

Panulirus polyphagus
Mud Spiny Lobster



Scientific classification

Kingdom:	Animalia
Phylum:	Arthropoda
Subphylum:	Crustacea
Class:	Malacostraca
Order:	Decapoda
Family:	Palinuridae
Genus:	Panulirus
Species:	<i>P. polyphagus</i>

Binomial name

Panulirus polyphagus
 ([Herbst](#), 1793)

Synonyms

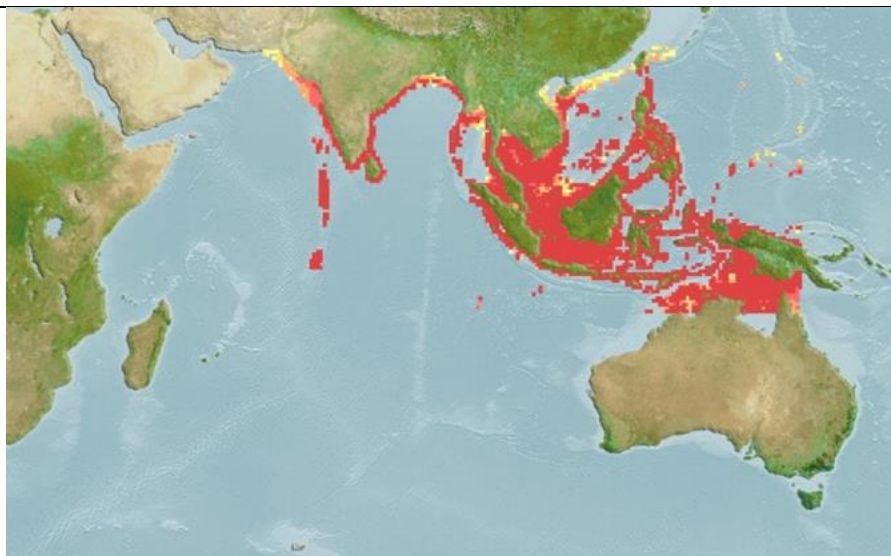
- *Cancer (Astacus) polyphagus* Herbst, 1793
- *Palinurus fasciatus* Fabricius, 1798
- *Panulirus fasciatus* (Fabricius, 1798)
- *Panulirus orientalis* Doflein, 1900

A. Environment/Ecology:

Environment

Benthic; brackish; depth range 3 - 90 m (Ref. [4](#)). Tropical; 26°N - 14°S, 64°E - 145°E (Ref. [107402](#))

B. Distribution:




***Panulirus polyphagus* was reported from 12 countries/islands**

Present in 12 countries/islands (endemic, native, introduced)

Continent	Country		Occurrence	Main Ref.
Asia	Bangladesh	BGD	native	4
Asia	Cambodia	KHM	native	4
Asia	India	IND	native	4
Asia	Indonesia	IDN	native	4
Asia	Myanmar	MMR	native	4
Asia	Pakistan	PAK	native	4
Asia	Philippines	PHL	native	4
Asia	Sri Lanka	LKA	native	85538
Asia	Thailand	THA	native	4
Asia	Viet Nam	VNM	native	4
Oceania	Australia	AUS	native	4
Oceania	Papua New Guinea	PNG	native	4

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Asia	Thailand	THA	native 	4
Asia	Viet Nam	VNM	native 	4
Oceania	Australia	AUS	native 	4
Oceania	Papua New Guinea	PNG	native 	4

Ecosystems where *Panulirus polyphagus* occurs

n = 9

Ecosystem	Type	Status	Ref.
Arabian Sea	Sea/Bay/Gulf	native	4
Indian Ocean	Sea/Bay/Gulf	native	4
Northern Bay of Bengal	Sea/Bay/Gulf	native	4
Pacific Ocean	Sea/Bay/Gulf	native	4
South China Sea	Sea/Bay/Gulf	native	4
South India and Sri Lanka	Sea/Bay/Gulf	native	85538
Sunda Shelf	sea/bay/gulf	native	4
West and South Indian Shelf	sea/bay/gulf	native	85538
Western Indo-Pacific	sea/bay/gulf	native	4

Distribution

Indo-West Pacific: from the coasts of Pakistan and India to Vietnam, the Philippines, Indonesia, Northwest Australia and the Gulf of Papua.

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

Maturity: L_m [10.5](#) range ? - ? cm

Max length : 40.0 cm TL male/unsexed; (Ref. [4](#)); common length : 25.0 cm TL male/unsexed; (Ref. [4](#))

Maximum total body length

About 40 cm, common from 20 to 25 cm.

