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FILTER-FEEDING IN COPEPODS: OBSERVATION BY MEANS OF HIGH SPEED MOTION

PICTURES

by: M. ALCARAZ\*, J.R. STRICKLER\*\* and G.A. PAFFENHOFER\*\*\*

The study of the problems related with the mechanisms of food uptake by marine calanoid copepods have been generally focused through two main criteria: copepods filtrate all the particles, using the mouth parts as a mesh, or they perceive the particles and select the interesting ones. In fact, the two mechanisms play an important rôle, as it has been pointed out by STRICKLER (1980).

The aim of this note is to present, with the help of a movie, the possibilities of visual observation as a method for studying how important the two feeding systems above mentioned are. A description of part of the mechanisms involved has been presented in a previous paper (ALCARAZ et al., 1980).

The species filmed is Eucalanus crassus Giesbr.; the animal has been maintained in focus by means of a fine dog-hair glued to its fourth thoracic segment. The hair ends in forceps which are mounted in a micro-manipulator.

Due to the frequency of the feeding movements of the mouth parts, and the diameter of the setae involved, and also of the algae supplied (Rhizosolenia indica, Skeletonema costatum and Lauderia borealis), the film must be taken at 500 frames per second, with an exposure time of 111  $\mu$ sec, which give a theoretical resolution of 2  $\mu$ m. A more detailed description of the method can be found in ALCARAZ et al., (1980).

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\* Instituto de Investigaciones Pesqueras. Pº Nacional S/N, Barcelona 3  
Spain

\*\* Australian Institute of Marine Science, Townsville, Q. 4810, Australia

\*\*\* Skidaway Institute of Oceanography, Univ. System of Georgia, P.O.  
box 13687, Savannah, Georgia 31406. USA.