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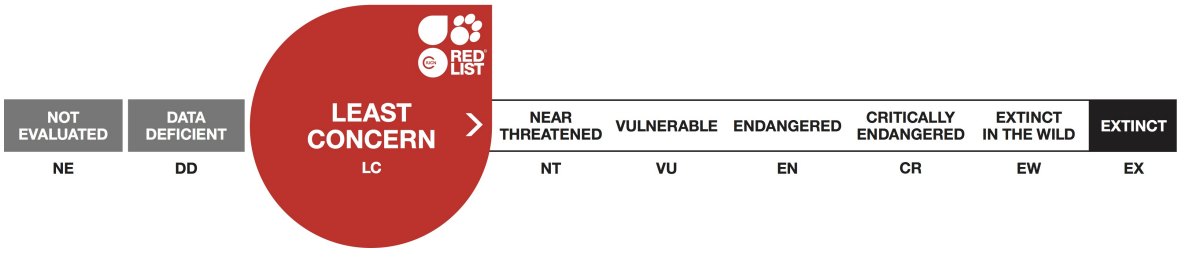
# *Pseudemys nelsoni*, Florida Red-bellied Cooter

**Errata version**

**Assessment by: van Dijk, P.P.**

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# Taxonomy

| Kingdom | Phylum | Class | Order | Family |
|---|---|---|---|---|
| Animalia | Chordata | Reptilia | Testudines | Emydidae |

**Taxon Name:** *Pseudemys nelsoni* Carr, 1938

**Synonym(s):**

- *Chrysemys nelsoni* (Carr, 1938)
- *Pseudemys rubriventris* ssp. *nelsoni* Carr, 1938

**Common Name(s):**

- English: Florida Red-bellied Cooter, Florida Redbelly Turtle

# Assessment Information

**Red List Category & Criteria:** Least Concern ver 3.1

**Year Published:** 2011

**Date Assessed:** August 1, 2010

**Justification:**

*Pseudemys nelsoni* has been assessed as Least Concern as it has a moderately sizeable distribution across most of Florida and part of Georgia, with populations reportedly stable and well-represented in extensive protected areas.

**Previously Published Red List Assessments**

2010 – Lower Risk/least concern (LR/lc)

# Geographic Range

**Range Description:**

*Pseudemys nelsoni* is found throughout peninsular Florida, in the Okefenokee Swamp of southern Georgia, and in an isolated population in the Florida panhandle, near Tallahassee. Introduced populations have been reported from San Marcos, Texas, and Tortola, British Virgin Islands (Jackson 2010).

**Country Occurrence:**

**Native:** United States (Florida, Georgia, Texas - Introduced)

**Introduced:** Virgin Islands, British


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## Population

*Pseudemys nelsoni* is generally abundant in suitable habitat and may be the numerically dominant freshwater turtle; densities of 4-22 individuals per hectare have been reported from open, suboptimal habitats to 78 animals/ha in prime locations. Overall, populations appear to be mostly stable ( Jackson 2006, 2010). NatureServe (2006) considered the species as abundant throughout peninsular Florida and especially common in the Everglades, and assessed it as G5, or Least Concern, in 1996.

**Current Population Trend:** Stable

## Habitat and Ecology (see Appendix for additional information)

*Pseudemys nelsoni* inhabits a variety of freshwater habitats with abundant vegetation, including ditches, wetlands, marshes, ponds, lakes, and streams, mangrove-bordered creeks slow-flowing rivers and spring runs. Some individuals occur in brackish (30% saltwater) situations. *Pseudemys nelsoni* is strictly herbivorous after its early juvenile years, feeding on a variety of aquatic plants. Females average 30.5 cm carapace length (CL) and 4 kg body mass; the largest reported female was 37.5 cm CL, while males can reach to 30 cm CL. Females mature at about 27-29 cm CL at an age of seven to eight or more years, males from 19-23 cm CL and a minimum of three years onwards. Adult females produce three to six clutches of on average 14.6 (range 7-26) eggs annually, for a mean annual reproductive output of 64.4 eggs (Jackson 2010). Hatchlings measure about 32 (28-38) mm CL.

**Systems:** Terrestrial, Freshwater

## Use and Trade

*Pseudemys nelsoni* is collected for the pet trade and local human consumption.

## Threats (see Appendix for additional information)

*Pseudemys nelsoni* has been reported as subject to a variety of impacts, including habitat degradation due to pollution and wetland loss, collection for pet trade and local human consumption, accidental mortality from cars and boat propellers, and increased predation levels. Impacts from invasive nest predators (fireants) and possibly subsidized native predators (i.e., unnaturally large populations of predators subsidized by easily available resources near human settlements), such as raccoons and possums, have been reported but appear not to represent a significant threat at present levels. Invasive non-indigenous red fire ants are known to predate on turtle nests, where they feed on pipped eggs, and sting, kill and subsequently feed on turtle hatchings (Allen *et al.* 2001). While this has been document for the green and loggerhead turtles, it may also threaten *P. nelsoni*, as this species is known to lay eggs in alligator nests, 20% of which are infested with fire ants in central Florida. A study on ant predation on *P. nelsoni* found that in an affected nest, 70% of the hatchlings were killed by fire ants either during pipping or shortly after hatching (Allen *et al.* 2001). Overall, however, the species is sufficiently adaptable to current land use patterns and non-natural mortality impacts in its range, and its overall population status appears stable. The species was assessed as G5, or Least Concern, by NatureServe in 1996 (NatureServe 2006).

