

Identification: The black pinesnake (*Pituophis melanoleucus lodingi*) is a large dark brown to black non-poisonous snake. It may have a few white scales scattered over its body or display a trace of pattern. It has a small head, moderately stout body, short tail, and can grow up to 74 inches in length. There are two other black snakes, the black racer and eastern indigo snake, which occur within its range. The black pinesnake can be identified by its keeled body scales, the other two black snakes have smooth body scales. It occurs in southwest Alabama with specimens having only been documented in Mobile, Clarke, and Washington counties.



Habitat: Black pinesnakes adapted to the upland longleaf pine ecosystem. Xeric, fire maintained longleaf pine forests having sandy, well-drained soils are preferred. Hilltops and ridges with open canopy, limited mid-story, and dense herbaceous ground cover are ideal. It does not use riparian areas, hardwood forest, or other closed canopy forest types (pine plantation) very often. This species spends the majority of its time underground. It utilizes rotted or burned out pine stump holes, particularly the root channels, as refuge. It will occasionally utilize gopher tortoise burrows. The main prey items are small rodents, small birds, and sometimes bird eggs. The average home range of black pinesnake is about 117 acres.

Importance: The black pinesnake was listed as Threatened under the Endangered Species Act, effective November 5, 2015. The final rule for the black pinesnake has been published with section 4(d) exceptions (see below). On March 11, 2015, the US Fish and Wildlife Service published a proposed rule to designate Critical Habitat for the black pinesnake. The black pinesnake has been a species of concern since 1982. Threatened species are those that are likely to become endangered in the future. Endangered species are those that are in danger of becoming extinct.

Reasoning for Listing: The US Fish and Wildlife service has found that the black pinesnake warrants listing as a Threatened Species because of past and continuing loss, degradation, and fragmentation of habitat in association with silviculture, urbanization, and fire suppression. Population declines are also attributed to road mortality and intentional killing of snakes by individuals. These factors, combined with the snake's low reproductive rate, are believed to threaten the species long term viability.

Forestry Considerations: Habitat destruction and modification is a primary reason for the decline of the black pinesnake. Acreage of fire maintained longleaf pine ecosystems has declined significantly over the past decades. Recently, longleaf pine restoration has been increasing in the south, possibly at a rate able to keep up with overall forest loss. The conversion of longleaf pine forest to highly stocked pine plantation often reduces the quality and suitability of a site for black

piresnake. Site preparation for pine plantations often involves clearing of downed logs that reduces above ground refuge for black pine snakes. Removal of stumps interferes with the development of stump holes and root channels that are highly utilized for refuge. Heavy use of certain forestry herbicides often leaves the site with few native warm season grasses and forbs; what generally comes back is dog fennel and other weeds. Fire suppression has allowed for changes in the understory to occur. The understory of fire suppressed pine stands will often have increased hardwood mid-story and limited herbaceous ground cover. When managing longleaf pine forest lands within the range of the black pinesnake these factors need to be considered. Wise planning can allow for conservation of the black pinesnake and accomplishment of timber management objectives.

Endangered Species Act 4(d) Rule: The provision in the 4(d) rule states that all purposeful take is prohibited within the range of the black pinesnake. The 4(d) rule would exempt from the general prohibitions in 50 C.F.R. 17.31,32 take incidental to the following activities when conducted within habitats currently or historically occupied by the black pinesnake:

- Prescribed burning, including all fire break establishment and maintenance actions, as well as actions taken to control wildfires.
- Herbicide application for invasive plant species control, site-preparation, and mid-story and understory woody vegetation control. All exempted herbicide applications must be conducted in a manner consistent with Federal law, including Environmental Protection Agency label restrictions; applicable State laws; and herbicide application guidelines as prescribed by herbicide manufacturers.
- All forest management activities that maintain lands in a forested condition, except for:
 - o (a) Conversion of longleaf-pine-dominated forests (>51 percent longleaf in the over story) to other forest cover types or land uses.
 - o (b) those activities causing significant subsurface disturbance, including, but not limited to, shearing, wind-rowing, stumping, disking (except during fire break creation or maintenance), root-raking, and bedding.
- Herbicide treatments, prescribed burning, and normal forest management activities.

All of the activities listed above should be conducted in a manner to maintain connectivity of suitable black pinesnake habitats, allowing dispersal and migration between larger forest stands; to minimize ground and subsurface disturbance by conducting harvests during drier periods when the ground is not saturated, by using low-pressure tires, or both; and to leave stumps, dead standing snags, and woody debris.

We believe these actions and activities, while they may have some minimal level of mortality, harm, or disturbance to the black pinesnake, are not expected to adversely affect the subspecies' conservation and recovery efforts. They would have a net beneficial effect on the subspecies. Nothing in the 4(d) rule would change in any way the recovery planning provisions of section 4(f) of the Act and consultation requirements under section 7 of the Act or the ability of the Service to enter into partnerships for the management and protection of the black pinesnake. *(Text taken directly from the Federal Register)*

Proposed Designation of Critical Habitat: When a species is listed as Threatened or Endangered, the US Fish and Wildlife Service must designate critical habitat at the maximum

extent prudent and determinable. The designation of critical habitat is based on the best scientific data after taking into consideration economic impact, national security impact, and any other relevant impact of specifying a particular area as critical habitat. Critical habitat is defined as:

- The specific areas within the geographic area occupied by the species, at the time it is listed in accordance with the Endangered Species Act, on which are found those physical or biological features:
 - o Essential to the conservation of the species.
 - o Which may require special management considerations or protection.
 - o Specific areas outside of the geographic range area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

The designation of critical habitat does not affect land ownership or designate a refuge, wilderness, reserve, preserve, or other conservation area. Such a designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. There have been six records of black pinesnakes on the industrial forest lands in northern Clarke County since 1990.

Distribution by County: Choctaw, Clarke, Mobile, and Washington counties

For additional information please visit the US Fish and Wildlife Service or Alabama Department of Conservation and Natural Resources websites:

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=C029>

<http://www.outdooralabama.com/black-pine-snake>

Text Credit: US Fish and Wildlife Service, Alabama Department of Conservation and Natural Resources

Photo Credit: Roger Clay, Wildlife Biologist, Alabama Department of Conservation and Natural Resources



This information provided by the Alabama Forestry Commission

For more information please visit www.forestry.alabama.gov