Systematic revision and phylogenetic relationship among populations of clariid species in South East Asia

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Abstrak

Among the approximately 25,000 described fish species, 40% occur mostly in fresh water (Nelson, 1994). The majority of the World?s freshwater fish biodiversity is located in the tropical areas (Lowe-McConnell, 1987; Kottelat et al., 1993; Kottelat &. Whitten, 1996). South-east Asia has the highest number of freshwater fish families. In this area, Indonesia displays the highest number of species with more than 1300 (Kottelat & Whitten, 1996).

World-wide freshwater fish species occur in only 0.01% of the Blue Planet's water and therefore are being threatened (Stiassny, 1996). Numerous recent publications from many countries clearly demonstrated this current crisis of freshwater fish diversity (Miller efal., 1989; Bianco, 1990; Mamyama &. Hiratsuka, 1992; Witte et ai., 1992; Moyle, 1994; Warren, &.Burr, 1994; Wilcove & Bean, 1994; Bruton, 1995; Elvira, 1996;.Lelek, 1996; Cambray, 11997; Stiassny, 1998; Cambray Bc Bianco, 1998). The rapid human population growth coupled with technological advances have 'released a "lethal cocktail oft hreats" against the freshwater ecosystems (Cambray & Bianco, 1998) The set of human disturbances is constituted by overexploitation, introductions of alien species, genetic contamination of native genes pools, environmental pollution, habitat degradation, hydrological manipulations and global effects as climatic changes. The compilers of the IUCN Red List of Threatened Animals point out that the major causes of threats are essentially the introduction of non-native fish species and the habitat modifications (Groombridge, 1993-1994). In Southeast Asia, particularly in Indonesia, threats of aquatic biodiversity above all, include loss of forest cover, pollution, exotic introductions and over-fishing, either for food or for aquarium trade (Kottelat ez al., 1993; Kottelat & Whitten, 1996).