

APPENDIX L

BIOLOGICAL RESOURCES SUPPORTING

DOCUMENTATION

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1.1 TERRESTRIAL AND MARINE SPECIES LIST

The following table provides the scientific name for all species listed by common name in the text of the Environmental Impact Statement (EIS). It also includes the Chamorro and Carolinian name for each species if one is known and accepted within the Commonwealth of the Northern Mariana Islands (CNMI).

English/Chamorro/Carolinian Name	Scientific Name	English/Chamorro/Carolinian Name	Scientific Name
PLANTS		Tangantangan/Tangantangan/-	<i>Leucaena leucocephala</i>
-/aaban/-	<i>Eugenia</i> spp.	Tape seagrass/-	<i>Enhalus acoroides</i>
African tulip tree/-/Apar	<i>Spathodea campanulata</i>	Tropical almond/Talisai/-	<i>Terminalia catappa</i>
-/Aplohkateng/-	<i>Psychotria mariana</i>	-/Ufa halomtano/-	<i>Heritiera longipetiolata</i>
-/Atmahayan/-	<i>Melochia villosissima</i>	-/Umumu/-	<i>Pisonia grandis</i>
Banyan tree/Nunu/-	<i>Ficus prolixa</i>	INVERTEBRATES	
Beach heliotrope/Hunig/-	<i>Tournefortia argentea</i>	Asian cycad scale/-/-	<i>Aulacaspis yasumatsui</i>
Beach naupaka/Nanaso/-	<i>Scaevola taccada</i>	Black coral/-/-	<i>Antipatharia</i>
Blue buffle grass/Sakate/-	<i>Pennisetum polystachion</i>	Black teatfish sea cucumber/-/-	<i>Holothuria whitmaei</i>
Bulrush/-/-	<i>Schoenoplectus litoralis</i>	Blue coral/-/-	<i>Helioporacea</i> spp.
Bur-marigold/-/-	<i>Bidens pilosa</i>	Coconut crab/Ayuyu/Iyaf	<i>Birgus latro</i>
Candle bush/Akapuku/-	<i>Cassia alata</i>	Cycad blue butterfly/-/-	<i>Chilades pandava</i>
-/Cebello halumtano/-	<i>Bulbophyllum guamense</i>	Elongate giant clam/Hima (Shiim)/-	<i>Tridacna squamosa</i>
-/Chiuti/-	<i>Cerbera dilatata</i>	Fluted giant clam	<i>Tridacna maxima</i>
Climbing hempweed/-/-	<i>Mikania scandens</i>	Ghost crab/Hagu'ui/Arigh	<i>Ocyopode cerathophthalma</i>
Coconut palm/Niyog/-	<i>Cocos nucifera</i>	Giant African snail/Akaleha'	<i>Achatina fulica</i>
Coral tree or tiger's claw/Gabgab/-	<i>Erythrina variegata</i> var. <i>orientalis</i>	Horned helmet shell/Kulu Prensa/Sa'wi Schap	<i>Cassis cornuta</i>
-/Fadang/-	<i>Cycas micronesica</i>	Horny corals and sea fans/-/-	<i>Gorgonacea</i> spp.
-/Fago/-	<i>Neisosperma oppositifolia</i>	Humped tree snail/Akaleha'/-	<i>Partula gibba</i>
False verbena/-/-	<i>Stachytarpheta</i> spp.	Lace coral/-/-	<i>Stylasteridae</i> spp.
Flame tree/Arbol de fuego/-	<i>Delonix regia</i>	Land crab/Panglao tunas/-	<i>Discoplax</i> (previously <i>Cardisoma</i>) <i>hirtipes</i>
Formosan koa/Boiffuring/Serepa	<i>Acacia confusa</i>	Land crab/Panglao echung/-	<i>Cardisoma carnifex</i>
Giant sensitive plant/-/-	<i>Mimosa invisa</i>	Mangrove crab/-/-	<i>Scylla serrata</i>
Giant swampfern/Langayao/-	<i>Acrostichum aureum</i>	Mariana eight-spot butterfly/Ababang/-	<i>Hypolimnas octocula mariannensis</i>
Golden false beardgrass/-/-	<i>Chrysopogon aciculatus</i>	Mariana wandering butterfly/Ababang/-	<i>Vagrans egistina</i>
-/Gulos/-	<i>Cynometra ramiflora</i>	Manokar flatworm/-/-	<i>Platydemus manokwari</i>
Hartog seagrass/-/-	<i>Halophila minor</i>	Octopus/Gamson/Ghuus	<i>Octopus</i> spp.
Hibiscus/Pago/-	<i>Hibiscus tiliaceus</i>	Pectinate venus/Tapon/Ai'mett	<i>Gafrarium pectinatum</i>
Hopseed bush/Lampauye/-	<i>Dodonaea viscosa</i>	Rosy wolf snail/-/-	<i>Euglandina rosea</i>
Ironwood/Gago/-	<i>Casuarina equisetifolia</i>	Rough turban	<i>Turbo setosus</i>
Ivy Gourd/-/-	<i>Coccinia grandis</i>	Silver-mouth turban/Aliling pulan/Lifott maram	<i>Turbo argyrostoma</i>
-/Kangkun/-	<i>Ipomoea aquatica</i>	Spider conch/Toro/Li'yang	<i>Lambis</i> spp.
Lantana/Lantana/-	<i>Lantana camara</i>	Spiny lobster/Mahongang/-	<i>Panulirus penicillatus</i>
-/Langiti/-	<i>Ochrosia mariannensis</i>	Stony corals/-/-	<i>Scleractinia</i>
Madras thorn/Kamachile/-	<i>Pithecellobium dulce</i>	Surf redfish sea cucumber/-/-	<i>Actinopyga mauritiana</i>
-/Mapunyao/-	<i>Aglaia mariannensis</i>	Tapestry turban	<i>Turbo petholatus</i>
Morning glory/Fofgu/-	<i>Ipomoea triloba</i>	Triton's trumpet shell/Kulo'/-	<i>Charonia tritonis</i>
Narrowleaf seagrass/-/-	<i>Halodule uninervis</i>	Wire coral/-/-	<i>Cirripathes leutkeni</i>
-/Nigas/-	<i>Pemphis acidula</i>	FISH	
-/Niyoron/-	<i>Cordia subcordata</i>	Basking shark/-/-	<i>Cetorhinus maximus</i>
-/Paipai/-	<i>Guamia mariannae</i>	Black-axil chromis	<i>Chromis atripectoralis</i>
Pandanus/Kafu/-	<i>Pandanus</i> spp.	Blackbar devil/Dick's damselfish	<i>Plectroglyphidodon dickii</i>
-/Paodedo/-	<i>Hedyotis scabridifolia</i>	Blue-green damselfish, Green chromis/-	<i>Chromis viridis</i>
Paper rose/Alalag/-	<i>Operculina ventricosa</i>	Dolphinfish/Botague'/-	<i>Coryphaena hippurus</i>
Physic nut/Tubatuba/-	<i>Jatropha curcas</i>	Eight-banded grouper/Gadau/-	<i>Epinephelus amblycephalus</i>
Portia tree/Banalo/-	<i>Thespesia populnea</i>	Gray reef shark/Halu'on unai/-	<i>Carcharhinus amblyrhynchos</i>
-/Puteng/-	<i>Barringtonia asiatica</i>		
Siam weed/Masiksik/-	<i>Chromolaena odorata</i>		
Siris tree/Tronkon mames/-	<i>Albizia lebbek</i>		
Swordgrass/Neti/-	<i>Miscanthus floridulus</i>		
Tall reed/Karriso/-	<i>Phragmites karka</i>		

