

# Kinds of Sea Cucumber (Holothuroidea) from Eastern Coastal Waters of Natuna, Riau Islands

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## ABSTRACT

*This research aims to know the kinds of sea cucumber. Samples were collected in the coastal waters of Natuna, Riau Islands Province in June 2009. Samples were taken from two locations: Sepempang and Pengadah beach. Observations in a sample using the method transek quadrant 5 x 5 m. The sample on mikrohabitat done with snorkeling. Samples were collected later identified by virtue of differences morphology. Based on analysis of form, color, and type spicules found 16 a species in two locations, are, 7 species of aquatic Sepempang and 10 species of aquatic pengadah and 1 species found on both location consisting of the family: Holothuriidae and Stichopodidae. Of the genus Holothuria found 4 species and of the genus Stichopus found 3 species for waters Sepempang. While for waters Pengadah of the family: Holothuriidae found 4 genus i.e. Holothuria with 3 species, Actynopyga one species out Bohadschia 2 species, Pearsonothuria 1 species and to the family Stichopodidae found one genus Stichopus with 3 species.*

**Keywords:** kinds of sea cucumber, morfologi, sepempang and Pengadah Beach, Natuna

## INTRODUCTION

Natuna Islands have the wealth and the diversity of the fisheries and marine resources, as potential 1.197.520 tons of fishery (Dept. of marine fisheries district natuna, 2007). Of statistics known that production of Indonesian trepang 720 500 ha (Dahuri, 2002). And from the only 10 % of production trepang new use. But great potential, has not been able to contribute mean for the people of coastal, local fishermen in particular. One of the fishery potential has not been optimally exploited is a sea cucumber

Sea cucumber fishery commodities is one who has enough good prospects and high economical value, both on domestic and international market. Indonesia is the world's largest exporter of sea cucumber. Mainly exported to China, Japan, Korea, Singapore, Taiwan, and Australia. Price of average export trepang year 1996-2002 of the highest US\$ 15.06 per kg until lowest price US \$ 1.44 per kg. (Tuwo, 2004). The need for the appropriate product is increasing from year to year with production values this time depends on the arrest of sea cucumber by fishermen.

Natuna waters have a large enough area, inhabited by numerous species of sea cucumber that can be exploited for the needs of the people and food for export commodities. In his position as an export commodity, sea cucumber has been able to as a foreign exchange earner no small country, even in the development of appropriate increases every year, both in terms of volume as well as in the form of economic value (Directorate General Fisheries, 1990).

The rapid developing science in pharmacy, who working to find alternative trepang source that can be used as raw materials for medicines. Through such an activity livelihood source alternative natural materials of trepang, it also contributed to a reduced diversity the kinds of trepang in natuna waters and finally can cause extinction to the kinds of certain. At the moment of arrest, sea not only on the types of economic value but also to the kinds of cheap that was originally not a concern. The exploitation is often done intensively without looking at the type and size of the sea cucumber population very natural decrease. In addition exploited of coral reefs cause a decrease in the quality of resources and habitat and pollution threaten the majority of the coastal area which in turn can accelerate the decline in the availability of sea cucumber. Extinction of the types of trepang could happen, this leads to a loss of a germ plasm existing in nature. It is therefore necessary the preservation and cultivation of efforts to reduce excessive arrests.

Thus this research needs to be done to find out how the number of species that still exist in nature .and how great diversity trepang level still to be retained, so that this research can provide information for sea cucumber farmers to immediately do the cultivation of sea cucumber, and complement the data base of the kinds of sea cucumber from coastal waters Sepempang and

## MATERIALS AND METHODS

This research was carried out in the waters of eastern coasts of Natuna (Sepempang and Pengadah), Riau Islands. Animals Taxonomy Laboratory, Andalas University, Padang. The Oceanographic Research Center LIPI Jakarta, from June 2009 until December 2010.

The sample trepang use methods transek. On the location research made 2 transek shaped with size 50x100 m arranged parallel to the sea. Next made transek quadrant that had 5x5 m, modification of English, *et al.*, (1997) in Wilkinson (2008). The sample trepang done at night, trepang found in quadrant transek into bottles samples that has been provided before. The sample on into 2 to 5 m done through dives by using snorkeling. Name and kind trepang identified according to book Rowe and Doty (1977), Oceanographic Research Center Laboratory LIPI Jakarta.

