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# Description of pereopod setae of scyllarid lobsters, *Scyllarides aequinoctialis*, *Scyllarides latus*, and *Scyllarides nodifer*, with observations on the feeding during consumption of bivalves and gastropods

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The morphological and behavioral aspects of slipper lobster (Scyllaridae) feeding have remained largely unexplored. Using scanning electron microscopy, the gross morphological structure of all segments of the pereopods were described for three species of scyllarid lobsters.

Five types of setae within three broad categories were found: simple (long and miniature), cuspidate (robust and conate), and teasel (a type of serrulate setae). Setae were arranged in a highly-organized, row-like pattern on the ventral and dorsal surfaces. Cuspidate setae were found on all surfaces of all segments. Simple setae were found only on the dactyl, whereas teasel setae were concentrated on the lateral-most edge of the alate carina on the merus in only one species [*Scyllarides aequinoctialis* (Lund, 1793)]; this species also differed from the other two [*Scyllarides nodifer* (Stimpson, 1866), *Scyllarides latus* (Latreille, 1803)] in setal patterning. All examined slipper lobsters differed in setal types and patterns from nephropid and palinurid lobsters, likely due to the more rigorous use of their pereopods in accessing food. Feeding sequences of two of the slipper lobster species were videotaped and analyzed, and demonstrated a complex set of behaviors involving contact chemoreception by the antennules as part of an initial assessment of the food item, followed by extensive manipulation, probing, and eventual wedging behavior by the pereopods as previously described for *Scyllarides*. Use of the antennules for food assessment and heavy reliance on the pereopods, rather than the mouthparts, for food handling contrasts with nephropid and palinurid lobsters.



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