English/Chamorro/Carolinian Name	Scientific Name	English/Chamorro/Carolinian Name	Scientific Name
Goatfish	<i>Parupeneus spp</i>	Micronesian honeyeater/Egigi/-	<i>Myzomela rubrata</i>
Humphead wrasse/ Tanguisson/Máám	<i>Cheilinus undulates</i>	Micronesian megapode/ Sasangat/Sasangal	<i>Megapodius laperouse laperouse</i>
Jewel damselfish/-/-	<i>Plectroglyphidodon lacrymatus</i>	Micronesian starling/Sali/-	<i>Aplonis opaca guami</i>
Long-tail red snapper/Tagafi/-	<i>Etelis coruscans</i>	Nightingale reed-warbler/Ga'ga karisu/Malul ghariisu	<i>Acrocephalus luscina</i>
Midget chromis/-/-	<i>Chromis acares</i>	Orange-cheeked waxbill/-/-	<i>Estrilda melpoda</i>
Orange-spine unicornfish/Hangon/-	<i>Naso lituratus</i>	Pacific golden plover/Dulili/-	<i>Pluvialis fulva</i>
Ornate wrasse/-/-	<i>Halichoeres ornatissimus</i>	Pacific reef heron/Chuchuko atilong/-	<i>Egretta sacra</i>
Princess damselfish/Fohmo/-	<i>Pomacentrus vaiuli</i>	Red-footed booby/Lu'ao talisai/-	<i>Sula sula</i>
Redgill emperor/-/-	<i>Lethrinus rubrioperculatus</i>	Red junglefowl/Poyo/-	<i>Gallus gallus</i>
Reticulated damselfish/ Two-stripe damselfish	<i>Dascyllus reticulatus</i>	Red-tailed tropicbird/Fagpi/-	<i>Phaethon rubricauda</i>
Scalloped hammerhead/Kilu'us/-	<i>Sphyrna lewini</i>	Rock dove/-/-	<i>Columba livia</i>
Skipjack tuna/Bunitu/-	<i>Katsuwonus pelamis</i>	Ruddy turnstone/Dulili/-	<i>Arenaria interpres</i>
Striated surgeonfish/Machara/-	<i>Ctenochaetus striatus</i>	Rufous fantail/Naabak/Leteghipar	<i>Rhipidura ruffifrons uraniae</i>
Trevally	<i>Caranax spp.</i>	Sooty tern/-/-	<i>Onychoprion fuscatus</i>
Vanderbilt's chromis/-/-	<i>Chromis vanderbilii</i>	Tinian monarch/ Chichurikan/Leteighi'par	<i>Monarcha takatsukasae</i>
Yellowfin tuna/Makuro'/-	<i>Thunnus albacares</i>	Wandering tattler/Dulili/-	<i>Tringa incana</i>
REPTILES AND AMPHIBIANS		White-tailed tropicbird/Fakpe or Utag/-	<i>Phaethon lepturus</i>
Brahminy blind snake/-/-	<i>Ramphotyphlops braminus</i>	White tern/Chunge'/-	<i>Gygis alba</i>
Brown treesnake/Kolepbla/-	<i>Boiga irregularis</i>	White-throated ground-dove/ Paluman apaka (male) and fachi (female)/Apooka	<i>Gallicolumba xanthonura</i>
Curious skink/Guali'ek halom tano'/-	<i>Carlia fusca</i>	Yellow bittern/Kakkak/-	<i>Ixobrychus sinensis</i>
Emerald skink/Guali'ek/-	<i>Lamprolepis smaragdina</i>	MARINE MAMMALS	
Green anole/-/-	<i>Anolis carolinensis</i>	Blainville's beaked whale	<i>Ziphius cavirostris</i>
Green sea turtle/Haggan betde/-	<i>Chelonia mydas</i>	Blue whale/-/-	<i>Balaenoptera musculus</i>
Hawksbill sea turtle/Hagan karai/-	<i>Eretmochelys imbricata</i>	Bottlenose dolphin/-/-	<i>Tursiops truncatus</i>
Indo-Pacific house gecko/Guali'ek/-	<i>Hemidactylus garnotii</i>	Cuvier's beaked whale	<i>Ziphius cavirostris</i>
Leatherback sea turtle/-/-	<i>Eretmochelys imbricata</i>	Fin whale/-/-	<i>Balaenoptera physalus</i>
Littoral or tidepool skink/Guali'ek kantun tasi/-	<i>Emoia atrocostata</i>	Humpback whale/-/-	<i>Megaptera novaeangliae</i>
Loggerhead sea turtle/-/-	<i>Dermochelys coriacea</i>	False killer whale/-/-	<i>Pseudorca crassidens</i>
Marine toad/Kairo/-	<i>Bufo marinus</i>	Melon-headed whale/-/-	<i>Peponocephala electra</i>
Micronesian gecko/Guali'ek/Galuuf	<i>Perochirus ateles</i>	Minke whale	<i>Megaptera novaeangliae</i>
Mangrove monitor lizard/Hilatai/-	<i>Varanus indicus</i>	Pantropical spotted dolphin/-/-	<i>Stenella attenuata</i>
Mourning gecko/Guali'ek/-	<i>Lepidodactylus lugubrus</i>	Sei whale	<i>Balaenoptera borealis</i>
Mutilating gecko/Guali'ek/-	<i>Gehyra mutilata</i>	Short-finned pilot whale	<i>Globicephala macrorhynchus</i>
Oceanic gecko/Achiak/-	<i>Gehyra oceanic</i>	Sperm whale	<i>Physeter macrocephalus</i>
Oceanic snake-eyed skink/Guali'ek halom tano'/-	<i>Cryptoblepharus poecilopleurus</i>	Spinner dolphin/-/-	<i>Stenella longirostris</i>
Olive ridley sea turtle/-/-	<i>Lepidochelys olivacea</i>	TERRESTRIAL MAMMALS	
Pacific blue-tailed skink/Guali'ek halom tano'/-	<i>Emoia caeruleocauda</i>	Asian house shrew/Cha'ka/-	<i>Suncus murinus</i>
Pacific slender-toed gecko/Guali'ek/Galuuf	<i>Nactus pelagicus</i>	Brown rat/Cha'ka/-	<i>Rattus norvegicus</i>
Slevin's skink/Guali'ek halom tano'/-	<i>Emoia slevini</i>	Cattle/Guaka/Wakke	<i>Bos primigenius</i>
BIRDS		Domestic cat/Catu/-	<i>Felis catus</i>
Black-capped vireo/-/-	<i>Vireo atricapilla</i>	Domestic dog/Gatlagu/-	<i>Canis lupus familiaris</i>
Black noddy/Fahang dikike'/-	<i>Anous minutus</i>	Domestic goat/Chiba/-	<i>Capra hircus</i>
Bridled white-eye/Nosa/Litchogh	<i>Zosterops conspicillatus saypani</i>	Domestic pig/Babui/-	<i>Sus scrofa</i>
Brown booby/Lu'ao/-	<i>Sula leucogaster</i>	House mouse/Cha'ka/-	<i>Mus musculus</i>
Brown noddy/Fahang dankolo/-	<i>Anous stolidus</i>	Mariana fruit bat/Fanihi/Pai'scheei	<i>Pteropus mariannus mariannus</i>
Coastal California gnatcatcher/-/-	<i>Polioptila californica</i>	Musk shrew/Cha'ka/-	<i>Suncus murinus</i>
Collared kingfisher/Sihék/-	<i>Todiramphus chloris</i>	Oriental house rat/Cha'ka/-	<i>Rattus tanezumi</i>
Elepaio/-/-	<i>Chasiempis sandwichensis</i>	Pacific rat/Cha'ka/-	<i>Rattus exulans</i>
Eurasian tree-sparrow/Gaga pale/-	<i>Passer montanus</i>	Philippine deer/Binadu/-	<i>Rusa marianna</i>
Golden-cheeked warbler/-/-	<i>Dendroica chrysoparia</i>	Roof rat/Cha/ka/-	<i>Rattus rattus</i>
Grey-tailed tattler/Dulili/-	<i>Heteroscelus brevipes</i>	Water buffalo/Carabao/-	<i>Bubalus bubalis</i>
Island collared-dove/Paluman/-	<i>Streptopelia bitorquata</i>	<p>Note: - = no commonly accepted English, Chamorro, or Carolinian name. Sources: Falanruw et al. 1990; Raulerson and Rinehart 1991; Vogt and Williams 1990; Lutz and Musick 1997; Rice 1998; Nelson et al. 2004; Berger et al 2005; FishBase 2006; GDAWR 2006; Peterson 2006; Gill et al. 2009; Kerr 2012; U.S. Forest Service 2014.</p>	
Mariana common moorhen/ Pulattat/Bherel bweel	<i>Gallinula chloropus guami</i>		
Mariana fruit-dove/Paluman totut/Mwee'mwe	<i>Ptilinopus roseicapilla</i>		
Masked booby/Lu'ao/Amwo	<i>Sula dactylatra</i>		

1.2 TERRESTRIAL AND MARINE SPECIES PROFILES

This section provides brief overviews or “fact sheets” for a subset of the terrestrial and marine species that occur on or within the nearshore waters of Tinian and Pagan. This section is not meant to provide an overview for all species; rather it includes those species that (1) are listed or proposed for listing as threatened or endangered either by the federal government or the CNMI, (2) may be culturally important, (3) unique to the islands, and (4) those that are of particular concern.

Common Name: None
Chamorro/Carolinian Name: Fadang/None
Scientific Name: *Cycas micronesica*



SPECIES DESCRIPTION

A cycad reaching heights of 26-39 feet (8-12 meters). Leaves are deep green, highly glossy, and constructed of tough tissue. Seeds are flattened and long, reaching 2.4 inches (60 millimeters). Pollen cones are orange.⁽²⁾

LISTING STATUS

Proposed for listing as a threatened species under the Federal Endangered Species Act (ESA).⁽¹⁾ Listed as endangered by the International Union for Conservation of Nature (IUCN).⁽²⁾

THREATS

The most serious threats are introduced pests, including the Asian cycad scale (*Aulacaspis yasumatsui*). This insect voraciously infests and kills the plant. Other threats include the non-native cycad blue butterfly (*Chilades pandava*) eating the leaves, habitat destruction by non-native ungulates (e.g., Philippine deer, water buffalo, and feral pigs),⁽⁶⁾ direct removal of plants, and reduced numbers of the Marianas fruit bat.^(2, 3)

ECOLOGY

Preferred habitat is in closed forest country, coral limestone, or coral sand. Insects transfer pollen, and in effect make seeds for reproduction.^(1, 3)

HISTORICAL AND CURRENT DISTRIBUTION

Cycas micronesica is currently known to occur on Guam, Rota, Palau, and Yap, and was recently reported on Pagan; it is not known historically from Tinian.^(1, 4, 5) On Guam, *C. micronesica* is severely impacted by Asian cycad scale, cycad blue butterfly, and non-native ungulates.⁽⁶⁾ As a result, the Department of the Navy has been collaborating with others on a conservation project for *C. micronesica* on Tinian. In 2005, Joint Region Marianas collected 3,000 cycad seeds from Guam, cleaned the seeds of scale insects, and germinated and raised seedlings in a nursery on Tinian. In 2008, 1,000 of the cycad seedlings were planted in native limestone forest on Tinian. The cycads on Tinian have since been monitored monthly. As of April 2012, there has been an 81% survivorship of these seedlings.⁽³⁾ The cycad population on Tinian is considered to be an experimental population and was not included within the species' range in the proposed rule to list *C. micronesica* under the ESA.⁽¹⁾

REFERENCES

1. U.S. Fish and Wildlife Service. (USFWS) (2014a). Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for 21 Species and Proposed Threatened Status for 2 Species in Guam and the Commonwealth of the Northern Mariana Islands; Proposed Rule. *Federal Register* 79:59364-59413.
2. Marler, T., J. Haynes, and A. Lindstrom. (2010). *Cycas micronesica*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2014.3. Retrieved from www.iucnredlist.org.
3. Brooke, A. (2012). *Conservation and Management of Micronesian Cycads, Navy Leased Land, Tinian*. Department of the Navy, Joint Region Marianas, Guam.
4. Raulerson, L. (2006). Checklist of Plants of the Mariana Islands. *University of Guam Herbarium Contribution* 37: 1-69.
5. Pratt, L.W. (2010). *Vegetation Assessment of Forests of Pagan Island, Commonwealth of the Northern Mariana Islands*. U.S. Geological Survey (USGS), Pacific Island Ecosystems Research Center, Hawaii Volcanoes National Park, HI.
6. Marler, T. E. & Lawrence, J. H. (2012). Demography of *Cycas micronesica* on Guam following introduction of the armoured scale *Aulacaspis yasumatsui*. *Journal of Tropical Ecology* 28:233-242.