## RESULTS AND DISCUSSION

From the identification obtained 196 individual trepang consisting of 16 species of two locations in coastal waters Natuna namely: Sepempang seven species and pengadah 10 species. One species found in a second location, derived from the order aspidochirotrida consisting of two the family namely Holothuriidae and Stichopodidae. There were four genus of the family Holothuriidae: *Holothuria*, six species *Actinopyga* (one species), *Bohadschia* (two species), *Pearsonothuria* (one species). The family Stichopodidae consisting of the one genus namely *Stichopus* (six species, but two species are not yet known).

Table 1. The family, genus, species, a number of individuals of trepang at Sepempang and pengadah, in the waters Natuna Riau Islands.

NoFamily Genus Species	Location	
	Sepempang	Pengadah
	a number of individuals a number of individuals	
I. <i>Holothuriidae</i>		
A. <i>Holothuria</i>	16	3
1. <i>H. atra</i> Jaeger	14	-
2. <i>H. edulis</i> Lesson	-	11
3. <i>H. fuscocincta</i> Jaeger	13	-
4. <i>H. hilla</i> Lesson		
5. <i>H. leucospilota</i> Brandt	12	-
6. <i>H. pericax</i> Selenka	-	13
B. <i>Actinopyga</i>		
7. <i>A. lecanora</i> Jaeger	-	11
C. <i>Bohadschia</i>		
8. <i>B. marmorata</i> Jaeger	-	12
9. <i>B. tenuissima</i> Semper	-	10
D. <i>Pearsonothuria</i>		
10. <i>P. graeffei</i> Semper	-	10
II. <i>Stichopodidae</i>		
E. <i>Stichopus</i>		
11. <i>S. chloronotus</i> (Brandt)	10	-
12. <i>S. noctivagus</i>	10	-
13. <i>S. quadrifasciatus</i>	12	-
14. <i>S. vastus</i>	-	14
15. <i>Stichopus</i> sp.1	-	13
16. <i>Stichopus</i> sp.2	-	12

### Marfologi, description and the spread of trepang

#### *Holothuria atra* Jaeger, 1833

*H. atra* also known as sea cucumber or trepang black rivet. Have a bodily form silendris and elongated. Length of the body 95-170 mm ( $131.44 \pm 21.44$  mm). The body wall of thick 2 mm and gentle. The color of the body generally black. There are on the anterior part of the mouth which is surrounded by 20 tentacles are black and shield-shaped. Upon the posterior part there are the anus at the end of the terminal.



Figure1. *Holothuria atra*

Ventral section of the tube feet are nifty little small-spaced and uneven spread meetings. Papillae on the dorsal parts are black short and small scattered showers with tapered tip. The surface of the body secretes a fluid which is red when it should be wiped with, hence often called sea cucumber of blood.

Spicules are the type table with high 55 - 60  $\mu\text{m}$ , edge table sometimes spiny 4 have a long pole crossing and ending with the form of a crown. Tube feet across the surface, number of feet tube more ventrally than the dorsal. The body wall with type spicules shaped table and rosset.

### ***Holothuria edulis* Lesson, 1830**

Figure2. *Holothuria edulis*

*H. edulis*, also known as sea cucumber with red chest. Have a round body shape stretched. The body length of 91-190 mm ( $127.79 \pm 8.22$  mm). The body wall thickness 2 mm and soft. The dorsal body color is black to purple-unguan and on the ventral part is colored reddish-brown. On the anterior portion there is a mouth surrounded by tentacles of 20 black and shield-shaped. On the posterior part of the lateral on the anus there is. Ventral section there are nifty little tube-feet as small as black spots arranged somewhat rarely spread unevenly. All surfaces of the body except near the anus is composed of 3-5 ambulakral line.

Papillae on the dorsal parts are black short and small. The form of the spikula of species *H. edulis* on the walls of the body is shaped like a table and rosset and without a pole. Spikula form table found on the dorsal and ventral part. Ventral section type amount less rosset and very little other than the dorsal part. Spikula of Tube-shaped legs have a cavity and also there is a shaped rod.

