



## Sirens and Dwarf Sirens (*Siren spp.*) and (*Pseudobranchius spp.*)

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### **Non-Mythical Sirens Do Exist!**

Sirens are a genus of elongated, primarily aquatic, neotenic salamanders indigenous to the permanent to semi-permanent ditches, swamps, slow moving streams and riverways, and other wetlands of the southeastern United States. Sirens earn their name from the clicking or whistling vocalizations they may emit when disturbed or handled, and although they are mainly aquatic, sirens will move over land during rainy weather or to disperse to new habitats. Sirens are most often a gray, grayish-brown, brown, olive-brown, to black in color with a single pair of reduced vestigial forelimbs (hind limbs are absent). Other neotenic features of sirens also include a pair of bushy gills, and finned tails. These amphibians also lack eyelids, have flattened, pointed heads, and have visible lateral lines. Sirens are not widely bred in captivity, but are often available as wild caught specimens or from biological/research supply companies.

### **Taxonomy-True Sirens**

**Life:** All living, physical, and animate entities

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum/Sub Phylum:** Chordata/Vertebrata

**Class:** Amphibia

**Order:** Caudata/Urodela

**Suborder:** Sirenoidea

**Family:** Sirenidae

**Genus:** *Siren*

**Species:** *Siren spp.\**

*\*Taxonomy subject to change and revision.*

### **Taxonomy-Dwarf Sirens**

**Life:** All living, physical, and animate entities

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum/Sub Phylum:** Chordata/Vertebrata

**Class:** Amphibia

**Order:** Caudata

**Suborder:** Salamandroidea

**Family:** Sirenidae

**Genus:** *Pseudobranchius*

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**Species:** *Pseudobranchus spp.\**

*\*Family, genus, and species taxonomy is subject to change and revision.*

### **Lifespan and Longevity**

Captive and wild longevity of sirens has ranged from 10 to 25 years or more.

### **Species**

The Dwarf siren species can be distinguished from other species by having three toes on each digit rather than four, and range in color from light to dark brown, olive brown, or grayish with paler yellowish, yellowish-brown, to olive-yellow lateral stripes. Species of dwarf sirens include the Southern Dwarf Siren (*Pseudobranchus axanthus*) and Northern Dwarf Siren (*Pseudobranchus striatus*), both of which have two to three subspecies thereof. Two species of the more well-known extant sirens are recognized: the Lesser Siren (*Siren intermedia*) and Greater Siren (*Siren lacertina*).

### **Distribution and Habitat**

Sirens are a unique genus of salamanders which inhabit the eastern to southeastern, and south central United States, and into northern Mexico depending on the genus and species. They occupy primarily aquatic environments, although sirens can sometimes be forced onto land during flooding events as well. Within their ranges, sirens can be found in a variety of shallow, slow moving to stagnant, vegetated bodies of water including ponds, slow moving rivers and streams, ditches, swamps, marshes, and other seasonally flooded wetlands.

### **Conservation Status**

IUCN Red List Least Concern (LC).

### **Legal and Regulatory Status (\*Subject to Change)**

Siren spp. Lacey Act of 1900 listed species as of 2016. Also consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

### **Experience Level Required**

Intermediate/Moderate.

### **Size**

Dwarf sirens are the smallest members of the Sirens, reaching 4 ½ to 8 inches as adults. The greater and lesser sirens are larger members, reaching 7 to up to 40 inches in length.

### **Housing and Enclosure**

Sirens are primarily aquatic, and should be provided a secure, escape proof aquarium or terrarium designed to hold water. They do not require any dry land space. Depending on the size and species, and number of sirens to be housed, a 10 to 20 gallon long or larger aquarium is of sufficient size depending on the number of animals being housed. Sirens can be housed together, but some care should be required during feeding to prevent them from biting or injuring one another. In general, it is also preferable that sirens not be housed with fish or other species, since they may compete for food and resources as well as possibly predate upon one another depending on their sizes and circumstances. Provide an appropriate filtration system as well as water heating, which will assist in maintaining water clarity and quality as well as sufficient water temperatures for sirens. Although these they respire, or breathe primarily through their skin, they will also breathe air and should be provided with several inches of air space in the

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enclosure. Other furnishings to increase safety and security in the enclosure can also be provided, including live plants, rocks, slabs, logs, and other suitable hides. Substrates that allow for burrowing should also be included, and can include fine organic topsoil and dried leaves/vegetation, or otherwise non-ingestible rocks or pebbles. They can also be maintained on bare substrate as well if viewing is important, but should still be given access to hides or shelter. Any live or floating plants in the enclosure should be firmly and securely planted to prevent uprooting. In order to prevent substrate from being stirred up and clogging any filters that may be used, a sponge filter and weekly 10 to 20% water changes are recommended. All water used in siren enclosures should be aged and dechlorinated. Distilled water should only be used to replace evaporated water, as these water types lack sufficient ions and other nutrients required for these salamanders, and may result in calcium loss.

### **Temperature, Lighting, and Humidity**

Sirens have simple and undemanding heating and lighting requirements in captivity, and do not require additional UVA/UVB lighting, although providing it in moderated amounts can be greatly beneficial for their health, immune system, and overall wellness. They otherwise do not require any other special lighting or heating unless live plants are also maintained, although water temperatures should be maintained at around 65 to 80 degrees F. For any supplemental heating that may be needed, use a low wattage incandescent or UVA/UVB bulb, radiant or ceramic heat emitter, submersible water heater, or UTH (under tank heating element). They can tolerate temperatures as low as 40 degrees F or below. They are susceptible to health and husbandry related issues if water temperatures are too cold or too warm for these unusual amphibians. Do not exceed 80 degrees F as they are susceptible to health and husbandry related issues if water temperatures are too cold or too warm for these unusual amphibians. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Feeding, Diet, and Nutrition**

*Primarily Carnivorous;* Sirens are primarily carnivorous in the wild. They will feed on most of any small fish, frogs, smaller amphibians, small reptiles, carrion, crustaceans, worms, snails, mollusks, and a variety of other aquatic insects and other invertebrates that they can catch and ingest. In captivity, variety is important, and sirens can be fed weekly and will consume appropriately sized feeder fish, redworms, bloodworms, waxworms, earthworms, crickets and other feeder insects and larvae, as well as some commercially available pelleted fish foods of appropriate nutritional value and raw or cooked shrimp or crayfish, pre-killed pinkie mice, or other pieces of meat. Variety, as well as whole prey items, are important as well in order to prevent any calcium and vitamin D3 deficiencies. Any uneaten foods should be cleaned or removed regularly to maintain water clarity and quality. Sirens may also be cannibalistic, and caution should be used not to house specimens of different sizes together in the same enclosure. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Handling**

As with most other aquatic and terrestrial caudates, sirens are delicate and sensitive skinned amphibians that should not really be handled, and are more suitable for viewing. Use a suitable sized aquarium net to move sirens when cleaning the enclosure or whenever necessary.

**\*\*Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens\*\***

## **Contact**

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact the Madison Area Herpetological Society at [info@madisonherps.org](mailto:info@madisonherps.org)

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