

Osteopilus septentrionalis 

System: Freshwater_terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Amphibia	Anura	Hylidae

Common name rana cubana (English), rana platernera (Spanish), Giant Tree-frog (English), Marbled Tree-toad (English), Cuban Treefrog (English)

Synonym *Trachycephalus insulsus* , Cope, 1864
Trachycephalus wrightii , Cope, 1864
Hyla schebestana , Werner, 1917
Hyla microterodisca , Werner, 1921
Trachycephalus marmoratus , Duméril & Bibron, 1841
Osteopilus septentrionalis , Duméril & Bibron, 1841
Hyla lesueurii , Bory de Saint-Vincent, 1828
Hyla sueurri , Bory de Saint-Vincent, 1831
Dendrohyas septentrionalis , Tschudi, 1838
Trachycephalus septentrionalis , Barbour, 1904
Hyla dominicensis septentrionalis , Mertens, 1939
Hyla insulsa , Mittleman, 1950
Hyla dominicensis insulsa , Mittleman, 1950

Similar species

Summary The Cuban treefrog, *Osteopilus septentrionalis* is a voracious, nocturnal predator that eats any prey that it can grab, including members of its own species, other frogs, lizards, insects, spiders, and small snakes. It is an arboreal species, but it can also survive in moist areas. It is an excellent climber and is variable in color. This species is a threat to native species primarily through predation and competition. The Cuban treefrog is easily distinguishable from other frogs by its comparably large size and warty skin. This species is very successful in colonizing and has a long life span, which can make it a very significant problem in regions where it is introduced.



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

Notes

Recent increases in shipping and trade, as well as increasing human populations and demands for non-regional produce and landscaping and building materials have enabled the dispersal and invasion of the Cuban treefrog (Platenberg, 2007). The Cuban treefrog is a storm-adapted species that can immediately increase its fecundity and rapidly disperse during and after hurricanes (Somma, 2008). High fecundity, a short larval period, broad diet, open habitat, and dietary niches make this species a successful widespread anuran population in situations that seem less than ideal for supporting it (Townsend, Eaton, Powell *et al*, 2000).

Lifecycle Stages

Eggs are around 3 mm when they hatch into tadpoles. Tadpoles typically emerge between 1 and 2 days after the eggs are laid (GSMFC, 2007). At about 20 hours after hatching, tadpoles are around 2 mm from snout to vent with a tail length of about 4 mm. They reach a size of 26-32 mm at metamorphosis, which occurs usually 30-60 days after hatching. The Cuban treefrog is a long-lived species with a lifespan of approximately 5-10 years (Masterson, 2007). Males tend to exhibit lower survival than females, which means that females have more time to grow than males. Males in some populations tend to live in a mature stage up to 3 months, whereas mature females can live more than 2 years. Due to the fact that there is a positive relationship between the snout, vent length and the number of eggs that are laid, research indicates that females mature more slowly than males, and they skip breeding events. However, there is no difference in the growth rates of male and female juveniles (Salinas, 2006a).

Uses

The Cuban treefrog has been used in the form of a pet as well as a display animal and in international horticulture. In fact, it has been reported that a large percentage of this species has been a part of captive breeding/farming at some point (Hedges *et al*, 2008).

Habitat Description

Osteopilus septentrionalis occurs from sea level up to 1,110m asl. Cuban treefrogs live in mesic habitats but may also be found in xeric habitats. This species can tolerate brackish water, which includes pools, marshes, flood pastures, and ditches (Hedges *et al*, 2008). Terrestrial habitats include forest-hardwood, mixed, suburban/orchard as well as woodland of conifers or mixed. Daytime retreats include surface objects, hollow logs, burrows, high corners of beams of rooms, and nests of birds to name a few. Larvae are aquatic (NatureServe, 2008). In addition, *O. septentrionalis* can easily coexist among humans. In fact, this species can be many times more numerous in urban habitats than any of its natural habitats (Meshaka, 1996a). The Cuban treefrog has been encountered in mangrove scrub and mangrove in addition to disturbed areas (Rice, Waddle, Crockett *et al*, 2007). *O. septentrionalis* is well known for exploiting man-made structures and water supplies, which results in the successful colonization of certain areas (Townsend, Eaton, Powell *et al*, 2000). This species has also occurred in agricultural settings such as orange groves and plant nurseries. It may also be found in small trees and shrubs, being an arboreal animal, and has even been found buried several inches below dry soil (Johnson, 2007).