D. Short description

Panulirus polyphagus grows to a length of about 40 cm (16 in). The antennal plate bears two large spines and there are no transverse grooves on the abdominal segments. Distinctive colour features by which this species can be distinguished from other spiny lobsters include a greenish-grey background colour and a thin white band near the hind edge of each segment. In Europe, the otherwise similar native species, the north eastern [Atlantic spiny crawfish](#) (*Panulirus regius*), has four large spines on the antennal plate, and smooth grooves on the abdominal segments.

E. Biology

It has lengths of 40 cm, maximum total body length; 20 to 25 cm, common length. Occurs at a depth range from 3 to 90 m, but usually less than 40 m (Ref. 4). It is found on muddy substrates and sometimes on rocky bottoms near river mouths in turbid water (Ref. 4). Lives mainly at river-influenced shelf in shallow, turbid water with moderate run-off (Ref. 105109). In general, palinurids are mainly considered carnivores, usually feeding upon sluggish, easily captured animals where most material is eaten alive or freshly killed (Ref. 105260). Individuals reared in captivity fed on a natural diet of gastropods, clams, crabs, squids and fish (Ref. 105110). Mating behavior: Precopulatory courtship ritual is common (through olfactory and tactile cues); usually indirect sperm transfer (Ref. 833). Major spawning occurs in January and September, minor peaks were observed in March and June, occasional spawning were observed in April, May, August and October to December, least spawning occurs in February and July (Ref. 106340).

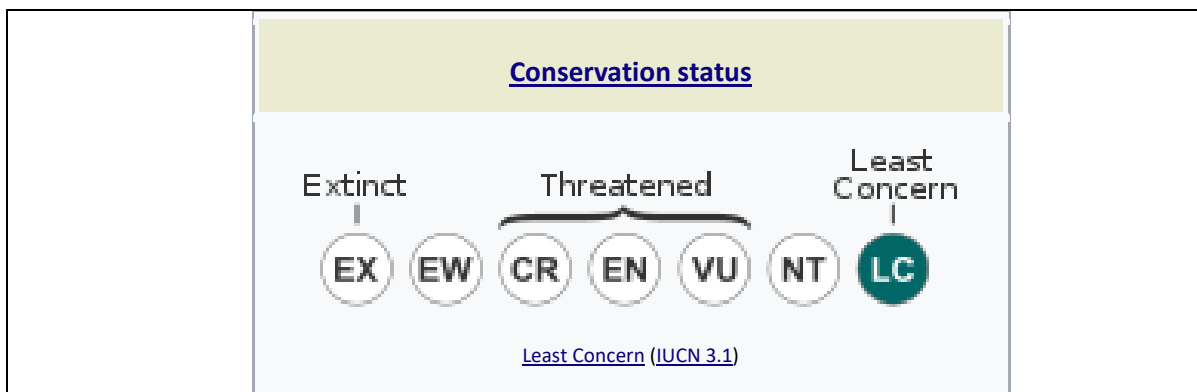
F. Life cycle and mating behavior

Mating behavior
Precopulatory courtship ritual is common (through olfactory and tactile cues); usually indirect sperm transfer (Ref. 833).

G. Fisheries

Interest to fisheries
In the Bay of Bengal and the Gulf of Thailand, the species is quite important commercially. In India, the main fishing season extends from November to March. The animals are caught by trawling, but also with set nets, seines, etc.; they rarely enter traps. Sold fresh and frozen in local markets and also transported to the larger towns. Served regularly in restaurants in Thailand, and else-where. In Thailand, mounted dry specimens, usually in fancy glass cases, are sold as curios to tourists.

H. IUCN Red List Status



I. More Information:

- 1) Stocks

???

- 2) Ecology

Ecology of *Panulirus polyphagus*

Main Ref.	Holthuis, L.B., 1991			
distribution	Marine - Neritic <ul style="list-style-type: none"> • supra-littoral zone • littoral zone • sublittoral zone 	Marine - Oceanic <ul style="list-style-type: none"> • epipelagic • mesopelagic • epipelagic • abyssopelagic • hadopelagic 	Brackishwater <ul style="list-style-type: none"> • estuaries/lagoons/brackish seas • mangroves • marshes/swamps 	Freshwater <ul style="list-style-type: none"> • rivers/streams • lakes/ponds • caves • exclusively in caves
	Highlighted items on the list are where <i>Panulirus polyphagus</i> may be found.			
Remarks	It is found on muddy substrates and sometimes on rocky bottoms near river mouths in turbid water (Ref. 4). Lives mainly at river-influenced shelf in shallow, turbid water with moderate run-off (Ref. 105109). In general, palinurids are mainly considered carnivores, usually feeding upon sluggish, easily captured animals where most material is eaten alive or freshly killed (Ref. 105260). Individuals reared in captivity fed on a natural diet of gastropods, clams, crabs, squids and fish (Ref. 105110).			