Photo: T. Marler

Common Name: None
Chamorro/Carolinian Name: Ufa-halomtano/None
Scientific Name: *Heritiera longipetiolata*



SPECIES DESCRIPTION

A tall tree reaching heights of 40 feet (12 meters). The bark is mottled brown in color. Leaves are silvery below and dark green above. Roots are massive and grow above-ground. The fruit is approximately 2-3 inches (51-76 millimeters) long and 2 inches (51 millimeters) wide.⁽¹⁾

LISTING STATUS

Proposed for listing as an endangered species under the Federal ESA.⁽²⁾ Listed as vulnerable by the IUCN.⁽³⁾

THREATS

The most serious threats are habitat loss and that pollinator-controls are affected by the non-native brown treesnake.⁽¹⁾

ECOLOGY

Habitat is moist forest on limestone cliffs and coastal sites with windy conditions.⁽³⁾ Very little is known about the ecology of this species.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found historically on Guam, Rota, Saipan, and Tinian. Currently, trees have been confirmed on Guam, Tinian, and Saipan⁽³⁾, and are known outside the Marianas only from Pohnpei.⁽⁴⁾ Within the Military Lease Area on Tinian it has been found in coastal forests near Unai Masalok on the east coast, and along the Lamanibot Bay (Dump Coke) escarpment.⁽⁵⁾ It has also been observed south of the Military Lease Area in native limestone forest along Tinian's southeastern coast, between Puntan Barangka and Puntan Kastiyu.^(6,2)

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2. USFWS. (2014a). Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for 21 Species and Proposed Threatened Status for 2 Species in Guam and the Commonwealth of the Northern Mariana Islands; Proposed Rule. *Federal Register* 79:59364-59413.
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5. Hawaiian Agronomics International, Inc. (1985). *Final Report for Flora and Fauna Survey of Tinian, Northern Mariana Islands*. Honolulu, HI: Prepared for Commander, Pacific Division, Naval Facilities Engineering Command. Retrieved from <http://www.worldcat.org/title/final-report-for-flora-and-fauna-survey-of-tinian-northern-mariana-islands-us-navy-contract-n62742-84-c-0141/oclc/15164926>.
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Photo: Waimea.

Common Name: None

Chamorro/Carolinian Name: None

Scientific Name: *Dendrobium guamense*



SPECIES DESCRIPTION

An epiphytic orchid found on tree branches in forests with filtered sunlight. Stems are crowded and can be up to 3.28 feet (1 meter) long. Leaves are oblong-lanceolate and up to 10 centimeters long and 1-1.5 centimeters wide. Two small white flowers emerge between two leaves, and are open only one day, appearing as balls on the second day.⁽¹⁾

LISTING STATUS

Proposed for listing as an endangered species under the Federal ESA.⁽²⁾

THREATS

The most serious threats are habitat loss and destruction from agriculture, urban development, nonnative animals and plants, fires, typhoons, and predation by the nonnative invertebrates.⁽²⁾

ECOLOGY

Grows on tree trunks and branches in forest habitats.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Known historically from Guam, Rota, Saipan, and Tinian. Currently, a single population of *D. guamense* is known from Tinian south of the Military Lease Area.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

REFERENCES

1. Raulerson, L. & A. Rinehart. (1992). Ferns and Orchids of the Mariana Islands.
2. USFWS. (2014a). Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for 21 Species and Proposed Threatened Status for 2 Species in Guam and the Commonwealth of the Northern Mariana Islands; Proposed Rule. *Federal Register* 79:59364-59413.

Photo: USFWS

Common Name: None

Chamorro/Carolinian Name: Cebello halumtano

Scientific Name: *Bulbophyllum guamense*



SPECIES DESCRIPTION

Leaves are oblong-elliptic, 10-15 x 2.5-3.8 centimeters, fleshy and stiff. Flowers are single, fleshy, and greenish-yellow in color, and have a faint, unpleasant, carrion-like odor.⁽¹⁾

LISTING STATUS

Proposed for listing as an endangered species under the Federal ESA.⁽²⁾

THREATS

The most serious threats are habitat loss and destruction from agriculture, urban development, nonnative animals and plants, fires, typhoons, and predation by the nonnative invertebrates such as slugs.⁽²⁾

ECOLOGY

Occurs in mat-like formations on tree branches of forest ecosystems.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Currently, it is known from widely distributed occurrences on the southern Mariana Islands of Guam and Rota. Historically this species occurred on Pagan, but has not been observed since 1984.⁽²⁾

REFERENCES

1. Raulerson, L. & A. Rinehart. (1992). Ferns and Orchids of the Mariana Islands.
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Photo: USFWS

Common Name: Coconut crab

Chamorro/Carolinian Name: Ayuyu/None

Scientific Name: *Birgus latro*



SPECIES DESCRIPTION

The largest terrestrial crab, and the most terrestrial of the decapod crustaceans due to well-developed thoracic lungs. Considered a hermit crab, but only use the shell of other mollusks during very early life stages. Body color varies between shades of light violet to deep purple to brown. Body length can be up to 16 inches (400 millimeters) and weight on the order of 8.8 pounds (4 kilograms). Males and females are difficult to distinguish from one another, but males are generally larger.⁽¹⁾

THREATS

Threats include overharvesting and modification of habitat. Highly prized as a food item, as large body size provides substantial amounts of flesh. Commercial interest has led to declining numbers.⁽¹⁾

On Tinian and other southern islands (Rota, Saipan, and Aguiguan) the CNMI Division of Fish and Wildlife has established a legal crab hunting season (September 15 - November 15). Only crabs with a carapace width larger than 3 inches (76 millimeters) are allowed to be taken and females carrying eggs (berried) of any size are prohibited. However, residents of the northern islands (i.e., Pagan) are allowed to harvest at any time of the year for subsistence and catch must be consumed on the island.⁽²⁾

ECOLOGY

Found on land after the juvenile phase. Older juveniles begin the move from water, and adults only visit the ocean to hatch eggs and drink seawater as needed. Forage for fruits, nuts, and seeds, and occasionally eat dead animals.⁽³⁾ Individuals hide and rest during the day and emerge at night to feed. Eggs are hatched in the ocean where the larvae are planktonic. Lifespan is thought to be around 30-40 years.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found on oceanic islets and atolls and along the coasts of islands in the tropical Indo-Pacific area; occurs regularly on the CNMI.^(1, 2, 4, 5)



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Map: <http://www.fao.org/docrep/field/003/AC281E/AC281E06.jpg>.

Common Name: Humped tree snail, Mariana Islands tree snail

Chamorro/Carolinian Name: Akaleha'/None

Scientific Name: *Partula gibba*



SPECIES DESCRIPTION

Named for the enlarged last whorl of its shell forming a "hump." The shell is a conical shape, and has four to four and a half whorls. Primary shell color is chestnut brown to whitish yellow, and occasionally purple. All forms are accented by white or brown lines along the suture between shell whorls.⁽¹⁾

LISTING STATUS

Proposed for listing as an endangered species under the Federal ESA.⁽²⁾ Listed as critically endangered by the IUCN.⁽³⁾

THREATS

Threats include habitat degradation and removal, predation by native and introduced flatworms and other snails, and typhoons negatively impacting the forest.⁽¹⁾

ECOLOGY

Preferred habitat is cool, shaded forest with high humidity. These snails also prefer subcanopy vegetation. Diet consists of decaying material, and foraging occurs primarily at night. Life history includes hermaphroditism, with reproduction occurring within the first year of life. Lifespan is thought to be up to 5 years. This species gives birth to live young.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found historically on numerous islands within the CNMI including Rota, Aguiguan, Tinian, Saipan, Anatahan, Sarigan, Alamagan, and Pagan. The current range has been reduced to the islands of Guam, Tinian, Saipan, Sarigan, and Pagan.⁽¹⁾

REFERENCES

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Common Name: Brown treesnake

Chamorro/Carolinian Name: Kolepbla or culepla/None

Scientific Name: *Boiga irregularis*



SPECIES DESCRIPTION

A seemingly harmless snake typically ranging in length from 3-6 feet (0.9-1.8 meters). Individuals are known to grow to lengths of 10 feet (3.0 meters) and have a long and slender body type with color ranges from patterned brown to yellow-green to beige with red markings. This species does have relatively weak venom, but only the last two teeth are used to inject it, making it rather difficult to use. The venom poses a risk for small children.⁽¹⁾

ECOLOGY

Preferred habitat is cool, shaded areas during the day for resting. Most feeding and other activities take place at night. Diet includes a large variety of prey organisms, such as small mammals, birds, bird eggs, and other reptiles. They are voracious eaters and have been discovered rummaging through garbage. They have also created a major threat to the existence of many native species on Guam, limiting the number of small mammals and the Mariana fruit bat and the extirpation of numerous native birds. Reproduction is not well documented, but females are thought to produce two clutches of eggs each year.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found historically in the South Pacific, including coastal Australia, Papua New Guinea, and numerous islands in northwestern Melanesia. This species was unintentionally introduced to Guam in the 1950s.⁽¹⁾ The threat of invasion by the brown treesnake from Guam to the other Mariana Islands via increased cargo transport between the islands is very high.⁽²⁾

There have been brown treesnake sightings on Saipan and Rota and several, but unconfirmed sightings on Tinian.^(2, 3, 4)



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Map: <http://www.fort.usgs.gov/resources/education/bts/bioeco/btsnake.asp#>.

Common Name: Micronesian gecko
Chamorro/Carolinian Name: Guali'ek/None
Scientific Name: *Perochirus ateles*



SPECIES DESCRIPTION

A relatively large gecko with mottled brown body color. Length is typically 3.5 inches (90 millimeters), and total body length up to 7.5 inches (190 millimeters).⁽¹⁾ The tail is flattened with enlarged scales on its ventral surface. Toes are webbed, and it has clearly reduced toes and fingers. Males can be distinguished by possessing two to five enlarged pores in front of their vent.⁽²⁾

LISTING STATUS

Listed as a threatened and endangered species by the CNMI government.⁽³⁾ Listed as endangered by the IUCN.⁽⁴⁾

THREATS

Threats include predation by the brown treesnake, oceanic gecko, and feral cats.

ECOLOGY

Preferred habitat is thought to be limestone forests and beach strands, and there is a possible association with large trees.⁽²⁾ Other habitat associations include palm leaf axils, shrubs and bushes, and under loose bark. This species is found in association with other geckos, and therefore does not appear to compete with conspecifics.⁽⁵⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found historically on the Mariana Islands, including Guam, Rota, Tinian, and Saipan, and Micronesia. Current distribution includes Tinian, Rota, and Saipan.⁽²⁾

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Photo: <http://www.fort.usgs.gov/resources/education/bts/impacts/herps.asp>.

Common Name: Oceanic gecko, Island gecko

Chamorro Name: Achiak/None

Scientific Name: *Gehyra oceanic*



SPECIES DESCRIPTION

One of the largest geckos with a fairly distinct appearance with a rounded tail. Coloration ranges from grey to tan to dark brown, and the dorsal surface is spotted white. Body lengths reach nearly 4 inches (100 millimeters).⁽¹⁾ This species has elongated scales behind the tip of the chin. Toes are webbed, and it has clearly reduced toes and fingers. Males can be distinguished by possessing 26-42 enlarged pores in front of their vent.⁽³⁾

THREATS

The major threat is predation by the brown treesnake.

