

Summary of the Distribution of Indiana Crayfishes, Including New State and County Records¹

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The only major paper dealing with the crayfishes of Indiana is by Hay in 1896 (9). He listed 14 species including one (*Procambarus gracilis* Bundy) that has not yet been found in the state but which may occur in the extreme northwest portion of the state (it has been found in Chicago). Williamson (16) described a new species (*Cambarus ortmanni*) from Wells County, and Faxon (7) described a new sub-species (*Cambarus bartonii laevis*) to include the form listed by Hay as *Cambarus bartonii*. *Orconectes inermis* Cope, considered by Hay to be a synonym of *O. pellucidus*, is here listed as a distinct species. The discovery of *Carbarus bartonii robustus* Girard in Miami County brings the present list to a total of 16 species and sub-species.

Hay's paper summarizes well the knowledge of the distribution of crayfishes in Indiana up to 1895. In the present paper his records are taken as the starting point to which are added subsequent records as they have been published and new records in the author's collection. In the following list, the published records are listed by counties. The numbers in parentheses following each county refer to the papers which reported them. New localities are given as specifically as possible. The generic terminology follows Hobbs (10).

List of Species

1. *Procambarus blandingii acutus* Faxon. Knox (9), Kosciusko (9), Lake (9), Marshall (4, 5, 9), Vigo (9), Wells (16). New location: pond 1 mile s.e. of Roann, Wabash Co.
2. *Orconectes indianensis* Hay. Gibson (9), Dubois (9).
3. *Orconectes sloanii* Bundy. Crawford (9), Floyd (9), Jefferson (9), Orange or Crawford (7).
4. *Orconectes pellucidus* Tellkamp. Bartholomew (9), Crawford (9), Harrison (9), Jefferson (9), Lawrence (9), Orange (9).
5. *Orconectes pellucidus testii* Hay. Monroe (1, 9). New localities: Eller's Cave (collected by G. Thurow) and May's Cave, Monroe Co.
6. *Orconectes inermis* Cope. Crawford (2). New locality: small cave 4 miles n.e. of Mauckport, Harrison Co. (Collected by Sherman Minton, Jr.).

The above three species are the blind white cave crayfishes of Indiana. *O. inermis* was described from a small cave near Wyandotte Cave in 1872 (2). Many early writers supposed that it was just a variant form of *O. pellucidus* and included it in the records that way. Faxon (1898) observed that specimens of *O. pellucidus* from Lawrence and Orange counties seemed more like the *inermis* variety than the typical *pellucidus* from Mammoth Cave. Hobbs (1948) after examining specimens collected at the

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type locality is of the opinion that until further work is possible on this complex, *O. inermis* should retain its specific status. The discovery of a new locality for *O. inermis* supports the validity of its status as a distinct form, either as a separate species (as considered here) or as a sub-species of *O. pellucidus*. *O. pellucidus testii* is apparently restricted to a small area around Bloomington in Monroe County.

7. *Orconectes immunis* Hagen. Kosciusko (12), Marion (9), Marshall (4, 5, 9), Noble (9), Posey (9), Vigo (9), Wells (16). New localities: ditch 1 mile s.e. of Laketon, Wabash Co.; ditch 5 miles e. of Warsaw and pond ½ mile s. of Little Barbee Lake, Kosciusko Co. Old records for *O. immunis spinirostris* are included here as this is considered a normal variant of the typical form and not a distinct sub-species.

8. *Orconectes virilis* Hagen. Elkhart (9), Greene (7), Kosciusko, Wawasee Lake (9), Lagrange (9), La Porte (9), Noble (9). New localities: creek 2 miles n. of Wakarusa, Elkhart Co.; Adams Lake, Oliver Lake and Lake-of-the-Woods, Lagrange Co.; Little Long Lake, Noble Co.; Otter and Walters Lakes, Steuben Co.; Goose Lake, Whitley Co.; Hill Lake, Kosciusko Co.

9. *Orconectes propinquus* Girard. Boone (14), Brown (9), Carroll (9), De Kalb (6, 9), Franklin (9), Fulton (7), Grant (7), Greene (9), Knox (3), Kosciusko (7, 9, 12), La Porte (9), Marion (9), Marshall (4, 5, 9), Monroe (3, 9), Noble (9), Sullivan (9), Tippecanoe (9), Vanderburgh (7), Whitley (7). New localities: Yellowwood Lake, Brown Co.; outlet of Lake Manitou, Fulton Co.; many localities in Kosciusko Co.; McCormick's Creek and Richland Creek, Owen Co.; creek 2 miles n. of Wakarusa, Elkhart Co. This is the most widely distributed species in the state.

10. *Orconectes rusticus* Girard. De Kalb (6, 9), Franklin (9), Hamilton (3), Huntington (7), Jefferson (9), Madison (3), Marion (8, 9), Orange or Crawford (3), Wells (3, 16), White (7). New localities: outlet of Lake Pappekeechie, Kosciusko Co.; Ball's Lake, Steuben Co.; Atwood Lake, Lagrange Co.; creek at Newton Junction near Laketon, Eel River near Roann, Paw Paw Creek near Roann, creek in city park, Wabash, Wabash Co.; Silver Creek near Liberty, Union Co. (collected by B. G. Owen). There is some variation between the northern and central specimens of this species. Work with a bigger collection might establish some sub-speciation.

11. *Orconectes juvenilis* Hagen (= *putnami* Faxon). Harrison? (9), Franklin (9).

12. *Cambarus bartonii laevis* Faxon. Floyd (7, 9—given by Hay incorrectly as New Albany, Jefferson Co.), Lawrence (9), Marion (7, 9), Monroe (1, 7, 9), Orange (9). Mitchell County of Ortmann (13) is undoubtedly Mitchell, Lawrence Co. New localities: McCormick's Creek Park, Owen Co.; small cave 4 miles n.e. of Mauckport, Harrison Co. (collected by Sherman Minton, Jr.).

13. *Cambarus bartonii robustus* Girard. New locality: Sulfur Springs Park, 5 miles s.e. of Peru, Miami Co. This is the first state record for this form. It is found commonly in southern Michigan and in Ohio. Dr.

Horton H. Hobbs, Jr., of the University of Virginia, graciously identified these specimens for the writer.

14. *Cambarus ortmanni* Williamson. Wells (16). New localities: Somerset, Wabash Co.; 4 miles s.w. of Roann in Miami Co.; Sulfur Springs Park, 5 miles s.e. of Peru, Miami Co.

15. *Cambarus diogenes* Girard. Boone (14), Crawford (7), Hendricks (9), Henry (9), Howard (9), Kosciusko (12), Lake (9), Marion (9), Marshall (7), Monroe (9), Noble (9), Putnam (9), Wells (16), White (7). New localities: creek at Indian Village, Noble Co.; many localities in Kosciusko Co.; creek 2 miles s. of Wilmot, Whitley Co. (Williamson, 15, reported burrows but no specimens for Round and Shriner Lakes, Whitley Co.); Somerset, Wabash Co.; 6 miles s., 2 miles w. of Roann in Miami Co.

16. *Cambarus fodiens* Cottle (= *argillicola* Faxon). Floyd (9—given incorrectly as New Albany, Jefferson Co.), Knox (9), Marion (9), Monroe (9). New localities: pond 1 mile s.e. of Roann, Wabash Co.; creek 3 miles n. of Webster Lake, and pond and creek in woods 8 miles n.e. of Warsaw, Kosciusko Co.; Yellowwood ponds, Brown Co.

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