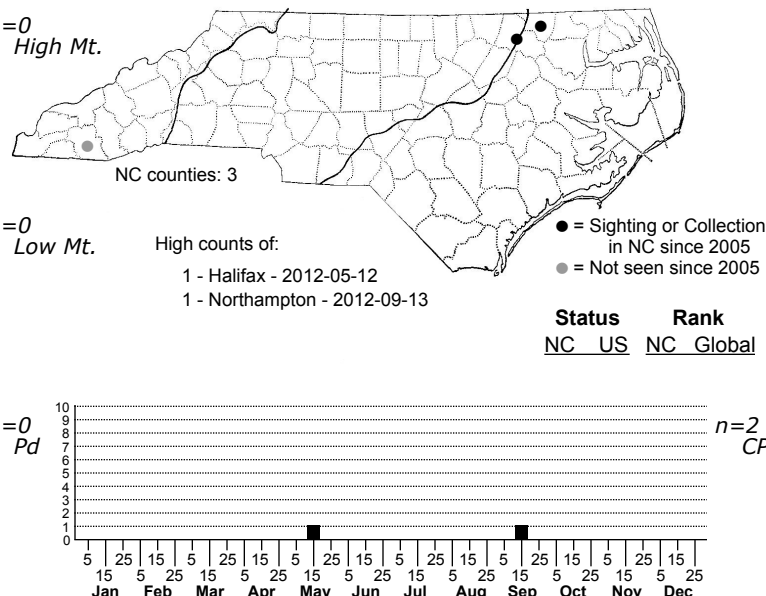


## *Eusarca packardaria* Packard's Eusarca



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Ourapterygini

TAXONOMIC\_COMMENTS: One of sixteen species in this genus that occur in North America north of Mexico (Pohl et al., 2016), three of which have been recorded in North Carolina

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: McDunnough (1940)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: A medium-sized, light brown Geometrid, with falcate forewings and rounded or slightly scalloped hindwings. McDunnough (1940) characterizes the ground color as pale yellow-ochraceous, with the basal 2/3 shaded with fawn and the terminal area shaded with deep fawn. The antemedian and postmedian lines are both brown and strongly bent; the antemedian runs obliquely out from the costa and then makes an acute bend at the cubitus vein; the postmedian makes a similar sharp bend just below the apex and then runs fairly straight at an oblique angle down to the inner margin. The subterminal area has some smoky shading and there is also a triangular brown shade projecting obliquely downward from the middle of the costa. Small, black discal dots are present on each wing. Hindwings are similar in color to the forewings and possess a postmedian line that looks like an extension from the line on the forewing. *Eusarca confusaria* is similar but possesses a more rounded rather than bent antemedian and the hindwings are usually angled rather than rounded or scalloped. *Eusarca fundaria* is typically more strongly bicolored lemon yellow and chocolate brown and also has a rounded antemedian, usually with teeth on veins C1 and C2.

DISTRIBUTION: Recorded at one site in the southern Mountains and in two areas along the lower Roanoke River floodplain in the Coastal Plain

FLIGHT COMMENT: Collected in May and September in North Carolina, suggesting that there are two separate flights

HABITAT: The two Coastal Plain records come from rich bluff and levee forests along the lower Roanoke River. A couple of records shown on BugGuide from Oklahoma (Mark Dreiling, photographer) also come from a forested floodplain, in both cases near a pond.

FOOD: Host plants are apparently unknown. *Eusarca confusaria* feeds on various composites and *E. fundaria* feeds on *Baccharis*, which is also in the Asteraceae.

OBSERVATION\_METHODS: Our records all come from blacklights.

NATURAL HERITAGE PROGRAM RANKS: GNR SU [S1S3]

STATE PROTECTION: Has no legal protection, although permits are required to collect it on state parks and other public lands.

COMMENTS: This species was originally described from Texas and Oklahoma and most records still come from west of the Appalachians. The discovery of this species first in Macon County and then in Halifax and Northampton Counties in the Coastal Plain were complete surprises. In the case of the Coastal Plain records, the individuals were collected at two widely separated sites and in both the spring and fall, suggesting that they are not simply strays but instead represent resident populations. The Roanoke valley is supports a number of rare species -- particularly plants -- whose main range is west of the Mountains; the headwaters of this river are in fact, located west of the Blue Ridge in the Ridge and Valley Province (see Legrand and Hall, 2014). Whether *Eusarca packardaria* is associated with one of these western plants or has simply followed the same dispersal corridor down to the Coastal Plain is unknown. Much more information is needed on the range of this species in the state, its abundance, its host plants, and habitat associations before its conservation status within the state can be accurately determined.