

# Identification of the flat grain beetles (*Cryptolestes* spp.) of Australia

Three species of flat grain beetles (*Cryptolestes* spp.) occur in stored grain in Australia. Adults are fast moving, small (2mm), flat, with longer antennae than most stored grain pests. *Cryptolestes* species occur in all grain growing regions of Australia. One species, the rusty grain beetle, *Cryptolestes ferrugineus*, has developed a strong resistance to phosphine at a number of sites in eastern Australia. Correct identification of this pest will facilitate appropriate management practices. Following is a guide to the identification of flat grain beetle species in Australia.

To identify flat grain beetles to species, a good quality binocular microscope with at least x 75 magnification is necessary to observe the characters in this guide. The use of fine forceps will aid in the manipulation of the specimens.

To use this guide manipulate the specimens to observe a combination of characters until a species identification is made. Flat grain beetles display sexual dimorphism (males and females look different) and this is presented on page 2. The antennae of male *C. pusillus* and *C. pusilloides* are much longer than the females. Other characters are independent of gender. The diagnostic features of the head and pronotum are presented on page 3 and the elytral (wing covers) characters are presented on the final page. Characters involving hairs are usually better observed if the specimen is dry. The head may need to be protruded to determine if the transverse carina is present or absent.

## Further information:

Stored grain pest identification and management: [www.storedgrain.com](http://www.storedgrain.com)

Stored grain specialist national hotline: 1800 WEEVIL (1800 933 845)

