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Taxonomy and Distribution of *Edotea (= Tropedotea) lyonsi* (Menzies and Kruczynski, 1983) N. Comb. (Crustacea: Isopoda: Idoteidae)

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GULF OF MEXICO

Distribution of Edotea (= Tropedotea) lyonsi in the eastern Gulf of Mexico. Circled star is type locality. Depth contours are 20 and 40 meters.

Figure 1. Distribution of Edotea (= Tropedotea) lyonsi in the eastern Gulf of Mexico. Circled star is type locality. Depth contours are 20 and 40 meters.

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ABSTRACT Tropedotea lyonsi Menzies and Kruczynski, 1983, is reported from the waters off Alabama southeastward to Cape Romano, Florida. The monotypic genus Tropedotea was recently erected on the basis of coxal plates of pereonites V to VII visible in dorsal view and a reduced number of articles in both antennae. Pereonites V to VII are also visible in dorsal view in Edotea Guérin-Méniléville, 1843, and the number of articles in antenna 1 and 2 of Tropedotea Menzies and Kruczynski, 1983, is the same as in Edotea. Hence Tropedotea lyonsi is assigned to the genus Edotea and Tropedotea is designated a junior synonym of Edotea.

Edotea is diagnosed as having coxal plates not visible in dorsal view (Richardson 1905, p. 394, Menzies and Franken-berg 1966, p. 21). Tropedotea lyonsi has coxal plates visible in dorsal view, although they are difficult to distinguish. This character is not unique to the genus Tropedotea and until now has been apparently overlooked in the genus Edotea. Edotea triloha (Say, 1818) (= E. montosa Stimpson, 1853) from the northern Gulf of Mexico, from the coast of Georgia, and from Newport, Rhode Island, have indications of the coxal plates on pereonites V to VII in dorsal view, incompletely fused with pereonites V to VII. Under sufficient magnification, the remnants of the articulation may be seen, the imperfect fusion evident in both juveniles and adults. The generic diagnosis of Edotea should be emended to state coxal plates imperfectly fused to pereonites V to VII and partly visible in dorsal view.

The second distinctive feature given by Menzies and Kruczynski for the genus Tropedotea was the number of antennal articles, 4 in antenna 1 and 5 in antenna 2; however, the basal article of antenna 1 and the minute 6th article on antenna 2 were overlooked in the original description of T. lyonsi. An examination of the paratype has shown the antennae of T. lyonsi to be in agreement with Edotea in the number of articles of both antennae. Dr. T. E. Bowman (U. S. National Museum of Natural History, in litt.) has confirmed our observations on the type-specimen.

As noted previously, the remaining characters described for the genus Tropedotea are shared by other genera within the family Idoteidae. We consider the bilobed frontal lamina of the cephalon and the presence of a pair of bifid spines on the carpus of each pereopod of T. lyonsi as specific rather than generic characters. For the above reasons we assign Tropedotea lyonsi Menzies and Kruczynski, 1983, to the genus Edotea Guérin-Méniléville, 1843, and consider Tropedotea Menzies and Kruczynski, 1983, a junior synonym of Edotea.
**Edotea lyonsi** (Menzies and Kruczynski, 1983); new combination.


**Material Examined** – 1 ø, PARATYPE, 14 November 1967, dredge, 26°24′N, 82°28′W, 18 m. USNM 204998, 1 ø, 4 ø ø, July 1976; 1 ø, 1 ø, September 1977, 29°54′N, 87°24′W, 27 m, fine sand. 1 ø, June 1975, 29°33′N, 87°24′W, 83 m, coarse sand. 1 ø, September 1977, 30°08′N, 86°30′W, 40 m, medium sand. 5 ø ø, June 1975, 29°12′N, 85°00′W, 28 m, medium sand. 1 ø, July 1976, 29°36′N, 87°24′W, 28 m, medium sand. 1 ø, June 1975, 29°33′N, 87°24′W, 19 m, silty fine sand. 3 ø ø, June 1975; 1 ø, July 1976, 29°01′N, 83°45′W, 21 m, medium sand. 1 ø, 1 ø, August 1977, 28°42′N, 84°18′W, 37 m, silty fine sand. 2 ø ø, June 1975, 27°59′N, 83°42′W, 36 m, silty fine sand. 2 ø ø, July 1976, 27°59′N, 83°08′W, 17 m, very fine sand. 7 ø ø, September 1977, 26°25′N, 82°59′W, 39 m, fine sand. GCRL 1119, 1 ø, May 1975; GCRL 1120, 1 ø, September 1977, 26°25′N, 82°15′W, 10 m, very fine sand. 1 ø, September 1977; 2 ø ø, November 1977, 26°45′N, 82°20′W, 26 m, fine sand (Invertebrate Collection, GCRL).

**Diagnosis** – Cephalon twice as wide as long, frontal lamina bilobate, visible in dorsal view; dorsal crest of cephalon bilobate, acutely raised; antenna 1 with 5 articles, last minute (Figure 2C), antenna 2 with 6 articles, last minute; pereopods 1 to 7 with 2 bifid spines on carpus; lateral margins of pereonites 1, 5, 6, and 7 rounded, lateral margins of pereonites 2, 3, and 4 angular and somewhat bilobate, dorsal boss of pleosome low, little indication of fusion in pleosomal segments; appendix masculina with single row of transverse spines, about 8 in number (Figure 2A, B).

A great deal of variation is present within Edotea triloba and has led to taxonomic confusion. Many workers still recognize *E. montosa* Stimpson, 1853, and *E. acuta* Richardson, 1900, as valid taxa. This is despite the work of Wallace (1915, p. 24) who reported the variation of *E. triloba* (Say, 1818) is extensive. He synonymized the above three names, stating "there appears to be, therefore, no good reason for separating *E. montosa* and *E. acuta* from *E. triloba*" (p. 26). Dr. T. E. Bowman has indicated his agreement with Wallace's conclusion (in litt.).

We examined our specimens of Edotea lyonsi to document possible intraspecific variation. No marked variation was found among the specimens during this study. Minor differences in the shapes of the frontal lamina of the cephalon and the lateral margins of the pereonites from the original description were attributable to sexual dimorphism or to growth stages. No significant variation was noted in these or the development of the dorsal boss of the pleosome.

Comparison of the appendix masculina of male *E. lyonsi* with published illustrations of that of *E. montosa* (Menzies and Frankenberg, 1966, Figure 2f) and with specimens of *E. triloba* from both Atlantic and Gulf populations has shown several discrepancies that may be of diagnostic value. A difference was noted in the presence of fewer spines on *E. lyonsi* than in *E. triloba*. The apex of the appendix masculina also reaches far beyond the endopod in *E. lyonsi* and only slightly beyond in *E. triloba*.

Little ecological or distributional information is available for *E. lyonsi* since the type material was based on only two specimens from a single collecting site in 18 m of water off Tampa Bay, Florida. Our collection data indicate that *Edotea lyonsi* is most common in marine waters from 10 to 40 meters deep on fine to medium sand substrata having high carbonate content. Associated species included the amphipods *Acanthohaustorius* sp.; *Eudevenopus honduranus* Thomas and Barnard, 1983; *Metharpinia floridana* (Shoemaker, 1933); *Amplelicia bicarinata* Goede and Heard, 1983; and the shrimp *Leptocheira papulata* Chace, 1976. These taxa are typically sand-dwelling species and support the observation *E. lyonsi* is common on sand bottoms.

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