Habitat selection and food preference study of mud crab Scylla serrata (Forskal, 1755) was carried out at Klong Ngao mangrove forest, Ranong Province. Mud crabs were caught from the natural forest and mangrove plantations of different ages from August, 1994 to July, 1995. The crab abundance in the 8 years old plantation as compared to the abundance found in the natural forest was not significantly differences. The stomach content analysis of mud crabs using the points method and frequency of occurence method revealed that crustaceans were the major prey items. From the food preference index, grapsid crabs were the most chosen prey items. This corresponded to the benthic macrofaunal study in this mangrove forests that crustaceans in the Family Grapsidae were the dominant groups. Thus the study supported the roles of mangrove plantations at different ages in supporting the mud crab population through the availabity of food sources for these crabs.

The fishery biology study of mud crabs were conducted during July, 1994 to June, 1995. The relationship between carapace width (CW) and weight (W) in male crabs were $W = 0.0894 \, CW^{3.39}$ and in female crabs were $W = 0.2245 \, CW^{2.91}$. The sex ratios of all crabs measured was approximately 1:0.79. The size at sexual maturity in female crabs was 9.9 cm. The spawning of eggs occurred almost all year round with the peak during November and December. The data on population structure and dynamics of mud crabs have been calculated using the FiSAT program based on the carapace width frequency distribution. The growth parameters of the male crabs were: $L_\infty = 14.82$ cm.; $K = 0.94$ per year. and $t_0 = 0.05$ per year. While the growth parameters in female crabs were: $L_\infty = 12.51$ cm.; $K = 1.26$ per year and $t_0 = 0.06$ per year. Total mortality (Z) in the male and female crabs were 5.18 and 3.32 per year respectively. The recuitment occured all year round with the recruitment in male occured during July to August. The recuitment in female crabs occurred during July. Of the total catch, most of the crabs were less than one year of age. The catch statistics showed the increasing trend of immature female crabs and at least 80 % of the total catch do not get a chance to spawn before entering the fishing.

ภาควิชา........วิทยาศาสตร์ทางทะเล............ ลายมือชื่อนิสิต.................................

สาขาวิชา........วิทยาศาสตร์ทางทะเล............ ลายมือชื่ออาจารย์ที่ปรึกษา...............................

ปีการศึกษา..............2539.................... ลายมือชื่ออาจารย์ที่ปรึกษาร่วม............................