Larval Development of the Intertidal Barnacles *Jehlius Cirratus* and *Notochthamalus Scabrosus*(Cirripedia: Chthamalidae) under Laboratory Conditions

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Abstract

Larvae of the common intertidal chthamalid barnacles *Jehlius cirratus* and *Notochthamalus scabrosus* were obtained from mature adults collected in central and northern Chile and cultivated in the laboratory at temperatures typical of the conditions encountered by larvae in these regions. Morphological and developmental descriptions of the six naupliar stages and the cyprid stage of both species are given. Both species clearly present the general pattern of development for chthamalids, in which the structural characters of the cephalic shield and abdominal process, in conjunction with the utilization of the alphabetical setation formula for antennae, facilitate the identification and differentiation between larval stages. The average time of naupliar larval development of *J. cirratus* and *N. scabrosus* in sea-water temperature ranging 15–18°C was 31 and 37 days, while larvae cultivated in temperatures ranging 18–20°C completed naupliar development after 13 and 20.2 days, respectively. This represents a 58% and 45.5% reduction in naupliar development time with a three-degree increase in mean sea water temperature for *J. cirratus* and *N. scabrosus*, respectively. The development time from cyprid until settlement and metamorphosis of *N. scabrosus* lasted between 9 and 11 days, depending on the temperature, while cyprid development for *J. cirratus* lasted 8 days at 18–20°C. The average sizes of the naupliar and cyprid stages were similar between the species at both temperature ranges. Although the increased temperature reduced the time of larval development, it did not significantly affect larval sizes.