Sea cucumber fisheries in Rasa Island Wildlife Sanctuary, Narra, Palawan, Philippines

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Abstract

Sea cucumber fishing in Rasa Island Wildlife Sanctuary is an important source of livelihood among the coastal inhabitants of Narra Municipality, Palawan, Philippines. Sea cucumbers, however, are becoming overly exploited in most of their distribution range. Therefore, there is a need to determine the status of this fishery resource within the island to serve as basis for management interventions. Of the 24 species identified within the sanctuary, 3 species (*Actinopyga echinites, Holothuria scabra* and *Stichopus herrmanni*) are listed as threatened by the International Union for Conservation of Nature. Only 8 species were encountered at the intertidal and shallow subtidal reefs, and only 20 species were identified by the respondents. The current number of species in the sanctuary represents about 69% of the 35 reported number of commercially important sea cucumber species in Palawan. The survey for abundance and catch-per-unit-effort in five stations within the sanctuary revealed an average density of 52.95 ind. ha^{-1}. With an average catch-per-unit-effort of 1.79 kg $person^{-1}$ h^{-1} and an average fishing time of 5 h, fishers could at least collect 8.95 kg per operation. The projected monthly earnings (PHP 1,600.00)[2] from sea cucumber fishing is much lower than what is claimed (PHP 3,937.50–5,571.00) by the respondents whose fishing activities covered a much wider area and depth.

Introduction

The Philippines is one of the largest producers of sea cucumbers, and represents a multi-million dollar fishery industry for the country (Akamine 2001). Statistics reveal that the annual volume of harvest in the Philippines reached its peak between 1985 and 1993, with an annual average of 3,478.89 t. However, the trend dropped towards 1998, and between 1998 and 2014, average annual production did not exceed 1,000 t (FAO 2016). Such decline was coupled with a dramatic increase in the number of exploited species, with only 26 species exploited in 2000 (Schoppe 2000) and 35 species in recent years, with the inclusion of more low-valued species (Jontila et al. 2014a).

If marine protected areas (MPAs) were established they could help promote the conservation of sea cucumbers in the Philippines (see Cabral et al. 2014; Horigue et al. 2014; Muallil et al. 2015). Sea cucumbers and other marine organisms were found to have recovered in effectively managed MPAs (Dumas et al. 2010; Dolorosa 2015), but species and biomass recovery is not possible in partially protected areas (Shears et al. 2006; Bobiles et al. 2016). Rasa Island Wildlife Sanctuary (RIWS) is an example of a partially protected MPA in the country. While the island has been declared as a protected area pursuant to RA 7586 or the National Integrated Protected Areas System Act of 1991, and now known as Rasa Island Wildlife Sanctuary through Presidential Proclamation 1000 series of 2006 (Widmann et al. 2010); however, only the terrestrial part of the island is fully protected. Its surrounding reefs remain open for many types of fishing activities, and sea cucumbers are among the commonly harvested species in RIWS but information about them is lacking.

The unregulated harvesting of sea cucumbers may affect both the diversity of these species and those people who are directly dependent on these resources. Thus, this study was conducted to determine the species diversity, abundance and sizes of sea cucumbers, catch-per-unit-effort and earnings of sea cucumber collectors in RIWS. These data are expected to serve as a basis in formulating local policies affecting the sustainable use of this fishery resource in RIWS.

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[2] PHP 1.00 = USD 0.02 (as of January 2016)

Materials and methods

Study site

Rasa Island Wildlife Sanctuary (9°13′21.25″N and 118°26′38.06″E) is a nearshore island located in Narra, Palawan, Philippines. The area of the island's shallow coast, coralline rocks and coral reefs is about 381.48 ha (Fig. 1).

Collection and identification of specimens

Between 4 April and 5 May 2015, samples were obtained from sea cucumber fishers operating in the vicinity of RIWS. Photos of sea cucumbers taken from RIWS between 2009 and 2010 were also examined. Identification was based on the works of Schoppe (2000), Kerr et al. (2006), Purcell et al. (2012) and Jontila et al. (2014a).

Abundance and catch-per-unit-effort

Sampling was timed with good weather and during low tide at night (19:00 to midnight) when the water was clear and free of ripples. Five sampling stations (Fig. 1) were established with two areas at each station: the Cortido Area (CA, or *Holothuria scabra* area) is located adjacent to the outer edge of the mangrove forest, and the Hanginan Area (HA, or *Stichopus* spp. area) is found close to the reef crest. In each area, several transects were surveyed to record the abundance of sea cucumbers and CPUE of a collector. Sea cucumber harvesting was carried out by a fisherman using a wooden pole (armed with a pointed metal piece on the tip) while standing in the bow of a *banca* (a traditional boat with an outrigger). The beginning and end of each transect were recorded with a global positioning system to estimate the distance covered in each 10-minute survey. The area of each transect was obtained as the product of the estimated length and approximate 5 m width of each transect (Table 1).

