



MEDITERRANEAN GECKO

SCIENTIFIC NAME: *Hemidactylus turcicus*. From the Greek *hemi* meaning half and *daktulos* meaning finger or toe, in reference to longitudinally divided clinging pads on the bottom of each toe. The Latin *turcicus* means belonging to Turkey, presumably referring to the origin of original specimens.

DESCRIPTION: Less than 5 inches total length. When active (at night), normally pale pink to whitish with darker blotches on body and banding on tail (sometimes leading to misidentification as baby Gila monsters); much darker when inactive. Numerous white or light tubercles (slightly enlarged, protruding scales) scattered over body. Skin translucent, especially on belly. Eyes lack movable lids, thus always appear open. May vocalize in social or defensive situations.

DISTRIBUTION: Native to coastal areas of Canary Islands, Mediterranean, Somali, and Arabian peninsulas, east to extreme western India. Introduced to coastal areas of West Indies, Gulf Coast of United States and Mexico, and inland sites in Texas, New Mexico, and Arizona. Established in Tucson and Phoenix since early 1970s. Also known from Yuma and other municipalities. Range expanding.

HABITAT: Mainly urban and suburban areas. In and around buildings, fences, brush piles, gardens, and other habitats associated with humans.

BIOLOGY: In many urban areas of southern Arizona, the nocturnal (active at night) Mediterranean gecko and diurnal (active during daylight) tree lizard are the only lizards that maintain population densities that are healthy, even unusually high, in the face of intensive urbanization. A South Texas urban study estimated population densities as high as 1,000 per acre. Such



estimates are not available for Arizona. In Arizona, dependence on humans may stem from availability of water (or humid shelters), food (invertebrates also associated with people), and thermal refuges (nooks and crannies that are cool in summer and warm in winter) around human habitations; these geckos may not be able to tolerate the heat and desiccating effects of our natural desert habitats.

At least 25 years after becoming established in Arizona, Mediterranean geckos continue to expand their range, gradually dispersing or being moved from their original site(s) of introduction. Although not yet documented by thorough studies, many people have noted that after Mediterranean geckos arrived at their homes, populations of cockroaches, crickets, and black widows declined markedly.

A remarkable attribute of Mediterranean geckos is their ability to walk on surfaces, including glass, that are vertical or even upside down. On the bottom of each toe, this species, like many geckos, has a large pad equipped with microscopic hooks that grab (like Velcro) onto minuscule imperfections on substrates. Nevertheless, calls from people who find these lizards in sinks and bathtubs indicate even geckos can't

negotiate some surfaces.

Unlike most lizards, our native banded gecko and Mediterranean geckos have a fixed (invariant) clutch size of two eggs. Like camouflaged coloration and other genetically controlled characteristics, reproductive traits evolve through natural selection. Most species of lizards have evolved fairly uniform egg size, determined by balancing selection for eggs large enough to produce hatchlings that survive well (smaller eggs produce smaller, more vulnerable hatchlings), yet small enough for the mother to maximize her lifetime production of offspring that survive to maturity (the smaller the eggs, the more eggs she can produce, given her limited energy reserves).

Most lizards have variable clutch size, with larger clutches being laid by larger, well-fed females. These lizards usually keep growing after reaching maturity, allowing them to produce larger clutches of eggs at times when resources (food, water, etc.) are abundant. In contrast, with their invariant clutch size, geckos just produce more clutches of the same number of eggs (two). Additional growth would provide little advantage reproductively, so growth in females slows once they reach maturity, with available energy being diverted to egg production. This is an interesting evolutionary consequence of invariant clutch size.

STATUS: As an invasive species, Mediterranean geckos are afforded no special state or federal status.

MANAGEMENT NEEDS: At this time, no management actions required. Though unlikely, demonstration that Mediterranean geckos significantly impact native species may necessitate development of techniques to eradicate them, or at least to discourage further range expansion. 🦎