Biosecurity Alert

Australian Government
Parks Australia

Species: *Hemidactylus parvimaculatus* (Sri Lankan house gecko) **Status:** Introduced

Location: Cocos (Keeling) Islands (12°11’31”S, 96°49’56”E) **Date:** 17 February 2014

A new introduced gecko has been recorded on West Island, Cocos (Keeling) Islands, Indian Ocean.

This is the first known record of this species in an Australian territory. Like any introduced species, it may pose a risk to native ecosystems if it spreads to other islands or the Australian mainland.

Quarantine Officers are urged to be vigilant and report any sightings.

Figure 1: Adult male *Hemidactylus parvimaculatus* at Reunion. Photo by: Mickaël Sanchez. Source: Deso et al, 2012

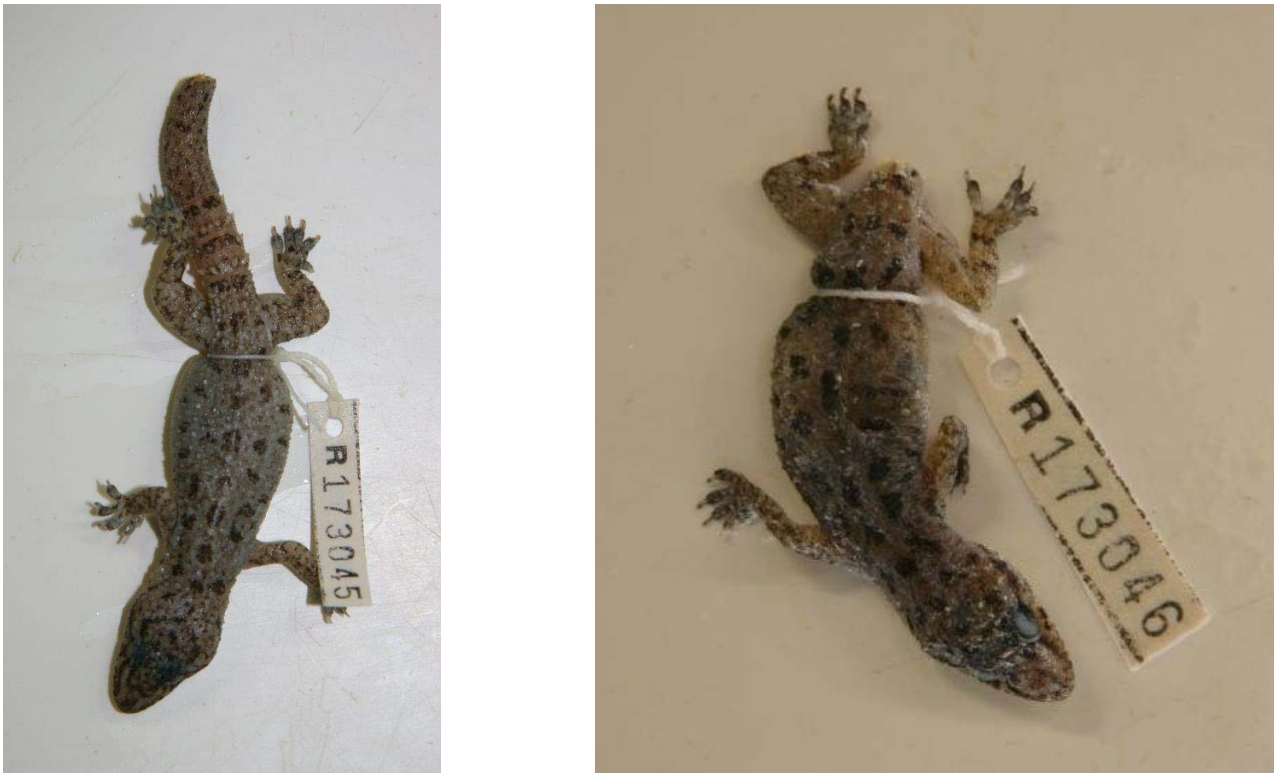

Figure 2: Two *Hemidactylus parvimaculatus* specimens from Cocos (Keeling) Islands, February 2012. Source: Ryan Ellis, WA Museum

Record of sighting

In February 2012, two Sri Lankan house geckos were captured on West Island, Cocos (Keeling) Islands, by Russell Palmer (WA Department of Parks and Wildlife, Perth). Taxonomists from the WA Museum have since confirmed this gecko as a new introduced species to Australia and a potential biosecurity threat.

Risk

The Sri Lankan house gecko is a highly aggressive and competitive introduced species. **A significant threat exists for the potential spread of this gecko to Christmas Island and the Australian mainland,** where many native and endemic species would be at risk.

Invasive geckos compete with native species for food and habitat, and may also introduce new diseases or parasites that can have population level impacts on native species. The endemic Lister's gecko (*Lepidodactylus listeri*) on Christmas Island has been severely impacted by the introduction of invasive species, including geckos. Parks Australia has had to embark on an expensive captive breeding program to aid the survival of this species and other native reptiles. If another invasive gecko were to reach Christmas Island, the chance of successfully reintroducing native geckos back into the wild could be eliminated.

Vigilance is crucial, to ensure the Sri Lankan house gecko does not reach Christmas Island or the mainland.
The gecko may spread via sea freight cargo or commercial or freight aircraft.

Identification

The Sri Lankan house gecko can be identified based on the combination of the following characters, as described by Heckard et al. (2013):

- maximum snout-vent length of about 55 mm, with original tail slightly longer than the snout- vent length
- dorsum bears 16 to 23 rows of moderately keeled tubercles
- colouration variable, but typically a light brown with three regular to irregular longitudinal rows of darker brown, often rectangular spots
- original tail banded, but often without well-defined borders between light and dark annuli
- each tail segment bears a whorl of tubercles similar in size to those on the body.

The Sri Lankan house gecko can be distinguished from its relative, the Asian house gecko or barking gecko (*Hemidactylus frenatus*), by the presence of regular rows of enlarged dorsal tubercles. The Asian house gecko is another introduced species that has established populations in the Cocos (Keeling) islands, Christmas Island and northern Australia.

Any small lizard displaying the distinctive series of small dark brown spots on its back (see photos) should be treated as a Sri Lankan house gecko and therefore a high risk exotic introduction.

We urge that all quarantine officers are aware of this risk.

If found, please notify Parks Australia	**If help is needed to confirm the species, contact the WA Museum**
Park Manager, Christmas Island 08 9164 8700	Curator of Herpetology, Paul.Doughty@museum.wa.gov.au Ryan Ellis, Ryan.Ellis@museum.wa.gov.au

Distribution

The Sri Lankan house gecko's natural distribution is Sri Lanka, South India (Kerala), Moheli (Comoro Islands), Rodrigues, Maldives and Mascarene Islands. It is recorded as an introduced species in Mauritius, Reunion, Seychelles and New Orleans.

Reference: Heckard, D., Kathriner, A. & Bauer, A. (2013). First record of *Hemidactylus parvimaculatus* Deraniyagala, 1953 from the United States. *IRCF Reptiles & Amphibians* **20**, 192-196.