

TITLE 14. Fish and Game Commission Notice of Proposed Changes in Regulations

NOTICE IS HEREBY GIVEN that the Fish and Game Commission (Commission), pursuant to the authority vested by Sections 2118 and 2120, Fish and Game Code and to implement, interpret or make specific Sections 1002, 2116, 2118, 2118.2, 2118.4, 2119, 2120, 2122, 2123, 2124, 2125, 2126, 2127, 2150, 2190, 2271, 3005.9 and 3005.92, Fish and Game Code, proposes to amend Section 671, Title 14, California Code of Regulations, relating to Importation, Transportation, and Possession of Live Restricted Species.

Informative Digest/Policy Statement Overview

This proposed regulation change would add seven species and two genera to the Restricted Animal List in Section 671 of Title 14. The animals listed below are non-native invasive species. They pose a threat to native fish and wildlife populations through competition for food, predation, alteration of habitats and/or as potential sources of introducing diseases or parasites to native fish and wildlife.

Prevention is the most cost effective manner of managing these species, as control and eradication projects are very costly once an invasive species is released and establishes in the wild. A number of species and genera warrant addition to the Section 671 list in order to prevent their introduction into the state's wildlands or control the spread of species that have already been introduced. Although several of the species listed below are already known to exist in California, the control of these species is still possible, and inclusion in the list of Restricted Animals identifies these species as a threat to native wildlife and habitats. Once they are listed, partner agencies, like the Department of Food and Agriculture, have authority to undertake control actions.

Proposed Taxa Not Yet Known in California

- Largescale silver carp (*Hypophthalmichthys harmandi*)
- Black carp (*Mylopharyngodon piceus*)
- Barramundi (*Lates calcarifer*)
- Abalone (all non-native species of genus *Haliotis*)

Proposed Taxa Already Present in California

- Watersnake (all species of genus *Nerodia*)
- Coqui frog (*Eleutherodactylus coqui*)
- Channeled apple snail (*Pomacea canaliculata*)
- Mute swan (*Cygnus olor*) (except for mute swans possessed before January 1, 2008)

The background information that follows provides some basic information about the species being proposed for addition to the restricted species list and the threats that they pose to native fish and wildlife resources.

Background

Largescale silver carp (*Hypophthalmichthys harmandi*)

Until recently, this species was considered a subspecies of silver carp (*H. molitrix*), which is already on California's restricted animal list (i.e. Section 671 list). The two fish are very similar plankton feeders with potential to compete with native fish larvae and invertebrates, which in turn, are the food base for many larger fish and wildlife species. Adding this newly split-off species to Section 671 essentially closes a loophole that could be used to import animals that the Commission intended to restrict when Silver carp was added to the list.

Black Carp (*Mylopharyngodon piceus*)

The natural range of black carp is drainages feeding into the Pacific Ocean in eastern Asia, including parts of China, Russia and possibly northern Vietnam. They were originally introduced into the United States as a "contaminant" in grass carp importations and were subsequently intentionally imported by fish farmers for yellow grub control and as a food fish.

Black carp is a blackish-brown fish with blackish-grey fins and an elongated and laterally compressed

body. They can typically grow to more than 3 feet in length and weigh, on average, 33 pounds. Young black carp are difficult to distinguish from young grass carp (*Ctenopharyngodon idella*), another non-native species. Adults may be distinguished externally by the color and the more cylindrical form of the body, and internally by the pharyngeal teeth.

Black carp are molluscivores (mussel and snail feeders) but also eat freshwater shrimp, crawfish, and insects. At all life stages, black carp will compete for food with native species. If introduced or established, black carp are likely to have a considerable impact on native mussel and snail populations. Native fish, turtles, birds, including waterfowl, and vertebrates, such as raccoons, otters, and muskrats, are likely to be affected through competition for food.

In addition to the threat of their predatory behavior and its resulting impacts, the black carp may also have other impacts on our aquatic ecosystems including the transfer of pathogens and risk to threatened or endangered native species through predation.

