Do New Zealand damselflies exhibit a fast/slow life history dichotomy?

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Multiple species of Odonata can co-exist in the same habitat while feeding on the same prey; therefore, to successfully co-exist they require different life history (LH) strategies. One strategy is the fast-slow dichotomy, which has been attributed to the development of predator avoidance or flight response behaviour. A species with a slow LH should have a slower metabolism an differing behavioural responses, it is expected that they will be able to survive longer without food than a species with a fast LH, by reducing movement and energy expenditure. Two species of New Zealand damselfly (*Austrolestes colensonis* and *Xanthocnemis zealandica*) are being used to investigate this life history dichotomy. Larvae of both species were starved to identify the time required for death to occur. Larvae position was recorded daily and notes were made about behavioural responses witnessed. *Xanthocnemis zealandica* survived an average of 87 days and had a preference for sitting on vertical sticks placed in the enclosures. *Austrolestes colensonis* preferred resting on the bottom of the enclosures and survived for a significantly shorter period of time (average 31 days). It was observed that when the surface of the water was disturbed, *A. colensonis* move away from the disturbance while *X. zealandica* flattened its body to the surface it was attached to. This suggests that *A. colensonis* can be considered to have a fast LH and *X. zealandica* to have a slow LH.