Reproduction

Osteopilus septentrionalis reproduces at night and is largely stimulated by rainfall, especially warm summer rains (Johnson, 2007). Males have horny nuptial excrescences on their thumbs and a medial internal subgular vocal sac with posterolateral extensions (GSMFC, 2007). The vocal sac, which is located under the chin and when inflated has the appearance of a double sac, is used to make breeding calls. The fairly distinct calls of the male Cuban treefrog sounds like a squeaking door or a "snoring rasp" (Johnson, 2007). Males call from leaves, branches, limbs and stems of saplings (NatureServe, 2008). Breeding is non-assortive by the snout, vent length. However, males may increase their reproductive success by starting to breed with small snout, vent length females and by participating in all possible breeding events, and they apparently start to breed at a younger age than females (Salinas, 2006a). Males do not exhibit any parental care nor do they defend territories. Unpaired males often clasp males in amplexus or place themselves alongside other mated pairs (Salinas, 2006b). Females lay approximately 130 eggs, which are deposited in lakes, pools, cisterns, etc (GSMFC, 2007). However, the number of eggs deposited by the female is related to her size. A very large female may lay an excess of 15,000 eggs in one season (Johnson, 2007). The Cuban treefrog is capable of using pools of relatively high salinity for reproduction. Eggs form a thin floating sheet at the surface (GSMFC, 2007). Breeding events typically last only one night (Salinas, 2006b).

Nutrition

The Cuban treefrog is a "sit and wait" predator that feeds at night (Johnson, 2007). This species is a voracious predator that preys on any small animal that it can catch, especially insects, spiders, and other small frogs (GSMFC, 2007). This species is also known to eat lizards and small snakes (Johnson, 2007). Research concluded that there is no apparent trend in the size or hardness when looking at the composition of the diet or individual prey items present in the diet of the Cuban treefrog (Owen, 2005).

General Impacts

The Cuban treefrog has sticky skin secretions that can be extremely irritating to the mucous membranes of people. The secretions can cause a burning and itching sensation that can sometimes last for more than an hour. It can also be a nuisance to people because of its many abundant hiding places, consistent food sources, and adequate breeding sites that are many times provided by human dominated landscapes where populations may become quite dense. The standard of living may be lowered in areas where the Cuban treefrog prospers. For example, this species has been found in toilet bowls and has clogged drains. The mating calls of male Cuban treefrogs can be an annoyance as well (Johnson, 2007). The Cuban treefrog may also be a vector of pathogens (Hedges *et al*, 2008). Studies suggest that this species has the potential to inflict substantial monetary and ecological damage on the habitat that it invades (Owen, 2005). Adults are predators to native animals in areas of invasion, but larvae can also be threatening. Cuban treefrogs as tadpoles will prey on heterospecific anuran larvae, which may reduce the survivorship of these heterospecific tadpoles (Smith, 2005a).

Management Info

Preventative measures: Early detection and rapid response are very important for a rapid and successful eradication of this species in introduced areas (Campbell, 2008).

Biological: Some species of aquatic and terrestrial species of snake are predators of the Cuban treefrog (GSMFC, 2007).

Integrated management: Effectively screening cisterns and regulating water distribution will negatively impact established populations of Cuban treefrog (Townsend, Eaton, Powell, *et al*, 2000).

Chemical: Monitoring and fumigating imported plants should impair further dispersal of the species (Townsend, Eaton, Powell *et al* 2000).

Pathway

Recent increases in shipping, along with increasing human populations and demands for non-regional produce and landscaping building materials have enabled the dispersal of opportunistic invaders such as the Cuban treefrog (Platenberg, 2007). This species has been used as pets and display animals (Hedges *et al*, 2008).

Principal source:

Compiler: National Biological Information Infrastructure (NBII), Comité français de l'IUCN (IUCN French Committee) & IUCN SSC Invasive Species Specialist Group (ISSG)

Review:

Publication date: 2008-03-14

ALIEN RANGE

[1] ANGUILLA

[3] BES ISLANDS (BONAIRE, SINT EUSTATIUS AND SABA)

[1] COLOMBIA

[1] CURACAO

[1] GRENADA

[2] ANTIGUA AND BARBUDA

[1] CANADA

[2] COSTA RICA

[1] DOMINICA

[1] GUADELOUPE



GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Osteopilus septentrionalis*

[1] JAMAICA
[1] PANAMA
[1] PUERTO RICO
[1] SAINT KITTS AND NEVIS
[2] SAINT MARTIN (FRENCH PART)
[10] UNITED STATES
[4] VIRGIN ISLANDS, U.S.