Barramundi (*Lates calcarifer*)

Barramundi are found in northern Australia and the Indo-West Pacific region. They are not currently known to exist in California. At different life stages, barramundi move between salt and freshwater habitats. Mature animals are located in estuarine/coastal areas and older juveniles are found in the upper reaches of rivers.

The fish are greenish-bronze along the back, silver along the sides, shading to white on their bellies. Juveniles have creamy and dark blotches, and may have yellowish pelvic and tail fins. Most barramundi start life as males, reaching maturity at around 3-4 years of age and later change gender and become females, usually at around age 5. They can reach weights of up to 132 pounds. Barramundi are predators with a diet of fish and crustaceans.

The breeding and rearing of barramundi commenced in the early 1980's and has resulted in the development of a significant aquaculture industry both in Australia and in South East Asia (including temperate areas such as South Australia). An area of particular concern in the farming of barramundi is the occurrence of an associated virus (Nodavirus). Barramundi pose a threat to California's native fisheries through predation, competition for food and transmission of diseases and parasites.

Watersnake (all species of the genus *Nerodia*)

There are 10 species and 15 subspecies that are currently recognized as belonging to the genus *Nerodia*. They are all from North America, with their natural range occurring east of the Rocky Mountains and south into Mexico. Three isolated occurrences are known to currently exist in California in the cities of Folsom, Sacramento Co; Roseville, Placer Co., and the community of Harbor City, Los Angeles Co. These populations are thought to have started from pets that were released.

The coloration of these snakes varies, but most individuals have earth-tone background coloration with lighter-colored crossbands running the length of the snake. Most individuals feature a dark stripe from eye to angle of jaw. It is common for *Nerodia* to become darker as they grow, and larger individuals may be completely black. They are generalist, mid-level carnivores, primarily eating amphibians and fish. The snakes themselves are prey for larger wading birds and raptors. This species has a high rate of reproduction and has developed a substantial population in Folsom over a relatively short period of time.

The concern is that *Nerodia* will impact native fish and wildlife populations through predation and competition. Of particular concern is the potential for impacts to the Sacramento-area populations of giant garter snake (*Thamnophis gigas*), which is state and federally listed as threatened.

Coqui frog (*Eleutherodactylus coqui*)

Coqui frogs are native to Puerto Rico and have become a serious pest in Hawaii, where the populations are very dense and the calling noises are considered an auditory disturbance to residents and tourists. They survive in warm, moist environments that might be encountered in gardens and greenhouses in Southern California. They nest in cavities and do not require standing water to complete their life cycle. They are imported accidentally, typically with shipments of ornamental tropical plants and are also in the pet trade.

Coqui frog is a brown or gray-brown frog that is 1.25-2.25 inches long. Its eyes are gold, golden-brown, or brown, and it has toe disks (toepads) for climbing. The markings on the back of coqui frogs vary from no pattern, to one or two broad cream stripes, v-shaped marks, spots, blotches, or an ill-defined pale band or "M" between the shoulders. The call of male coqui is a loud "ko-KEE"

There is potential for suitable habitat for this species to increase in Southern California due to climate change. So far, they have only been reported from one site in Southern California. If established in California, they may compete with small native predators such as birds, reptiles and amphibians for insect prey.

Channeled apple snail (*Pomacea canaliculata*)

The channeled apple snail is native to a large portion of South America and has become established in the southern parts of the continental United States and Hawaii. It is tolerant of a wide range of salinities and temperatures. It has the ability to forage both in and out of water through the use of a gill and a lung. This species is sold in the pet and aquarium trade.

The size of channeled apple snails varies from approximately 1.5 to 2.5 inches wide and approximately 1.75 - 3 inches high depending on the conditions. The color varies completely yellow and green (cultivated forms) to brown with or without dark spiral bands (wild form). The channeled apple snail is easily distinguished from other apple snails by the pink egg mass laid above the surface of the water away from predatory fish.

