



An in-depth study on the life stages of lohmanniid mite *Lepidacarus ornatissimus* Csiszar, 1961 (Acari: Oribatida)

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The importance of oribatid mites in soil ecosystem for biodegradation of plant litter to increase soil fertility and crop development is a known fact. However, biodegradation of woody plant materials appears to be a difficult task to most mites. This study concentrated on the developmental biology of a mite which prefers plant material of woody nature.

Lepidacarus ornatissimus Csiszar, 1961 is a rare species of oribatid mite collected from soil and litter in and around *Bambusa gigantea* cultivated in the Trivandrum and Calicut districts of Kerala, India. The collected mites were separated into two groups. The first group was used in preparation of slides for identification. The second group was used for culture maintenance at average relative humidity of 94.7% and temperature of $30 \pm 1^{\circ}$ c throughout the period of development. Leaves and twigs of *B. gigantea* were given as food for mites in culture. Duration of all stages of development, from egg laying to adult emergence, has been considered. An average of 176 days were found to take for the completion of the life cycle from the egg to adult stage. The average incubation period for the egg was 15.1 days. Larva, protonymph, deutonymph and tritonymph stages required an average of 31.0, 29.6, 34.5 and 29.6 days, respectively. Quiescent periods were all short, with Q1 period 8.6 days, Q2 period 9.1 days, Q3 period 8.8 days and Q4 period 9.6 days. Detailed descriptions of all life stages, namely egg, larva, protonymph, deutonymph and tritonymph were included for identification.

Keywords: *Bambusa gigantea*, rare species, feeding trials, life stages, development duration