BLUE COLOR ANOMALY IN AN OKLAHOMA CRAYFISH *(DECAPODA: CAMBARIDAE)*

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Anomalous blue specimens have been reported for five crayfish species in the family Cambaridae Hobbs (1): *Cambarus* (*Jugicambarus*) *monongalensis* (Ortmann) and *C. carolinus* (Erichson), reported by Newcombe (2); *Procambarus* (*Scapulicambarus*) *clarkii* (Girard), reported by Penn (3); *Procambarus* (*Girardiella*) *hagenianus* (Faxon) and *P.* (*Ortmannicus*) *acutus acutus* (Girard), reported by Smiley and Miller (4). Reimer has also found specimens of *Fallicambarus hedgpethi* (Hobbs) from the Houston, Texas, area which exhibit this anomalous color pattern.

On September 1, 1974, 24 crayfish of the species *Orconectes deanae* Reimer and Jester (5) were collected from beneath stones in a drying pool of a small stream 2 mi west of Okemah on Interstate Highway 40, Okfuskee County, Oklahoma. In this collection, one female (20.0 mm cephalothorax length) was blue as previously reported for the other species. Of approximately 50 specimens examined, this is the only blue specimen noted. No blue specimens have been reported from New Mexico populations examined by Reimer and Jester for their description of the species. No blue specimens have been reported previously for any other *Orconectes* species.

The blue specimen and a normal specimen were photographed with Kodachrome 64 color slide film and the blue color in life was compared with the color plates of Maerz and Paul (6). The overall wash of light blue matches their Plate 34, K, 6. Dots and bands of darker blue on the chelae match their Plate 35, L, 12. Other than the eyes, which are the normal black, crayfish appear to have no pigmentation other than blue. Tips of chelae and other nonpigmented areas are between a pale cream color and an off-white. The closest color match to this was Maerz and Paul's (6) Plate 11, A, 1. The blue specimen has been sent to Dr. George Crozier, Dauphin Island Sea Lab, Dauphin Island, Alabama, for analysis. He found that the blue appearance is probably due to a carotenoprotein in which the carotenoid is astaxanthin.

Some blue is normally seen in all specimens of *O. deanae* in the telson and the fingers of the chelae, but the normal body color is from olive to light brown, with black maculations on the chelae and reddish-orange areas at the tips of the chelae and at leg joints.

This report brings the known "blue" Cambarids to seven species representing four genera.

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