[1] MEXICO
[1] PERU
[1] SAINT BARTHELEMY
[1] SAINT LUCIA
[1] TURKS AND CAICOS ISLANDS
[4] VIRGIN ISLANDS, BRITISH

Red List assessed species 6: NT = 1; LC = 5;

[Anaxyrus terrestris](#) LC
[Dryophytes squirellus](#) LC
[Leptodactylus albilabris](#) LC

[Dryophytes cinereus](#) LC
[Eleutherodactylus martinicensis](#) NT
[Thamnophis sirtalis](#) LC

BIBLIOGRAPHY

84 references found for *Osteopilus septentrionalis*

Management information

[Anguilla National Trust., 29th May 2007. Anguilla Invasive Species. Workshop Report 29th May 2007 Paradise Cove Hotel, Anguilla](#)

Summary: Available from: http://www.scsb.org/working_groups/resources/invasives-workshop-report-anguilla.pdf [Accessed 4 September 2008]

[Bomford, Mary; Fred Kraus; Mike Braysher; Liz Walter & Leanne Brown, 2005. Risk assessment model for the import and keeping of exotic reptiles and amphibians. A report produced by the Bureau of Rural Sciences for The Department of Environment and Heritage](#)

Summary: Available from: <http://www.feral.org.au/wp-content/uploads/2010/03/RepAmphRisk.pdf> [Accessed 19 August 2010]

[Campbell, S Todd., 2007. The Role of Early Detection and Rapid Response in Thwarting Amphibian and Reptile Introductions in Florida. USDA National Wildlife Research Center Symposia: Managing Vertebrate Invasive Species. University of Nebraska - Lincoln](#)

Summary: Available from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1005&context=nwrcinvasive> [Accessed 4 September 2008]

[Centre for Environment, Fisheries & Aquaculture Science \(CEFAS\), 2008. Decision support tools-Identifying potentially invasive non-native marine and freshwater species: fish, invertebrates, amphibians.](#)

Summary: The electronic tool kits made available on the Cefas page for free download are Crown Copyright (2007-2008). As such, these are freeware and may be freely distributed provided this notice is retained. No warranty, expressed or implied, is made and users should satisfy themselves as to the applicability of the results in any given circumstance. Toolkits available include 1) FISK- Freshwater Fish Invasiveness Scoring Kit (English and Spanish language version); 2) MFISK- Marine Fish Invasiveness Scoring Kit; 3) MI-ISK- Marine invertebrate Invasiveness Scoring Kit; 4) FI-ISK- Freshwater Invertebrate Invasiveness Scoring Kit and AmphISK- Amphibian Invasiveness Scoring Kit. These tool kits were developed by Cefas, with new VisualBasic and computational programming by Lorenzo Vilizzi, David Cooper, Andy South and Gordon H. Copp, based on VisualBasic code in the original Weed Risk Assessment (WRA) tool kit of P.C. Pheloung, P.A. Williams & S.R. Halloy (1999).

The decision support tools are available from:

<http://cefas.defra.gov.uk/our-science/ecosystems-and-biodiversity/non-native-species/decision-support-tools.aspx> [Accessed 13 October 2011]

[The guidance document](#) is available from http://www.cefas.co.uk/media/118009/fisk_guide_v2.pdf [Accessed 13 January 2009].

[Christy, Michelle T; Savidge, Julie A; Rodda, Gordon H., 2007. Multiple pathways for invasion of anurans on a Pacific island. Diversity & Distributions. 13\(5\). SEP 2007. 598-607.](#)

[Gregoire, D. R., 2005. Tadpoles of the Southeastern United States Coastal Plain. United States Geological Survey Report. Florida Integrated Science Center. 60pp](#)

Summary: Identification aid.

Available from: http://www.cnah.org/pdf_files/430.pdf [Accessed 4 September 2008]

[Hardin, Scott., 2007. Managing Non-Native Wildlife in Florida: State Perspective, Policy and Practice. USDA National Wildlife Research Center Symposia: Managing Vertebrate Invasive Species. University of Nebraska - Lincoln](#)

Summary: Available from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1013&context=nwrcinvasive> [Accessed 4 September 2008]

[Johnson, Steve, A., 2007. The Cuban Treefrog \(*Osteopilus septentrionalis*\) in Florida. Department of Wildlife Ecology and Conservation, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida.](#)

Summary: Available from: <http://edis.ifas.ufl.edu/pdffiles/UW/UW25900.pdf> [Accessed 4 September 2008]

[Kraus, Fred., 2007. Using Pathway Analysis to Inform Prevention Strategies For Alien Reptiles and Amphibians. USDA National Wildlife Research Center Symposia. Managing Vertebrate Invasive Species. University of Nebraska - Lincoln](#)

Summary: Available from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1020&context=nwrcinvasive> [Accessed 4 September 2008]

[Platenberg, Renata J.; Boulon, Ralf H., 2006. Conservation status of reptiles and amphibians in the U.S. Virgin Islands. Applied Herpetology, Volume 3, Number 3, 2006, pp. 215-235\(21\)](#)

