

LAVA, VOG, AND TROPICAL FORESTS: WORKING WITH THE FIA PROGRAM IN HAWAII

Thomas McGinley¹, Ashley Lehman²

Abstract—In the winter of 2009, the Pacific Northwest Research Station initiated the ground implementation of their Forest Inventory and Analysis (FIA) program on the Hawaiian Islands. In the Pacific, people from the indigenous to the transplanted, hold intrinsic and utilitarian values of their forests that often differ considerably from values of mainstream mainland USA. These values need to be thoroughly respected in order to obtain the trust needed to collect forestry data in these regions, and the Hawaiian Islands proved to be a challenging place to earn sufficient trust to establish permanent research plots. Establishing partnerships with local land management entities such as state land management departments and non-governmental organizations was vital. Additionally, the ability of FIA field crews to fit the measurement anomalies and unconventional growth habits of tropical trees and understory vegetation to standard FIA protocols was paramount to successful FIA implementation. As such, local crews from Hawaii were assembled and trained by mainland FIA crews from the PNW Research Station. Hawaiian crews provided local knowledge of local flora identification, access to remote and rugged areas, and remaining safe by avoiding locations that shouldn't be accessed due to unknown lava tubes and potential SO₂ exposure. Unconventional vegetative growth common to the tropics, in combination with new field hazards including wild pigs, VOG (volcanic air pollution consisting primarily of SO₂), and lava tubes were the norm and not the exception in Hawaii FIA plots.

¹USFS, PNW FIA Data Collection, 810 State Route 20 Sedro-Woolley, WA 98284, USA; 360-333-5639 tmcginley@fs.fed.us

²USFS, PNW FIA Data Collection, Pacific Islands Inventory, Anchorage Forestry Sciences Lab, 161 E 1st Ave., Door 8, Anchorage, AK 99501, USA; adlehman@fs.fed.us