

# Enhancing Regulations of Invasive Reptiles



July 23, 2020

**Florida Fish and Wildlife Conservation Commission**

Version 3

This document summarizes staff proposals for draft rules that address a recent statutory change regarding the possession of some species of invasive reptiles.

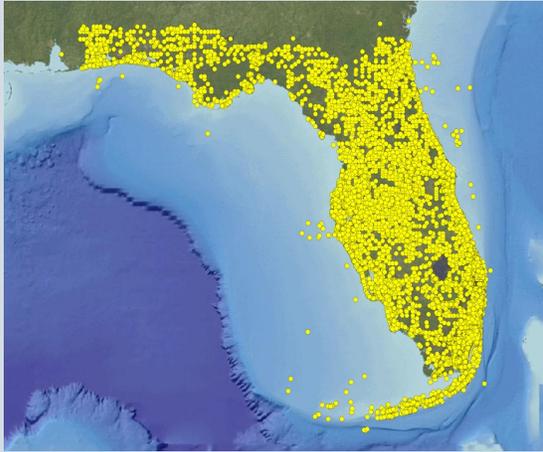
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All photos are MyFWC unless otherwise noted.

# Nonnative Wildlife in Florida



*FWC 1924 - Present*

- Over 500 nonnative fish and wildlife species have been observed in Florida
- At least 150 species are established and reproducing
- Over 100,000 observations (excluding lionfish)

Over 500 different species have been documented in Florida. Of these introductions, at least 150 species are estimated to have reproducing populations.

Nonnative species causing adverse impacts, or that are likely to cause adverse impacts, are considered invasive. FWC has many responsibilities related to nonnative species including research on impacts, management and removal, permitting importation and possession, inspection of retail and wholesale facilities, enforcement of State Laws and FWC rules.



# Invasive Fish and Wildlife Pathways



- Live Animal Trade
  - Aquaria releases
  - Escaped/released captive wildlife/live animals
- Hurricanes and natural disasters
- Occasional stowaways



While not the only pathway, it is widely accepted that the greatest pathway by which nonnative fish and wildlife find their way into Florida's habitats is through escape or release from the pet trade. Due to Florida's prominence in the exotic pet trade, many species of imported pets are released or escaped.

Although these actions can lead to major impacts, a large number of Florida's residents want to own exotic species as pets. Reptiles for example are extremely popular, especially in urban areas as they do not require large backyards. Exotic pet shows and expos are popular in Florida with more events than in any other state. Almost 90% of the exotic pets purchased at these events go to private individuals.

*Photo: FWC investigator with intercepted shipment of Nile tilapia in Miami. (FWC)*

# Nonnative Animal Businesses



- Over 224 million documented live animals imported to U.S. annually
- Sold in retail
- Breeding
- Export



Over 224 million individual animals are imported into the United States each year, primarily through three major ports – New York City, Los Angeles, and Miami (Smith et al 2017). The trade in wild animals has also been increasing. The number of declared animal shipments has doubled since 2000.

Between 1999-2010 over 12 million wild caught reptiles from elsewhere in the world were imported into the U.S., and of these over 9 million reptiles were imported through Florida ports alone (Romagosa 2011).

Commercial use in Florida may include direct sales, exhibition, and breeding houses for food fish or to be placed within the pet industry pathway.

*Photo: Florida hosts the most and largest reptile trade shows in the United States.*

## Species Introductions in Florida

	Number of Introduced Species	Introduced via Live Animal Trade (estimates)
Mammals	18	50%
Reptiles	180	92%
Freshwater Fish	130	88%
Amphibians	27	59%
Marine Fish	40	93%
Birds	198	68%
<b>Total</b>	<b>593</b>	<b>80%</b>



Many species introduced into the wild in Florida originate in the live animal trade. Staff conducted a literature and database review to better understand the number of species introductions and where those species originated. Over 80% of the species introduced into Florida have originated from the live animal trade. Not included here, are invertebrates as a full literature review has not been completed for those taxa.

