

## *Hemidactylus frenatus*

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Reptilia	Squamata	Gekkonidae

**Common name** bridled house gecko (English), common house gecko (English), Asian house gecko (English), Asiatischer Hausgecko (German), Chichak (English, Asia), Gewöhnlicher Halbfingergecko (German), gecko-casero bocón (Spanish)

**Synonym**

*Hemidactylus javanicus* , Fitzinger 1826 (*nomen nudum*)  
*Hemidactylus frenatus* , Schlegel in Dumeril & Bibron 1836: 366  
*Hemidactylus* , (Pnoepus) Bojeri Fitzinger 1843  
*Hemidactylus vittatus* , Gray 1845  
*Hemidactylus punctatus* , Jerdon 1853  
*Hemidactylus fraenatus* , Bleeker 1857  
*Hemidactylus inornatus* , Hallowell 1861  
*Hemidactylus pumilus* , Hallowell 1861: 502  
*Gecko caracal* , Tytler 1865  
*Gecko chaus* , Tytler 1865  
*Hemidactylus longiceps* , Cope 1869: 320  
*Hemidactylus hexaspis* , Cope 1869: 320  
*Hemidactylus papuensis* , [Macleay] 1877  
*Hemidactylus tristis* , Sauvage 1879  
*Hemidactylus frenatus* , Boulenger 1885: 120  
*Hemidactylus nigriventris* , Lidth De Jeude 1905  
*Hemidactylus bowringii* , Stejneger 1907: 172  
*Hemidactylus fragilis* , Calabresi 1915  
*Hemidactylus frenatus* , De Rooij 1915: 28  
*Hemidactylus nigriventris* , De Rooij 1915: 31  
*Hemidactylus vandermeer-mohri* , Brongersma 1928  
*Hemidactylus mabouia* , Barbour & Loveridge 1929 (*partim*)  
*Hemidactylus okinawensis* , Okada 1936  
*Hemidactylus vandermeermohri* , Wermuth 1965  
*Hemidactylus auritus* , Poeppig (in Obst) 1977  
*Pnoepus papuensis* , Wells & Wellington 1985  
*Pnoepus frenatus* , Wells & Wellington 1985  
*Pnoepus bojeri* , Wells & Wellington 1985  
*Pnoepus vittatus* , Wells & Wellington 1985  
*Pnoepus punctatus* , Wells & Wellington 1985  
*Pnoepus inornatus* , Wells & Wellington 1985  
*Pnoepus pumilus* , Wells & Wellington 1985  
*Pnoepus caracal* , Wells & Wellington 1985  
*Pnoepus fragilis* , Wells & Wellington 1985  
*Hemidactylus fragilis* , Lnaza 1990  
*Hemidactylus frenatus* , Lanza 1990  
*Hemidactylus frenatus* , Liner 1994  
*Hemidactylus frenatus* , Glaw & Vences 1994: 277  
*Hemidactylus frenatus* , Manthey & Grossmann 1997: 235  
*Hemidactylus frenatus* , Cox *et al.* 1998: 84  
*Hemidactylus frenatus* , Cogger 2000: 246  
*Pnoepus frenatus* , Wells 2002  
*Hemidactylus* , *cf. frenatus* Andreone *et al.* 2003

## Similar species

### Summary

The common house gecko is now established in at least 87 locations around the world outside of its natural range in Asia and the Indo-Pacific. Many of these new locations have been small remote islands in the Pacific and Indian Oceans. Where the common house gecko has been introduced to islands of the Pacific Ocean, researchers have shown that this lizard has been responsible for the competitive displacement of other similar sized or smaller gecko species in urban and suburban environments. It was shown that habitat simplification and clumped food resources around artificial light sources as a result of urbanisation have enabled the common house gecko to gain an indirect competitive advantage over other nocturnal gecko species. The ability of the house gecko to persist outside of its natural range poses a threat to the survival of ecologically similar endemic geckos.



[view this species on IUCN Red List](#)

### Species Description

*Hemidactylus frenatus* is a gecko which measures 7.5-15 cm long with males larger than females. Their scalation is uniform, with distinctive enlarged scales along their backs and arranged in bands on their tail. Its coloration may be gray or light brown to beige with greenish iridescence and a white underside (Csurhes & Markula, 2009). *H. frenatus* may be identified by several detailed characteristics. It has vertical pupils. Its digits have widened subdigital lamellae, medial subcaudals which are distinctly enlarged, and are arranged in a series. The subdigital lamellae of digit IV extends to base of digit. It has small dorsal tubercles which are restricted to dorso-lateral rows, and a second pair of anterior chin shields in contact with infralabials. Other characters include divided lamellae; dorsum and venter light in coloration, sometimes semi-transparent; a light line through eye; dark lateral stripe may be present; and maximum size of 60 mm SVL (Krysko & Daniels, 2005). *H. frenatus* has a very distinctive “chuck, chuck, chuck” call (Wilson, 2006) which is most commonly emitted at dusk and dawn. This call is one of the key indicators that house geckos are present in a particular area (N.C. Cole, pers. comm.).

