

M.S.55 MERCY THOMAS—Studies on portunid crabs—1985— Dr. R. Damodaran

Reproduction in five species (*Portunus pelagicus*, *P. sanquinolentus*, *Scylla serrata*, *S. serrata serrata*) (*Podophthalmus vigil* and *Thalamita crenata*) or crabs presently studied covers length frequency distribution, size at first maturity, sex ratio, fecundity and annual reproductive cycle. Length frequency distribution in samples collected from the commercial catches and from the field revealed that the matured forms and older groups contributed to the fishery than immature group forms.

There was a good linear relationship between fecundity and carapace of crabs presently studied. *P. pelagicus*, *S. serrata* and *T. crenata* were found to breed for an extended period but breeding was not continuous year round. *P. sanquinolentus* and *S. serrata serrata* were found to be continuous breeders.

Length-weight relationship studied in five species and one subspecies of these commercially important crabs showed that cube law is obeyed. Males and females in two species and one subspecies namely *S. serrata*, *T. crenata* and *S. serrata serrata* did not show significant variations but in other three species namely *P. pelagicus*, *P. sanquinolentus* and *P. vigil* the difference was significant.

In the larval development studied presently in *T. crenata* by rearing the larvae, 3 zoeal stages and a megalopa were noticed under laboratory condition. The shortest duration of all zoeal development was found to be 15 days.

Mortality rate was heavy in the I zoeal stage. The day of each moult and mean intermoult duration increased as the salinity decreased.

Proximate composition was also studied in *T. crenata*. Though the total meat content increased progressively in higher size groups, the percentage of meat was more in lowest size group crabs (10–20 mm). In males the percentage of meat varied from 26.3 to 20.7%. In females the range was 23.3–16.4%.

Proximate composition varied in relation to size and sex and from the nutritive point of view, small animals which have high protein and less fat were found to be advantageous.