

Catalogue of American Amphibians and Reptiles.

CALDWELL, JANALEE P. 1982. *Hyla gratiosa**Hyla gratiosa* LeConte
Barking treefrog

Hyla gratiosa LeConte, 1856:146. Type-locality, "lower country of Georgia," restricted to "Liberty County, Georgia" by Schmidt (1953:71). Holotype, Acad. Natur. Sci. Philadelphia 2089 according to Malnate (1971:351; examined by author). Cochran's (1961:54) listing of six "cotypes" from Riceboro, Liberty County, in the National Museum of Natural History is puzzling, for LeConte mentioned only three specimens.

Epedaphus gratiosus: Cope, 1885:383.

• CONTENT. No subspecies are recognized.

• DEFINITION AND DIAGNOSIS. A member of the *Hyla cinerea* species group (Blair, 1959), *gratiosa* is the largest *Hyla* in the United States: females 50–70 mm snout–vent length, males 49–70 mm. Characteristics include: stout forelimbs, fingers webbed at base with large terminal discs; toes about one-half webbed; skin evenly granulated over entire body; thoracic fold present. The dorsal color is variable bright green to dark olive green with evenly spaced darker round spots encircled with black, sometimes indistinct. An irregular white stripe extends from the upper lip to the groin.

Hyla cinerea is similar to *H. gratiosa* in size and coloration but its body is more slender, its lateral white line is more sharply defined, and it never has dark, round spots on the dorsum. There is no overlap of the ratio of head width to tibio-fibula length in *H. gratiosa* and *H. cinerea* (Gerhardt et al., 1980). *Hyla andersoni* is smaller and has a distinct mask. *Hyla squirella* may be green with a light lateral stripe, but small size and generally brown or variable coloration distinguish it from *gratiosa*.

• DESCRIPTIONS. For adults, see Cope (1889) and Wright and Wright (1949); tadpoles, Wright (1929, 1932) and Altig (1970, 1972); eggs, Livezey and Wright (1947), Wright (1932), and Wright and Wright (1949). For keys to adults, see Carr and Goin (1955), Mount (1975), and Blair et al. (1957); tadpoles, Altig (1970) and Wright (1929); eggs, Livezey and Wright (1947).

• ILLUSTRATIONS. Black-and-white illustrations of adults are in LeConte (1856), Cope (1889), Wright (1932), Wright and Wright (1949), Carr and Goin (1955), Blair et al. (1957), and Mount (1975). Color illustrations are in Conant (1975) and Behler and King (1979). A hybrid *gratiosa* × *cinerea* is figured by Lee (1968a). For pre-

metamorphic stages, see Altig (1972), Livezey and Wright (1947), Wright (1932), and Wright and Wright (1949). Altig and Pace (1974) figure an electron photo-micrograph of a tadpole's labial tooth. Some skeletal and soft anatomy is illustrated in Cope (1889), Gaudin (1974), and Hilton (1954).

• DISTRIBUTION. *Hyla gratiosa* occurs on the Atlantic and Gulf coastal plains from the Florida parishes in Louisiana to southern Florida and north to Virginia. The species occurs in the Alabama piedmont, but is absent from most of the Georgia piedmont. Disjunct populations are reported from Kentucky (Monroe and Taylor, 1972; Monroe and Giannini, 1977), Tennessee (Jacob, 1980; Rossman, 1958), but a colony in New Jersey (Black and Gosner, 1958) may be extinct (K. L. Gosner, pers. comm.). Additional comments on distribution are by deRageot et al. (1969) and Mount (1975). *Hyla gratiosa* is absent from the majority of the Atlantic coast barrier islands (Gibbons and Coker, 1978; Martof, 1963) and from the Florida barrier islands as well (Blaney, 1971).

• FOSSIL RECORD. Chantell (1964) referred ilia from the Miocene Norden Bridge Local Fauna, Lower Valentine formation, Brown County, Nebraska, to *Hyla* cf. *H. gratiosa*.

