

Understanding invasion success: life-history traits and feeding habits of the alien crayfish



In the present study, the life history and diet of the highly successful North American invader *Orconectes immunis* was assessed for the first time in its introduced European range. In 2007, *O. immunis* population dynamics were monitored in a typical backwater habitat using unbaited funnel traps, and its life history was analysed using Von Bertalanffy's growth function. Juveniles hatched as early as March and may attain sexual maturity at the end of their first summer. The adult population moulted up to four times during the summer months, with the non-breeding form (II) lasting for a remarkably short time period. The high growth rate of *O. immunis* was combined with a short longevity, which was estimated at 2.5 years. The fecundity ranged from 119 to 495 pleopodal eggs. The stomach contents were dominated by detritus, followed by macroinvertebrates and macrophytes, and no ontogenetic shift in diet was observed. The ability to prey on a wide array of invertebrate taxa presumably supports the sustained high growth rate of *O. immunis*. The presented data provide evidence that *O. immunis* exhibits a strongly r-selected life history and omnivorous feeding habits. These ecological properties have often been linked to successful invaders and enhance the invasiveness of *O.*

immunis.

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