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## Problem Pets

The American Pet Product Association estimates that 62% of US households had a pet in 2011-12. The vast majority of these animals will spend their entire life in captivity and pose no threat to the environment. Unfortunately, some will find their way into the wild, either through escape or intentional release. Most of these animals will not be able to survive on their own, but the few that do pose the threat of establishing self-sustaining populations with long-term impacts on the environment.

When this happens, these animals are no longer considered pets, they are invasive species. And like other types of invasive species, feral pets can threaten the diversity and abundance of native species through competition for resources, predation, interbreeding with native populations, transmitting diseases, or causing physical or chemical changes to the invaded habitat. This issue of "Eye on Invasives" looks at pet ownership, and its potential for contributing to invasive species issues in California.

One pet that is not native to California and has established itself here is the watersnake of the genus *Nerodia*. Native to the eastern US, these snakes were historically absent from California and other western states. This changed subsequent to their popularity in the pet trade, and they eventually began appearing in our lakes and rivers. Brian Todd from UC Davis has penned a guest article describing *Nerodia* and its potential impacts on California ecosystems.

When an animal is determined to have the potential to be an invasive, like *Nerodia*, the State of California has the ability to restrict importation, transportation, and possession of that animal. On page three, we provide a description of California's restricted species regulations and the process for adding animals to the list.

Enforcement of the restricted species list is handled by the California Department of Fish and Wildlife's (CDFW) Law Enforcement Division (LED). This issue includes an interview with Lieutenant Mike Milotz explaining how CDFW tracks down species possessed illegally in California, and how the CalTip hotline assists these efforts. We also learned about some of the species LED encounters and what the department does with confiscated animals.

Not all animals that pose a threat are on the list. Some common pets that are legally obtainable have established populations in non-native environments. Often this is the result of the owner improperly disposing of unwanted pets by releasing them into the wild. Fish and Game Code section 6400 makes it illegal to place any aquatic plant or animal into the waters of the state without CDFW approval. While releasing pets into the wild may seem a humane option, the reality is that it may cause pain and suffering to the animal, and result in negative environmental impacts. We provide suggestions for concerned pet owners who may be facing this dilemma.

Finally, in our regular feature "Do You Know This Is Invasive," we look at the humble goldfish. One of the most common aquarium pets, it has proved itself adaptable to a wide variety of conditions. Established populations in our lakes, ponds and streams disturb

aquatic ecosystems and compete with native fishes for food and space.



**Red-eared sliders (*Trachemys scripta elegans*) are a common pet species now found in the wild. Greg Hume, 2010**

# Watersnakes in California: From Unwanted Pets to Growing Menace

Brian Todd, UC Davis

Watersnakes of the genus *Nerodia* are an important part of many aquatic ecosystems in the eastern United States. These non-venomous snakes feed mainly on amphibians and fish and are harmless to people. As their common name implies, watersnakes are among the most aquatic of all snakes in North America. Although widespread in much of the eastern US, existing species never occurred west of the Rocky Mountains, making them historically absent from California and other western states. At times, they have appeared for sale in the pet trade. Unfortunately, as many unknowing consumers soon learn after purchasing them, watersnakes are known for their defensive and often nasty disposition, being quick to bite and spray foul-smelling musk when handled. This has led many pet owners to quickly grow tired of them, and in some cases, release them into the wild.

The intentional release of unwanted pet watersnakes is presumably how they were first introduced to California. Currently, there are three populations of watersnakes established in the state. Banded watersnakes (*Nerodia fasciata*) in Los Angeles County have been known since at least 1976. Another population occurs in Sacramento County near the Folsom Reservoir and was first



**UC Davis student Will Bauer holds a northern watersnake caught in a research trap in Roseville, California. Photo by RJ Roush, UC Davis**

documented in 1992. Finally, a population of the closely related northern watersnake (*N. sipedon*) occurs in Roseville in Placer County and has been known since 2007.

There is growing concern that watersnakes may cause declines of California's already greatly imperiled amphibian and fish communities. For example, both species introduced to California feed widely on amphibians and fish closely related to California's

threatened and endangered species. There is also concern that non-native watersnakes may displace important native snakes that share similar habitat and prey, such as the state's threatened giant garter snake (*Thamnophis gigas*). These concerns are heightened by the knowledge that



**Close up of a young northern watersnake caught in Roseville, California. Photo by RJ Roush, UC Davis**

other snakes have had sometimes devastating effects on native wildlife when introduced outside their native range.

