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During the past two decades, it has shown an increase in ultraviolet radiation (UVR) and particularly the UVB (280-315nm) above Earth's surface. There is some evidence that UV-B radiation (280-315 nm) and the shorter wavelengths of UV-A (315-400 nm) can significantly affect the biota in waters up to 20 m deep and have adverse on aquatic organisms such as damage in the genetic material and high mortality. It has been shown that many species of seaweeds synthesize and accumulate high concentrations of photoprotective compounds and may constitute an interesting alternative as a supplement in aquaculture feeds. In the present work the effects of UVR were studied in the animal model *Palaemon macrodactylus* which is a successful invader, known as the Oriental Shrimp, native to estuaries and coastal waters of the Northwest Pacific. In the south western Atlantic, the species was found in Mar del Plata harbour, Argentina, probably introduced from the Pacific with discharged ballast water

The aim of this study was to determine the bioaccumulation of photoprotective compounds (PPC) from diets added with red seaweeds meal of the family Halymeneaceae on juvenile *P. macrodactylus* and its possible protective role under conditions of stress by UVR.

Juveniles of *P. macrodactylus* collected from Mar del Plata harbour (38° 03′ S; 57° 31′ W) were placed in PVC tanks under controlled conditions of temperature, pH, and salinity, under two feeding treatments: one group with basal diet (B) (45% protein, 8% lipid, 7% water and 7% ash) and the other 2% diet added with red seaweed meal of the family Halymeneaceae (diet B2). After 15 days animals were subjected to two radiations in four treatments, by triplicate: a) Control PAR (400-700nm) and diet B b) PAR+ UVR (280-700nm) and diet B c) PAR and diet B2, d) PAR+ UVR and diet B2. Survival, percentage of weight gain, concentrations of PPC and carotenoids were determined.

In treatment b mortality of 16% was recorded after 72 hours of exposition to UVR, while in those fed with the 2% added diet, the same mortality was observed after 120 h of exposure. Survival in the treatments (a, c) was 100%. At the end of the exposure radiation period, percentage of weight gain was higher in animals fed with diet B (77%) nevertheless concentration of PPC and carotenoids (determined as OD g tissue$^{-1}$) recorded the highest values in the animals corresponding to treatment c (PPC: 1.9 ± 0.38 DO g$^{-1}$; carotenoids: 0.48 ± 0.1 OD g$^{-1)}$. although there were no significant differences between other treatments.

These results suggest that, a diet added with red seaweeds rich in photoprotective compounds constitutes and interesting alternative, not only for its contribution to a better physiological state of animals under stress conditions by UVR, but also for the particularity of being invasive species with potential commercial use.

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