

Fenneropenaeus merguensis**Banana prawn****Scientific classification**

Kingdom: [Animalia](#)
 Phylum: [Arthropoda](#)
 Subphylum: [Crustacea](#)
 Class: [Malacostraca](#)
 Order: [Decapoda](#)
 Suborder: [Dendrobranchiata](#)
 Family: [Penaeidae](#)
 Genus: [Fenneropenaeus](#)
 Species: ***F. merguensis***

Binomial name

Fenneropenaeus merguensis
 (De man, 1888)

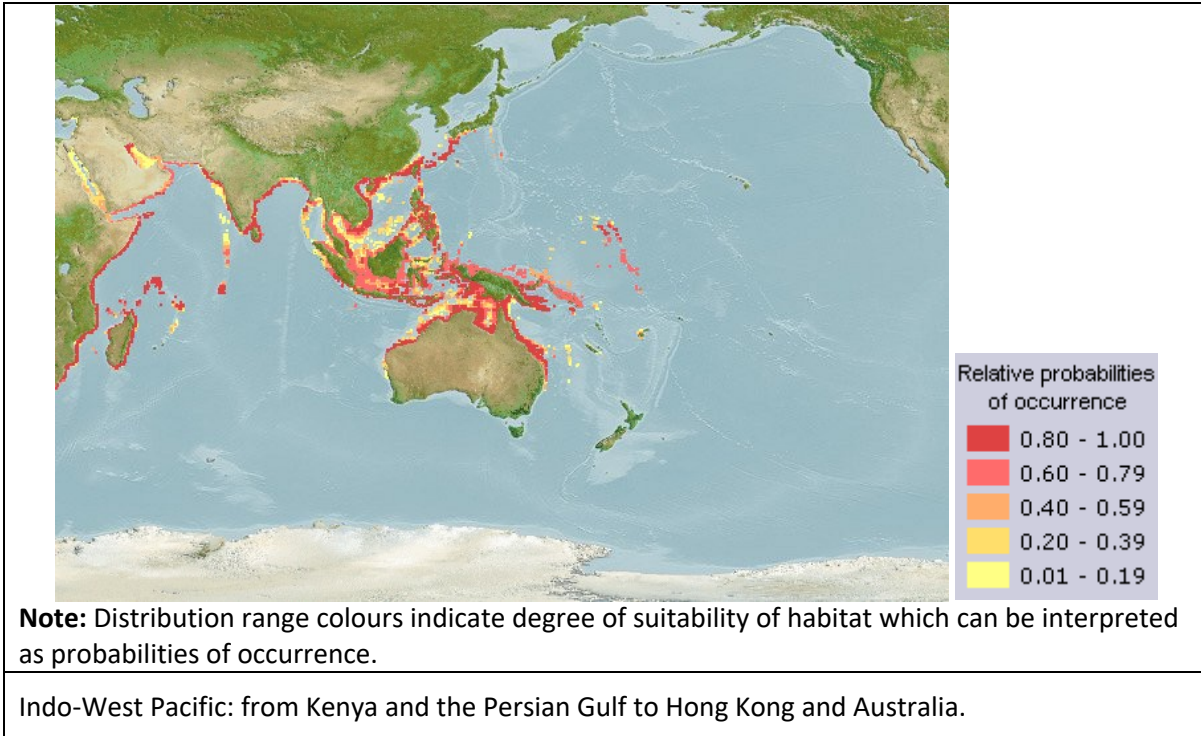
Synonyms ^[1]

- *Penaeus merguensis* 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:



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

- **estuaries/lagoons/brackish seas**

Highlighted items on the list are where *Fenneropenaeus merguensis* may be found.

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	s.e.	
	From diet composition					
	Ref.					
	From individual food items	3.77	0.36			Trophic level estimated from a number of food items using a randomized resampling routine.

