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***Enoclerus knabi* (Wolcott), a junior synonym of *Enoclerus ichneumoneus* (Fabricius) (Coleoptera: Cleridae)**

John Leavengood, Jr.  
*Florida State Collection of Arthropods*

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**Abstract.** *Enoclerus knabi* (Wolcott) falls within the range of variation of *E. ichneumoneus* (Fabricius) and is hereby synonymized under that species.

## Introduction

Sympatric congeners of the Cleridae, or checkered beetles, are often reasonably easy to distinguish from each other. One such exception involves the Floridian congeners *Enoclerus ichneumoneus* (Fabricius) and *E. knabi* (Wolcott). Problems in distinguishing *E. ichneumoneus* from *E. knabi* are addressed and a brief history of the literature of both species is reviewed.

## Discussion

In 1910, Wolcott described *Clerus ichneumoneus* var. *knabi* with the following diagnostic characters: “the markings and color also similar [to the “normal form”], but with the apical fourth of elytra pale reddish testaceous, each elytron with a rather large, anteapical, black maculation”. Thirty-seven years later, Wolcott (1947: 79) had not changed its taxonomic rank, still listing it as *Enoclerus ichneumoneus* var. *knabi*.

Later, Barr (1950: 62) assigned species rank to Wolcott’s varietal name. Barr claimed that the “thoracic sternites of *knabi* are uniformly reddish and the integument of the elytra has a reddish subapical fascia whereas the thoracic sternites of *ichneumoneus* are blackish and the integument of the apical third of the elytra is entirely black”. Barr also observed that specimens of *E. knabi* (based on the aforementioned descriptive notes) were reported from Florida and that *E. ichneumoneus* was widely distributed throughout the eastern United States and southeastern Canada.

Intraspecific variation is abundant in the Cleridae. For example, Wolcott (1909: 95; 1921: 278) observed considerable color variation in *Cymatodera bicolor* (Say). Specimens of *C. bicolor* that expressed variations disagree with the typical color forms from more northeastern localities. King and Fox (1970: 133) observed that specimens of *Enoclerus nigripes* (Say) underwent a temporal change in abdominal color. Over their 2 year study, only 4 specimens of 41 with red abdomens developed a black abdomen over time, indicating a potential temporal dimorphism with regard to abdominal color for some specimens. However, temporal change of abdominal color was not consistently monitored during their study. It seems that a particular female oviposited both when she had a red abdomen and when she had a black abdomen. Therefore, change in abdominal color cannot be attributed to sexual maturity.

More than 400 specimens (more than half from Florida) of *E. ichneumoneus* and *E. knabi* collected throughout eastern North America were examined, plus the holotype of *E. knabi*. Specimens exhibited a considerable range of color variation particularly with regard to the thoracic sternites, which varied from entirely red (only in Florida) to entirely black; extremes of which were listed by Wolcott (1910) and Barr (1950) as distinguishing characters to separate the 2 species. Further, there were specimens which had partially black thoracic sternites while others had partially red thoracic sternites. When both colors were present, black would most often be present just posterior to the middle of the metathorax in the form of 2 dark patches anterior to the metacoxae and on the prosternum, which was either entirely black or with a central spot of variable size and shape. Occasionally, the dark region of the metasternum covered all but the posterior margins.

The diagnostic character cited by Wolcott (1910: 321), the red integumental color of the apical fourth of the elytra, also exhibits variation. In specimens with entirely black thoracic sternites (*E. ichneumoneus*

according to literature), the color of the elytral integument ranges from black to varying degrees of reddish when viewed at the elytral margins and the central regions where the black and pale fasciae occur. Specimens with entirely red thoracic sternites also show red at the elytral apical fourth. This combination of characteristics, which diagnoses *E. knabi*, is observed in those few specimens that are more brightly reddish on all regions of the integument that are red.

The holotype [label data: Marion Co., Fla., F. Knab collector] of *E. knabi* has a reddish coloration to the integument at elytral apical fourth. However, the thoracic sternites are red and black, with the metasternum divided rather transversely into red and black regions. Thus, the holotype is not consistent with Barr's (1950) diagnosis. Wolcott (1910: 321) described *E. knabi* from a single specimen and noted that he had "examined not less than four hundred specimens of *ichneumoneus* without finding another individual either identical with, or intermediate between" the 2 species. I suspect that Wolcott examined few specimens from the extremes of the southeastern United States.

Although some specimens of each species can be clearly diagnosed with existing literature, most specimens exhibit intermediate character states of either one or both characters. As such, I consider the existence of intermediate color form evidence of conspecificity with *E. ichneumoneus*.

Thus, *Enoclerus ichneumoneus* and *E. knabi* are synonymized (**new synonymy**) with the observed differences considered to be intraspecific variation and possibly latitudinal and/or temporal variation.

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