The abundance of sea cucumbers was calculated as the quotient of the number of individuals harvested per area for each transect (ind. ha^{-1}). CPUE was calculated using the data on catch and time spent fishing. Data among stations were compared using analysis of variance.

Assessment of fisher's catch and earnings

In total, 23 sea cucumber fishers (10 from Barangay Malinao and 13 from Barangay Antipuluan) from two nearby *barangays* (villages) were interviewed using a questionnaire. Interviews were

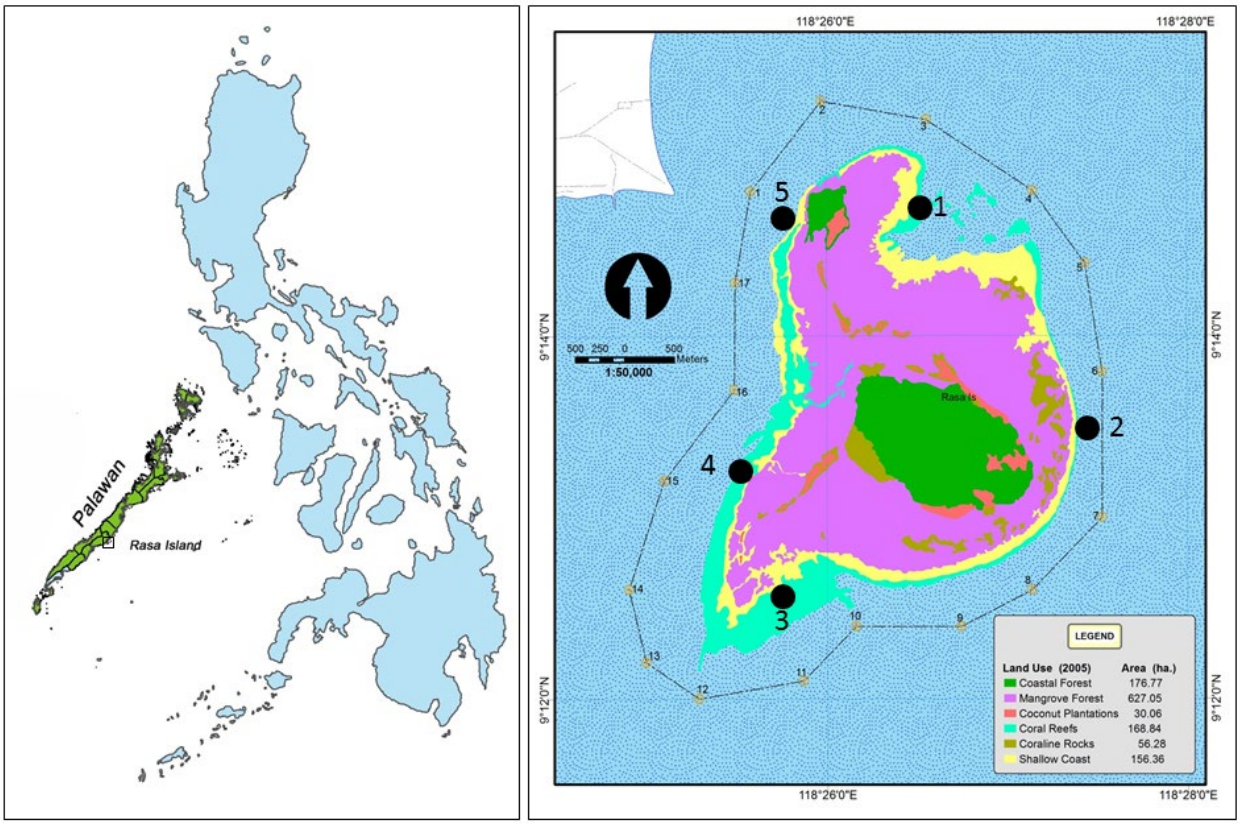

Figure 1. Location of Rasa Island Wildlife Sanctuary (RIWS) in Palawan (left) and the locations of five surveyed stations (right). The numbered lines surrounding the island indicate the boundaries as stipulated in the Presidential Proclamation 1000 series of 2006. Total area of the sanctuary is 1,980 ha (this includes the marked boundaries in the water as defined by the connected lines surrounding the island).

