

CHAPTER V

DISCUSSIONS AND CONCLUSIONS

5.1 Discussions

1. Choowong *et al.* (2004) reported that the study area was in the former tidal flat based on the geomorphological evident. The molluscan assemblages in this study also show that their living environment was in the intertidal (mangrove) environment.

2. Three areas dated by C14 dating at Khao Rap area is approximately 1520±250 BP., Wat Thung Noi School area is approximately 2200±270 BP. and Ban Don Makham area is approximately 7360±420 BP. All of them indicated that the shells belong to Holocene. The results from C14 dating and the high of the sea notch show the Holocene sea-level envelope for Thailand which can be represented the elevation of the study area. At Khao Rap, the elevation is equal the present mean sea level whereas Wat Thung Noi School is 0.5 m above the present mean sea level and Ban Don Makham is 2.2 m above the present mean sea level. (Figure 5.1, 5.2)

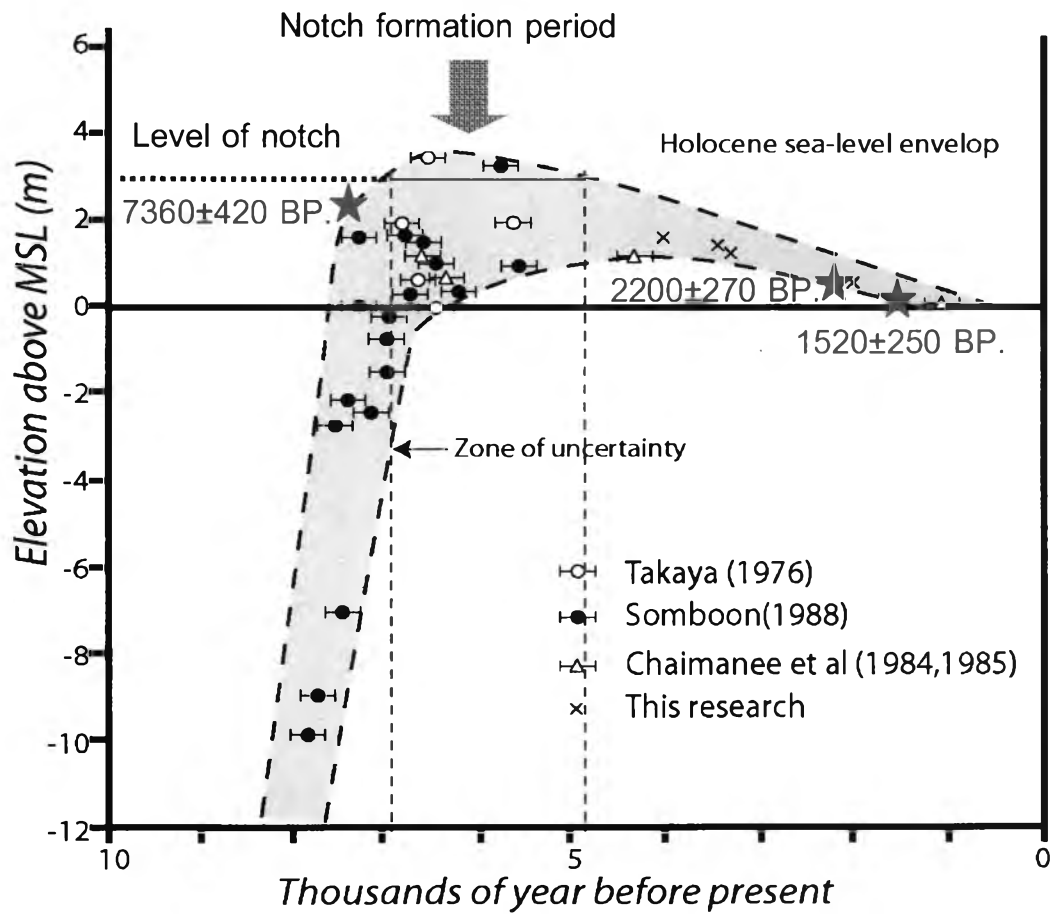


Figure 5.1 Holocene sea-level envelope for Thailand and level of notch (Modified from Choowong *et al.*, 2004).

