

## Catalogue of American Amphibians and Reptiles.

Moler, P.E. 1993. *Rana okaloosae*.

***Rana okaloosae* Moler  
Florida Bog Frog**

*Rana okaloosae* Moler, 1985a:379. Type-locality, "along Malone Creek, Eglin Air Force Base, Okaloosa County, Florida (Sec 24-T2N-R25W), at an altitude of 13 meters." Holotype, University of Florida (UF 53964, an adult male collected by P.E. Moler on 2 June 1983 (examined by author).

• **Content.** No subspecies are recognized.

• **Definition and Diagnosis.** *Rana okaloosae* is the smallest member (males 34.8-45.8 mm SVL; females 38.2-48.8 mm SVL) of the *catesbeiana* group of eastern North American *Rana*. The species is characterized by an unspotted dorsum, distinct dorsolateral folds that do not reach the groin, and reduced webbing of the foot. Vocal sacs are internal in males. At least three phalanges of the 4th toe are free of webbing and at least two phalanges of all other toes are free. *Rana okaloosae* can be distinguished from all American congeners by this very reduced webbing. Within the *catesbeiana* group, the presence of dorsolateral folds is shared only with *R. clamitans*.

The advertisement call consists of a series of 3-21 guttural "chucks" issued at about 5 notes per second (24.5°C), but slowing audibly at the end of a call. Under favorable conditions in early July, the interval between calls ranged from 34-80 ( $\bar{x}$  = 63) seconds. Between calls, males periodically issue single softer notes, particularly in response to calls by nearby males. The call does not carry well. The call most nearly resembles that of *R. virgatipes*, but the notes are not paired as they are in *R. virgatipes*. An individual note lasts about 0.1 second, twice as long as that of *R. virgatipes*, and has a more rasping quality.

The general coloration of living tadpoles is olive brown with buff spots on the tail. The ventral surface is marked with white spots. Only the tadpoles of *R. clamitans* normally occur with the tadpoles of *R. okaloosae*. White ventral spots distinguish the tadpoles of *R. okaloosae* from those of *R. clamitans*.

• **Descriptions.** Moler (1985a) provided the most detailed description. Briefer descriptions are in Ashton and Ashton (1988), Bartlett (1989), and Conant and Collins (1991).

• **Illustrations.** Moler (1985a, 1992) provided black and white photographs of adults and Moler (1985b), Stone (1986), Bartlett (1989), and Carmichael and Williams (1991) provided color photographs. The specimen (UF 53952) pictured in Means (1991) may be a *R. okaloosae* X *R. clamitans* hybrid. Conant and Collins (1991) provided a color illustration. The frog depicted in color in Ashton and Ashton (1988) is not *R. okaloosae* (see Comment).

The tadpole is illustrated in Moler (1985a), and color photographs of eggs and tadpole are in Ashton and Ashton (1988). Moler (1985a) and Ashton and Ashton (1988) provided drawings comparing the hind foot of *R. okaloosae* with that of *R. clamitans*.