[Rice, Kenneth G.; J. Hardin Waddle; Marquette E. Crockett; Christopher D. Bugbee; Brian M. Jeffery; and H. Franklin Percival., 2007. Herpetofaunal Inventories of the National Parks of South Florida and the Caribbean: Volume IV. Biscayne National Park. Open-File Report 2007-1057 U.S. Department of the Interior U.S. Geological Survey](#)

Summary: Available from: <http://pubs.usgs.gov/of/2007/1057/pdf/ofr2007-1057.pdf> [Accessed 6 September 2008]



GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Osteopilus septentrionalis*

[University of Florida, undated. Factsheet: Cuban Treefrog - *Osteopilus septentrionalis*. Lee County Extension Service. An IFAS Publication adopted from <http://www.wec.ufl/extension/> - Dept of Wildlife Ecology & Conservation, Institute of Food & Agricultural Sciences, University of Florida](#)

Summary: Available from: <http://lee.ifas.ufl.edu/AgNatRes/Pubs/Factsheet%20-%20Cubtreefrog%20.pdf> [Accessed 4 September 2008]

[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]

[Witmer, Gary W., Patrick W. Burke, Will C. Pitt, Michael L. Avery., 2007. Management of Invasive Vertebrates in the United States: An overview. USDA National Wildlife Research Center Symposia: Managing Vertebrate Invasive Species. University of Nebraska Lincoln](#)

Summary: Available from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1055&context=nwrcinvasive> [Accessed 6 September 2008]

Goetz SM, Guyer C, Boback SM, Romagosa CM (2018) Toxic, invasive treefrog creates evolutionary trap for native gartersnakes. *Biological Invasions* 20 (2): 519-531.

Haggerty CJ, Crisman TL (2015) Pulse disturbance impacts from a rare freeze event in Tampa, Florida on the exotic invasive Cuban treefrog, *Osteopilus septentrionalis*, and native treefrogs. *Biological Invasions* 17 (7): 2103-2111.

Ortega N, Price W, Campbell T, Rohr J (2015) Acquired and introduced macroparasites of the invasive Cuban treefrog, *Osteopilus septentrionalis*. *International Journal for Parasitology: Parasites and Wildlife* 4 (3): 379-384.

Tennessen JB, Parks SE, Tennessen TP, Langkilde T (2016) Raising a racket: invasive species compete acoustically with native treefrogs. *Animal Behaviour* 114: 53-61.

Tennessen J, Parks SE, Snow RW, Langkilde TL (2013) Impacts of acoustic competition between invasive Cuban treefrogs and native treefrogs in southern Florida. In *Proceedings of Meetings on Acoustics ICA 19 (1): 010057*. Acoustical Society of America.

General information

[American Museum and Natural History, 2008. Amphibians Species of the World 5.2, an Online Reference. Species: *Osteopilus septentrionalis* Dumeril and Bibron, 1841.](#)

Summary: taxonomy, distribution, description

Andrews JM, Childress JN, Iakovidis TJ, Langford GJ (2015) Elucidating the life history and ecological aspects of *Allodero hylae* (Annelida: Clitellata: Naididae), a parasitic oligochaete of invasive Cuban tree frogs in Florida. *Journal of Parasitology* 101 (3): 275-281.

Bartareau, Tad M., 2004. PVC pipe diameter influences the species and sizes of treefrogs captured in a Florida coastal oak scrub community. *Herpetological Review*. 35(2). June 2004. 150-152.

Bartareau, Tad M; Meshaka, Walter E., 2007. *Osteopilus septentrionalis* (Cuban treefrog). Diet. *Herpetological Review*. 38(3). SEP 2007. 324-325.

Breuil, M. 2002. Histoire naturelle des Amphibiens et des Reptiles terrestres de l'archipel Guadeloupéen. In *Patrimoines Naturels*, MNHN, Paris.

Summary: Ce livre propose une synthèse sur les amphibiens et reptiles terrestres de l'archipel Guadeloupéen. Six espèces d'anoures, 5 de tortues, 21 de lézards dont 4 teintes et 7 de serpents sont détaillés.

Breuil, M. & Ibáñez, B. 2004. Les Hylides invasifs dans les Antilles françaises et le peuplement batrachologique naturel. *Bull. Soc. Herpetol. Fr*, 10 p.

Summary: Synthèse des introductions d'hylides (rainettes) dans les Antilles françaises. Trois espèces exotiques et envahissantes sont inventoriées.

