

**TRICHOGRAMMATOIDEA BACTRAE
NAGARAJA—A NEW EGG PARASITOID OF
SORGHUM SHOOT FLY, *ATHERIGONA
SOCCATA* RONDANI**

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THE egg parasitoids reported on sorghum shootfly, *Atherigona soccata* Rondani include *Trichogramma evanescens* Westwood from Italy¹, *T. chilonis* Ishii (= *australicum* Girault) from India² and *T. kalkae* Schulten and Feijen from Kenya³. During 1985, a trichogrammatid, *Trichogrammatoidea bactrae* Nagaraja was reared from *A. soccata* eggs collected at the Regional Research Station Farm, Dharwad. This constitutes a new host record. A male and a female adult were reared from two eggs. Since these two individuals emerged at different periods, culture of the parasitoid could not be built up. Except sciomyzid, *Sependon sautori* Hend no other dipteran hosts are known for *T. bactrae*⁴. The parasitoid is known to occur in Oriental region from Taiwan and India to Indonesia (Pers. Comm. with Dr H. Nagaraja).

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**AGE-CORRELATED BIOCHEMICAL CHANGES
IN TWO THRIPS-INDUCED GALLS**

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NUTRITIONAL dependence of cecidozoa necessitates the formation of new 'adaptive tissues' by the host plant. The importance of wounding in the gall initiation is evident from the presence of numerous new cells which appear and the biochemical profile of the gall tissue changes following wounding. The histochemical profiles of the gall tissues of *Calycopteris floribundus* Lamk and *Mimusops elengi* Linn induced by *Austrothrips cochinchinensis* Karny and *Arrhenothrips ramakrishnae* Hood respectively, are on record¹, information relating to the biochemical changes occur in galled tissues of the two plant species in relation to gall age and population of thrips.

The galls were graded into 5 developmental stages in *Mimusops* and 7 stages in *Calycopteris* (tables 1 and 2) as well as by the population counts of the inhabiting thrips. Healthy leaves of comparable age were collected from the respective host plants for comparison. Chlorophyll a, b and total chlorophyll content in the normal leaves as well in galls were determined by the methods of Yoshida *et al*². Both healthy and galled tissues were dried (40°C) till they attained constant weights and the percentage of dry matter in them was estimated. Total proteins, phenols, and sugars were estimated following the methods of Lowry *et al*³, Bray and Thorpe⁴ and Nelson⁵ respectively. Lipids were extracted using Soxhlet apparatus.

Levels of Sugar and Chlorophyll a, b and total chlorophyll were generally lower in galls and decreased with the age of the gall. In senescent galls, the total chlorophyll content was reduced to 81.71% and 30.77% in *Calycopteris* and *Mimusops* galls, respectively (tables 1 and 2). There was a slight increase in the sugar level in the galls of *C. floribundus* in the initial stages. Reduction in the sugar content of galls was observed from initial stage onwards in *M. elengi* (table 1 and figure 1). During gall development, an enhanced protein level was evident at all stages, compared to the normal leaves. The percentage increase of protein in the gall tissues over normal leaves varied from 114.25% (in 30–40 days old galls) to 49.74% (in 70–90 days old galls) of