Table 1. Number of transects and area (m^2) covered at each station.

	Cortido Area		Hanginan Area		Total	
Station	Number of transects	Total area covered (m^2)	Number of transects	Total area covered (m^2)	Number of transects	Total area covered (m^2)
1	9	954.6	5	248.3	14	1202.9
2	4	542.1	5	551.9	9	1094.0
3	8	1231.1	9	925.7	17	2156.8
4	4	385.3	4	1021.1	8	1406.4
5	8	1440.8	6	342.3	14	1783.1
Total	33	4553.9	29	3089.3	62	7643.2

conducted to elucidate the status and trends of sea cucumber fisheries in RIWS. Most respondents belonged to the indigenous community and had an elementary educational background. Photos of live sea cucumbers were shown to respondents to identify the species involved in the fishery. The sizes of dried sea cucumbers processed by the respondents were also recorded.

Results

Species composition

In total, 24 commercially important species belonging to families Holothuriidae and Stichopodidae were recorded. Holothuriidae had the most number of species (20), while only 4 species belonged to the family Stichopodidae (Figs 2–4; Table 2). Only 8 of these 24 species were encountered during the survey while 20 species were identified by the respondents through photos (Table 2).

Figure 2. Family Holothuriidae: A) *Actinopyga echinites*, B) *A. lecanora*, C) *Bohadschia argus*, D) *B. vitiensis*, E) *B. marmorata*, F) *Holothuria atra*, G) *H. coluber*, H) *H. edulis*, I) *H. fuscogilva* and J) *H. hilla*.

