

Laboratory of Evolutionary Ecology

Mitsuru HATTORI

mhattroi@nagasaki-u.ac.jp



Researches in our laboratory focus on ecology and evolution of biological interactions, particular in pollination mutualism and prey-predator interaction. We are especially interested in plant adaptation to pollinators and in prey adaptation to predators. Our work mainly conducted field observations and field experiments to gain insight into adaptive evolution.



Topic 1: Local adaptation of plants to pollination

Evolutionary ecologists are interested in the influence of locally-different pollinator assemblages on floral trait evolution. However, few studies have demonstrated that geographically-different pollinator-mediated selections influence geographic variation in floral traits (e.g., flower morph). Our studies aim to demonstrate that geographic variation of pollinator-size influences of flower morph, because geographic variation of pollinator assemblages reflects geographic variation of pollinator size.

Topic 2: Defensive strategy of eusocial aphids

Preys often show sophisticated defensive traits to their predators. One of the most ultimate defensive traits is reproduction of sterile defensive individual (“soldier”) in eusocial aphids. However, the defensive trait of eusocial aphids is not only soldier reproduction. Our studies aim to reveal the combination of defensive traits in a eusocial aphid *C. japonica* that reproduce “pseudoscorpion-like” soldiers (please see the right picture).

