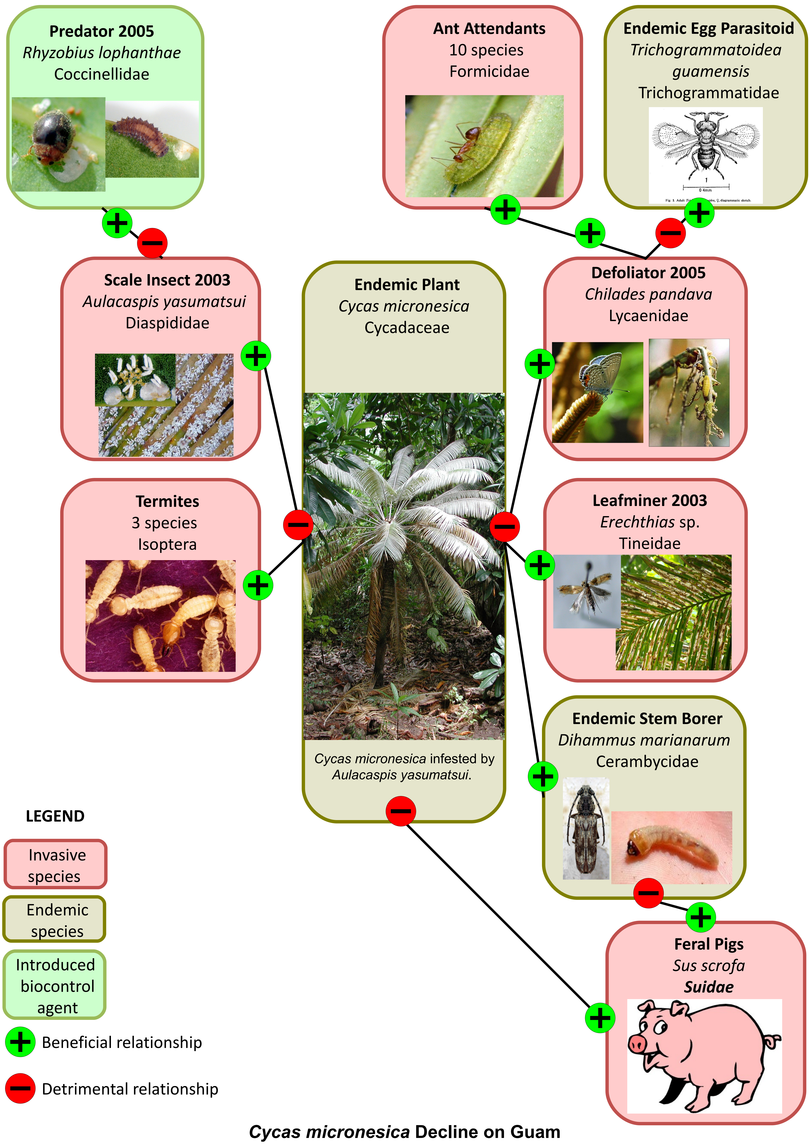
A Coalition of Invasive Species Attacks Guam's Native Cycads

Aubrey Moore, Ross Miller & Thomas Marler

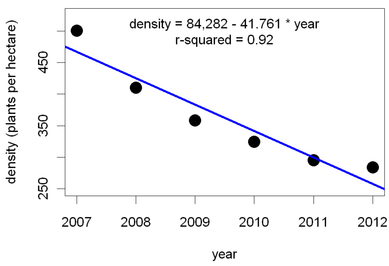
Western Pacific Tropical Research Center

University of Guam, Mangilao Guam 96923

A 2002 forest survey listed *Cycas micronesica*, locally known as "fadang", as the most numerous tree-sized plant in Guam's forests. In 2006 *C. micronesica* was placed on the IUCN Red List of Threatened Species in response to high mortality from simultaneous attack by recently introduced invasive species including the cycad aulacaspis scale (CAS), *Aulacaspis yasumatsui*, the cycad blue butterfly, *Chilades pandava*, and a lepdopteran leafminer, *Erechthias* sp. The coccinellid, *Rhyzobius lophanthae* was established as an effective biological control agent for CAS. However, the cycads continue to decline due to damage from herbivores. This poster summarizes the major ecological relationships between *C. micronesica* and the invasive species which threaten its existence.



Cycas micronesica Decline on Guam



If the current rate of decline persists, *Cycas micronesica* will become extinct in the wild on Guam during 2018.

REFERENCES:

Moore, A., T. Marler, R.H. Miller and R. Muniappan. 2005. Biological control of cycad aulacaspis scale on Guam. The Cycad Newsletter 28(5):6-8.

Marler, T.E. and R. Muniappan. 2006. Pests of *Cycas micronesica* leaf, stem, and male reproductive tissues with notes on current threat status. Micronesica 39: 1-9.

Marler, T. E. and A. Moore 2010. Cryptic scale infestations on *Cycas revoluta* facilitate scale invasions. HortScience 45(5): 837–839.

Marler, T. E., L. S. Yudin and A. Moore 2011. *Schedorhinotermes longirostris* (Isoptera: Rhinotermitidae) on Guam adds to assault on the endemic *Cycas micronesica*. Florida Entomologist 94(3): 702-703.

ACKNOWLEDGMENTS:

This project was partially supported by grants from the US Forest Service and the US Fish & Wildlife Service.

This poster can be downloaded from: http://guaminsects.myspecies.info/cycad-poster