

Beware of Invasive Cane Toads: Huge Toad is a Dog and Koi Killer

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Toxic Cane Toads are Everywhere!

Be careful when walking your dogs in South Florida. Don't let them stray into the bushes or nose around without supervision. Especially at night! They may find a toxic Cane Toad.

This toad defends itself using chemical warfare. When disturbed, it releases (sometimes squirts) milky toxins that will burn the eyes, inflame the skin, and are rapidly absorbed across the mucus membranes of the victim into the circulatory system. If your pet bites or swallows a Cane Toad, it will become sick and may die in as little as 15 minutes unless you take immediate action.

Photo: Think Fish Media © 2004-2013

BEWARE! DOG KILLER



Cane Toad, *Rhinella marina*
[Formerly *Bufo marinus*] AKA
"Bufo Toad", Marine Toad or Giant Toad

INITIAL TREATMENT

Scrub the toxins away from its mouth (not into its stomach). Take a wash cloth and try to clean the gums and mouth as you sponge the poison away. Do this for about 15 minutes **then get to the veterinarian ASAP.**

Check Your Yard

If you have pets it is a good idea to catch and identify ANY toad you see in your yard to be sure that they aren't dangerous. With very few exceptions, any toad in Florida that is larger than 4 inches is NOT native and is almost certainly an invasive Cane Toad.

Wear gloves to protect yourself and catch them at dusk or at night in a net or plastic bag. They especially come out in big

SYMPTOMS

The first indication of a problem is pawing at the mouth and frantic, disoriented behavior. The mucus membranes turn a brick red (instead of pink) and the animal will foam profusely at the mouth. Other symptoms include vomiting, head-shaking, crying, loss of coordination and sometimes convulsions.

numbers during wet and rainy evenings. Place it in a sealed baggy and freeze for about a week. Discard in the trash.

More detailed information on following pages...

Good Toad • Bad Toad: Naples Reporting Increasing Numbers of Cane Toads

A South Naples (off Davis Blvd) resident warned me that they were seeing large numbers of these toads. He had collected a dozen in an hour! So, I had to see if my dog's exercise habitat was a toad gauntlet. I went for a

10:00 p.m. walk and found 8 in 30 minutes! When we have rainy, rainy seasons and mild winters, frog and toad populations will most likely abound. Dog lovers, snowbirds especially, need to be careful when walking

your dog in south Florida. Don't let them stray into the bushes or nose around without supervision! They may find a toxic toad, the cane toad! Dogs especially may want to chew on it or eat it, which could end up requiring a visit to the pet emergency hospital. For small pets and wild animals, this toad toxin could be deadly. These toads will also climb into outdoor food bowls to consume leftovers, which may also lead to a confrontation with Fido. So sanitation is important in reducing possible encounters.

Cane Toad Size

Adults of the cane toad (AKA, marine toad) or *Rhinella marina*, previously *Bufo marinus*, are the

largest toad found in the US. It's natural range includes south Texas through Mexico and South America. It grows from a tadpole to a 6 to 9 inch long toad; this is just the body without the legs extended! The Guinness Book of Records reports a pet cane toad record length of 15 inches body length and weighed in at 5.84 pounds. There are urban legends about how this toad, wound up in south Florida.

It may have escaped from zoos or pet stores and/or was released as a biocontrol agent for large beetles in sugarcane fields, hence the "cane" name. However, University of Florida, Sugarcane Entomologist, Dr. Ron Cherry, doubts the toads have

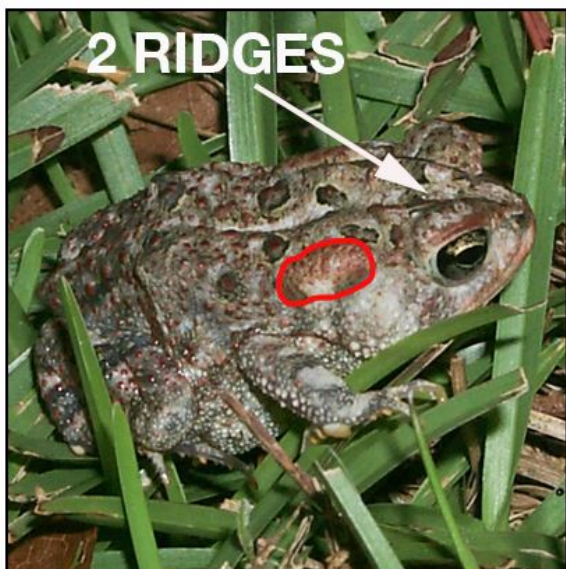
diminished the beetle populations. And Les Baucum, UF Regional Sugarcane Extension Agent states, "I have spent many, many hours in and around sugarcane fields and have NEVER seen a cane toad."

