

EASTERN INDIGO SNAKE



Tyler Buckley • Raoul K. Boughton

Wildlife of Florida Factsheets

The Forest Ruler



PHOTO BY: GTM NERR, KEVIN ENGE,
HTTPS://CREATIVECOMMONS.ORG/LICENSES/BY-NC/2.0/LEGALCODE

SCIENTIFIC NAME *Drymarchon couperi*

COMMON NAMES Eastern indigo snake, blue indigo snake, gopher snake, blue bull snake

HABITAT Longleaf pine forest, xeric pinelands, tropical hardwood hammocks, upland scrubs, wet prairies.

PHYSICAL DESCRIPTION Nonvenomous, large-bodied, glossy, iridescent bluish-black snake with smooth scales. The sides of the head and chin are typically reddish orange but can be white or black. Juveniles are similar but redder on their head.

LENGTH Up to 8 ft, average of 5–6.5 ft.

REPRODUCTIVE RATE Lay 4–12 eggs a year between April and June; eggs hatch after approximately 90 days.

LIFESPAN Unknown in the wild, but up to 25 years in captivity.

DISPERSAL & HOME RANGE Largest home range of any snake species in North America, ranging from 53 acres for females in central Florida to 1260 acres for males in Georgia (see Biology and Behavior). Little is known about dispersal, but one record shows a young adult male moving 13.6 miles between two overwintering sites.

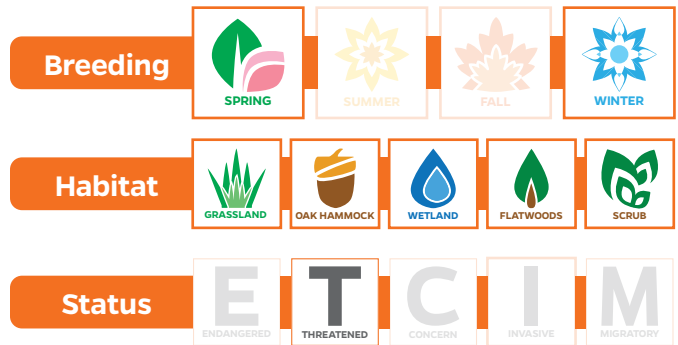
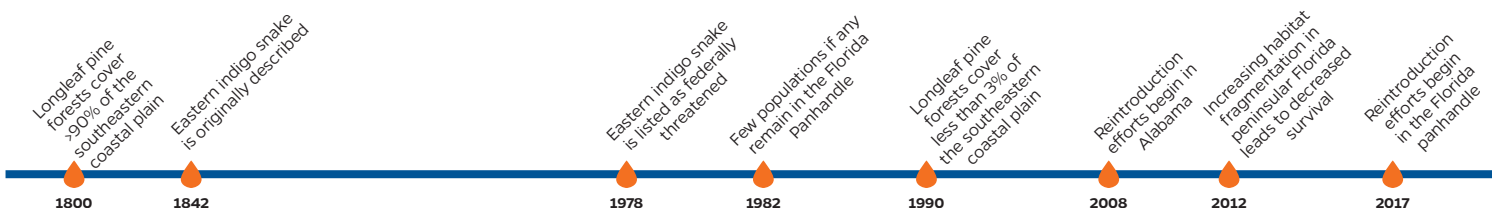


PHOTO BY: CARLTON WARD JR.
HTTPS://CREATIVECOMMONS.ORG/PUBLICDOMAIN/MARK/1.0/

HISTORY The eastern indigo snake was once widely distributed throughout Florida and the coastal plain of Mississippi, Alabama, and Georgia. They were listed as federally threatened when populations began to decline due to the illegal pet trade, reduction in the extent and quality of longleaf pine forests, and gassing of gopher tortoise burrows in search of rattlesnakes. Populations have continued to slowly decline despite their listing status due to further loss of longleaf pine forests combined with increasing urbanization and habitat fragmentation.

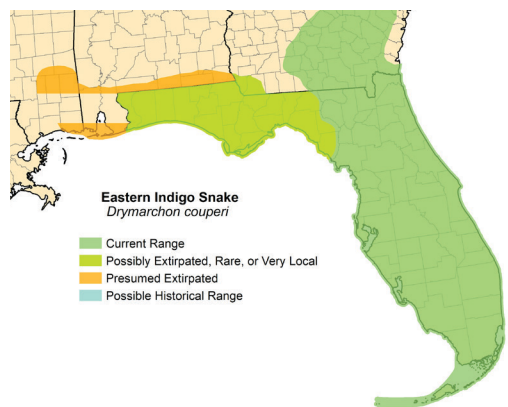
Did you know?

Eastern indigo snakes are the longest native snake in North America!



