

ECOLOGICAL AND MORPHOLOGICAL STUDY ON FISH-FAUNA FROM THE WATERS AROUND TAIWAN AND ITS ADJACENT ISLANDS¹

20. Study on the goatfishes—Mullidae

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ABSTRACT

The goatfishes (family Mullidae) of Taiwan and its adjacent islands, has been reviewed. Seventeen species, including one doubtful species, were recognized belonging to three genera. Of which seven species, *Upeneus bensasi* (TEMMINCK & SCHLEGEL), *U. tragula* RICHARDSON, *Mulloidichthys auriflamma* (FORSSKAL), *Pseudupeneus indicus* (SHAW), *P. trifasciatus* (LACÉPÈDE), *P. fraterculus* (VALENCIENNES), *P. barberinus* (LACÉPÈDE) are very common in the shallow waters of northern, north-eastern and south-western coastal areas. Three species, *Upeneus moluccensis* (BLEEKER), *Mulloidichthys vanicolensis* (VALENCIENNES), *Pseudupeneus chrysopleuron* (SCHLEGEL) distribute in more deep waters, but are rare in Taiwan. The last six species, *Upeneus quadrilineatus* are CHENG & WANG, *Pseudupeneus bifasciatus* (LACÉPÈDE), *P. janseni* (LACÉPÈDE), *P. barberinoides* (BLEEKER), *P. cyclostomus* (LACÉPÈDE), *P. chryserydros* (LACÉPÈDE) are recorded firstly in the fish-fauna from the waters of Taiwan.

INTRODUCTION

The goatfishes from the waters around Taiwan and its adjacent islands have not been studied except "Key to species of Mullidae in A synopsis of the Vertebrates of Taiwan" Chen (1969). In which, fifteen species, *Upeneus bensasi* (TEMMINCK & SCHLEGEL), *U. moluccensis* (BLEEKER), *U. sulphureus* (CUVIER & VALENCIENNES), *U. vittatus* (FORSSKAL), *U. tragula* RICHARDSON, *Mulloidichthys erythrinus* (KLUNZINGER), *M. auriflamma* (FORSSKAL), *Pseudupeneus barberinus* (LACÉPÈDE), *P. indicus* (SHAW), *P. trifasciatus* (LACÉPÈDE), *P. fraterculus* (CUVIER & VALENCIENNES), *P. porphyreus* JENKINS, *P. chrysopleuron* (TEMMINCK & SCHLEGEL), *P. luteus* (CUVIER & VALENCIENNES), *P. megalops* TANAKA were recorded belonging to three genera of the family Mullidae. In 1964, Liang & Yeh listed ten species, including one unknown species, *Upeneus bensasi*, *U. vittatus*, *U. tragula*, *Mulloidichthys vanicolensis*, *Pseudupeneus barberinus*, *P. trifasciatus*, *P. chrysopleuron*, *P. spirulus*, *P. taniatus* of this family in "List of the fish specimens preserving in the Museum of the Department of Zoology, National Taiwan University". Of which some of them have no collecting data, and one was preserved in very bad condition.

For the purpose of ecological and morphological study on fish-fauna from the waters around Taiwan and its adjacent islands, extensive and intensive collections of fishes have been made since 1968. In the present study, seventeen species belonging to three genera are recognized, including one doubtful species. Six of them, *Upeneus quadrilineatus* CHENG & WANG, *Pseudupeneus bifasciatus* (LACÉPÈDE), *P. janseni* (BLEEKER), *P. barberinoides* (BLEEKER), *P. cyclostomus* (LACÉPÈDE), and *P. chryserydros* (LACÉPÈDE) are recorded

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