

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
REQUEST FOR CONSIDERATION AS RESTRICTED OR PROHIBITED
EXOTIC SPECIES (68A-23.008, F.A.C.)

(68A-23.0089 will be replaced by 68-5, a new rule – Scott Hardin)

Items with * are optional.

1. CLASSIFICATION

a. Taxonomy, and common names, and *references

Subspecies: *Trachemys scripta elegans* (Wied-Neuwied, 1838)
Both *Chrysemys* and *Pseudemys* have been used as generic names in the recent past. However, most authorities currently accept the genus *Trachemys*.

Common Names: Red-eared slider, Red-eared turtle, Red-ear

Higher Taxonomy: Order Testudines, Family Emydidae

b. Physical description, identifying characteristics, *illustrations, *photos

A small to medium-sized, hard-shelled freshwater turtle. The chief identifying characteristic in most individuals is a broad reddish stripe behind the eye. Carapace length of adults commonly 15-25 cm; carapace usually brown to black in adults, with variable pattern of dark and light lines. Plastron cream to yellow and usually marked with numerous pairs of dark spots, smudges, or ocelli. Legs and neck with cream to yellow striping. Mature individuals, especially older males, may become melanistic, with black pigment perfusing the skin and shell to the point of obliterating all markings (including the red “ear”).

Hatchlings about 3 cm shell length, with the carapace being bright green and bearing a low keel along the midline; otherwise marked similarly to adults.

For detailed descriptions, photos, and illustrations, see: Conant and Collins 1991; Ernst et al. 1994.

c. *Genetics

2. DISTRIBUTION

a. Native range

Chiefly the Mississippi Valley region of the U.S., from northern Illinois to the Gulf of Mexico, but extending across Texas to New Mexico. Much of Alabama is considered a zone of intergradation between this subspecies and *T. s. scripta*, the subspecies inhabiting the southeastern U.S., including Florida. There is little or no data confirming any major expansion or contraction of the native range in recent times.

Considered to be common and abundant throughout much of its native range, able to reach high population densities in many wetlands.

b. Habitat

Occupying a variety of permanent freshwater habitats, generally with little or no flow: e.g., ponds, ditches, canals, marshes, oxbows, and large lakes. Utilizes terrestrial habitats for nesting and for movement between wetlands, including during drought. Tolerant of a broad array of physical conditions, able to survive in degraded waters.

c. Introduced range

This highly invasive turtle has spread worldwide through deliberate and careless introduction. Chief sources are discarded pets, but also releases or escapes from importations for food and religious practices. The turtle is known to be causing problems for the native turtle faunas of Europe and Asia and has even spread to Hawaii and Bermuda. Scattered populations are known from throughout much of the Florida peninsula, especially in urban areas, as well as in Leon County (reviewed by Aresco and Jackson, in litt.; see also Meshaka et al. 2004).

3. BIOLOGY

See Ernst et al. (1994) for a review of the species= biology. A few pertinent aspects are summarized below.

a. Reproduction

Females lay eggs annually during the spring, typically in May and June. Many females lay multiple clutches at intervals of approximately 3 weeks. Typical clutches contain 6-15 eggs, although larger and smaller occur. Males mature at plastron lengths (PL) of ca. 9-10 cm, achieved at 2-5 years. Females mature at PL of 15-19 cm, probably at ages in excess of 5 years. Females likely can be reproductively active for at least 20 years.

b. Diet

Highly omnivorous, capable of feeding upon a broad variety of foods including algae, aquatic macrophytes, worms, insects, mollusks, fishes, and carrion.

c,d. *Early life history, Age and growth

Live in littoral zone or floating vegetation, eat a variety of foods, bask, and grow.

e. *Parasites and disease

4. CONTROL

The purpose of this petition is not so much to remove red-eared sliders from the environment (although this might be a longer-term goal) as to prevent their further spread by continued introduction. The major proposed means of doing this is to prohibit the sale and/or distribution of these turtles in Florida. Note that Adistribution@ is included, as some pet dealers reportedly Agive away@ turtles with the purchase of a bowl. An importation ban should not be necessary, as there would be no incentive to import the species for commercial purposes. Additionally, regulations should prohibit the release of red-eared sliders into the environment in Florida. This applies not only to former pets but

also to any red-ears that may be leftover (i.e., still alive) from their use in anatomy and physiology classes of educational institutions, should this practice still exist; the regulation would also apply to Adumping@ of unsold hatchlings by commercial dealers.

We do not seek a ban on the possession of captive red-eared turtles, as we encourage responsible owners to maintain their pets in secure environments rather than feel that they must release them. Further, we advocate the establishment of rescue centers, much as exist in Europe (under the auspices of several NGOs), for the rescue and adoption of unwanted red-eared sliders, under strict guidelines to prevent reproduction or escape into the wild. In all captive situations, regulations should prohibit reproduction; this is accomplished simply by limiting the nesting areas, then searching for and destroying (e.g., by freezing) any eggs that are laid.

At sites with only a small number of introduced red-ears, as well as in any non-urban areas, we advocate prompt removal of red-ears by trapping. It may be that secure ponds can be found or built (perhaps at zoos) to house such animals rather than inciting a negative response from animal rights advocates that would result from euthanasia.

