Thanaporn Pinpart 2010: Sequence Divergence of Mitochondrial DNA among Freshwater Prawn, Genus *Macrobrachium* in Basins of the Central, Western and Eastern Parts of Thailand. Master of Science (Genetics), Major Field: Genetics, Department of Genetics. Thesis Advisor: Associate Professor Lertluk Ngernsiri, Ph.D. 116 pages.

Freshwater prawns of the genus *Macrobrachium* from the provinces in central, western and eastern parts of Thailand were morphologically classified into 10 species namely, *M. assamese*, *M. lanchesteri*, *M. rosenbergii*, *M. tratense*, *M. sintangense*, *M. forcipatum*, *M. dienbienphuense*, *M. hirsutimanus*, *M. niphanae* and *M. sp3*. Their complete nucleotide sequences of *16S rRNA* gene were determined. The gene sequences ranged from 1300-1310 bp. The average evolutionary distance within and between species were 0.000-0.026 and 0.023-0.351 respectively. There is inconsistency between morphological features and genetic divergence in the species *M. assamense*. The species showed very little variation and formed a very well-supported clade with *M. lanchesteri*. Species in the *M. pillimanus* group, *M. forcipatum*, *M. dienbienphuense* and *M. hirsutimanus* formed a different clade and are closer to *M. lanchesteri* and *M.rosenbergii*. Thus, at least 8 *Macrobrachium* species in this study were supported species status by molecular evidence. Moreover, species specific marker using multiplex PCR for 3 species, *M. hirsutimanus*, *M. rosenbergii* and *M. lanchesteri* were successfully developed.

_____ _____ __ / __ / __

Student's signature Thesis Advisor's signature