• PERTINENT LITERATURE. Blair (1959) included *Hyla gratiosa*, *H. cinerea*, and *H. andersoni* in the *cinerea* species group based on similarity of morphology and calls. Hybridization of *gratiosa* in nature and in the laboratory is reported in numerous papers: Blair (1959), Fortman and Altig (1973, 1974), Gerhardt (1974), Gerhardt et al. (1980), Lee (1968a, 1968b), Mecham (1960, 1965), Moore (1955), and Pyburn and Kennedy (1961). Calling and associated behavior are treated by Blair (1958, 1959), Gerhardt (1975, 1981), Mecham (1960), Neill (1958), and Oldham and Gerhardt (1975, who comment critically on earlier interpretations of call structure). Recordings of the call are on *Voices of the Night* (Cornell University) and *Sounds of North American Frogs* (Folkways Records FX 6166, New York). Various aspects of life history are discussed by Blem and Miller (1980), Bowler (1977), Caldwell et al. (1980), Lee (1968a), Means and Longdon (1976), Wright (1932), and Wright and Wright (1949). Boyd and Goodyear (1971), Farrell and MacMahon (1969), Hutchison et al. (1968), Jaeger and Hailman (1973), and Sustare (1977) treat physiological topics. Jameson and Richmond (1971), Elias and Shapiro (1957), Gaudin (1974), and Parsons and Williams (1962) deal with morphology.

• ETYMOLOGY. The name *gratiosa* is derived from the Latin *gratiosus*, meaning favored or beloved.

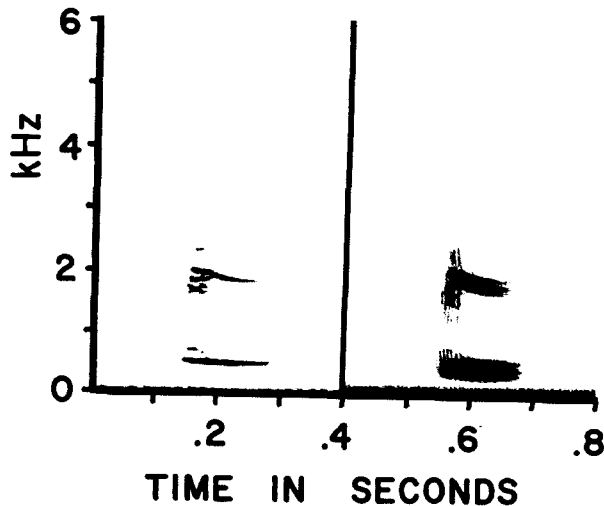
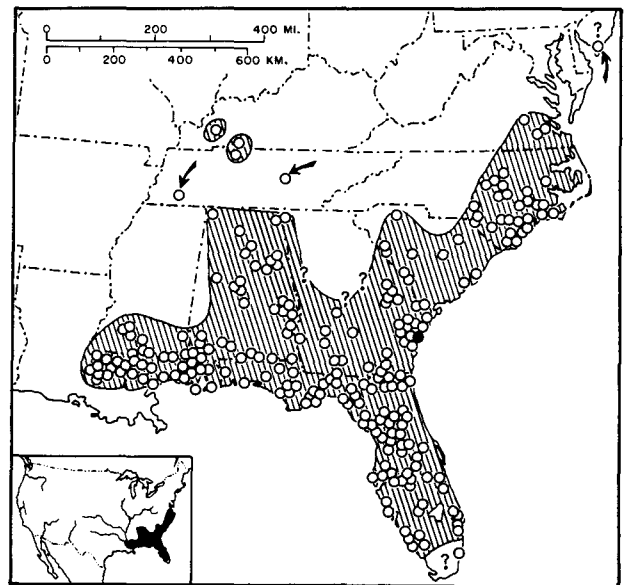


FIGURE. Audiospectrogram of call of *Hyla gratiosa*: 0.5 mi N Hawthorne, Alachua Co., Florida, 23 June 1977, recorded by J. Caldwell; 45 Hz filter left, 300 Hz right.



MAP. Solid circle marks restricted type-locality; open circles indicate other localities; localities outside of shaded area represent disjunct populations.

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