### ***Holothuria fuscocinerea* Jaeger, 1832**

Figure 3. *Holothuria fuscocinerea*

*H. fuscocinerea*, also known as coral sea cucumber. Have a silendris body shape and the lengthwise. The length of the body 70-90 mm ( $7.96 \pm 78.93$  mm). The body wall is thick and soft. Body colour greyish white on ventral parts. The ventral side is colored pale brown. On the dorsal colour is brownish-black transverse dorsal side composed. On the part of the terminal there is the anus. The mouth is on the ventral part of which is surrounded by 20 tentacles a shield-shaped.

ive 1 - 4 plug the hole. On integument ventral 5- 8 plug the hole. Moreover, there were type

stems on integument dorsal with long 100 - 160 m m, there are holes at both sides. On the top of papillæ dorsal only there are certain spicules type table. In tube feet type table undersized 40 - 60 mm, type studs with 3 - 4 pairs of a hole in the ventral portion of the body holothuriafuscocinerea.

#### **Holothuria hilla Lesson, 1830**



Figure4 . *Holothuria hilla*

*Holothuriiahilla*, also known as coralsea cucumber. Have silendris and rounded body shape. The body length of 50-75 mm. The body wall is thick and hard. The body color is generally young and Brown speckled yellow. Small papillae scattered evenly colored dark brown, composed from the tip of the anterior longitudinal to the posterior end. Feet tubes on the ventral part is composed of 3-4 lines on each ambulakral. The mouth is on the ventral and anal is located in the terminal.

Long body shape in the aquatic habitat, when appointed to the Mainland form of his body so it retracts and rounded, with a dark brown body color and speckled yellow. This species of shaped Spikula Type tables in the standing position, have the disc with a diameter of 40-50  $\mu\text{m}$ , there is a big hole in the middle of 4 and 4-12 small holes into the pole, had a short table with Crown. The walls of the body have a type spikual as table and type buttonholes.

#### ***Holothuria leucospilota* Brandt, 1835**



Figure 5. *Holothuria. leucospilota*

*H. leucospilota* also called black trepang. Have a silendris body shape and the lengthwise. The body length of 77-100 mm (85.92  $\pm$  7.36 mm). The body wall is thin and soft covered by papillae and software. The posterior section is somewhat larger than the anterior part. The body colour is generally black. On the ventral mouth is surrounded by 20 black tentacles. This species has an elastic thread-thread sticky called tubules cuvier would come out if there is a physical or chemical disturbance. When this species rests with the tubules cuvier would come out, this is one of the mechanisms of self defence from enemies.

Spikula of this species in the shape of the table, Type the diameter disc of 40-50  $\mu\text{m}$ , have 4 a big hole in the middle and 4-15 small hole by the side of disc, there's a bumpy and there is a flat, short table columns and Crown of spiky barbed at the edges.. When this species rests or if there is a physical or chemical disturbance the tubules cuvier would come out, this is one of the mechanisms of self defence from enemies.

#### ***Holothuria pericax* Selenka, 1867**



*huria. pericax*



*H. pericax* call also with sea cucumber mingkudu. Have a silendris body shape and the lengthwise. The body length of 190-198 mm ( $192.69 \pm 2.61$  mm). Soft and thick body wall with a thickness of 7 mm and thin skin. The body color is generally white to brownish with dark brown splotches that look like ribbons on the dorsal part. The structure of the body length folding. The ventral part of the body is yellowish white. Toe ambulakral reddish brown colored spread evenly and densely

Ventral section there is a mouth surrounded by tentacles that are in the shape of a shield. On the posterior part there is the anus at the end of the terminal. Papillae on the dorsal dark brown colored, tapered and has large tubercles on its base. The species *H. pericax* has a morfologi similar to *H. fuscocinerea*, unless his body different color and shape of the spot larger and it is irregular. This species of shaped Spikula Type table without the Crown, sometimes without a desk type pole, wavy disc edge  $25-45 \mu\text{m}$ , has four large holes in the middle. In addition there are types like spikula studs, the order was irregular with a length of  $15-30 \mu\text{m}$ . On the dorsal and ventral integumentary shapes spikula like rods.

