EARLY GROWTH STUDIES
of
Cancer magister

On May 26, 1948 a number of very small crabs in various post-larval stages were obtained from the Alsea area, these young crabs being picked from the pots in conjunction with the larger crabs. All were given a specimen number and placed in individual bowls where a daily watch on condition, ~~daily~~ water changing, sheds, food, etc. was given. Although the data obtained is admittedly open to the criticism of unnatural conditions it is felt that the data is valuable for comparison with any future information that may be obtained. It has also proved interesting to compare these figures with those of ~~Donald C. G.~~ McKay's (1942) data which ~~were listed in his publication "The Pacific Edible Crab, Cancer magister"~~ and are listed here in table form as a comparison with the Newport figures. This table gives time in days between sheds of the various post-larval stages.

MacKay's data		Newport data	
post larval stage	duration	post larval stage	duration
1st p.l. stage.....	11.4 days	1st p.l. stage.....	No data
2nd " "	11.6 "	2nd p.l. stage.....	8.8 days*
3rd " "	10.0 "	3rd " "	29.3 "
4th " "	21.6 "	4th " "	25.2 "
5th " "	34.3 "	5th " "	32.5 "
6th " "	No data	6th " "	42.0 "

*A minimum figure. This figure ~~was obtained~~ shows the time the crabs were held ~~to~~ up to the first molt after the original gathering of the specimens.

Newport shedding time figures are greater in most cases than MacKays.

Similarly a comparison of growth from one instar to the next was kept the results of which are shown in the following table:

MacKays data*		Newport data	
Post larval stage	size in mm.	Post larval stage	size in mm.
1st	5 mm. ~~(approx.)~~*	1st	No data
2nd	7.5 mm	2nd	7.4 mm (12 figs)
3rd	9.0 mm	3rd	10.4 mm (13 figs)
4th	12.5 mm	4th	12.8 mm (10 figs)
5th	18.0 mm	5th	16.3 mm (8 figs)
		6th	18.9 mm (5 figs)
6th	~~18/9/44~~ no figures	7th	22.0 mm (1 fig)

* MacKays figures are ~~approximated~~ interpolated from his graphic

MacKay's figures on size were not chosen from the instar duration study as were the Newport figures, but rather from width frequencies of small crabs taken at various time intervals. MacKay groups Newport's 5th and 6th larval stages into one group, group 5. Newport data shows two groups, which might be accounted for by slowing of growth due to captivity. However, MacKay's graph showed an undefined peak for group 5 which could lead to a possible error on his part in interpretation of the graph.

The graph ~~accompanying this report~~ shows the Newport findings in concise form by comparing the number of days from the beginning of the 3rd instar (the time at which complete information was available) to the end of the 7th instar with the width of the crabs during the respective instars. Growth of the young crabs is thus followed through a pweriod of 129 days.

To date our figures are complete to October 8, 1948. As a number of crabs are still being held, the data on hand will be added to as each molt takes place. During the 1948-49 crab tagging program a new group of post-larval form crabs is hoped to be obtained to strengthen the infommation already gathered.

Bibliography:

MacKay, Donald C. Gl
1942. The Pacific edible crab, Cancer magister. Fisheries Research Board of Canada, Bulletin No. 62, Ottawa.