[Breuil, Michel - Ed. 2003. *Osteopilus septentrionalis*. Museum national d'histoire naturelle de Paris \(Paris- 2002\)](#)

Summary: Rapport scientifique sur la rainette de Cuba. Sont présentés sa systématique, sa répartition dans l'archipel Guadeloupéen, son habitat, sa biologie, etc

Available from: <http://sxm.fauna.free.fr/Rep/A-Osteopilus-septentrionalis.htm> [Accessed 7 April 2008]

Campbell, Todd S., 2007. *Osteopilus septentrionalis* (Cuban Treefrog). Saurophagy. *Herpetological Review*. 38(4). DEC 2007. 440.

[Cayman Wildlife Connection., 2004. Amphibians and Reptiles in the Cayman Islands](#)

Summary: Available from: <http://www.caymanwildlife.org/docs/Amphib-Reptiles.doc> [Accessed 4 September 2008]

Christman, Steven P; Young, Cameron A; Gonzalez, Shannon; Hill, Karen; Navratil, George; Delis, Pablo., 2000. New records of amphibians and reptiles from Hardee County, Florida. *Herpetological Review*. 31(2). June, 2000. 116.

Daltry, Jennifer, C., 2007. An introduction to the herpetofauna of Antigua, Barbuda and Redonda, with some conservation recommendations. *Applied Herpetology*, Volume 4, Number 2, 2007, pp. 97-130(34)

Dodd, C. Kenneth, Jr; Griffey, Marian L., 2002. Remarks on the current status of the non-marine herpetofauna of Egmont Key, Florida. *Florida Scientist*. 65(1). Winter, 2002. 62-66

Summary: Abstract: The present, non-marine herpetofauna of Egmont Key consists of three (possibly four) snakes, two (possibly five) lizards, two turtles, and three frogs. Three species (Cuban Treefrog, *Osteopilus septentrionalis*; Indo-Pacific Gecko, *Hemidactylus garnotii*; Cornsnake, *Elaphe guttata*) are reported for the first time. The Cuban Treefrog and Indo-Pacific Gecko likely arrived with construction material; the sole Cornsnake may have been a released captive. There are no recent records of three species (Green Treefrog, *Hyla cinerea*; Mole Skink, *Eumeces egregius*; Eastern Diamond-backed Rattlesnake, *Crotalus adamanteus*). The Green Anole (*Anolis carolinensis*), thought extirpated, was resighted in 1998. This species may have recently recolonized or been transported to the island rather than have persisted unseen for more than 90 years.

Forys, Elizabeth A. & Craig R. Allen., 1998. Biological invasions and deletions: community change in south Florida. *Biological Conservation* Volume 87, Issue 3, (March 1999) Pages 341-347

Franz, Richard, C; Kenneth Dodd Jr.; & Donald W. Buden., 1993. Distributional Records of Amphibians and Reptiles from the Exuma Islands, Bahamas, Including the First Reports of a Freshwater Turtle and an Introduced Gecko. *Caribbean Journal of Science*, Vol. 29, No. 3-4, 165-173, 1993

[Global Biodiversity Information Facility \(GBIF\), 2008. Species: *Osteopilus septentrionalis* Duméril & Bibron, 1841.](#)

Summary: Available from: <http://data.gbif.org/species/13847304> [Accessed 15 June 2010]

Global Invasive Species Database (GISD) 2026. Species profile *Osteopilus septentrionalis*. Available from: <https://www.iucngisd.org/gisd/species.php?sc=1261> [Accessed 24 May 2026]

[Gulf States Marine Fisheries Commission \(GSMFC\), 2007. *Osteopilus septentrionalis* \(Duméril and Bibron, 1841\)](#)

Summary: Available from: http://nis.gsmfc.org/nis_factsheet.php?toc_id=206 [Accessed 4 September 2008]

Guzy, Jackie C; Campbell, Todd S; Campbell, Kym Rouse., 2006. Effects of hydrological alterations on frog and toad populations at Morris Bridge Wellfield, Hillsborough County, Florida. Florida Scientist. 69(4). FAL 2006. 276-287.

Summary: Amphibian populations worldwide have been declining for decades, largely due to habitat destruction, water pollution, and introduced species. Wetland impacts are often the cause of local amphibian declines. We studied the effect of alterations in wetland hydrology on frog and toad populations at Morris Bridge Wellfield (MBWF) in Hillsborough County, Florida. Frogs and toads in wetlands in zones of different surficial aquifer drawdown levels were studied to determine if hydrological differences resulting from groundwater pumping affected their populations. Nighttime call surveys and tadpole sampling were conducted at 16 wetlands in three drawdown zones from June through August 2004. While there was no significant relationship between the number of tadpole species and drawdown zone, the zone unaffected by groundwater pumping had significantly higher tadpole densities than the other zones. No correlation was found between the number of species calling in each wetland and the number of tadpole species captured. Cuban treefrogs (*Osteopilus septentrionalis*), an introduced species that competes with and consumes native frogs, comprised 48% of tadpoles captured and were found at 50% of the wetlands studied. This marks the beginning of a long-term study of the interaction between the impacts of hydrological alterations and introduced species on native frogs and toads at MBWF.