Many of these methods are currently used in the European Community, where the establishment of the larger and more aggressive *T. s. elegans* has been deleterious to native freshwater turtles.

5. POTENTIAL FLORIDA DISTRIBUTION

a. Potential coverage

The entire state of Florida

b. Hospitable habitats

Nearly any body of permanent fresh water; ephemeral waters can be used if near more permanent sources.

c. Ecologically similar species

The major environmental concern with the invasive red-ear is that it is a subspecies of a species native to Florida. *T. s. scripta*, the yellow-bellied slider, is native to the entire panhandle and northern peninsula, south to approximately Gainesville. The two subspecies can and do interbreed when brought into contact, with the result that red-eared genes and morphology are introduced into the *T. s. scripta* population. Genetic swamping of *T. s. scripta* by *T. s. elegans* is a real possibility. Mitchell (1994) has documented hybridization in Virginia and has expressed strong concern for the imperiled integrity of *T. s. scripta* there. We have observed hybrid animals in at least one local site (Lake Jackson, Leon County) in Florida.

Throughout Florida, habitats potentially inhabitable by *T. s. elegans* support a broad diversity of turtles. These include nearly a dozen species of mud and musk turtles, softshell turtles, snapping turtles, and emydids. The potential competitive effect on these species by the invasive red-ear, which can reach extremely high densities, monopolize

basking sites, and eat nearly anything organic, is unknown but potentially serious. Florida, which is blessed with one of the highest native turtle diversities in the world, should not become an experimental laboratory to determine these effects.

d. Introduction pathways

The pet trade is surely the major pathway, with the sale of hundreds of thousands of baby red-ears over the last four decades. Most of these hatchlings are presumably imported from out of state, although there may be breeder-suppliers within Florida. When purchasers grow weary of their pets, or they grow too large, the turtles are often released. Adult red-ears are also imported for use in classrooms (anatomy-physiology), as well as presumably for food among minority cultures; some of these animals may escape or be released.

6. POTENTIAL IMPACT: FWC LISTING CRITERIA

(X = applicable)

X a. Ecological

- X i. Potential to eliminate or significantly reduce native species through competition for habitat, food, predation, interbreeding
- X ii. History of range extension, high population growth rate, tendency to monoculture (reduced community diversity)
- X iii. Potential to adversely impact listed species.
This species has been captured at Rainbow Run in Marion County where it could impact the population of the Suwannee Cooter, which is a listed species.
- iv. Potential for habitat alteration

X? b. Health C directly harmful to humans

Poorly housed captive turtles are prone to the development of bacteria within their environs. Because of the risk of *Salmonella* transmission to infants, the FDA banned the sale of hatchling turtles, although loopholes have been exploited. We feel that properly housed turtles, accompanied by good hygiene practices, pose little danger and may even stimulate appreciation for reptiles in nature; however, many average pet owners fall short in terms of both husbandry and hygiene.

X? c. Economic

- i. Bio-fouling
- ii. Competition with agricultural/cultured crops
- iii. Impact agricultural/cultured crops
- X? iv. Potential socioeconomic impacts from listing
The pet industry (breeders and sellers) would potentially lose sales in the short term as a result of this prohibition. However, we have not called for a ban on sale of hatchling turtles (which may be illegal anyway under federal law). Thus, the industry could switch sales in Florida to those of native species. Three species

are already bred in some numbers for this purpose. These are:

Trachemys scripta scripta - yellow-bellied slider

Pseudemys nelsoni - Florida red-bellied turtle

Pseudemys floridana (including *peninsularis*) - Florida cooter

***If any of these turtles is substituted for sales, the geographic distribution of these sales and species offered must be considered so that species are sold within their native range (this will reduce, though not eliminate, potential introductions out-of-range). Thus, if FWC permitted such sales, we recommend:

Gainesville north and west (panhandle) - *T. s. scripta*

Ocala and south - *P. nelsoni*

We hesitate to recommend *P. floridana* because of subspecific concerns.

This does not constitute an endorsement of turtle sales by us. We include these recommendations only if FWC decides to continue to allow turtle sales, which is not a subject of this petition.

- d. Social C potential to substantially impact recreational use
- e. Legal C restricted by national or international law

To our knowledge, the restrictions we propose would not conflict with law. In fact, national law may already forbid it, but federal agencies (FDA) are not enforcing it due to insufficient staffing and other concerns. FDA has informed us that current practices used by pet-sellers to get around the Abona fide@ educational purpose requirement do not fulfill their criteria.

7. REFERENCES

- Aresco, M. J., and D. R. Jackson. 2005, in litt. *Trachemys scripta elegans* (Red-eared slider): geographic distribution. Unpublished manuscript.
- Conant, R., and J. T. Collins. 1991. A Field Guide to Reptiles and Amphibians of Eastern and Central North America, third edition. Houghton Mifflin Co., Boston, Massachusetts.
- Ernst, C. H., J. E. Lovich, and R. W. Barbour. 1994. Turtles of the United States and Canada. Smithsonian Inst. Press, Washington, D.C.
- Meshaka, W. E., Jr., B. P. Butterfield, and J. B. Hague. 2004. The exotic amphibians and reptiles of Florida. Krieger Publ. Co., Malabar, Florida.
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