3) Diet

(NA)

4) Reproduction

Reproduction of Fenneropenaeus merguensis

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 <i>Fenneropenaeus merguensis</i>													
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](#)

L _{oo} (cm)	Length Type	K (1/y)	t ₀	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	- 0.0 8	M	2.9 0			1.4 5	Iran	Strait of Hormoz	Yes	No
4.43	CL	1.400			1.9 6			1.4 4	Indonesi a	Kotabaru, South Kalimantan	Yes	No
4.45	CL	1.310		M	3.7 0	29.00		1.4 1	Indonesi a	Cilacap, south coast of Java	Yes	No
4.90	CL	1.625			2.1 6			1.5 9		Arafura Sea	Yes	No
4.99	CL	1.425			1.9 7			1.5 5		Arafura Sea	Yes	No
5.00	CL	1.400			1.9 5			1.5 4		Arafura Sea	Yes	No
5.00	CL	1.475			2.0 1			1.5 7		Arafura Sea	Yes	No
5.00	CL	1.500	- 0.0 9	F	2.5 0			1.5 7	Iran	Strait of Hormoz	No	No
5.01	CL	1.650			2.1 7			1.6 2		Arafura Sea	Yes	No
5.02	CL	1.650			2.1 6			1.6 2		Arafura Sea	Yes	No
5.04	CL	1.875			2.3 5			1.6 8		Arafura Sea	Yes	No
5.15	CL	1.050		F	3.1 0	29.00		1.4 4	Indonesi a	Cilacap, south coast of Java	No	No
5.20	CL	1.750			1.8 1			1.6 8		Arafura Sea	Yes	No
19.20	TL	2.000		F	3.1 8			2.8 7	India	Maharasht ra	No	No
19.90	TL	1.400		M	2.5 0			2.7 4	India	Maharasht ra	No	No
20.50	TL	2.000		M	3.1 3			2.9 2	India	Maharasht ra	No	No
25.20	TL	1.200		M	2.1 1			2.8 8	India	Maharasht ra	No	No
25.20	TL	1.900		F	2.8 5			3.0 8	India	Maharasht ra	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	Country <input type="radio"/>		Locality <input type="radio"/>	
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.
Meristic characteristics of <i>Fenneropenaeus merguensis</i>	
Lateral Lines	Interrupted: No

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)

References

1. Ahmed, M. and G. Abbas 2000 Growth parameters of the finfish and shellfish juveniles in the tidal waters of Bhanbhore, Korangi Creek and Miani Hor Lagoon. Pakistan J. Zool. 32(1):21-26.
2. Baboli, M.J. and M. Velayatzadeh 2013 Determination of heavy metals and trace elements in the muscles of marine shrimp, Fenneropenaeus merguensis from Persian Gulf, Iran. The Journal of Animal & Plant Sciences 23(3):786-791.
3. Bartley, D.M. (comp./ed.) 2006 Introduced species in fisheries and aquaculture: information for responsible use and control (CD-ROM). Rome, FAO.
4. Bisby, F.A., M.A. Ruggiero, K.L. Wilson, M. Cachuela-Palacio, S.W. Kimani, Y.R. Roskov, A. Soulier-Perkins and J. van Hertum 2005 Species 2000 & ITIS Catalogue of Life: 2005 Annual Checklist. CD-ROM; Species 2000: Reading, U.K.
5. Chan, T.Y. 1998 Shrimps and prawns. 851-971. In Carpenter, K.E. and V.H.Niem (eds). FAO species identification guide for fishery purposes. The living marine resources of the Western Central Pacific. Vol. 2. Cephalopods, crustaceans, holothurians and sharks. Rome, FAO. 687-1396.