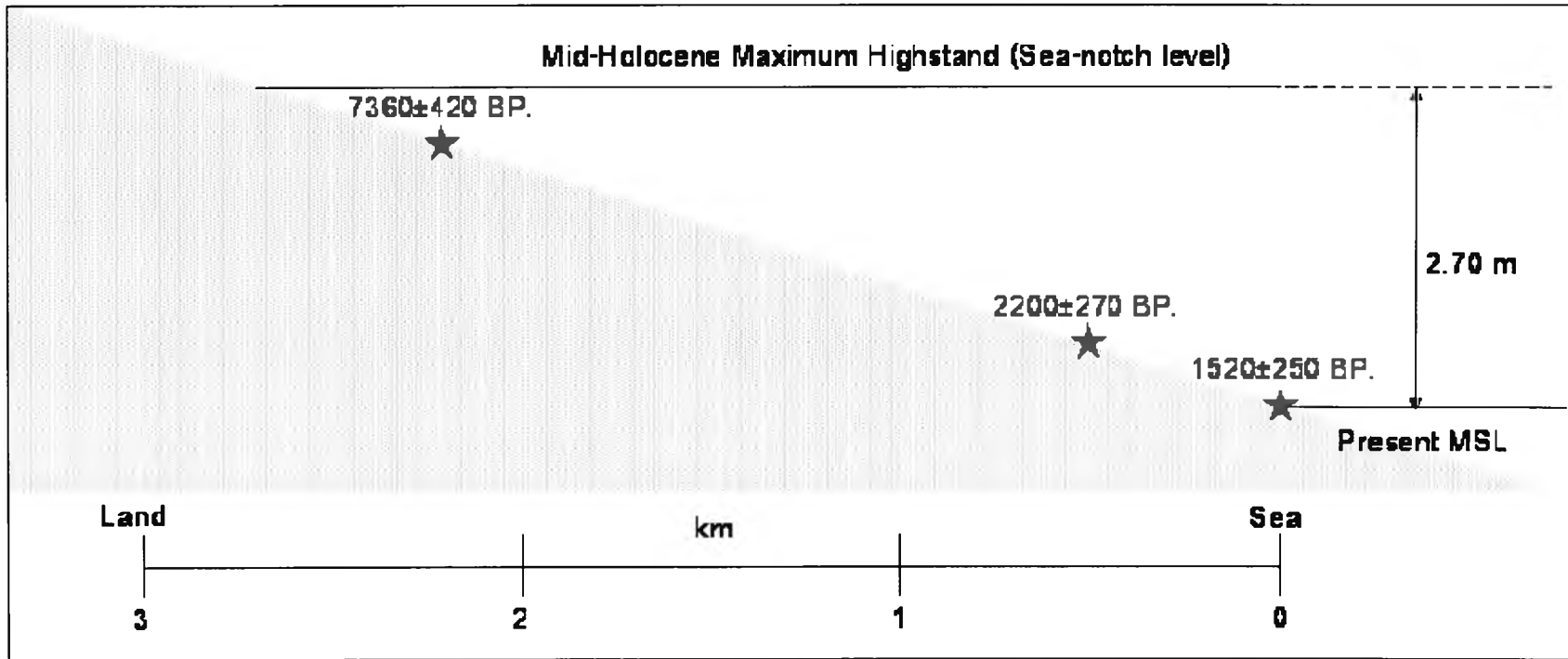


Figure 5.2 Sketch diagram showing relationship between mid-Holocene maximum highstand and age is dating control the progradation during marine regression.

