AMPHIBIA: SALIENTIA: HYLIDAE

Catalogue of American Amphibians and Reptiles.


- **Content.** No subspecies have been described.

- **Definition.** A small treefrog (adults 23–37 mm snout-vent length, maximum 43 mm, with no overt sexual dimorphism in size) with these characteristics: snout rounded; canthus rostralis angular but not sharp-edged; diameter of tympanum about half that of eye; heel of adpressed hind limb reaching near to a partial bar between the eyes, a white or yellowish white line areolate on venter. The dorsum is green, gray, or brown usually with at least a partial bar between the eyes, a white or yellowish white line on the upper lip, and a light line extending from below the eye to over the shoulder. Colors and markings are extremely variable; e.g., the dorsum may be bright green and unspotted or brown with many or few rounded spots. The concealed surfaces of the legs lack spots and vermiculations. The mating call is a nasal, duck-like “aaaa” or “waaaaak” with a fundamental frequency of 133 Hz. Notes average about 0.24 sec. in length and are repeated after about 0.5 sec. (Blair, 1955). The “rain-call” is a raspy, squelch-like scold (Conant, 1975) or a raucous “quack” (Duellman and Schwartz, 1958). It is usually given during the day by lone males in trees and bushes, often far from water.

- **Diagnosis.** This nondescript *Hyla* is best identified by eliminating other sympatric species. It lacks the light spot under the eye of *H. axioca,* *H. versicolor* and *H. chrysoceps;* the showy lavender stripe on the side of the body of *H. crucifer;* the prominent light stripe on the side of the body of *H. cinerea*; the diagnostic row of yellow to orange spots on the back of the thigh of *H. femoralis;* the large size and many large round dorsal spots of *H. gratiosa;* and the very large size and absence of stripes on the head of *Osteopilus septentrionalis.*

- **Descriptions.** The most readily available source is Wright and Wright (1949). Other general sources are Wright (1931), Glass (1946) and Dickerson (1906). For technical descriptions of the mating call, see Blair (1958, 1959), Orton (1947) described early larval stages and Fortman and Altig (1973) described hybrid tadpoles. C. Goin (1958) described the maxillary dentition.

- **Illustrations.** Color illustrations showing variation in dorsal pigmentation appear in Conant (1975) and Dickerson (1906). Black and white photographs of adults are in Carr and Goin (1955), Dickerson (1906), Wright (1931) and Wright and Wright (1949). Photographs of eggs and tadpoles occur in Wright (1931) and Wright and Wright (1949). A fossil ilium is shown by Chantell (1964). For a sonagram of the mating call, see Blair (1958, 1959), Altig and Pace (1974) present scanning electron photomicrographs of tadpole labial teeth. The following line drawings are available: section of skin—Elías and Shapiro (1957); choroid plexus—Hilton (1954); lateral views of early tadpoles—Orton (1947); hybrid tadpole, *H. femoralis × H. squirella*—Fortman and Altig (1973); egg membranes—Wright and Wright (1949); mouth parts of tadpole—Wright and Wright (1949).

- **Distribution.** This species occurs in the Coastal Plain from southeastern Virginia to the Florida Keys, and westward along the Gulf Coast to near Corpus Christi, Texas. In North Carolina it invades the lower Piedmont and there is an outlying record for southeast Oklahoma (Bragg, 1966). Records from Illinois, Indiana and Kentucky were based on misidentified specimens (Smith, 1961; Barbour, 1966). Crowbie (1972) reported introduction into the Bahamas. Important publications dealing with distribution include Blaney (1971), Duellman and Schwartz (1958), Gosner and Black (1956), Hoffman (1955), Mount (1964), Smith (1961) and Smith and List (1955).

- **Fossil Record.** Records for the Pleistocene near Haile, Florida (Lynch, 1964) and Mio-Pliocene near Brown City, Nebraska (Chantell, 1964) are based on ilia. The ilium of *H. squirella* is said to be distinctive in its unique dorsal acetabular protuberance. Holman (1968) considered an Oligocene species, *H. saumastoni,* to be similar to *H. squirella.*

- **Pertinent Literature.** The major comprehensive works are Wright (1931) and Wright and Wright (1949). Areas covered in other papers include: comparative osteology (Gaudin, 1914); histology of skin (Elías and Shapiro, 1957); body temperature (Brattstrom, 1963); predators, habitat selection, activity and homing (Goin and Goin, 1957); variation in body size and proportions, habitat, breeding season and weather, food (Duellman and Schwartz, 1958); ecological comparisons with *H. cinerea* (Goin and Goin, 1953; O. Goin, 1958); marine associations (Neill, 1958; Webb, 1965; Blaney, 1971); hybridization and phylogeny (Rain, 1970); mis-mating with *Gastrophrynne* (Volpe, 1956); comparative call structure (Blair, 1958, 1959, 1960); color changes (Dickerson, 1906; Wright, 1931); sleep behavior (Hobson et al., 1968); hibernation (Neill, 1948; Carr, 1940); phototactic responses (Jaeger and Hallman, 1973).

**MAP.** The solid circle marks the type-locality; open circles indicate other records. The stars mark fossil localities.

**FIGURE.** Audiospectrogram of mating call of *Hyla squirella:* St. Catherine’s Island, Georgia, 11 May 1972, water 21.6°C; first two notes wide band (300 Hz), third narrow (45 Hz); Amer. Mus. Nat. Hist. Dept. Herpetology tape, specimen AMNH 89995.
topics related to DNA (Bachman et al., 1966; O. Goin, et al., 1958); other topics in ecology and life history (Nell, 1951; Anderson et al., 1952); karyotype (2n = 24, Bogart, 1973).

- Remarks. The name of this species was commonly attributed to Sonnini and Latreille (1801), but Harper (1940) showed that it stems from Bosc in Daudin (1800).

- The suggestion of Wright and Wright (1949) that Hyla flava or Hyla microcephala is a junior synonym of H. squirella has not been disputed.

- Etymology. The author of this species spent time in the Carolinas (Harper, 1940) and must have been familiar with its call. Possibly he combined the English “squirrel” with the Latin diminutive suffix ella in allusion to the call.

Literature Cited


LITERATURE CITED

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