



Introduction

Mould-feeding beetles are very common throughout the world and are frequently found on insect traps. They are often not identified as a result of their small size and indistinct features, as illustrated by the name 'minute brown scavenger beetle' for the family *Latridiidae*.

These beetles, which are often colloquially referred to as 'plaster beetles' or 'fungus beetles', can be useful damp and mould indicators in the museum context. They feed on spores, hyphae and conidia, typically found in decaying organic materials that are colonised by fungi. Their natural habitats include bark, animal nests, haystacks and vegetable debris. Many species are synantropic and are regularly found in buildings with damp problems. They occur not solely in old dilapidated dwellings but also in newly built houses, hence the name 'plaster beetle'. They not only feed on mould but can also contaminate materials with mould, as *Cryptophagus acutangulus* has been shown to do. Many of these mould-feeding beetles are not well researched. In particular, information on the life-cycle, feeding habits and larvae stages is sparse.

This poster highlights four common examples of the family *Latridiidae* and one species of the family *Cryptophagidae*, which were found in buildings of the Royal Museums Greenwich (UK).

Identification

Many mould-feeding beetles are very small (i.e. less than 3 mm long) and adults are therefore often found on the underside of blunder traps. Larvae and eggs are rarely found, as they usually live hidden in the food source.

Identification by external characteristics requires a binocular microscope with a minimum magnification of x40 and a good light source, as well as identification guides. Usually, artificial keys are used, which systematically group together taxa that share similar morphology regardless of evolutionary relation. They are largely based on simple characteristics; e.g. size, colouration, shape of the pronotum and antennae, density of punctation, etc.

Further reading

Bousquet, Y. (1990) *Beetles associated with stored products in Canada: an identification guide*, Research Branch Agriculture Canada Publication 1837. Ottawa: Canadian Government Publishing Centre

Coombs, C. W. and Woodroffe, G. E. (1955) 'A revision of the British species of *Cryptophagus* (Herbst) (Coleoptera: Cryptophagidae)', in *Transactions of the Royal Entomological Society of London*, vol. 106, issue 6, July; pp. 237 – 82

Gorham, J. R., ed. (1991) *Insect and mite pests in food: an illustrated key*, U.S. Department of Agriculture Handbook 655. Washington: U.S. Government Printing Office

Hinton, H. E. and Stephens, F. L. (1941) 'Notes on the biology and immature stages of *Cryptophagus acutangulus*, Gyll. (Col., Cryptophagidae)' in *Bulletin of Entomological Research*, vol. 32, issue 2, August; pp. 135 – 43

Hinton, H. E. (1941) 'The Latridiidae of economic importance', in *Bulletin of Entomological Research*, volume 32, issue 3, November; pp. 191 – 247



Cryptophagus acutangulus

Length: 1.9 – 2.8 mm
Colour: red-brown, variable
Antennae: 11-segmented, 3-segmented club
Head: not concealed; large, multi-faceted eyes
Pronotum: large and distinctly shaped callosities at anterior of pronotum; pronotum widest at the callosities; lateral margins slightly serrate, with a large tooth in the middle
Elytra: covered with single, decumbent hairs of approx. equal length



Corticaria elongata

Length: 1.3 – 1.8 mm
Colour: light red-brown, variable
Antennae: 11-segmented, 3-segmented club
Head: not concealed; punctured; large, multi-faceted eyes
Pronotum: distinctly broader than long; sides rounded; lateral margins finely serrated, coarser towards base
Elytra: pubescence dense, relatively decumbent, hairs of approx. equal length; longitudinal rows of pits on elytra



Cartodere constricta

Length: 1.2 – 1.7 mm
Colour: dark brown, variable
Antennae: 11-segmented, 2-segmented club
Head: median longitudinal depression; temples behind eyes; multi-faceted eyes
Pronotum: distinctive constriction at lower basal third; longitudinal ridges
Elytra: elytra approx. twice as wide as pronotum; 8 longitudinal rows of pits on each elytron



Dienerella filum

Length: 1.2 – 1.6 mm
Colour: dark red-brown, variable
Antennae: 11-segmented, 2-segmented club
Head: median triangular depression; no temples; large, multi-faceted eyes
Pronotum: distinctive median oval depression; sides sinuate
Elytra: abdomen comparably flat and hind body at its widest part somewhat broader than pronotum; 8 longitudinal rows of pits on each elytron



Adistemia watsoni

Length: 1.2 – 1.7 mm long
Colour: light red-brown, variable
Antennae: 11-segmented, 3-segmented club
Head: distinctly longer than broad; wide labrum; eye facets coarse-granular, approx. 6 facets, eyes pale (most other Latridiidae have black eyes); temples behind eyes
Pronotum: slender; sides rounded
Elytra: hind body oval and depressed; approx. twice as wide as pronotum; 8 longitudinal rows of pits on each elytron; longitudinal ridges

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