These toads were intentionally released in 1935 in Australian sugarcane fields for beetle control and it has become an ecological nightmare there (see references at end of article) with no beetle control benefits either.

Toad I.D.

Do not confuse these bad toads with our native, southern toad, *Anaxyrus terrestris*, previously *Bufo terrestris*. The southern toad stays under 4

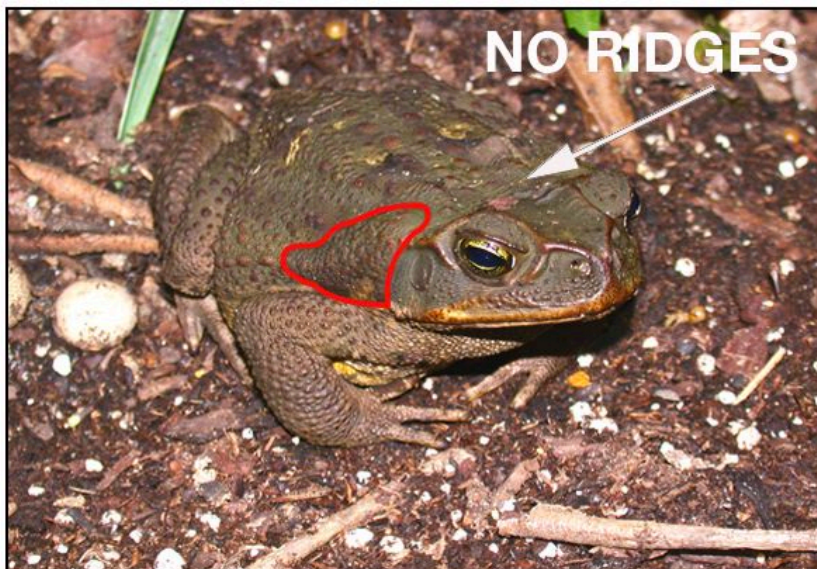
Photo: U.S. Geological Survey



Native Southern Toad

The Southern Toad stays under 4 inches in length. It also has smaller oval parotoid glands and two short, parallel ridges that start as knobs between the eyes and extend down the back.

Photo: Doug Caldwell



Invasive Poisonous Cane Toad

The invasive Cane Toad has no knobs or ridges between the eyes. There are 2 larger triangular parotoid glands located just below the shoulders. Many grow to the size of a salad plate and become up to four pounds in weight.



Toxin being released from the parotoid glands of the Cane Toad.

inches in length. The southern toad also has smaller parotoid glands and two short, parallel ridges that start as knobs between the eyes and extend down the back for an inch or so. The cane toad has no knobs or ridges between the eyes. The cane toad has dry, warty skin and the color is usually various shades of brown with some grey, some are yellow, red-brown or olive brown with varying brown and white mottling.

Poisonous Pest!

This toad defends itself using chemical warfare. When disturbed, it releases (sometimes squirts if stepped on) toxins. These toxins are secreted in a milky substance from the toad's large parotoid glands, which are an aggregation of granular glands (modified mucous glands) located at the back of the head, behind and to the side of each ear drum (tympanum). These toxins will burn the eyes, inflame the skin, and are rapidly absorbed across the mucus membranes of the victim into the circulatory system. There is a

wide variety of toxins secreted by this toad.