ECOLOGY

Preferred habitat is thought to be along limestone cliffs and in dense clusters of screw pine (*Pandanus*). This species is found in association with other geckos, and therefore does not appear to compete with conspecifics, but is known to prey on other gecko species.⁽³⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found historically on Cocos, Guam, Rota, Tinian, Saipan, Guguan, Alamagan, and Asuncion. Surveys conducted in 2008 on Aguiguan and Tinian detected dense populations of Oceanic gecko on Aguiguan and substantially less on Tinian.⁽⁴⁾ Survey conducted on Pagan recorded only two individuals.⁽⁵⁾

REFERENCES

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Photo: <http://www.fort.usgs.gov/resources/education/bts/impacts/herps.asp>

Common Name: Pacific slender-toed gecko, Rock gecko

Chamorro Name: Guali'ek/None

Scientific Name: *Nactus pelagicus*



SPECIES DESCRIPTION

One of the most distinctly colored geckos in the region, with alternating dark and light markings. The tail is narrow and rounded with small bumps along the surface. Length averages 2.2 inches (57 millimeters).⁽¹⁾ This species lacks widened digital pads on the hands and feet, unlike other geckos in the region. No males have been identified.⁽²⁾

THREATS

The major threat is predation by the brown treesnake and the musk shrew (*Suncus murinus*).⁽²⁾

ECOLOGY

Preferred habitat is thought to be rough rock substrates for foraging, and areas with crevices and hiding places during the day for a resting period. Cryptic coloration allows for blending into the environment. This species is particularly prone to hiding or running from man or other animals it sees as a threat. This is an all-female species.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found historically on Guam, Rota, and Tinian. Thought to possibly occur on other islands, but to go undetected due to its tendency to hide during the day.⁽²⁾ Surveys conducted on Tinian in 2008 did not detect presence of this species and is thought to have been eliminated on the island by the introduction of the musk shrew.⁽³⁾ Surveys conducted on Pagan in 2010 did not record any observations of this species.⁽⁴⁾

REFERENCES

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Photo: <http://www.fort.usgs.gov/resources/education/bts/impacts/herps.asp>.

Common Name: Slevin's or Mariana skink
Chamorro/Carolinian Name: Guali'ek halom tano' /None
Scientific Name: *Emoia slevini*



SPECIES DESCRIPTION

Large body size with brown or tan body coloration covered with white square blotches. Body length can be up to 2.95 inches (75 millimeters).⁽¹⁾ The sides of the body are often black. Some individuals exhibit bright orange coloration along the rear part of the belly.⁽²⁾

LISTING STATUS

Proposed for listing as an endangered species under the Federal ESA.⁽³⁾ Listed as critically endangered by the IUCN.⁽⁴⁾

THREATS

The major threats are competition with non-native skinks and predation by non-native species such as the musk shrew or brown treesnake.⁽⁴⁾

ECOLOGY

Preferred habitats appear to be low on tree trunks, old fields, or on the forest floor. Like many skink species, they are known to hide from predators and become active at night.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Known to occur historically on Cocos Island, Guam, Rota, Tinian, Guguan, Alamagan, Asuncion, and Maug. It has not been recorded from Tinian or Saipan since the 1940s.^(4, 5) Although Slevin's skink was not observed on Pagan during 2010 surveys, the species was collected in the southern part of Pagan during a CNMI Division of Fish and Wildlife survey in 1999. Slevin's skink may still be present on Pagan, but if so, it occurs in small numbers.⁽⁶⁾

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Photo: <http://www.fort.usgs.gov/resources/education/bts/impacts/herps.asp>.

Common Names: Littoral skink
Chamorro/Carolinian Name: Guali'ek kantun tasi/None
Scientific Name: *Emoia atrocostata*



SPECIES DESCRIPTION

Relatively slender shape and small in size, with a typical body length of 3.3 inches (85 millimeters).⁽¹⁾ Bodies appear to be “shiny,” as bronze is the main body color. Scales are large, limbs are long, and eyelids are clear and movable.⁽²⁾

THREATS

The major threats are competition with non-native skinks and predation by non-native species such as the musk shrew.^(3, 4)

ECOLOGY

Preferred habitats are near the coast in mangroves or other vegetation and on mudflats during low tide. Capable of swimming, but prefers to stay above water most of the time. Uses the ocean to move around and escape predators. Unlike many skink species, tidepool skinks are known to be active during the day, and have been sighted sunning themselves. Diet consists of insects and small crabs captured during low tide.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Known to occur historically from Japan and Taiwan, down the Malayan peninsula to Australia and the Pacific Islands. Endemic to the Marianas, only occurring within the tide pool areas of the Marianas.^(3,5) Surveys conducted on Tinian in 2008 recorded observations of Littoral skink but none were identified on Pagan during 2010 surveys.^(5, 6)

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Photo: http://www.naturia.per.sg/buloh/verts/mangrove_skink.htm.

Common Name: Green turtle

Chamorro/Carolinian Name: Haggan betde/None

Scientific Name: *Chelonia mydas*



SPECIES DESCRIPTION

The largest of all the hard-shelled sea turtles at over 3 feet (0.9 meter) in length and 300 pounds (136 kilograms). Their name stems from green-colored fat, which reportedly occurs from their primarily herbivorous diet. The carapace ranges from shades of black, grey, green, brown and yellow, while their ventral surface (plastron) is yellowish-white.⁽¹⁾

LISTING STATUS

Listed under the federal ESA with breeding populations in Florida and the Pacific coast of Mexico listed as endangered, and all others listed as threatened.⁽¹⁾ Listed as a threatened and endangered species by the CNMI government.⁽²⁾ Listed as endangered by the IUCN.⁽⁴⁾

THREATS

The major threats are alteration or loss of nesting habitat, decreased quality of sensitive marine habitats such as seagrass, vessel strikes, hunting for commercial or subsistence use, take of eggs, incidental take in fisheries, and diseases such as fibropapillomatosis, which results in internal and/or external tumors.⁽⁴⁾

ECOLOGY

Preferred habitat varies by life stage and this species is highly mobile. All young are born on the beach, and females return to land to nest. Adults primarily occur in coastal waters, but do make long migrations over deep waters to transit to and from foraging, nesting, and mating areas. Adults feed primarily on seagrass and a variety of algae, although some have been documented eating invertebrates. Juveniles are thought to remain in convergence zones for many years, feeding on pelagic prey items such as floating mats of algae (e.g. *Sargassum*) or ctenophores.⁽⁴⁾

HISTORICAL AND CURRENT DISTRIBUTION

Occurs in most oceans, including the western, central, and eastern Atlantic, Mediterranean Sea, western, northern and eastern Indian, southeast Asia, and the western, central, and eastern Pacific. In the Pacific, occurs around most of the islands, including the Hawaiian Island chain, American Samoa, Guam, and the CNMI.⁽¹⁾

Surveys conducted on Tinian from 1998 to 2007 indicated nesting activity occurs on most of Tinian's sandy beaches. During these surveys, nearly 50% of all sea turtle activity on the 6 Military Lease Area beaches was observed on 2 of the 13 pocket beaches at Unai Dankulo. In 2012, Unai Babui was among the most active beaches despite its complete lack of nesting activity during the previous 10 years of surveys. Surveys conducted on Pagan documented three resident sea turtles on the beach and in the nearshore areas in 2010. However, over 100 juvenile and subadult green sea turtles were observed within the nearshore waters of Pagan during 2013 surveys. No nesting was observed during either survey conducted on Pagan.^(5, 6, 7, 8)

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Photo: http://www.nmfs.noaa.gov/pr/species/turtles/green_photos.htm.

Common Name: Hawksbill turtle

Chamorro/Carolinian Name: Haggan karai/None

Scientific Name: *Eretmochelys imbricata*



SPECIES DESCRIPTION

A smaller sea turtle, measuring less than 3 feet (0.9 meter) in length and 150 pounds (68 kilograms). Their name stems from the shape of the head, which is elongated and narrows to a point. Carapace has tortoiseshell coloring, ranging from dark to gold-brown with streaks of colors including orange, red, and black, while their ventral surface (plastron) is a clear yellow color.⁽¹⁾

LISTING STATUS

Listed as endangered under the Federal ESA.⁽¹⁾

Listed as a threatened and endangered species by the CNMI government.⁽²⁾

THREATS

The major threats are alteration or loss of nesting or marine habitat, bycatch, overutilization for commercial or subsistence use, take of eggs, incidental take in fisheries (bycatch), and climate change.⁽³⁾

ECOLOGY

Preferred habitat varies by life stage and this species is highly mobile. All young are born on the beach, and only females return to land to nest. Adults are found in coastal and offshore waters, and are known to make long migrations over deep waters to transit to and from foraging, nesting, and mating areas. Adults forage on the seafloor on corals and other invertebrates. Adults are known to frequent ledges and caves of coral reefs, and to return to the same areas nightly to rest. Juveniles are thought to feed on the surface, but in the Pacific little is known about the juvenile phase.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Occur circumtropically, from 30°N to 30°S in the Atlantic, Pacific, and Indian Oceans and associated water bodies, including the Caribbean Sea and Gulf of Mexico. In the Pacific, occurs around most of the islands, including the Hawaiian Islands, American Samoa, Guam, and the CNMI.⁽¹⁾

Nesting has not been documented on Pagan or Tinian and sightings of this turtle species are rare in general. Surveys conducted in 2010 did not observe presence of hawksbill in the nearshore waters of Pagan; however, as many as 65 hawksbill turtles were identified within nearshore waters of Pagan in 2013.^(4, 5) Approximately 5 juvenile hawksbill sea turtles were observed within the nearshore waters of Tinian during 2013 surveys.⁽⁵⁾

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Photo: http://www.nmfs.noaa.gov/pr/species/turtles/hawksbill_photos.htm.

Common Name: Mariana common moorhen

Chamorro/Carolinian Name: Pulattat/None

Scientific Name: *Gallinula chloropus guami*



SPECIES DESCRIPTION

A member of the rail family, although slightly resembles a duck. Coloration is primarily slate black, with white undertail coverts and a white line along the flank. Legs are long and olive green or yellow colored. The most distinguishing feature is a red frontal “shield” on the bill. Toes are lobed, making it possible for walking across plants that are floating on top of the water. Females closely resemble males, but have a smaller frontal shield. Overall body length is typically 14 inches (350 millimeters).^(1, 2)

LISTING STATUS

Listed as endangered under the Federal ESA.⁽¹⁾ Listed as a threatened and endangered species by the CNMI government.⁽³⁾

THREATS

The most serious threat is habitat loss, particularly loss of wetlands. Other threats include encroachment of non-native vegetation and human disturbance.^(1, 2)

ECOLOGY

Preferred habitats include natural and man-made wetlands, including freshwater lakes, marshes and swamps, and some brackish areas such as tidal channels or mangrove wetlands. Diet is omnivorous, consisting of such items as grass, insects, and insect larvae. Nesting occurs year-round, and nests are created on or near standing water. Young leave the nest to learn to forage soon after hatching.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Historic distribution was Guam, Saipan, Tinian, and Pagan. Current distribution includes Guam and the Northern Mariana Islands, but numbers are much fewer than in the past.⁽⁴⁾ Surveys conducted on Pagan did not identify any presence of the Mariana common moorhen on the island.⁽⁵⁾

REFERENCES

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4. USFWS. (2009). *Mariana Common Moorhen (Gallinula chloropus guami). 5-Year Review Summary and Evaluation*.
5. Marshall, A.P. and F.A. Amidon. (2010). Status of the Land and Wetlands Avifauna of Pagan, Mariana Islands.

