

Insect of the week (82), *Encyrtoscelio* prob. *undecim* (Hymenoptera: Platygastroidea: Scelionidae: Scelioninae: Gryonini)

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This week's insect is known for its looks, not necessarily good looks, but looks nonetheless. One of the more peculiar looking wasps, *Encyrtoscelio* is another member of the very successful endoparasitoid family Scelionidae, all species of which parasitize insect or spider eggs. *Encyrtoscelio* species are small, very small, some specimens only slightly exceeding 500 microns in length, less than the diameter of a full stop made by a pencil ending a sentence on a piece of paper. When an animal is that small it is exceedingly difficult to study its life history and, in the case of *Encyrtoscelio*, the excellent work by Bin (1979) is exceptional. Bin recorded the rearing of *Encyrtoscelio apterus* from a batch of eggs of *Cydnus aterrirnus* (Family Cydnidae [burrowing bugs] laid in a sand dune in southern France. Other observations support the hypothesis that *Encyrtoscelio* attacks Cynidae. In Somalia, specimens of two *Encyrtoscelio* species were observed together with four species of Cynidae, the putative host(s), in a dune environment.

The genus is readily identified by virtue of the head appearing triangular when viewed laterally and the long hairs that arise from the apical margin of the forewings of

macropterous females (see image). Females may be fully winged or micropterous. Males are micropterous. The shape of the head suggests that it has a burrowing function, consistent with their presumed use in the wild, at least on dunes and sandy soils. Their mandibles are straight, stick-like and comparatively long, unlike those of other scelionids.

The genus is known only from the old world and contains 13 species, with two or so more from Vietnam that have not yet been adequately described. There are no records of *Encyrtoscelio* from North, Central or South America. One species, *Encyrtoscelio undecim*, has been collected in Nairobi, Kenya, and is probably the species shown in the image of this week's insect of the week.

*Encyrtoscelio* was described in 1914 by Alan Parkhurst Dodd (APD) an Australian entomologist and son of the more famous Frederick Parkhurst Dodd (FPD) both of whom were professional collectors of insects for sale to European clients and museums, a vocation accepted widely in that period (Alfred Russel Wallace financed his trips in a similar way). As a money-making spin off of their entomological work APD and FPD created display cases of insects of attractive species of butterflies and beetles, showing them for a small fee around the country. An example of a display case created by APD is shone online <u>https://artsandculture.google.com/asset/ulysses-casealan-parkhurst-dodd/BgEdNOHGKe5z6w?hl=en</u>. Both Dodds were also serious taxonomists, each publishing on many new species; APD being an expert on the family Scelionidae, of which the insect of the week is a member.

A note. When biology and capitalism bump heads, featuring APD.

The prickly pear cactus *Opuntia stricta,* was deliberately imported for commercial purposes from Argentina to Australia, to act as a host of the scale insect *Dactylopius coccus* (known colloquially as Cochineal). Successfully farmed Cochineal was more profitable to farmers and was readily accepted by them. Cochineal produces a rich, carmine-coloured dye that has been used for centuries as a cloth dye, including as the source of the red colour for the English colonial army uniform worn by the "Red Coats" during the American war of independence. Unfortunately, the scale insect didn't thrive in Australia under the environmental conditions of it use in Queensland. Soon the growth and spread of the cactus far outstripped attempts to control it and, in the time it takes to say "whoops", 65 million acres of acres of farmland were infested by prickly pear. Farmers were not happy with this outcome. APD was appointed to direct efforts against prickly pear and travelled to Argentina to collect a species of moth (*Cactoblastis cactorum*) that controlled prickly pear in the Americas where the cactus is indigenous. Moths were mass reared and released, successfully establishing a population that proceeded to work its magic in the field. Within 6 years the cactus was eradicated from Australia. For his work on control of the prickly pear cactus APD was appointed MBE (Member of the Order of the British Empire).