



Research Paper

ASSESSMENT OF HOST PLANT SUITABILITY FOR BEST REPRODUCTIVE TRAITS OF *ANTHERAEA MYLITTA* IN UTTARAKHAND, INDIA

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ABSTRACT

Antheraea mylitta Drury being a lepidopteran insect, meet its entire nutritional requirement during larval stage to accumulate sufficient food energy to tide over non-feeding adult to egg laying stage. In this study, effects of host plants, rearing season and their interactions on reproductive traits of *A. mylitta* were taken as primary research requisites to assess the suitability of different forest tree species on grainage behaviour and seed multiplication pattern of *A. mylitta* with the primary aim to introduce tropical tasar culture in Uttarakhand. This is the first attempt of its kind on *A. mylitta* in Uttarakhand. Experimental rearing of Daba ecorace (BV) of *A. mylitta* was conducted on seven forest tree species at Forest Research Institute, Dehra Dun (Uttarakhand) during 2012 to 2014 and grainage activities were carried out on the generated cocoons of all the treatments and data on thirteen reproductive variables of *A. mylitta* were collected. Results indicated that *Terminalia alata*, *T. tomentosa*, *Lagerstroemia speciosa* and *T. arjuna* are the best suitable forestry host plants in their order of merit for most of the examined variables of *A. mylitta*. Interestingly, overall reproductive performance of *A. mylitta* was found better on *L. speciosa* than *T. arjuna* and in Uttarakhand, *L. speciosa* grow luxuriously, not preferred by browsing animals, has larger leaf area than *T. arjuna* and can easily be propagated. Further, SRTM (Shuttle Radar Topography Mission) mapping of Uttarakhand indicated that 3217.9 km² of forest area distributed up to an altitudinal range of <610 meter in Dehra Dun, Haridwar, Nainital and U.S. Nagar districts of Uttarakhand can be explored for introduction of tropical tasar culture in the state.

Key words: Forest conservation, livelihood improvement, poverty alleviation, tropical tasar silkworm, vanya silk.