**PRESS RELEASE**

Prepared by Aubrey Moore, May 17, 2021

**Bimonthly island-wide roadside video surveys indicate that coconut rhinoceros beetle (CRB) damage to coconut palms is increasing on Guam (Fig. 1).**

The damage surveys use an innovative method developed by UOG entomologist Dr. Aubrey Moore. Roadside videos are recorded by a smart phone attached vehicle. Back in the lab, a computer program developed using an artificial intelligence technique called *deep learning* examines every frame in the videos, finds all coconut trees, assigns a CRB damage to each palm, and generates an interactive map which is published on the internet (Fig. 2).

Moore says the new damage survey method is a big improvement over the standard method which requires inspecting individual trees and recording CRB damage levels manually: “We can now measure damage to tens of thousands of palms instead of a few hundred. This means that our damage estimates are much more precise. The data will be used to measure changes in damage in response to CRB pest control activities.”

Moore’s work on monitoring CRB damage is supported by grants from the US Department of the Interior – Office of Insular Affairs and the US Forest Service.

The US Department of the Interior, Office of Insular Affairs (DOI-OIA) has awarded $239,994 to the University of Guam College of Natural and Applied Scicate iences in response to a grant proposal entitled *Establishment of Self-sustaining Biological Control of Coconut Rhinoceros Beetle Biotype G in Micronesia* submitted by UOG entomologist Dr. Aubrey Moore.

Funding from the grant will be used for partial support of an existing project aimed at implementing self-sustaining control of coconut rhino beetles (CRB) throughout Guam by introducing an insect disease caused by a naturally occurring insect virus which infects only rhino beetles. This virus is called *Oryctes rhinoceros* nudivirus, or OrNV for short. Different strains of OrNV have been very effective in providing long-lasting control of rhino beetles on many Pacific islands. Typically, after the virus is introduced into the CRB population, damage to coconut palms and other palms falls to very low levels within a few months and it stays at those low levels indefinitely.

Part of the grant funding will be used to pay the salary of Dr. James Grasela, an insect pathologist who has spent his career finding ways to control pest insects with insect diseases instead of poisoning them with insecticides. Grasela has been working under a contract at the University of Guam for the past two years under a previous DOI-OIA grant. He has screened OrNV strains collected from several locations in the Asia-Pacific region and has found two which have potential for controlling CRB-G, which is the biotype causing so much damage on Guam.

For detailed information, you can download Moore's grant proposal from:

https://github.com/aubreymoore/2020-DOI-CRB-Biocontrol/blob/master/doi\_proposal.pdf

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