### Lifecycle Stages

Females lay two eggs per clutch which have an incubation period of 48-90 days in laboratory conditions (Krysko *et al.*, 2003; Church, 1962 in Krysko *et al.*, 2003). Studies conducted in outdoor enclosures hatched after an average of 50 days (48 to 53 days) (N.C. Cole, pers. comm.). Eggs are round and hard-shelled, unlike most reptile eggs, making them resistant to moisture loss and better able to survive travelling long distances (Wilson, 2006). Juveniles become sexually mature after six months to a year. The lifespan of *H. frenatus* is approximately 5 years (Csurhes & Markula, 2009).

### Uses

*Hemidactylus frenatus* are kept as pets in some locations.



## Habitat Description

*Hemidactylus frenatus* may occur in tropical, subtropical, and temperate environments. It is most abundant in urban, suburban, and developed locations. It is nocturnal and introduced populations are almost always found on building walls near artificial lighting. *H. frenatus* is also known to inhabit natural environments, including in woodlands, patches of forest, on trees in open fields, rocky and forested areas, coconut palm trunks, under rotting logs, and among dense, low ground-cover such as *Ipomea* and *Canavalia*. *Canavalia* often associated with grasses and a rocky habitat. *H. frenatus* prefers habitats with open hunting surfaces such as walls or vertical rocks near concentrated populations of insects (Csurhes & Markula, 2009; Frenkel, 2006; Newberry & Jones, 2007).

## Reproduction

*Hemidactylus frenatus* is a sexually reproducing, oviparous reptile. Mating includes a short courtship during which males repeatedly touch the female with his snout and may bite and hold her by the neck. Three to four weeks after fertilization females lay two hard-shelled that are partially fixed to a solid surface (Csurhes & Markula, 2009). Incubation of the eggs to a temperature of at least 18 °C is required for development (Ota, 1994; N.C. Cole, pers. comm.). Breeding occurs throughout the year in tropical environments and is seasonal in cooler conditions. Females are able to store functional sperm for up to a year (Yamamoto & Ota, 2006).

## Nutrition

*Hemidactylus frenatus* is predominantly a nocturnal, opportunistic hunter which preys on a wide range of insects and spiders. It may be commonly found hunting in developed environments on walls near artificial lights. Stomach contents analysis revealed prey of insect orders Blattodea, Coleoptera, Dermaptera, Diptera, Hemiptera, Homoptera, Hymenoptera, Isopoda, Isoptera, Lepidoptera, Neuroptera Orthoptera, Zygoptera, as well as Araneae and other arachnids. *H. frenatus* is also known to consume juveniles of other geckos and skinks and also known to consume sugar-based products and nectar (Cole 2005 b; Csurhes & Markula, 2009).

## General Impacts

*Hemidactylus frenatus* has demonstrated a high propensity for competitive displacement of similar-sized and urban-adapted geckos. The ability of *H. frenatus* to replace locally native gecko species seems most pronounced in urban areas. *H. frenatus* is very well adapted to predation on concentrations of insects that gather along building walls near artificial lighting, seemingly more so than most endemic gecko species. *H. frenatus* also tends to be more aggressive and territorial, as well as, more tolerant of interspecific cohabitation and competition than endemic geckos. Such features allow it to successfully outcompete native species and exclude them from concentrated food sources. Studies have demonstrated aggressive, dominant behavior in *H. frenatus* over native geckos *Nactus* spp. on the Mascarene Islands and *Lepidodactylus lugubris* throughout Pacific islands. *H. frenatus* was frequently observed stalking, lunging towards and biting at other geckos. In some instances *H. frenatus* bit off their tails or ate them entirely. *H. frenatus* was also found to aggressively exclude endemic geckos from daytime refugia, making these native species more vulnerable to predation and adverse climatic conditions (Cole *et al.* 2005; Newberry & Jones, 2008). *H. frenatus* are also known to predate upon other small, usually juvenile lizards, such as *Cryptoblepharus boutonii* (Cole *et al.* 2005b).

