

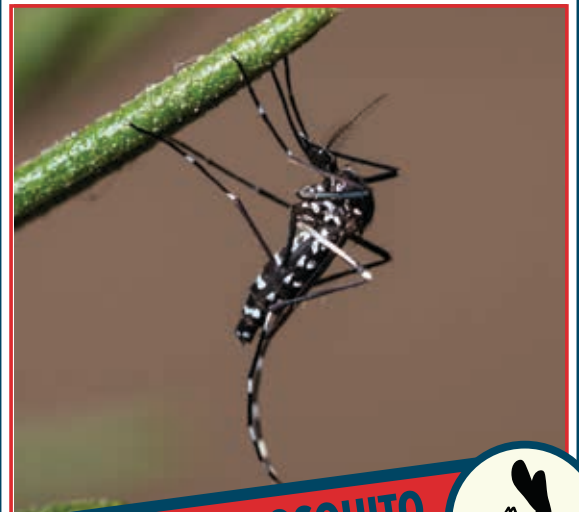
Climate Effected Species “Baseball Cards”



AFRICAN REED FROG
HYPEROLIUS ARGU



Kingdom: Animalia, Phylum: Chordata
Class: Amphibia, Order: Anura
Family: Hyperoliidae, Genus: Hyperolius



ASIAN TIGER MOSQUITO
AEDES ALBOPICTUS



Kingdom: Animalia, Phylum: Arthropoda
Class: Insecta, Order: Diptera
Family: Culicidae, Genus: Aedes



FOUR TOED LIZARD
HEMIDACTYLIUM SCUTATUM



Kingdom: Animalia, Phylum: Chordata
Class: Amphibia, Order: Caudata
Family: Plethodontidae, Genus: Hemidactylium



CORAL
MADRACIS KIRBYI



Kingdom: Animalia, Phylum: Cnidaria
Class: Anthozoa, Subclass: Hexacorallia
Order: Scleractinia, Family: Astrocoeniidae
Genus: Madracis

HABITAT: Native to tropical and subtropical regions, they are successfully adapting to cooler regions. In the warm and humid tropical regions, they are active the entire year long; however, in temperate regions they hibernate over winter. This mosquito has become a significant pest in many communities because it closely associates with humans (rather than living in wetlands), and typically flies and feeds in the daytime in addition to at dusk and dawn. The Asian Tiger mosquito is an important vector for the transmission of many viral pathogens, including the Yellow fever virus, dengue and Chikungunya fever.

DIET: Like other mosquito species, only the females require a blood meal to develop their eggs. Males and females feed on nectar and other sweet plant juices.

REPRODUCTION: The female lays her eggs near water typically near a stagnant pool. However, any open container containing water will suffice for larvae development, even with less than an ounce of water in. It can also breed in running water, so stagnant pools of water are not the mosquitos' only breeding sites.

HABITAT: Near water in rather dense savannas of eastern Africa from southernmost, coastal Somalia to coastal South Africa. H. ARGUS is a widely distributed lowland species which thrive in a variety of annual temperature ranges and are found in ponds and temporary pools in savanna, shrubland and grassland.

DIET: Prey consists mainly of a variety of insects. Predators include various fish, birds, snakes, terrapins, spiders and other frogs.

REPRODUCTION: They produce freshwater dependent aquatic larvae that have short maximum dispersal differences.

HABITAT: This rare species is only found in the northern and central Indian Ocean and southwest Pacific. This species occurs in most reef environments and prefers low-light areas.

DIET: Dependent on heat-intolerant Zooxanthellae for energy (food).

REPRODUCTION: *Madracis kirbyi* has a very slow growth rate and the age of first maturity of most reef building corals is typically three to eight years old. Based on average sizes and growth rates, scientists assume that average generation length is 10 years.

HABITAT: Four toed lizards belong to a family of lungless salamanders and are native to Eastern North America. They survive within a narrow precipitation range as they must keep their skin wet in order to effectively breathe through it. Four toed lizards only live in sphagnum bogs, grassy areas surrounding beaver ponds and forests rich with mosses.

DIET: Small invertebrates, such as spider, worms, ticks, springtails, ground beetles and other insects.

REPRODUCTION: Mating occurs in terrestrial areas throughout the fall months. In early spring the females nest on land, along the banks of small ponds (a microhabitat requirement). After the 4–6 week embryonic period, the larvae hatch and make their way to the adjacent pond (thus the species has short maximum dispersal distances). Compared to other amphibians lungless lizards have a slow turnover of generations.



FANTAIL WARBLERS
GENUS *CISTICOLA*



Kingdom: Animalia, Phylum: Chordata
Class: Aves, Order: Passeriformes
Family: Cisticolidae, Genus: Cisticola



COMMON COQUI
ELEUTHERODACTYLUS COQUI



Domain: Eukaryotic, Kingdom: Animalia
Phylum: Chordata, Class: Amphibia
Order: Anura, Family: Leptodactylidae
Genus: Eleutherodactylus



FINGERED POISON FROGS
MANNOPHYRNE TRINITATIS



Kingdom: Animalia, Phylum: Chordata
Class: Amphibia, Order: Anura
Family: Aromobatidae, Genus: Mannophryne



HORNBILLS
BUCEROTIDAE FAMILY



Kingdom: Animalia, Phylum: Chordata
Class: Aves, Order: Bucerotiformes
Family: Bucerotidae

HABITAT: Coquí is the common name for a genus that includes 17 species in Puerto Rico. The species is named for the loud call the males make at night. Many species are found only within a small habitat on just one island and have narrow temperature and precipitation niches.

