



FLORA & FAUNA OF GUAM



**College of Natural
& Applied Sciences**

University of Guam | Unibetsedåt Guåhan

YOGA

The native tree, *Elaeocarpus jogia*, produces beautiful flowers and striking blue marble-sized fruit. It is called *yoga* in Chamorro and is indigenous to the Mariana Islands and Palau. Germination rates are low because the seed coverings are very hard and must be weathered or broken apart in order for the seeds to begin absorbing water. CNAS horticulturists recommend planting the *yoga* tree for use in afforestation and as an ornamental in parks and gardens.

Photo credits: G. Curt Fiedler



The spreading crown of the *yoga* tree is a characteristic silhouette of its species.



ABABBANG

After metamorphosis, this Mariana eight-spot butterfly larvae will become a butterfly called *ababbang* in Chamorro, also known as *Hypolimnas octocula marianensis*. This butterfly is endemic to Guam and is currently listed as endangered under the Endangered Species Act. Larvae feed on the host plants *Procris pedunculata* and *Elatostema calcareum*, which only grow in karst limestone forests and can be found in the Pagat area of Guam.

Photo Credits: G. Curt Fiedler



HÅFULA'

Guam mantas will forever be mentioned in the scientific literature because of UOG Master of Biology candidate Julie Sawbulyal Britsch Hartup's passion for her research subject. She has been studying Guam's *Manta alfredi* for over ten years and is the first to document a very interesting behavior, mantas congregating to eat fish spawn. Each manta has unique spot patterns on its belly, which enables identification of one individual from another. Julie is making a difference in the region one manta at a time. Please visit micronesianconservation.org for more information about manta research in the region.

Photo credit: Julie Sawbulyal Britsch Hartup



FUNGI

This delicate red-capped mushroom, *Marasmius sp.*, is commonly found growing in the limestone forests around Guam. The bioluminescent mushrooms pictured below are called *Mycena chlorophos*. It has been noted that these mushrooms are often seen growing on rotting bamboo during times of abundant rain.

Photo credits: G. Curt Fiedler



Mycena chlorophos



HILITAI

Called *hilitai* in Chamorro, mangrove monitor in English and known to science as *Varanus indicus*, this lizard is thought to have inhabited Guam since prehistoric times. *Hilitai* are carnivores eating a variety of insects, skinks (like the blue-tailed skink pictured below) birds, eggs, rats, and crabs.

Photo credits: G. Curt Fiedler



Emoia caeruleocauda



KAMUKE-NANOFE

This tiny but significant native orchid *Taeniophyllum mariannense* is one of the world's smallest orchids. Worm orchids have no leaves, but their roots contain chloroplasts that photosynthesize. This orchid flowers several times a year but the flowers are open for one day only. Endemic to Micronesia and called *kamuke-nanofe* in Chamorro, this orchid is commonly found on branches and tree trunks throughout the Mariana Islands.

Photo credits: G. Curt Fiedler



DUK-DUK

Coenobita cavipes is the scientific name for this land hermit crab that is known throughout the Indo-Pacific. The Chamorro name for hermit crabs is *duk-duk*. Legend has it that if you look a *duk-duk* in the eye and call out *duk-duk-duk-duk* the crab will come out of its shell. Although hermit crabs usually use empty seashells for a home, sometimes they use hard seedpods from *da'ok* trees, like the crab in the above photograph.

Photo credits: G. Curt Fiedler



Coenobita perlatus, also known as the strawberry hermit crab, is common throughout the Indo-Pacific region.



PHYLLANTHUS

Endemic to Guam, the spiral leaves form the branch tips of *Phyllanthus saffordii*. It is named after William Safford who wrote the book *Useful Plants of Guam*. It grows in the savannas of southern Guam and is threatened, as are many native plants and animals, by habitat loss due to development, agriculture, fire, off-roading, pigs, and typhoons.

Photo credits: Lauren Gutierrez



Guamia mariannae



AKALEHA

Guam's three native snail species are known as *akaleha* in Chamorro and were added to the US Endangered Species listing in 2015. The Guam endemic *Partula radiolata*, or Guam tree snail, may number in the thousands. The humped tree snail, *Partula gibba*, population has been reduced to fewer than 100 on Guam and is declining in the CNMI. This species was once so common its shell was used to make handbags and jewelry. The fragile tree snail, *Samoana fragilis* is from Guam and Rota, but hasn't been seen on Rota since 1996 and is rare on Guam. The introduced flatworm *Platydemus manokwari* is decimating *akaleha* populations. Dr. G. Curt Fiedler and his students are currently conducting research on these species.

Photo credits: G. Curt Fiedler



CHACHA

Cyathea lunulata is indigenous to Guam and is exceptionally rare. It is found in ravines and on the savanna where dry season fires destroy these delicate tree ferns. Known as *chacha* in Chamorro, this plant is one of the species the Guam Plant Extinction Prevention Program (GPEPP) is working to conserve.

Photo credits: J. Davis, James McConnell (below)



NIYOK

Coco *nucifera*, the tropical palm tree called *niyok* in the Chamorro language is one of the most useful trees in the islands. Guam's coconut trees are dying due to an invasive beetle first found on island in 2007. CNAS researchers, in collaboration with scientists in New Zealand have discovered that the coconut rhinoceros beetle (CRB), *Oryctes rhinoceros*, found on Guam is genetically different from other CRB populations previously found on Pacific islands. This new beetle variant has been named the Guam biotype. These beetles are resistant to the virus previously used to control invasive beetle populations in Fiji and Palau. For more information visit:

cnas-re.uog.edu/crb

Photo credits: G. Curt Fiedler,
Olympia Terral (below)



Rhino beetle caught in tekken net



ATKAPÅRES

This delicate white flower, *Capparis mariana*, is a Guam native that grows along the island's limestone coastlines. The flower is fragrant and the unripe seed capsules are enjoyed pickled. It is from the family Capparaceae, which is the same family as capers and is referred to as the Marianne caper. Locally it is called *atkapåres* from the Spanish. This plant is also used medicinally for bone fractures and the milky sap for treating boils.

Photo credits: Lauren Gutierrez



UMBRELLA ORCHID

This interesting orchid species is found on Guam and Rota and is called *Bulbophyllum longiflorum*. It can be seen in shaded areas of the forest growing on the trunks and branches of trees. June and July are the best months for observing the unusual umbrella-shaped flowers, which account for its common name of umbrella orchid.

Photo Credits: Guam Plant Extinction Prevention Program

By Olympia Terral and Emily Shipp

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Published by the College of Natural & Applied Sciences (CNAS), University of Guam, in cooperation with the U.S. Department of Agriculture, under Dr. Lee S. Yudin, Director/Dean. University of Guam, CNAS, UOG Station, Mangilao, Guam 96923. Copyright 2016. For reproduction and use permission, contact CNAS-Media.events@gmail.com, (671) 735-2000. The University of Guam is an equal opportunity/affirmative action institution providing programs and services to the people of Guam without regard to race, sex, gender identity and expression, age, religion, color, national origin, ancestry, disability, marital status, arrest and court record, sexual orientation, or status as a covered veteran. Find CNAS publications at CNAS-RE.uog.edu.

