A New Variety of Cretaceous Decapod from Texas

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Fragments of the large crustacean, *Enoploclytia walkeri* (Whitfield) are not infrequently reported from Texas. Localities are listed by Stenzel (1944, p. 421) and by Rathbun (1935, p. 23, as *Palaeastacus walkeri*), in the Fort Worth and Weno limestones of the upper Albian, near the summit of the lower Cretaceous. The geographic distribution as now known is within the outcrop belt of these rocks and extends for about 250 miles from Denton County on the north to Bexar County on the south.

The specimen discussed here was collected by Karl P. Schmidt and Billy J. Anderson near the Bosque–McLennan County line, a few miles north of China Springs, about in the middle of the known distributional range of the species. The specimen had weathered free but was found still in place in its impression on a massive ledge outcropping on the gently rolling upland surface of the Washita Upland (Grand Prairie). With it was associated an echinoid.

Order **Decapoda**

Family **Erymidae**

Genus **Enoploclytia** McCoy 1849

Enoploclytia walkeri, var. **schmidti,** var. nov. Figure 108.

Type specimen.—Chicago Natural History Museum no. P29710.

Description.—The specimen collected by Schmidt and Anderson consists of the fingers, palm (manus), wrist (carpus), and part of the arm (merus) of an individual of the same size as the holotype and slightly larger than the Weno specimen figured by Stenzel (1944, pl. 38); all are right chelipeds. The fixed finger is almost entire and is somewhat longer in relation to the length of the cheliped than in the Weno specimen referred to above; Whitfield's

restoration (1883, pl. 16, fig. 1, *a*; pl. 17, fig. 1, *a*) evidently makes this finger too long for the species.

The new specimen is a steinkern, the usual condition of the species. Stenzel has noted (1944, p. 418) that if the thick exoskeleton is

FIG. 108. *Enoploclytia walkeri*, var. *schmidti*, var. nov. Inside of right cheliped, Fort Worth limestone, McLennan County, Texas. Holotype, CNHM no. P29710.

preserved the manus looks plumper and heavier than in the steinkern. The chief difference on which the new variety is based is its being plumper than the typical variety, so it is important to emphasize that this is a steinkern.

Whitfield reported (1883, p. 37) that "the mandibles, both fixed and movable, are distinctly round, without any flattening or carination." The fixed finger of the new variety, however, is preserved in greater detail than that of Whitfield's specimen. The line of nodes that Whitfield described on the inside of the manus, "extending obliquely downward from the upper edge, parallel to the margin of the socket of the movable mandible, and at a short distance from it," continues onto the fixed finger as a low carina, soon disappearing on the flat smooth gripping surface. The cross section of the fixed finger becomes semicircular distally, with a flat or slightly concave gripping surface bounded by low carinae that continue from rows of

spines parallel and close to the lower edge of the manus. The plane of this flat surface rotates distally toward the inside of the finger.

The lip of the socket of the movable finger is more nearly transverse to the axis of the manus than in typical specimens, and the base of the movable finger is relatively thicker. The lower edge of the socket falls below half the height of the manus, while in typical specimens it lies above the half.

The manus is more inflated than in typical specimens and its lower margin is rounded up to the base of the fixed finger; the manus is higher in relation to its length. Whitfield reported the ratio of length to height as 7:5, while in the new variety it is about 7:6.

The carpus has about the same proportions as in the typical specimens. On its inner surface are four stout spines, three forming one of a pair of rows along its top surface and the fourth standing alone about halfway down the carpus, near its distal margin; these spines are slightly tilted distally.

The new variety is named in honor of Dr. Karl P. Schmidt.

Remarks.—China Springs is situated on the Del Rio Formation, equivalent to the Grayson marl; north of the town, bands of successively lower formations appear, presenting the Mainstreet limestone, the Weno limestone, and the Fort Worth limestone, all members of the Georgetown Formation. The Pawpaw and Denton members are not distinguished in this area. For the areal geology, see Adkins (1923). The specimen here discussed came from an outcrop in one of the limestone bands north of China Springs.

The associated echinoid is a *Macraster* that, except for a slightly more posterior position of the genital pore, closely matches figures and descriptions of *M. elegans* (Shumard) and is here referred to that species. It carries no. P29711 in the Chicago Natural History Museum collection. Since *Macraster elegans* is typical of the Fort Worth limestone, and since typical *Enoploclytia walkeri* is fairly common in that member, these specimens were probably collected from the Fort Worth.

REFERENCES

ADKINS, W. S.

1923. Geology and mineral resources of McLennan County. Univ. Texas Bull., no. 2340, 202 pp., map, 4 pls.

RATHBUN, MARY J.

1935. Fossil Crustacea of the Atlantic and Gulf coastal plain. Geol. Soc. Amer., Sp. Pap., no. 2, vii+160 pp., 2 figs., 26 pls.

STENZEL, H. B.

1944. Decapod crustaceans from the Cretaceous of Texas. Univ. Texas Bull., no. 4401, pp. 402–476, figs. 1–16, pls. 34–45.

WHITFIELD, ROBERT P.

1883. *Paramithrax? walkeri* Whitfield, pp. 37, 38, pl. 16, fig. 1*a*, pl. 17, fig. 1*a*, in WHITE, C. A., Report, pp. 1–171 in HAYDEN, F. V., 12th Ann. Rept. U. S. Geol. and Geogr. Surv. Terr. for 1878.