

Thesis Title Reproductive Biology of the Large Oyster
Crassostrea Belcheri in Thailand.

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ABSTRACT

The large oyster Crassostrea belcheri (Sowerby) collected from Surat Thani Province were transferred to Prachuap Khiri Khan Province and maintained in the sea in Manao Bay and in the earth pond at the Prachuap Khiri Khan Coastal Aquaculture Development Centre during March 1988 to February 1989. This study aims to compare the condition index, the reproductive cycle, and the spawning season of the oysters of two batches.

The results revealed that the size of the large oyster maintained in the earth pond was significantly greater than that of the oyster kept in the sea within the range of 8.50-16.50 cm, 123.42-496.07 g and 7.20-13.50 cm, 81.00-362.11 g, respectively. The commercial condition index of the oysters maintained in the

sea and in the earth pond varied from 3.08-24.86 and 2.96-14.67, respectively. The spawning season of the oyster maintained in the sea indicated two peaks: the first was in April (50% spawning) and the second was in September (65% spawning). For the oyster grown in the earth pond, the spawning peaks was in February (40% spawning) and in November (50% spawning). However, ANOVA revealed that the mean values of the condition index and the percentage of the spawning oysters were not different between the two locations and around year ($p < .05$). The monthly mean values of the salinity and the temperature of the sea and the earth pond were slightly changed. The mean values of the salinity and the temperature of the sea and the earth pond were about 29.30-35.00 ppt, 26.50-33.85 °C and 29.30-35.30 ppt, 26.30-32.00 °C, respectively.

It can be interpreted that the culture of the large oyster in the earth pond can be applicable to the monitoring of broodstocking for further artificial propagation and management of the oyster conditioning. In addition, the allocation of the oyster to another potential areas as to recruit the oyster production and genetic variability in Thai water is proven possible.