# Impacts of Invasive Fish and Wildlife

- Ecological impacts
  - Direct predation
  - Competition with native species
  - Habitat alteration
  - Disease and parasites
- Human health and safety
- Economic impacts



Not all established nonnative species become invasive. The level of concern for an individual species is determined by assessing the potential impacts. These impacts can be ecological such as direct predation, human health and safety including injury or disease transmission, or economic impacts that are a result of the introduction. Economic damage includes iguanas undermining sea walls and levees as shown in the top photo. Pythons directly prey upon a wide variety of birds and mammals, including deer as shown in the bottom photo.

*Photos:*

*Top : Green iguana exiting a burrow (Palm Beach Post)*

*Bottom : A Burmese python removed after consuming a deer (Everglades National Park)*

# Economics of Invasive Species Management

- Economic Impacts
  - Property damage
  - Agriculture impacts
  - Tourism
- Management Costs
  - State and federal agencies
  - Local governments
  - Constituents



Economic impacts from the presence of invasive species vary. Examples include, impacts to water control structures, roadways, seawalls and landscaping by burrowing species such as iguanas or sailfin catfish, and agriculture impacts by tegus that are known to consume certain crop plants, including squash and strawberries. They may also include impacts that are harder to measure, such as impacts to tourism when reef ecosystems and fisheries are adversely affected by invasive lionfish.

Control costs over the last decade for invasive fish and wildlife have also risen. Management costs by FWC and our federal partners are over \$8 million each year, with \$3 million being spent by FWC. One of our primary management priorities over the last few years has become the Argentine black and white tegu, where nearly \$1 million is being spent yearly in trying to reduce the population of this species where it is found.

Another component to the economics of invasive species is the benefit to the commercial market in Florida. Although there are pet industry studies indicating a multi-billion-dollar industry in Florida, much of this cost is likely driven by domestic animals (<http://cra.gmu.edu/wp-content/uploads/2017/02/Economic-Impacts-of-the-Pet-Industry-2015-Final.pdf>).

*Photo: FWC staff trap and remove invasive tegus in Miami-Dade County where they are established.*

# Nonnative Species Regulatory Framework

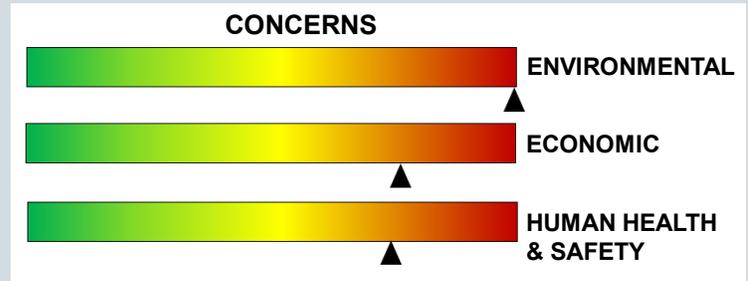
- Rules in Florida Administrative Code
- Florida statutes
- Permits and licenses
- Law enforcement



Regulation of nonnative fish and wildlife has many components. The FWC has constitutional authority over wildlife and promulgates rules with that authority. The legislature may pass statutes in aid of the Commission. To implement many of the rules and statutes, permits and licenses are issued by the Commission and other entities (e.g. FDACS) to qualifying entities for specific purposes. Finally, law enforcement plays a critical role in enforcing these regulations.

# Assessing Level of Risk from Nonnative Species

- Classification of captive wildlife based on human health and safety risk
- Nonnative species regulations based on ecological, economic and human health and safety risk



The FWC has a history of regulating high-risk native and nonnative fish and wildlife species and uses multiple factors to classify captive animals in possession.

The classification of captive wildlife and other pertinent rules are focused on risks to human health and safety by regulating potentially dangerous animals like lions and tigers, as well as exotic pets. Captive wildlife rules address caging, experience requirements for permittees, and public contact with wildlife.

The FWC's nonnative species regulations are based on ecological, economic, and human health and safety risks. Nonnative species rules regulate importation of nonnative fish and wildlife, possession of invasive species, containment, permitting requirements and rules on Exotic Pet Amnesty.

