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# COLONIZATION OF NORTHERN LOUISIANA BY THE MEDITERRANEAN GECKO, *HEMIDACTYLUS TURCICUS*

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*Abstract.*—The Mediterranean Gecko, *Hemidactylus turcicus*, is known to have colonized nearly every state in the southern United States. In Louisiana, the Mediterranean Gecko has been documented in many of the southern parishes, but records for the northern portion of the state are limited. We sampled northern Louisiana parishes to document the presence of the Mediterranean Gecko. We sampled a total of 21 parishes in northern Louisiana and found geckos in 17 of those parishes, 16 of which represent new distribution records for the species. This indicates a significant range expansion of this introduced species throughout northern Louisiana. Geckos were found across a temperature range of 14.0–28.0°C and had a strong association with buildings. The species' affinity for anthropogenic association and the continual nature of anthropogenic expansion facilitate the high vagility of this species. The result is a successful colonization throughout much of Louisiana and likely continued range expansion throughout the southern United States.

*Key Words.—Hemidactylus turcicus*; introduced species; Louisiana; Mediterranean Gecko

## INTRODUCTION

Gekkonidae is a cosmopolitan family of lizards found predominantly in the tropics and warm temperate regions. *Hemidactylus turcicus*, the Mediterranean Gecko, is native to the Mediterranean regions of Africa, Asia, and Europe (Rose and Barbour 1968). Individuals inhabit rocky outcrops in their native range and are crepuscular to nocturnal (Rose and Barbour 1968; Arnold and Burton 1978). The species has high survivorship, calcareous eggs, small body size, and high population densities that aid in their colonization of new habitats (Selcer 1986). They are often found around man-made structures, predominantly on brick and concrete, and they are likely easily transported by anthropogenic dispersal (Rose and Barbour 1968).

*Hemidactylus turcicus* was first documented in the United States in Key West, Florida in 1910 (Fowler 1915); since then the species has been documented as far west as California and as far north as Utah, Illinois, and Maryland (McCoy 1970; Robinson and Romack 1973; Kraus 2012). This species has been recorded in every Gulf Coast state including Louisiana (Dundee and Rossman 1989; Conant and Collins 1998; Meshaka et al. 2006). *Hemidactylus turcicus* is thought to have been introduced into Louisiana first in the late 1940's by trade along the Mississippi River (Etheridge 1952; Viosca 1957) and was first reported from Ouachita Parish in 1992 (Jenson and George 1993). It has now been reported in numerous locations throughout Louisiana (Dundee and Rossman 1989; Boundy 1994, 2004; Meshaka et al. 2006; Boundy and Gregory 2012), but there are few distribution records for the northern portion of the state (Jenson and George 1993; Boundy 1994; Ray and Cochran 1997; Hardy et al. 2005; Walls 2008).

Throughout its introduced range, *H. turcicus* has been found to be highly associated with human habitations (Conant and Collins 1998). Observations suggest that geckos prefer substrates similar to their native habitats, i.e., rough outer surfaces such as brick, cement, and wood (Paulissen and Buchanan 1991; Meshaka et al. 2006; Jaden and Coleman 2007). Other reports include use of sidewalks, construction material, and trees (Meshaka et al. 2006). Individuals have been documented in well-lit areas, but seem to prefer areas with indirect light (Paulissen and Buchanan 1991; Nelson and Carey