3) Diet

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4) Reproduction

Reproduction of *Panulirus polyphagus*

Main Ref.	Kagwade, P.V., 1988
Mode	dioecism
Fertilization	
Spawning Frequency	throughout the year, but peaking once
Batch Spawner	No
Reproductive Guild	bearers External brooders
Description of life cycle and mating behavior	Mating behavior: Precopulatory courtship ritual is common (through olfactory and tactile cues); usually indirect sperm transfer (Ref. 833).
Search for more references on reproduction	Scirus

5) Maturity

Maturity studies for *Panulirus polyphagus*

n = 3

	Lm (cm)	Length (cm)	Age range (y)	tm (y)	Sex of fish	Country	Locality
<input checked="" type="checkbox"/>	0.5 CL	-	-	2.20	female	India	Kovalam/ 1977-1978
<input type="checkbox"/>	20.5 TL	-	-		female	India	Sassoon Dock and Kasara Bunder/ 1976-1985
<input type="checkbox"/>	26.5 TL	-	-		male	India	Sassoon Dock and Kasara Bunder/ 1976-1985

6) Spawning

Spawning for *Panulirus polyphagus*

n = 1

J	F	M	A	M	J	J	A	S	O	N	D	Country	Locality
111	111	111	111	111	111	111	111	111	111	111	111	India	Sassoon Dock and Kasara Bunder

7) Spawning aggregation

(NA)

8) Fecundity

(NA)

9) Eggs

(NA)

10) Egg development

(NA)

11) Age/Size

(NA)

12) Growth

Growth parameters for *Panulirus polyphagus*

Maximum Length 40cm TL n = 6

Note that studies where L_{oo} is very different (+/- 1/3) from L_{max} are doubtful.Auximetric graph [n = 6]M vs K graph [n = 4]

M vs Linf graph [n = 4]

$\phi = 3.56$

L inf = 43.8 cm CW

K = 1.9

Median record no. 4

Ref. 116140

Loo (cm)	Length Type	K (1/y)	to	Sex	M (1/y)	Temp° C	Lm	ϕ'	Country	Locality	Questionable	Captive
36.10	TL	<u>1.580</u>		F	2.29			3.31	India	Maharashtra	No	No
36.50	TL	<u>1.830</u>		M	2.51			3.39	India	Maharashtra	No	No
37.50	CW	<u>1.600</u>		F	2.20			3.35	India	Maharashtra	No	Yes
43.80	CW	<u>1.900</u>		M	2.40			3.56	India	Maharashtra	No	Yes
44.30	TL	<u>0.223</u>	0.20	F				2.64	India	Bombay	No	Yes
53.70	TL	<u>0.200</u>	0.60	M				2.76	India	Bombay	No	Yes

13) Length-weight

Length-Weight Parameters for *Panulirus polyphagus*

<u>Length-weight (a vs b) graph</u>	[n=4]	Median Record No. 3 a = 0.4897 cm CL b = 3.1400 Ref. <u>106343</u>
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a	b	Doubtful?	Sex	Length (cm)	Length type	No.	Country	Locality
<u>0.0806</u>	2.616	No	female		TL		India	Unspecified
<u>0.0472</u>	2.802	No	male		TL		India	Unspecified
<u>0.4897</u>	3.140	No	male		CL		India	off Kovalam, Mangalore / 1977-1978
<u>0.2570</u>	3.710	No	female		CL		India	off Kovalam, Mangalore / 1977-1978

14) Length-length

Length-length Parameters for *Panulirus polyphagus*

n=2

Unknown length	a	b	Known length	r	Length range (cm)	Sex of fish
<u>CL</u>	0.579	0.395	TL		-	female
<u>CL</u>	0.646	0.407	TL		-	male

15) Length-frequencies

(NA)

16) Morphometrics

(NA)

17) Morphology

(NA)

18) Larvae

19) Recruitment

20) Abundance

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