[Hedges, Blair., Luis Díaz, Beatrice Ibón, Rafael Joglar, Robert Powell, Federico Bolaños, Gerardo Chaves 2008. *Osteopilus septentrionalis*. In: IUCN 2008. 2008 IUCN Red List of Threatened Species. . Downloaded on 09 April 2009.](#)

Summary: Available from: <http://www.globalamphibians.org/servlet/GAA?searchName=Osteopilus+septentrionalis> [Accessed 4 September 2008]

[ITIS \(Integrated Taxonomic Information System\), 2008. Online Database *Osteopilus septentrionalis* \(Duméril and Bibron, 1841\)](#)

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=173538 [Accessed 11 March 2008]

Johnson, Steve A., 2007. *Osteopilus septentrionalis* (Cuban treefrog). Herpetological Review. 38(3). SEP 2007. 349.

Johnson, Steve A; Staiger, Jennifer S; Barichivich, William J; Barlow, Steve., 2003. *Osteopilus septentrionalis* (Cuban treefrog). Herpetological Review. 34(4). December 2003. 381.

[Krysko, Kenneth L; Enge, Kevin M; Townsend, Josiah H; Langan, Esther M; Johnson, Steve A; Campbell, Todd S., 2005. New county records of amphibians and reptiles from Florida. Herpetological Review. 36\(1\). MAR 05. 85-87.](#)

Krysko, Kenneth L; King, F. Wayne., 1999. *Osteopilus septentrionalis* (Cuban treefrog). Herpetological Review. 30(4). Dec., 1999. 230-231.

Lindsay, Kevel & Cooper, Brian., 2008. *Osteopilus septentrionalis* becomes established on Antigua, West Indies. Applied Herpetology, Volume 5, Number 1, 2008 , pp. 96-98(3)

Livo, Lauren J., Geoffrey A. Hammerson, Hobart M. Smith., 1998. Summary of Amphibians and Reptiles Introduced into Colorado. Northwestern Naturalist, Vol. 79, No. 1 (Spring, 1998), pp. 1-11

Lorvelec, O., Pascal, M., Pavis, C., Feldmann, P. 2007. Amphibians and reptiles of the French West Indies : Inventory, threats and conservation. Applied Herpetology 4, 131-161

Summary: Cet article fait le point des connaissances sur les amphibiens et les reptiles indigènes et introduits des Antilles françaises. Les impacts des espèces introduites sur la faune indigène sont discutés. Le cas de la conservation des populations de *Iguana delicatissima* sur l'île de Petite-Terre est présenté

Love, William B., 1995. Anura: *Osteopilus septentrionalis* (Cuban treefrog). Predation. Herpetological Review. 26(4). 1995. 201-202.

Malhotra, Anita; Thorpe, Roger S; Hypolite, Eric; James, Arlington., 2007. A report on the status of the herpetofauna of the Commonwealth of Dominica, West Indies. Applied Herpetology, Volume 4, Number 2, 2007 , pp. 177-194(18)

[Masterson, J., 2007. Species Name: *Osteopilus septentrionalis* Common Name: \(Cuban Treefrog\). Smithsonian Marine Station at Fort Pierce](#)

Summary: Available from: http://www.sms.si.edu/irlspec/Osteopilus_septentrionalis.htm [Accessed 4 September 2008]

Meshaka, Walter E. Jr., 1996a. Diet and the colonization of buildings by the Cuban treefrog, *Osteopilus septentrionalis* (Anura: Hylidae). Caribbean Journal of Science. 32(1). 1996. 59-63.

Meshaka, Walter E. Jr., 1996. Anura: *Osteopilus septentrionalis* (Cuban treefrog). Maximum size. Herpetological Review. 27(2). 1996. 74.

Meshaka, Walter E. Jr., 1996b. Retreat use by the Cuban treefrog (*Osteopilus septentrionalis*): Implications for successful colonization in Florida. Journal of Herpetology. 30(3). 1996. 443-445.

Meshaka, Walter E. Jr., 1996. Vagility and the Florida distribution of the Cuban treefrog (*Osteopilus septentrionalis*). Herpetological Review. 27(1). 1996. 37-40.

Meshaka, Walter E., Jr., 1999. The herpetofauna of the Doc Thomas House in South Miami, Florida. Florida Field Naturalist. 27(3). Aug., 1999. 121-123.

