# Discovery of the Endemic Envertebrates of St Helena and 'The Belgians'

**by Myrtle & Philip Ashmole**

Knowledge of the invertebrate animals of St Helena – which is far more comprehensive than for most tropical islands – has been built up over the centuries through the work of numerous biologists and observant visitors. The giant earwig, now almost certainly extinct, seems to have been the first endemic insect noted by scientists and was described in 1798. A few years later the botanist W.J. Burchell, schoolmaster on the island, collected a number of animals, including a giant ground beetle that carries his name. The workaholic traveller Charles Darwin, whose visit in 1836 lasted only a few days and who was primarily concerned with the geology of the island, managed to collect an endemic click beetle and other insects, as well as taking a serious interest in the fossil snails.

John Charles Melliss was born on St Helena in the year before Darwin's visit. His classic study of St Helena, including all the then-known details of the flora and fauna, was published in 1875. During the previous decades, he corresponded with numerous scientists in England and sent invertebrate specimens to them for study. Melliss inspired Thomas Vernon Wollaston, a noted beetle specialist, to visit St Helena with his wife Edith in 1875-76. Wollaston studied the beetles while his wife wrote an account of the moths of the island that remained the standard work on this group for 120 years.

The detailed knowledge of the fauna of St Helena that was available by the late nineteenth century made it a prime example for discussion by biologists in the years following the publication of the *Origin of Species* in 1859. Alfred Russel Wallace, co-discoverer with Darwin of the theory of evolution by natural selection, included a chapter on St Helena in his classic book *Island Life*, published in 1880. In this, he

explained that many distinctive plants and animals found on the island were relicts of groups that had been more widely distributed in Africa and elsewhere in the distant past.

During the first half of the twentieth century the invertebrates of St Helena were largely ignored, but in 1957 Arthur Loveridge – a herpetologist with much experience in Africa – retired to St Helena. On an island without snakes, Loveridge turned to invertebrates, devoting his retirement years to the study of the St Helena fauna. He found many new species and massively increased knowledge of the insects of the island. He lived at Varneys – and we would be interested to hear from anyone who remembers him. Loveridge handed over his carefully kept records to a group of Belgian entomologists who visited the island in 1965 and again in 1966.

These entomologists from the Musée Royal de l'Afrique Centrale at Tervuren in Belgium carried out one of the most comprehensive surveys of island invertebrates ever attempted anywhere. They were impressed by the isolation of St Helena and thought that a comprehensive inventory of the invertebrates was needed before an understanding of the evolution of the fauna and flora could be reached. While on St Helena they visited almost all parts of the island and over the next few years produced over 100 scientific articles describing their findings. Many different authors, specialists in various groups of invertebrates, wrote the articles, mainly in French but some in English or German, which were published in four volumes of the museum's own journal. This was meticulous work including details of where all the specimens were collected. Many species new to science were described and details of closely related species in Africa or elsewhere were often given.

However, only in the case of the beetles and a few small groups was there any attempt to analyse the data obtained; there was not even a listing of all the new species they found. It was clear from the beetle work that many endemics occurred only on the Peaks, but the fact that there were other habitats of equivalent importance for endemics (the Central Basin of Prosperous Bay Plain for instance) could only be ascertained later by an analysis of the articles. This is what we did when

we wrote our book on the natural history of the island (published in 2000) and we were then able to discuss the origins of different groups in the fauna. Last year, as part of the Peaks Project and with the help of Edward Thorpe, we put all the Belgian data on a database, adding in records from the previous century and also those later than the Belgians. This should be of enormous benefit to any future person studying the invertebrates.

The Belgians have been criticised for the number of specimens that they collected. However, that was thirty years ago. Nowadays we have a growing understanding of the need to conserve populations of endemic animals and plants, but back then, few ordinary people or professional zoologists paid much attention to matters of invertebrate conservation. It was the Belgians, however, who provided a secure basic knowledge of the fauna, without which it would be hard to plan conservation work. It is also a fact that collecting small insects will have little or no long-term affect on the overall population and it is only large rare ones that are likely to be affected. In the case of the giant earwig, the Belgians' collection might have had a detrimental effect, if there was only a small population of them left in a restricted area at that time. However, it would seem that the main reasons for the earwig's disappearance is deterioration of the habitat - including wholesale removal of shelter stones on Horse Point Plain and similar areas - together with losses from predation by cats, rats and mice, and probably also by the introduced (not native) large centipede which is now so common. ☙

The Belgians were professional entomologists and would have used many of the same techniques that we are using during our work on the Peaks. Here our colleague Howard Mendel is examining a beating tray.