

AMPHIBIA: CAUDATA: PLETHODONTIDAE

PLETHODON PETRAEUS

Catalogue of American Amphibians and Reptiles.

Jensen, J.B. and C.D. Camp. 2004. *Plethodon petraeus*.

***Plethodon petraeus* Wynn, Highton, and Jacobs**
Pigeon Mountain Salamander

Plethodon petraeus Wynn, Highton, and Jacobs 1988:135. Type locality, "34°39'50" N and 85°22'10" W, at an elevation of 310 m, at the mouth of Dickson Gulf on the eastern slope of Pigeon Mountain, Walker County, Georgia." Holotype, National Museum of Natural History (USNM) 267105, an adult male, collected on 24–25 May 1986 by J.F. Jacobs and A.H. Wynn (not examined by authors).

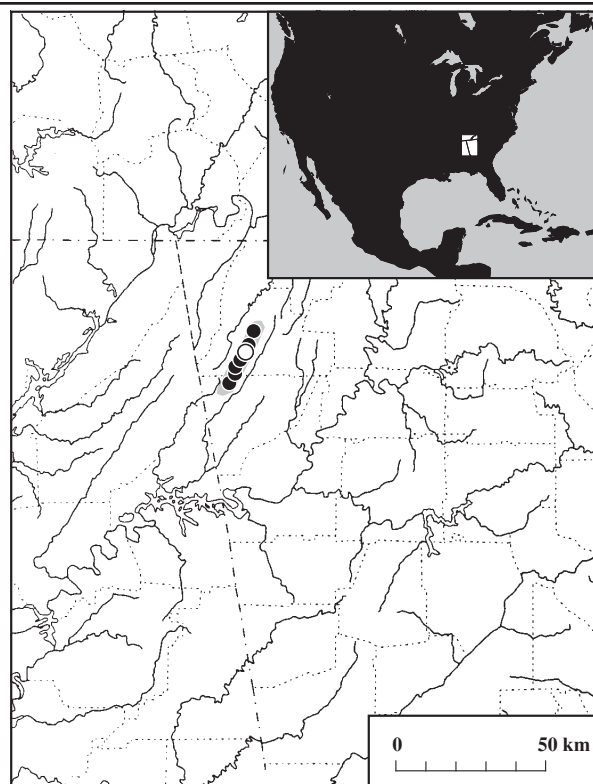
• **CONTENT.** No subspecies have been described.

• **DEFINITION.** *Plethodon petraeus* is a large member of its genus; adult males range from 56.0–80.0 mm SVL and adult females from 65.4–84.3 mm SVL (Jensen et al. 2002). Individuals are black in overall background color with variable coverage of reddish- or olive-brown pigmentation dorsally and dorsolaterally, including the head and anterior portion of the tail. Reddish-brown pigmentation also is present on the chin. Small white spots and brassy flecks occur dorsally and laterally, including on limbs and tail. The venter is black. Immature individuals are similar to adults in pattern, but very small juveniles may have 3–12 dorsal, alternating or oppositely placed, reddish-brown spots that fuse and expand to cover much of the dorsum as they age. Toes have extensive webbing, are broad and flattened, with blunt and expanded tips. Costal grooves typically number 16, occasionally 15 or 17 (Wynn et al. 1988). This species is a genetically distinct member of the *P. glutinosus* group, differing from other species by a mean Nei genetic distance of 0.42 (Wynn et al. 1988).

• **DIAGNOSIS.** Preserved specimens lose the reddish-brown dorsal pigmentation and are grossly similar in appearance to sympatric *P. glutinosus*. Other sympatric species are distinctive. *Plethodon yonahlosee* and *P. ouachitae* have similar pigmentation, but their ranges do not come close to overlapping with that of *P. petraeus*. The dorsal pigmentation of *P. yonahlosee* is more red in color and does not extend onto the head. *Plethodon ouachitae* has similar-colored dorsal pigmentation that also extends onto the head and tail, but the brown pigment typically covers less of the dorsum than in *P. petraeus*. The feet of *P. petraeus* are unique in the *P. glutinosus* group (including *P. ouachitae* and *P. yonahlosee*). The fourth toe on the forefeet and the fifth toe on the hindfeet extend beyond the second joint of the adjacent digit; these toes on other members of the *P. glutinosus* group are relatively shorter. Also, the feet are larger, the limbs longer, and the webbing more extensive in *P. petraeus* than in most other members of the group (Wynn et al. 1988). Nei genetic distance between *P. petraeus* and other members of the species group ranges from 0.32 (to *P. cylindraceus*) to 0.52 (to *P. aureolus*; Wynn et al. 1988, Highton 1989).

