

2381 (9449)	Uncertain <i>Hoplodrina alsines</i> (Brahm, 1791)	Common
2382 (9450)	Rustic <i>Hoplodrina blanda</i> ([Denis & Schiffermüller], 1775)	Common
2383 (9451)	Powdered Rustic <i>Hoplodrina superstes</i> (Ochsenheimer, 1816)	Rare Immigrant (Channel Islands, resident)
2384 (9454)	Vine's Rustic <i>Hoplodrina ambigua</i> ([Denis & Schiffermüller], 1775)	Common

Diagnostic external characters

H. alsines and *blanda* have probably caused more confusion than any other species pair in the history of the study of the British Noctuidae. With experience, a proportion can safely be positively identified using characters described by Waring *et al.* (2009) and Skinner (2009), but these are generally comparative and, unavoidably, somewhat subjective. Many individuals will be found to be difficult or impossible to separate, and reference to genitalia is then necessary. *H. ambigua* is less likely to cause problems, but dark examples especially, can closely resemble *blanda*.

The possibility of *superstes* should always be borne in mind, especially at times of high immigration activity. In some respects, *superstes* resembles *ambigua*, but the much longer cilia on the middle section of the antenna of male *ambigua* (as also described in the aforementioned guides) is diagnostic. It may also closely resemble some forms of *alsines* and *blanda*.

Key to diagnostic morphological characters of the males

Determination of *Hoplodrina* using genitalic characters demands a high level of experience and can cause problems even for the specialist. This applies particularly to the eversion and correct presentation of the vesica and its diverticula, and full inflation of the bursa copulatrix. However, *ambigua* shows clear differences, so is unlikely to cause confusion. The majority of *alsines* and *blanda* can, with practice, be safely assigned, but some may still defy determination. *H. superstes* also shows only slight differences (which are not easy to present or interpret). Therefore, moths suspected of not being one of the resident species (e.g. if the circumstances of capture suggest immigration) should be dissected with great care, preferably by someone experienced.

1. Median part of antenna with long, fasciculate cilia, almost equal in length to diameter of shaft.
Everted vesica shows several very large, pointed cornuti in basal half (Fig. 129, A).
Harpe broad and strongly bent (Fig. 125, A).....*ambigua*

– Antennal cilia shorter, half diameter of shaft or less. Harpe narrower, fairly straight or somewhat bent.
Vesica with smaller cornuti in basal half, located in clusters (Figs. 126-128).....2

2. Median part of antenna with short, fasciculate cilia, less than half diameter of shaft in length.
Everted vesica shows broad, rounded first diverticulum (Fig. 128, A).....*superstes*

– Antenna with cilia not fasciculate.....3

3. Everted vesica shows a pronounced, rather elongated basal diverticulum (Fig. 127, A).
Juxta* conical (Fig. 123, A).....*blanda*

– Everted vesica shows small first diverticulum (Fig. 126, A).
Juxta* trumpet-shaped, with broad base and almost parallel sided to apex (Fig. 122, A).....*alsines*

* The shape of the juxta can be hard to discern or misleading if this area is not cleaned correctly during the slide preparation, or if it is not laid completely flat, so this character should be treated with caution.

83

122. *Hoplodrina alsines*

123. *Hoplodrina blanda*

124. *Hoplodrina superstes*

125. *Hoplodrina ambigua*

126. *Hoplodrina alsines* aedeagus

127. *Hoplodrina blanda* aedeagus

128. *Hoplodrina superstes* aedeagus

129. *Hoplodrina ambigua* aedeagus

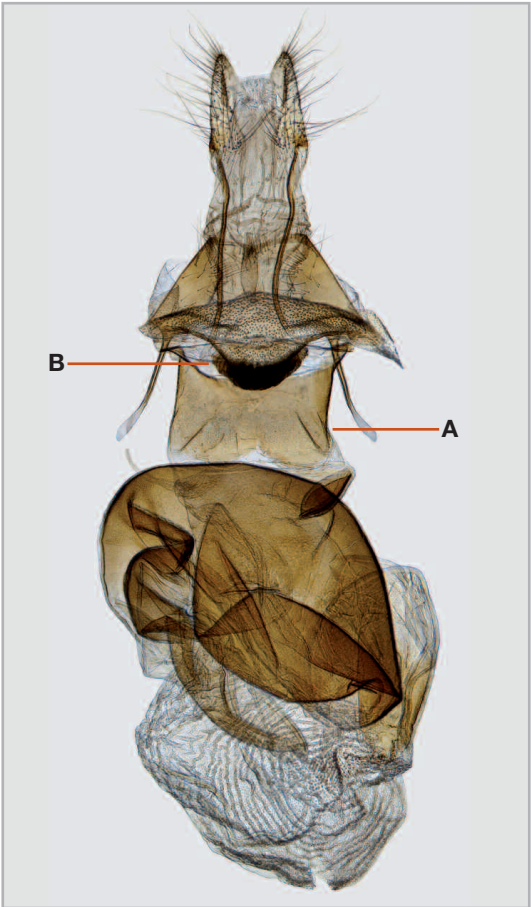
Plate 33. Genitalia of male *Hoplodrina* species, including everted aedeagus.