5.2 Conclusions

More than 75 molluscan species (Gastropoda: 31/Bivalvia: 44) species belong to 55 genera (Gastropoda: 26/Bivalvia: 29) and 35 families (Gastropoda: 17/Bivalvia: 18) were investigated from 5 localities: Wat Ban Khao Daeng, Khao Rap, Wat Thung Noi School, Ban Don Makham and Ban Nong Tao Pun Lang (Table 5.1). They are *Umboonium vestiarium*, *Cerithidea (Cerithideopsis) cingulata*, *Turritella terebra*, *Strombus canarium*, *Strombus robustus*, *Strombus (Doxander) vittatus*, *Cypraea talpa*, *Polinices (P.) mammilla*, *Polinices (Glossaulax) didyma*, *Natica tigrina*, *Sinum eximium*, *Bursa rana*, *Murex trapa*, *Lataxiena fimbriata*, *Thais lacera*, *Babylonia areolata*, *Pseudoneptunea varicose*, *Phos senticosus*, *Nassaria pusilla*, *Nassarius nodiferus*, *Nassarius pullus*, *Nassarius siquijorensis*, *Pugilina (Hemifusus) tuba*, *Oliva miniacea*, *Vexillum curviliratum*, *Scalptia scalariformis*, *Tomopleura pouloensis*, *Turricula javana*, *Ptychobela nodulosa*, *Terebra evoluta*, *Architectonica perdix*, *Barbatia signata*, *Anadara granosa*, *Anadara oblonga*, *Anadara sp.*, *Anadara (Potiarca) pilula*, *Anadara (Scapharca) inaequalis*, *Scelidionarca pectunculiformis*, *Modiolus philipinarum*, *Plicatula chinensis*, *Chlamys cloacata*, *Minnivola pyxidata*, *Amusium pleuronectes*, *Placuna placenta*, *Cycladicama oblonga*, *Chama brassica*, *Vepricardium coronatum*, *Maetra cumingii*, *Maetra luzonica*, *Maetra (Coelomaetra) antiquate*, *Solen curtus*, *Cultellus lacteus*, *Tellina capsoides*, *Tellina Cygnus*, *Tellina timorensis*, *Tellina spengleri*, *Tellina sp.*, *Psammotreta (Tellinimaetra) edentula*, *Gari truncate*, *Solecurtus exaratus*, *Azorinus abbreviatus*, *Circe scripta*, *Anomalocardia squamosa*, *Placamen calophylla*, *Placamen chloroticum*, *Meretrix meretrix*, *Pitar sp.*, *Marcia hiantina*, *Paphia undulate*, *Paphia (Protapes) gallus*, *Dosinia cretacea*, *Dosinia dilecta*, *Dosinia trailli*, *Dosinia tumida* and *Corbula (Notocorbula) fortisulcata*.

Based on the results of chapter IV *Cerithidea (Cerithideopsis) cingulata*, *Natica tigrina*, *Nassarius pullus*, *Placamen chloroticum* and *Marcia hiantina* were examined in all areas. They indicate the intertidal (mangrove) environment in Holocene. Sea notch

found in adjacent area which caused by the marine erosion, as well as the evidence and analysis of marine molluscan fossils can be concluded that one of the study areas at Ban Don Makham which is around 4 km from recent coastline used to be affected by the transgression and the intertidal or mangrove environment occurred in 7360 ± 420 BP. After that the regression had been occurred until reaching the mean sea level at the present coastline.

Table 5.1 Summary of Molluscan, their age and environment in the study area.

Area	Family (Gastropoda/Bivalvia)	Genus (Gastropoda/Bivalvia)	Species (Gastropoda/Bivalvia)	Age		Depositional Environment
				Relative	Absolute	
Wat Ban Khao Daeng	16(6/10)	22(7/15)	28(7/21)	-	-	Beach
Khao Rap	22(11/11)	38(17/21)	49(22/27)	Holocene	1520±250	Intertidal (mangrove)
Wat Thung Noi School	22(12/10)	31(17/14)	38(20/18)	Holocene	2200±270	Intertidal (mangrove)
Ban Don Makham	13(7/6)	18(9/9)	23(9/14)	Holocene	7360±420	Intertidal (mangrove)
Ban Nong Tao Pun Lang	4(1/3)	4(1/3)	4(1/3)	Holocene	-	Intertidal