## Conditional Reptiles

- Adverse impact to native species, including protected species
- Management focus on detection and removal
- Regulated both in Rule 68-5 F.A.C. and Section 379.372 F.S.
- Rule 68-5 F.A.C. allows for breeding, commercial import and export, public exhibition, and research



Currently 7 snakes and lizards are listed as Conditional species in Chapter 68-5, F.A.C. The general provisions for these species allows for possession for the purposes of public exhibition, research and commercial use of import/export businesses. Conditional species cannot be kept as pets. Many of these species, such as Burmese Pythons or Nile monitors, have documented ecological impacts where they have become established. Other species, such as reticulated pythons or green anacondas have been observed in Florida but are not breeding. Conditional species are considered a priority for detection and removal when encountered outside of captivity in Florida.



## Tegus

- Adverse impact to native species, including protected species
- Popular in the pet trade
- Breeding in 4 areas of Florida
- No permit has been required for personal possession
- Licenses are required for entities that sell or exhibit tegus

One of the species that has become a focus of FWC control efforts is the Argentine black and white tegu. The Argentine black and white tegu is an established invasive species in Florida. Other species of tegus, like the gold tegu and red tegu, have also been found in the wild in Florida.

Regulation of tegus in Rule has only included the requirement for licenses for people who commercially use or exhibit tegus. This species has been popular in the pet trade for some time, and it is unknown how many people currently possess tegus as pets.

The primary concern around tegus is the potential impact this species may have on native wildlife. Tegus are considered breeding and likely expanding in four areas of Florida including parts of Miami-Dade, Hillsborough, Charlotte, and St. Lucie Counties – however, reports have occurred elsewhere across the state, even as far north as the panhandle. FWC has evidence to support that these tegu populations became established after they escaped or were released from captive breeding facilities or pet owners. In these instances, we work with the landowners to rapidly respond and set traps to remove the tegus. To date, nearly 9,000 tegus have been removed from the wild in Florida by the FWC and our partners.

*Photo: Tegus are known egg-eaters and have been documented consuming alligator eggs (Photo credit: University of Florida).*



## Green Iguanas

- Adverse impact to landowners and infrastructure
- Widespread establishment in south Florida
- Popular in the pet trade
- No permit has been required for personal possession
- Licenses are required for entities that sell or exhibit iguanas

Another invasive lizard that also affects many citizens and businesses in Florida is the green iguana. Like tegus, pet owners are not required to have a permit. However, entities that sell or exhibit green iguanas are required to be licensed. There are likely thousands of green iguanas in personal ownership.

This species was first introduced to Florida as early as the 1960's and has since established across south Florida in urban and suburban areas. The primary impacts of green iguanas are mainly social and economic, particularly in areas where their populations are dense and interface with humans. They frequently impact homeowners' landscaping and defecate in pools and on patios. They have also been documented burrowing into and causing damage to seawalls, roadways and water control structures.

Currently, FWC staff remove iguanas from high priority or ecologically sensitive areas including areas in the Keys WEA. The FWC also has also utilized contractors to remove wild green iguanas from State Parks in the Keys. Since 2017, over 5,000 green iguanas have been removed from the wild by the FWC and our partners.

*Photo: Green iguanas on a seawall (South Florida Sun Sentinel)*

## Changes to Section 379.372, Florida Statutes

- Restricts possession of regulated reptiles except for:
  - Educational exhibition
  - Research
  - Eradication or control
- Adds green iguanas and tegus to list of regulated species
  - No future acquisitions as pets
  - Limited exceptions for current pet owners
- Directs FWC to develop rules for biosecurity, reporting and limited exceptions for possession



During the 2020 Legislative session, changes were passed to Section 379.372, Florida Statutes, which became effective on July 1, 2020. These enhanced regulations are necessary to limit the potential additional future introductions and subsequent adverse impacts that these species pose in Florida.

