



A revision of the *Chrysobothris femorata* (Olivier, 1790) species group from North America, north of Mexico (Coleoptera: Buprestidae)

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Abstract

The *Chrysobothris femorata* (Olivier, 1790) species group is currently comprised of five species from North American localities north of Mexico. One previously described and synonymized species, *C. quadriimpressa* Gory & Laporte, 1837 is resurrected. In addition, neotypes are designated for *C. femorata*, *C. rugosiceps* Melsheimer, 1845 and *C. viridiceps* Melsheimer, 1845 as the type specimen for each of these species is lost. A key is included to facilitate identification of the 12 species, 11 of which have deciduous trees as hosts and one species from woody goldenrod, *Chrysoma pauciflosculosa* (Michx.). Six new species of *Chrysobothris* are described herein: *C. mescalero*, *C. seminole*, *C. wintu*, *C. comanche*, *C. caddo*, and *C. shawnee*. The new species are each fully described and the elytra, male genitalia, and female pygidium (8th abdominal tergite) of all species are illustrated.

Key words: Coleoptera, Buprestidae, *Chrysobothris*, *Chrysobothris femorata* species group, taxonomy, new species

Introduction

The *Chrysobothris femorata* (Olivier, 1790) species group includes those species with males having a row of small teeth on the inner margin of the protibia and females with the pygidium (8th abdominal tergite) longitudinally carinate. Prior to this paper, five species were recognized in the *C. femorata* species group. *C. femorata* (known as “the flatheaded appletree borer”) was described in 1790, and the type specimen is lost; therefore, a neotype for *C. femorata* is designated herein. The types of *C. rugosiceps* and *C. viridiceps*, both described by Melsheimer (1845) also could not be located in the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts and neotypes for each species are also designated. The type of *C. adelpha* Harold (1869) [replacement name for *C. soror* LeConte, 1860] is deposited in the MCZC. The type of the fifth species, *C. sloicola* Manley & Wellso (1975), is deposited in the USNM.

Although *C. femorata* is economically important and biological information is known, very little information is available about the other species in this species group, except for their distribution, abundance, and hosts. Most species in this species group are considered to be secondary attackers of trees that have been stressed by age, fire, and water (lack thereof, excess or both) and are often collected on recently cut or injured plants. Some techniques useful when collecting these beetles are: beating, sweeping with a net, placing a clear 5" long plastic or glass tube slowly over an adult resting on the bark of a tree, and a method used by Ed Riley, Texas A&M University, who places ethylene glycol in a fluorescent yellow cup near cut trees. Beetles were attracted to the yellow cup, enter and drown.

Anatomical variation in antennal shape and color, pronotal and elytral sculpture, and shape of the male genitalia and female pygidium are useful in the identification of these species. The color of the clypeus, anten-