Rapid Reproduction

A female deposits batches of 8,000 to 25,000 eggs and the gelatinous egg strings can stretch up to 66 feet in length. Eggs are deposited in water and hatch into tadpoles within 2 to 3 days and become land dwelling toadlets in 45 to 50 days. The toads can live 10 to 15 years. All parts of the Cane Toad are poisonous—eggs, juveniles and adults.

Dog Killers

Dogs (especially certain breeds such as terriers and Jack Russells), tend to be curious and if they latch onto one of these big toads there can be serious health consequences. The first indication of a problem is pawing at the mouth and frantic, disoriented behavior. The mucus membranes turn a brick red (instead

of pink) and the animal will foam profusely at the mouth; often vomit; and may vocalize and the eyes may move rapidly back and forth.

Convulsions are not uncommon. This may progress to stupor and death, especially with smaller dogs. Death may occur in as little as 15 minutes due to cardiac arrhythmia.

Symptoms & First Aid

If your dog exhibits these symptoms it is crucial to immediately remove *the toxins from its mouth* (not into its stomach). Take a wash cloth and try to clean the gums and mouth as you rinse the poison away. Mixing hydrogen peroxide with water 50:50 on a wash cloth wash may help deactivate the toxin. Then get to the veterinarian ASAP. If the toad was swallowed, it must be removed, either surgically or with an endoscope. Fido's temperature should be monitored because



A female deposits batches of 8,000 to 25,000 eggs and the gelatinous egg strings can stretch up to 66 feet in length. Beware! they are poisonous.

dangerously high temperature often follows the intense muscular activity induced by the toxins.

Thanks to Dr. Joshua Parra, Florida Veterinary Referral Center (Estero) for sharing cane toad experiences.

Fish Deaths

In March 2012, a local hotelier reported a koi incident: *“Our pond is 250 gallons and we lost 8-10 koi. We were maintaining the water feature of the pond and my tech moved one of the rocks that is a part of this feature and exposed a nest with about 10 black toads all of which proceeded to seek shelter in the pond—30 minutes later all the koi went belly up. Strangely enough, we have 2 plecostomus (bottom feeder), which were fine.”*

More References:

Steve A. Johnson and M. E. McGarrity. 2017. Florida Invader: Cane Toad., See: <http://edis.ifas.ufl.edu/pdffiles/UW/UW34500.pdf>

<http://ufwildlife.ifas.ufl.edu/frogs/canetoad.shtml>

http://www.critterology.com/bufo_toads_poisonous_to_pets-226.html

Click this link to hear this toad's particular song:

http://www.wec.ufl.edu/extension/wildlife_info/frogstoads/rhinella_marina.php

A 5-part Australian video series: Cane Toads an Unnatural History:

<http://www.youtube.com/watch?v=v6ERCHF1N1A&feature=relmfu>

Nigel Turvey. 2013. Cane Toads: A tale of sugar, politics and flawed science. Sydney Univ. Press. 247 pp.

Doug Caldwell is a Certified Arborist and the commercial horticulture extension agent and landscape entomologist with the University of Florida Collier County Extension Service. The Cooperative Extension Service is an off-campus branch of the University of Florida, Institute of the Food and Agricultural Sciences and a department of the Public Services Division of Collier County government. Extension programs are open to all persons without regard to race, color, creed, sex, handicap or national origin.

For updates on the Southwest Florida horticulture visit: <http://collier.ifas.ufl.edu>



Partial catch from June 2014 neighborhood Cane Toad hunt—37 Toads collected in one hour on a one mile hike.

Since this is not direct contact on land, it seems like an unexpected event, but the literature reports koi ponds with eggs (and possibly the tadpoles) of cane toads can kill koi fish. In several cases, koi have died in a small pond within 24 hours after a cane toad laid its eggs in that pond. It was unclear if the fish had eaten the eggs or if simply the presence of the eggs was toxic to the koi.

What To Do

Mike Freedman, Horticulturist from Fairchild Tropical Botanic Garden states, *“The toads are exotic and dangerous and should be removed from the U.S., but with a cool head.”*

You might even work on helping reduce the cane toad populations by having neighborhood toad hunts. To catch a cane toad, use gloves and a fish or butterfly net. Place in a baggy and freeze for about a week and discard in the trash the day it will be picked up. 🐸

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