**Pacifastacus leniusculus** Dana, 1852

The signal crayfish *Pacifastacus leniusculus* is a large, hardy cool-temperate freshwater crayfish that occupies a wide range of habitats from small streams to large rivers and natural lakes, including sub-alpine lakes. It also grows well in culture ponds and is tolerant of brackish water and high temperatures.

The signal crayfish is endemic to the northwestern United States and southwestern Canada, from where it was introduced into the more southerly states. It has also been introduced to Europe and Japan as part of the livefood trade and for aquaculture purposes. The signal crayfish is an aggressive competitor and has been responsible for displacing indigenous crayfish species wherever it has been introduced. The ‘Critically Endangered (CR)’ Sooty crayfish (*Pacifastacus nigrescens*) native to the western USA has become extinct partly due to interspecific competition with *P. leniusculus*; the signal crayfish has also been implicated in causing a reduction in the range of the endemic ‘Critically Endangered (CR)’ Shasta crayfish (*Pacifastacus fortis*) (Taylor, 2002).

*P. leniusculus* was introduced into Japan from Portland, Oregon, where it has reduced the range of the endemic *Cambaroides japonicus* on the island of Hokkaido (Kawai & Hiruta, 1999). In Europe, it has extirpated populations of the indigenous crayfish species, particularly the Vulnerable (VU) white-clawed crayfish *Austropotamobius pallipes* (Holdich, 1999).

Its main impact has been as a vector of the crayfish plague fungus, *Aphanomyces astaci* to which all non-North American crayfish are susceptible, but to which it is relatively immune. Crayfish plague has caused large-scale mortalities amongst indigenous European crayfish populations, particularly in England (Alderman, 1996).

**References:**


