *CHROMOLAENA ODORATA* (= *EUPATORIUM ODORATUM*)

Chromolaena odorata L. is a native of South America. In Kerala this is a major terrestrial weed of widespread occurrence, For the control of the weed, biological method is considered to be the most desirable as compared to chemical and other methods which are far more expensive and hazardous. A study of the native phytophagous insects of the weed is the first step to explore the feasibility of controlling the weed using indigenous natural enemies. Joy *et al.*, (1979) recorded *Aphis spiraecola*, *Aphis fabae* and *Brachycaudus helichrysi* on *C. odorata* from Kerala. But detailed information on the phytophagous insects associated with the weed is not available. Hence, a survey was conducted in parts of Kerala to identify the pests occurring on the weed. For the survey, the sampling design adopted was stratified multistage random sampling.

A total of 21 species of insects was recorded on *C. Odorata* and they are listed below.

1. *Aphis spiraecola* Patch (Aphididae:Hemiptera)

Both alate and apterous forms were recorded, but the apterous forms far outnumbered the alate ones. The vigour of the attacked plants was considerably reduced and in severe cases the plants became remarkably stunted.

2. *Aphis fabae* Scopoli (Aphididae:Hemiptera)

Both alate and apterous forms of this dark green aphids were recorded. The attacked leaves became moderately crinkled in appearance. However, only a few plants were found to be infested by these aphids and in some cases, both *A. spiraecola* and *A. fabae* co-existed on the same plant.

3. *Brachycaudus helichrysi* Kltb. (Aphididae: Hemiptera)

These pale yellowish aphids were noted in the high ranges of the Iddukki and Wynad areas of the state. They were totally absent in the plains. As a result of attack, plants presented a wilted appearance and most of the leaves became folded and rolled longitudinally.

4. *Coptosoma* sp. (Plataspidae : Hemiptera)

Adults and nymphs were found sucking sap from tender plant parts and were present on the weed throughout the growth phase of the weed.

5. *Sepontia nigrofusca* Dist. (Plataspidae : Hemiptera)

The adults were found to desap the tender foliage.

6. *Tettigella ceylonica* Melich. (Cicadellidae : Hemiptera)

Adults feed on tender shoots causing minor injury to the weed.

7. *Bemisia tabaci* Gen. (Aleyrodidae : Hemiptera)

The pest was noted in the early stage of the plant in limited numbers causing minor injury.

8. *Leptocorisa acuta* Thumb (Coreidae • Hemiptera)

This was found desapping on the leaves of the weed occasionally.

9. *Riptortus pedestris* Fb. (Coreidae : Hemiptera)

These feed on foliage and cause minor damage.

10. *Dysdercus cingulatus* Fb. (Pyrrhocoridae : Hemiptera)

Adults suck sap from the tender shoots of the weed. Jalamkar *et al.* (1974) recorded *D. cingulatus* on *C. odorata* in Maharashtra.

11. *Leptocentrus* sp. (Membracidae : Hemiptera)

Adults feed on the foliage by draining the sap.

12. *Coccosterphus minutus* Fabricius (Membracidae : Hemiptera)

These occurred throughout the growth phase of the plant and cause damage by desapping from the tender shoots.

13. *Apion* sp. (Apionidae : Coleoptera)

The adults bite small irregular holes on the foliage and cause damage to the flower heads. Sugathan (1979) reported *A. brunneonigrum* as a promising candidate for the biological control of *C. odorata* in India. The *Apion* sp. recorded in the survey was distinctly different from *A. brunneonigrum* and was not found to be promising as an effective biocontrol agent.

14. *Astycus aurovittatus* Hellar (Curculionide : Coleoptera)

These weevils were found to cause minor injury by defoliation.

75. *Amblyrrhinus* sp. (Curculionidae : Coleoptera)

These were found to defoliate the weed causing minor damages.

16. *Mylabris* sp. (Meloidae : Coleoptera)

The beetles feed on the flowers.

77. *Corynodes* sp. (Chrysomelidae : Coleoptera)

The adults cut numerous irregular holes on the lamina.

18. *Caryedon* sp. (Bruchidae : Coleoptera)

These beetles feed occasionally on the flowers.

19. *Pericallia ricini* Fb. (Arctiidae : Lepidoptera)

The larvae feed on the surface tissue of tender leaves during the early instars and in the later instars they fed on the whole leaves.

20. *Diacrisia obliqua* Wik (Arctiidae : Lepidoptera)

The larvae of this were recorded to defoliate the weeds.

21. *Haplothrips gowdeyi* Franklin (Phlaothripidae : Thysanoptera)

Adults and nymphs feed on the inflorescence without causing serious damage.

Out of the insects recorded on *C. odorata*, the most widespread and numerous were *A. spiraecola* and *A. fabae*. But, in view of the wide host range of these insects which include cultivated crops, the scope of their utilisation in bio-control appear to be very limited. The other insects occurred sparsely causing negligible damage.

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