The new statute language:

- Adds tegus (genera *Salvator* and *Tupinambis*, all species) and green iguanas (*Iguana iguana*) to the list of regulated species. These species may no longer be acquired as personal pets.
- Limits possession, importation and breeding of all nonnative reptile species listed in the statute to permitted facilities engaged in educational exhibition, research, or eradication or control activities.
- Includes language with limited exceptions for licensed entities that were commercially selling green iguanas or tegus under a valid License to Possess Class III Wildlife for Exhibition or Public Sale (ESC) on January 1, 2020 with a documented inventory of green iguanas or tegus on their 2019 ESC license application.

The statute also directs the FWC to develop any additional necessary rules for biosecurity, reporting and limited exceptions for possession. As explained further in this presentation, enhanced regulations in Rule were analyzed and considered by FWC staff

and is the basis of the recommendation we are making today.

*Photo: green iguana in south Florida.*

# Executive Order 20-19

- Temporary measure
- Provides clarification to regulated public
- Addresses limited exceptions and provides timeframe to comply

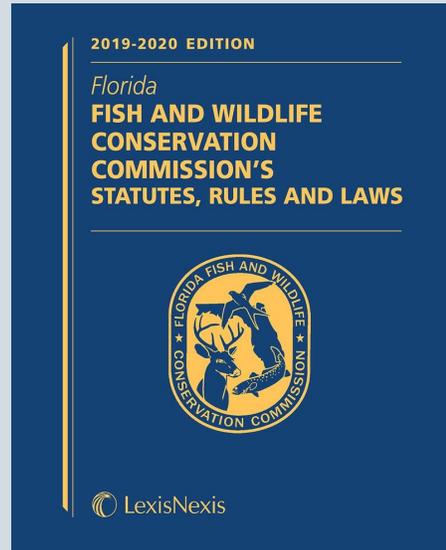


A screenshot of the Florida Fish and Wildlife Conservation Commission website. The page is titled "Executive Orders" and contains a list of orders from 2013 to 2020. The 2020 section is expanded, showing a list of orders. A red arrow points to the entry "EO 20-19 - Regulations of Reptiles". The website header includes navigation links such as "Buy and Apply", "Resolve a Wildlife Conflict", "Engaging in Conservation", "Things To Do", "Places To Go", and "About Us". A search bar is also visible in the top right corner.

Executive Order 20-19 was signed to help bridge the gap between the new statute language going into effect on July 1 and the FWC enhancing current rule language in Chapter 68-5 F.A.C. for high risk species. This Executive Order provides clarification and regulatory certainty to people in possession of these animals. It is a temporary measure that will only be in place until replaced by rule.

# Draft Rule Language

- Enhances regulations for the possession of some high risk invasive reptiles
- Addresses:
  - Reporting requirements
  - Biosecurity requirements to limit escapes
  - Additional limited exceptions
- Adds definitions as appropriate
- Clarifies provisions of the Exotic Pet Amnesty rule



The intent of the draft rule language is to enhance and improve current rule language for these high risk reptile species. Draft language addresses importation and possession criteria, adds clarification on how the changes will be implemented, and addresses reporting requirements, biosecurity requirements and additional provisions for limited exceptions, as necessary. It also became apparent through our rule review that defining “eradication and control” would be helpful. Because the Exotic Pet Amnesty Program plays a role in addressing unwanted pets that may be regulated, additional draft language has been provided to clarify this program in rule.

## Constrictors and Nile monitor lizards

- Move from Conditional to Prohibited species list in Rule 68-5.006, F.A.C.
- Add provisions for research and eradication and control permits
- Address breeding of Prohibited species



The currently listed Conditional snakes and lizards are also regulated in Section 379.372, F.S.. The draft rules move these species from the Conditional list to the Prohibited list based on staff analysis that these species pose a high risk in Florida.

Currently, Conditional species may be possessed for educational exhibition, research, and commercial import/export, whereas, Prohibited species may only be possessed for educational exhibition or research use. By moving these animals to the Prohibited species list and adding provisions for eradication and control, the FWC's rule language will better align with the new statute language which now prohibits the importation and sale of these animals.

