PHORESIS OF THE GREEN HYDRA, *CHLOROHYDRA VIRIDISSIMA* (PALL.), ON A LARVAL *ANAX IMPERATOR* LEACH UNDER LABORATORY CONDITIONS (HYDROZOA: HYDRINA; – ANISOPTERA: AESHNIDAE)

Phoresis is a widespread phenomenon in nature. Phoretic associations of members of diverse invertebrate taxa on Odonata larvae have already been reported. C. DE LA ROSA & A. RAMIREZ (1995, *Odonatologica* 24: 219-224) give an overview of Diptera and Trichoptera, and H. BEUTLER (1991, *Die Flussjungfer*, Kinderbuchverlag, Berlin, p. 19) and J.K. TUCKER & J.B. CAMERER (1994, *Odonatologica* 23: 179-181) describe phoresy of Bivalvia on odonates. This note reports on the first association of a coelenterate with an odonate.

When rearing *Anax imperator* larvae in aquaria for predation experiments, the aquaria became colonized by polyps of *Chlorohydra viridissima*. Most of the hydras settled on the vertical glass walls. A few individuals settled on two vertical wooden sticks in the centre of the aquarium (placed as a substrate for the dragonfly larvae). One hydra was found on the tergum of the fourth abdominal segment of a male *Anax*. The supposed mechanism of settlement of the hydra on the mobile *Anax* larva was by floating, facilitated by water currents, induced by the oxygen pump or by a kind of somersaulting typical of hydra (see R. BUCHSBAUM et al., 1987, *Animals without backbones*, Univ. Chicago Press, Chicago, pp. 102-103).

Every two days the *Anax* were fed with *Daphnia* and *Chaoborus* larvae. The green hydra fed exclusively on *Daphnia*. Immediately after releasing the food, a hydra could capture a single *Daphnia*. Since by swallowing a *Daphnia* the hydra's translucent body wall took almost the shape and colour of the *Daphnia*, food intake could be seen long afterwards. Despite the high prey densitiy at that moment, the hydras were not physiologically able to swallow up a second one. By the time the first *Daphnia* was digested, *Daphnia* numbers had decreased considerably, mostly leaving some animals in the centre of the aquarium only. Only the hydras on the sticks and the one on the *Anax* were in advantageous positions and could trap additional *Daphnia* during the rest of the two-day food regime. Because most *Daphnia* swam freely in the water, it was advantageous for a hydra to be positioned on a mobile *Anax* or on a wooden stick instead of being fixed to the wall.

The *Anax* was in its penultimate instar. After the moult, the hydra remained on the larval skin. This means that settling on a last instar could be fatal for a hydra. However, phoretic associations of other invertebrates on larval odonates may not necessarily be fatal. In this context, it is interest-

ing to note that H. BEUTLER (1991, *loc. cit.*) shows a picture of a zebra mussel, *Dreissena polymorpha*, still attached to the exuviae of an emerged *Gomphus vulgatissimus*, hanging in a tree. In contrast with J.K. TUCKER & J.B. CAMERER (1994, *loc. cit.*), he states that this behaviour is quite common ("Auf mancher Larvenhaut sitzt eine kleine Muschel"). Due to rain, most exuviae fall quickly back into the water. In contrast to hydras, mussels may, therefore, be able to survive this stressful period.

By our knowledge this is the first report of an coelenterate/odonate association. This may indicate that this phenomenon is not widespread. In nature, *Chlorohydra* has many other potential prey items and a diversity of possible substrates. It is likely, therefore, the observed phoretic combination is incidental and induced by the artificial rearing conditions in the laboratory.

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