The channeled apple snail is a host for the parasitic rat lung worm (*Angiostrongylus cantonensis*), which can infect humans. The channeled apple snail has a voracious appetite for plants, including aquatic and terrestrial vegetation. It can cause a great deal of damage to aquatic habitat, ornamental plants, and agricultural crops, including rice.

Abalone (all non-native species of genus *Haliotis*)

The genus *Haliotis* has a worldwide distribution. The family has unmistakable characteristics: the shell is rounded to oval, with two to three whorls, and the last one auriform, grown into a large "ear", giving rise to the common name 'ear-shell'. The body whorl has a series of holes — four to ten depending on the species, near the anterior margin. Abalones reach maturity at a relatively small size. Their fecundity is high and increases with size (from 10,000 to 11 million eggs at a time). The adults are herbivores and feed on macroalgae. Their sizes vary from about 0.75 inches (*Haliotis pulcherrima*) to about 8 inches or more (*Haliotis rufescens*) in length.

Under current regulations mollusks destined to terminal food or hobby aquarium markets are specifically exempted from the need for an importation permit, provided that they are not intended to be placed into waters of the state, or waters that are discharged to waters of the state. Effectively, there is no control over importation and other operational practices of abalone importers.

Mass mortalities of wild and cultured abalone have recently occurred in various locations worldwide, and have been shown to be caused by viruses that potentially could infect some or all of California's eight abalone species. None of these viruses are known to occur in California or elsewhere in the Eastern Pacific. Native abalone populations at risk include recovering Southern and Central California populations (including a federal ESA-listed species), North Coast red abalone populations and those held at a variety of commercial farms and restoration-related culture facilities statewide. Associated activities that could be impacted include the North coast recreational fishery, commercial abalone farming, a potential San Miguel Island commercial fishery, and restoration activities.

Abalone disease agents could contact waters of the state via holding infected abalone at facilities or restaurants in marine settings that illegally discharge water from on-site tanks, through unintentional escapement and through ritual release of abalone directly into state waters. Although the potential for exposure of native abalone to foreign pathogens via these routes is relatively low, the potential impact is extremely high.

Preventing exposure is the most cost effective method of disease management. This requires control over

the non-native abalone importation process, both for non-native abalone initially entering California and non-native abalone that is being transported and held at various locations within the state. Including the non-native species of the genus, *Haliotis*, in the restricted animal list is an appropriate and straightforward means of achieving the necessary regulatory control. It will also incidentally provide documentation could be useful in controlling an outbreak of disease, should that occur.

Mute Swan (*Cygnus olor*)

Mute swans are native to Europe and Asia, and were successfully introduced into North America in the early 1900's. Feral mute swans inhabit mostly estuary and marsh habitats throughout their range in North America and locally, have been found to be reproducing in the Petaluma Marsh region. In 2007, DFG staff observed feral mute swans in the Suisun Marsh region.

They are best distinguished from North American swans by the knob at the base of the upper bill, and the color of the bill itself, which is orange, with the tip and base colored black. Also, mute swans hold their necks in a curved position while swimming, while tundra swans hold their necks straight up. Another difference between these two species is that the tundra swan population is migratory, while mute-swans are mostly non-migratory.

Since swan species feed primarily on submerged aquatic vegetation (SAV hereafter), they have the ability to reduce SAV by 95% in introduced areas. Adult mute swans consume 35-43% of their weight on a daily basis. In addition, feeding behavior causes uprooting and damage to other plant species. These types of impacts reduce the carrying capacity of habitat for wintering and breeding waterbirds and waterfowl. Reductions in SAV have also been documented to result in decreased habitat and populations for fish, shellfish, and macroinvertebrates.

Furthermore, mute swans are highly aggressive and do not socially aggregate with other species during winter. Due to their size and aggressiveness, mute swans are capable of injuring people and attacks on humans have been documented.

Proposal Overview

Currently in California, it is legal to import, transport or possess the animals described above. The Department requests the Commission consider the proposed amendments to Section 671 to add the above six species and two genera to the list of restricted species.

