Pseudoscorpions in Cyprus: at a light trap and nocturnal activities

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In February 2016 I received an email from Ian Barton in Cyprus together with some excellent photographs of a pseudoscorpion. This had been caught in the act of eating a fly but what was unusual was that it was at a moth-trap that was in operation on a patio table. A further specimen was found in the trap itself and others had also been seen climbing the adjacent white walls of his villa at night.

Figure 1. *Hysterochelifer cyprius* on moth-trap and eating a fly. Image credits. © Ian Barton.
Three questions arise: What species? How did they get in the light trap and what were the ones on the villa wall doing?

They appeared to resembled *Hysterochelifer cyprius* (Beier, 1929) and this tentative identification was confirmed by Mark Harvey (Senior Curator & Head, Department of Terrestrial Zoology Western Australian Museum), although with reservations. Identifying from images is never easy with such small creatures, but the photos were of sufficient resolution and quality that the presence of small tubercles on the prolateral face of the pedipalpal femur were strongly visible suggesting the genus was *Hysterochelifer* Chamberlin 1932. In addition, the shape of the pedipalpal articles were a good match for Beier's (1963) illustration of *H. cyprius*.

There are two possible ways by which they could have arrived at the light trap, one being transported by a flying insect – phoresy (the non-parasitic association of one kind of animal with another in order to obtain transport) or two, being already present in the area, on or under the table, and climbing up to feed, taking advantage of the prey drawn in to the trap.

Phoresy is quite common in some families of pseudoscorpion, particularly the Chernetidae. For a non-flying arthropod this method of dispersal is essential in order to find a new transient habitat like a bird’s nest, manure heap or rotting wood and has been much discussed (see Beier 1948, Cuthberson 1984, Del-Claro & Tizo-Pedroso 2009, Gabbutt 1970, Gärdenfors & Wilander 1995, Hagen 1868, Harvey et al. 2012, Harvey, et al. 2015, Jones 1978, Legg 1975, 2015, Muchmore 1971a,b, Vachon 1954, Wegoldt 1969, Zeh & Zeh 1992). So for them to be found in or adjacent to an insect light trap would not be unexpected and in the past I have received specimens attached to flies and beetles (dipterists and coleopterists can be sources of pseudoscorpions!).

Figure 2. *Hysterochelifer cyprius* by moth-trap on the patio table. Image credits. © Ian Barton.
In this instance specimens had been found at the trap and on the villa wall. Rather than being phoretic they may well have been out hunting at night and crawled up on to the table to the ready source of food by the light-trap. Those on the white walls might also have been exploiting the lit walls which would attract insect prey. Nocturnal behaviour in pseudoscorpions has rarely been seen, owing probably to their small size. The botanist David Bellamy did recall seeing one on a lawn at night and the present author found the best time to catch female Chthonius ischnocheles (Hermann 1804) picking up spermatophores previously deposited by males was at night. Pseudoscorpion nocturnal activity is a subject worthy of further study.

The behaviour associated with white villa walls might be worthy of further observations, perhaps whilst relaxing with a suitable beverage on a pleasant evening when next on holiday.

References


