

## 5<sup>th</sup> International Conference on **Biodiversity**

March 10-12, 2016 Madrid, Spain

### Floral structure in relation to pollination and breeding system of selected endemic *Impatiens* of Western Ghats

A K Sreekala

Jawaharlal Nehru Tropical Botanic Garden and Research Institute, India

The family Balsaminaceae comprises annual as well as perennial herbs that show conspicuous and striking floral morphology. *Impatiens* with more than 1000 species is distributed in the tropical and subtropical regions of the whole world as well as in the northern temperate regions. The genus is represented by c. 215 species in India with two centers of diversity: The Eastern Himalaya and the Western Ghats. Both the regions show a high degree of endemism and hence recognized as two amongst the 34 biodiversity hotspot regions in the World. The survival of the selected candidate species in the Western Ghats is questionable due to various factors including its reproductive constrains. The Balsams are highly evolved members among the order Geraniales as evident from the marked zygomorphic flowers and nectiferous spur. The arrangement of the stamens and its protandry nature, pistil and spur are markedly adopted for cross pollination and hence most of the species of *Impatiens* reproduce by means of cross pollination. So the survivability mainly depends on pollination by the visitors and the high altitude *Impatiens* species are pollinated mostly by honey bees, *Trigona*, butterflies, etc. The colour of the flowers attract more than the fragrance. The lateral and wing petals act as a platform for landing of honey bees and butterflies while forage. Position of anthers also prevent self-pollination and promote cross pollination. Large numbers of butterflies and honey bees visited the flowers and transferred the pollen grains to stigma. The successful pollination by the agents only determines the survival of the species in wild condition. With this background, a study has been framed to analyze the relationship between floral structure in relation to the pollination of *Impatiens* in the Western Ghats.

#### Biography

A K Sreekala obtained PhD from Kerala University in 1998 with specialization in Plant Reproductive Biology. She has published more than 75 papers in reputed journals, chapters in books and presented her research in national and international meetings. She has successfully obtained research grants from funding agencies such as DBT, DST and KSCSTE. She currently supervises six doctorate candidates and produced two PhDs.

[ak.sreekala@gmail.com](mailto:ak.sreekala@gmail.com)

#### Notes: