

Invasive Alien Species

"Invasive alien species (IAS) are species whose introduction and/or spread outside their natural past or present distribution threatens biological diversity." Convention on Biological Diversity

Basic Rule: Arrive, Survive & Thrive

For an alien species to become invasive, its introduced habitat should complement its survivability and reproducibility. However, it must also out-compete the native organisms and spread through and increase its population in its new environment. The local ecosystem can be subjected to negative impacts since this causes disruptions and alterations in the food chain and other associated biological features.

Common Characteristics of IAS

Rapid reproduction and growth

High dispersal ability

Phenotypic Plasticity (Phenotypic Plasticity: ability to adapt physiologically to new conditions)

Ability to survive on various food types and environmental conditions.

Giant African Snail *Achatina fulica*



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The Giant African snail, *Achatina fulica*, or locally referred to as "Finihaka" is said to make its mark in the Maldives in the 1960s. Upon the introduction, its population is known to increase dramatically. It is considered as a garden pest but with it can reproduce to such numbers to cause public nuisance. The Giant African snail can alter the habitat properties by feeding on the native plants. Furthermore it is known to out-compete the native snail population as well. It can also act as a vector of human pathogens and parasites.

Coconut Hispid Beetle *Brontispa longissima*



Ento. Coconut/Flickr

Coconut Hispid Beetle, (*Brontispa longissima*) distresses seedlings, mature coconut trees and other palms, specifically palms up to five years old are at the greatest risk of infestation.

The beetle is known to attack the closed young fronds of the palm. As the spear unfurls the beetle moves on to other palms or the next emerging spear. Coconut hispid beetle invasion can kill the underlying tissue and reduce the leaf photosynthesis of the leaflets. Infestations may result in the complete defoliation of the palm and in worst cases palms can die.

The beetle was introduced to the Maldives in the late 1990s from ornamental palms imported from Malaysia and Indonesia. It is believed that these originated from adult or immature stages of the pest that were concealed in these palms. Even with the fragmented and isolated geography of the nation the beetle had spread to several islands in a year's period. A severely affected resort of Maldives has reported to have incurred direct economic loss of over US\$ 200,000 within a period of 3 years.