"A Moth" (No common name)
Agnorisma bollii

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DESCRIPTION

Taxonomy and Basic Description

Moths of the Family Noctuidae consititute the largest family in the insect order Lepidoptera. Subfamily Noctuinae has long been recognized, but there has been argument since at least the 1960s as to its exact composition. The author follows the method of Lafontaine (1998), dividing the subphylum into two tribes, the Agrotini and the Noctuini. All of the Noctuinae share a common wing vein pattern: an easily observed absence of one of the four possible cubitus veins in each of the hindwings.

The moth pictured above has been variously placed within three closely related genera of tribe Noctuini. The earliest description was by Grote in 1880, in which the name *Agrotis hilaris* was proposed. Shortly thereafter (in 1881) Grote moved the species to a different genus and published the name *Xestia bollii*. This stood until 1998 when Lafontaine created the separate genus *Agnorisma* to house three very similar species, *bugrai*, *badinodis*, and *bollii.* These three species are most easily distinguished from close relatives by the presence of a dark-brown collar on the anterior margin of the thorax and by the absence of a jagged or toothed appearance of the postmedial line of the forewing.

Agnorisma bollii, with a forewing length of between 14 and 16 mm (0.55 to 0.65 in.), can be distinguished from the other two species of the genus by the presence of a scattering of white scales over the otherwise brown forewings and on the dorsal thorax and head (Lafontaine 1998). This gives the wings and body a slightly grayish cast over the medium brown background. There is remarkably little size, color, or wing-pattern variation among specimens of the same sex. Males can be rather easily distinguished from females by their antennae: males (shown in the photo above) are bipectinate (having two margins toothed like a comb), and females are biserrate (having double saw-teeth).

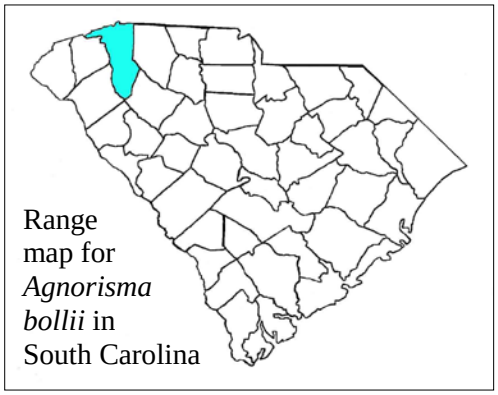
Status

Within South Carolina, *A. bollii* has been collected from only one location in Greenville County. It has no official status but is range restricted.

POPULATION SIZE AND DISTRIBUTION

This moth is apparently rare throughout its range. Lafontaine (1998) reports its occurrence only in several states west of the Appalachian range and in the Chesapeake Bay region of Maryland. The online database of noctuids in the National Museum of Natural History reports specimens from only the following states: Maryland, Ohio, Kentucky, Arkansas and Kansas.

The Furman University Zoological Collection houses four specimens of *A. bollii* that were collected in South Carolina in 1999 and 2000, far from the above-mentioned regions. All of these were collected at a blacklight trap in Greenville County in a suburban residential location within 300 m (328 yds.) of the southwestern base of Paris Mountain (coordinates: N 34°56.107′ W 82°25.589′, NAD27 CONUS). The species has also recently been found in the northern tier of Georgia counties (J. Adams, personal communication). The Greenville and Georgia specimens were collected in October and November, a hallmark of this apparently univoltine species.



Range map for *Agnorisma bollii* in South Carolina

A thorough search of appropriate university and private collections of the Southeast failed to uncover any other specimens collected in South Carolina or in the two neighboring states of Georgia and North Carolina. The size of the Greenville County population has not been determined. It is not known whether the South Carolina population is a recent arrival or a remnant of a once-widespread population. The Clemson University Arthropod Collection has many examples of moths collected in the Upstate from 1925 onward, but none of this species; this may indicate that it is just now spreading to the Southeast.

HABITAT AND NATURAL COMMUNITY REQUIREMENTS

Nothing is known of the larval host plant(s) of this species, or indeed, of the larva itself. The known locations for the species in South Carolina and Georgia would seem to indicate that it prefers the Piedmont and Foothills terrains, but its occurrence in the northern and midwestern regions of the United States, often far from mountainous terrain, indicates our lack of knowledge concerning the community requirements of the organism.

CHALLENGES

The obvious challenge in South Carolina is the extreme rarity of the species coupled with our profound ignorance of its habitat requirements both here and throughout its range.

CONSERVATION ACCOMPLISHMENTS

There are no known conservation accomplishments specifically for *A. bollii* at this time.

CONSERVATION RECOMMENDATIONS

- Investigate the habitat requirements, especially the host plant(s) for *A. bollii*.

MEASURES OF SUCCESS

As research and management needs are identified, projects will be initiated to address those needs.

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