Meshaka, Walter E., Jr., 1999. The herpetofauna of the Kampong. Florida Scientist. 62(3-4). Summer-Autumn, 1999. 153-157.

Summary: Fourteen reptile and three amphibian species were present at the Kampong, a four ha tropical garden in Coconut Grove, Dade County, Florida. Only four species were native, indicating that the herpetofauna of the Kampong was an artifact assemblage dominated by exotic species, mostly small-bodied lizards. Eleven of the 13 exotic species present were established and comprised 42% of the terrestrial and arboreal exotic herpetofauna of Dade County. A new species for North America, *Mabuya multifasciata* (Lacertilia: Scincidae) of southeast Asia was recorded at the Kampong. The herpetofauna of the Kampong reflected the changing herpetofaunal community of southern Florida. The protected nature of the Kampong and recent acquisitions of adjacent land favor the persistence of both native and exotic herpetofauna.

Meshaka, Walter E., Jr; Ferster, Betty., 1995. Two species of snakes prey on Cuban treefrogs in southern Florida. Florida Field Naturalist. 23(4). 1995. 97-98.

Meshaka, Walter E., Jr; Jansen, Kevin P., *Osteopilus septentrionalis* (Cuban treefrog). Predation. Herpetological Review. 28(3). 1997. 147-148

Meshaka WE (1994) Ecological correlates of successful colonization in the life history of the Cuban Treefrog, *Osteopilus septentrionalis* (Anura: Hylidae). PhD Dissertation, Florida International University, Miami, Florida. pp. 55-69



GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Osteopilus septentrionalis*

[NatureServe., 2008. *Osteopilus septentrionalis* - \(Duméril and Bibron, 1841\) Cuban Treefrog](#)

Summary: Available from: <http://www.natureserve.org/explorer/servlet/NatureServe?searchName=Osteopilus+septentrionalis> [Accessed 4 September 2008]

Neils, Aletris; Bugbee, Chris., 2007. *Rana catesbeiana* (American Bullfrog). Diet. Herpetological Review. 38(4). DEC 2007. 443.

Owen, Jennifer; Perry, Gad; Lazell, James; Petrovic, Clive; Egelhoff, Jim., 2006. *Osteopilus septentrionalis* (Cuban tree frog). Colonization of the British Virgin Islands. Herpetological Review. 37(1). MAR 2006. 74-75.

Owen JL (2005) The Cuban tree frog (*Osteopilus septentrionalis*): distribution, diet, and reproduction of an invasive species in the British Virgin Islands (Doctoral dissertation, Texas Tech University).

Perry, Gad; Platenberg, Renata., 2007. Recent additions to the herpetofauna of little St. James, US Virgin Islands. Applied Herpetology. 4(4). 2007. 387-389.

Pieteron, E. Corrie; Addison, Lindsay M; Agobian, Jorge N; Brooks-Solveson, Brenda; Cassani, John; Everham, Edwin M. III., 2006. Five years of the Southwest Florida Frog Monitoring Network: Changes in frog communities as an indicator of landscape change. Florida Scientist. 69(Suppl. 2). 2006. 117-126.

[Platenberg, Renata, J., 2007. Impacts Of Introduced Species On An Island Ecosystems: Non-Native Reptiles and Amphibians in the US Virgin Islands. Managing Vertebrate Invasive Species: Proceedings of an International Symposium \(G. W. Witmer, W. C. Pitt, K. A. Fagerstone, Eds\). USDA/APHIS/WS, National Wildlife Research Center, Fort Collins, CO. 2007](#)

Summary: Available from: <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1038&context=nwrcinvasive> [Accessed 4 September 2008]

[Raffucci, Félix A. Grana., Junio, 2007. Nomenclatura de los organismos acuáticos y marinos de puerto rico e islas vírgenes. Volumen 8: Vertebrados acuáticos y marinos de Puerto Rico e Islas Vírgenes \(exclusivo Peces\). Clase Amphibia Clase Reptilia Clase Mammalia](#)

Summary: Available from: <http://drna.gobierno.pr/biblioteca/publicaciones/tecnicas/vertebrados01.pdf> [Accessed 4 September 2008]

Rice, Amanda N; Rice, Kenneth G; Waddle, J. Hardin; Mazzotti, Frank J., 2006. A portable non-invasive trapping array for sampling amphibians and reptiles. Herpetological Review. 37(4). DEC 2006. 429-430.

Rivero, J. A. 1998. Los anfibios y reptiles de Puerto Rico/The Amphibians and Reptiles of Puerto Rico. 2nd Ed. Edit. Univ. P. R. San Juan, P. R.