*Photo: Nile monitor (Wikimedia Commons)*

## Tegus and Green Iguanas

- Lists green iguanas and all species of tegus as Prohibited in Rule 68-5.006, F.A.C.
- Allows for educational exhibition, research, and eradication or control
- Allows for personal pets to be kept with a no-cost permit
- Provides provisions for limited exceptions for some licensees that will qualify for commercial use



By moving these animals to the Prohibited species list and adding provisions for eradication and control, the FWC's rule language will better address the impacts these species have on Florida's ecology and economy.

The Prohibited species listing means that live green iguanas or tegus may only be possessed by permitted facilities for educational exhibition, research, or eradication and control purposes.

Provisions were added to the draft rule language that allows for limited exceptions for some commercial use. Qualifying commercial use entities will be able to continue that activity with a no-cost permit. There is also language in the current Prohibited species rules that would allow for personal pets possessed prior to the species' listing as Prohibited to continue to be possessed for the life of the individual animals with a no-cost permit.

Staff's recommended changes to Rule also align with recent statutory changes.

*Photo: green iguana in south Florida.*

## Red-eared Sliders

- Continue to be regulated as described in Rule 68-5.004, F.A.C.
- Continue to be possessed by permitted entities for:
  - Educational exhibition
  - Commercial import/export businesses
  - Research
  - Personal use
  - Aquaculture



Staff have begun analysis of the current regulation of red-eared sliders in conjunction with the Florida Department of Agriculture and Consumer Services to determine whether changes in regulation of this species are warranted. Under current rules, red-eared sliders may be possessed by permitted entities for personal use, educational exhibition, commercial sale, and research use, or by certified aquaculture facilities. Entities with a valid Aquaculture Certificate of Registration for red-eared sliders are allowed to culture this species. Staff are not recommending changes to the regulation of red-eared sliders (*Trachemys scripta elegans*) at this time and that while analysis and input is received this species continues to be regulated as described in Rule 68-5.004, F.A.C.

*Photo: Red-eared slider (Wikimedia Commons)*

## Additional Provisions in Rule Drafts

- Create definition for “eradication and control”
- Provide permit qualifications for eradication and control work
- Update regulated reptile caging to align with other captive wildlife rules
- Incorporate permit application forms
- Add language for caging, reporting, and biosecurity
- Clarify provisions of pet amnesty rule



The initial rule drafts presented today have some additional provisions to help clarify the language and language and adds clarification on how the changes will be implemented. These provisions are listed here.

Staff have also proposed some updates to help clarify the pet amnesty rule. Staff anticipate that there may be some increase in pets surrendered to the Exotic Pet Amnesty Program and these changes are aimed to update the rule to meet contemporary management needs. These draft changes will still allow animals to be surrendered to the Exotic Pet Amnesty Program without penalty or fee.

## Outreach and Stakeholder Engagement

- Webinars
- Webpage updates
- Social media posts
- Online Workshops to collect public comment



Staff are currently planning informational webinars for interested stakeholders on the statute changes and the FWC's rule development efforts. Virtual rule workshops will also be held in the upcoming months to obtain public comment.

Staff also reached out to license holders by email, added information and FAQs to the agency's website, and posted on the agency's social media accounts to get the information to interested and affected stakeholders.

## Staff Recommendations

### **Approve Draft Rules in Chapter 68-5, F.A.C., including:**

- 68-5.002
- 68-5.004
- 68-5.005
- 68-5.006
- 68-5.007
- 68-5.008

### **Approve staff moving forward to solicit public and stakeholder input on Draft Rules, and bring back final rules at a future Commission meeting**

*Staff have begun planning a series of webinar workshops designed to collect input on specific areas of rule changes.*



Staff have recommended that the draft rules for Chapter 68-5, F.A.C., be approved for advertisement.

Further, staff request to move forward collecting public comments for these rule concepts. focusing on provisions for possession, importation, permitting, biosecurity, limited exceptions, and reporting requirements. Staff would seek final consideration of proposed rule changes at a subsequent Commission meeting.