Laboratory of Animal Ecology

Noriyuki Yamaguchi
noriyuki@nagsaki-u.ac.jp

Our lab is interested in behavior, ecology, and evolution, and focuses primarily, but not exclusively, on avail biology. The majority of our studies are related to behavioral ecology, in particular animal movements. Animals' movements affect various biological interactions and ecological processes across multiple scales. We seek to understand patterns and the adaptive significance of animal movements. Currently, we are interested in examining the effects of weather conditions and human activities on animal movements.

Research

- **Effects of weather conditions on movement patterns of migratory birds**

  Migratory birds travel between breeding and wintering grounds at the global scale. Recent changes in weather and climatic conditions may severely affect the movements of these birds. Our lab tracks migration route and movement pattern of several raptor species and examines and predicts the effect of weather conditions on the movements.

- **Tracking migration routes of Japanese murrelets**

  The Japanese murrelet, *Synthliboramphus wumizusume*, is a threatened seabird species whose distribution extends over Japan and southern Korea (VU on the IUCN Red List). This species breeds in small islands around Japan and South Korea and breeding ecology and population status are examined in some breeding colonies. However, little is known about the Japanese murrelet's movement patterns outside of the breeding season. Our lab tracks the movements of Japanese murrelets using loggers, such as geolocators, to reveal the species' migration.

- **Adaptive vocal communications of birds in urban environments**

  In urban environments, birds are exposed to artificial sounds that can be loud and have the potential to inhibit vocal communications. It is a well known fact that some songbirds accommodate such conditions by varying the volume and frequency of their song and calls. Our lab examines the effectiveness of urban birds communications (between breeding pairs, among families…) in the Blue Rock Thrush *Monticola solitaries*.