In 2008, CDFW added all watersnakes to the list of restricted species due to growing concern about the risk they pose to native communities and a desire to limit their spread. It is now illegal to capture, possess, purchase, transport, or sell any watersnakes in California. This was a valuable first step in trying to prevent these non-native species from becoming an even bigger management problem across the state. Current management attention is focused on finding ways to remove the species where they occur in California, predict their capacity to spread throughout the state, and determine whether unknown populations occur elsewhere.

**What can you do to help?** Everyone can play an important role helping CDFW tackle the problem of non-native watersnakes in the state. The first thing you can do is to avoid capturing, importing, purchasing, or selling any watersnakes in the state. If you already possess one, please do not turn it loose. If you believe you have seen a non-native watersnake in the wild please send a photograph of the animal and information about the location of the sighting to Dr. Michael Fuller ([mmfuller@unm.edu](mailto:mmfuller@unm.edu)). Be sure to abide by all laws and regulations and to avoid any taking or killing of native snakes that may look similar. For more information about watersnake work in California visit the [Herpetology & Wildlife Conservation](#) website.

# Restricted Species Regulations

CDFW Staff

Title 14, Section 671 of the California Code of Regulations allows the California Fish and Game Commission to restrict the possession of animals not normally domesticated, and those that pose a threat to native wildlife, agricultural interests of the state, or to public health or safety. Such animals include those with the potential to become invasive. This determination is based on a risk assessment using the best available science to evaluate the biology, transportability, and potential impact a species will have if it becomes established in California. Once on the restricted species list, it is unlawful to import, transport, or possess live animals except under a permit issued by the California Department of Fish and Wildlife (CDFW). This is why some exotic pets such as hedgehogs, sugar gliders, or ferrets that may be allowed in other states are not allowed in California.

When evaluating the biological risk of an animal being invasive, California's environmental conditions are compared to those necessary for the animal's survival and reproduction. In addition, natural and manmade factors in California that can prevent the animal's survival and reproduction are considered. Some examples of factors taken into consideration include reproductive rate, adaptability, and tolerance to habitat disturbance. Also taken into consideration is whether the species, or closely related species, have been invasive in other areas with similar environmental conditions.

Transportability of an animal is the likelihood that it will be moved from one place to another, and specifically into California. This component of the risk assessment involves identifying likely pathways (also known as vectors) of introduction into the state. Once vectors are characterized, a review of existing regulations determines whether a regulatory mechanism already exists to prevent the movement of the animal into California.

The final step in the analysis is to determine whether the organism is likely to have negative impacts on native wildlife, agriculture, the state, or public health and safety. Impact analysis may also include an analysis of whether the animal has the potential to spread to other parts of the continent if it were to become established in California.

After a species biology, transportability and potential impacts have been assessed, CDFW makes a recommendation to the Fish and Game Commission, through the regulatory change process. The Commission makes its determination, only after it has provided the public with an opportunity to review the evidence supporting a listing. Both written comments and verbal comments provided before the Commission are considered. If the Commission decides to approve listing the species after reviewing the evidence and considering input from the public, any person wishing to import the species into California would need to obtain a permit from CDFW.

**Not all animals on the restricted species list pose a threat of establishing as an invasive species in California. Some species are listed to prevent the depletion of wild populations and to protect animal welfare. These are termed "welfare animals" in the code and include species such as lions, elephants, wolves and others that are threatened or endangered in their natural habitat or require specialized care.**

Species are added to the restricted species list only after a thorough analysis using the best available science. While a negative economic impact to some as a result of listing is possible, listing is a proactive regulatory effort to protect the greater public good by preventing the introduction of the animal, and subsequent negative impacts.

For the complete list of animals on the restricted species list and associated regulations, download the [Restricted Species Laws and Regulations Manual 671](#).



