SCHOOL FOR ENVIRONMENTAL RESEARCH

Charles Darwin UNIVERSITY

Honours Project: opportunity for a student

Frugivory by adult butterflies and moths in monsoon rainforest patches

Background

Studies of the foraging ecology of moths and especially butterflies have emphasized larval food sources, but limits to adult food resources may also shape populations and influence reproductive success. Tropical forests often feature a species-rich guild of butterflies and moths (Lepidoptera) that forage at rotting fruit, and the abundance and diversity of butterflies caught in traps baited with fruit has been used as a proxy for a wider range of biodiversity.

The monsoon rainforest patches of the Top End of the Northern Territory form an archipelago of tiny islands in an ocean of savanna. They feature an exceptionally high proportion of trees with fleshy fruits but a low diversity of frugivorous birds and mammals, a combination with fascinating ecological implications. Because they are much smaller, it is plausible that the diversity of specialised butterflies and moths is greater than that of birds and mammals. There have been no surveys of this fauna in the Top End, and indeed, the lepidopteran frugivore guild has received very little attention anywhere in Australia even though several butterflies and many moths are known to be attracted to rotting fruit.

Project aims

1. to survey and evaluate the species composition, diversity, community structure and mouth-part morphology (fruit-piercers *cf* non-piercers) of the lepidopteran rotting-fruit foraging guild in monsoon forest patches near Darwin;
2. to experimentally evaluate the extent to which fruit bait type influences survey results; and
3. to evaluate the extent to which the frugivore guild are specialists.

Subject to additional funding and permissions, it might also include a preliminary survey of the guild in monsoon forest patches on the Tiwi Islands, as these patches are prime candidates for the occurrence of unrecorded species.

The Evening Brown, a cryptic butterfly that flies at dawn and dusk and which feeds at rotting fruit.

Resources

Catch and release traps are held by the School. Funding is available to support transport and other field requirements.

Staff involved Assoc. Prof. Michael Lawes and Dr. Donald Franklin

Collaborators Dr. Michael Braby and Dr. Graham Brown

For more information contact Don Franklin on 08 8946 6976 or email don.franklin@cdu.edu.au.