### ***Actinopyga lecanora* Jaeger, 1833**



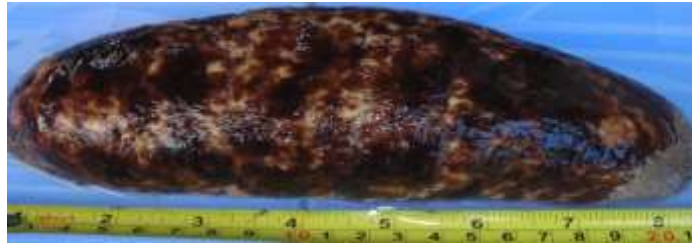
Figure 7. *Actinopyga lecanora*

*A. lecanora* also called trepang stones, koro sea cucumber. Have a round body shape and body size 66-95 mm ( $77.82 \pm 9.26$  mm). The body wall has a thickness between 3-5 mm. slippery body structure. The body color is generally yellow and there are white spots. Ventral section there is a mouth surrounded by tentacles that can be 20 irrevocably shaped shield. On the posterior ventral part position and there is a hole anus surrounded by 5 teeth yellow chalk. For the genus *Actinopyga* characterized by the presence of 5 small teeth surrounding the anus. *A. lecanora* will harden when held. This species has a branched tubules cuvier organs and could not be issued.

This species of Spikula shaped plate size of  $50 \mu\text{m}$ , in addition to the type of wall spikula present on the rosette-shaped body with a size of  $25-135 \mu\text{m}$ . The ventral part Spikula also type rosset, measuring  $25-80 \mu\text{m}$ . This species has a strong lime ring line and a great circle of the slab. The dorsal papillae are shaped with rossetspikula wall type body. The tentacles are straight trunk type spikula or curved with a length of  $60-240 \mu\text{m}$ . The body color is generally yellow and there are white spots. Ventral section there is a mouth surrounded by tentacles that can be 20 dijulurkan and irrevocably shaped shield. On the posterior ventral part position and there is a hole anus surrounded by 5 teeth yellow chalk. For the genus *Actinopyga* characterized by the presence of 5 small teeth surrounding the anus. *A. lecanora* will harden when held.

### ***Bohadschia tenuissima* Semper, 1868**

*B. tenuissima* is also known as sea cucumber with white sap, white sea cucumber or trepang birdlime jackfruit. Have a silendris body shape and the lengthwise. The body length of 99-104 mm ( $101.75 \pm 1.74$  mm). The body wall thickness 2 mm and hard. The body color is black generally there are white patches and spots of black. The color change occurs between sea cucumber are small and at the time of a large sea cucumber. At the time a small sea cucumber, less 130 mm sea cucumber, cream colored with Brown while on large sea cucumber more 130 mm, sea cucumber, cream colored with black splotches. *B. tenuissima* is very similar to *b. similis*, a striped blackits back and more dark on *b. tenuissima* (Purwati and Syahailatua, 2008).

Figure 8. *Bohadschia. tenuissima*

*B. tenuissima* have body fat can panhandle to look stretched, with light brown colored circular ribbons on her body. Color slick body structure. On the anterior portion of the ventral area there is a mouth surrounded by tentacles of 20 black and shield-shaped. On the posterior part there is the anus which has 5 teeth on the ends of the terminal. Ventral section there are nifty little tubes-small feet which are not arranged in a single line or spread out unevenly. The ends of the legs reddish brown colored ambulakrum. Spikula of these species shaped type granules, the type of rod, type plate that had 50  $\mu\text{m}$ , spicules are rod-shaped found on the tube feet integument dorsal and ventral. In the body wall of a dorsal and a body part ventral part spicules are found are the type granules / grain. In tube feet found spicules are the type of rod. On tentacles spicules are found are the type spiny rod with long 65-180  $\mu\text{m}$ , have organs tubules of cuvier.

