



Acanthoscelides obtectus (Say, 1831) the “bean weevil”



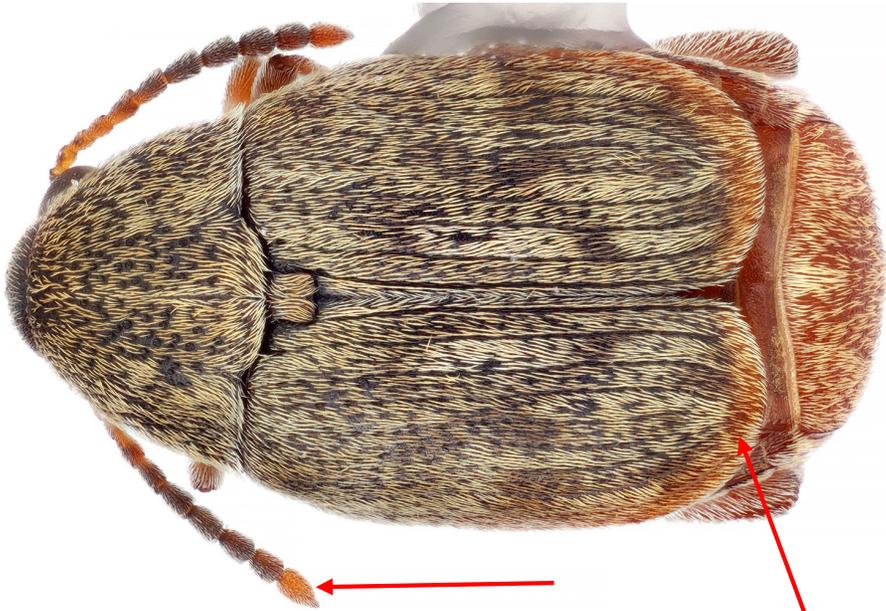
Diagnosis: Standard shape for the group (length 1.45–1.6X width) with considerable variation in size when measured from apex of pronotum to apex of elytra (2.0–3.7 mm). Black to dark brown beetles with lighter vestiture giving an overall brown appearance notably **contrasting with red pygidium and abdomen**. Appendages mostly red, with base and ventral area of metafemur dark brown to black, **and terminal antennomere red contrasting with brown segments 5–10**. Hind legs somewhat slender compared to many similar species, 2.75–3X longer than wide. The pecten is usually composed of a large first spine followed two evenly spaced spines approximately 0.5X as long. The tibia is rather straight and somewhat slender with a **short mucro** that is only slightly longer than lateral coronal denticle. The armature of the internal sac of the somewhat elongate median lobe of the male genitalia lacks any large sclerites, being composed primarily of spines and spicules, with a paired spinescent structure apically. The lateral lobes are somewhat elongate, expanded at their apex, and cleft to about 4/5 their length.

Literature for identification: *A. obtectus* has been reviewed, revised, and figured in numerous modern taxonomic publications in the context of New World *Acanthoscelides* (Johnson 1970; Johnson 1983a; Johnson 1990a; Kingsolver 1968c; Kingsolver 2004; Kingsolver et al. 2014; Kingsolver et al. 2017). Larvae have also been characterized (Pfaffenberger 1985).

