

The male frogs were often on the undersides of *Heliconia* leaves, a position that may offer protection from desiccation, falling rain drops, and predators. Also, the leaves supporting the frogs and egg masses were frequently covered by a second leaf that would likely provide additional protection from wind and sun. Crabs were observed on the same plants that contained frogs and they may be a primary factor in the frogs of this genus selecting the undersides of leaves for calling stations and egg laying.

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**HYLA ARBOREA (European Tree Frog). POTENTIAL CANNIBALISM.** Cannibalism is widespread in a variety of animals, including amphibians (Elgar and Crespi 1992. *Cannibalism: Ecology and Evolution Among Diverse Taxa*. Oxford University Press, Oxford, New York. 376 pp.). Cannibalism may occur during food shortages, desiccation of the habitat, or because of a high concentration of individuals (Crump 1983. *Am. Nat.* 121[2]:281–289; Pfennig and Frankino 1997. *Evolution* 51:1993–1999; Summers 1999. *Oecologia* 119:557–564; Michimae and Wakahara 2001. *Behav. Ecol. Sociobiol.* 50:339–345.). Studies show that cannibalistic individuals have a higher growth rate, a larger size at metamorphosis, a greater likelihood of survival, and better reproductive parameters (Fox 1975. *Annu. Rev. Ecol. Evol. Syst.* 6:87–106;

Polis 1981. *Annu. Rev. Ecol. Evol. Syst.* 12:225–251; Crump 1990. *Copeia* 1990[2]:560–564; Babbit and Meshaka 2000. *Copeia* 2000[2]:469–474). Cannibalism in tadpoles of *Hyla intermedia* as a result of drying habitat was described by Grant and Halliday (2011. *Herpetol. Rev.* 42[1]:86).

On 20 July 2007 on the Krk island in Croatia (45.03°N, 14.55°E, 54 m elev.), we observed different stages of *Hyla arborea* tadpoles that exhibited noticeable signs of damage to the caudal fin, especially the smaller individuals (Fig. 1). No dead specimens were observed, and potential natural predators (e.g., *Dytiscus* sp., *Pelophylax ridibundus*, *Natrix natrix*) were not found associated with the tadpoles. The habitat was completely unnatural, a small enamel livestock tank with drying aquatic habitat and dense larval aggregations. The tank was about 100 × 40 × 50 cm, with water ca. 30 cm deep. We estimated ca. 150–200 tadpoles ranging in size from 1–2.5 cm. Although direct cannibalism was not observed, the size differentiation and high density of individuals may of lead to the wounds observed.

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**HYLA AVIVOCA (Bird-Voiced Treefrog). CONSTRUCTED WETLAND COLONIZATION.** At the northern end of its range, *Hyla avivoca* populations have been extirpated or reduced in size due to drainage of Bald Cypress (*Taxodium distichum*) and Tupelo Gum (*Nyssa aquatica*) swamps (Redmer et al. 1999a. *Illinois Nat. Hist. Surv. Bull.* 36:37–66). Many remaining *H. avivoca* populations are isolated from each other by extensive deforested areas such as agricultural fields.

In the Cache River drainage of southern Illinois, USA, government agencies and private conservation groups are acquiring and reforesting cropland, and constructing wetlands. The Nature Conservancy's Grassy Slough Preserve (GSP) is an 1123-ha former vegetable farm bisected by a channelized portion of the Cache River in Johnson Co., Illinois. Fifteen shallow (< 2 m) wetlands (0.9–47.9 ha in area) were constructed or restored on GSP in 1999 and 2000, and seedling oaks (*Quercus* spp.) and hickories (*Carya* spp.) were planted on intervening uplands from 1999–2002. I studied herpetofaunal colonization of constructed wetlands from 2001–2004, when upland vegetation was dominated by pioneering herbaceous vegetation that over-topped the planted trees, and wetlands were vegetated principally by algae, Cocklebur (*Xanthium commune*), and Water Primrose (*Jussiaea repens*). Although I heard *H. avivoca* vocalizing from forested wetlands north and south of the former agricultural fields in 2000, *H. avivoca* was not among the 35 herpetofaunal species encountered at newly-constructed wetlands (Palis 2007. *Trans. Illinois State Acad. Sci.* 100:177–189).

On 15 June 2011, I heard choruses of *H. avivoca* in one restored and two constructed wetlands on GSP. Wetlands 3 and 1 are 65 m east and 485 m south, of a forest-bordered former channel of the Cache River where I heard *H. avivoca* calling in 2000 and 2008 (see Figure 1 in Palis 2007, *op. cit.*; available at [www.il-acad-sci-org/publications](http://www.il-acad-sci-org/publications)). Wetland 3 (37.331222°N, 88.919189°W; geo-coordinates derived from Google Earth), the restored wetland, is bordered on the west by a dense stand of young (≤ 7.5-m tall) trees including Sweetgum (*Liquidambar styraciflua*), Box Elder (*Acer negundo*), Red Maple (*Acer rubrum*), American Sycamore (*Platanus occidentalis*), Green Ash (*Fraxinus pennsylvanica*), oak, and River Birch (*Betula nigra*), as well as Buttonbush (*Cephalanthus*



FIG. 1. *Hyla arborea* tadpoles with damaged caudal fins.