• **DESCRIPTIONS.** Wynn et al. (1988) described the holotype, allotypes, juveniles, and variations of both adults and juveniles. Eggs have not been found.

• **ILLUSTRATIONS.** Color photographs of adults are in Petranka (1998) and on the cover of Volume 1 (2002), No. 1 of the Southeastern Naturalist. Black and white photographs of adults are in Wynn et al. (1988), Petranka (1998), and Jensen et al.



MAP. Distribution of *Plethodon petraeus*: the circle indicates the type locality and dots mark other known locality records.



FIGURE. An adult female *Plethodon petraeus* from Pettijohn Cave, Walker County, Georgia (photograph by JBJ).

(2002). A color drawing is in Conant and Collins (1991). Jensen (1999) depicted a line drawing of an adult. Line drawings of the dorsal aspect of the right hind foot and the ventral view of the fourth toe on the right hind foot are in Wynn et al. (1988). Powell et al. (1998) included a line drawing of the right rear foot. Radiographs of the fore- and hindfeet are in Wynn et al. (1988).

• **DISTRIBUTION.** *Plethodon petraeus* has an extremely limited range in the Cumberland Plateau of extreme northwestern Georgia, USA. All known populations occur on the eastern slope of Pigeon Mountain in Walker and Chattooga counties (Wynn et al. 1988, Jensen 1999, Buhlmann 2001, Jensen et al. 2002). Sites occur at altitudes ranging from 220 m (Wynn et al. 1988) to 570 m. Illustrations of the range are in Wynn et al. (1988), Conant and Collins (1991), Petranka (1998), Jensen (1999), and Jensen et al. (2002).

• **FOSSIL RECORD.** No fossils are known.

• **PERTINENT LITERATURE.** **General accounts** are in Conant and Collins (1991), Petranka (1998), and Jensen (1999). The **diets** of *P. petraeus* and sympatric *P. glutinosus* were compared in Jensen and Whiles (2000). Aspects of **life history** were discussed in Jensen et al. (2002). **Morphology**, as it relates to climbing abilities, was described by Wynn et al. (1988). **Habitat** features were presented in Wynn et al. (1988), Jensen (1999), and Jensen et al. (2002). **Genetic relationships**, as determined by analysis of allozymes, with other members of the *P. glutinosus* species group and other members of the genus *Plethodon* were presented by Wynn et al. (1988) and Highton (1995). **Convergent evolution of color pattern** among *P. petraeus*, *P. yonahlossee*, and *P. ouachitae* was discussed by Highton (1995) and of **digit morphology** between *P. petraeus* and *Aneides* by Wynn et al. (1988). **Conservation** status was addressed in Jensen (1999). A **key** was provided by Powell et al. (1998).

• **ETYMOLOGY.** The specific epithet is derived from the Greek word “petraeos,” which means “among rocks” or “rock-dwelling” (Wynn et al. 1988). The only site from which this species is currently known is the basis for the common name.

• **COMMENTS.** National Museum of Natural History (USNM) specimens 491335–491337 were collected by Carol Ruckdeschel and Mac Rogers on 23 August 1972 based on their recognition of the salamanders’ morphological uniqueness. These specimens, originally identified by Richard Highton as *P. glutinosus*, apparently because the distinctive dorsal coloration was lost in preservative, substantially predate the published discovery of the species (24 May 1986; Wynn et al. 1988).

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JOHN B. JENSEN, Georgia Department of Natural Resources, Nongame-Endangered Wildlife Program, 116 Rum Creek Drive, Forsyth, GA 31029, USA (John_Jensen@dnr.state.ga.us) and **CARLOS D. CAMP**, Department of Biology, Piedmont College, P.O. Box 10, Demorest, GA 30535, USA (ccamp@piedmont.edu).

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