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CONGREGATION OF DANAID BUTTERFLIES ON *CROTALARIA RETUSA* L. (FABACEAE)

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An unusual congregation of butterflies was observed in the experimental garden of Botanical Survey of India (BSI), Pune on 6-8 months old *Crotalaria retusa* L. plants grown in a separate plot earmarked for this species. The congregation of these butterflies was first noticed in late September and slowly increased in number from about twelve initially and reached the peak in mid October up to about sixty. Then the number started dwindling slowly, but the butterflies were found congregating till late November, though the number was six to seven only. Congregation of butterflies was found in the morning hours only with the maximum number around 9.00 am. As the atmospheric temperature gradually increased they were found dispersing and by around 11.30 am all of them have left the plants. Also these butterflies were not found gathering again in the afternoon or in the evening.

The butterfly species found gathering on *Crotalaria retusa* in the BSI garden were identified as *Danaus chrysippes* L. (*Plain tiger*), *Danaus genutia* Cramer (*Striped or common tiger*), *Euploea core* Cramer (*Common Indian crow*) and *Tirumala limniace* Cramer (*Blue tiger*). All these species belong to the family Nymphalidae. Majority of the butterflies were *Blue tiger* followed by *Stripped or common tiger. Common Indian Crow and Plain tiger* were very less in number. A few *Eurema hacabe* L. (*Common grass yellow*)



Fig. 1 : Congregation of butterflies on the older plants of *Crotalaria retusa* L.

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of family Pieridae was found in the nearby grassy area, but were not in the congregation. Another observation made is that such kind of congregation was not found on younger plants raised in the nursery but only on mature plants which were transplanted to legume plots in open grassy area. Distance between the nursery and the legume plot is about 250 m.

A perusal of literature revealed that biologists and naturalists are familiar with the phenomenon of butterflies gathering on certain plant species since long back. Such gathering is usually noted on damaged plant parts, for sucking the sap. In the present case also the terminal portion of the plants were found damaged as the leaves were eaten by the larvae of a moth. There are reports of butterfly gathering on plant species like *Ageratum conyzoides* L., *Crotalaria retusa* L., *C. lutescens* Dalz. (*C. peduncularis* Dalz. & Gibs.), *Cynoglossum denticulatum* A. DC., *Eupatorium odoratum* L., *Heliotropium indicum* L., *Paracaryopsis coelerina* (Lindl.) R. Mill., *Trichodesma indicum* (L.) Lehm., etc. This kind of gatherings were reported by Amladi (1975), Barnes (1939), Chaturvedi (1994), Chaturvedi & Satheesan (1979), Haribal 1992), Jafar Palot (2000), Jafer Palot & al. (1997), Karthikeyan (1999), Larsen (1986a & 1986b) and Weynter-Blyth (1957). Recently Nair (2003) reported congregation of common crow butterflies, *Euploea core* Cramer on the roots of a fallen tree of *Hopea parviflora* Bedd. (Dipterocarpaceae). As in the present case, Nair, *l.c.* also found the congregation in the morning hours only and with the increase in the atmospheric temperature the butterflies began to disperse by 11.30 a.m.

It is reported that *Ageratum conyzoides* is a probable source of the pyrrolizidine alkaloids, which are necessary for adult Danaine betterflies, since the pheromones necessary for successful courtship will not be developed in their absence (Larsen, 1986b). In the present case also the main purpose of aggregation on *Crotalaria retusa* may be to imbibe the sap containing such alkaloids as observed by Larsen, in the case of *Ageratum conyzoides*.

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