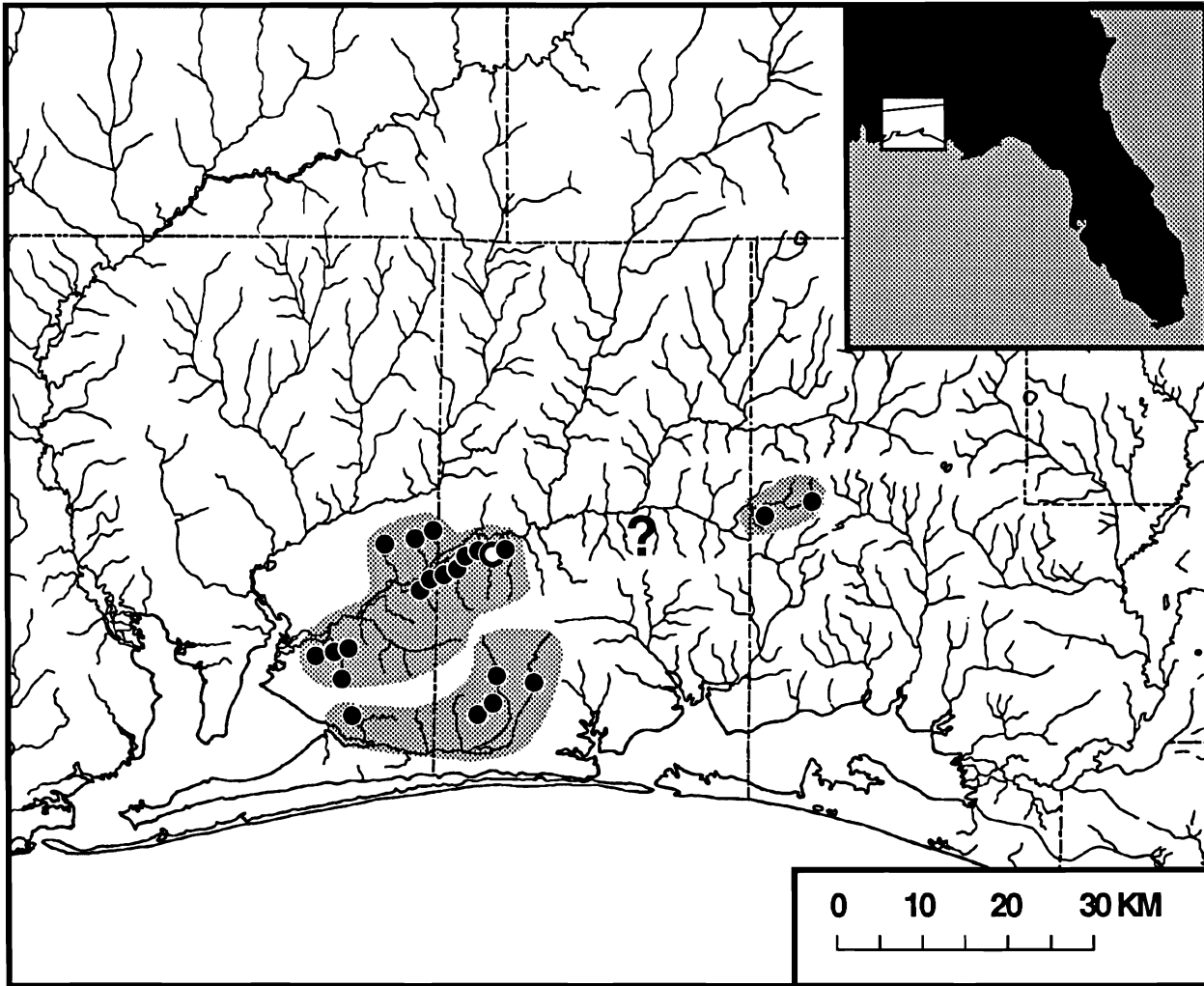
• **Distribution.** *Rana okaloosae* is known from a total of 23 localities in Okaloosa, Santa Rosa, and Walton counties, Florida. The species is associated with small tributary streams of the East Bay, Shoal, and Yellow rivers. Twenty of the known localities are on Eglin Air Force Base.

• **Fossil Record.** None.

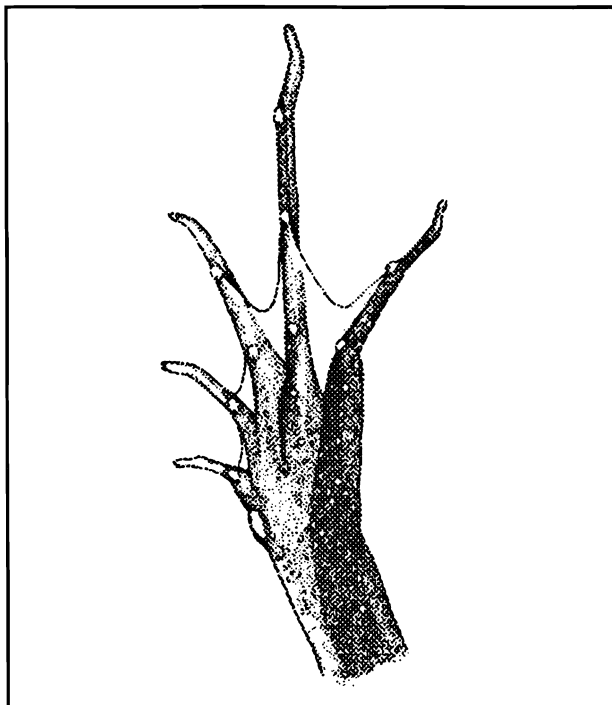
• **Pertinent Literature.** Moler (1985a) provided the original description and included discussion of relationships to other *Rana*, breeding phenology, zoogeography, habitat requirements, and associates. Bartlett (1989) further discussed the habitat. Dubois (1992) placed *R. okaloosae* in the subgenus *Aquarana*. Portions of Ashton



