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Sexual dichromatism in a Mexican checkered beetle (Coleoptera: Cleridae: Neorthopleurinae)

JACQUES RIFKIND

Research Associate, California State Collection of Arthropods, 3294 Meadowview Road, Sacramento, CA 95832, U. S. A.

E-mail: clerid@aol.com

This paper describes sexual dichromatism in the Mexican checkered beetle *Nelsonoplium jeanae* Barr, an unusual case for the Cleridae. Although sexual dimorphism is common in Cleridae, it is primarily expressed in morphological differences such as antennal composition, relative body size, shape of the hind legs, and the structure of the terminalia. Polychromatism is often encountered in clerids, with different color phena sometimes occurring within the same population. For example, *Colyphus signaticollis* Spinola presents in various concolorous, banded and striped elytral forms (Egis 1977), and I have beaten several distinct morphs of this species (or near) from oak at the same location in Sonora, México. Solervicens (personal communication) has observed non sex-linked dichromatism among species of *Eurymetopum* Blanchard and within *Pelonium* Spinola. Much confusion has been attached historically to the identity of many species of the epiphloeine genus *Ichnea* Castelnau because earlier workers counted primarily on coloration to diagnose taxa. Recognizing the plasticity of elytral color pattern within the genus, and its unreliability for species determination, Opitz (2010) synonymized no fewer than 17 of the 31 previously described species. Solervicens' (1986) study of *Eurymetopum* revealed that certain color morphs occur more frequently within one sex than the other, and he discusses a species within which the typical color pattern is expressed in males and some females while other females have their own distinct coloration, not found among males. Nevertheless, records of consistent sexual dichromatism in clerids are rare. Gerstmeier (2013) reports and illustrates a pair of an Indonesian *Tenerus* sp. where the male and female are so different in habitus and coloration from one another that they could easily have been mistaken for separate species had they not been collected in copula. As far as I am aware, the present note represents the first record of a North or Central American clerid exhibiting a similar dichromatism.

Taxonomic history

Nelsonoplium jeanae was described by Barr (2006) from four female specimens, all collected in the state of Guerrero, México. These have the body unicolorous yellow–brown, and the pronotum bearing a narrow elongate black marking at middle. Subsequently, Fred Skillman, Jr. sent me specimens of *N. jeanae*, including the first known males, that he and John Hildebrandt collected in Colima, México. The males are surprisingly different in aspect: the occiput and the elytral ground color are piceous, the elytra decorated with yellow–brown post–median and apical banding connected at the lateral margins. Had they not been directly associated with the females I would have doubted their conspecificity. I made these specimens available to Weston Opitz who is in the midst of revising *Nelsonoplium*; he will be providing a formal description of the male and a key to the members of the genus. He has generously allowed me to publish these notes in advance of his paper. Figure 1 shows the habitus of a female of *N. jeanae* with collection data as follows: México, Colima, MEX 120, 18 km W of Tepalcatepec, 13–VII–2006, Skillman & Hildebrandt, slash pile, acacia, weeds. Figure 2 shows the habitus of a male of the same species collected concurrently with the female.

Discussion

Sexual dimorphism is known for many species of organisms throughout the animal kingdom (Slatkin 1983; Shine 1989). In beetles, sexual selection is the most obvious mechanism for the evolution of species specific and often elaborate differences in the shape of the terminalia—differences which reinforce prezygotic reproductive isolation. Similarly,