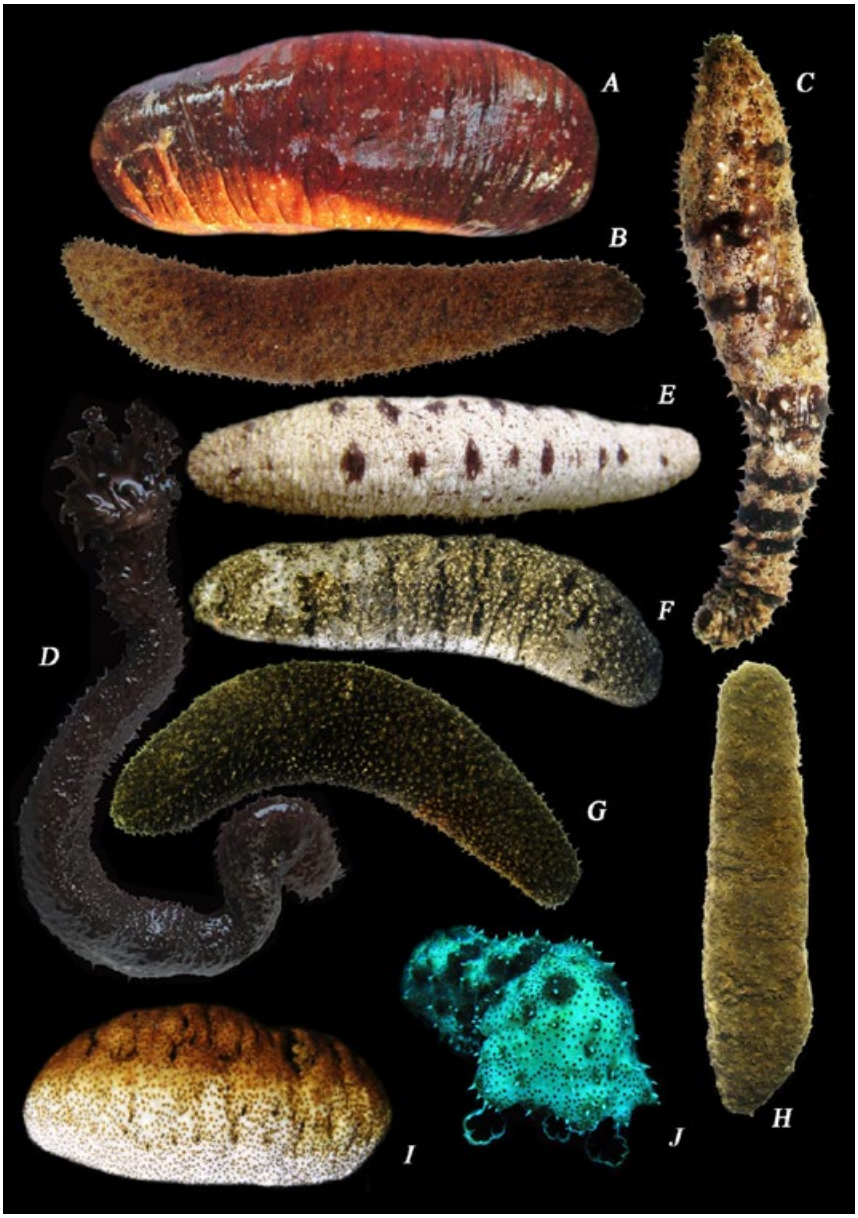

Figure 3. Family Holothuriidae: A) *Holothuria* aff. *edulis*, B) *H. fuscocinerea*, C) *H. impatiens*, D) *H. leucospilota*, E) *H. rigida*, F) *H. scabra*, G) *H.* sp. 1, H) *H.* sp. 2, I) *H. fuscopunctata* and J) *Pearsonothuria graeffei*.

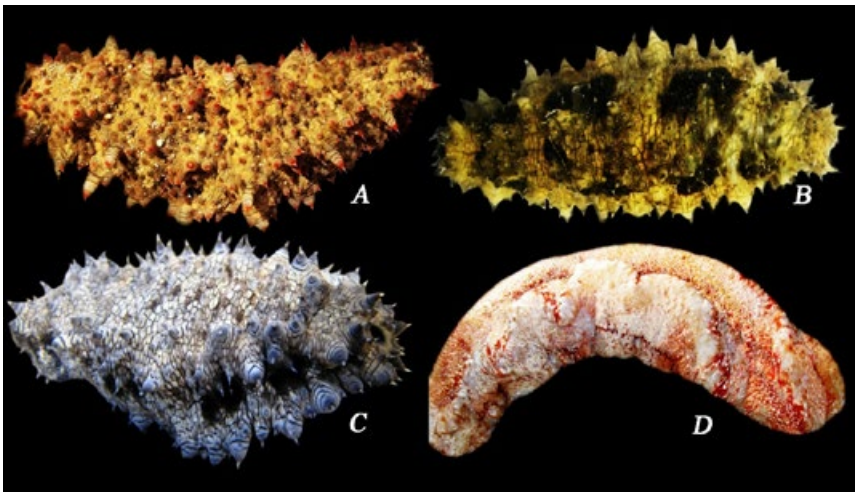

Figure 4. Family Stichopodidae: A) *Stichopus herrmanni*, B) *S. horrens*, C) *S. monotuberculatus* and D) *Thelenota anax*.

Table 2. List of commercially important sea cucumbers that are exploited in Rasa Island Wildlife Sanctuary, Narra, Palawan.

Scientific name	English name	Local name	Cortido and Hanginan areas (CA and HA)	Fishery dependent (interview)
Family Holothuriidae				
Actinopyga echinites	Deep-water redfish	Khaki / brown beauty	+	+
A. lecanora	White-bottomed sea cucumber / stonefish	Buli / monang		+
Bohadschia argus	Leopardfish	Matang-itik		+
B. vitiensis	Speckled sea cucumber / brown sandfish			
B. marmorata	Chalky sea cucumber		+	+
Holothuria atra	Lollyfish	Black beauty	+	+
H. coluber	Snakefish	Patola white		+
H. edulis	Pinkfish	Red beauty		+
H. aff. edulis	Pink sea cucumber	Lipstick		+
H. fuscogilva	White teatfish	Susuhan		+
H. fuscopunctata	Elephant trunkfish	Sapatos	+	
H. fuscocinerea	Ashen sea cucumber	Dagtaan		+
H. hilla	Tiger-tail sea cucumber	Bat-tuli		
H. impatiens	Bottleneck sea cucumber			+
H. leucospilota	White threadfish	Lawayan		+
H. rigida	Rigid sea cucumber			+
H. scabra	Sandfish	Curtido	+	+
Holothuria sp.1			+	+
Holothuria sp.2		Taba-taba	+	+
Pearsonothuria graeffei	Blackspotted sea cucumber	Pinya-pinya / mani-mani		+
Family Stichopodidae				
Stichopus herrmanni	Curryfish	Hanginan		+
S. horrens	Selenka's sea cucumber	Hanginan	+	+
S. monotuberculatus	Selenka's sea cucumber	Hanginan		
Thelenota anax	Amberfish	Legs		+
Total: 24			8	20

+ means "present"

Abundance and catch-per-unit-effort

The overall density of sea cucumbers in both CA and RA was 52.95 ind. ha^{-1}; the average density in CA and HA were 26.8 and 89.05 ind. ha^{-1}, respectively. Station 5 had the highest density (136.2 ind. ha^{-1}) followed by Stations 1, 3, 4 and 2 (Fig. 5).

