

## **Estimation of Arthropod Faunal Diversity Inhabiting *Calotropis procera* (W. T. Aiton) in Industrial and Non-industrial Areas of West Bengal, India**

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**ABSTRACT** The present paper explored the species richness, 5 bootstrap diversity estimates, 4 evenness measures, 6 similarity coefficients, two parametric analyses of diversity (lognormal distribution and logarithmic series) of arthropods from four insect orders (namely, Coleoptera Hemiptera, Orthoptera, and Hymenoptera,) and one arachnid order Araneae inhabiting *Calotropis procera*. The investigation was conducted in 15 study sites, 10 of which are around the Falta Export Processing Zone (FEPZ) and 5 from non-industrial expanses in South 24 Parganas district, West Bengal, India. The overall mean abundance value of all the arthropod fauna of FEPZ is 69.1 percent to that of 83.0 percent from non-industrial areas, which indicates a reduction in 13.9 percent fauna in FEPZ. Impact of industrialization on species richness is observed in Coleoptera, Hymenoptera, Orthoptera and Lepidoptera. However, both Hemiptera and Araneae virtually show no impact from industrialisation. Results indicate that industrialisation affected the harmonic distribution of the insect community inhabiting *Calotropis procera*.