#### ***Bohadschia marmorata* Jaeger, 1833**

*B. marmorata*, also known as sea cucumber with rubber. Have a silendris body shape and the lengthwise. Body size 170-180 mm ( $17.30 \pm 3.46$  mm.) The body wall is thick and hard. The structure of the body length folding as a mattress. The body color is generally yellow in color on the dorsal and ventral portions of the white color. On the back there is a color that is slightly older than the young yellow-white base color. Alcohol in aqueous solution and the color changed to a light brown speckled. Ventral section there is a mouth surrounded by tentacles that 20 shield-shaped. The terminal contains the anus and not toothed.

Figure 9. *Bohadschia marmorata*

Papillæ and tube feet not arrayed in a row. Papillæ to the dorsal part black short and small widely distributed unequally. Body filled papillæ fine, can distimulasi to cleave. These species having a plump body and can sprawled hinggaooklongways, with streamers of colored light brown ditubuhnya, circular the species are very sensitive to disorder; and take out the threads of tubules gluey quickly cuvier. The body wall of the ventral portion having granules spicules are shaped with long 20 - 30  $\mu\text{m}$  and form large rosset. The body wall of the dorsal portion having spicules shaped rosset with long 15- 20  $\mu\text{m}$

On the tube feet are there are the spicules are rod-shaped. The tube feet at the end of his terminal spicules shaped a slab. In the tentacles are the spicules are shaped a barbed shank whose lengths 60 - 180  $\mu\text{m}$

#### ***Pearsonothuria graeffei* Semper, 1868**

Trepang p. Graeffei called also with trepang red spot looks elongated rounded body. His body relatively large, its surface relatively coarse and conicle. A longer body 195-218 mm ( $206.70 \pm 8.15$  mm). The body wall thick 2 mm and soft. Brown color of a body young, there are spots brown mottled with the site the dark dorsal along.

Figure 10. *Pearsonothuria graeffei*

The ventral part there is a mouth surrounded by tentacles that 20 is black with white edges and shield-shaped. On the posterior part of the lateral is the anus. The ventral part there is a small tube feet are assembled in ambulakral meetings are spread unevenly. Papillae on the dorsal parts are black short spread unevenly with tapered tip. The species *p. graeffei* appropriate solitary and often found at the base of the slopes of the tubir hard in a die. These types also live among seaweed on Rocky Ridge equivalent of coral

Spicules of these species on the walls of the body is rosset and some of them shaped plate spicules of tube feet shaped pole. Spicules of tentacles shaped rosset and shaped record diameter 60 - 65  $\mu\text{m}$ , the form of a rosette undersized 20 - 30  $\mu\text{m}$ .

### ***Stichopus chloronotus* Brandt, 1835**

*S. chloronotus*, also known as sea cucumber or trepangdadok. The body shape is rectangular and trapezoidal cross section the appropriate latitude. The body length of 132-140 mm (135.8  $\pm$  2.60 mm). The body wall is thick and hard. The dorsal portion of the body color is Brown, ventral part is black. The dorsal side is filled with tubercles or papilla, papillae arranged in ambulakral. Such bulges forming Ambulakral an irregular bulge.

Figure 11. *Stichopus chloronotus*

The ventral side is filled with foot tubes arranged in 3 rows from the anterior to posterior. On the anterior portion there is a mouth surrounded by tentacles that are in the shape of a shield. On the lateral part there is the anus. This species of shaped Spikula Type tables and rods, rod-shaped type c. On species not found in the shape of spikularosset. The ventral part of the integumentary spikula shapes that are almost the same shape with spikula dorsal section of the. On the dorsal, integumentary spikula dominant position laid table (instead of standing or upside down). The dish has four large holes in the middle and around the 0% u2013 4 holes are small, relatively high pole and ended up with a spiked Crown. The C-shaped Rod Spikula found with shapes and sizes are relatively the same. The S-shaped Rod Spikula less found than the rod-shaped C. On the ventral part of the integument there are the spicules are rod-shaped that its brim ridged and plate that has many table a small hole.

### ***Stichopus noctivagus* Cherbonnier, 1980**

*Stichopus noctivagus*, also known as corn sea cucumber. Has a rectangular body shape and cross section of trapezoid appropriate latitude and has a rather transparent skin. The body length of 80-105mm (92.90  $\pm$  9.89 mm). The upper surface is smooth and soft body with a small Protuberance. The body wall is 2 mm and the software. The structure of the body-length folding. The body color is generally white or yellowish whitish yellow.

