A KEY TO THE SPECIES OF AMPHIPODA OF OKLAHOMA

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1. First antenna much shorter than the second, without a secondary flagellum; terga of some of the abdominal segments produced backward in the midline to form a median row of spines.

   *Hyalella asteca* Saussure, 1858
   (Distribution covers the entire state, in clear permanent waters).
   First antenna as long as, or longer than, second antenna, and with accessory flagellum present; dorsa of abdominal segments not produced backward into spines ........................................ 2

2. Accessory flagellum consisting of three or more segments; telson cleft to the base ................................................................. 3
   Accessory flagellum consisting of only two segments, the terminal one very small; telson cleft only part way to the base or not at all ........ 4

3. Inner ramus of third uropod about 3/4 the length of outer ramus; robust species, average specimens 15 mm long or larger ..............................................

   *Gammarus bimaculatus* Smith, 1874
   (This species is locally abundant in springs of the Arbuckles)
   Inner ramus of third uropod not more than 2/3 the length of outer ramus; small species, maximum size about 10 mm. long.

   *Gammarus minus* Say, 1818
   (Found only in the northeast part of the state, in springs of the Ozarkian uplift).

4. Species with well developed eyes ................................................................................................................ 5
   Species without eyes ......................................................................................................................................... 6

5. Palmar margin of propod of female gnathopod slightly concave and armed with heavily notched spines; lower margin of dactyl armed with 10 to 12 teeth.

   *Eucrangonyx shoemakeri* Hubricht and Mackin, 1940
   (In small temporary streams of the eastern half of the state).
   Palmar margins of propods of female gnathopods convex and armed with weakly notched spines; lower margins of dactyls smooth or armed with setae.

   *Eucrangonyx gracilis* (Smith) 1871
   (Found to date only in sink lake at Antlers, in southeast part of state).

6. Third uropods considerably longer than second uropods; the exopodite two- to several-segmented, endopodite very small.

   *Niphargus pellicidus* Mackin, 1935
   (In springs and subterranean waters of the Arbuckle uplift).
   Third uropods shorter than second pair, the exopodite consisting of only a single very short segment, the endopodite absent or vestigial .............................................. 7

7. Endopodite of third uropod present, vestigial; last three segments of abdomen not fused.
Boleurus brachycerus Mackin and Hubricht, 1940
(This species occurs in the Ozark uplift area).
Endopodite of third uropod absent; last three segments of abdomen fused, but the sutures may be visible ........................................ 8

8. Second gnathopod with palmar margin slightly concave to straight, post palmar margin meeting palmar margin at the heel in a definite angle, post palmar margin nearly as long as palmar margin.

*Sympleonias ciantoni* Creaser, 1934
(In the Arbuckle, Ouachita, and Ozarkian uplifts, in springs and subterranean waters).

Second gnathopod with palmar margin rounded to convex, post-palmar margin merging into palmar margin without definite angle at the heel, palmar margin nearly twice the length of post palmar margin.

*Sympleonias n. sp.* Hubricht, 194—
(This species collected by Mr. Leslie Hubricht and the author in Spring Creek at the Girls' Scout Camp south of Locust Grove, Mayes Co., and is being described by Mr. Hubricht).