

SIREN INTERMEDIA (Lesser Siren). **DROUGHT SURVIVAL.**

Adult sirens are able to survive prolonged exposure to drought conditions with larger animals being more successful at surviving laboratory-induced aestivation than smaller conspecifics (Gehlbach et al. 1973. *Am. Midl. Nat.* 89:455–463; Etheridge 1990. *Herpetologica* 46:407–414). Larger Greater Sirens (*Siren lacertina*) can possibly survive droughts for 2–3 years and very small sirens (~1 g) are likely able to survive droughts of 146 days (Etheridge 1990, *op. cit.*). Despite the numerous reports of aestivating sirenids in the literature, it remains unknown whether small, young of the year sirens can survive short drought conditions under field conditions. In 2007, many isolated wetlands on the Savannah River Site in Barnwell County, South Carolina, USA, dried completely as a result of a severe drought in the southeastern United States. Even some of the most permanent wetlands on the site dried completely for the first time in nearly 10 years. One of these semi-permanent wetlands, Craig's Pond, is a 72.8-ha Carolina Bay wetland that is the largest natural bay on site. We visited Craig's Pond on 23 Feb 2008 from 2100–2300 h after a series of heavy rains passed through the area. There was a film of dried organic matter floating on the surface of the bay that was presumably formed when the bay dried, the water was uncharacteristically clear and the bottom of the wetland was still comprised of cracked mud and (now submerged) green terrestrial grasses (indicating that the water in the wetland was mostly, if not all, from recent rainwater). During this time, we saw a few *Siren intermedia* moving along the wetland bottom. Judging from Gehlbach and Kennedy's (1978. *Southwest. Nat.* 23:423–429) estimates of year class data, these were likely individuals that would have hatched in 2006 (~20 g). On a subsequent visit on 12 March 2008 from 2100–2300 h we captured two *S. intermedia* that were yearlings from 2007 (~5 g) and sighted several more small sirens. The presence of the two smallest size classes from the previous year's population in Craig's Pond indicates that even the smallest *S. intermedia* were able to successfully survive a short term wetland dry down from ca. November 2007 to February 2008. Additionally, many fish were present in Craig's Pond prior to the drought, including Redfin Pickerel (*Esox americanus*), and cyprinids. Despite several person-hours of searching on both nights, no fish were seen. This suggests that no temporary waterways connected Craig's Pond with other water sources where fish or sirens may have persisted. Consequently, it is likely that the small sirens we observed in Craig's Pond were in fact drought survivors and not dispersers from connected waterways. To our knowledge, this is the first record of juvenile sirens surviving drought conditions in the field.

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