Photo: S. Vogt.

Common Name: Micronesian megapode
Chamorro/Carolinian Name: Sasangat/Sasangal
Scientific Name: *Megapodius laperouse laperouse*



SPECIES DESCRIPTION

A medium-sized megapode measuring approximately 1.2 feet (38 centimeters) in body length, with an average body weight of 0.8 pounds (350 grams). The primary colors of plumage are dark grey-brown to black, with an ash grey head. The crest is dark grey, wings are short and rounded, and the bill, legs, and feet are yellow. Feathers on the head are patchy or absent, which reveals red skin.⁽¹⁾

LISTING STATUS

Listed as endangered under the federal ESA⁽¹⁾ and as threatened and endangered by the CNMI government.⁽²⁾

THREATS

Most serious threats include modification or destruction of habitat, past hunting practices, predation by non-native species including to a greater extent the brown treesnake, and competition with non-native birds.⁽¹⁾

ECOLOGY

Preferred habitat is limestone forest, although they are known to use native or non-native secondary forest adjacent to limestone forest. Have been described as “birds of the forest floor.” Known to “burrow nest” in areas warmed by the sun or to place nests among rotting roots of trees or logs, and in patches of rotting sword grass. External heat is thought to be necessary for egg incubation. Feeding habits are omnivorous, and food items include seeds, ants and other insects, and various plant matter.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Historically found on all of the Mariana Islands, this species was extirpated from all of the large islands, and presently occurs only on small uninhabited islands of the CNMI. Megapodes have always been considered rare on Tinian and likely observations have been of birds dispersing from other islands.⁽⁴⁾ Surveys conducted on Tinian in 2008 did not record any sightings.⁽⁴⁾ Micronesian megapodes used to be common on Pagan up until 1981.⁽³⁾ Surveys conducted in 2010 did not observe presence of the Micronesian megapode on Pagan.⁽⁵⁾

REFERENCES

1. USFWS. (2012). Micronesian Megapode/*Megapodius laperouse/sasangat* or sasangal. Pacific Islands Fish and Wildlife Office. Retrieved from www.fws.gov/pacificislands/fauna/micronesianmegapode.html. Last updated September 20. Accessed January 24, 2014.
2. CNMI. (2014). Northern Mariana Islands Administrative Code Title 85-30.1-101. Revision 9 February 2014. Locally Designated Threatened and Endangered Species. Retrieved from <http://www.cnmilaw.org/mediawiki-1.21.2/index.php?title=85-30.1&oldid=1212>. Accessed January 27.
3. Amidon, F.A., A.P. Marshall, and C.C. Kessler. (2011). *Status of the Micronesian Megapode in the Commonwealth of the Northern Mariana Islands*. Prepared by USFWS, Pacific Islands Fish and Wildlife

Office, Honolulu, HI. *In* Marianas Expedition Wildlife Surveys 2010: Terrestrial Resource Surveys of Pagan, Commonwealth of the Northern Mariana Islands. Prepared by USFWS, Pacific Islands Fish and Wildlife Office, Honolulu, HI for Marine Corps and NAVFAC Pacific, Pearl Harbor, HI.

4. USFWS. (2009). *Terrestrial Resource Surveys of Tinian and Aguiguan, Mariana Islands, 2008. Final Report*. Prepared for Marine Force Pacific and Naval Facilities, Pearl Harbor, Honolulu, HI.
5. Marshall, A.P. and F.A. Amidon. (2010). *Status of the Land and Wetlands Avifauna of Pagan, Mariana Islands. December*. Prepared by USFWS, Pacific Islands Fish and Wildlife Office, Honolulu, HI. *In* Marianas Expedition Wildlife Surveys 2010: Terrestrial Resource Surveys of Pagan, Commonwealth of the Northern Mariana Islands. Prepared by USFWS, Pacific Islands Fish and Wildlife Office, Honolulu, HI for Marine Corps and NAVFAC Pacific, Pearl Harbor, HI.

Photo: S. Vogt.

Common Name: Micronesian starling
Chamorro/Carolinian Name: Sali/None
Scientific Name: *Aplonis opaca guami*



SPECIES DESCRIPTION

A small bird with primarily glossy black body color in adults. Tail is short and the eye is distinctly yellow. Body length is approximately 9 inches (230 millimeters).⁽¹⁾

LISTING STATUS

Not listed as a threatened or endangered species under the federal ESA or the CNMI government.⁽²⁾

THREATS

Most serious threats include modification or destruction of habitat and predation by the brown treesnake and other non-native species.⁽¹⁾

ECOLOGY

Known to use all habitat types, although most common in forested areas. Foraging occurs over many habitat types, but preferred foraging habitat appears to be ridge crests and open grassy areas. Diet is omnivorous and includes various insects, seeds, and fruits. Known as a cavity nester, and both parents incubate the eggs. Cavity nesting may be the main reason this species has not been extirpated like other bird species in the region.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Historically found on the Mariana Islands of Guam, Tinian, and Saipan. This species presently occurs on Guam and Cocos Island, Pagan, and Tinian. Surveys conducted in 2010 resulted with the highest reported densities per hectare of Micronesian starlings.⁽³⁾ Surveys conducted on Tinian in 2008 showed an increase in density when compared to surveys in the early 1980s.⁽⁴⁾

REFERENCES

1. Grimm, G. (2009). Guam birds: Micronesian starling. Retrieved from <http://www.guampedia.com/micronesian-starling/>
2. CNMI. (2014). Northern Mariana Islands Administrative Code Title 85-30.1-101. Revision 9 February 2014. Locally Designated Threatened and Endangered Species. Retrieved from <http://www.cnmilaw.org/mediawiki-1.21.2/index.php?title=85-30.1&oldid=1212>
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4. USFWS. (2009). *Terrestrial Resource Surveys of Tinian and Aguiguan, Mariana Islands, 2008. Final Report*. Prepared for Marine Force Pacific and Naval Facilities, Pearl Harbor, Honolulu, HI.

Photo: <http://www.mesc.usgs.gov/resources/education/bts/impacts/birds.asp>.

Common Name: Tinian monarch

Chamorro/Carolinian Name: Chichurikan/None

Scientific Name: *Monarcha takatsukasae*



SPECIES DESCRIPTION

A small forest songbird with body length of approximately 6 inches (150 millimeters). Coloration includes light underparts, olive-brown upperparts, dark brown wings and tail, and white bars on the wings, and a white rump and undertail coverts.⁽¹⁾

LISTING STATUS

The federal ESA status is “delisted-taxon recovered.” Was listed as endangered under the federal ESA in 1970, but was later reassessed and deemed recovered in 2004.⁽¹⁾ However, a rangewide decline of 39% from 1996-2008 prompted a petition to list the species under the federal ESA.^(2, 3) Listed as vulnerable by the IUCN.⁽⁴⁾

THREATS

Most serious threats included modification or disturbance of native forests and Avian pox virus. Although the brown treesnake has been found on Tinian, it is not known to have invaded Tinian, thus this non-native predator is not currently a threat.^(1, 2)

ECOLOGY

Known to use many forest habitat types including native limestone, secondary vegetation, a variety of native tree forests, and some non-native tree forests. Foraging and nesting occurs in several habitat types, but preferred habitat appears to be native limestone forest.⁽¹⁾ Diet includes foraging for various insects. Nests are small and cup-shaped, nesting appears to occur year-round, and both parents tend to the nest.⁽⁵⁾

HISTORICAL AND CURRENT DISTRIBUTION

This species presently occurs only on Tinian but may have historically occurred on Saipan.^(2, 3)

REFERENCES

1. USFWS. (2005). *Post de-listing monitoring for the Tinian monarch (Monarcha takatsukasae)*. Endangered Species Division. Pacific Islands Fish and Wildlife Office. Honolulu, HI. May.
2. Center for Biological Diversity. (2013). *Petition to List the Tinian Monarch (Monarcha takatsukasae) as Threatened or Endangered Under the Endangered Species Act*.
3. USFWS. (2009). *Terrestrial Resource Surveys of Tinian and Aguiguan, Mariana Islands, 2008. Final Report*. Prepared for Marine Force Pacific and Naval Facilities, Pearl Harbor, Honolulu, HI.
4. Birdlife International. (2012). *Monarcha takatsukasae*. In IUCN Red List of Threatened Species. Version 2014.3. Retrieved from www.iucnredlist.org
5. CNMI DFW. (2009). Tinian monarch fact sheet. Retrieved from <http://cnmidfw.com/docs/TIMO.pdf>

Photo: S. Vogt.