There are many records of *H. frenatus* displacing or causing decline in native geckos throughout its introduced range ostensibly by competitive displacement. *H. frenatus* displaces endemic and 'Vulnerable (VU)' lesser night gecko (see [Nactus coindemirensis in IUCN Red List of Threatened Species](#)) and the endemic night gecko *Nactus durrelli* in the Mascarene Islands. It displaces both *Nactus* spp. from favored environments increasing their risk of predation and has proven to be a major cause in the decline of, the once thought extinct in the wild, *N. coindemirensis* (Cole *et al.*, 2005; Jones & Cole, 2004). *H. frenatus* displaces Pacific island native *Lepidodactylus lugubris* in many locations and has demonstrated superior predation abilities. Experiments have demonstrated that *H. frenatus* consumes a disproportionately higher amount of insect prey than *L. lugubris*, thereby leaving it with less potential prey which decreases its body condition, fecundity, and ability to survive (Hanley *et al.* 1995; Harvey *et al.* 1998; Petren & Case, 1996). A similar predation study with Australian gecko *Gehyra dubia* also found *H. frenatus* to be a more formidable forager (Canyon & Hill, 1997). The displacement of *Hemidactylus garnotii* by *H. frenatus* throughout the Pacific basin has been attributed to behavioral interference from aggressive males. Furthermore, *H. frenatus* was also found to hybridize with *H. garnotti* in laboratory experiments (Dame & Petren, 2006).

## Management Info

**Preventative measures:** The majority of introductions of *Hemidactylus frenatus* are the result of it finding its way onto boats or shipping containers that are transported to new locations. It is recommended that incoming cargo be examined for *H. frenatus* and that any individuals or eggs found be exterminated to prevent its establishment. Its superior ability to cling to surfaces allows it access to high crevice spaces for refuge and egg deposition, which gives it high potential to stowaway undetected in cargo and shipping containers (Csurhes & Markula, 2009; Newberry & Jones, 2008).

The use of naturally or artificially occurring substrates with a crumbly/highly concentrated particulate surface may be used to exclude the pad-bearing *H. frenatus* from specific locations, allowing claw-bearing gecko species to forage unchallenged. This method of exclusion was tested in attempts to preserve populations of threatened *Nactus* spp in the Mascarene Islands. Simple habitat modifications through the addition of artificial refugia have been proposed as a means to enhance populations of endangered or displaced native reptiles (Cole *et al.* 2005).

**Chemical control:** The use of Tricaine methanesulfonate (MS222) injected into the intracoelomic cavity of *H. frenatus* is a chemical euthanasia method consistent with conditions specified by The Public Health Service Policy on Humane Care and Use of Laboratory Animals which require that euthanasia of ectotherms be consistent with the American Veterinary Medical Association (AVMA) Guidelines on Euthanasia. Test subjects were administered a intracoelomic injection of 250 to 500 mg/kg of 0.7% to 1% sodium-bicarbonate-buffered MS222 solution followed by intracoelomic injection of 0.1 to 1.0 ml unbuffered 50% (v/v) MS222 solution. Test subjects were effectively made unconscious by the first injection and respiratory and cardiac functions were eliminated by the second (Conroy *et al.* 2009).



# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Hemidactylus frenatus*

## Pathway

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## Principal source:

**Compiler:** IUCN SSC Invasive Species Specialist Group

Updates with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

**Review:** Dr. Nik Cole, Durrell Wildlife Conservation Trust.

**Publication date:** 2010-10-04

## ALIEN RANGE

[1] AMERICAN SAMOA	[2] AUSTRALIA
[1] BELIZE	[1] BHUTAN
[1] BRITISH INDIAN OCEAN TERRITORY	[1] CAMBODIA
[1] CAROLINE ISLANDS	[1] CHINA
[1] CHRISTMAS ISLAND	[1] COLOMBIA
[1] COMOROS	[1] COSTA RICA
[1] ECUADOR	[1] EL SALVADOR
[1] FIJI	[5] FRENCH POLYNESIA
[1] GUAM	[1] GUATEMALA
[1] HONDURAS	[1] INDIA
[1] JAPAN	[1] KENYA
[1] MADAGASCAR	[1] MALDIVES
[1] MARSHALL ISLANDS	[1] MAURITIUS
[1] MELANESIA	[1] MEXICO
[1] MICRONESIA, FEDERATED STATES OF	[1] MYANMAR
[1] NAURU	[1] NEPAL
[1] NEW CALEDONIA	[1] NEW GUINEA
[1] NEW ZEALAND	[1] NICARAGUA
[1] NORFOLK ISLAND	[1] NORTHERN MARIANA ISLANDS
[1] PAKISTAN	[1] PALAU
[1] PANAMA	[1] PHILIPPINES
[1] POLYNESIA	[1] REUNION
[2] SAINT HELENA	[1] SAMOA
[1] SINGAPORE	[1] SOLOMON ISLANDS
[1] SOMALIA	[1] SOUTH AFRICA
[1] TAIWAN	[3] UNITED STATES
[1] VANUATU	[1] VENEZUELA
[1] VIET NAM	

