

Beware of the Beauty - A Distasteful Toxic Beetle

Anthony Thomas, Canada

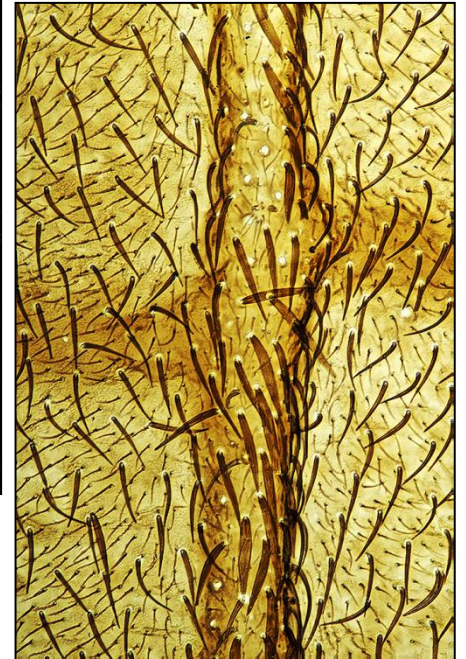
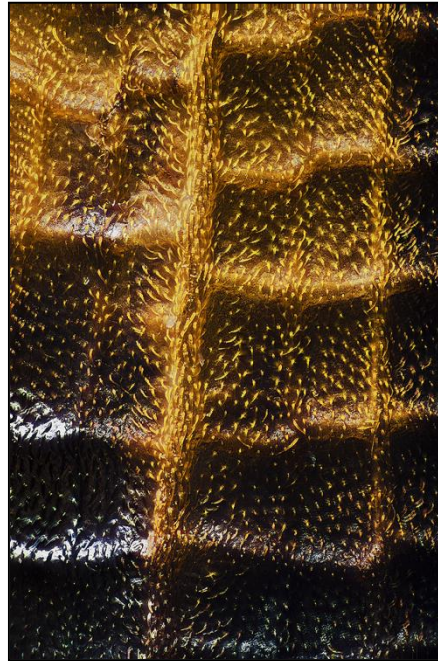
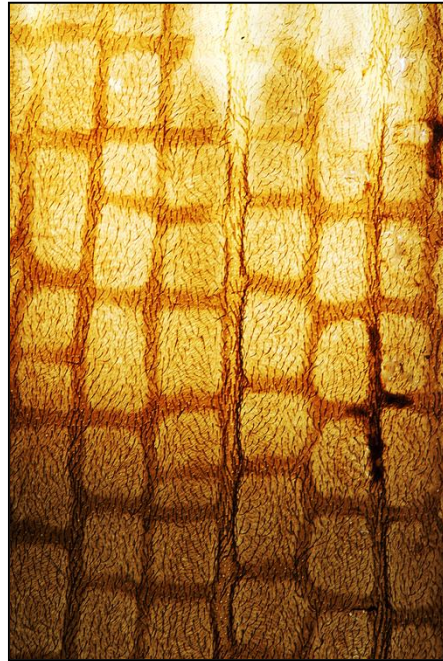
The Beetle

This colourful small beetle flew into my (moth) light trap in my garden. It's a member of the 'Net-winged Beetles', Family: Lycidae although it could just as readily be called an 'Antler Beetle' or even a 'Helmet Beetle'. It's scientific name is *Caenia dimidiata*.



