

had decreased to 22.8°C and relative humidity had risen to 75%. For about another hour we slowly searched for metamorphs on the pond perimeter.

On 11 June, MRB, KNB, and AFB searched along the Nellie Pond perimeter road from 2030–2100 and 2210–2345 h, and along the entire margin of Nellie Pond from 2105–2210 h during a gentle rain with thunder and lightning in the distance. At 2235 h we captured a metamorph (SVL 32.3) in the middle of the sandy road. This frog never moved even though it was almost stepped on, indicating that searchers should anticipate little or no mobility of these frogs as they are approached. Temperature at 2200 h was 21.1°C with relative humidity at 99%. At 2300 h temperature was still 21.1°C with relative humidity at 100%.

MRB searched along the perimeter road from 0230–0315 h, then three of us searched along this road and in the gopher tortoise burrow fields for several hours beginning at 0500 h. At 0550 h we captured a metamorph with an obvious tail remnant (SVL 34.6, tail 3.7 mm) about 3 m from the entrance to a different gopher tortoise burrow, out in the open on sand. This metamorph also moved only when being captured. At 0600 h temperature was 21.1°C and relative humidity was 100%. SVL of these metamorphs fall within the range reported from western Florida (Palis 1998. *J. Herpetol.* 32:217–223), but are less than those observed in South Carolina (Semlitsch et al. 1995. *J. Herpetol.* 29:612–614.).

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RANA MUSCOSA (Mountain Yellow-legged Frog).

PREDATION. *Rana muscosa* is a moderate-sized, high elevation frog restricted to California and the Lake Tahoe region of western Nevada (Zweifel 1968. *Cat. Amer. Amphib. Rept.* 65:1–2; Jennings and Hayes 1994. *Amphibian and Reptile Species of Special Concern in California*. California Dept. Fish and Game. 255 pp.). Native predators of *R. muscosa* include *Thamnophis elegans*, *Euphagus cyanocephalus* (Brewer's blackbird), *Nucifraga columbiana* (Clark's nutcracker), and *Canis latrans* (coyote) (Bradford 1991. *J. Herpetol.* 25:174–177; Camp 1917. *Univ. California Publ. Zool.* 17:115–125; Jennings et al. 1992. *J. Herpetol.* 26:503–505; Moore 1929. *J. Mamm.* 10:255). Here we report two additional predators of *R. muscosa*.

On 9 August 1999 during herpetological surveys of the Tahoe National Forest, we caught a male *T. sirtalis fitchi* (SVL 416 mm, tail 142 mm, 31.56 g, California Academy of Science 209984) at an unnamed pond 8.8 km. NE of Cisco Grove via Rattlesnake Rd., Nevada Co., California (39° 20'10.5"N, 120°28'48.0"W) from which we palped a partially digested juvenile *R. muscosa* (SVL ca. 33 mm, 1.97 g, stomach contents of CAS 209984).

We also encountered a juvenile *R. muscosa*. (SVL 30 mm, 1.64 g, CAS 210033) among the *Juncus* sp. and *Carex* sp. 1 m from the

pond shore at the surface of water 30 cm deep. The *R. muscosa* was weakly struggling with a larval *Dytiscus* sp. (predaceous diving beetle) (total length ca. 50 mm, 1.16 g, held with CAS 210033) that was attached to the frog's left thigh by penetrating mandibles. We collected both *R. muscosa* and *Dytiscus* sp. at which time the dytiscid larva released the frog. Upon observing the *R. muscosa*, the left leg remained extended, apparently unusable, and the left thigh was discolored by massive hemorrhaging around the bite area. The *R. muscosa* was placed in a moist plastic bag, and kept cool until later that day. Inspecting the *R. muscosa* two hours later, we found it had died, probably from the effects of the proteases injected by the dytiscid larva's mandibles (Young 1967. *Pan-Pac. Entomol.* 43:113–117). Though an increasing number of incidents of predation by invertebrates, especially insects and spiders on both adult and tadpole frogs have been reported (e.g., predation of *Ascaphus truei* by a helgrammite, Jones and Raphael. 1998. *Herpetol. Rev.* 29:39; predation of *R. cascadae* by a giant water bug, Nauman and Dettlaffe. 1999. *Herpetol. Rev.* 29:93) this is the first case for *R. muscosa*, a state listed species of special concern in California, and suggests that newly metamorphosed *R. muscosa* may be vulnerable to other predatory aquatic macroinvertebrates (Formanowicz and Brodie 1982. *Copeia* 1982:91–97).

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TESTUDINES

CARETTA CARETTA (Loggerhead Sea Turtle). **EPIZOANS.**

Although epizoic organisms occur on all seven species of marine turtles, *Caretta caretta* hosts the largest and most diverse communities (Frick et al. 1998. *Herpetol. Rev.* 29:211–214). Much of the data concerning *Caretta* and its epibiota in the southeastern U.S. come from nesting females (Caine. 1986. *J. Exp. Mar. Biol. Ecol.* 95:15–26 and Frick et al. 1998. *op. cit.*). To our knowledge, only one study reports the occurrence of epizoa on subadult *Caretta* (Frazier et al. 1985. *Mar. Ecol.* 6:127–140). However, the two turtles sampled by Frazier et al. (1985. *op. cit.*) were dead strandings and it is therefore possible that epizoan attachment occurred post-mortem. Herein, we report four newly documented species of epizoans associated with living subadult *Caretta* in Georgia, USA.

From 12 to 16 February 1999, 33 subadult *Caretta* were collected from the St. Mary's River Entrance Channel (30°42.7'N, 81°20.1'W). Prior to channel dredging operations, a specially modified shrimp trawler was used to collect any sea turtles located within a specified hopper dredge digging area. While on board the trawler, turtles were measured, tagged, and sampled for epibiota. Turtles were then relocated to estuarine waters, away from the digging area, immediately west of Cumberland Island National Seashore (Cabin Bluff, 30°53.0'N, 81°30.8'W).

All captured turtles were *Caretta* of subadult age class (51.8–77.0 cm CCL) as defined by Dodd (1988. U.S. Fish Wildl. Serv.