



SEAFDEC/UNEP/GEF Project on Establishment and Operation of a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand

Fenneropenaeus merguensis

Banana prawn



Scientific classification

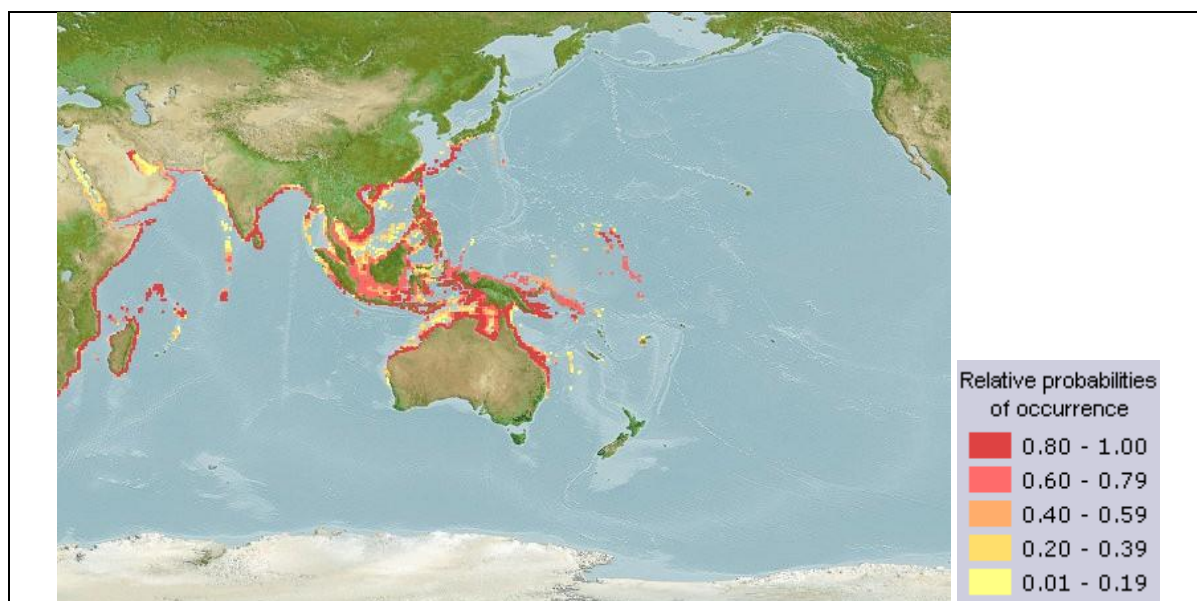
Kingdom:	Animalia
Phylum:	Arthropoda
Subphylum:	Crustacea
Class:	Malacostraca
Order:	Decapoda
Suborder:	Dendrobranchiata
Family:	Penaeidae
Genus:	Fenneropenaeus
Species:	<i>F. merguensis</i>

<u>Binomial name</u>
<i>Fenneropenaeus merguensis</i> (De man , 1888)
<u>Synonyms</u> ^[1]
<ul style="list-style-type: none"> <i>Penaeus merguensis</i> de Man, 1888

A. Environment/Ecology:

Benthic; brackish; depth range 10 - 55 m (Ref. [8](#)), usually ? - 20 m (Ref. [10](#)). Tropical, preferred 28°C (Ref. [107945](#)); 28°N - 29°S, 39°E - 168°E (Ref. [356](#))

B. Distribution:



Note: Distribution range colours indicate degree of suitability of habitat which can be interpreted as probabilities of occurrence.

Indo-West Pacific: from Kenya and the Persian Gulf to Hong Kong and Australia.

C. Length at first maturity / Size / Weight / Age:

Maturity: L_m [?](#), range 3 - ? cm Max length : 24.0 cm TL male/unsexed; (Ref. [8](#)); max. published weight: 50.00 g (Ref. [116487](#))

D. Short description

No dark brown transverse bands on the carapace and abdomen, which are uniformly glabrous. Uniformly high proximal part of triangular rostrum is particular in fully grown female. Rostrum usually armed with 7 or 8 dorsal and 5 or 6 ventral teeth. No lateral spines on telson. Color: in life, cream to yellow, sometimes minutely speckled with brown, olive green or light green pigments.

Brown banded antennules; brown antennae not banded; legs and pleopds are yellowish, sometimes tinged with brown or pink; uropods with combinations of yellowish green and brownish shades. Upper margin of rostrum is fringed with brown in fully grown individuals.

