

## Europe's only gregarious species of *Aleiodes* (Braconidae: Rogadinae)

By: Mark Shaw, National Museums of Scotland

Some of you who attended the 7th International Congress of our Society at Kőszeg, Hungary in June last year might have become aware that one of my objectives in attending was to obtain livestock of the gregarious *Aleiodes* parasitoid of *Cerura* and *Furcula* species (Notodontidae) that occurs in that area—indeed, several of you kindly looked for caterpillars or mummies of its hosts on my behalf. *Aleiodes* is a large genus of almost entirely solitary parasitoids of (mostly) macrolepidoptera, only this one and a North American relative being known to be gregarious, and I had long wanted to look into its abnormal biology.

Of course (as at the 2001 Kőszeg symposium), I couldn't find it myself, but Ika Österblad found a freshly formed *Furcula furcula* mummy on *Salix fragilis* at our first Fertő-Hanság National Park stop (at Nyirkai-Hany, on 26 June), and Jacek Hilszczański found a *Cerura vinula* mummy, also very freshly formed, on *Populus tremula* two days later at a small disused quarry at Cák, near Kőszeg,



The mummy found by Ika in Hungary, photographed after the adults had emerged.



The defensive behaviour of the host, which can delay successful attack for several hours.



Oviposition into the temporarily paralysed host.



Newly emerged males waiting on the mummy for the emergence of the females (being genetically identical evidently dispels aggression).

to which István Mikó had taken us. Both Ika and Jacek very kindly gave the mummies to me: from the *Furcula* one a brood of 14 females 4 males *Aleiodes* duly emerged just as I was about to travel home, but unfortunately the somewhat larger brood in the *Cerura* larva had been totally hyperparasitised, producing just 19 females 5 males of a *Mesochorus* species about 3 weeks later.

The adults from the *Furcula* mummy mated readily, and back in Edinburgh I was able to record the rather remarkable behavioural and developmental characteristics of this species in the course of getting several ovipositions into young larvae of *Furcula bifida*. Adults hatched from the resulting mummies in early autumn, and currently I have a large number of females overwintering to await the young *Cerura* larvae that I hope to offer them in spring – one aim being to see whether the very large (*ca* 50) broods sometimes reared from *Cerura* are the progeny of more than one female. Overwintering in the adult stage occurs widely in this species-group, and I have sometimes kept (well-fed!) adults alive for more than a year without refrigeration.

The name of this species may be *A. pallescens* Hellén, but with some reservation: (i) That species was described

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from non-reared material collected in Finland, and the only rearings of the gregarious species from *Cerura* and *Furcula* that I know of have been in south-central Europe and the Mediterranean; and (ii) the gregarious species (and *A. pallescens*, if it is not the same) belongs to a species group (the other members of which are solitary) in which determination of non-reared material is very difficult. For this reason it would be great if Finnish entomologists, especially in the south of that country, could try to find this gregarious parasitoid of *Cerura* and *Furcula* somewhere reasonably near to the type locality of *A. pallescens*. ❖

## White Whale Wasps I. The unknown female of *Odontophotopsis pudica* (Mutillidae)

By: Kevin A. Williams, Utah State University

Although I have an insatiable bloodlust (hemolymph-lust?) for all velvet ants, some species elude me long enough to bring out my inner Captain Ahab. Near my aunt's house in Weed, California, there is a small dusty flat area about the size of a football field. I first collected there on July 9, 2002, where I found *Dasymutilla coccineohirta* and males of the rare *Odontophotopsis pudica*. Over the next few years, I was able to collect both sexes of three additional species: *D. aureola*, *D. californica*, and *Sphaerophthalma unicolor*. The unknown female of *O. pudica* eluded me; I couldn't know what she would look like, except that she would probably be small and brown (like every other nocturnal female mutillid).

Members of the genera *Sphaerophthalma* and *Odontophotopsis* are typically nocturnal in habit. In the mountains of Siskiyou County, however, specimens of *O. pudica* and *S. unicolor* were found before nightfall. In my earlier collecting, numerous males and females of *S. unicolor* and males of *O. pudica* were collected in the roughly one hour interval between sunset and full darkness. For eight years, I visited my aunt at least once each summer in pursuit of the unknown *O. pudica* female. I waited diligently until the late afternoon and trod the dusty flat until the sun retired. Empty-handed, I would then walk back to the house after dark, thoroughly dejected.

Half a year ago, August 15, 2010, I finally collected females of *O. pudica*. Five of these small wasps died by my hand, possibly representing the only curated female specimens. This August, *S. unicolor* and *O. pudica* speci-

mens were both found after dark, even though all previous specimens were found at dusk. These wasps may have been active later in the day because of the abnormally high temperatures that week. Global climate change isn't entirely horrible.

My advisor, James Pitts, has reservations about the generic placement of *O. pudica* and recent phylogenetic studies have shown it to be more closely related to the genus *Photomorphus*. This new-found female looks nothing like any *Odontophotopsis* females, supporting the phylogenetic results. In North America, only 20 of the estimated



*Sphaerophthalma arnalduri* male.



*Odontophotopsis pudica* female.

350 nocturnal mutillid species are known from both sexes. Discovering new sex associations will be vital for developing useable classification schemes.

After collecting this female, I need a new White Whale to chase. Right now I'm leaning toward *Sphaerophthalma arnalduri*, an apterous male mutillid known from only 10 specimens that were collected with pitfall traps in Owens Lake Valley, California over 40 years ago. If anybody else has good White Whale stories, chronicling either elation or depression (or both), please submit them for the next edition of *Hamuli*. ❖