

New records of Encyrtid Parasites and Mite Predator of the Sugarcane Scale (*Melanaspis glomerata* Green)

The scale insect, *Melanaspis glomerata* (Green) has been very often reported to cause appreciable damage in sugarcane crop in Tamil Nadu (Leela David et al., 1964). Agarwal (1959) found the scale insect in Coimbatore parasitised by the Encyrtids, *Xanthoencyrtus fullawayi* Timberlake, *Microterys* sp., and *Anabrolepis bifasciata* Ishii and an Aphelinid, *Azotus chlonaspidis* Howard. Subsequently in 1960, he had also reported the presence of two species of predatory mites of the family Calligonellidae. Rao (1970) noticed *Anabrolepis mayurai* with two other Encyrtids, as well as a coccinellid beetle, *Pharoscymnus horni* Wsl., on the scale insect in Pugalur area, Tiruchirapalli district, Tamil Nadu. The presence of an yellow mite, *Saniosulus nudus* Summers predated on *M. glomerata* at Bardoli (Gujarat) was noticed by Rao and Sankaran (1969). In the course of the observations made on the biology of the scale insect at Coimbatore, the authors have recorded two new species of Encyrtids-*Microterys delhiensis* Subba Rao and *Cheiloneurus* sp., and one species of white mite, *Tyrophagus putrescentiae* (Schränk).

The population of the encyrtids, *Microterys delhiensis* and *Cheiloneurus* sp., was very low. *M. delhiensis* was originally reported from the sugarcane mealy bug, *Saccharicoccus sacchari* (Narayanan et al., 1957). Its presence on *M. glomerata* noticed now is apparently the first record of its occurrence on the host. A species of *Cheiloneurus* was

reported from the scale insect *Aspidiotus perniciosus* and *Pulvinaria iceryi* in U.S.A., and Porto Rico respectively (Thompson, 1944). The occurrence of a similar species on the sugarcane scale is being reported for the first time in India.

Besides the hymenopteran parasites, a species of predatory mite, *Tyrophagus putrescentiae* (Schränk) was also observed preying on the scale insect. This white mite, *T. putrescentiae* was previously reported from a dipteran host *Pegonia betae* Curt., in Holland by Thompson and Simmonds (1965). Its presence on a homopteran host, *M. glomerata* has been observed for the first time in the country.

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Incidence of Grasshopper (*Atractomorpha crenulata* F.) on Sunflower

The grasshopper, *Atractomorpha crenulata* F., a polyphagous species, causes considerable damage to young sunflower plants. Both adults and nymphs feed on the leaves and cause characteristic irregular holes. Since no information is available on the damage by the grasshopper in sunflower, observations were taken on the seasonal damage at different periods of crop growth and the results presented.

Twelve monthly sowings were taken at the Farm of Tamil Nadu Agricultural University, Coimbatore from June 1972 onwards. The crop was sown on 1st of every month in replicated blocks. Ten plants were selected in each plot at random and the percentage of leaf damage was assessed by

noting the number of leaves damaged to the total leaves of the plant at four fortnightly intervals from 15th day of sowing.

The data (Table 1) reveal that in all monthly sowings, maximum leaf damage of 16.66 per cent was noted on 45 days old crop. The crop at 15th, 30th and 60th days recorded 11.46, 13.83 and 13.89 per cent leaf damage respectively. Significant differences in damage was also observed between different monthly sowings. In all periods of crop growth, October sowing recorded maximum leaf damage of 38.35 per cent while minimum damage of 3.11 per cent was registered by the crop sown on April. In general, it was observed that the crop sown on June,