ABS-00379

Study of plant–pollinator interactions for understanding and conserving plant diversity

A. Kawakita[1,*], K. Mochizuki[1], T. Miyamoto[1], K. Takeda[2], T. Tanaka[1], and Y. Komaki[1]

[1]The Botanical Gardens, Graduate School of Science, The University of Tokyo, Bunkyo, Tokyo 112-0001, Japan
[2]Mount Fuji Research Institute, Yamanashi Prefectural Government, Fujiyoshida, Yamanashi 403-0005, Japan

[*]Corresponding author: kawakita@ns.bg.s.u-tokyo.ac.jp

Keywords: fungus gnat, Koishikawa Botanical Garden, oceanic island, Ogasawara Islands, *Pandanus*, Phyllantheae

Pollination is a critical step in the life history of plants, and thus, knowledge on plant-pollinator interactions is essential for understanding and conserving plant diversity. At the Koishikawa Botanical Garden, the University of Tokyo, we aim to increase our knowledge of plant diversity by studying the natural history of plant-pollinator interactions, and to use this knowledge to aid conservation. We first present examples of plants with 'unusual' flowers, where detailed observations have led to the discovery of unexpected pollination syndromes. These include plants of the tribe Phyllantheae (Phyllanthaceae), which produce tiny, often green flowers and are pollinated by specialized moth seed parasites; plants of several families with inconspicuous dark red flowers, which are pollinated by fungus gnats; and *Pandanus* plants, which are pollinated by specialized sap beetles that reproduce on the male inflorescences. We then highlight the role of the Koishikawa Botanical Garden in conserving the endemic plants of the Ogasawara Islands. The Ogasawara Islands are oceanic islands located approximately 1,000 km south of mainland Japan and contain over 100 endemic plant species, many of which are critically endangered. Progress has been made in *in situ* conservation and *ex situ* propagation of threatened plants, but little is known about how these plants are pollinated in the wild. Our study has identified the pollinators of many endemic plant species and found convergent floral traits in several plants, which are likely the result of a shift to moth pollination after island colonization.