**Red List assessed species 2: CR = 1; EN = 1;**

[Oedodera marmorata](#) **CR**

[Urosaurus auriculatus](#) **EN**

## BIBLIOGRAPHY

75 references found for *Hemidactylus frenatus*

### Management information

Global Invasive Species Database (GISD) 2024. Species profile *Hemidactylus frenatus*. Available from: <https://iucngisd.org/gisd/species.php?sc=1344> [Accessed 23 November 2024]



# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Hemidactylus frenatus*

- Canyon, D. V.; Hii, J. L. K., 1997. The gecko: An environmentally friendly biological agent for mosquito control. *Medical & Veterinary Entomology*. 11(4). Oct., 1997. 319-323.
- Case T J; Bolger D T., 1991. The Role of Introduced Species in Shaping the Distribution and Abundance of Island Reptiles. *Evolutionary Ecology*. 5(3). 1991. 272-290.
- [Cogger, H; G. Muir and G. Shea., 2005. A survey of the terrestrial reptiles of Norfolk Island March 2005: Report 4. Assessment of the suitability of potential gecko re-introduction sites on Norfolk's main island, and a review of threatening processes and the recovery actions proposed in the draft Recovery Plan prepared for the Department of the Environment and Heritage](#)
- Summary:** Available from: <http://www.environment.gov.au/biodiversity/threatened/publications/pubs/norfolk-island-reptiles-reintroduction.pdf> [Accessed 28 December 2009]
- Conroy, C. J. ; Papenfuss, T. ; Parker, J. ; Hahn, N. E., 2009. Use of Tricaine Methanesulfonate (MS222) for Euthanasia of Reptiles. *Journal of the American Association for Laboratory Animal Science*. 48(1). JAN 2009. 28-30,32
- Csurhes, Steve and Anna Markula., 2009. Pest animal risk assessment: Asian house gecko *Hemidactylus frenatus*. Biosecurity Queensland, Queensland Primary Industries and Fisheries, Department of Employment, Economic Development and Innovation
- [Fritts, Thomas H. & Gordon H. Rodda., 1998. The Role of Introduced Species in the Degradations of Island Ecosystems: A Case History of Guam. Annu. Rev. Ecol. Syst. 1998. 29:113-140](#)
- Summary:** Available from: <http://cas.bellarmine.edu/tietjen/Ecology/guam.pdf> [Accessed December 28 2009]
- Gill, B. J.; Bejakovich, D; Whitaker, A. H., 2001. Records of foreign reptiles and amphibians accidentally imported to New Zealand. *New Zealand Journal of Zoology*. 28(3). September, 2001. 351-359.
- [IUCN/SSC Invasive Species Specialist Group \(ISSG\), 2010. A Compilation of Information Sources for Conservation Managers.](#)
- Summary:** This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.
- Petren, Kenneth; Case, Ted J., 1998. Habitat structure determines competition intensity and invasion success in gecko lizards. *Proceedings of the National Academy of Sciences of the United States of America*. 95(20). Sept. 29, 1998. 11739-11744.
- [Rodder, Dennis; Mirco Sole and Wolfgang Bohme., 2008. Predicting the potential distributions of two alien invasive Housegeckos \(Gekkonidae: \*Hemidactylus frenatus\*, \*Hemidactylus mabouia\*\) North-Western Journal of Zoology Vol. 4, No. 2, 2008, pp.236-246](#)
- Summary:** Available from: <http://herp-or.uv.ro/nwiz/content/v4.2/28.nwiz.4.2.Roedder.et.al.pdf> [Accessed 28 December 2009]
- Takahashi, Hiroo., 2005. A case of artificial overseas dispersal of *Hemidactylus frenatus*. *Bulletin of the Herpetological Society of Japan*.(2). 2005. 116-119.
- [Varnham, K. 2006. Non-native species in UK Overseas Territories: a review. JNCC Report 372. Peterborough: United Kingdom.](#)
- Summary:** This database compiles information on alien species from British Overseas Territories.
- Available from: <http://www.jncc.gov.uk/page-3660> [Accessed 10 November 2009]
- Vences, Miguel; Wanke, Stefan; Vieites, David R; Branch, William R; Glaw, Frank; Meyer, Axel., 2004. Natural colonization or introduction? Phylogeographical relationships and morphological differentiation of house geckos (*Hemidactylus*) from Madagascar. *Biological Journal of the Linnean Society*. 83(1). September 2004. 115-130.
- General information**
