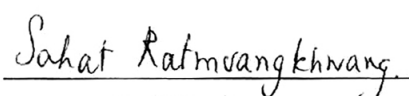
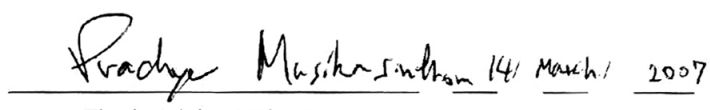


Sahat Ratmuangkhwang 2007: Taxonomic Review of the Southern Asian Airsac Catfish  
*Heteropneustes fossilis* (Siluriformes :Heteropneustidae). Master of Science (Fisheries Science),  
Major Field: Fisheries Science, Department of Fishery Biology. Thesis Advisor: Mr. Prachya  
Musikasinthorn, Ph.D. 93 pages.

The Southern Asian Airsac Catfish, *Heteropneustes fossilis* (Siluriformes: Heteropneustidae), is widely distributed from Pakistan, the Indian subcontinent, Sri Lanka through Indo-China including Malay Peninsula. Although its wide distribution and importance as a food fish, morphological comparisons between local populations including examination of type specimens of related nominal species presently treated as junior synonyms of the species for testing real taxonomic diversity of the species has never been done so far. Morphological comparisons between local populations within its distribution range, totally 645 specimens from 14 river basins including the Indus, Ganges, Ganges-Brahmaputra delta, Brahmaputra, Kerala state, Cauvery, Sri Lanka, Upper Irrawaddy, Lower Irrawaddy, Sittoung, Salween, Chao Phraya, Eastern and Tapi river basin has been conducted. The result of discriminant analysis from 7 meristic characters indicated that the examined local populations can be separated into two major groups. The former and later group can be characterized by 61-78 (mean 69) vs. 73-86 (mean 79) anal fin rays, 42 - 47 (mean 45) vs. 45-51 (mean 48) caudal vertebrae, caudal peduncle depth 5.0-7.3 (mean 5.8) vs. 3.3-5.8 (mean 4.5) % standard length (SL) and pectoral spine length 6.9-10.9 (mean 9.3) vs. 9.8- 13.4 (mean 12.7) % SL, respectively. The student t-test from 11 meristic characters between the two groups showed that 8 of them were significant ( $p < 0.001$ ). The analysis of covariance (ANCOVA) from 36 morphometric characters indicated that 31 of them were significantly different between the two groups ( $p < 0.001$ ). The former group distributed from the Indus River basin in Pakistan, Ganges, Brahmaputra, Cauvery Rivers and Kerala state of the Indian subcontinent, Sri Lanka and the Upper Irrawaddy River basin in China and Myanmar whereas the later group distributed from the Upper to Lower Irrawaddy, Sittoung, Salween River basins in Myanmar, the Chao Phraya, Eastern and Tapi River basins in Thailand. The two groups are sympatrically distributed in the Upper Irrawaddy River basin. The comparison with the original descriptions and the type specimens of all nominal species of the congeners indicated that the first group is *H. fossilis* (Bloch, 1794) and the second group is *H. kemratensis* (Fowler, 1937).

  
Student's signature

  
Thesis Advisor's signature