

**A Check List of Freshwater Ostracods of Indiana—  
Including Sixteen New Recordings  
and a Description of Two New Species**

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*Abstract*

The check list of freshwater ostracods of Indiana raises the number of ostracods reported from Indiana from 6 to 24. The list is a result of a survey taken in the spring of 1968 in Delaware County. The list includes the descriptions of 2 new species: *Potamocypris brachychaeta* and *Candona ginnensis*.

**Introduction**

A survey of ostracods (Class Crustacea, Order Ostracoda) was taken through Delaware County during May and June, 1968. The survey was an attempt to fill a gap in the taxonomy of ostracods from Indiana. Comprehensive surveys of ostracod faunas have been made in Ohio (1) and Illinois (3), but to date none have been made in Indiana. There are scattered reports of ostracods from Indiana; among these are 4 cave types; *Candona marengoensis*, *C. jeanneli* (5), *Entocythere donaldsonensis* (7), *E. barri* (2). There are only 2 ostracod species reported from streams and ponds in Indiana: *Cypridopsis vidua* (4), *Cyclocypris laevis* (6). The survey of Delaware County raises the number of known ostracods from Indiana from 6 to 24 including 2 new species.

**Methods and Materials**

During May and June 1968, 100 dredge-net samples were taken in Delaware County. The samples were taken from rivers, creeks, ponds, drainage ditches, and borrow pits. Of the 100 samples 62 contained ostracods. The ostracods were preserved in a 95% alcohol solution. Permanent reference slides were made and placed on file in the Ball State University biology laboratory.

**Description of New Species**

*Potamocypris brachychaeta*, sp. nov.

Five specimens were collected from two sample sites.

Sample number 20 was from a borrow pit along Interstate 69 in Delaware County. The pit is about 6 acres in area and the true depth is not known. The bottom is mostly mud and silt. There was little vegetation except along the edges of the pit, and this was mostly grass and unidentified algae. *Cypridopsis vidua* was also found in the sample.

Sample 31 was taken from a small creek with slow movement under normal conditions. The bottom was mostly silt and much decaying vegetation. The water was clear. Five other species of ostracods were found at this site: *Ilyocypris bradyi*, *Candona elliptica*, *Candona* sp., *Paracandona* sp., and *Darwinula stevensoni*. Also found in the collection were many unidentified insect larvae, copepods, and cladocera.

*Potamocypris brachychaeta* is easily identified as genus *Potamocypris* because of the genus characteristics: reniform shape, compressed valves, arched dorsum maximum height

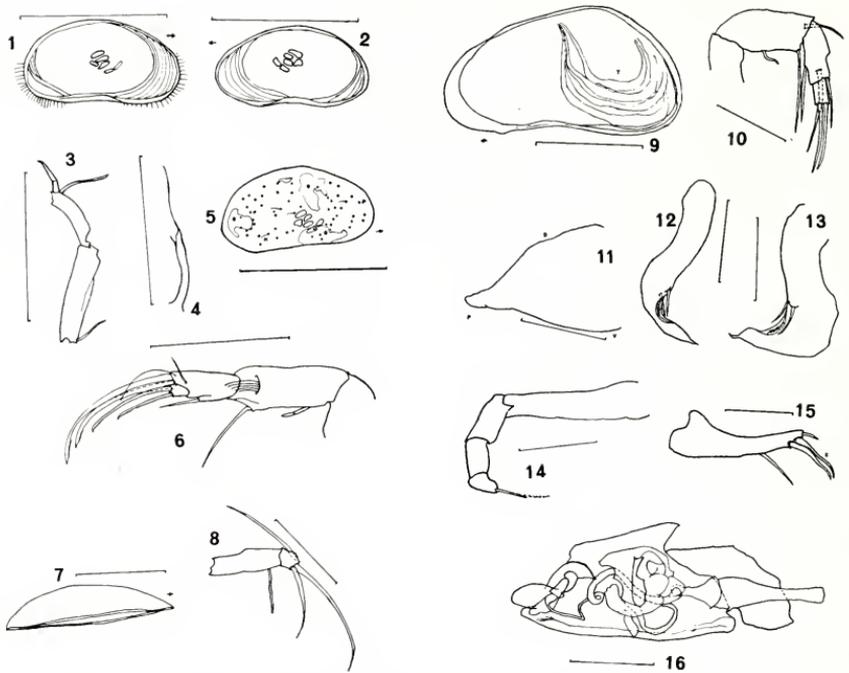


FIGURE 1. *Potamocypris brachychaeta*. Interior view of left valve showing list. Scale 0.5 mm. Arrow—anterior.

FIGURE 2. *P. brachychaeta*. Interior view of right valve. Scale 0.5 mm.

FIGURE 3. *P. brachychaeta*. Third leg. Scale 0.1 mm.

FIGURE 4. *P. brachychaeta*. Furca. Scale 0.1 mm.

FIGURE 5. *P. brachychaeta*. Exterior view of right valve. Scale 0.5 mm. G—green, H—hair, P—pit.

FIGURE 6. *P. brachychaeta*. Second antenna. Scale 0.1 mm.

FIGURE 7. *Candona ginnensis*. Dorsal view of left valve. Scale 0.5 mm.

FIGURE 8. *C. ginnensis*. Third leg. Scale of 0.1 mm.

FIGURE 9. *C. ginnensis*. Interior view of right valve. Scale 0.5 mm. T—testes.

