

5th International Conference on **Biodiversity**

March 10-12, 2016 Madrid, Spain

Plant-insect interactions and biodiversity in Coringa mangrove forest, Andhra Pradesh, India

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Insect interactions with true viviparous plant species such as *Bruguiera gymnorrhiza*, *B. cylindrica*, *Ceriops decandra*, *C. tagal*, *Rhizophora apiculata* and *R. mucronata*; crypto-viviparous species such as *Avicennia alba*, *A. officinalis*, *A. marina*, *Aegialitis rotundifolia* and *Aegiceras corniculatum*; and non-viviparous species *Sonneratia alba*, *S. apetala*, *Lumnitzera racemosa*, *Scyphiphora hydrophyllacea* and *Excoecaria agallocha*; mangrove associates such as *Acanthus ilicifolius*, *Caesalpinia crista*, *Clerodendrum inerme*, *Derris trifoliata*, *Ipomoea pes-caprae*, *I. tuba*, *Malachra capitata*, *Suaeda maritima*, *S. monoica* and *S. nudiflora* were studied for pollination ecology. *Rhizophora* species offer only pollen as floral reward while all others both nectar and pollen as floral rewards. *Acanthus*, *Aegialitis*, *Aegiceras*, *Avicennia*, *Bruguiera*, *Ceriops*, *Derris*, *Excoecaria*, *Lumnitzera*, *Caesalpinia*, *Ipomoea pes-caprae*, *Malachra*, *Scyphiphora* and *Suaeda* are associated with bees, wasps, thrips, flies and butterflies. These species utilize these insects for pollination while the insects utilize them as forage source. Bees and thrips use both pollen and nectar while wasps, flies and butterflies use only nectar. *Euplecta decussata* utilizes *Ipomoea pes-caprae* pollen promoting out-crossing. Hawk moths use *I. tuba* as nectar source. The bees, *Xylocopa* and *Anthophora* rob nectar from *Clerodendrum* flowers and this foraging indirectly promotes out-crossing. Therefore, plant-insect interactions are important for the structural and functional integrity of mangrove forests.

Biography

Aluri Jacob Solomon Raju is working in Environmental Sciences, Andhra University, India. He was the Visiting Professor of University of Colima, Mexico, Post-Doctoral Research Fellow of University of Akron, USA. He received Distinguished Achievement Award of University of Akron, USA, Best Research Award and Dr. Sarvepalli Radhakrishnan Best Academician Award of Andhra University, Loyola Environmental and AP Scientist Awards APCOST. He published 300 papers and attended 75 national and 50 international conferences held in India, USA, Canada, UK, Brazil, Italy, Mexico, China, Thailand, Malaysia, Ethiopia and Tanzania. He is the reviewer for Elsevier, Springer, Indian, US and African publishers.

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