

# Mate searching in *Ennya maculicornis* (Membracidae: Polyglyptini) initiated by females: behavioural and acoustic descriptions

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1. In treehoppers in which courtship has been studied, males initiate the search for females by periodically emitting a vibrational signal. The responses by the female are used by males as a beacon and give rise to a duet. 2. Courtship and mating of the treehopper *Ennya maculicornis* were characterised through the simultaneous recording of vibrational signals and the behaviour of males and females in an arena. 3. In *E. maculicornis*, female initiated mate searching. Females produced two types of signals during the this process: (i) a signal that preceded the approach by the male and (ii) a signal that preceded mating. Males emitted two signals associated with two stereotyped body movements: (i) a signal produced as a response to the first signal emitted by the female, involving a change in the male's locomotory mode and the approach to the female, and (ii) a signal produced after finding and holding on to the female, involving simultaneous abdomen ra