First record of the common house gecko 
(*Hemidactylus frenatus*) in Ecuador

Robert C. Jadin 1,2, Marco A. Altamirano 3, Mario H. Yáñez-Muñoz 3
and Eric N. Smith 1

1 Amphibian and Reptile Diversity Research Center and Department of Biology, Box 19498, University of Texas at Arlington, Arlington, Texas 76019-0498, USA
2 Corresponding author; e-mail: snakeman1982@hotmail.com
3 División de Herpetología, Museo Ecuatoriano de Ciencias Naturales, Quito, Ecuador

Key data

*Hemidactylus frenatus*; Gekkonidae; Common House Gecko; Ecuador; Provincias Esmeraldas and Manabí; population; San Lorenzo & Pedernales. UTA R-55986–88 & DHMECN 04606; verified by Carl J. Franklin, Amphibian and Reptile Diversity Research Center, University of Texas at Arlington, and Cecilia Tobar, División de Herpetología, Museo Ecuatoriano de Ciencias Naturales, Quito, Ecuador.

© Koninklijke Brill NV, Leiden, 2009

The Common House Gecko, *Hemidactylus frenatus* Dumeril and Bibron, is native to south and southeast Asia and the Indo-Australian archipelago, but has since been widely introduced throughout many tropical and subtropical regions (Bauer and Henle, 1994). Its range currently includes countries in Eastern Africa, Madagascar, many of the islands of the South Pacific, Hawaii, Mexico, Central America, and the United States (De Rooij, 1915; Bauer and Henle, 1994; Case et al., 1994; Vences et al., 2004). Within South America, this species has only recently been reported from western Venezuela near the Colombian border (Rivas et al., 2005) and has not been documented in Ecuador (Peters, 1967; Torres, 2001). Here we document the first record of the Common House Gecko from two provinces of Ecuador.

Three individuals were hand captured on 16–17 March 2008 from a wall at the Hotel El Pedregal in San Lorenzo (WGS 84; 1.275°N; 78.812°W, 36 m elev.), Provincia Esmeraldas, approximately 15 km south of the Colombian border. On 21 March 2008, an additional specimen (UTA R-55988) was hand-captured on a wall at the Hotel John in Pedernales, Provincia Manabí (see fig. 1 for locations). In addition to the collected specimens, several additional individuals were observed, suggesting that both localities support established *H. frenatus* populations. We are

© Koninklijke Brill NV, Leiden, 2009
DOI:10.1163/157075408X394133
uncertain whether the presence of this species in Ecuador is the result of a single or multiple introductions. Both San Lorenzo and Pedernales are port cities on the coast and it is likely that this species has been introduced through the ship yards. However, it is difficult to estimate an approximate date of introduction or the country of origin. Molecular studies could be useful in determining the pattern of colonization in Ecuador.

*Hemidactylus frenatus* is a successful colonizer. For example, it was one of the first colonizing species reported from islands of the Krakatau group after the eruption of Anak Krakatau, and it is now found on all islands of the Krakatau archipelago (Rawlinson et al., 1990). The invasion of *H. frenatus* to mainland Ecuador, and potentially the Galápagos, should be monitored while population structures of native and introduced geckos are studied pre- and post-invasion, with a goal of minimizing impacts and preventing invasion of the ecologically sensitive Galápagos. Human activity has already resulted in the introduction of three species
of gecko to the Galápagos islands: *Phyllodactylus reissii* (Santa Cruz), *Lepidodactylus lugubris* (Santa Cruz, San Cristobal, Isabela), and *Gonatodes caudiscutatus* (San Cristobal) (Schauenberg, 1968; Wright, 1983; Hoogmoed, 1989). The native species *Phyllodactylus galapagoensis* is currently displaced from urban areas by the introduced *P. reissii* (Altamirano, 2002) and we believe the presence of *H. frenatus*, which is often a superior competitor to other geckos (e.g., Case et al., 1994), would likely have graver implications for the conservation of the endemic geckos.

Acknowledgements

We thank J.W. Streicher, C.J. Franklin, and M.A. Urgiles for assistance in the field; S.A. Orlofske and C.M. Sheehy, III, for reviewing this manuscript; and C.J. Franklin, C.M. Sheehy, III, and C. Tobar for assistance in specimen identification. Financial support for the field portion of this study was provided by grants from Bioclon and the National Science Foundation (DEB-0416160) to ENS. Permits were issued by Ministerio del Ambiente República del Ecuador (001-08IC-FAU-DNABPVS/MA).

References