If this change is adopted, it would be unlawful to import, transport, or possess alive individuals of these animals except under a permit issued by the Department, although for one species (mute swans) existing specimens in captivity would be allowed without permit. This section contains the list of restricted species that are unlawful for any person to import, export, transport, maintain, dispose or use except as authorized in a permit issued by the department.

Regulatory control over these animals is needed because they pose a threat to native fish and wildlife populations through competition for food, predation, alteration of habitats and/or as potential sources of introducing diseases or parasites to native fish and wildlife.

Other non-substantive revisions for simplification and clarity purposes are proposed. In Subsection 671(c)(1)(I), lines 1. and 2. are replaced by "all species (D)" for simplification. In Subsection 671(c)(5)(A), "the species" is removed from the beginning of lines 1. and 2. for clarity.

NOTICE IS GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a hearing to be held at the Crowne Plaza, Cedar Room, 45 John Glenn Drive, Concord, California on Friday, October 12, 2007, at 8:30 a.m., or as soon thereafter as the matter may be heard.

NOTICE IS GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a hearing to be held at the California Resources Building, First Floor Auditorium, 1416 9th Street, Sacramento, California on Friday, November 2, 2007, at 8:30 a.m., or as soon thereafter as the matter may be heard.

NOTICE IS ALSO GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a hearing to be held at the Department of Education, State Board Room, 1430 N. Street, Room 1101, Sacramento, California on Friday, December 7, 2007, at 8:30 a.m., or as soon thereafter as the matter may be heard. It is requested, but not required, that written comments be submitted on or before November 26, 2007, at the address given below, or by fax at (916) 653-5040, or by e-mail to FGC@fgc.ca.gov. Written comments mailed, faxed or e-mailed to the Commission office, must be received before 5:00 p.m. on December 4, 2007. All comments must be received no later than December 7, 2007, at the hearing in Sacramento, CA. If you would like copies of any modifications to this proposal, please include your name and mailing address.

The regulations as proposed in strikeout-underline format, as well as an initial statement of reasons, including environmental considerations and all information upon which the proposal is based (rulemaking file), are on file and available for public review from the agency representative, John Carlson, Jr., Executive Director, Fish and Game Commission, 1416 Ninth Street, Box 944209, Sacramento, California 94244-2090, phone (916) 653-4899. Please direct requests for the above mentioned documents and inquiries concerning the regulatory process to Shawn Cabbage at the preceding address or phone number. **Susan R. Ellis, Invasive Species Coordinator, phone (916) 653-9767, has been designated to respond to questions on the substance of the proposed regulations.** Copies of the Initial Statement of Reasons, including the regulatory language, may be obtained from the address above. Notice of the proposed action shall be posted on the Fish and Game Commission website at <http://www.fgc.ca.gov>.

Availability of Modified Text

If the regulations adopted by the Commission differ from but are sufficiently related to the action proposed, they will be available to the public for at least 15 days prior to the date of adoption. Any person interested may obtain a copy of said regulations prior to the date of adoption by contacting the agency representative named herein.

If the regulatory proposal is adopted, the final statement of reasons may be obtained from the address above when it has been received from the agency program staff.

Impact of Regulatory Action

The potential for significant statewide adverse economic impacts that might result from the proposed regulatory action has been assessed, and the following initial determinations relative to the required statutory categories have been made:

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- (a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

The proposed action is necessary for the continued preservation of the resource and therefore the prevention of adverse economic impacts.

- (b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California:

None.

- (c) Cost Impacts on a Representative Private Person or Business:

The agency is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

- (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:

None.

- (e) Other Nondiscretionary Costs/Savings to Local Agencies:

None.

- (f) Programs Mandated on Local Agencies or School Districts:

None.

- (g) Costs Imposed to Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4:

None.

- (h) Effect on Housing Costs:

None.

Effect on Small Business

It has been determined that the adoption of these regulations may affect small business.

Consideration of Alternatives

The Commission must determine that no reasonable alternative considered by the Commission, or that has otherwise been identified and brought to the attention of the Commission, would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

FISH AND GAME COMMISSION

John Carlson, Jr.
Executive Director

Dated: September 25, 2007