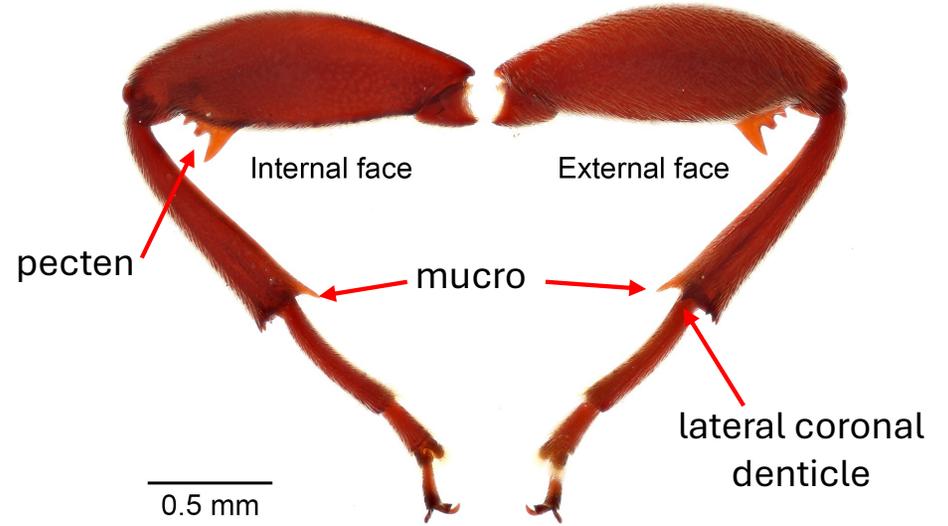
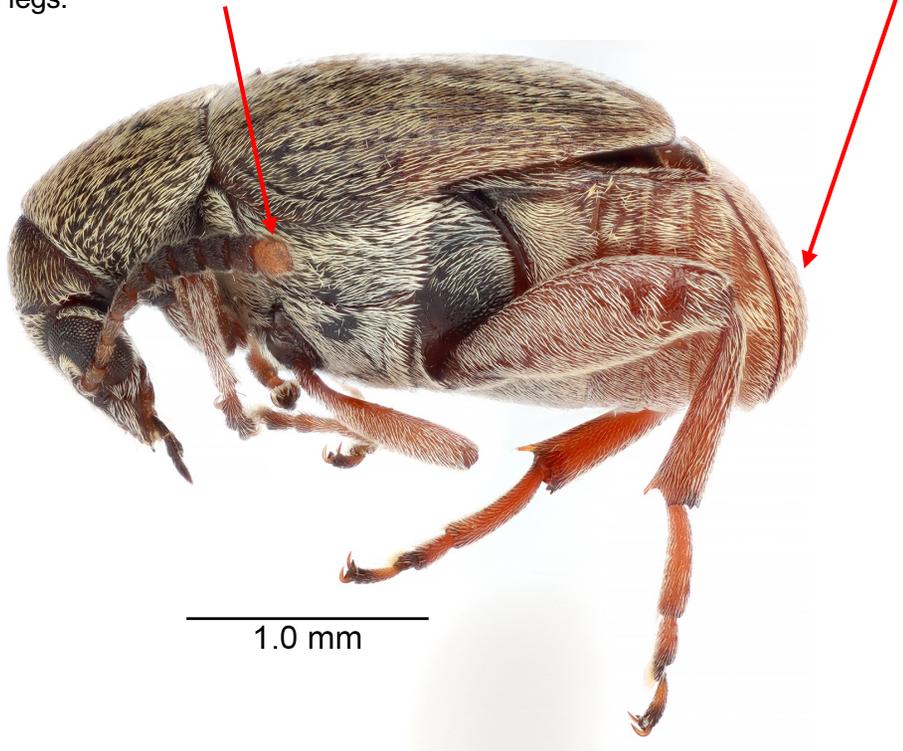
Similar species: *Acanthoscelides obtectus* shares with many other species the short mucro, variegated pubescence, and only modestly expanded metafemur. From most it can be distinguished by its subtle variegation, its large and somewhat quadrate scutellum, and its primarily red legs with dark base and ventral region of the metafemur. It is most similar to members of the *obtectus* group, especially *A. argillaceus* and *A. obvelatus* from which it can be distinguished by its red pygidium and abdomen contrasting with its black or dark brown elytra, thorax, and head; and by its red terminal antennomere contrasting with its brown antennomeres 6-10. *A. argillaceus* is primarily red to reddish brown without contrasting coloration and *A. obvelatus* is primarily dark brown to black without contrasting coloration. The genitalia of *A. obtectus* and *A. obvelatus* are quite similar, with subtle differences in the shape of the ventral valve and the relative distribution of the fine spicules and triangular denticles in the internal sac. In addition to the coloration differences mentioned above, males can be distinguished by the much longer antennae in *A. obvelatus*.

Distribution: Native to Mesoamerica, but now has a near Cosmopolitan distribution due to its association with food legumes.

Host associations: Reared from seeds of legumes (Fabaceae): [Cajanus cajan \(L.\) Huth](#) (Pigeon Pea); [Cicer arietinum L.](#) (Chickpea); [Cochlianthus caracalla \(L.\) Trew](#) (Snail Vine); [Phaseolus acutifolius A.Gray](#) (Runner bean); [Phaseolus coccineus L.](#) (Scarlet Runner Bean); [Phaseolus glabellus Piper](#); [Phaseolus lunatus L.](#) (Lima Bean), [Phaseolus vulgaris L.](#) (Common Bean), [Vicia faba L.](#) (Fava Bean), [Vicia lens \(L.\) Coss. & Germ.](#) (Lentil), [Vicia sativa L.](#) (Common Vetch), [Vigna aconitifolia \(Jacq.\) Maréchal](#) (Moth Bean), [Vigna mungo \(L.\) Hepper](#) (Black Gram), [Vigna subterranea \(L.\) Verdc.](#) (Bambara Groundnut), [Vigna umbellata \(Thunb.\) Ohwi & H. Ohashi](#) (Rice Bean), [Vigna unguiculata \(L.\) Walp.](#) (Cowpeas or Black-eyed Peas).



Note basal 4 antennomeres and terminal antennomere bright orange in contrast with dark brown antennomeres 5-10; orange-red abdominal ventrites that contrast with brown dorsal surfaces; and mostly orange-red legs.



Pecten with three spines, the first one twice as long as the next. Mucro (ventral apical tibial spine) only slightly longer than lateral coronal denticle.

Male genitalia.

Median lobe (left):

- ventral valve triangular to an acuminate point;
- internal sac armed basally with densely packed with fine spicules, medially with loosely packed triangular denticles, and apically with paired spinescent structures.

Tegmen (right):

- lateral lobes somewhat elongate and held close together, expanded at apex;
- cleft to 4/5 their length;
- fringe of setae on medial margins;
- internal angle narrowly U-shaped.