Common Name: Mariana fruit bat
Chamorro/Carolinian Name: Fanihi/None
Scientific Name: *Pteropus mariannus mariannus*



SPECIES DESCRIPTION

A medium-sized fruit bat, with body weight in the range of 0.9-1.2 pounds (408-544 grams). Body color is black or brown on the ventral surface with some grey hair, and the neck is bright golden brown. The head is brown or dark brown. Appearance has led to a nickname of “flying foxes.” Males are slightly larger than females.⁽¹⁾

LISTING STATUS

Listed as threatened under the federal ESA⁽¹⁾ and as a threatened and endangered species by the CNMI government.⁽²⁾

THREATS

Most serious threats include modification or disturbance of habitat, predation by the brown treesnake on juveniles, the use of pesticides and fertilizers, and poaching.⁽³⁾

ECOLOGY

Known to use native forest habitat types including native limestone, and also are known to frequent coconut groves. Highly colonial, colonies of several to over 800 individuals exist. The typical social behavior is grouping into harems, with one male grouping with 2-15 females, although some males remain “bachelors.”⁽¹⁾ Diet includes foraging for various fruits, flowers and other plant materials. Reproduction appears to occur year-round, and breeding typically occurs after 18 months of age.⁽³⁾

HISTORICAL AND CURRENT DISTRIBUTION

Historically and currently found on the CNMI and Guam.⁽¹⁾ Of the CNMI surveyed in 2010, the greatest number of Mariana fruit bats document was on Pagan.⁽⁴⁾ Surveys conducted on Tinian did not detect any colonies or individual sightings of fruit bats.⁽⁵⁾

REFERENCES

1. USFWS. (2012). Endangered Species in the Pacific Islands. Mariana Fruit Bats/Fanihi. Retrieved from <http://www.fws.gov/pacificislands/fauna/marianabat.html>. Last updated September 20, 2012, accessed January 27, 2014.
2. CNMI. (2014). Northern Mariana Islands Administrative Code Title 85-30.1-101. Revision 9 February 2014. Locally Designated Threatened and Endangered Species. Retrieved from <http://www.cnmilaw.org/mediawiki-1.21.2/index.php?title=85-30.1&oldid=1212>. Accessed January 27.
3. USFWS. (2009). *Draft Revised Recovery Plan for the Mariana Fruit Bat or Fanihi (Pteropus mariannus mariannus)*. U.S. Fish and Wildlife Service, Portland, OR.
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5. USFWS. (2009). *Terrestrial Resource Surveys of Tinian and Aguiguan, Mariana Islands, 2008. Final Report.* Prepared for Marine Force Pacific and Naval Facilities, Pearl Harbor, Honolulu, HI.

Photo: USFWS.

Common Name: None
Chamorro/Carolinian Name: None
Scientific Name: *Acropora globiceps*



SPECIES DESCRIPTION

Acropora globiceps grows in small colonies and are usually described as digitate (having divisions arranged like those of a bird's foot or small hand). Each of the "digits," or branches, has varying size and appearance depending on the level of wave action and exposure; however, branches are always short and compacted closely together. *Acropora globiceps* are either uniformly blue or cream in color.⁽¹⁾

LISTING STATUS

Listed as threatened under the federal ESA⁽²⁾.

THREATS

Acropora globiceps is vulnerable to thermal stress/impacts related to climate change (rising ocean temperatures, ocean acidification and disease), predation (usually from crown-of-thorns and corallivorous snails), ecological effects of fishing, and poor land-use practices, and international collection and trade.^{(1) (2)}

ECOLOGY

Colonies are found in the intertidal zone, upper reef slopes, and reef flats in water depths shallower than 26 feet (8 meters). *Acropora globiceps* can be found in areas exposed to heavy wave action.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

This species has been reported in the central Indo-Pacific, the oceanic west and central Pacific, the Great Barrier Reef, the Philippines, Andaman Islands, Polynesia, Micronesia and Pitcairn. According to both IUCN and the CITES species database this species occurs in the Northern Mariana Islands.⁽¹⁾

REFERENCES

1. Brainard, R.E., C. Birkeland, C.M. Eakin, P. McElhany, M.W. Miller, M. Patterson, and G.A. Piniak. (2011). *Status review report of 82 candidate coral species petitioned under the U.S. Endangered Species Act*. NOAA Technical Memorandum NOAA-TM-NMFS-PIFSC-27.
2. NMFS. (2014a). *Endangered and Threatened Wildlife and Plants: Final Listing Determinations on Proposal To List 66 Reef-Building Coral Species and To Reclassify Elkhorn and Staghorn Corals*. Federal Register, 79(175), 53852–54114.

Common Name: None

Chamorro/Carolinian Name: None

Scientific Name: *Pavona diffluens*

SPECIES DESCRIPTION

Pavona diffluens colonies are submassive with deep corallites. Colonies are usually tan in color. ⁽¹⁾

LISTING STATUS

Listed as threatened under the federal ESA. ⁽²⁾

THREATS

Pavona diffluens is vulnerable to thermal stress/impacts related to climate change (rising ocean temperatures, ocean acidification and disease), predation, ecological effects of fishing, and poor land-use practices. ⁽¹⁾⁽²⁾

ECOLOGY

Colonies have been reported in most reef habitats in water depths ranging from 16 feet (5.0 meters) to 67 feet (20 meters). ⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

This coral species has a very narrow latitudinal and longitudinal distribution. It is found in the region of the Red Sea and Arabian Gulf. It has also been recorded in the Northern Marianas and American Samoa; however, it is considered unlikely to occur in this area. ⁽¹⁾

REFERENCES

1. Brainard, R.E., C. Birkeland, C.M. Eakin, P. McElhany, M.W. Miller, M. Patterson, and G.A. Piniak. (2011). *Status review report of 82 candidate coral species petitioned under the U.S. Endangered Species Act*. NOAA Technical Memorandum NOAA-TM-NMFS-PIFSC-27.
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Common Name: Humphead and Napoleon wrasse, Napoleonfish

Chamorro/Carolinian Name: Tanguisson/Mem (also Máám, Nippwáyik, Mamiliporos)

Scientific Name: *Cheilinus undulatus*



SPECIES DESCRIPTION

The largest living wrasse, with male body length reaching over 6 feet (1.8 meters) and weight over 420 pounds (190 kilograms); females are smaller, with a maximum length of 3 feet (0.9 meter). Body coloration varies greatly by life stage. Small juveniles are black and white; larger juveniles are a pale green with black spots running vertically on each scale; adults vary between shades of olive green and blue-green with a very distinct bar running vertically on each scale.⁽¹⁾

LISTING STATUS

National Oceanic Atmospheric Administration/National Marine Fisheries Service Species of Concern and listed as Endangered by the IUCN.⁽¹⁾ In Guam, considered a Species of Greatest Conservation Need.⁽²⁾

THREATS

Most serious threats are from commercial and subsistence fishing, including directed live capture for food, spearfishing with scuba gear, and fishing techniques that employ destructive methods such as the use of dynamite or cyanide. This species is particularly vulnerable to overfishing due to slow growth, long lifespan, late age of sexual maturity, and a preference for immature fish by consumers. General habitat loss and degradation are also major threats to this species.⁽¹⁾

ECOLOGY

Generally found near shore over reef and channel slopes and lagoon reefs, in depths ranging from 3-330 feet (1-100 meters). Adults are found in open areas around reefs, while juveniles seek refuge from predators within dense coral or seagrass growth. Seasonal spawning takes place in aggregations and is dependent on the tidal cycle. Adults are found in male-female pairs or in small groups of less than seven individuals. This species is a protogynous hermaphrodite, with select females changing to males. Sexual maturity occurs between 5 and 7 years of age, and lifespan is at least 30 years.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found throughout most of the tropical Pacific in low densities. In Guam and surrounding areas, this species was once very common and economically important, but today is rarely sighted.⁽¹⁾

REFERENCES

1. NOAA. (2007). Species of Concern, Humphead wrasse, *Cheilinus undulatus*. Retrieved from http://www.fpir.noaa.gov/Library/PRD/SOC/Revised%20fact%20sheets_2007/humpheadwrasse_detailed.pdf.
2. GDAWR. (2006). *Guam Comprehensive Wildlife Conservation Strategy (GCWCS)*. Department of Agriculture, Guam.

Photo: K. Moots

Common Name: Common bottlenose dolphin

Chamorro/Carolinian Name: Toninos/None

Scientific Name: *Tursiops truncatus*



SPECIES DESCRIPTION

One of the most widely known marine mammals in the world. Body type is strong and robust, with a head that ends in a “beak” that is short and thick compared to other dolphins. Body is counter-shaded, with light grey on the bottom and variations ranging from dark grey to black along the back. Body size ranges from 6-12 feet (1.8-3.6 meters) in length and 300-1,400 pounds (136-636 kilograms) in weight. Males and females are difficult to distinguish from one another, but males are generally larger.⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act.⁽¹⁾ In Guam, considered a Species of Greatest Conservation Need.⁽²⁾

THREATS

Most serious threat is incidental catch from fishing gear that use nets or long lines with large hooks pose a threat to dolphins. Although outlawed in most of the world, legal harvest still takes place in Japan and Taiwan, and illegal harvest occurs in other locations. General ocean water quality issues such as pollution also pose a risk for the health and safety of bottlenose dolphins.⁽¹⁾

ECOLOGY

Found offshore over deep waters and near shore in coastal environments such as estuarine, bay, or river mouth. Uses echolocation to locate and capture prey, and prey items vary based on habitat but are generally various fish species. Typically found in small groups, but can form large groups with 100s of individuals, and are often associated with other marine mammal species (e.g., pilot whales). Calves are born after a 1-year gestation period, and sexual maturity is reached between 9-14 years for males and 5-13 years for females. Lifespan is thought to be around 50 years.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found worldwide, generally ranging from latitudes 45°N to 45°S. This species occurs regularly in Guam and surrounding areas.⁽²⁾

REFERENCES

1. NMFS. (2009a). Bottlenose Dolphin (*Tursiops truncatus*). Retrieved from <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/bottlenosedolphin.htm>.
2. GDAWR. (2006). *Guam Comprehensive Wildlife Conservation Strategy (GCWCS)*. Department of Agriculture, Guam.

Photo: National Oceanic and Atmospheric Administration

Common Name: Spinner dolphin

Chamorro/Carolinian Name: Toninos/Dofen

Scientific Name: *Stenella longirostris*



SPECIES DESCRIPTION

Well known and named for their impressive capability to leap out of the water and spin through the air. Body is small, with a head that ends in a “beak” that is long and narrow compared to other dolphins. Body is counter-shaded, with light grey on the bottom and variegated medium grey to dark grey along the back. Colors vary based on geographic location, with a “white belly” form inhabiting the Pacific Islands. Body size ranges from 4-7 feet (1.2-2.1 meters) in length and 100-165 pounds (45-75 kilograms) in weight.⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act. The stock in the Eastern Tropical Pacific Ocean is Marine Mammal Protection Act depleted.⁽¹⁾ In Guam, considered a Species of Greatest Conservation Need.⁽²⁾

THREATS

Most serious threat is incidental entanglement in fishing gear; an unexplained association between large yellowfin tuna and spinner dolphins exists. Interactions with tourists disturb this species, as ideally they should be resting during the day to prepare for night time hunting.⁽³⁾ General ocean water quality issues such as pollution also pose a risk for the health and safety of spinner dolphins.⁽¹⁾

ECOLOGY

Generally found offshore over deep waters, but some populations are coastal, spending time in small groups resting in bays and other protected areas. At night, large groups feed on prey items such as fish and squid found in deep waters. Often associated with other marine mammal species such as spotted dolphins and humpback whales.⁽³⁾ Calves are born after a 10.5-month gestation period. Lifespan is thought to be around 20 years.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Found in all tropical and subtropical oceans. In Guam and surrounding areas, the “white belly” form is found along the coastline during the day and in deeper waters at night.⁽¹⁾

REFERENCES

1. NMFS. (2009). Spinner Dolphin. Retrieved from http://www.fpir.noaa.gov/PRD/prd_spinner.html.
2. GDAWR. (2006). *Guam Comprehensive Wildlife Conservation Strategy*. Department of Agriculture, Guam.
3. NMFS. (2009). Spinner Dolphin (*Stenella longirostris longirostris*). Retrieved from <http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/spinnerdolphin.htm>.

