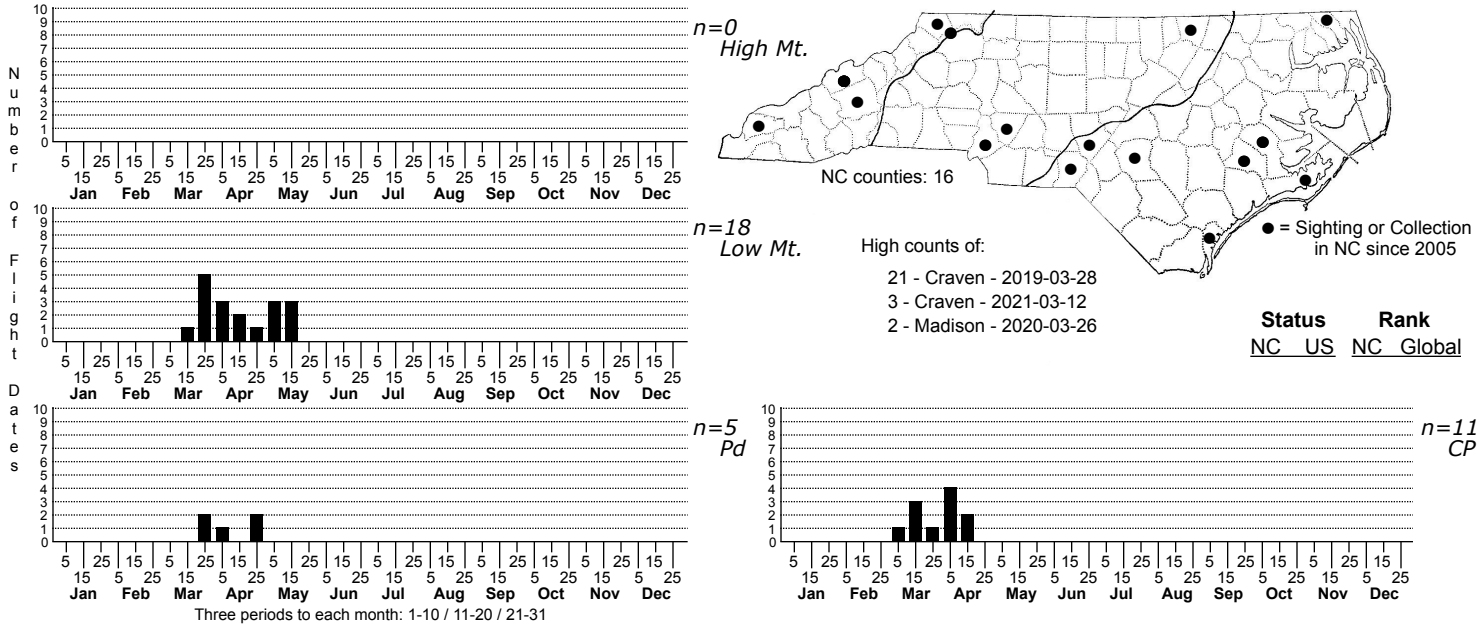
Zale intenta Intent Zale



FAMILY: Erebidae SUBFAMILY: Erebinae TRIBE: Ophiusini
TAXONOMIC_COMMENTS: One of 39 species in this genus that occur north of Mexico, 23 of which have been recorded in North Carolina. Zale intenta was recently separated from Z. lunifera, a close sibling species, by Schmidt (2010).

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Schmidt (2010)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner et al. (2011)

ID COMMENTS: Zale intenta and lunifera are most clearly distinguished using DNA analysis (including DNA bar-coding). Other characters that Schmidt used to distinguish the two species are variable, including size, degree of elongation of the wing, prominence of the orbicular, intensity of striation on the forewing, and degree of sinuousity of the antemedian. Genitalic differences -- the last resort for identifying other Zales -- are only slight, especially in the males. Several of these characters, moreover, appear to be more clearly distinct in the Northeast; in North Carolina, specimens that have been bar-coded as intenta appear to be smaller than those bar-coded as lunifera (the opposite of what Schmidt found), with the other characters also not consistently different. In the Northeast, intenta is widespread and believed to feed primarily on Cherry, whereas lunifera is confined to sandy pine barrens where it feeds on Scrub Oak (Q. ilicifolia). Those patterns have not, however, been clearly established in the Southeast, including North Carolina. Virtually all of our older records were assigned to lunifera and will take an effort to go back through existing specimens to re-determine their identities. In the meantime, we assume that the majority of records actually refer to intenta, presumably the more common, widespread species. We restrict records for lunifera primarily to specimens that have been confirmed by bar-coding.

DISTRIBUTION: Intenta is likely to have a statewide distribution but the situation is currently unclear due to past confusion with lunifera

FLIGHT COMMENT: Probably univoltine with adults flying two-three weeks earlier than lunifera (Wagner et al., 2011)

HABITAT: In the Northeast, Zale lunifera is believed to be highly confined to sandy barrens located close to the coast, where they are associated with populations of Scrub Oak (Quercus ilicifolia); all other records are assumed to represent Z. intenta. In North Carolina, however, several species that feed on Scrub Oak up north feed on other xeric oaks, including Turkey Oak (Q. laevis) and Blackjack Oak (Q. marilandica). Those that feed on Blackjack Oak in particular often occur outside the Coastal Plain, including well up into the Mountains (e.g., Hemileuca maia, Hyparpax aurora, and Morrisonia mucens). It seems unsafe to simply assume, therefore, that the same pattern observed for Z. lunifera in the Northeast will hold in the Southeast. Conversely, since Black Cherry can occur in even some of the driest habitats in the state, it is also not safe to assume that all records for this complex coming from xeric sandhills represent Z. lunifera. Waiting to see how bar-coded specimens sort out by habitat appears to be the best course.

FOOD: Wagner et al. (2011) reported that cherry (Prunus spp.) - especially Black Cherry (P. serotina) and plums - are the main host plants, although at least one adult has been reared by Dale Schweitzer from a larva found on Willow Oak (Q. phellos). In North Carolina, J.B. Sullivan also had rearing records from Bluejack Oak (Q. incana) and blueberry (Vaccinium sp.). More research is needed to determine if oaks (rather than cherry and plum) are the preferred hosts in our state.

OBSERVATION_METHODS: Appears to come moderately well to blacklights, with large numbers of individuals occasionally being collected in single traps. Like other Zale species, it probably also comes well to bait.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S3S4]

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

COMMENTS: Probably is a secure species in North Carolina but more information is needed on its distribution and habitat associations before its conservation needs can be estimated.