FIGURE 10. *C. ginnensis*. Second antenna. Scale 0.1 mm.

FIGURE 11. *C. ginnensis*. Genital lobe. Scale 0.1 mm. V—ventral, P—posterior, D—dorsal.

FIGURE 12. *C. ginnensis*. Oblique view of left prehensile palp showing the teeth. Scale 0.1 mm.

FIGURE 13. *C. ginnensis*. Right palp. Scale 0.1 mm.

FIGURE 14. *C. ginnensis*. Leg 2. Scale 0.1 mm. Dashed line shows normal length of terminal seta.

FIGURE 15. *C. ginnensis*. Furca. Scale 0.1 mm. S—S-shaped seta.

FIGURE 16. *C. ginnensis*. Penis. Scale 0.1 mm.

reached at mid-length, broad anterior vestibule, with the left valve slightly overlapping the right valve. The valves of *P. brachychaeta* are punctate with very few hairs and are grayish with several areas of green pigment. The pore canals are simple and the hinge is adont. This new species differs from the other potamocyprids with abbreviated natatory setae in that the setae of *P. brachychaeta* are very short (Fig. 6). The swimming setae are a mere 0.08 mm long and barely reach the proximal 1/3 of the penultimate segment. Another distinguishing feature is the appearance of a second posterior list on the left valve (Fig. 1). This list does not appear on any of the other species of *Potamocypris*.

Dimension of adult female: Right valve 0.56 mm long, 0.29 mm high. Left valve 0.59 mm long, 0.36 mm high. Width 0.3 mm.

*Candona ginnensis*, sp. nov.

The sample was collected from Ginn's Woods, a preserve of Ball State University in Delaware County, Indiana. Five individuals were found in a sample taken in April. The sample contained *Candona truncata* and the eggs of the spring peeper, *Hyla crucifer*, and the chorus frog, *Pseudacris nigrita*.

The left valve of *Candona ginnensis* is slightly longer and higher than the right valve. The greatest height is reached in the posterior one-third of the valve. From the rounded anterior, the dorsal margin arches gradually to the maximum height. Posteriorly the dorsal arch curves gently to the posterior; this downward curve is not sharp as in *Candona truncata*. From the broadly rounded posterior margin the ventral margin forms a slight sinuation at the mid-point. The male has a weak point where the ventral margin meets the anterior margin. The third leg has an undivided penultimate segment. The prehensile palps are both similar with a double row of teeth on the ventral side at the curve between the setae (Figs. 12, 13). The furca has a definite "S" shape in the female (Fig. 15) and is only slightly less pronounced in the male.

Dimensions of adult female: Right valve 0.85 mm long, 0.42 mm high. Left valve 0.93 mm long, 0.45 mm high. Width about 0.5 mm.

Dimensions of adult male: Right valve 1.1 mm long, 0.5 mm high. Left valve 1.2 mm long, 0.6 mm high. Width not determined.

*Candona ginnensis* is similar to *Candona simpsoni* (Sharp, 1897) and *C. sigmoides* (Sharp, 1897) (6) with each having an S-shaped furca. However, the valves of *Candona ginnensis* and *C. sigmoides* are arching, while the valves of *C. simpsoni* are elliptical in shape. The sizes also differ with *Candona ginnensis* being between *C. simpsoni*, the smallest, and *C. sigmoides*, the largest. The penis of *C. ginnensis* (Fig. 16) is longer and somewhat narrower than the penis of *C. sigmoides*. The genital lobe (Fig. 11) of the female of the new species is shorter and less pointed than that of *C. sigmoides*.

A Check List of Freshwater Ostracods of Indiana

Class Crustacea

Order Ostracoda

Suborder Podocopa

Family Darwinulidae

*Darwinula stevensoni* (Brady and Robertson, 1870)

Family Cypridae

Subfamily Ilyocyprinae

*Ilyocypris bradyi* (Sars, 1890)

*I. gibba* (Ramdohr, 1808)

Subfamily Cyprinae

*Cyprinotus* sp. (Brady, 1886)

Subfamily Cypridopsianae

*Cypridopsis vidua* (O. F. Müller, 1776)

*Potamocypris smaragdina* (Vavra, 1891)

*P. brachychaeta*, sp. nov.

## Subfamily Candocyprinae

## Tribe Cyclocyprini

- Physocypria globula* (Furtos, 1933)  
*Cypria maculata* (Hoff, 1942)  
*C. obesa* (Sharp, 1897)  
*C. turneri* (Hoff, 1942)

## Tribe Candonini

- Candona elliptica* (Furtos, 1933)  
*C. stagnales* (Sars, 1890)  
*C. marengoensis* (Klie, 1931)  
*C. jeanneli* (Klie, 1931)  
*C. ginnensis*, sp. nov.

## Subfamily Cyprinae

Genus *Cypris*

- Subgenus *Eucypris* (Vávra, 1891)  
*E. affinis hirsuta* (Fischer, 1851)  
*E. reticulata* (Zaddach, 1844)

## Subfamily Candocyprinae

- Cyclocypris laevis* (Müller, 1912; Sharp, 1918)  
*C. forbesi* (Sharp, 1897)

## Family Cytheridae

## Subfamily Entocytherinae

- Genus *Entocythere* (Marshall, 1903)  
*E. donaldsonensis* (Klie, 1931)  
*E. barri* (Hart and Hobbs, 1961)  
*E. sp.*

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