

sal stripe; at this stage faint humeral stripes appear. Abdominal segments 1-5 and 6-10 are predominantly orange and black respectively; however, aging changes the whole abdominal dorsum to a bluish-gray. A vulvar spine occurs in some females; however, it is always quite small if present. Males are distinct in the field with their slender, yellow-orange abdomen. Lentic habits with emergent vegetation are characteristic.

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Hesperagrion Calvert, 1902

Hesperagrion heterodoxum.—Abdominal appendages and mesostigmal plates in the male and female respectively identify this species; however, color and stripe patterns are exceptionally variable. Calvert (1901-1908) assumed the differences represented aging effects and described several stages from teneral to mature adults. I cultured numerous larvae through metamorphosis and observed color patterns in breeding adults in southwestern New Mexico providing additional evidence. All males shortly after emergence are brownish-yellow other than a dark middorsal thoracic stripe and a dark longitudinal line on the dorsum of abdominal segments 4-7. At maturity the yellowish areas of the abdomen turn to orange-red on segments 8, 9 and 10; segments 1, 2 and 3 are orange or greenish-yellow. The dorsum of the head is black excepting large red postocular spots, the face is pale tan excepting a black transverse band on the postclypeus, the prothorax is dorsally black and the dorsum of the pterothorax is black laterally to at least the humeral suture, and the pale antehumeral areas exist as two isolated spots (rarely connected). Pale areas of the pterothorax are blue or cream in color. The femur and tibia develop black stripes laterally. Females at emergence occur in one of two patterns. Most females are brownish-yellow without any dark stripe pattern. Suture lines are somewhat darker, especially on the head; the postocular region is frequently dark brown but without definite postocular spots. Other females at emergence possess the color and stripe pattern described above for teneral males. Calvert's description of the variation is not clear relative to the condition he associated with maturity for females; however, two female types exist at maturity in *H. heterodoxum* as with many *Ischnura* species.

At maturity, heteromorphic females remain brownish-yellow without any dark pattern (excepting actual suture lines). The color becomes fully brown or tan and loses all yellow attributes. Such females mate, oviposit, and judging from the condition of wings and exocuticle, they reach ad-