



Short note – Kurzmitteilung

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**Behaviour – Verhalten**

## **Big-headed flies do occasionally imbibe nectar (Diptera: Pipunculidae)**

[Augenfliegen naschen gelegentlich auch Nektar (Diptera: Pipunculidae)]

by

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Big-headed flies are true stunt-pilots, performing an energy-demanding hovering flight in search for mating partners, larval hosts and food sources. But unlike in many other families of Diptera (SSYMANK et al. 2008), they are hardly ever encountered on flowers. In fact, there does not seem to exist any reliable record in the literature that documents nectar-feeding in this group of two-winged insects. Instead, it is long known that male and female pipunculids primarily feed on honeydew, a sugar-rich secretion produced by many Hemiptera (LEROY et al. 2011), which they dab up from vegetation (e. g. COE 1966: 14f; WILLIAMS 1918: 190). Also, big-headed flies have been observed taking up water from moist stones and vegetation (HARDY 1943: 19; WILLIAMS 1918: 190). On the other hand, indication of nectar-feeding can be found in IMMS (1960: 634) and GILBERT & JERVIS (1998: 515), but both papers do not provide any solid evidence to back-up this statement.

Over the past years, two observations have come to my attention that document nectar-feeding in big-headed flies:

- 1) On 9th June 2006, David GIBBS observed a male specimen of *Eudorylas venturai* KEHLMAIER, 2005 nectaring on a flower of *Helianthemum* or related genus (Cistaceae) at Sierra Tejada, Andalusia, Spain. The specimen was dissected and is in the collection of D. GIBBS, who is a well-known dipterologist and pipunculid expert and his observation free of doubt.
- 2) In the course of a study on the relationships of floral traits among plant species in relation to the observed variation in flower visitation frequency by potential pollinators (HEGLAND & TOTLAND 2005), a single male *Cephalops aeneus* FALLÉN, 1810 was recorded on a flower of *Galium album* (Rubiaceae) on 7th July 2003 by Stein Joar HEGLAND at the inner region of Sognefjord, western Norway. For their study, HEGLAND & TOTLAND (2005) only included flower visits where the visitor actually landed on the flower and stayed for more than one second. The specimen is ethanol-preserved and in the collection of the author.

HARDY (1987: 745) and GILBERT & JERVIS (1998: 526) describe Pipunculidae mouthparts as typically muscoid, with a short and fleshy proboscis including a broad labellum with numerous pseudotracheae, and small, inconspicuous palpi that are microscopically annulated, lack an apparent segmentation, but exhibit an apical sensory vesicle and one or more fine apical setae. Mouthparts are generally reduced in size, with an extended proboscis length of approximately 0.45 mm (length of prementum: 0.24 mm) for *C. aeneus* (n = 1). Obviously, due to their short proboscis, the flowers visited must have easily accessible nectar. Therefore, big-headed flies can be considered occasional nectar thieves as they are unlikely to pollinate the flowers they visit.