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**Viviparity in a damselfly (Odonata: Chlorocyphidae)**

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**SUPPLEMENTARY MATERIAL**

**VIVIPARITY IN THE INSECTA**

The following brief review of the phenomenon is expanded and updated from the account in Gullan & Cranston (2010).

Three contrasting forms of viviparity are known (Hagan 1931). Pseudo-uterine viviparity occurs when eggs are nurtured within the female reproductive tract through a placenta-like structure. Once eggs have matured they eclose within the female and the young are laid immediately. Viviparity of this sort is known in many aphids (Kennedy & Stroyan 1959) and ectoparasitic polyctenic bugs (Hemiptera) (Hagan, 1931), ectoparasitic or ectocommensal Arixenina and Hemimerina within the Dermaptera (see, for example, Tworzydlo et al. 2013), and in some Psocoptera (New 1987). Adenotrophic viviparity occurs when very early larvae emerge from eggs within the female and feed themselves from glandular structures within the reproductive tract. This form of viviparity is restricted, as far as is known, to the Hippoboscoidea (Diptera, Pupipara) comprising the haematophagous families Glossinidae, Streblidae, Nycteribidae and Hippoboscidae (see, eg, Petersen et al. 2007). Finally, haemocoelous viviparity occurs where embryos are nurtured within the haemolymph of the parent. Haemocoelous viviparity occurs in the ectoparasitic Strepsiptera, exiting the female via a birth canal (Kathirithamby 1989). In the Cecidomyiidae (Diptera) larvae are effectively parasitic on the adult female which is consumed as they develop (Gagné 1981, Schüpbach & Camenzind 1983). A recent case of viviparity in a non-parasitic dermapteran could not be ascribed to a particular category (Kočárek 2009).

Ovo-viviparity, in contrast, occurs where the eggs are retained within the female adult until mature. They eclose immediately upon, or just before, parturition. Such reproductive behaviour is known principally within the higher Diptera in the families Calliphoridae, Muscidae and Tachinidae (eg Pollock 1974; Chapman 1998). Other instances are known within the Coleoptera (Liljebad 1917; Liebherr & Kavanaugh 1985; Schroder et al. 1994; Dutrillaux et al. 2010) and Thysanoptera (Crespi 1989).

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