

more caudal fusion than a riffle dwelling darter, such as *E. collettei*, which would move about more. This seems to be true, as *E. proeliare* exhibited almost 15 percent more variation in its caudal skeleton than did *E. collettei*.

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SOUTHWESTERN RANGE EXTENSION AND UNUSUAL HABITAT FOR THE MAYFLY NYMPH, *HEPTAGENIA FLAVESCENS* (WALSH) (EPHEMEROPTERA: HEPTAGENIIDAE).—Sixteen nymphs of *Heptagenia flavescens* (Walsh) were collected from Black Hollow Reservoir in northern Colorado on 25 September 1976. This reservoir (104°52'30" W, 40°36'30" N) is located 14.5 km east of Fort Collins, Colorado, 1.6 km north of State Highway 14. This collection extends the known western limits of the species' range; it having been recorded previously from southeastern and Central United States as well as from Central Canada based upon geographic subdivisions of Edmunds et al. (Univ. Minn. Press, Minneapolis, 330p., 1976). The previous westerly records were reports from Kansas and Texas (Needham et al., Comstock Ithaca, 759p., 1935).

The water level in the reservoir was approximately 3 m below yearly mean level, consequently creating a shoreline of 12 m of unvegetated, silty beach. The water temperature was 16 C, dissolved oxygen 7.8 mg/l, and pH 8.4. All specimens were collected at the south end of the lake on driftwood in association with damselfly nymphs, midge larvae, beetles, and amphipods. The mayfly nymphs were clinging to the submerged surface of the driftwood which was covered with diatoms. The silty substrate of the reservoir contained only a few chironomids.

Nymphs of *Heptagenia* spp. generally occur beneath stones and among debris

in medium to small rivers or creeks with moderate rapid to swift currents (Edmunds et al., Univ. Minn. Press, Minneapolis, 330p., 1976; Burks, Ill. Nat. History Surv. Bull. 26:1-216, 1953). Later instars often occur under stones at the edge of quiet pools. Nymphs of this genus may occur also at the margins of lakes where wave action exists along rocky shores in debris to which they attach themselves (Edmunds et al., Univ. Minn. Press, Minneapolis, 330p., 1976). In Wisconsin, *H. flavescens* habitat is listed as medium to large streams choosing a substrate of rocks and debris in deep water (Flowers and Hilsenhoff, Great Lakes Entomol. 8:201-218, 1975). As Black Hollow Reservoir has a silty bottom, it is doubtful that *H. flavescens* would be a normal inhabitant.

H. flavescens presence in the reservoir may originate from its occurrence in a channel connecting Black Hollow Reservoir with a small unnamed pond on the south end of the reservoir. Due to the dry conditions in northern Colorado during the summer of 1976, however, the channel did not carry water and on a subsequent collection trip no nymphs of *H. flavescens* were collected from the pond. The more probable source of the nymphs is downstream drift into the reservoir while attached to debris via a channel in which water intermittently flows into the north end of Black Hollow Reservoir. Most of the nymphs collected were late instars as evidenced by their size and probably molted several times during their occupation of the lake habitat.

While the present literature indicates *H. flavescens* normally prefers lotic waters, it is apparent that the species can survive in lentic situations if conditions force it upon them. *H. flavescens* seemingly has a wider distribution than published records indicate. While Flowers and Hilsenhoff (Great Lakes Entomol. 8:201-218, 1975) state that *H. flavescens* is rare in Wisconsin, near the northern limits of its known distribution, it is comparatively abundant in the Central United States (Burks, Ill. Nat. History Surv. Bull. 26:1-216, 1953). It is possible, however, that the species may be widespread in its distribution and more intensive collections in the western states eventually may reveal *H. flavescens* to occur throughout much of the continental United States.—Richard V. Anderson, Department of Zoology and Entomology and Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, Colorado 80523 and William S. Vinikour, Argonne National Laboratory, Division of Environmental Impact Studies, Argonne, Illinois 60439.

OBSERVATIONS OF LEPTODORA KINDTII (FOCKE) (CRUSTACEA: CLADOCERA) AND ASSOCIATED ZOOPLANKTERS IN SOUTHEASTERN KANSAS LAKES—Kring, et al. (Southwest. Nat. 21:254-255, 1976) reported the presence of *Leptodora kindtii* in Toronto and Fall River reservoirs during the 1974 and 1975 summer months. Their report constituted the first published record of this predaceous cladoceran in Kansas (Prophet, Waite, Trans. Kans. Acad. Sci. 77:22-47, 1975), and it represents one of the most southerly collections of this species in North America.

A preliminary study of the distribution and seasonal occurrence of *Leptodora* in Kansas was initiated during March 1977. From March through October, Toronto Lake was visited at intervals of 1-2 weeks, and zooplankton samples were collected within the open basin along and 100-200 m from the dam and examined for the presence of *Leptodora*. Plankton samples were collected with a 30 cm