**There are many different species listed on CDFW's restricted species list ranging from birds and mammals to fish and reptiles. One such species is the American Alligator (*Alligator mississippiensis*), which is native to the gulf and southern states of the U.S. Photo by: Gerald and Buff Corsi © California Academy of Sciences, 2001.**



# Tracking Down Illegal Species: An Interview with California Department of Fish and Wildlife's Law Enforcement Division

CDFW Staff

Last month we sat down with Lieutenant Mike Milotz, CDFW's CalTip Coordinator, to talk about CDFW's role in tracking down restricted species in California.

## Q. Why is CDFW concerned about illegal species?

A. Species determined to pose a threat to native wildlife, agricultural interests, or to public health or safety are illegal to possess per California Code of Regulations Title 14, Section 671. The Law Enforcement Division (LED) is responsible for enforcing these regulations by tracking sales and reports of illegal species in California.

## Q. What is CalTip, and how does it help you track down illegal species?

A. CalTip stands for Californians Turn In Poachers and Polluters. It is a confidential secret witness program that encourages the public to provide CDFW with factual information leading to the arrest of poachers and polluters. As the CalTip coordinator, I spend approximately half of my time focused on CalTip calls. On average we receive around three tips per week related to restricted species. Those tips are typically reports of someone that actually possesses a species that is illegal vs. selling of an illegal species. For example, someone may report a neighbor that has a ferret that bit their child and they choose to call it in. Internet searches are actually a bigger source for finding illegal species in California.

## Q. How much internet searching does the Law Enforcement Division (LED) do for illegal species?

A. I spend the other half of my time dedicated to internet crimes. I search social networking sites for sales of illegal species, tips and references to exotic pets, and information on the commercialization of wildlife. Reports that come in through CalTip and internet finds are referred to the local wardens for follow up. The local wardens also spend time, usually a few times a week, searching online for illegal sales of species. We have found that there tends to be a



***Caulerpa taxifolia*, a common aquarium plant, is illegal to possess in California. It is sometimes found in pet shops. Photo by: Merkel & Associates**



larger number of individuals in possession of restricted species in the areas with larger populations, like the Bay Area, Los Angeles, and Sacramento.

## Q. What does 'commercialization of wildlife' mean?

A. The commercialization of wildlife refers to making a profit off of wildlife and can be anything from selling deer mounts to caviar made from sturgeon eggs. LED spends time tracking down items like these that are for sale.

## Q. What happens when a tip comes in or an ad is found online? How does follow up occur? Does someone contact the individual as an interested buyer?

A. It varies. Typically, if we are following up on the sale of a restricted species, a buy/bust scenario is easiest. A lot of times there will be an undercover officer that plays the role of an interested buyer. An officer in uniform will be nearby and will enter into the situation once the seller has agreed to terms. In other situations, it may be more appropriate to approach the individual as Department staff.

## Q. How about pet stores. Do wardens visit these stores looking for illegal species?

A. Yes. In-person searches are more common in those highly populated areas; the cities vs. the rural areas. Most pet stores are typically in compliance when it comes to the sale of illegal animals; however, they may know of someone who is selling or may be in possession of an illegal animal. Some stores have also been in violation because they possess something that is illegal even if it isn't for sale. For example, an aquarium shop may have onsite aquaria with *Caulerpa taxifolia* displayed. The aquarium plant may not be for sale, but it is still illegal for them to possess it.

(Continued on page 5)

# Tracking Down Illegal Species: An Interview with California Department of Fish and Wildlife's Law Enforcement Division, continued

CDFW Staff

**Q. What kind of species are found by LED? What is the most common species found? What is the most unusual species that have been confiscated by a warden?**

A. A variety of species are found and/or followed up on by local wardens. The most common restricted species that are found are ferrets and piranhas. The craziest exotic species that have been confiscated have been a Siberian tiger and a Coatis, which is similar to an aardvark. We frequently find individuals keeping birds of prey as pets – falcons and hawks. Falconry is allowed in California if you have a permit, but we do find people keeping birds that do not have proper permits. We also see all kinds of native species being kept as pets, everything from deer and skunks to mountain lions. Even though these species are native, it is still illegal to possess them.



