

NOTES ON FROGS OF THE GENUS *ACRIS*

BY EMMETT REID DUNN

Associate Curator of Reptiles, Academy of Natural Sciences of Philadelphia.

Percy Viosca, Jr., has maintained for some time that *Acris* is composed of two distinct species, *gryllus* and *crepitans*. He has given some characters and ranges for the two (1923, *Copeia*, 115, p. 9; in Wright and Wright 1933, *Handbook of Frogs and Toads*, p. 82). In the former paper both are stated to occur in Louisiana, "the up land species being tentatively *gryllus* and that of the lowlands *crepitans*" and in the latter *gryllus* is given as a pine-barren Atlantic Coastal Plain form extending to the Florida Parishes of Louisiana, and *crepitans* a Mississippi Valley or more western form.

Examination of the collections of this Academy confirms Viosca's opinion that two distinct species are involved, and the distinguishing characters are those he mentions. The ranges are, however, sufficiently different to warrant publication of the following notes.

Rana gryllus LeConte (1825, *Ann. Lyc. Nat. Hist.*, New York, 1, p. 282) was described without type locality, and without designated type. It would be natural to consider the LeConte plantation at Riceboro, Georgia, as the most likely source, and to consider U.S.N.M. No. 3564 (five specimens), U.S.N.M. No. 5909 (seven specimens), and A.N.S.P. Nos. 1989-90, all from LeConte and labeled "Georgia" as the nearest approach to types that we are likely to get. Viosca has sent me Louisiana specimens of what he calls *gryllus*, and they agree perfectly with these LeConte specimens.

Acris crepitans Baird (1854, *Proc. Acad. Nat. Sci. Philadelphia*, VII, p. 59) was described from "Northern States generally". No type was designated. Baird mentions a New York specimen figured by DeKay (1842, *Zool. New York, Reptiles*, p. 70, pl. 22, fig. 61, "in cabinet of the Lyceum") and this may help to fix the name.

I have seen no specimens from New York, but specimens from Bucks Co., Pa., agree quite well with Louisiana specimens which Viosca considers *crepitans*.

This Academy possesses specimens of *Acris gryllus* from the following localities: Southport, N. C.; Manning, S. C.; Thomasville, Ga.; Caloosahatchie, Fla. I have seen specimens in the U. S. National Museum from extreme southeastern Virginia. The range is, therefore, from Virginia to Louisiana along the coast.

We have *crepitans* from many New Jersey localities in the counties of Warren, Summerset, Sussex, Mercer, Burlington, Cumberland, Camden,

Gloucester, and Cape May. In Pennsylvania we have it from the counties of Bucks, Philadelphia, Delaware, Chester, and York.

DeKay (above) has recorded it from New York, and Cope (1889, Bull. U. S. Nat. Mus., XXXIV, p. 460) has recorded it from New Haven, Connecticut.

This Academy has *crepitans* from Maryland, Delaware, Virginia, North Carolina, Illinois, Georgia, Mississippi, Tennessee, South Dakota, Kansas, Arkansas, Oklahoma, and Texas.

Stejneger and Barbour (Checklist, 3rd ed., 1933, p. 31) give "the Canadian Northwest Territories".

It is entirely possible that careful study may show that western specimens differ from typical northeastern *crepitans*, although I have noticed no marked differences such as those that separate *crepitans* from *gryllus*.

I have taken *crepitans* at Midway, Nelson Co., Va., in the Piedmont, and near Brevard (2000 ft.) in the French Broad Valley, N. C.

The range of *crepitans* may be defined as from Connecticut to the Canadian northwest, and to Georgia, Louisiana and Texas; from sea level to 2000 feet.

In the State of Virginia I have seen *gryllus* from the counties of Norfolk and Elizabeth City; *crepitans* from the counties of Fairfax, Arlington, Fauquier, Caroline, Prince William, Prince Edward, Nelson, Albermarle, Dinwiddie, Mecklenburg; and west of the Blue Ridge from Bath, Clarke, Rockbridge, and Wythe.

The best character for distinguishing the two species is the amount of webbing of the toes, *crepitans* having much more web.

<i>gryllus</i>	<i>crepitans</i>
smaller.	larger.
less web (3 phalanges of toe 4 free, toe 1 partly free).	more web (2 to 1½ phalanges of toe 4 free, toe 1 completely webbed).
more rugose.	smoother.
anal warts less prominent.	anal warts more prominent.
legs longer, heel beyond snout.	legs shorter, heel not to snout.
thigh more definitely striped.	thigh less definitely striped.

No difficulty whatever has been experienced in sorting the material in the Academy series into two species on the basis of the characters given above. According to Viosca, the two may occur together in Louisiana, and our specimens bear this out as we have both species from Southport, N. C. and Thomasville, Ga.

I have been unable to locate the types of *Rana dorsalis* Harlan (1827, Journal Acad. Nat. Sci. Philadelphia, V, p. 317; 1835, Med. Phys. Res., p. 105, fig., p. 72) from Florida, or of *Acris acheta* Baird (1854, Proc. Acad. Nat. Sci. Philadelphia, VII, p. 59) from Key West. These names have usually been relegated to the synonymy of *gryllus*.