6. Cheung, W.L., R. Watson and D. Pauly 2013 Signature of ocean warming in global fisheries catch. *Nature* 497:365-368.
7. Chullasorn, S. and P. Martosubroto 1986 Distribution and important biological features of coastal fish resources in Southeast Asia. FAO Fisheries Technical Paper 278, 84 p.
8. CMFRI 2012 Annual report 2011-2012. Central Marine Fisheries Research Institute, Cochin. 274 p.
9. CMFRI 2014 Annual report 2013-2014. Central Marine Fisheries Research Institute, Cochin. 274 p.
10. CMFRI 2015 Annual report 2014-15. Central Marine Fisheries Institute, Cochin. 353 p.
11. Crosnier, A. 2007 Peneides shrimps of New Caledonia. In Payri, C.E.; de Forges R.B. (eds) Compendium of marine species of New Caledonia. Doc. Sci. Tech. 117, 2nd edition, IRD Noumea, pp. 301-303.
12. De Man, J.G. 1888 Report on the podophthalmus Crustacea of the Mergui Archipelago, collected for the Trustees of the Indian Museum, Calcutta, by Dr. John Anderson, F.R.S., Superintendent of the Museum. *Journal of the Linnean Society of London (Zoology)* 22:1-312.
13. del Mundo, C.M. 2000 Philippine decapod crustacea. An illustrated handbook on the commercially important decapod crustacea of the Philippines. Fisheries Resources Evaluation and Environmental Services Division, Bureau of Fisheries and Aquatic Resources. Quezon City, Philippines. 83 p.
14. Dwiponggo, A. 1987 Indonesia's marine fisheries resources. In Bailey, C., Dwiponggo, A., Marahudin, F. (eds). Indonesian marine capture fisheries. ICLARM Studies and Reviews 10. Manila, Philippines, Directorate General of Fisheries, and Marine Fisheries Research Institute, Ministry of Agriculture, Jakarta, Indonesia. 196 p.
15. FAO 1980 Report of the workshop on the biology and resources of penaeid shrimps in the South China Sea area - Part I. South China Sea Fisheries Development and Coordinating Programme, Manila, Philippines, October 1980.
16. FAO-FIES 2017 Aquatic Sciences and Fisheries Information System (ASFIS) species list. Retrieved from <http://www.fao.org/fishery/collection/asfis/en> (accessed 08/06/2017).
17. Finlex Data Bank 2008 Maa- ja metsätalousministeriön asetus kalastus- ja vesiviljelytuotteiden sallituista kauppanimistä. <http://www.finlex.fi/fi/laki/alkup/2008/20080597> [Accessed 01/06/2016].
18. Fødevarestyrelsen. 2012 Handelsnavne fisk version 2012. http://www.foedevarestyrelsen.dk/SiteCollectionDocuments/25_PDF_word_filer%20til%20download/06kontor/Maerkning/Handelsnormer_varestandarder/OEvrige_produkter/Handelsnavne%20fisk%20version%202012.pdf [Accessed 01/06/2015].
19. Holthuis, L.B. 1980 FAO Species Catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. FAO Fish. Synop. 125(1):271 p. Rome: FAO.
20. Hosie, A.M., A. Sampey, P.J. Davie and D.S. Jones 2015 Kimberley marine biota. Historical data: crustaceans. Records of the Western Australian Museum Supplement.
21. Kangas, M.I., S. Morrison, P. Unsworth, E. Lai, I. Wright and A. Thomson 2006 Development of biodiversity and habitat monitoring systems for key trawl fisheries in Western Australia. Final FRDC Report - Project 2002/038.
22. Kurian, C.V. and V.O. Sebastian 1976 Prawns and prawn fisheries in India. Delhi. Hindustan Publishing Corporation. 208 p.
23. Longhurst, A.R. 1970 Crustacean Resources. FAO Fish. Tech. Pap. (97):252-305.
24. Macintosh, D. J., E. C. Ashton and V. Tansakul 2002 Utilisation and knowledge of biodiversity in the Ranong Biosphere Reserve, Thailand. ITCZM monograph series (7): 29.
25. MarineSpecies.org 2050 MarineSpecies.org. <http://www.marinespecies.org/index.php>
26. Meager, J.J., D.J. Vance, I. Williamson and N.R. Loneragan 2003 Microhabitat distribution of juvenile *Penaeus merguensis* de Man and other epibenthic crustaceans within a mangrove