Abundance in each area per station suggests that HA has the higher density of sea cucumbers than CA but these differences were not statistically significant (p>0.05).

Average CPUE was relatively similar in all stations, with an overall average of 1.79 kg $person^{-1}$ h^{-1}. Stations 1 and 5 had the highest CPUE, while Station 2 had the lowest. The large confidence interval (error bars) suggest large variations of catch among transects (Fig. 6). Therefore, the CPUE across the five stations was not significantly different (p>0.05).

Assessment of fishers' catches and earnings

The historical volume of harvested sea cucumbers from RIWS reveals a declining pattern as perceived by respondents. In the past, harvests could be as

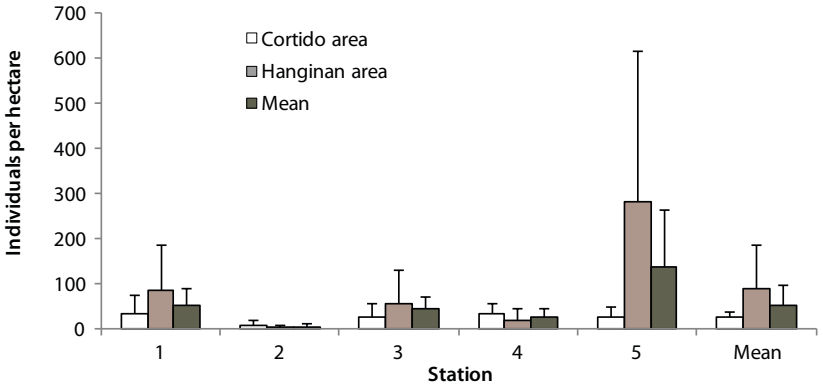

Figure 5. Average (±sd) density (ind. ha^{-1}) of commercially important sea cucumber species in Cortido and Hanginan Areas in Rasa Island Wildlife Sanctuary, Narra, Palawan.

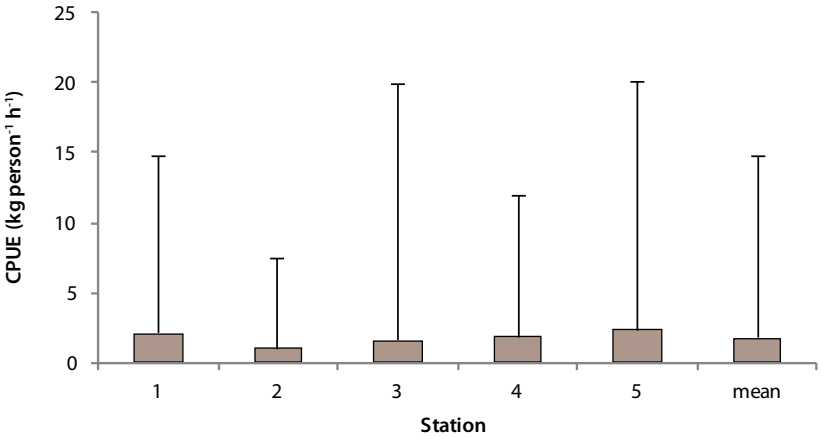

Figure 6. Average (±95% CI) sea cucumbers catch per unit effort (kg person^{-1} h^{-1}) in Rasa Island Wildlife Sanctuary, Narra, Palawan.

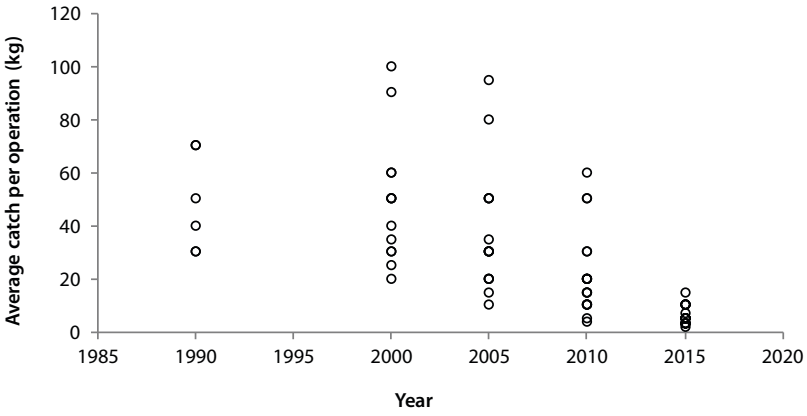

Figure 7. Historical volume (kg per fishing trip) of sea cucumbers harvested from Rasa Island, Narra, Palawan as perceived by respondents.

much as 120 kg per operation compared with only about 3 kg per operation currently (Fig. 7). Recently, respondents claimed that, on average, they can only process about 11.5 kg (±10.4; range: 2–30 kg) of fresh sea cucumber per week.

