

**STUDIES ON FLATFISH LARVAE  
IN THE SHELF WATERS OF THE  
CENTRE GREAT BARRIER REEF  
AUSTRALIA**

**1983**

**HOCK - CHAK LIEW**

PERPUSTAKAAN  
UNIVERSITI PERTANIAN MALAYSIA

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PERPUSTAKAAN SULTANAH NUR ZAHIRAH  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21030 KUALA TERENGGANU


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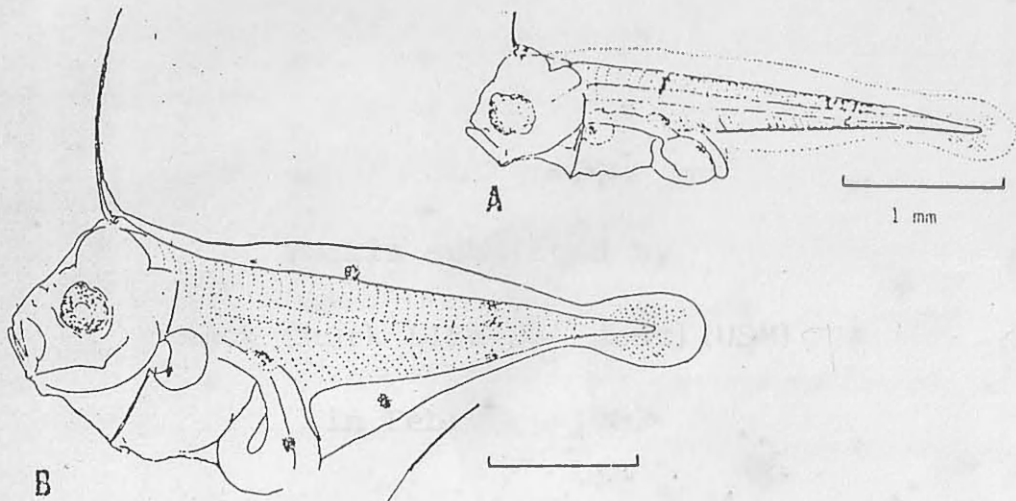
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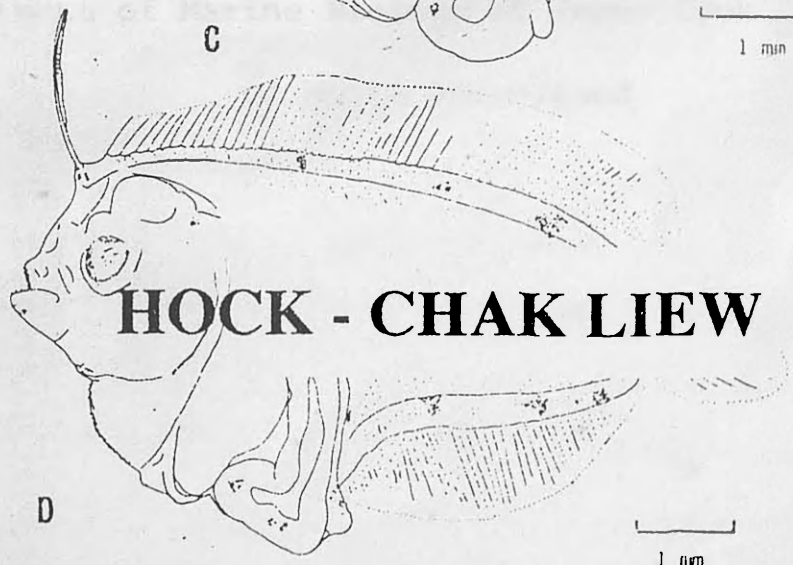
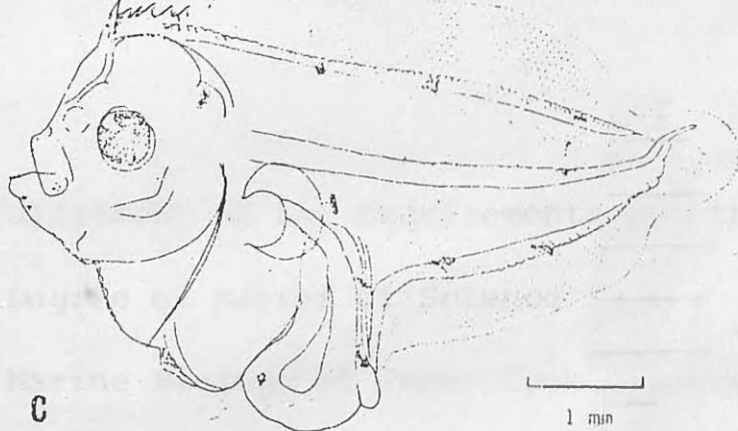
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# STUDIES ON FLATFISH LARVAE IN THE SHELF WATERS OF THE CENTRE GREAT BARRIER REEF AUSTRALIA



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STUDIES ON FLATFISH LARVAE (FAM. PSETTODIDAE AND BOTHIDAE,  
PLEURONECTIFORMES) IN THE SHELF WATERS OF THE CENTRAL  
GREAT BARRIER REEF, AUSTRALIA

TERENGGANU

Thesis submitted by

Hock-Chark LIEW BSc (Hons) (USM)

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of North Queensland

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## ABSTRACT

Over 14 000 flatfish larvae were collected from the shelf waters of the Central Great Barrier Reef, Australia, during August 1978 to December 1981, from which 11 types (Fam. Psettodidae and Bothidae) were identified to species. Descriptions of larval development sequence of these species, namely: *Psettodes erumei*, *Pseudorhombus arsius*, *Pseudorhombus elevatus*, *Pseudorhombus spinosus*, *Pseudorhombus diplospilus*, *Grammatobothus polyophthalmus*, *Grammatobothus pennatus*, *Asterorhombus intermedius*, *Engyprosopon grandisquama*, *Engyprosopon bleekeri*, and *Arnoglossus waiti* are given.

Spatial distribution of these larvae are strongly influenced by the predominantly longshore currents, and similarities in the bathymetric distribution of larvae and adults were observed. Spawning seasonality is variable. Some species spawn in the warmer months (e.g. *P. erumei*, *G. polyophthalmus* and *E. bleekeri*); some spawn in the cooler months (e.g. *P. elevatus*), while others spawn throughout the year (e.g. *E. grandisquama*, and *P. arsius*). From otolith studies, their pelagic larval phase was estimated to last from 3-6 wks, varying with species and prevailing conditions for growth. Estimates of larval growth rates were also made. During the larval phase, they exhibit diel vertical migration, moving to deeper waters during the day, when they feed most actively. The primary prey items of *G. polyophthalmus*, *G. pennatus* and *P. elevatus* larvae are copepods; those of *P. arsius*, *A. intermedius*, *E. grandisquama*, *E. bleekeri* and *A. waiti* larvae are larvaceans; of *P. spinosus* and *P. diplospilus* larvae are chaetognaths and larvaceans; while those of *P. erumei* larvae are copepods and fish larvae.