

Notes on Morphology of Capitellids By Karen Green

The following notes are excerpts from a recent manuscript prepared on capitellids from the Andaman Sea off Thailand. That paper provides an overview of regional studies, morphology, keys to genera and species, and descriptions with illustrations for over 30 species representing 15 genera. Publication of the paper will be in a special volume of the Phuket Marine Biological Center Research Bulletin, which is being edited by Dr. Danny Eibye-Jacobsen.

Review of Morphological Characters

The primary key characters that have been widely adopted to identify capitellids are the number of thoracic setigers and setal distribution. Although Fauchald's (1977) key and definition of capitellid genera followed the traditional system based on setal distribution, he considered the subdivision of capitellids in need of revision. The need for revision of the family has been echoed by recent authors (Ewing 1991; Blake 2000), who point out that the high percentage of monotypic genera and use of thoracic segmental and setal distributions as the basis of the generic descriptions are unsatisfactory.

Several authors have pointed out that setal distribution, particularly in the posterior thorax, may change with age. Ewing (1982, 1984) and Blake (2000) have pointed out that juveniles may have fewer setigers with capillary setae than observed in the adult condition. Warren (1991) and Warren et al. (1994) conducted recent reviews of *Capitella* and *Mediomastus* and discussed the relative usefulness of various hard and soft characters in defining capitellids. These authors considered the number of thoracic setigers (rather than segments) with capillary setae occurring in adults a reliable generic character, particularly when the distinction between the thorax and abdomen is clear, but caution against stating the total number of thoracic setigers when the distinction between the thorax and abdomen is indistinct.

Other features such as appearance of thoracic and abdominal segments, body shape and size, branchia, lateral organs, genital or nephridiopores, number of aetous segments, proboscis, pygidium, shape and appearance of the prostomium, structure of setae, and more recently methyl green staining patterns have been used to differentiate species. Warren et al. (1994) considered setal structure the most decisive character for distinguishing *Mediomastus*. Several of the above-mentioned features have been considered by some authors as unreliable, difficult to assess, or diagnostic only at the species level.

The following review of morphological characters is based on assessment of characters that were used to identify a couple of hundred specimens from Thailand.

Head. The prostomium has few forms in capitellids. The shape may be rounded, conical, or elongated at the tip in the form of a palpode. The shape may vary among species. However, the palpode may be retracted and a frontal view of rounded