E. Biology

Maximum depth from Ref. 10. Maximum standard length: 24.0 cm (Ref. 356). Caught mainly by trawl, gill net, fish corral, push net and filter net (Ref. 10). Occurs in bottom mud or sandy-mud substrates in marine and estuarine environments (Ref. 8). Inhabits shallow open sea or in the mouth of a river and bay areas where water is more or less turbid (Ref. 374). Adult species periodically form aggregations or 'schools' offshore (Ref. 100847). Omnivore (Ref. 116259). Members of the order Decapoda are mostly gonochoric. Mating behavior: Precopulatory courtship ritual is common (through olfactory and tactile cues); usually indirect sperm transfer (Ref. 833). Spawning happened throughout the year with one peak in September (Ref. 94177).

F. Life cycle and mating behavior

Members of the order Decapoda are mostly gonochoric. Mating behavior: Precopulatory courtship ritual is common (through olfactory and tactile cues); usually indirect sperm transfer.

G. Fisheries

The species is commercially of major importance in the Persian Gulf and in Pakistan (Longhurst, 1970:280,281; Tirmizi, in Litt.). In India this species has often been confused with *Penaeus indicus* so that its present economic status is not quite accurately known, but Jones (1967: 1333) pointed out that it definitely contributes to the commercial fishery along the Karwar coast of W. India. Kurian & Sebastian (1976:100) reported that there is a small fishery for this species "in the middle region of east and west coasts" of India, while "juveniles are fished from estuaries". It is not mentioned for Bangladesh by Ahmad (1957), so that it is possible that a confusion with *P. indicus* has occurred here also. *P. merguensis* is also important off the northwestern coast of Malaya, and possibly the west coast of Thailand, and the Philippines (Longhurst, 1970:284-290). In Indonesia it is taken by trawlers off E. Sumatra, the south coast of Java, off Borneo and in the Arafura Sea, being the dominant species there. In Australia it is the most important commercial species of Queensland, and also in Western Australia it may become very important (Racek, 1955:222; 1957:12). In the Gulf of Papua it is trawled for; the catch is frozen. It plays a role in pond culture in Thailand (Shigueno, 1975:120) and in Indonesia. The total catch reported for this species to FAO for 1999 was 78 743 t. The countries with the largest catches were Indonesia (65 230 t) and Thailand (9 200 t).

H. IUCN Red List Status

(NA)

I. More Information:

1) Stocks

(NA)

2) Ecology

Ecology of *Fenneropenaeus merguensis*

Main Ref.	Holthuis, L.B., 1980
distribution	Brackishwater <ul style="list-style-type: none"> • estuaries/lagoons/brackish seas <p>Highlighted items on the list are where <i>Fenneropenaeus merguensis</i> may be found.</p>
Remarks	Occurs in bottom mud or sandy-mud substrates in marine and estuarine environments (Ref. 8). Inhabits shallow open sea or in the mouth of a river and bay areas where water is more or less turbid (Ref. 374). Adult species periodically form aggregations or 'schools' offshore (Ref. 100847). Omnivore (Ref. 116259).

Substrate

Substrate	Benthic: mobile; Soft Bottom: sand; mud;
Substrate Ref.	del Mundo, C.M., 2000
Special habitats	
Special habitats Ref.	

Feeding

feeding type	mainly animals (troph. 2.8 and up)
feeding type ref	Wassenberg, T.J. and B.J. Hill, 1993
feeding habit	hunting macrofauna (predator)
feeding habit ref	Wassenberg, T.J. and B.J. Hill, 1993

trophic level(s)	original sample		unfished population		Remark
	estimation method	Troph	s.e.	Troph	
	From diet composition				
	Ref.				
	From individual food items	3.77	0.36		

							resampling routine.
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3) Diet

(NA)

4) Reproduction

Reproduction of <i>Fenneropenaeus merguensis</i>	
Main Ref.	Ruppert, E.E., R.S. Fox and R.D. Barnes, 2004
Mode	dioecism
Fertilization	
Spawning Frequency	
Batch Spawner	No
Reproductive Guild	bearers External brooders
Description of life cycle and mating behavior	Members of the order Decapoda are mostly gonochoric. Mating behavior: Precopulatory courtship ritual is common (through olfactory and tactile cues); usually indirect sperm transfer.
Search for more references on reproduction	Scirus

5) Maturity

Maturity studies for <i>Fenneropenaeus merguensis</i>						
n = 1						
Sort by <input checked="" type="radio"/> Lm <input type="radio"/> Country <input type="radio"/> Locality <input type="radio"/> tm						
Lm (cm)	Length (cm)	Age range (y)	tm (y)	Sex of fish	Country	Locality
	2.5 -	0.5 -		unsexed		Unspecified

6) Spawning

Spawning for Fenneropenaeus merguensis
n = 1

J	F	M	A	M	J	J	A	S	O	N	D	Country	Locality
								111				Indonesia	Kotabaru waters, South Kalimantan

7) Spawning aggregation

(NA)

8) Fecundity

(NA)

9) Eggs

(NA)

10) Egg development

(NA)

11) Age/Size

List of Population Characteristics records for *Fenneropenaeus merguensis*

n = 4

Sex	Wmax	Lmax (cm)	Tmax (y)	Country	Locality
unsexed	50.00 g			Philippines	Unspecified, Philippines
male		18.3		India	Maharashtra / 2014-2014
male		19.5		Philippines	Unspecified, Philippines
female		24		Philippines	Unspecified, Philippines

12) Growth

Growth parameters for *Fenneropenaeus merguensis*

Maximum Length 24cm TL

n = 19

Note that studies where L_{oo} is very different (+/- 1/3) from L_{max} are doubtful.

