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BRIEF NOTE

NEW DISTRIBUTIONAL RECORDS OF CRAYFISHES (*CAMBARUS* AND *FALLICAMBARUS*) FROM OHIO, INCLUDING A NEW SUBSPECIES RECORD¹

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While conducting a crayfish survey for The Center for Lake Erie Area Research, we discovered several populations of crayfishes that are new state distributional records and a subspecies, *Cambarus* (C.) *bartonii carinirostris* Hay 1914, not previously recorded in Ohio. The initial discoveries were made in the Cuyahoga, Chagrin, and Mahoning River drainages in northeastern Ohio during the autumn of 1979. Additional collections were made from streams of the Flushing Escarpment and Grand River drainage during the spring and summer of 1980.

All specimens have been donated to the Crayfish Collection of The Ohio State University Museum of Zoology. Locality data and field notes have been deposited in the Museum's archives and are available to interested investigators.

Cambarus (*Lacunicambarus*) *diogenes diogenes* Girard 1852—A single female specimen was dug from a burrow in an upland swamp in Smith Township, Mahoning County. It was associated with a colony of *Fallicambarus* (C.) *fodiens* (Cottle 1863). Turner (1926) records *C.* (L.) *d. diogenes* from Mosquito Creek, Trumbull County, but not from Mahoning County nor the Mahoning River drainage. Rhoades (1944) states that: "This species probably occurs in every county of Ohio . . ." We agree with this statement.

Cambarus (*Cambarus*) *bartonii carinirostris* Hay 1914—This subspecies has not been previously recorded in Ohio. It was always captured in small streams, usually less than 1 m in width, having gradients of 3.7 m/km or greater. Sixteen of the collections are from streams of the Flushing Escarpment from Barnes Run, Monroe County, northward to the Yellow Creek drainage, Jefferson County; 4 are from the

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Little Beaver Creek drainage, Mahoning and Columbiana Counties; one is from the Mahoning River drainage, Mahoning County; and one is from an unnamed tributary of the Grand River, Lake Erie drainage, in Parkman Township, Geauga County. This latter site is very near the drainage divide of the Grand and Mahoning rivers (fig. 1).

Ortmann (1931) and Hobbs (1972) state that this subspecies is found in the headwaters of the Cheat, Greenbrier, and Tygart rivers in West Virginia. Our records indicate a much broader distribution and, in Ohio, one similar to that of *Orconectes obscurus* (Hagen 1870). The Ohio distribution of both of these crayfishes appears to be correlated with the ancient Steubenville River drainage, a tributary of the preglacial Pittsburgh and Erigan Rivers (Stout et al. 1943).

We have found that this subspecies can be distinguished from *Cambarus* (*C.*) *b. bartonii* (Fabricius 1798) by the following characters: rostral margins thickened and

frequently concave; rostrum ending abruptly, forming a 90° angle with the base of the acumen; postorbital ridges more strongly developed; chela with stronger development of the lateral impression and dorsal ridges; mesial margin of the palm having a slight development of a 2nd row of 2 or 3 tubercles; gape between the dactyl and propodus reduced; and an enlarged 3rd tubercle on the mesial margin of the opposable propodus. These characters are most pronounced in first form males of *C.* (*C.*) *b. carinirostris*. The presence of a carina on the rostrum, from which the subspecies derives its subspecific name, is the poorest character separating these 2 taxons for it is more often absent than present.

Fallicambarus (*Creaserinus*) *fodiens* (Cottle 1863)—This primary burrower was taken from upland swamps at 5 different localities; 3 sites in Mahoning County, Mahoning River drainage; one site in Geauga County, Cuyahoga River drainage; and one site in Cuyahoga County, Chagrin River drainage. Five males were first form and one female was ovigerous on 20 October 1980.

Turner (1926) reported the species from Geneva Creek, Ashtabula County, in northeastern Ohio. All other records (Turner 1926, Rhoades 1944) are from the glaciated regions of the state, especially in the northern and western counties.

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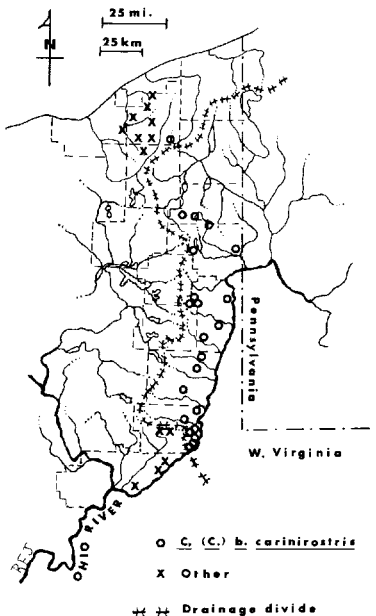


FIGURE 1. Ohio distribution of *Cambarus* (*C.*) *b. carinirostris*. Note the approximate western drainage divide of the preglacial Steubenville River.

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