The Forewings

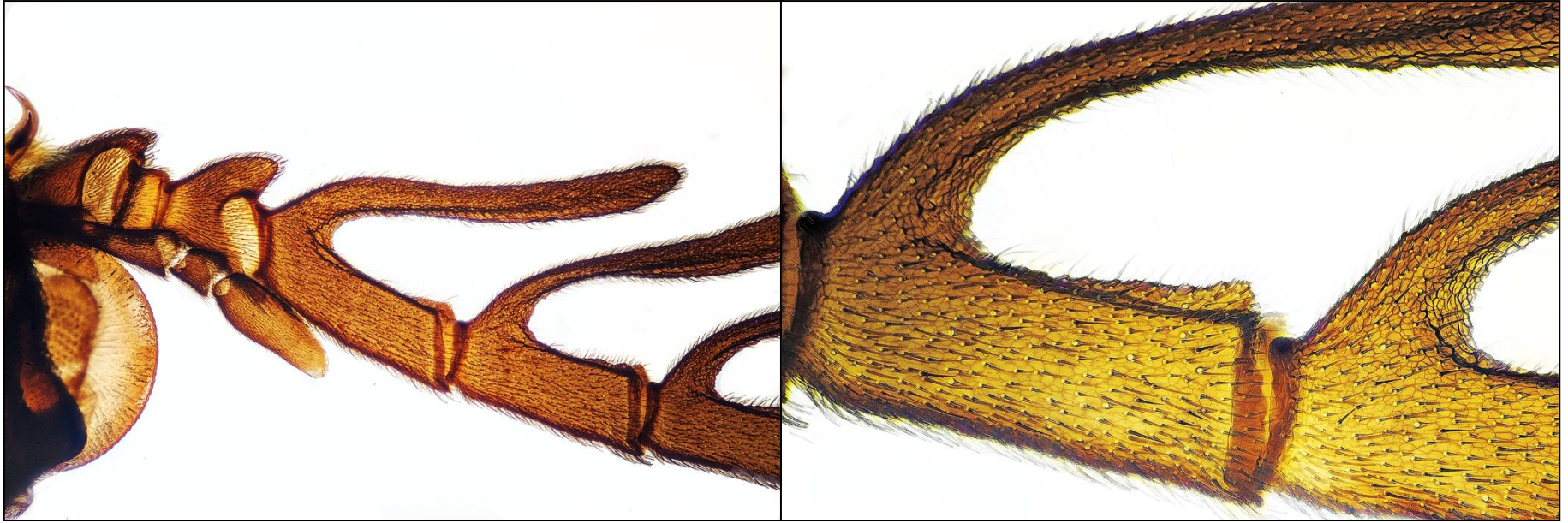
This species has several interesting features. Unlike most beetles that have the forewings hardened and function as a shield of protective armour over the body, this beetle's forewings are purposefully soft. Dorsally, they have about half-a-dozen longitudinal ridges on each forewing and very many horizontal ridges connecting the longitudinal ridges.



The ridges are hollow tubes and are filled with blood containing toxic phenolic and pyrazine compounds. The tubes rupture readily releasing toxic blood that serves as a protection from would-be predators. Such protection is obviously effective as other beetles, and moths, mimic the colour pattern and so gain a similar protection – a case of Batesian Mimicry.

The Antennae

I have no idea why the antennae are so different from most beetles!

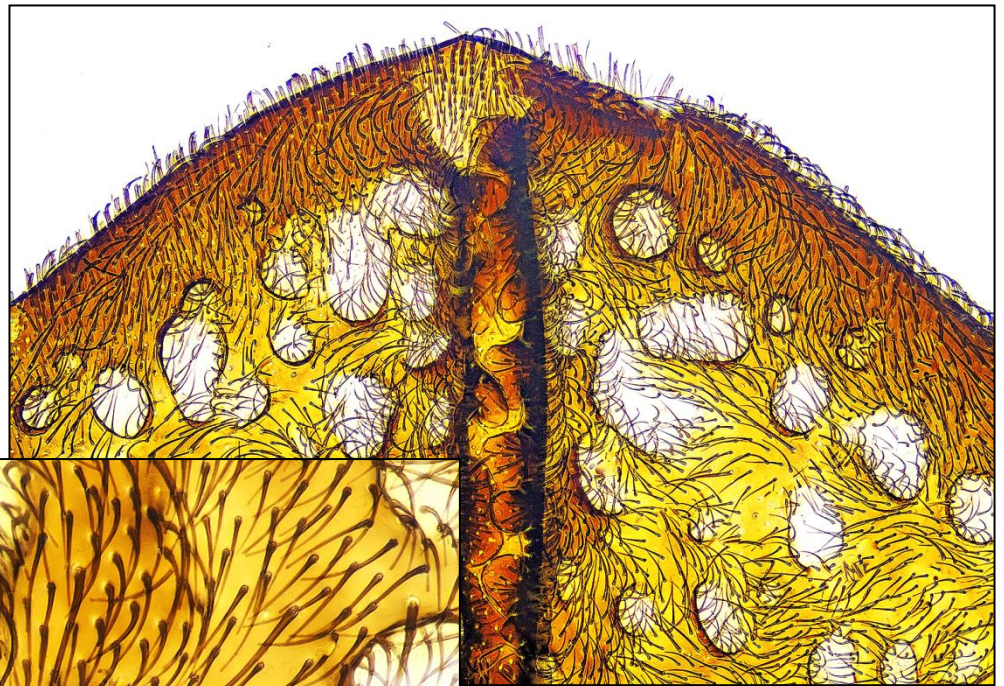


The Thoracic Shield

Another bizarre structure. Protects most of the head and all of the leg attachments, leaving a concavity such that the eyes can see what's above. In close-up has great detail; applying Occam's Razor and evolution indicates that such detail must have significance for the beetle even though we don't know what it is. The longitudinal central ridge is in fact a central canal with raised sides and the lateral pale regions have circular pits.



Tip of thoracic shield showing the central longitudinal 'canal' and the lateral pits



Close-up of central 'canal' showing lateral walls with lobe-like protuberances

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Close-up images with Olympus BH2-BHS with Splan objectives, 4x, 10x, 20x. Nikon D7200, stacked with Zerene