**Figure 1.** An adult male *Rana okaloosae* from Crane Branch, Santa Rosa County, Florida (photograph by Barry Mansell).



**Map.** Distribution of *Rana okaloosae*. The type-locality is indicated by the large, open circle. Other known localities are marked by solid symbols. The question mark notes the unexplained hiatus in the range.

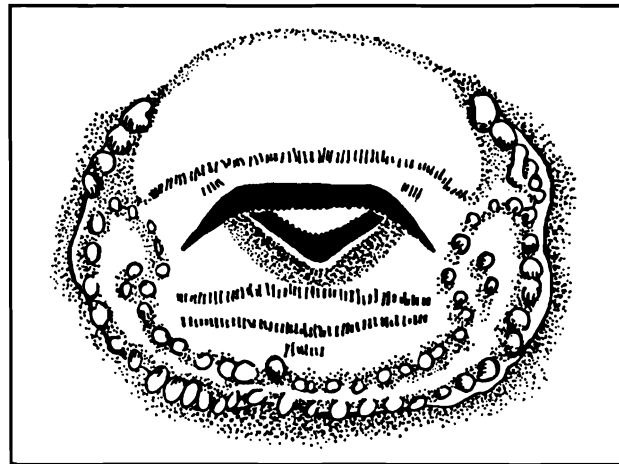


**Figure 2.** Ventral view of the left foot of *Rana okaloosae* (UF 54064) from Santa Rosa County, Florida. Illustration is by Lyda Stock.

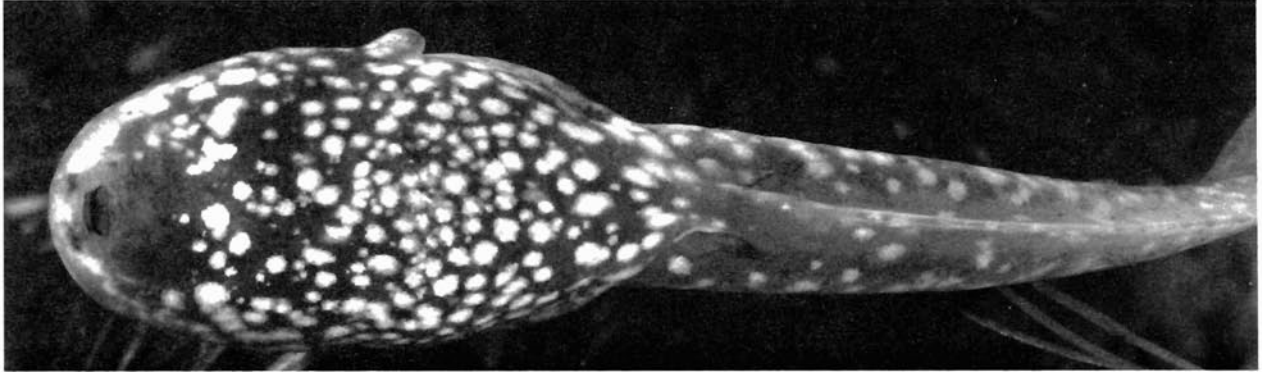
and Ashton (1988) are in error (see Comment).

- **Etymology.** The species is named for Okaloosa County, Florida, where it was discovered. The specific epithet is a latinized noun in the genitive case.

- **Comment.** Other than the original description (Moler, 1985a), the most extensive account is that of Ashton and Ashton



**Figure 3.** Oral disc of UF 53968, a stage 28 *Rana okaloosae* tadpole. Note the row of submarginal papillae, the wide A-2 gap, and the short P-3, shown here at its maximum development. Both A-2 and P-3 may be lacking completely. Illustration is by Lyda Stock.



