

essentially the same time. Arboreality may be environmentally or phenologically triggered when conditions are appropriate, particularly during or in temporal proximity of rainfall. Since arboreality has not been reported in any eastern salamander with great frequency, there have been few suggestions as to the cause or importance of this behavior.

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HYDROMANTES PLATYCEPHALUS (Mt. Lyell Salamander). **BEHAVIOR.** Little information is available concerning the behavior of *Hydromantes platycephalus*, a bolitoglossine plethodontid salamander known only from the Sierra Nevada of California. This is probably due to their nocturnal activity, patchy distribution, and remote, generally high elevation range (up to 3660 m). Discovered by accident in Yosemite National Park (Camp 1916. Univ. California Publ. Zool. 17:11–14), this species is commonly associated with wet granitic talus slopes. Typical microhabitats are downslope from melting snowfields on granite bedrock, usually with a thin film of flowing water and scattered cover consisting of granite boulders. Individuals also have been found under moss on wet rock faces, under pieces of wood, or under rocks on the edges of streams or in moist decomposed granitic soil (Adams 1942. Univ. California Publ. Zool. 46:179–204). In 1999 we discovered a new population at 3500 m elev. in Kings Canyon National Park (36°49'41"N, 118°26'9"W). The site is characterized as glacially carved granite with a small stream (75 cm wide, 1–10 cm deep, flow rate ca. 1.5 m/sec in mid to late summer) flowing over granitic bedrock. The stream flows out of a lake (0.4 ha SA) over a 100 m flat stretch (ca. 4–9° incline), then over a cliff, cascading nearly vertically for 60 m. Salamanders were found under large slabs of granite (60 x 40 x 12 cm) in direct contact with the water and hiding along the edges of the entire waterfall in moist fissures. One specimen was collected at the site in 1999 (MVZ 230961), but other animals were either caught and released, or observed and not handled. We found many more individuals when the site was visited at night (35 in one nocturnal visit versus 15, 7, 4, 8, 13, 9 in six diurnal visits). In diurnal visits, salamanders were found exclusively under large pieces of granite. The animals were in direct contact with the water, on the edge of the flowing stream. No salamanders were found away from the wet areas even though many rocks were turned. In sharp contrast to the diurnal surveys, in the nocturnal survey we encountered salamanders out in the open both in the water and on dry land, sometimes as far as 2–3 m from the stream. Additionally, many of the salamanders were seen clinging to the granite bedrock (with their feet and their tail) in the middle of the stream, usually with their heads above the water surface and the rest of the body immersed. One was crawling upstream along the edge of the stream in the water, but froze in our

light, then drifted downstream about 10 m before clinging to the bedrock in the middle of the creek. When startled by our presence, another salamander made a short swim using its tail. *Hydromantes platycephalus* has not been reported previously in lotic habitats, which we believe may be a common habitat type, especially at high elevations (>3500 m) where moisture-retaining soil is sparse or lacking altogether. This behavioral observation stresses the importance of moist microhabitats for *H. platycephalus* (especially in areas lacking soil) and suggests that the specialized morphology (cupped feet and prehensile tail) may aid the animal in lotic locomotion.

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PLETHODON SERRATUS (Southern Red-backed Salamander). **INTRASPECIFIC AGGREGATION.** On 4 November 2000 we found an aggregate of nine individual *Plethodon serratus* inside a rotting log that was lying on the floor of a ravine covered by deciduous forest in the Cherokee National Forest near Rafter, Monroe County, Tennessee, USA. All salamanders were within 5 cm of all other members of the group. Two of them were small juveniles (< 25 mm SVL), whereas the others appeared to be adults or larger immatures. The log was ca. 15 cm in diameter. The cavity where the salamanders were found was wet although underneath the log was dry. Nine additional *P. serratus* were found under logs in the vicinity (within 100 m), although most logs were also dry underneath. There was never more than a single individual under any of these logs. Several individuals were tightly coiled in a posture to help prevent water loss (Ray 1958. Ecology 39:75–83). There had been no measurable rain for 38 days. The air temperature was ca. 18.5°C, and had reached similar temperatures every day for the previous two weeks.

Overwintering aggregations have been reported for species of *Desmognathus* and *Pseudotriton* (Petranka 1998. Salamanders of the United States and Canada. Smithsonian Inst. Press. Washington, D.C.). In addition, *P. cinereus* has been reported from winter hibernacula in ant mounds (Caldwell and Jones 1973. Am. Midl. Nat. 90:482–485). The relatively warm air temperatures, the number of single-occurring *P. serratus* in the immediate area, and the fact that the salamanders were above ground lead us to believe that we did not observe a winter aggregation. Although *P. cinereus* has been reported to aggregate in small groups for mating (Placyk et al. 2000. Herpetol. Rev. 31:167), the presence of two small juveniles suggests that this aggregation was not related to mating. Due to the dryness of the region and the water-conserving posture seen in several of the single individuals, we presume that this clump was a behavioral mechanism to prevent desiccation. Petranka (*pers. comm.*) has observed 10–12 *Desmognathus wrighti* in a clump under similar dry conditions, and several species of *Ambystoma* have been reported to exhibit clumping behavior during drought (Petranka, *op cit.*).

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