EASTERN INDIGO SNAKE FAST FACTS

- Eastern indigo snakes are federally protected under the Endangered Species Act. Do not touch, hold, or harass indigo snakes.
- They do not constrict like most snakes but overpower prey with their powerful bite.
- The scientific genus *Drymarchon* means “forest ruler.”



Current and historical range of the eastern indigo snake. Map by UF/IFAS, adapted from Javan Bauder from the Species Status Assessment Report for the Eastern Indigo Snake (*Drymarchon couperi*) Version 1, November 5, 2018, U.S. Fish and Wildlife Service. <https://ecos.fws.gov/ServCat/DownloadFile/157073>

DISTRIBUTION The eastern indigo snake is now found only in the coastal plain of Georgia, Florida, and, due to successful reintroduction efforts, Alabama. In Georgia and Alabama, they are restricted to the coastal plain region (see map) within xeric (dry) sandhills and longleaf pine forests interspersed with gopher tortoise burrows. Indigo snakes use burrows throughout their range but especially in the northern part, where burrows provide critical overwintering habitat and protect from the cold stress thought to impact the snakes' survival. Although they are found throughout Florida, their abundance varies regionally. Today, they are likely extirpated or very rare in the Panhandle. Though a reintroduction project is underway in the Panhandle, it is too early to determine whether it will result in a stable population. South-central Florida still has relatively stable isolated populations of eastern indigo snakes, which is thought to be due to less development and warmer temperatures. In south-central Florida, eastern indigo snakes are most common along sandy ridges and in xeric sandhills and flatwoods but will venture into adjacent habitats. Though stable populations remain in south-central Florida, studies have indicated a

decrease in survival within fragmented landscapes, which emphasizes the need to conserve expansive tracts of land. Due to drier habitat preferences, eastern indigo snakes are relatively uncommon in the wetter habitats of the seasonally flooded Everglades. They have also been found in a few sites along the Florida Keys.

BIOLOGY AND BEHAVIOR Eastern indigo snakes are large and near the top of the food chain. They hunt during the day, and other snakes (both venomous and nonvenomous) are their main diet. However, they will also eat frogs, birds, small mammals, and any other animal they can overpower. The eastern indigo snake uses a variety of habitats in south-central Florida. In this region, they have been observed in xeric pinelands, tropical hardwood hammocks, citrus groves, upland scrubs, and wet prairies. In northern Florida, they primarily occupy longleaf pine forests, which contain burrows created by gopher tortoises. During the winter months, they seek burrows for thermal refugia and become relatively inactive due to the colder temperatures. However, in south-central Florida, they remain active on the surface all year. In the heat of the summer, they retreat to nearby wetlands. These variations in habitat and location may influence population density, mating opportunities, prey abundance, and, in turn, movements and home range size. In Georgia, average home range size is 250 and 1,260 acres; in north-central Florida, average home range size is 53 and 392 acres; and in south-central Florida, average home range size is 117 and 341 acres, for females and males, respectively for each location. They are a late-maturing snake, with males reaching sexual maturity at 2–3 years and females 3–4 years, at a length of 5 to 6 feet. Breeding occurs from October through March with a peak during November through January. Females lay their eggs in April through June. Little is known about nest sites, but gopher tortoise burrows are suspected to be a common nesting location.

THE THREATENED FOREST The longleaf pine-wiregrass ecosystem, a preferred habitat of eastern indigo snakes, once covered the coastal plain of the southeastern United States. The frequent lightning strikes in May–July resulted in frequent low-intensity fires that were crucial in maintaining the ecosystem. This ecosystem is considered as biologically diverse as a rainforest with records of up to 40 species of plants per 10 ft². Historically, this system stretched from Texas to Virginia, but today less than 3% percent remains. The decline of the longleaf ecosystem is largely due to fire suppression and conversion of forest to agricultural lands and slash pine plantations. In addition, the naval store industry extracted oleoresin from longleaf pines to create turpentine, tar, and pitch. These products were used to waterproof the hulls of wooden ships and generate lamp oil, medicine, and paint. The longleaf ecosystem has been severely degraded, and, as a result, many species that depend upon it are endangered or threatened, including the eastern indigo snake, red-cockaded woodpecker, gopher tortoise, gopher frog, and the flatwoods salamander.

How You Can Help

- Educate others on the threatened status of the eastern indigo snake.
- Don't harass or kill eastern indigo snakes.
- Support eastern indigo snake conservation by supporting federal, state, and private agencies.
 - <https://www.oriannesociety.org/>
 - <https://www.nature.org/en-us/>
 - <https://myfwc.com/>
 - <https://www.fws.gov/>

To learn more, visit edis.ifas.ufl.edu