- Ballardo, W.S., Quijano, F.M., & Solís, M.E.M. 1996. Range extensions for *Hemidactylus frenatus* in Mexico. *Herpetological Review*, 27: 40.
- Barquero, Marco D., Hijle, Branko. 2005. House Wren preys on introduced gecko in Costa Rica. *Wilson Bulletin*. 117(2). JUN 2005. 204-205.
- Barton, Diane P. 2007. Pentastomid parasites of the introduced Asian house gecko, *Hemidactylus frenatus* (Gekkonidae), in Australia. *Comparative Parasitology*. 74(2). JUL 2007. 254-259.
- Brown, Graham R., 2005. Insects and other terrestrial invertebrates recorded from Ashmore Reef National Nature Reserve and Cartier Island Marine Reserve. *Beagle*. FEB 05. 107-129.
- Brown, Susan G; LeBrun, Roanne; Yamasaki, Jacqueline; Ishii-Thoene, Deborah., 2002. Indirect competition between a resident unisexual and an invading bisexual gecko. *Behaviour*. 139(9). September 2002. 1161-1173.
- Buden, Donald W., 2000. The Reptiles of Pohnpei, Federated States of Micronesia. *Micronesica* 32(2):155-180, 2000
- Buden, Donald W., 2007. Reptiles of Satawan Atoll and the Mortlock Islands, Chunk State, Federated States of Micronesia. *Pacific Science*. 61(3). JUL 2007. 415-428.
- [Buden, Donald W; Lynch, D. Brian; Zug, George R., 2001. Recent records of exotic reptiles on Pohnpei, eastern Caroline Islands, Micronesia. Pacific Science. 55\(1\). January. 2001. 65-70.](#)
- Summary:** Available from: [http://muse.jhu.edu/journals/pacific\\_science/v055/55.1buden.pdf](http://muse.jhu.edu/journals/pacific_science/v055/55.1buden.pdf) [Accessed 28 December 2009]
- Carretero, Miguel A; Harris, D. James; Rocha, Sara., 2005. Recent observations of reptiles in the Comoro islands (Western Indian Ocean). *Herpetological Bulletin*.(91). SPR 2005. 19-28.
- Casas-Andreu, G., Barrios-Quiroz, G., & Cruz-Avina, R. 1998. Geographic distribution. *Hemidactylus frenatus*. *Herpetological Review* 29; 51.
- Case, Ted J; Bolger, Douglas T; Petren, Ken., 1994. Invasions and competitive displacement among house geckos in the tropical Pacific. *Ecology (Tempe)*. 75(2). 1994. 464-477.
- Case, T.J., Bolger, D.T., Petren, K. 1994. Invasions and competitive displacement among house geckos in the tropical Pacific. *Ecology* 75 (2), pp. 464-477.
- [Cole, N. 2005. The new noisy neighbours: Impacts of alien house geckos on endemics in Mauritius. In: Aliens newsletter, No. 22, Invasive Species Specialist Group \(ISSG\)](#)
- Summary:** Available from: [http://www.issg.org/pdf/aliens\\_newsletters/A22.pdf](http://www.issg.org/pdf/aliens_newsletters/A22.pdf) [Accessed 28 December 2009]
- Cole, N.C. 2005b. The ecological impact of the invasive house gecko *Hemidactylus frenatus* upon endemic Mauritian geckos. Unpublished PhD Thesis, University of Bristol, UK.

Cole, N.C. 2009a. A Field Guide to the Reptiles and Amphibians of Mauritius. Mauritian Wildlife Foundation, Vacoas, Mauritius.  
Cole, N.C. 2009b. Herpetofaunal observations on Eagle Island, Middle Brother, North Brother and Diego Garcia, with an overview of previous records in the Chagos Archipelago. *Phelsuma* 17: 40-48.  
Cole, N.C., Jones, C.G., Harris, S. 2005. The need for enemy-free space: The impact of an invasive gecko on island endemics. *Biological Conservation* Volume 125, Issue 4, October 2005, Pages 467-474.  
[CONABIO. 2008. Sistema de información sobre especies invasoras en México. Especies invasoras - Reptiles. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Fecha de acceso.](#)

**Summary:** English:

The species list sheet for the Mexican information system on invasive species currently provides information related to Scientific names, family, group and common names, as well as habitat, status of invasion in Mexico, pathways of introduction and links to other specialised websites. Some of the higher risk species already have a direct link to the alert page. It is important to notice that these lists are constantly being updated, please refer to the main page (<http://www.conabio.gob.mx/invasoras/index.php/Portada>), under the section Novedades for information on updates.