Summary: Introduction of the species in Puerto Rico

[Rojer, Anne, 1997. The Animals of St. Maarten, undated. APPENDIX III Biological Inventory of St. Maarten. Biological Survey. The Animals of St. Maarten. KNAF project 96-10 November 1997 Carmabi Foundation Postbus 2090 Curaçao, Nederlandse Antillen](#)

Summary: Available from: <http://www.mina.vomil.an/Pubs/RojerSXMannex3.html> [Accessed 4 September 2008]

Salinas, Fernando Vargas., 2006a. Sexual size dimorphism in the Cuban treefrog *Osteopilus septentrionalis*. Amphibia-Reptilia. 27(3). SEP 2006. 419-426

Salinas, Fernando Vargas. 2006b. Breeding behavior and colonization success of the Cuban treefrog *Osteopilus septentrionalis*. Herpetologica. 62(4). DEC 2006. 398-408.

Smith, Kevin G., 2004. *Osteopilus septentrionalis* (Cuban treefrog). Reproductive behavior. Herpetological Review. 35(4). December 2004. 374-375.

Smith, Kevin G., 2005a. An exploratory assessment of Cuban Treefrog (*Osteopilus septentrionalis*) tadpoles as predators of native and nonindigenous tadpoles in Florida. Amphibia-Reptilia. 26(4). DEC 2005. 571-575.

Smith, Kevin G., 2005b. Effects of nonindigenous tadpoles on native tadpoles in Florida: evidence of competition. Biological Conservation. 123(4). JUN 05. 433-441.

Smith, Kevin G., 2006. Keystone predators (eastern newts, *Notophthalmus viridescens*) reduce the impacts of an aquatic invasive species. Oecologia (Berlin). 148(2). JUN 2006. 342-349.

[Somma, Louis A. . 2008. *Osteopilus septentrionalis*. USGS Nonindigenous Aquatic Species Database, Gainesville, FL.](#)

Summary: Available from: <http://nas.er.usgs.gov/queries/FactSheet.asp?speciesID=57> [Accessed 4 September 2008]

[St. Croix Environmental Information Repository., 2006. St. Croix Wildlife. Information provided on this page was excerpted from A Comprehensive Wildlife Conservation Strategy for the U.S. Virgin Islands, 2005, USVI Department of Planning & Natural Resources, Division of Fish & Wildlife.](#)

Summary: Available from: <http://www.usvircd.org/STXEIR/STXwildlife.htm> [Accessed 4 September 2008]

[Townsend, Josiah H; Eaton, James M; Powell, Robert; Parmerlee, John S., Jr; Henderson, Robert W., 2000. Cuban Treefrogs \(*Osteopilus septentrionalis*\) in Anguilla, Lesser Antilles. Caribbean Journal of Science. 36\(3-4\). December, 2000. 326-328.](#)

Summary: Available from: http://academic.uprm.edu/publications/cjs/Vol36b/36_326_328.pdf [Accessed 22 June 2010]

[Townsend, Josiah, H; Kenneth L. Krysko; Anthony T. Reppas & Coleman M Sheehy III., 2002. Noteworthy Records for Introduced Reptiles and Amphibians from Florida, USA. Herpetological Review, 2002, 33\(1\), 75.](#)

Summary: Available from: http://www.naherpetology.org/pdf_files/41.pdf [Accessed 4 September 2008]

Townsend, Josiah H; Krysko, Kenneth L; Reppas, Anthony T; Sheehy, Coleman M., 2002. Noteworthy records for introduced reptiles and amphibians from Florida, USA. Herpetological Review. 33(1). March, 2002. 75.

Tuberville, Tracey D., John D. Willson, Michael E. Dorcas, and J. Whitfield Gibbons., 2005. Herpetofaunal Species Richness of Southeastern National Parks. Southeastern Naturalist. Volume 4, Issue 3 (September 2005) pp. 537-569

Van Buurt G (2006) Conservation of amphibians and reptiles in Aruba, Curaçao and Bonaire. Applied Herpetology 3 (4): 307-321.

van Buurt, Gerard., 2007. Breeding population of *Osteopilus septentrionalis* in Curacao. Applied Hepetology 4(4). 2007. 390-391.

Vargas-Salinas, Fernando., 2006. *Osteopilus septentrionalis* (Cuban Tree Frog). Reproduction. Herpetological Review. 37(2). JUN 2006. 205.

Wyatt, Julie L; Forys, Elizabeth A., 2004. Conservation implications of predation by Cuban Treefrogs (*Osteopilus septentrionalis*) on native hylids in Florida. Southeastern Naturalist. 3(4). 2004. 695-700.