**Figure 4.** Ventral view of *Rana okaloosae* tadpole. White spots distinguish the tadpoles of this species from those of *Rana clamitans*. Photograph is by Barry Mansell.

(1988), portions of which are in error. Specifically, (1) *R. okaloosae* typically calls from shallow water surrounded by sphagnum and not "from mats of floating vegetation;" (2) the species is not restricted to Okaloosa County, Florida; and (3) the frog pictured by Ashton and Ashton is not *R. okaloosae* but probably is a juvenile *R. clamitans*.

*Rana clamitans* is abundant in habitats occupied by *R. okaloosae* and two probable *R. clamitans* X *R. okaloosae* hybrids have been collected.

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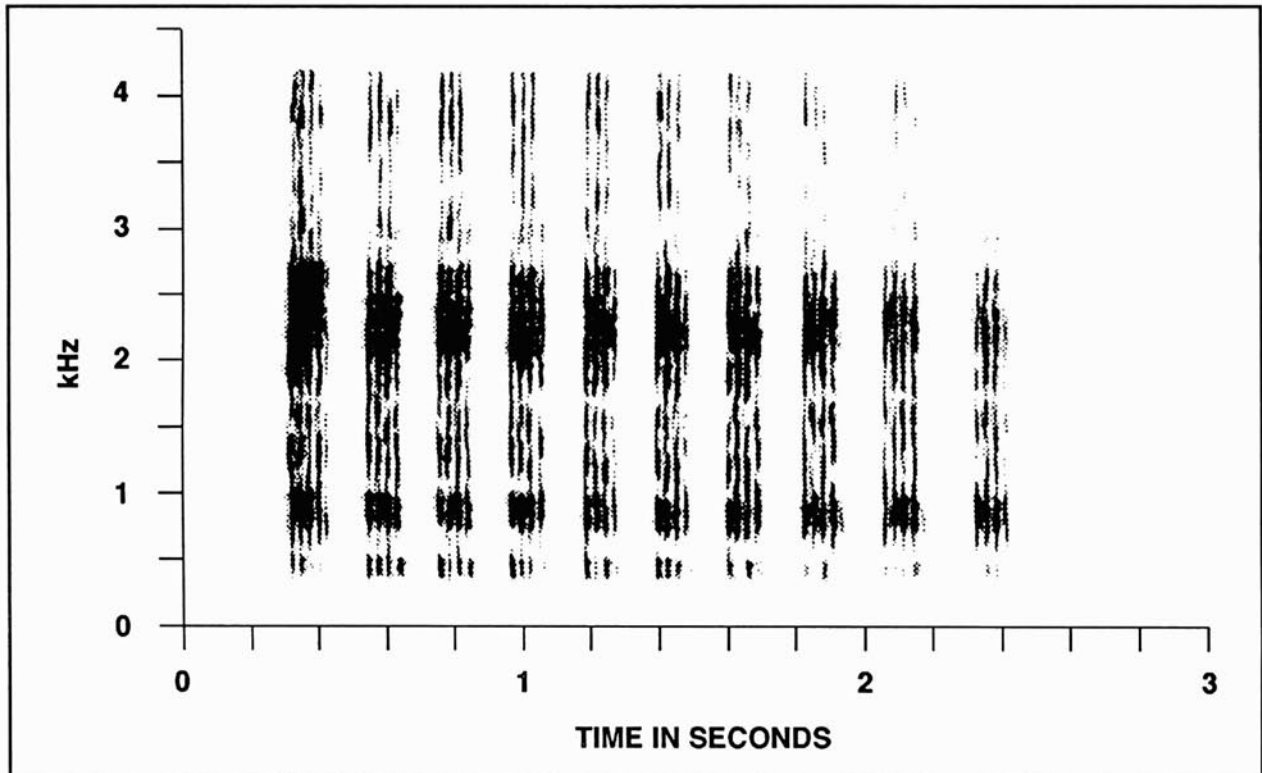
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**Figure 5.** Audiospectrogram of the advertisement call of *Rana okaloosae*: Crane Branch, Santa Rosa County, Florida, 22 July 1982, air 24.5°C; wide band (300 Hz) (Florida State Museum Bioacoustics Archive, Master Tape 632, Cut 1).