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Date: 19 April 2018, at 10:00AM   Venue: L8, LHC

Phylogeny and Biogeography of the *Didymocarpus* Wall. (Gesneriaceae)

Systematics, the science of classifying organisms into different categories, not only provides a quantifying tool to assess biodiversity but also provides a critical tool in our evolutionary understanding of biodiversity around us. Historically, taxonomy has relied heavily on morphological and anatomical characters to classify organism into different groups. With the advent of phylogenetic methods (morphological and molecular), we have only begun to understand the relationship among taxa, the drivers of diversification, patterns of evolution and reconstruction of historical biogeographic patterns. Therefore, an integrated taxonomic approach, combining morphological, cytological and molecular data along with ecological observation is important in our construction and understanding of a reliable tree of life (Dayrat, 2005).

The plant family Gesneriaceae has recently received considerable taxonomic attention and has been revised using a molecular approach (Weber et al, 2013). However, there is still insufficient knowledge about systematics and evolution in many old world genera such as *Didymocarpus* (~100 species). Plants in the genus *Didymocarpus* are perennial, deciduous plants producing seasonal flowering stems and they are usually found in high elevation, shaded rainforests. They generally grow on seasonally moist bedrocks but can be terrestrial or epiphytic as well. They are distributed from northeast India to northern Sumatra.

My talk is divided into two parts. In first part, I will briefly discuss the historical and current approaches in plant systematics. Later, I will focus on the state of *Didymocarpus* taxonomy, gaps in studying its evolution, and our approaches to understand the speciation process in the genus. I will also present preliminary insights into the molecular phylogenetic tree of *Didymocarpus*.

References:
1. Dayrat, B., 2005. Towards integrative taxonomy. *Biological journal of the Linnean society*, *85*(3):407-415.
2. Weber, A., Clark, J.L. and Möller, M., 2013. A new formal classification of Gesneriaceae. *Selbyana,* 31(2):68-94.