**A white-nosed coati (*Nasua narica*) is one restricted species that has been found by LED. Photo by: Benjamin Keen, 2012**

California we try and find a place for it where it can be rehabilitated and eventually released into the wild. If the animal cannot be released back into the wild, the department tries to find a permanent home for it, like an animal sanctuary. If a home can't be found, we may be forced to euthanize it. It is the Department's policy for officers to seek alternatives that will allow an animal to stay alive while still meeting the criteria of the restricted species law. If the animal is an exotic species, not native to California, the individual in possession is required to fill out a "Live Restricted Animals: Notice of Violation/Disposition

**Q. You said piranhas are one of the most common species you see? Why are they popular?**

A. Piranhas are typically confiscated from breeders. They are commonly kept as exotic pets but have been known to be used for wagering events.

**Q. What does LED do with the confiscated animals?**

A. If the species is native to



**A red-bellied piranha (*Pygocentrus nattereri*). Photo by: John White, 2006.**

Report" form, which offers the person three options for seizure of the animal. They can ship the animal out of state, return the animal to the point of origin, or have the animal destroyed.

**Q. What are the penalties associated with possession of restricted species?**

A. Violation of Title 14, Section 671 is considered to be a misdemeanor that is punishable by up to six months in prison or fines up to \$1,000. Typically an individual will not be arrested on site. They are usually given a citation and follow-up would then occur either by the County Superior Court or by the County District Attorney. The County would determine the appropriate penalty.

If you have questions about CalTip or LED's involvement with restricted species, email Lt. Mike Miltz at [Mike.Miltz@wildlife.ca.gov](mailto:Mike.Miltz@wildlife.ca.gov). Report illegal species to CalTip at 1-888-334-CALTIP (888-334-2258). Visit the [CalTip](http://CalTip) website for more information.



**Not all species on the restricted species list are non-native. Some species like mountain lions (*Puma concolor*) are native to California. Photo by: Kameron Perensovich, 2011**



# Resources for Pet Owners

CDFW Staff

Pets can bring many benefits to our lives – companionship, lessons in responsibility, insight into nature, to name only a few. When we acquire a pet most of us intend to provide the appropriate time and care necessary to ensure its health and happiness for the duration of its lifetime. From time to time, however, even the most well-meaning pet owner can find they are no longer able to meet the needs of their pet.

For the welfare of the animal, as well as the environment, it is important that pet owners make responsible decisions when it comes to giving up a pet. If you find yourself in this situation, or are asked for help by someone who is, there are definite do's and don'ts pet owners should follow. First and foremost, animals should never be released into the environment. Released pets rarely survive in the wild because they are easy meals for predators, or worse, are unable to find food and starve to death. Additionally, they may introduce parasites and diseases to other animals. Those that do survive may eat other animals, cause them to move from the areas they live, or change the habitat making it less useful. An example of released pets that impact the environment are red-eared slider turtles (*Trachemys scripta elegans*). While the impacts red-eared sliders have had on native western pond turtles (*Actinemys marmorata*) are not well understood, it is likely they are competing for food and basking sites along waterways of California.

The responsible alternative to releasing a pet is for you to find it a new home. Be aware that the willingness of someone to take in your pet may depend on what kind of animal it is, its size, age, health, temperament, and various other factors. When placing an animal with a new owner you should be confident they will be able to provide the animal with appropriate care that it needs.

Depending on the type of animal you are trying to rehome, there are a variety of possible avenues to explore. If you have an animal that is not legal to own in California you should only surrender it to a qualified person or organization that can safely handle it, and who will turn it over to the proper authorities. For other animals, if you acquired it from a breeder or pet store, contact them to find out if they would be willing to take it back. But don't expect them to refund any of your money - taking back an animal often costs them more money than they will recoup, and they would be doing it to ensure the wellbeing of the animal. Small, independent pet shops may be more willing to take back animals than large chain stores because they have more flexibility in their inventory and operations. Another idea is to ask around among your friends and family, who may be interested in adopting your pet. Another place to find prospective homes is through local organizations, such as specialty clubs and societies. Some groups, particularly those related to fish, offer opportunities for selling animals through trading posts and auctions, and

members may also be willing to take in or foster and adopt out animals. The internet is the most efficient way to find up-to-date information on organizations in your area, but staff at local pet shops or classified ads in the backs of hobbyist magazines may also be a resource. Posting ads on the internet has become a popular way to reach a broad audience of potential homes, however it does have risks. If you do choose this route, exercise caution when meeting people, and screen them to ensure they are really prepared for the commitment of taking on your pet.

