Training Students for Research

The Defaunation Lab. in the Department of Biology is investigating the effects of fruit-eating animal loss on plant distribution. A key component of this is understanding the seed dispersal potential of animals as this allows us to model the relative importance of each animal on driving plant species distribution. The undergraduate Madison Uzwy and the PhD candidate and Provost Fellow Seokmin Kim has used the Gifford Arboretum collect fruits of many species and obtain important morphological and chemical information.

They have measured the fruit and seed sizes of ~50 species – with which we can determine which animal dispersers could serve as potential dispersers by matching the fruit sizes to the animals' mouth sizes. With these fruits, they have also begun fruit feeding trials with tortoises and rock iguanas, through which they have calculated the seeds' gut passage time. With this data, they later hope to model the spatial extent of the seed dispersal potential for both tortoises and rock iguanas in various Caribbean Islands, where both species used to have a large presence in.

These projects, which have been greatly facilitated by the Arboretum, will hopefully have direct impacts on understanding the ecology of these plants and their respective animal dispersers and contribute to the conservation of threatened species.

Dr. Galetti