

## A box of beetles

*The photograph opposite shows one of Charles Darwin's collections of beetles. Beetle-collecting was something of a craze in the early 19th century; at the same time, scientific understanding of these creatures grew rapidly.*



Charles Darwin's interest in Natural History began when he was very young, but it was with the beetles that it really first flowered, when he was at Cambridge University. In his autobiography he remarked of that time:

*"But no pursuit at Cambridge was followed with nearly so much eagerness or gave me so much pleasure as collecting beetles. It was the mere passion for collecting, for I did not dissect them and rarely compared their external characters with published descriptions, but got them named anyhow. I will give a proof of my zeal: one day, on tearing off some old bark, I saw two rare beetles and seized one in each hand; then I saw a third and new kind, which I could not bear to lose, so that I popped the one which I held in my right hand into my mouth. Alas it ejected some intensely acrid fluid, which burnt my tongue so that I was forced to spit the beetle out, which was lost, as well as the third one.*

*I got some very rare species. No poet ever felt more delight at seeing his first poem published than I did at seeing in Stephen's Illustrations of British Insects the magic words "captured by C. Darwin, Esq."*

Here we see how Darwin identified his specimens, and we take a look at three interesting specimens from his collection.



*Beetlemania: some of Darwin's fellow students at Cambridge joined him in his beetle hunts; others mocked him.*

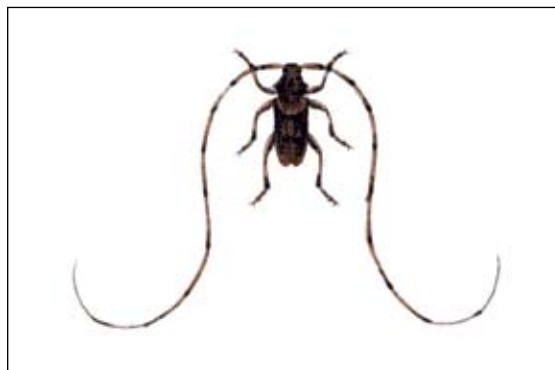
### Know your beetles

To identify his beetles Darwin used a variety of handbooks.

*Cassida* is a so-called tortoise beetle, unmistakable as they are like no other species in this country. They are well armoured, like a tortoise, with the head hidden under the semicircular thorax. This is a beetle which, unusually, is much less colourful when alive than after death. In most beetles the exoskeleton, including the hard wing cases (elytra), retain their colour, which is not due to a pigment but caused by fine sculpturing interfering with light. In the tortoise beetles fading does occur.

*Timarcha* is a beetle commonly known as the bloody-nosed beetle because of its habit of 'bleeding' a red fluid from its mouth and joints, when handled. This is a defence mechanism against predators, the beetle itself being a member of the entirely herbivorous family of beetles called the chrysomelidae or leaf beetles.

*Saperda* is a member of a group called the longhorns because of their very long antennae, up to 5 times the length of the body in some such as the timberman beetle, *Acanthocinus aedilis*. Many of these beetles are pests of stored timber because their larvae eat wood. They can even do serious damage to living wood in some cases.



Timberman beetle, *Acanthocinus aedilis*.



The Saperda beetle, as shown in JF Stephens' Illustrations of British Entomology.



A. All tarsal joints equal in length; insects apterous. Anterior coxae placed only slightly, hinder pairs far apart; tibiae without grooves for reception of tarsi. *Timarcha*, Redt.  
B. Second tarsal joint narrower than first; insects winged.

The Timarcha beetle, from HE Cox's handbook Coleoptera or Beetles of Great Britain and Ireland (this was the first systematic key to British beetles, but had no pictures).



The Cassida beetle in a page from British Beetles by John Curtis.