Figure 12. *Stichopus noctivagus*

On the anterior portion there is a mouth surrounded by tentacles that shield-shaped pale yellow. On the posterior part there is the anus at the end of the terminal. Ventral section there is a foot-long tubes arranged in 3-4 ambulakral on each line. Papillae on the dorsal parts are black short and small scattered showers with a blunt tip. Lateral position is seen in the difference between the dorsal and ventral parts. . This species of Spikula shaped rods, rare spikula shaped tables, and also rarely found spikula type buttons, or keys, in addition to the type of rods spikula, there was also found a C-shaped spikula and rod-shaped stem form of s. S is simple and there is also a large plate-shaped. The Diameter of the dish on the table are 20-40  $\mu\text{m}$ , with a big hole in the middle of 4 (some other disc there are only 3 holes), and there is a 4-14 small holes around the plate. On the dorsal part there is a table type spikulagreater than spikula ventral part.

#### ***Stichopusquadrifasciatus*Massin,1999**

Figure 13. *Stichopusquadrifasciatus*

Sea cucumber has a rectangular body shape and cross section of the appropriate latitude trapezoid, body length of 90-150 mm ( $122.83 \pm 20.57$  mm). The skin is thick and tough. The body wall is thin and clear (translucent) and stiff compared to the other members of Stichopus. The body color is generally light brown colored whitish and brownish anteriorly in the area

On the anterior portion there is a mouth surrounded by tentacles that 20 yellowish and shield-shaped. On the lateral part there is the anus. . Ventral section of the tube feet are nifty little small-spaced and uneven spread meetings. Papillae on the dorsal part spread evenly with a blunt tip and have a base of papillae. Foot tube is composed of 3 - 5 lines in each ambulakral. In the ambulakral papillae arranged in two rows. This species has a body wall is thin and clear (translucent), compared to the other members of Stichopus.

The body wall of Spikulaquadrifasciatus shaped table type, the type of rod-shaped type rosset, c., Spilkularosset type size of 20-35  $\mu\text{m}$ . Type plate-sized disc Spikula 35-50  $\mu\text{m}$  large and middle holes 4-14 small hole in the rim. Pillar table from the short pass and arranged spikula formed a square with the Crown angle-the angle is a thorny dikotom. The dorsal part of the table type spikula found a lot of thorny Crown. The ventral found spikularosset and shaped slab-shaped, measuring 170  $\mu\text{m}$ , it has a huge hole with jagged edge length of 35-55  $\mu\text{m}$ .

#### ***Stichopusvastus*Sluiter, 1887**

Figure 14. *Stichopusvastus*



*S. vastus* is called also sea cucumber with. Rectangular body shape. The body length of 190-197 mm ( $193.29 \pm 2.58$  mm). The body wall is thick and hard. Generally, body color is brown. Yellowish. Body structure fold more like the mattress on the dorsal surface. The body surface is rough with a short papilla. The last dorsal papillae is spread regularly in a row on either side of the lateral, dorsal tubercles are large and basic kunig papillae. Legs yellowish brown coloured tubes arranged in 4 -5 on each ambulakral. On the ventral part there is the mouth. On the posterior part there is the anus at the end of the terminal. The dorsal surface is clearly separate from the ventral parts.

Spicules of these species shaped type the table, rosset, type the stem the form of c, . In the body wall of the dorsal part found the spicules are rosset, are the type the stem, a small table with the diameter of the plate 35-45  $\mu$ m. Plate type having four large holes in the middle and surrounded 4 - 22, a small orifice at the edges. In the integument the dorsal and ventral part there are the spicules arerosset type. In the integument the ventral portion also found spicules are the type rod-shaped C. The integument of the ventral portion spicules shaped a slab supersized, there are lepeangan that its brim jagged.

### ***Stichopus* sp.1**

*Stichopus* SP. 1 species not yet known seen from the identification based on spikulanya, with a rectangular body shape and cross section of trapezoid the appropriate latitude. The body length of 200-220 mm ( $213.00 \pm 5.56$  mm). The walls of the body is soft and thin. The body color is generally white to blackish. The body structure is a bit rough. Ventral section there is a mouth surrounded by tentacles that 20 shield-shaped. There is the lateral portion of the anus at the end of the terminal. The ventral part there is a small tube of kecli feet-arrayed in 3 rows from the anterior to posterior.