Invasive species - reptiles is available from: [http://www.conabio.gob.mx/invasoras/index.php/Especies\\_invasoras\\_-\\_Reptiles](http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Reptiles) [Accessed 30 July 2008]

Spanish:

La lista de especies del Sistema de información sobre especies invasoras de México cuenta actualmente con información acerca de nombre científico, familia, grupo y nombre común, así como hábitat, estado de la invasión en México, rutas de introducción y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la página de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualización, por favor consulte la portada (<http://www.conabio.gob.mx/invasoras/index.php/Portada>), en la sección novedades, para conocer los cambios.

Especies invasoras - Reptiles is available from: [http://www.conabio.gob.mx/invasoras/index.php/Especies\\_invasoras\\_-\\_Reptiles](http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Reptiles) [Accessed 30 July 2008]

Couper, Patrick J; Lauren D. Keim & Conrad J. Hoskin., 2007. A new velvet Gecko (Gekkonidae: Oedura) from south-east Queensland, Australia. *Zootaxa* 1587: 27-41 (2007)

[Dame, Elizabeth A., Petren, Kenneth. 2006. Behavioural mechanisms of invasion and displacement in Pacific island geckos \(\*Hemidactylus\*\). \*Animal Behaviour\*. 71\(Part 5\). MAY 2006. 1165-1173.](#)

**Summary:** Available from: [http://www.artsci.uc.edu/collegedpts/biology/fac\\_staff/docs/2006DamePetren.pdf](http://www.artsci.uc.edu/collegedpts/biology/fac_staff/docs/2006DamePetren.pdf) [Accessed 28 December 2009]

de Brito-Gitirana, L; Storch, V., 2002. Temperature induced alterations in the liver of wall lizard (*Hemidactylus frenatus*): Morphological and biochemical parameters. *Micron*. 33(7-8). 2002. 667-672.

Frenkel, Caty. 2006. *Hemidactylus frenatus* (Squamata : Gekkonidae): call frequency, movement and condition of tail in Costa Rica. *Revista de Biología Tropical*. 54(4). DEC 2006. 1125-1130.

Fuenmayor, Gilson Rivas; Ugueto, Gabriel N; Bauer, Aaron M; Barros, Tito; Manzanilla, Jesus ., 2005. Expansion and natural history of a successful colonizing Gecko in Venezuela (Reptilia: Gekkonidae: *Hemidactylus mabouia*) and the discovery of *H. frenatus* in Venezuela. *Herpetological Review*. 36(2). JUN 2005. 121-125.

Galina-Tessaro, Patricia; Alfredo Ortega-Rubio; Sergio Alvarez-Corderas & Gustavo Arnaud., 1999. Colonization of Socorro Island (Mexico), by the tropical house gecko *Hemidactylus frenatus* (Squamata: Gekkonidae). *Rev. biol. trop* v.47 n.1-2 San José jun. 1999

Gill, B. J., 1993. The land reptiles of Western Samoa. *Journal of the Royal Society of New Zealand*. 23(2). 1993. 79-89.

Goldberg, Stephen R; Charles R. Bursey; Hay Cheam., 1998. Gastrointestinal Helminths of Four Gekkonid Lizards, *Gehyra mutilata*, *Gehyra oceanica*, *Hemidactylus frenatus* and *Lepidodactylus lugubris* from the Mariana Islands, Micronesia. *The Journal of Parasitology*, Vol. 84, No. 6 (Dec., 1998), pp. 1295-1298

Greenbaum, Eli., 2002. *Hemidactylus frenatus* (common house Gecko). *Herpetological Review*. 33(1). March, 2002. 65-66.

Hanley, Kathryn A; Vollmer, Dana M; Case, Ted J., 1995. The distribution and prevalence of helminths, coccidia and blood parasites in two competing species of gecko: Implications for apparent competition. *Oecologia* (Berlin). 102(2). 1995. 220-229.

Hanley, K., Petren, K., Case, T. 1998. An experimental investigation of the competitive displacement of a native gecko by an invading gecko: no role for parasites. *Oecologia* (1998) 115:196-205.