DIET: Feed primarily upon arthropods.

REPRODUCTION: Eggs hatch directly into small frogs, completely bypassing the tadpole stage. Most species are characterized by parental behaviors, such as egg-guarding by either the male or female parent. Young do not usually travel very far from the location they hatch.

HABITAT: The genus contains about 45 species and the majority live in tropical and subtropical regions of Africa. A variety of open habitats are occupied. These include wetlands, moist or drier grasslands, open or rocky mountain slopes, and human-modified habitats such as road verges, weedy areas or pasture.

DIET: *Cristicolas* eat a wide variety of insects. The parasitic weaver is a specialist parasite of *cisticolas* and is negatively affected by climate change.

REPRODUCTION: Females build their pouch nest suspended within a clump of grass. The average clutch is about 4 eggs, which take about 2 weeks to hatch. Two broods a year occur in many regions. Females can sometimes breed in their first year.

HABITAT: Hornbills (Bucerotidae) are a family of birds found in tropical and subtropical Africa and Asia. Many species have small ranges and hornbills tend to be territorial.

DIET: The Hornbill family is omnivorous, feeding on fruit and small animals.

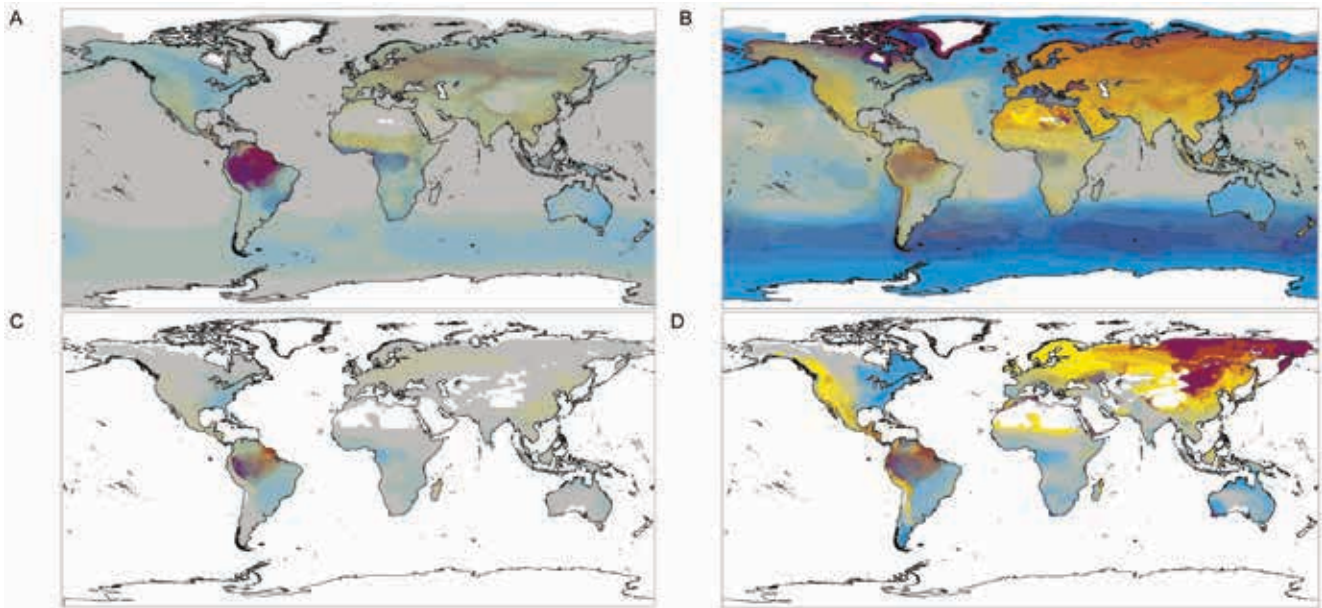
REPRODUCTION: They are monogamous breeders nesting in natural cavities in trees and sometimes cliffs. After breeding, the female uses regurgitated food, droppings, and mud to seal the opening of the tree hollow until only a small slit remains. She lays her eggs and sits on them while the male flies back and forth bringing her food.

HABITAT: *M. trinitatis* is endemic to (found only in) Trinidad, where they are concentrated mainly in the Northern and Central Ranges. Fingered poison tree frogs have both narrow temperature and precipitation niches.

DIET: Adults feed on small insects and arthropods. Juvenile animals may feed on small *Drosophila* (flies). The tadpoles are herbivorous and feed on leaf litter and algae.

REPRODUCTION: Females deposit small clutches of eggs in terrestrial nests. After hatching, one of the parents transports the tadpoles to a small water body (a microhabitat requirement), where they complete their development to metamorphosis. Compared to other amphibians fingered poison frogs have a slow turnover between generations.

FIGURE 2. CONCENTRATIONS OF CLIMATE CHANGE VULNERABLE SPECIES.



NOTE: Regions on the map containing species which exhibit sensitivity, low adaptive capacity and high exposure are shaded in maroon.

