

Twinned embryos of dragonflies (Odonata, Insecta) *

Yoko WATANABE¹⁾ and Hiroshi ANDO²⁾

¹⁾ 2-20-205 Suehiro, Nishinomiya, Hyogo 662, Japan

²⁾ Sugadaira Montane Research Center, University of Tsukuba, Sanada, Nagano 386-22, Japan

Among the eggs, collected in 1993, of an anisozygopteran *Epiophlebia superstes* Selys and an anisopteran *Gynacantha japonica* Bartenef, we found the eggs containing twinned embryos: one egg for the former species and six eggs (and one egg with triple embryos) for the latter. As far as we know, twins have not been reported to occur under the natural or non-experimental condition for dragonflies, and here we present photographs of the twins.

Figure 1 shows an *Epiophlebia superstes* egg with twinned embryos in successive stages of development (A-C), which was taken out of the stem of *Elatostema umbellatum* (collected at Kifune, Kyoto). Figure 2 shows a *Gynacantha japonica* egg with twinned embryos, which a female (collected at Kawasaki, Kanagawa) laid between tissues of filter paper in the laboratory. All twinned embryos of both species failed to develop up to hatching.

Further morphological and physiological studies on these twinned embryos are the future subjects. We thank Messrs. K. Kato and H. Yokota for their kindness to offer us the *Gynacantha japonica* eggs.

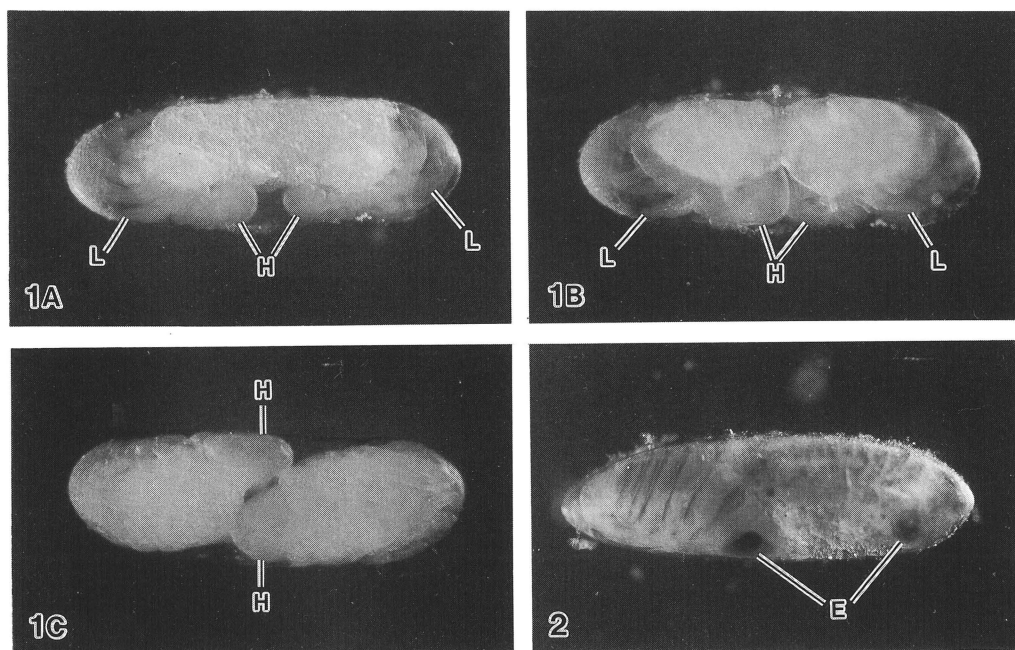


Fig. 1 An *Epiophlebia superstes* egg with twinned embryos, in the successive postrevolutional stages (A-C). Anterior to the left. The dorsal closure completes in the stage of C.

Fig. 2 A *Gynacantha japonica* egg with twinned embryos. Anterior to the left.

E: compound eye, H: head, L: leg.

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