- forest in subtropical Australia. *Journal of Experimental Marine Biology and Ecology* 294(2):127-144.
27. Momeni, M., E. Kamrani, M. Safaie and F. Kaymaram 2018 Population structure of banana shrimp, *Penaeus merguensis* De Man, 1888 in the Strait of Hormoz, Persian Gulf. *Iranian J. Fish. Scie.* 17(1):47-66.
 28. Motoh, H. 1980 Field guide for the edible crustacea of the Philippines. Southeast Asian Fisheries Development Center (SEAFDEC). Aquaculture Department, Iloilo, Philippines.
 29. Motoh, H. 1980 Field guide for the edible crustacea of the Philippines. Southeast Asian Fisheries Development Center (SEAFDEC). Aquaculture Department, Iloilo, Philippines.
 30. Naamin, N. 1984 Population dynamics of banana prawn (*Penaeus merguensis* de Man) in the Arafura Sea, and an alternative management plan. Bogor Agricultural University, Bogor, Indonesia, 256 p. Ph.D. Thesis. (In Indonesian).
 31. Palomares, M.L.D., R. Froese, B. Derrick, S.-L. Nöel, G. Tsui, J. Woroniak and D. Pauly 2018 A preliminary global assessment of the status of exploited marine fish and invertebrate populations. A report prepared by the Sea Around Us for OCEANA. The University of British Columbia, Vancouver, p. 64.
 32. Panutrakul, S., S. Khamdech, P. Kerdthong, W. Senanan, N. Tangkrock-Olan and A. Alcivar-Warren 2007 Heavy metals in wild banana prawn (*Fenneropenaeus merguensis* De Man, 1888) from Chantaburi and Trat provinces, Thailand. *Journal of Shellfish Research* 26(4):1193-1202.
 33. Pérez Farfante, I. and B. Kensley 1997 Penaeoid and Sergestoid shrimps and prawns of the world: keys and diagnoses for the families and genera. *Mémoires du Muséum National d'Histoire Naturelle* 175:1-233.
 34. Racek, A.A. 1955 Littoral Penaeinae from New South Wales and adjacent Queensland waters. *Aust. J. Mar. Freshwat. Res.* 6(2):209-241.
 35. Radhakrishnan, E.V., V.D. Deshmukh, G. Maheswarudu, J. Josileen, A.P. Dineshababu, K.K. Philipose, P.T. Sarada, S.L. Pillal, K.N. Saleela, R. Chakraborty, G. Dash, C.K. Sajeev, P. Thirumilu, B. Sridhara, Y. Muniyappa, A.D. Sawant 2012 Prawn fauna (Crustacea: Decapoda) of India - An annotated checklist of the Penaeoid, Sergestoid, Stenopodid and Caridean prawns. *J. Mar. Biol. Ass. India*, 54 (1):50-72.
 36. Rao, C.V. 1991 Scientific, common and local names of commercially important edible marine fin and shell fishes from Andhra Pradesh. *Marine Fisheries Information Service* 108:1-10.
 37. Ruppert, E.E., R.S. Fox and R.D. Barnes 2004 *Invertebrate Zoology. A functional evolutionary approach*. 7th Ed. Brooks/Cole, Thomson Learning learning, Inc. 990 p.
 38. SAUP Database 2006 SAUP Database. www.seaaroundus.org.
 39. SEAFDEC 1984 Important penaeid prawns/shrimps of the Philippines. SEAFDEC Aquaculture Department.
 40. Shigueno, K. 1975 Shrimp culture in Japan. Tokyo, AITP (Assoc. Int. Tech. Promotion). 153 p.
 41. Silvestre, G. and D. Pauly (eds.) 1997 Status and management of tropical coastal fisheries in Asia. Workshop on Sustainable Exploitation of Tropical Coastal Fish Stocks in Asia, Manila, Philippines, 2-5 July 1996. ICLARM Conf. Proc. 53:208p.
 42. Suman, A. and C. Umar 2010 Dinamika populasi udang putih (*Penaeus merguensis* de Man) di perairan Kotabaru, Kalimantan Selatan. *J. Lit. Perikan. Ind.* 16(1):29-33.
 43. Sumiono, B. 1988 Estimation of growth and mortality in banana prawn (*Penaeus merguensis*) from the south coast of Java, Indonesia. In Venema, S.C., J. Möller-Christensen and D. Pauly (eds.). *FAO Fisheries Report* 389. Rome.
 44. Villarta, K.A., A.G.C. del Norte-Campos and W.L. Campos 2006 Some Aspects of the Population Biology of the Green Tiger Prawn *Penaeus semisulcatus* (De Haan, 1844) from Pilar and Capiz Bays, Northern Panay, West Central Philippines. *Science Diliman* 18(1):1-10.
 45. Walker, R.H. 1984 Australian prawn fisheries. In Gulland, J.A. and B.J. Rothschild (eds.) *Workshop on the Scientific Basis for the Management of Penaeid Shrimp*. Key West, Florida, USA.

46. Wassenberg, T.J. and B.J. Hill 1993 Diet and feeding behavior of juvenile and adult banana prawns *Penaeus merguensis* in the Gulf of Carpentaria, Australia. *Mar. Ecol. Prog. Ser.* 94:287-295.
47. Yambao, A.C., A.T. White, W.E. Ablong and M.R. Alcala 2001 Coastal environmental profile of Negros Oriental, Philippines. Cebu City : Coastal Resource Management Project of the Dept. of Environment and Natural Resources, xii, 107 p. : ill. (some col.), maps (some col.) ; 28 cm.
48. Yearsley, G.K., P.R. Last and R.D. Ward 1999 Australian Seafood Handbook, an identification guide to domestic species. CSIRO Marine Research, Hobart, Australia.