Heriberto Valdez-Villavicencio, Jorge, Peralta-García, Anny. 2008. *Hemidactylus frenatus* (Sauria: Gekkonidae) in Northwestern Mexico. *Acta Zoológica Mexicana Nueva Serie*. 24(3). DEC 2008. 229-230.

**Summary:** New records of the introduced gecko *Hemidactylus frenatus* from northwestern Mexico are provided. One of them represents the first record for the state of Sonora.

Horner, Paul., 2005. Survey for terrestrial reptiles of Ashmore Reef National Nature Reserve. *Beagle*. FEB 05. 131-132.

Ineich, Ivan., 2009. Herpetological survey of Maiao Island, Society Archipelago (French Polynesia); Inventaire herpétologique de l'île de Maïao, archipel de la Société (Polynésie française). *Bulletin de la Société Herpétologique de France*.(130-31). 2009. 51-63.

Ineich, Ivan; Gouni, Anne; Blanc, Ludwig; Durieux, Jean; Butaud, Jean-Fran Ois., 2007. Lizards of Niau Atoll, Tuamotu archipelago, French Polynesia. *Herpetological Review*. 38(4). DEC 2007. 491-492.

[ITIS \(Integrated Taxonomic Information System\). 2008. Online Database \*Hemidactylus frenatus\* Duméril and Bibron, 1836](#)

**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from: [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=174056](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=174056) [Accessed 8 April 2008]

Jadin, Robert C; Altamirano, Marco A; Yanez-Munoz, Mario H; Smith, Eric N., 2009. First record of the common house gecko (*Hemidactylus frenatus*) in Ecuador. *Applied Herpetology*. 6(2, Sp. Iss. SI). 2009. 193-195.

[Jones, C. & Cole, N. 2004. \*Nactus coindemirensis\*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.2. . Downloaded on 20 January 2010.](#)

