

## FAMILY: Coleophoridae SUBFAMILY: Coleophorinae TRIBE:

TAXONOMIC\_COMMENTS: The genus <i>Coleophora</i> is one of the most taxonomically challenging groups in North America. With only a few exceptions, most species cannot be identified based on photographs or external characters. The shape of the larval cases and host plants are very useful in identifying species, and high-quality dissections of genitalia are essential to recognize the majority of species. There are numerous species complexes with many undescribed species, and the taxonomy of Nearctic species remains largely unresolved.

FIELD GUIDE DESCRIPTIONS: ONLINE PHOTOS: TECHNICAL DESCRIPTION, ADULTS: TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following is from a detailed description by Landry (2005). The head is white, except for the frons and vertex that are pale buff. The labial palp is also white, except for a pale brown streak that is present on the inner and outer sides of the second article, and on the ventral side of the third article. The second article is very short and lacks a ventral apical tuft, while the third article is acuminately tapered and about two-thirds the length of the second. The scape is white above and the flagellum entirely white in the female. In males the flagellum has pale buff or very pale brown annulations on the proximal one-third to one-half of the antenna. The dorsum of the thorax is pale buff in the male, but white in the female. The ground color of the upper surface of the forewing is white, with several ochreous-brown, narrow streaks highlighting the intervenal areas. The white areas in the cell and behind the cell have very scattered dark brown scales, with peppering of varying extent on different specimens. The extreme costal margin edge is dark brown in the proximal half. The upper surface of the hindwing is pale grayish brown and the fringes buff gray. The underside of the forewing is grayish brown, and the basal half is darker In the male. The underside of the body is creamy white. The legs are creamy white, and the femurs and tibiae have a pale brown longitudinal streak on the outer side that is darker in the female. The abdomen is creamy white or yellowish white and abdominal tergum I lacks posterior struts. The transverse strut is straight and lightly sclerotized in the middle. The spine patches are elongate, 2-3x as long as wide, with 25-35 spines. Landry (2005) noted that the external appearance of adults of <i>C. xyridella</i> is nearly identical to that of <i>C. eratipennella</i>. The only consistent difference is the very sparse peppering of dark brown scales on the white discal areas of the forewing of <i>C. xyridella</i> specimens. Specimens of <i>C. eratipennella</i> show no trace of such dark peppering. Females of <i>C. xyridella</i> can be recognized by the protruding, heavily sclerotized, blade-like ovipositor, which is exposed in undissected specimens. This feature is not found in any other Nearctic <i>Coleophora</i>. Another species with a similar forewing pattern is <i>C. laurentella</i>, but it also lacks the dark peppering found in <i>C. xyridella</i>. The labial palps also differ in terms of the relative proportions of the articles.

DISTRIBUTION: In North Carolina, the species is apparently restricted to the Coastal Plain in areas where the host plants (<i>Xyris spp.</i>) are present. <i>Coleophora xyridella</i> has been documented both in the Sandhills and on in coastal counties as of 2025. The species was previously only known from Florida and the Gulf Coast, so the North Carolina records may represent a disjunct population. This species has also recently been found in coastal areas of Connecticut.

FLIGHT COMMENT: The adults have been collected from early April through mid-September, with the earliest records in April and May from central Florida. The larvae and their cases can be seen year-round in North Carolina.

HABITAT: The larvae apparently feed on Yellow-eyed Grasses, which are commonly found in Coastal Plain habitats that vary from wet to drier sites. Many of our native species are found at wet sites such as ditches and wet savannas, or along the margins of canals, impoundments and natural ponds.

FOOD: Landry (2005) and many others found cases attached to the fruiting heads of a Yellow-eyed Grass (<i>Xyris</i>sp.). This is the only <i>Coleophora</i>that is known to feed on <math><i>Xyris</i>.

OBSERVATION\_METHODS:

NATURAL HERITAGE PROGRAM RANKS: GNR SNR [S2?]

## STATE PROTECTION:

COMMENTS: We have recent records from the Sandhills and the coast that appear to be northern disjuncts from this otherwise southern coastal species. Additional data are needed on the distribution and abundance of this species in North Carolina before we can assess its conservation status.