Photo: Ari Friedlaender, Duke University.

Common Name: Sperm Whale

Chamorro/Carolinian Name:

Scientific Name: *Physeter macrocephalus*

SPECIES DESCRIPTION

Female sperm whales can reach lengths of up to 41 feet (12.5 meters) and weigh up to 26.5 tons (24 metric tons), while males can reach lengths of up to 59 feet (18 meters) and weigh up to 63 tons (57 metric tons). The heads for sperm whales are disproportionately large, making up one quarter to one third of their total body length. This species is generally dark gray in color, with white lips and often white areas on the flank and belly.⁽¹⁾

LISTING STATUS

Listed as endangered under the federal ESA.⁽¹⁾

THREATS

Threats to sperm whales include ship strikes, entanglement in fishing gear, disturbance by anthropogenic noise, and the accumulation of stable pollutants, such as polychlorobiphenyls, chlorinated pesticides, and polycyclic aromatic hydrocarbons. Coastal pollution may also impact sperm whales.⁽²⁾

ECOLOGY

Sperm whales are deep and prolonged divers, generally found in very deep water (greater than 10,000 feet [3,000 meters]). They feed at depths between 500 to 1,000 meters, where most of their prey is found. Sperm whale diet includes squid, octopus, rays, sharks, and may ray-finned fish.

HISTORICAL AND CURRENT DISTRIBUTION

Sperm whale distribution is typically associated with waters over the continental shelf break, over the continental slope, and into deeper waters; however, in some areas adult males have been reported to consistently frequent waters in depths as shallow as 130 feet (40 meters).⁽³⁾

REFERENCES

1. NMFS. (2010). Final Recovery plan for the sperm whale (*Physeter macrocephalus*). NMFS, Silver Spring, MD. 148pp. December.
2. NOAA. (2014). Marine Mammals. NOAA Fisheries. Office of Protected Resources. Retrieved April 11, 2014, from <http://www.nmfs.noaa.gov/pr/species/mammals/>
3. Jefferson, T. A., M. A. Webber, and R. L. Pitman. (2008). Marine Mammals of the World: A Comprehensive Guide to Their Identification. Academic Press/Elsevier, 573 pp. (101)

Common Name: Sei Whale

Chamorro/Carolinian Name:

Scientific Name: *Balaenoptera borealis*

SPECIES DESCRIPTION

Sei whales are gray in color. Their skin is often marked with white scars. Sei whales can reach lengths of up to 60 feet (18 meters) and weigh up to 31 tons (28 metric tons). The dorsal fin, which curves backward, is usually prominent and is located about two-thirds of the way back from the tip of the snout. Sei whales rarely breach and almost never raise their flukes out the water. At sea it can be difficult to distinguish Sei whales from their close relatives, Bryde's, Omura's, fin whales.⁽¹⁾

LISTING STATUS

Listed as endangered under the federal ESA.⁽¹⁾

THREATS

Sei whales are threatened by ship strikes, interactions with fishing gear, changes in the abundance or distribution of prey due to climate change, illegal whaling, and the effects of increasing anthropogenic ocean noise.⁽¹⁾

ECOLOGY

Sei whales are typically found in subtropical to subpolar waters on the continental shelf edge and slope worldwide. They are usually observed in deeper waters of oceanic areas far from the coastline and tend not to enter semi-enclosed marginal seas or gulfs.⁽¹⁾ Sei whales are opportunistic feeders with flexible diets that differ by area. In the northern part of the North Pacific copepods are a principal prey, whereas fishes and squids are elsewhere.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

This species is globally distributed, occurring in the North Atlantic Ocean, North Pacific Ocean, and Southern Hemisphere. Sei whales occur throughout the temperate North Pacific (north of 40°N latitude). At lower latitudes in the North Pacific they range from Baja California, Mexico to Japan and Korea in the west.⁽¹⁾

REFERENCES

1. NMFS. (2011). Final Recovery Plan for the Sei Whale (*Balaenoptera borealis*). NMFS, Office of Protected Resources, Silver Spring, MD. 108 pp. December.

Common Name: Humpback Whale
Chamorro/Carolinian Name:
Scientific Name: *Megaptera novaeangliae*



SPECIES DESCRIPTION

Humpback whales are generally dark on the back, with white areas on the flippers, sides and ventral surface of the body and flukes. They can reach lengths up to 60 feet (18 meters) and weigh up to 40 tons (36 metric tons). Humpback whale distinguishable for other related whales by their long flippers, fewer throat grooves, and long complex, repetitive vocalizations during courtship.⁽¹⁾

LISTING STATUS

Listed as endangered under the federal ESA.⁽¹⁾

THREATS

Threats to humpback whales include entanglement in fishing gear, ship strikes, whale watch harassment, habitat impacts, and whaling (by Greenland, Japan, and Norway).⁽¹⁾

ECOLOGY

Humpbacks whales feed in their summer range, located over continental shelves at latitudes between 40° to 75°. The waters surrounding Guam is a major calving area for the western North Pacific stock during the winter.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Humpback whales are distributed worldwide in all major oceans. They are typically observed during the summer on high-latitude feeding grounds and during the winter in the tropics and subtropics around islands, over shallow banks, and along continental coasts, where calving occurs. The western North Pacific (or Asia) stock winters in Asia and migrates to feeding grounds off Russia and the Bering Sea/Aleutian Islands. The Asian wintering area extend from the South China Sea east through the Philippines, Ryuku Retto, Ogasawara Gunto, Mariana Islands, and Marshall Islands.⁽²⁾

REFERENCES

1. NMFS. (1991). Recovery Plan for the Humpback Whale (*Megaptera novaeangliae*). Prepared by the Humpback Whale Recovery Team for the National Marine Fisheries Service, Silver Spring, MD. 105 pp. November.
2. Carretta et al. (2014). U.S. Pacific Marine Mammal Stock Assessments, 2013. NOAA-TM-NMFS-SWFSC-532. 406 pp.

Photo: National Oceanic and Atmospheric Administration

Common Name: Minke Whale

Chamorro/Carolinian Name:

Scientific Name: *Balaenoptera acutorostrata*

SPECIES DESCRIPTION

Minke Whales are dark grey on the back with white undersides and streaks or lobes of intermediate colors on their sides. Northern Hemisphere and some Southern Hemisphere minke whales have distinctive white bands across their flippers. The head is extremely pointed, making it relatively easy to distinguish from other baleen whales. Minke whales are small, relative to other related whales, reaching 35 feet (10 meters) in length and weighing up to 15 tons (14 metric tons).⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act.⁽²⁾ Listed as least concern by IUCN.⁽³⁾

THREATS

Threats to minke whales include: whaling (by Greenland, Japan, and Norway), incidental take in fishing gear, noise, human interactions, habitat disturbance, and vessel strikes.⁽²⁾

ECOLOGY

Minke whales are more often seen in coastal and inshore areas, than offshore open ocean. Their primary prey includes krill and small schooling fishes (e.g., anchovies and herring). Calving occurs in lower latitude, warm waters.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Minke whales occur in polar, temperate, and tropical waters in most seas and oceans worldwide. Minke whales, like some other species of cetaceans, migrate seasonally and are capable of traveling long distances. Other minke whales have resident home ranges and are not highly migratory. Minke whales generally live in waters over the continental shelf, including inshore bays, and estuaries, as well as spend time in the open ocean.^(1,3)

REFERENCES

1. Jefferson, T. A, S. Leatherwood, and M. A. Webber. (1993). *FAO Species Identification Guide. Marine Mammals of the World*.to their Identification. Rome, Italy. p. 58-59.
2. Carretta et al. (2014). *U.S. Pacific Marine Mammal Stock Assessments, 2013*. NOAA-TM-NMFS-SWFSC-532. 406 pp.
3. Reilly et al. (2008). *Balaenoptera acutorostrata*. The IUCN Red List of Threatened Species. Version 2014.3.

Common Name: Short-finned pilot whale
Chamorro/Carolinian Name:
Scientific Name: *Globicephala macrorhynchus*



SPECIES DESCRIPTION

Pilot whales are black to dark brownish gray, with a light gray anchor-shaped patch on the chest and gray saddle behind the dorsal fin. They have a pair of parallel bands on the back that sometimes end in a light streak or teardrop above the eyes. They have bulbous heads with an extremely short or non-existent beak. The dorsal fin is low and hooked, with a wide base. Females can reach length of 18 feet (5.5 meters). Larger males can reach lengths of 20 feet (6.1 meters) and can weigh up to 8,000 pounds (3,600 kilograms).⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act.⁽²⁾ Listed as data deficient by IUNC.⁽³⁾

THREATS

Primary threats to this species include by-catch in fishing gear, drive fisheries, and ship strikes.^(2, 3)

ECOLOGY

This is a highly social species, which is almost never seen alone. Pods of up to several hundred individuals have been observed and is often seen in association with other species such as, bottlenose and Pacific white-sided dolphins. While they will take fish their primary prey is squid.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Short-finned pilot whales are found primarily in deep waters throughout temperate, tropical, and subtropical areas of the world.⁽¹⁾ Four U.S. associated and recognized stocks are found on the West Coast, Hawaii, Northern Gulf of Mexico, and Western North Atlantic.⁽²⁾

REFERENCES

1. Jefferson, T. A, S. Leatherwood, and M. A. Webber. (1993). FAO Species Identification Guide. Marine Mammals of the World. to their Identification. Rome, Italy. p. 124-125.
2. Carretta et al. (2014). U.S. Pacific Marine Mammal Stock Assessments, 2013. NOAA-TM-NMFS-SWFSC-532. 406 pp.
3. Taylor et al. (2011). *Globicephala macrorhynchus*. The IUCN Red List of Threatened Species. Version 2014.3.

