

W-16 Plant conservation with the aid of drones

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Duration: 90 minutes

Target audience: Conservation practitioners, field staff, and collection managers.

Objectives: Participants will get a broad overview of drone survey and collection methodology. As participants go through the modules, they will complete exercises in pre-planning, selecting flight locations, post-processing aerial imagery, and GIS plotting of drone photos. They will also have detailed discussions on the logistics of deploying and collecting plant material with a drone mechanism, while getting an opportunity to interact with the tool.

After this workshop participants will be able to discuss the pros and cons of using drones for botanical survey, while also having knowledge of the tools and software needed to get started. While we will not teach attendees to fly a drone, they will have many of the skills necessary to plan, execute and iterate field operations. These activities all contribute to building capacity in the application of drone technologies.

Abstract: Drones are changing the way people view the world and opening a new era of exploration. This technology has been applied by conservationists to locate and collect from a range of endangered plants species, including several that were unknown or thought-to-be-extinct. These new tools are providing broad opportunities for field scientists working in cliff environments or other hard-to-reach areas, such as tree canopies, hanging valleys, or offshore islets.

In this workshop, we provide in-depth coverage of drone processes that have been developed to assist in plant conservation efforts. An introductory module will outline the basics of getting started with the technology. A second segment will teach survey and inventory methodology, as well as imagery post-processing techniques, GIS mapping and follow-up field operations. Finally, attendees will get hands-on time with the newly developed Mamba tool that allows remote plant collection from a drone-based sampling mechanism.