Figure 15. *Stichopus*. sp.2

### ***Stichopus* sp. 2**

Sea Cucumber *Stichopus*. 2, also known as sea cucumber corn. Sea cucumber *Stichopus* SP. 2 species have not been found for certain, after identification based on spikulanya. Trapezoid and elongated body shape. The body length of 152- 160 mm ( $154.92 \pm 7.58$  mm). The skin is thick and soft. Thin body wall is clear (translucent) and stiff compared to other *Stichopus*. Enlarged papillae bulge beside the body. The down side of his body and the side it is curved. The body color is generally light brown colored whitish and brownish anteriorly in the area. The anterior portion there is a mouth surrounded by tentacles 20 yellowish-shaped shield. On the lateral part there is the anus



Figure 16. *Stichopus* sp.2

On the ventral part there is a nifty little tubes-small foot composed and meetings are spread unevenly. Papillae on the dorsal part spread evenly with a blunt tip and have a base of papillae. Foot tube is composed of 3-5 rows in each ambulakral. In the ambulakral papillae arranged in two rows

Table 2. The spread of sea cucumber in the Natuna waters of mikrohabitat based on the Riau Islands.

No	Species of Teripang	Sand	Seagrass	Seaweed	Coral
1.	<i>Holothuria atra</i> Jaeger	+	+	-	-
2.	<i>H. edulis</i> Lesson	+	-	-	+
3.	<i>H. fuscocinerea</i> Jaeger	-	+	-	+
4.	<i>H. hilla</i> Lesson	-	-	+	+
5.	<i>H. leucospilota</i> Brandt	-	-	+	+
6.	<i>H. pericax</i> Selenka	+	-	-	+
7.	<i>Actynopyga lecanora</i> Jaeger	-	-	+	+
8.	<i>Bohadschia tenuissima</i> Semper	-	-	+	+
9.	<i>B. marmorata</i> Jaeger	+	+	-	+
10.	<i>Pearsonothuria graeffei</i> Semper	-	-	+	+
11.	<i>Stichopus chloronotus</i> Brandt	-	+	+	-
12.	<i>S. noctivagus</i> Cherbonier	-	+	+	-
13.	<i>S. quadrifasciatus</i> Massin	-	+	+	-
14.	<i>S. vastus</i> Sluiter	+	+	+	-
15.	<i>Stichopus</i> sp 1	-	+	-	+
16.	<i>Stichopus</i> sp 2	-	+	+	-
Total of species		5	9	10	10

According to Nybakken (1992) any substrate different namely sand, stone, mud and karang causes the difference fauna and structure community from the litoral. This research on the spread trepang more found in habitats coral and seaweed. On a table 2 can be in see that trepang in general preferred mikrohabitatkarang, besides be found on mikrohabitat other.

From observations during the investigations it can be said that the condition of the coral reefs at the two sites, namely Sepempang and Pengadah waters look not so much suffered damage, as seen from the sea cucumber found on many coral habitats (table 2), although still found equivalent coral reefs have been damaged somewhat. This is due to various factors, among others, because of the magnitude of the surge at a time when the South wind/North. In addition to community activities in the business of fishing that is not eco-friendly by using explosives and chemicals which can damage coral reefs, but this activity is supervised and maintained by local Marine Fisheries Agency when the research was done.

Many trepang in mikrohabitat corals because of the need for protection from the sun. Mostly nocturnal namely. Trepang is an active search for food in the night and hide themselves during the day (Bakus, 1973). Trepang sensitive to the rays of the sun so trepang much that is spatially phototaxis negative.

*lecanora* on this research was found in seaweed and coral habitat, the same species ever discovered by Yusron (2003) on seagrass habitat. The species *B. marmorata* and *H. atra* in the sand mikrohabitat have the ability to avoid the glare of the Sun. *B. marmorata* capable of immersing his body in the sand, while *H. atra* cover the body with a grain of sand (Yusron, 2000).

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