Photo: © Alice MacKay, Courtesy Cascadia Research. MMPA Scientific Research Permit No. 731

Common Name: Melon-headed whale
Chamorro/Carolinian Name:
Scientific Name: *Peponocephala electra*



SPECIES DESCRIPTION

Melon-head whales are charcoal gray to black in color, with white lips. They can be difficult to distinguish from pygmy killer whales. The most obvious difference is the pointed flippers of the melon-head whale. They can reach a maximum length of 9 feet (2.75 meters) and weigh up to 600 pounds (275 kilograms).⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act.⁽²⁾ Listed as least concern by IUCN.⁽³⁾

THREATS

Primary threats to this species include by-catch in fishing gear, drive fisheries, and mass strandings.⁽²⁾

ECOLOGY

This is a highly social species, usually observed in pods of 100 to 500 individuals. They are eager bow wave riders and are often observed swimming with other species, especially Fraser's dolphins. They are known to feed on squid and small fishes.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

Melon-headed whales are found worldwide in primarily deep tropical and subtropical oceanic waters.⁽¹⁾ Melon-headed whales have been known to move close to shore over the continental shelf. Melon-headed whales near oceanic islands rest near shore during the day, and feed in deeper waters at night. The melon-headed whale is not known to migrate.

REFERENCES

1. Jefferson, T. A, S. Leatherwood, and M. A. Webber. (1993). FAO Species Identification Guide. Marine Mammals of the World. to their Identification. Rome, Italy. p. 130-131.
2. Carretta et al. (2014). U.S. Pacific Marine Mammal Stock Assessments, 2013. NOAA-TM-NMFS-SWFSC-532. 406 pp.
3. Taylor et al. (2008a). *Peponocephala electra*. The IUCN Red List of Threatened Species. Version 2014.3.

Photo: © Keoki Stender

Common Name: Pantropical spotted dolphin

Chamorro/Carolinian Name:

Scientific Name: *Stenella attenuata*



SPECIES DESCRIPTION

Pantropical spotted dolphins have a dark dorsal cap that can develop varying degrees of white spots in adulthood. The lower sides and belly are gray. The lips and lower beak tip are white. A dark grey band encircles the eyes. Adults range from 5.2 to 8.5 feet (1.6 to 2.6 meters) in length and weigh up to 265 pounds (120 kilograms).⁽¹⁾

LISTING STATUS

Protected and classified as “depleted” under the Marine Mammal Protection Act, meaning the species or stock has been determined to be below the optimum sustainable level.⁽²⁾ Listed as least concern by IUCN.⁽³⁾

THREATS

The greatest threat to this species includes by-catch associated with purse-seine fishing by the tuna industry.⁽²⁾

ECOLOGY

Spotted dolphins spend the majority of the day in shallower water, typically between 300 feet (90 meters) to 1,000 feet (300 meters) deep. At night they dive into deeper waters to search for prey.⁽³⁾

HISTORICAL AND CURRENT DISTRIBUTION

Pantropical spotted dolphins are distributed in offshore tropical and subtropical waters of the Pacific, Atlantic, and Indian Oceans.⁽¹⁾

REFERENCES

1. Jefferson, T. A, S. Leatherwood, and M. A. Webber. (1993). FAO Species Identification Guide. Marine Mammals of the World.to their Identification. Rome, Italy. p. 156-157.
2. NMFS. (1993). Taking and Importing of Marine Mammals; Listing of the Northeastern Offshore Spotted Dolphin as Deleted; Final Rule. p. 58285 Federal Register Vol. 58, No. 209. November 1.
3. Hammond et al. (2012). *Stenella attenuata*. The IUCN Red List of Threatened Species. Version 2014.2.

Photo: Howard Goldstein, NMFS Southwest Fisheries Science Center

Common Name: Blainville's beaked whale

Chamorro/Carolinian Name:

Scientific Name: *Ziphius cavirostris*

SPECIES DESCRIPTION

Blainville's beaked whales are blue-gray with white undersides. They tend to have white oval scars and scratches. The lower jaw is dramatically arched. Adult males have massive flattened tusks. They can reach up to 15 feet (4.7 meters) in length and weigh up to 2,270 pounds (1,033 kilograms).⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act. IUCN considers this species "Data Deficient" due to insufficient information on population status and trends.⁽²⁾

THREATS

Threats to this species include pelagic drift gillnet fishing and their sensitivity to underwater sounds including anthropogenic noise.⁽³⁾

ECOLOGY

They are usually found in deep, offshore waters of the continental shelf. This species is often associated with steep underwater geologic structures such as banks, submarine canyons, seamounts, and continental slopes.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Blainville's beaked whales occur in tropical to temperate waters worldwide. The Blainville's beaked whale can range from Chile, Japan, New Zealand, and Australia in the Pacific. This species is commonly sighted in the northeastern Bahamas, Caribbean Sea, Gulf of Mexico, Hawaiian Islands, Sea of Japan, and the Society Islands of the South Pacific.

REFERENCES

1. Jefferson, T. A, S. Leatherwood, and M. A. Webber. (1993). FAO Species Identification Guide. Marine Mammals of the World. to their Identification. Rome, Italy. p. 90-91.
2. Taylor et al. (2008). *Mesoplodon densirostris*. The IUCN Red List of Threatened Species. Version 2014.3.
3. Carretta et al. (2014). U.S. Pacific Marine Mammal Stock Assessments, 2013. NOAA-TM-NMFS-SWFSC-532. 406 pp.

Common Name: Cuvier's beaked whale

Chamorro/Carolinian Name:

Scientific Name: *Ziphius cavirostris*

SPECIES DESCRIPTION

Cuvier's beaked whales are dark grey to light rusty brown, with lighter areas around the head and belly. They have a short poorly defined beak and up curved mouth line. The top of the head is slightly concave, and becomes more pronounced with age. They can reach up to 24.6 feet (7.5 meters) in length and weigh up to 6,600 pounds (3,000 kilograms).⁽¹⁾

LISTING STATUS

Protected under the Marine Mammal Protection Act.⁽²⁾ Listed as least concern by IUCN.⁽³⁾

THREATS

Threats to Cuvier's beaked whale include entanglement in fishing gear, ship strikes, ocean noise, fisheries, and Japanese whaling. Much like the Blainville's beaked whale, the Cuvier's beaked whale is sensitive to anthropogenic noise including Navy sonar.⁽²⁾

ECOLOGY

Similar to the Blainville's beaked whales, Cuvier's beaked whales prefer deep waters, usually greater than 3,300 feet (1,000 meters), near the continental slope and edge, as well as around steep underwater geologic features like banks, seamounts, and submarine canyons.⁽²⁾

HISTORICAL AND CURRENT DISTRIBUTION

Cuvier's beaked whales can be found in temperate, subtropical, and tropical waters worldwide.

REFERENCES

1. Jefferson, T. A, S. Leatherwood, and M. A. Webber. (1993). FAO Species Identification Guide. Marine Mammals of the World. to their Identification. Rome, Italy. p. 82-83.
2. Carretta et al. (2014). U.S. Pacific Marine Mammal Stock Assessments, 2013. NOAA-TM-NMFS-SWFSC-532. 406 pp.⁽²⁾
3. Taylor et al. (2008). *Ziphius cavirostris*. The IUCN Red List of Threatened Species. Version 2014.3.

Common Name: Scalloped Hammerhead Shark

Chamorro/Carolinian Name: Kilu'us

Scientific Name: *Sphyrna lewini*

SPECIES DESCRIPTION

The scalloped hammerhead shark is distinguished from other hammerheads by a central indentation on the anterior margin of the head and two additional indentations on each side of the central indentation giving the head a “scalloped” appearance. The body is fusiform, with a large moderately hooked first dorsal fin and low second dorsal and pelvic fins. The top of the body is generally a uniform gray, grayish brown, bronze, or olive that shades to a white underside, with black or dusky pectoral fin tips.⁽¹⁾

LISTING STATUS

Due to illegal, unregulated, and unreported fishing of this species, it was listed as a threatened under the ESA in 2014.⁽²⁾

THREATS

This species is highly desired for the shark fin trade because of its fin size.

ECOLOGY

The scalloped hammerhead shark is an opportunistic predator, feeding on a wide variety of teleosts, cephalopods, crustaceans, and rays.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

This species is circumglobal, living in coastal warm temperate waters and tropical seas.⁽¹⁾ There are no records of scalloped hammerhead shark specifically within Tinian waters, but potential habitat for this species exists around Tinian (Myers and Donaldson 2003).⁽³⁾ Pups are often found in nearshore marine environments (i.e., estuaries and inlets), including Guam’s inner Apra Harbor.⁽¹⁾ Older life stages are generally found in offshore waters reaching 900 feet (275 meters) in depth.

REFERENCES

1. Miller, M., J. Carlson, P. Cooper, D. Kobayashi, M. Nammack, and J. Wilson. (2013). Status Review Report: Scalloped Hammerhead Shark (*Sphyrna lewini*). National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Silver Springs, MD.
2. NMFS. (2014). Endangered and Threatened Wildlife and Plants; Threatened and Endangered Status for the Distinct Population Segments of Scalloped Hammerhead Sharks; Final Rule. 38214 Federal Register Vol. 79, No. 128.
3. Myers, R., and T. Donaldson. (2003). The fish of the Mariana Islands. Integrative Biological Research Program, International Marinelife Alliance, University of Guam Marine Laboratory, Mangilao, Guam.

Common Name: Gray Reef Shark

Chamorro/Carolinian Name: Halu'on unai

Scientific Name: *Carcharhinus amblyrhynchos*

SPECIES DESCRIPTION

The dorsal body color of the gray reef shark is gray to brown, fading to white on the underside or abdomen. The caudal fin has a broad black trailing edge, which fades into the color of the rest of the tail. The second dorsal, anal, pelvic fins and the tips of the pectoral fins are black or dusky. The first dorsal never has a black tip or edge, but may have a slight white edge.⁽¹⁾

LISTING STATUS

Listed as near threatened by the IUCN.⁽²⁾

THREATS

Gray reef sharks are vulnerable due to small litter size, restricted habitat, late onset of maturity, inshore distribution, and prevalence to being fished. Bottom fishermen consider this species a nuisance as they will often attack catch.

ECOLOGY

Male sharks are generally found on the outer limits of reefs where there is a strong current, while female sharks are generally found in lagoon-like habitats, particularly where there is seagrass. Juveniles frequent nearshore areas such as bays and lagoons.⁽¹⁾

HISTORICAL AND CURRENT DISTRIBUTION

The historic range of gray reef shark extends from the Red Sea and Indian Ocean to the western and central Pacific. Gray reef sharks have been reported throughout the CNMI, including Tinian and Pagan.⁽¹⁾

REFERENCES

1. Berger et al. (2005). Comprehensive Wildlife Conservation Strategy for The Commonwealth of The Northern Mariana Islands. Submitted to The National Advisory Acceptance Team, U.S. Fish and Wildlife Service.
2. Smale, M.J. (2009). *Carcharhinus amblyrhynchos*. The IUCN Red List of Threatened Species. Version 2014.3. www.iucnredlist.org.