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## NATURAL HISTORY NOTES

Instructions for contributors to Natural History Notes appear in Volume 35, Number 1 (March 2004).

### CAUDATA

**CRYPTOBRANCHUS ALLEGANIENSIS ALLEGANIENSIS** (Eastern Hellbender). **BREEDING SEASON.** The breeding season of eastern populations of *Cryptobranchus a. alleganiensis* has been fairly well documented in the literature. In general, the season lasts from mid-August through mid-September (Petranka 1998. Salamanders of the United States and Canada. Smithsonian Institution Press. 587 pp.), although in Alabama it can continue into early October (Mount 1975. The Reptiles and Amphibians of Alabama. Auburn Univ. Agri. Exp. Station. 347 pp.). Herein, we report what we believe to be the first documented records of gravidity and nesting from Georgia, perhaps the southeastern-most state within this salamander's range.

In an effort to collect skin mucous for bacterial analyses, we hand-captured *C. alleganiensis* at Cooper Creek, Union County, Georgia on 5 Sept 2002. Among the hellbenders captured were two gravid females, one of these discharged ca. five eggs when placed in a dilute solution of MS-222 to anesthetize the animal. Additionally, a nest guarded by an adult hellbender was discovered under a large flat rock. We immediately replaced the rock and did not collect either the eggs or the adult. We were not able to confirm the sex of this animal.

A previous collection trip to this same section of creek on 22 July 2002 yielded seven adult male and two adult female *C. alleganiensis*, none in reproductive condition.

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**PLETHODON GLUTINOSUS** (Northern Slimy Salamander). **REPRODUCTION.** Detailed life histories are known for only a few populations of the *Plethodon glutinosus* complex and include several reports of egg clutches and very few reports of new hatchlings (Petranka 1998. Salamanders of the United States and Canada. Smithsonian Institution Press, Washington, D.C. 587 pp.).

On 24 Oct 2002, we discovered a female *P. glutinosus* (72 mm SVL) attending a newly laid clutch of eggs in Pettijohn Cave in Dickson Gulf on the eastern side of Pigeon Mountain, Walker County, Georgia, USA. The clutch was located in a horizontal crevice in the limestone rock of the cave wall ca. 1.3 m above the cave floor. It was suspended by a pedicel from the roof of the crevice and consisted of 17 eggs, each measuring 6.0–6.1 mm in diameter. The clutch was ca. 12 m from the cave opening. The outside air temperature was 16.5°C; the temperature inside the cave was 13.0°C. We monitored the clutch through the winter, revisiting it on 14 Dec 2002, 21 Jan, 9 Feb, and 1 March 2003. On 14 Dec 2002 the pedicel was broken, and the eggs lay in a heap on the floor of the crevice. The loss of suspension did not seem to interfere with development or the female's attendance. The significance of the 12-m distance from cave opening became apparent on cold days during the winter. The clutch was located at a depth closest to the opening where the thermal environment was relatively stable.

On 2 March 2003, one egg had hatched. The hatchling measured 16.4 mm SVL and 19.7 mm total length. Its belly was extended with yolk, it had distinct gills, and skin pigment was poorly developed. Because *Plethodon* hatchlings resorb their gills within a few days of hatching (Highton 1956. Copeia 1956:75–93) and because the other eggs seemed healthy and unhatched, we presumed that the hatchling was < 24 h old. Therefore, the gestation period was 128+ days.

This represents the latest seasonal dates of oviposition and hatching for the complex and >1 month later than those reported from caves in northern Alabama (Highton 1962. Copeia 1962:597–613). These were also the largest eggs and the longest gestation period reported for the *P. glutinosus* complex (Petranka 1998, *op. cit.*).

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### ANURA

**BUFO PARIETALIS** (Forest Toad). **PREDATION.** Although the toxic secretions of toads are repellent against many predators, there are numerous reports for predators of toads throughout the world (Haddad and Rogério 1997. Amphibia-Reptilia 18:295–298). The population ecology and the natural predators of amphibians in the forest ecosystems of India are poorly studied. *Bufo parietalis* is a rare and little-known toad, endemic to tropical rainforests of the Western Ghats (Molur and Sally 1998. Zoo's Print 13[12]:29). Since 1999, we have observed the natural history of *B. parietalis* as part of population studies. Herein, we report predation by an invertebrate (mosquito) and a vertebrate (bird) on males engaged in reproductive activity in Karnataka, South India.