If you are unsuccessful on your own, next consider working with an organization dedicated to rescuing animals and placing them using their network of resources. Many of these organizations, even those run by government agencies, operate on shoe-string budgets. Others are run on private donations and staffed by volunteers. If you do turn over an animal to them, a monetary donation to help defray the costs of caring of your animal until a new home can be found will be greatly appreciated.

Unfortunately, on rare occasions a pet cannot be rehomed. In a situation where the only remaining options would be to release it into the environment or euthanize it, the environmentally responsible thing to do would be to have it euthanized. In such a case contact your veterinarian or someone knowledgeable about the type of animal you have. Euthanasia can be a far more humane end than the potential suffering it may endure in the wild, and it also protects the animals and environmental resources of the State.

## Remember —

### Don't:

**Release pets into the environment**

**Give away or sell an illegal pet**

### Do:

**Try to find it a home yourself**

**Contact local hobbyist groups**

**Contact local rescue groups if you are unable to find a home**

**Euthanize if necessary**

## Do You Know This Is Invasive? Goldfish—*Carassius auratus*

Goldfish are one of the most common aquarium pets. Sometimes owners find themselves unable to care for their goldfish and release them into local lakes, ponds, or streams, thinking the goldfish will be better off in the wild. What these well-intended pet owners don't realize is that when released, some of these goldfish become *invasive* by impacting local native fish and their habitats.

Aquarium goldfish are usually only a couple inches in length. However, in the wild, goldfish can grow over 16 inches and weigh more than 6 pounds. Wild goldfish can be bright orange in color, like the aquarium types, but may also be olive-green, silver, or bronze. They can be found in many habitats, including ponds, reservoirs, lakes, sloughs, and backwaters of streams and rivers. They can tolerate a wide range of environmental conditions such as high levels of turbidity, temperature fluctuations, low levels of dissolved oxygen, and brackish water. When feeding, goldfish disturb bottom sediments, increasing turbidity and removing vegetation, which damages the habitat of native fish. Additionally, goldfish compete for food and space with native fish species, including important sport fish populations.

Goldfish originated from China, and have been selectively bred for bright colors for centuries. Goldfish became established in California in the 1860s. Today, they can be found in numerous waterbodies throughout California, with large populations in southern California reservoirs and in canals, sloughs, and reservoirs of the Central Valley. Goldfish have also recently been discovered in Lake Tahoe.

The California Department of Fish and Wildlife and University of Nevada Reno, in cooperation with other entities, remove goldfish and other non-native fish from Lake Tahoe as a part of the Lake Tahoe Warm Water Fish Control Program. Additionally, entities throughout the state may conduct goldfish removal at other waterbodies. Fish removal programs are costly and may take multiple efforts to be effective. The best way to manage invasive species such as goldfish is to prevent their introduction in the first place. Don't release your goldfish or other pets into the wild. For information regarding options other than release, visit the [Habitattitude Program](#).



Goldfish caught in Lake Tahoe. CDFW file photo.

### Upcoming Trainings and Conferences

#### Free Seminar on Aquatic Invasive Species

California's Boating Clean and Green Program is offering free seminars to teach boaters; fisherman; state and local officials; and marina, port and yacht club operators about their role in combating aquatic invasive species (AIS) on California's waterways.

You must register to attend. For registration contact Vivian Matuk at (415) 904-6905 or [vmatuk@coastal.ca.gov](mailto:vmatuk@coastal.ca.gov).

Seminars:

Marina Del Rey, Thursday June 13 (Register by June 7)  
Sacramento, Thursday June 20 (Register by June 17)

Download the seminar brochure [here](#) for more information.

### Subscribe

If you would like to receive the "Eye On Invasives" newsletter, please email [INVASIVES@wildlife.ca.gov](mailto:INVASIVES@wildlife.ca.gov) with the word 'subscribe' in the subject line to be added to the distribution list.

Watch the University of Southern California Sea Grant "[Don't Release a Pest](#)" PSA for more information about invasive pets.



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illegal species through Cal-Tip:  
Californians Turn in  
Poachers and Polluters  
1-888-334-2258**