## Identification of flat grain beetles:

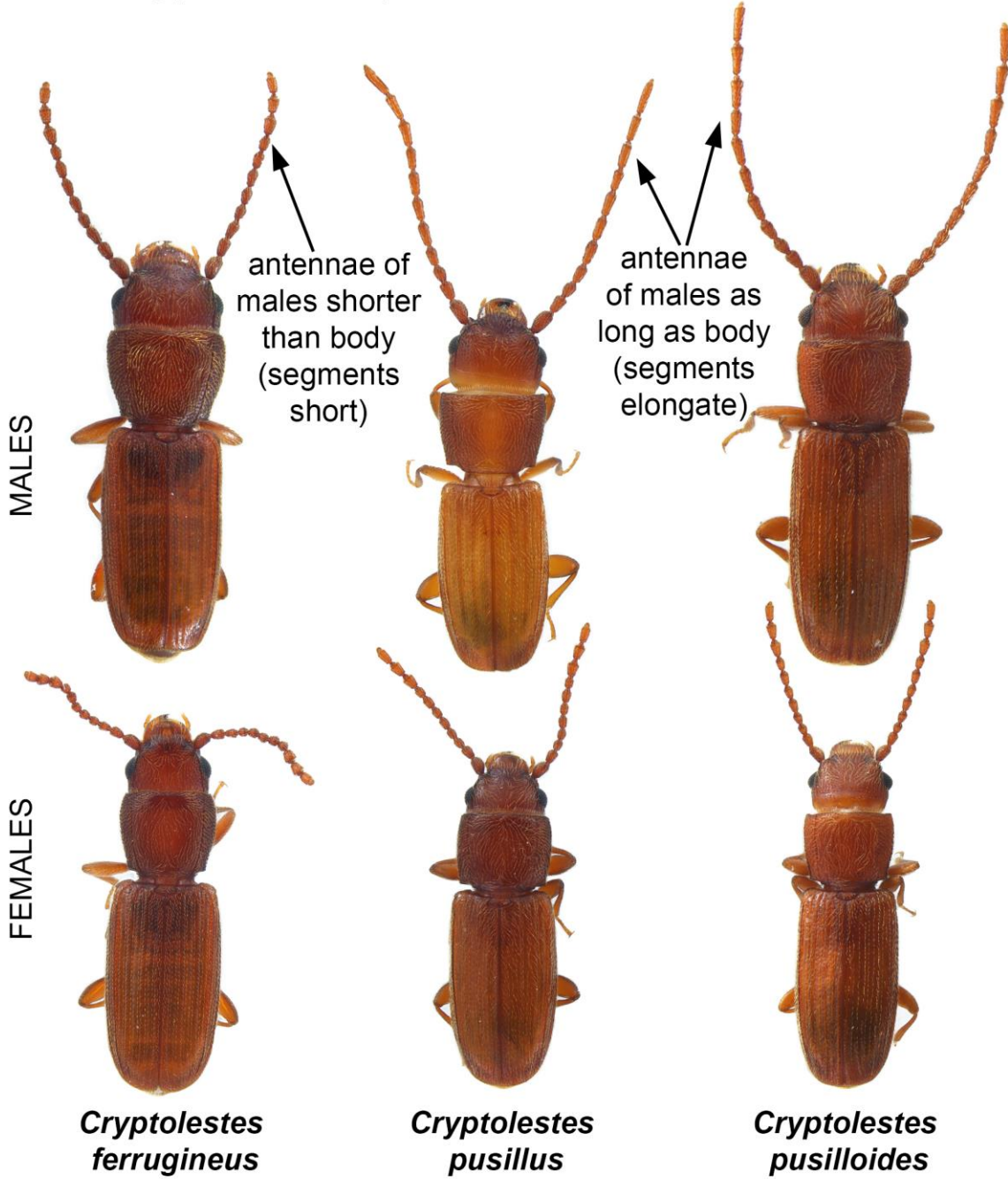
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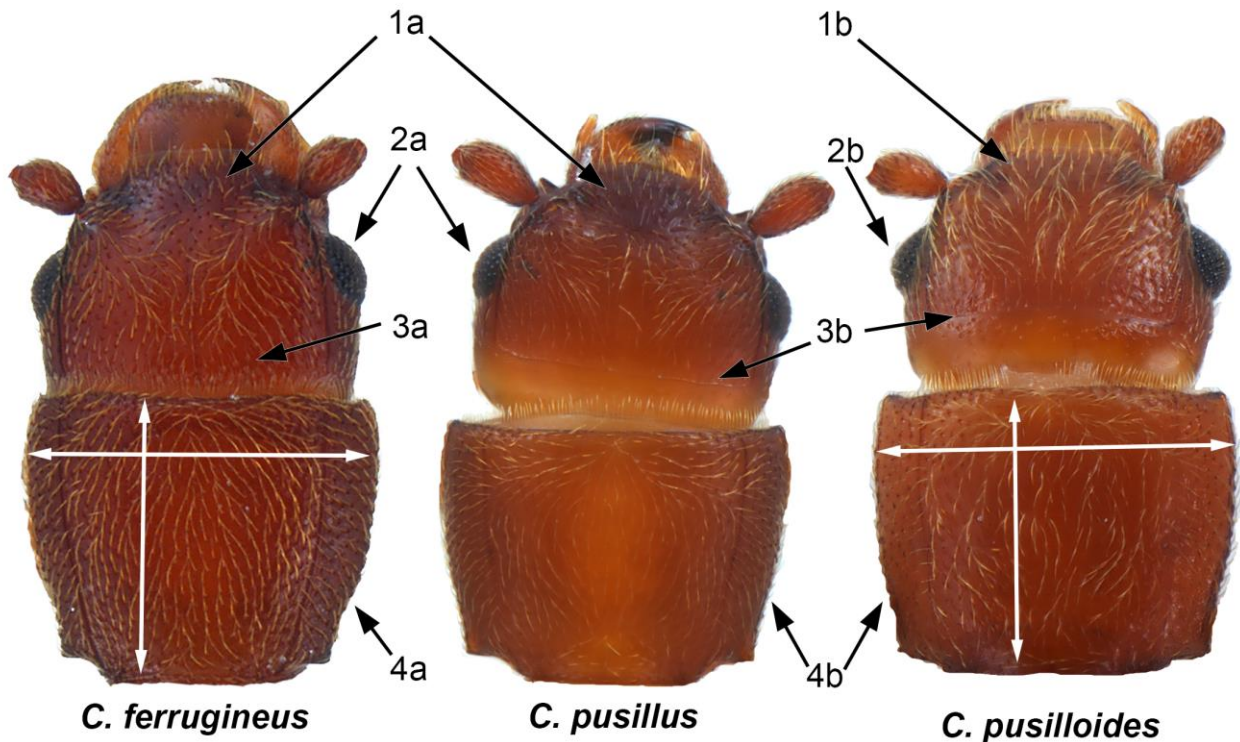
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***Cryptolestes* species males and females**



## Characters of the head and pronotum



1a. Hairs on front of head parted

1b. Hairs on front of head not parted

2a. Eyes very weakly bulging

2b. Eyes more noticeably bulging

3a. Rear of head without a transverse line (carina)

3b. Rear of head with a transverse line

4a. Pronotum about as wide as long and noticeably constricted at base

4b. Pronotum wider than long and less noticeably constricted at base

5a. Mandible of male with a triangular lateral 'tooth' (*C. ferrugineus* only)