Respondents also claimed that sea cucumbers in recent years are much smaller than they were in the past. Average lengths of 43 cm (±24) were encountered in the past, while sizes of only 19 cm (±8.8) have been found in recent years (Fig. 8). The perceived sizes per species are also much smaller than the reported maximum and common sizes (Fig. 9).

Monthly earnings of sea cucumber fishers

Sea cucumber fishing and processing were identified as either main or secondary sources of earnings for respondents. The average monthly earnings of respondents ranged between PHP 3,937.50 and PHP 5,571.43. The average earnings derived from sea cucumber collection (PHP 4,108.70) represent 50% of the monthly earnings of respondents because in addition to sea cucumber fishing, respondents also engage in fishing for other species, farming or any day job to supplement their earnings.

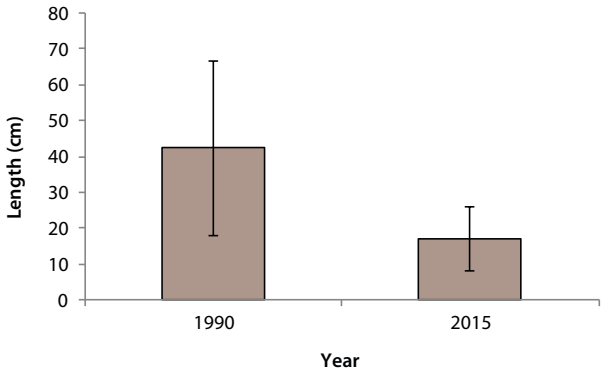

Figure 8. Average live length (±sd) of sea cucumbers fished in Rasa Island Wildlife Sanctuary in 1990 and 2015 as claimed by the respondents.

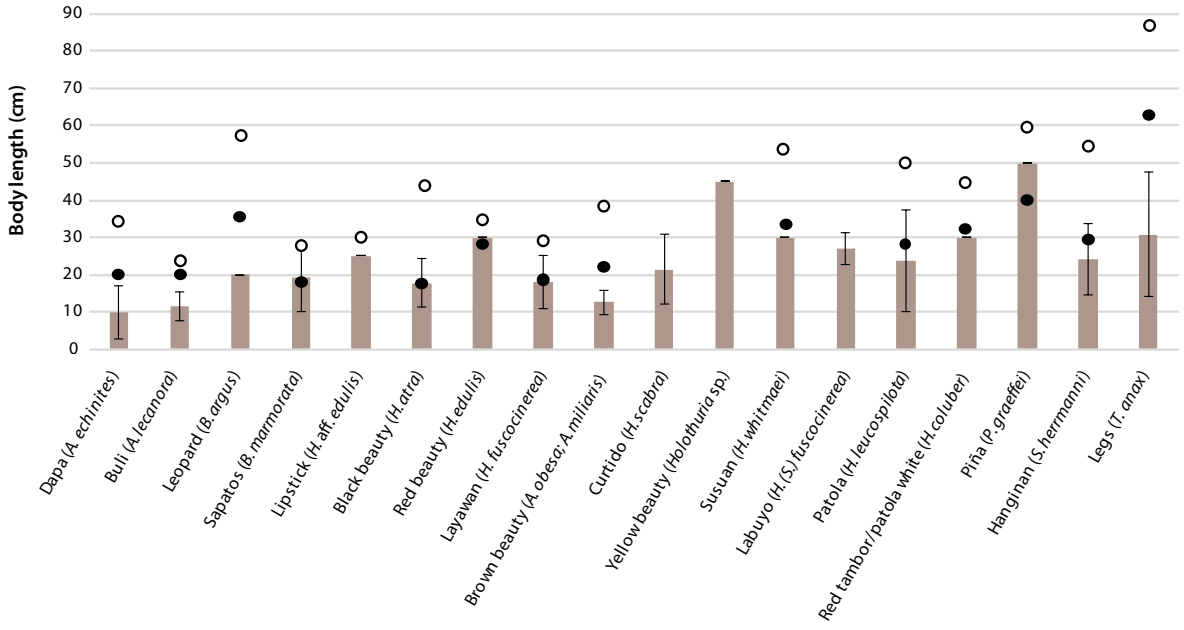

Figure 9. Current average body lengths (cm) of collected sea cucumbers as perceived by respondents. Unfilled circles represent the maximum sizes and and filled circles represent common sizes as reported by Purcell et al. (2012).