**Summary:** Available from: <http://www.iucnredlist.org/apps/redlist/details/40795/0> [Accessed 28 December 2009]

- Kraus, Fred., 2009. Alien Reptiles and Amphibians A Scientific Compendium and Analysis; In *Invading Nature- Springer Series in Invasion Ecology Volume 4* Series Editor: James A. Drake University of Tennessee, Knoxville, TN, U.S.A.
- Krisko, Kenneth L; Sheehy, Coleman M. III., 2005. Ecological status of the Ocellated Gecko, *Sphaerodactylus argus argus* Gosse 1850, in Florida, with additional herpetological notes from the Florida Keys. *Caribbean Journal of Science*. 41(1). 05. 169-172.
- Krisko, K.L., Sheehy III, C.M. & Hooper, A.N. 2003. Interspecific communal oviposition and reproduction of four species of lizards (Sauria: Gekkonidae) in the lower Florida Keys. *Amphibia-Reptilia* 24: 390-396.
- [Krisko, Kenneth L & Keidra J. Daniels., 2005. A Key to the Geckos \(Sauria: Gekkonidae\) of Florida. Caribbean Journal of Science, Vol. 41, No. 1, 28-36, 2005](#)
- Summary:** Available from: [http://www.caribjsci.org/april05/41\\_28-36.pdf](http://www.caribjsci.org/april05/41_28-36.pdf) [Accessed 28 December 2009]
- McCoid, Michael James., 1996. Putative interactions of geckos in the southern Mariana Islands. *Micronesica*. 28(2). 1996. 193-202.
- Meshaka, Walter E., Jr; Butterfield, Brian P; Hauge, Brian., 1994. *Hemidactylus frenatus* established on the lower Florida keys. *Herpetological Review*. 25(3). 1994. 127-128.
- Moritz, C; Case, T. J; Bolger, D. T; Donnellan, S., 1993. Genetic diversity and the history of Pacific island house geckos (*Hemidactylus* and *Lepidodactylus*). *Biological Journal of the Linnean Society*. 48(2). 1993. 113-133.
- [Newbery, Brock and Darryl N. Jones., 2005. Presence of Asian House Gecko \*Hemidactylus frenatus\* across an urban gradient in Brisbane: influence of habitat and potential for impact on native gecko species. Pp 59 - 65 in \*Pest or Guest: the zoology of overabundance\*, edited by Daniel Lunney, Peggy Eby, Pat Hutchings and Shelley Burgin. 2007. Royal Zoological Society of New South Wales, Mosman, NSW, Australia.](#)
- Summary:** Available from: [http://www98.griffith.edu.au/dspace/bitstream/10072/18554/1/50179\\_1.pdf](http://www98.griffith.edu.au/dspace/bitstream/10072/18554/1/50179_1.pdf) [Accessed 28 December 2009]
- Newbery, Brock and Jones, Darryl. 2008. Presence of Asian House Gecko *Hemidactylus frenatus* across an urban gradient in Brisbane: influence of habitat and potential for impact on native gecko species. *Pest or Guest: the zoology of overabundance*, Pp 59 - 65.
- Newbery, Brock; Dawson, Paul; Jones, Darryl N., 2005. Density of Asian House Geckos *Hemidactylus frenatus* within suburban Brisbane. *Queensland Naturalist*. 43(1-3). JUN 2005. 8-13.
- Ota, H. 1994. Female reproductive cycles in the northernmost populations of the two gekkonid lizards, *Hemidactylus frenatus* and *Lepidodactylus lugubris*. *Ecological Research* 9: 121-130.
- Paredes-Leon, Ricardo; Reynoso, Victor-Hugo., 2005. *Hemidactylus frenatus* (Common House Gecko). *Herpetological Review*. 36(4). DEC 2005. 467-468.
- Petren, Kenneth; Case, Ted J., 1996. An experimental demonstration of exploitation competition in an ongoing invasion. *Ecology* (Washington D C). 77(1). 1996. 118-132.
- Poulin, Brigitte; Lefebvre, Gaetan; Rand, A. Stanley., 1995. Lacertilia: *Hemidactylus frenatus* (House gecko): Foraging. *Herpetological Review*. 26(4). 1995. 205.
- Ramirez-Bautista, Aurelio; Hernandez-Salinas, Uriel; Leyte-Manrique, Adrian., 2006. *Hemidactylus frenatus* (common house gecko) - Reproduction. *Herpetological Review*. 37(1). MAR 2006. 85-86.
- [Reptiles Database, 2009. \*Hemidactylus frenatus\* Schlegel, 1836](#)
- Summary:** Available from: <http://reptile-database.reptarium.cz/species.php?genus=Hemidactylus&species=frenatus> [Accessed 8 September 2010]
- Rubio Morales, Beatriz; Cid Mendez, Eduardo ; Correa Sanchez, Felipe., 2009. *Hemidactylus frenatus* (Common House Gecko). BROOD. *Herpetological Review*. 40(3). SEP 2009. 345-346.
- Schmidt Ballard, Walter; Mendoza Quijano, Fernando; Martinez Solis, M. Ela., 1996. Range extensions for *Hemidactylus frenatus* in Mexico. *Herpetological Review*. 27(1). 1996. 40.
- [Townsend, Josiah H. and Kenneth L. Krisko., 2003. The Distribution of \*Hemidactylus\* \(Sauria: Gekkonidae\) In Northern Penninsular Florida. Biological Sciences No. 3 2003](#)
- Summary:** Available from: [http://www.cnah.org/pdf\\_files/88.pdf](http://www.cnah.org/pdf_files/88.pdf) [Accessed 28 December 2009]
- Vinson, J. & Vinson, J.M. 1969. The saurian fauna of the Mascarene Islands. *The Mauritius Institute Bulletin*, VI: 203-320.
- Wells, Richard W., 2002. Notes on the Genus *Hemidactylus* (Reptilia: Gekkonidae) in Australia. *Australian Biodiversity Record* 2002 (No 6) ISSN 1325-2992 March, 2002
- Werner, Y. L., 1990. Habitat- Dependent Thermal Regimes of Hawaiiin Geckos Reptilia Gekkonidae. *Journal of Thermal Biology*. 15(3-4). 1990. 281-290.
- Wiles, Gary J; Guerrero, Jesse P., 1996. Relative abundance of lizards and marine toads on Saipan, Mariana Islands. *Pacific Science*. 50(3). 1996. 274-284.
- Wiles G. J; Amerson, A B JR; Beck R E JR., 1989. Notes On The Herpetofauna of Tinian Mariana Islands Pacific Ocean. *Micronesica*. 22(1). 1989. 107-118.
- [Wilson, S. 2006. Asian House Geckos: Queensland Museum Fact Sheet.](#)
- Summary:** Available from: [www.qm.qld.gov.au/inquiry/factsheets/asian\\_house\\_geckos\\_20080709.pdf](http://www.qm.qld.gov.au/inquiry/factsheets/asian_house_geckos_20080709.pdf) [Accessed 5 May, 2010]
- Yamamoto, Yurie; Ota, Hidetoshi., 2006. Long-term functional sperm storage by a female common house gecko, *Hemidactylus frenatus*, from the Ryukyu archipelago, Japan. *Current Herpetology*. 25(1). JUN 2006. 39-40.