Key to diagnostic morphological characters of the females

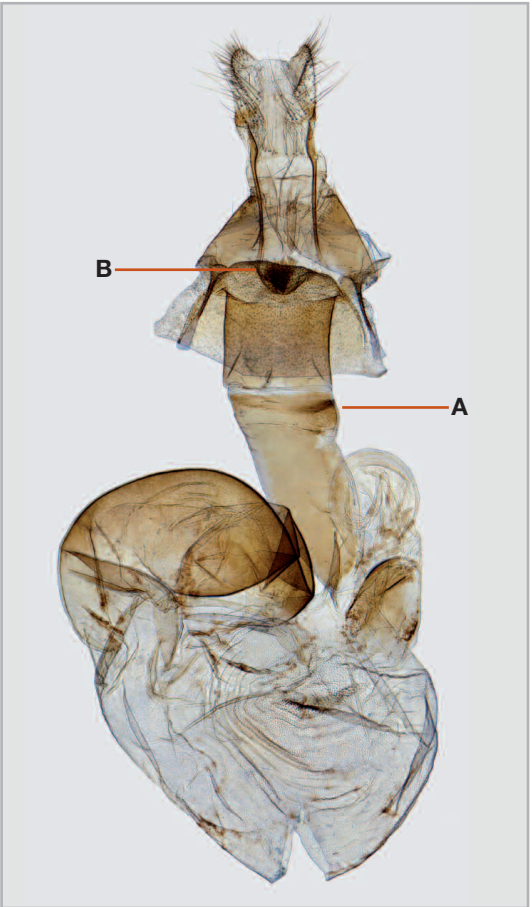
- 1. Corpus bursae divided into two approximately equal lobes, left and right (Fig. 133, A).
Ductus bursae strongly sclerotised (B).....*ambigua*
 - Corpus bursae consisting of a single rounded lobe or with an additional much smaller one.....2
- 2. Corpus bursae with a prominent globular shoulder (Fig. 132, A) (ductus bursae broad and short).....*superstes*
 - Corpus bursae lacking prominent globular shoulder (Figs. 130-131).....3
- 3. Ductus bursae broad and short (Fig. 130, A), ostium broader (B).....*alsines*
 - Ductus bursae narrower and longer (Fig. 131, A), ostium narrower (B).....*blanda*

Other similar species

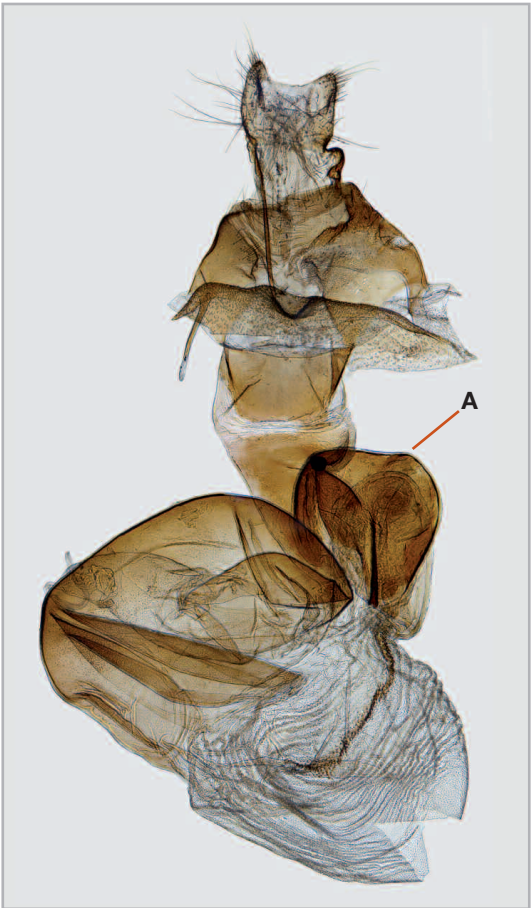
In addition, two further species occur in western Europe, which could conceivably occur as immigrants, namely *respersa* and *hesperica*. *H. respersa* is the most likely since its distribution includes northern France. It is similar to *superstes*, but has a milky-grey forewing. *H. hesperica* is confined as a resident to Spain and the far south of France, and is very difficult to distinguish from *superstes*. Adults and genitalia are illustrated by Fibiger and Hacker (2007).



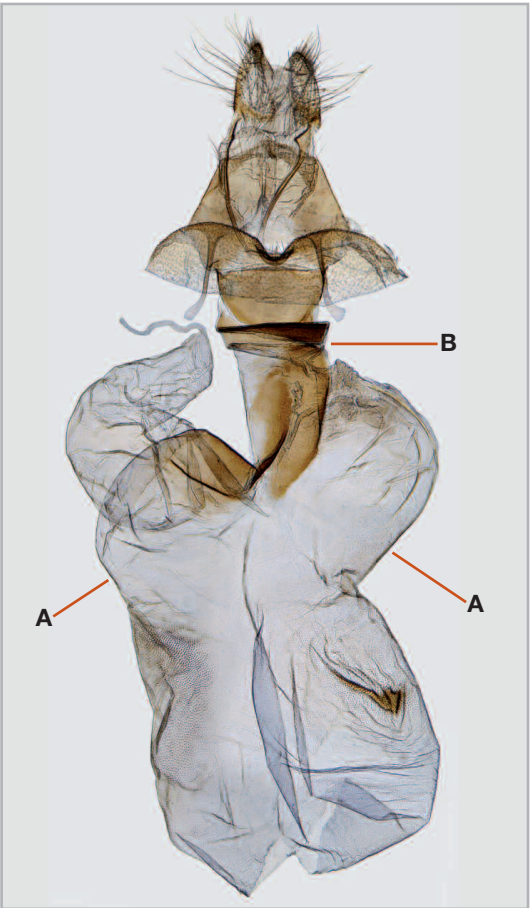
130. *Hoplodrina alsines*



131. *Hoplodrina blanda*



132. *Hoplodrina superstes*



133. *Hoplodrina ambigua*