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Tetiaroa Yellow Crazy Ant Sampling: Sugar and PB Protocol - 1/24/2023

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Protocol status: Working

We use this protocol and it's working

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Abstract

Walked along a series of transects with ant sugar water and peanut butter vials. The experiment aimed to discover the extent of the invasive yellow crazy Ant ,*Anoplolepis gracilipes*, on Tetiaroa Atoll. In addition, the experiment aimed to test if ants preferred the sugar water bait or the peanut butter bait.

Guidelines

- If it rains, do not set out ant traps as no ants will be present in the area. Wait one hour if it rains to continue or begin experiment.
- Do not trespass
- Analyze site safety before conducting a sample
- Avoid trampling flora
- If a point is inside a building, just go to the next point or as close to the point as possible

Materials

38 plastic vials
25 think napkins
Sugar water
Peanut butter
1 white index card
Epicollect app on smartphone
Gaia GPS app on smartphone
Timer (watch, smartphone, etc.)

Safety warnings

! Wear long pants and closed toed shoes- dense underbrush!!

Ethics statement

Unfortunately ants were harmed in the process.

Before start

Put on bug spray you're gonna need it.



Preparation

- 1 Divide the atoll into a series of transects labeled A-Z. Then on each transect create points 1-X. The points should create a grid on the island.
- 2 Prepare 25 sugar plastic vials by soaking a napkin in sugar water and placing at the bottom of the vial
- 3

Preparation

- 4 Prepare 12 PB plastic vials by placing 1 TBS of peanut butter at the bottom of each vial, making sure not to get any PB on the sides of the vial.

Deployment

- 5 Navigate to the site using Gaia GPS
- 6 At each site, place one sugar vial. Place a peanut butter vial down directly next to the sugar water vial only if ants are spotted in the nearby surrounding area.

Note

In the future, we would modify this procedure to deploy PB vials at every other site, not only when we saw ants surrounding, in order to standardize the procedure.

Deployment

- 7 Fill out Epicollect form detailing: deployed/retrieved, site number, and time collected (automatic)

Deployment

- 8 Repeat steps 3-5 at each site. Go in reverse order in the following section for retrieval.



Retrieval

- 9 After 90 minutes, return to placed vials. Retrieve any flags in the area marking transect.
- 10 Pick up and quickly cap vials, not letting any ants escape in the process.

Retrieval

- 11 Fill out form on EpiCollect. Count crazy ants on each vial.
- 11.1 If there are too many ants, head back to lab. Freeze vials and count ants afterward.

Clean up

- 12 Clean out test tubes and throw away samples.