Auximetric graph	[n = 7]
M vs K graph	[n = 18]

M vs Linf graph		[n = 18]										
Longevity vs 3/K graph		[n = 2]										
$\phi = 1.62$ $L_{inf} = 5.0$ cm $CL K = 1.7$ Median record no. 10 Ref. 85250												
Loo (cm)	Length Type	K (1/y)	to	Sex	M (1/y)	Temp° C	L m	Ø'	Country	Locality	Questionable	Captive
3.80	CL	4.160						1.78	USA	Gulf of Carpentaria	Yes	No
3.95	CL	1.800	-0.08	M	2.90			1.45	Iran	Strait of Hormoz	Yes	No
4.43	CL	1.400			1.96			1.44	Indonesia	Kotabaru, South Kalimantan	Yes	No
4.45	CL	1.310		M	3.70	29.00		1.41	Indonesia	Cilacap, south coast of Java	Yes	No
4.90	CL	1.625			2.16			1.59		Arafura Sea	Yes	No
4.99	CL	1.425			1.97			1.55		Arafura Sea	Yes	No
5.00	CL	1.400			1.95			1.54		Arafura Sea	Yes	No
5.00	CL	1.475			2.01			1.57		Arafura Sea	Yes	No
5.00	CL	1.500	-0.09	F	2.50			1.57	Iran	Strait of Hormoz	No	No
5.01	CL	1.650			2.17			1.62		Arafura Sea	Yes	No
5.02	CL	1.650			2.16			1.62		Arafura Sea	Yes	No
5.04	CL	1.875			2.35			1.68		Arafura Sea	Yes	No
5.15	CL	1.050		F	3.10	29.00		1.44	Indonesia	Cilacap, south coast of Java	No	No
5.20	CL	1.750			1.81			1.68		Arafura Sea	Yes	No
19.20	TL	2.000		F	3.18			2.87	India	Maharashtra	No	No

19.90	TL	1.400		M	2.50			2.74	India	Maharashtra	No	No
20.50	TL	2.000		M	3.13			2.92	India	Maharashtra	No	No
25.20	TL	1.200		M	2.11			2.88	India	Maharashtra	No	No
25.20	TL	1.900		F	2.85			3.08	India	Maharashtra	No	No

13) Length-weight

Length-Weight Parameters for <i>Fenneropenaeus merguensis</i>									
Length-weight (a vs b) graph					[n=2]	Median Record No. 2			
						a = 0.9497 cm CL			
						b = 2.8015 Ref. 118083			
Sort by <input checked="" type="radio"/> a <input type="radio"/> b <input type="radio"/> Country <input type="radio"/> Locality									
a	b	Doubtful?	Sex	Length (cm)	Length type	No.	Country	Locality	
0.9147	2.785	No	female	1.3 - 4.7	CL	633	Iran	Strait of Hormoz / 2012-2013	
0.9497	2.802	No	male	1.3 - 3.7	CL	705	Iran	Strait of Hormoz / 2012-2013	

14) Length-length

(NA)

15) Length-frequencies

(NA)

16) Morphometrics

(NA)

17) Morphology

Morphology data of <i>Fenneropenaeus merguensis</i>	
Identification keys	
Main Ref.	Motoh, H., 1980

Descriptive characteristics of juvenile and adult

Diagnosis	No dark brown transverse bands on the carapace and abdomen, which are uniformly glabrous. Uniformly high proximal part of triangular rostrum is particular in fully grown female. Rostrum usually armed with 7 or 8 dorsal and 5 or 6 ventral teeth. No lateral spines on telson. Color: in life, cream to yellow, sometimes minutely speckled with brown, olive green or light green pigments. Brown banded antennules; brown antennae not banded; legs and pleopds are yellowish, sometimes tinged with brown or pink; uropods with combinations of yellowish green and brownish shades. Upper margin of rostrum is fringed with brown in fully grown individuals.
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Meristic characteristics of Fenneropenaeus merguensis

Lateral Lines	Interrupted: No
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Fins

Dorsal fin(s)

Finlets No.	Dorsal
	Ventral

Paired fins

Pectoral	Attributes
	spines
	soft-rays
Pelvics	Attributes
	Position
	spines
	soft-rays

18) Larvae

(NA)

19) Recruitment

(NA)

20) Abundance

(NA)

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