Discussion

Species composition

The number of commercially important sea cucumber species in RIWS is higher than in other areas of Palawan (Table 3). Such high numbers of species suggest that RIWS is an important sea cucumber habitat compared with other localities where only few species are recorded. The relatively high species richness around Rasa Island could be related to the varied types of habitat (i.e. extensive mangrove forest, sea grass meadows, reef flat and slope, and sandy habitats) around the island, which are suited for both young and mature sea cucumbers.

Most of the species recorded in this study were collected by fishers from shallow areas, except for *Actinopyga lecanora, Bohadschia marmorata, Holothuria* aff. *edulis, Pearsonothuria graeffei* and *Thelenota anax*, which were obtained in deeper parts of the reef. Some sea cucumbers inhabit areas down to 30 m depth (Purcell et al. 2012), therefore, additional species may be found with extensive survey at deeper parts of RIWS.

Jontila et al. (2014a) recorded 44 species of sea cucumbers in Palawan, but with the current findings in RIWS, 9 more species were added; therefore, at least 53 sea cucumber species are found in Palawan. This is higher than for other areas in

Table 3. Number of commercially and non-commercially important sea cucumber species in different parts of Palawan, Philippines.

Area	Commercially important	Non-commercially important	Total species	Author and year
Johnson Island, Roxas, Palawan	14	--	14	Paalan 2009
Aborlan (east coast), Palawan	6	2	8	Quillope 2011
Sta. Lucia, Puerto Princesa City, Palawan	10	2	12	Buri 2012
Brooke's Point, Palawan	13	12	25	Canonico 2013; Pitong 2013
Quezon, Palawan	8	3	11	Collantes 2013
Caruray, San Vicente, Palawan	16	9	25	Sangutan 2015
Tubbataha Reefs Natural Park, Palawan	16	2	18	Dolorosa 2015
Palawan	26	--	26	Schoppe 2000
Palawan	35	9	44	Jontila et al. 2014a
Rasa Island, Narra, Palawan	24	Not documented	24	This study

the Philippines, and in other countries. For example, Kerr et al. (2006) recorded 49 holothuroid species in Central Visayas (Negros, Cebu, Bohol and neighbouring localities), 35 species were found in Bolinao-Anda, Pangasinan (Olavides et al. 2010), 18 species in the South China Sea (Dongsha Island, Namsha Island, Xisha Island and Zongsha Island) (Xiangmin 2004), 21 species in Papua New Guinea (Polon 2004), and 41 species in northwestern Australia (Ashmore Reef, Cartier Reef and Mermaid Reef) (Smith et al. 2002; Rees et al. 2003).

Among the 24 species of sea cucumbers found near Rasa Island, 3 species are listed as threatened (IUCN 2015; Conand et al. 2014). *Holothuria scabra* (Holothuriidae) is listed as "endangered" or "at high risk of extinction", while both *Actinopyga echinites* (Holothuriidae) and *Stichopus herrmanni* (Stichopodidae) are listed as "vulnerable" or "at risk of extinction". Globally, Conand et al. (2014) reported seven species of sea cucumbers already listed as "endangered" and nine species as "vulnerable". At the local level, however, more species are likely threatened because the sizes of dried sea cucumbers collected from RIWS fall below the size limits set in neighbouring countries (Purcell et al. 2012).

Some of the exploited species (*Holothuria marmorata, H. vitiensis, H. coluber, H. rigida, H. scabra, H. lineata, Acaudina* sp., *Stichopus monotuberculatus*, *S. ocellatus, S. quadrifasciatus, S. rubermaculosus, S.* aff. *rubermaculosus* and *S. vastus*) recorded in this study and by Jontila et al. (2014a) were not recorded by Akamine (2005). This suggests that some species have already been overharvested, and attention has shifted to previously unexploited species. There is a paradigm shift in terms of the commercial value of sea cucumbers. Because most of the high-value species are overharvested, traders are now turning medium-value species into high value. In recent years, some species with no commercial value before now turned into low-value species, possibly to sustain the demand in beche-de-mer in the international market.