## Conservation Actions (see Appendix for additional information)

*Pseudemys nelsoni* inhabits several large protected areas, including the Everglades National Park,

Okefenokee NWR, and several State or local authority protected areas. Minimizing wetland isolation and loss, mitigating the impacts of roads and residential developments near waterbodies, ensuring connectivity between wetlands and turtle populations, baseline distribution and population status surveys, and monitoring of sample populations, would all be highly desirable conservation measures (Jackson 2006, 2010).

# Credits

**Assessor(s):** van Dijk, P.P.

**Reviewer(s):** Horne, B.D., Mittermeier, R.A., Philippen, H.-D., Quinn, H.R., Rhodin, A.G.J., Shaffer, H.B. & Vogt, R.C


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## Disclaimer



## External Resources

For Images and External Links to Additional Information, please see the Red List website.

# Appendix

## Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Habitat | Season | Suitability | Major Importance? |
|---|---|---|---|
| 15. Artificial/Aquatic & Marine -> 15.9. Artificial/Aquatic - Canals and Drainage Channels, Ditches | - | Suitable | Yes |
| 15. Artificial/Aquatic & Marine -> 15.2. Artificial/Aquatic - Ponds (below 8ha) | - | Unknown | - |
| 15. Artificial/Aquatic & Marine -> 15.1. Artificial/Aquatic - Water Storage Areas (over 8ha) | - | Unknown | - |
| 5. Wetlands (inland) -> 5.9. Wetlands (inland) - Freshwater Springs and Oases | - | Suitable | - |
| 5. Wetlands (inland) -> 5.7. Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha) | - | Suitable | Yes |
| 5. Wetlands (inland) -> 5.5. Wetlands (inland) - Permanent Freshwater Lakes (over 8ha) | - | Suitable | - |
| 5. Wetlands (inland) -> 5.4. Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands | - | Suitable | Yes |
| 5. Wetlands (inland) -> 5.3. Wetlands (inland) - Shrub Dominated Wetlands | - | Unknown | - |
| 5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls) | - | Suitable | - |

## Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

| Threat | Timing | Scope | Severity | Impact Score |
|---|---|---|---|---|
| 1. Residential & commercial development -> 1.1. Housing & urban areas | Ongoing | - | - | - |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion<br>1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming | Past, unlikely to return | - | - | - |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion<br>1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |
| 4. Transportation & service corridors -> 4.1. Roads & railroads | Ongoing | - | - | - |
| | Stresses: | 1. Ecosystem stresses -> 1.1. Ecosystem conversion<br>1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |

| | | | | |
|---|---|---|---|---|
| 5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.1. Intentional use: (subsistence/small scale) [harvest] | Ongoing | - | - | - |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |
| 8. Invasive and other problematic species, genes & diseases -> 8.1. Invasive non-native/alien species/diseases -> 8.1.2. Named species | Ongoing | - | - | - |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |
| 8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species | Ongoing | - | - | - |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |
| 8. Invasive and other problematic species, genes & diseases -> 8.2. Problematic native species/diseases -> 8.2.2. Named species (Procyon lotor) | Ongoing | - | - | - |
| | Stresses: | 2. Species Stresses -> 2.1. Species mortality | | |
| 9. Pollution -> 9.3. Agricultural & forestry effluents -> 9.3.2. Soil erosion, sedimentation | Ongoing | - | - | - |
| | Stresses: | 1. Ecosystem stresses -> 1.2. Ecosystem degradation | | |

# Conservation Actions in Place

**(http://www.iucnredlist.org/technical-documents/classification-schemes)**

| **Conservation Actions in Place** |
|---|
| In-Place Land/Water Protection and Management |
| Conservation sites identified: Yes, over entire range |
| Occur in at least one PA: Yes |
| In-Place Species Management |
| Successfully reintroduced or introduced beningly: No |
| Subject to ex-situ conservation: No |
| In-Place Education |
| Included in international legislation: No |
| Subject to any international management/trade controls: No |

# Conservation Actions Needed

**(http://www.iucnredlist.org/technical-documents/classification-schemes)**

| **Conservation Actions Needed** |
|---|
| 2. Land/water management -> 2.1. Site/area management |
| 2. Land/water management -> 2.2. Invasive/problematic species control |


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| Conservation Actions Needed |
|---|
| 3. Species management -> 3.1. Species management -> 3.1.1. Harvest management |
| 3. Species management -> 3.1. Species management -> 3.1.2. Trade management |
| 4. Education & awareness -> 4.3. Awareness & communications |
| 5. Law & policy -> 5.1. Legislation -> 5.1.2. National level |
| 5. Law & policy -> 5.1. Legislation -> 5.1.3. Sub-national level |
| 5. Law & policy -> 5.2. Policies and regulations |
| 5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.3. Sub-national level |

# Research Needed

**(http://www.iucnredlist.org/technical-documents/classification-schemes)**

| Research Needed |
|---|
| 1. Research -> 1.2. Population size, distribution & trends |
| 1. Research -> 1.3. Life history & ecology |
| 1. Research -> 1.5. Threats |
| 1. Research -> 1.6. Actions |
| 3. Monitoring -> 3.1. Population trends |

# Additional Data Fields

| Population |
|---|
| Population severely fragmented: No |
| **Habitats and Ecology** |
| Movement patterns: Full Migrant |

# Errata

**Errata reason:** An errata assessment is required to generate a revised PDF without the range map which had been included in error; no range map was available when this assessment was originally published.


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# The IUCN Red List Partnership


The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.