Sea cucumbers are prone to overharvesting (Hasan 2005; Kerr 2006; Purcell et al. 2012; Conand et al. 2014); thus, a management plan to protect and rebuild populations of these species and their habitat is important in order to avoid the collapse of the fishery. Long-term effective protection of marine parks could allow the recovery of marine species as noted in the Tubbataha Reefs Natural Park (TMO 2013; Dolorosa 2015). In New Zealand, long-term protection (for nearly 30 years) of marine parks has resulted in an increase of the legal size of lobsters, which are 11 times more abundant and represent 25 times more biomass in the no-take marine park following park establishment, while no significant change has occurred in lobster abundance in partially protected marine parks (Shears et al. 2006). Thus, for the local government to revive the lost sea cucumber populations in RIWS, a long-term effective fishing closure in needed in specific areas.

Abundance and catch-per-unit-effort

Among the stations surveyed, Station 5 may be the least visited by fishermen because of its narrow reef and proximate distance from the mainland (S. Villalva pers. comm.). Such low fishing pressure at Station 5 could be one of the reasons for the high abundance of sea cucumbers at that station compared with other stations. Abundance was low at Station 4 because it is close to the docking point of the island rangers who also engage in sea cucumber fishing. These findings conform to the principle of establishing a marine sanctuary where organisms have a chance to recover in an area spared from fishing pressure (Lane 2008; Toral-Granda et al. 2008; Dumas et al. 2010; Olivades et al. 2010; Dolorosa 2015).

The overall density of sea cucumbers in RIWS (52.95 ind. ha^{-1}) was higher than in Tubbataha Reefs Natural Park (TRNP), but lower compared with other areas in Palawan and elsewhere (Table 4). Also, the abundance of *H. scabra* and *S. horrens* in RIWS was far lower than in other areas (Table 5). The observed sizes in RIWS, however, were far smaller than those in TRNP (Dolorosa 2015) due to unregulated harvesting.

The CPUE in this study (8.97 kg $person^{-1}$ $operation^{-1}$ or 122 ind. $person^{-1}$ $operation^{-1}$) was comparable with the CPUE in other areas. Rasolofonirina et al. (2004) reported a CPUE of 4.96 kg to 10.67 kg $fisher^{-1}$ day^{-1} (corresponding to 16.5 to 35.57 ind. $fisher^{-1}$ day^{-1}) in Toliara, southwest Madagascar. In Cuba, CPUE is about 1,200 ind. $boat^{-1}$ day^{-1} (Alfonso et al. 2004).

Monthly earnings of sea cucumber fishers

The dwindling volume of commercially important sea cucumbers as perceived by respondents has been also reported in other parts of the Philippines and other countries such as Malaysia and Egypt (Choo 2008; Purcell et al. 2012). In Mahout Bay, Sultanate of Oman, the mean sizes of sea cucumbers were much smaller in areas close to human populations. The reported average size of sea cucumbers in the Sultanate of Oman ranges between 16.6 cm and 26.8 cm (Al-Rashdi et al. 2007), which is comparable with the recent perceived sizes of sea cucumbers in RIWS.

Dried lengths of harvested sea cucumbers (see Fig. 10 on p. 18) from RIWS were generally categorised as small on the local market and are smaller than the size limit imposed in other countries (see

Table 4. Average density (ind. ha^{-1}) of sea cucumbers in Rasa Island Wildlife Sanctuary and in other areas.

Locality	No. of species	Density (ind. ha^{-1})	Source
Australia (Mermaid Reef) (*Thelenota ananas*)	1	8.82	Rees et al. 2003
Panama (*Holothuria mexicana*)	1	161.80	Guzman and Guevara 2002
Panama (*Isostichopus badionotus*)	1	117.40	
Panama (*Actinopyga multifidus*)	1	4.90	
NorthWestern Australia (Ashmore and Cartier Reef) (*Holothuria whitmaei*)	1	1.0	Shiell 2004
Western Australia (Rowley Shoals) (*H. whitmaei*)	1	9.1	
Western Australia (Ningaloo Reef) (*H. whitmaei*)	1	19.3–27.2	
North Western Australia (Mermaid Reef and Coral Bay) (*H. whitmaei*)	1	19.3–27.2	
Bolinao-Anda Reefs, Pangasinan	35	63.00	Olivades et al. 2010
Caruray, San Vicente, Palawan	25	618.00	Sangutan 2015
Tubbataha Reefs, Palawan	8	41.93	Dolorosa 2015
New Cuyo and Malcampo, Roxas, Palawan	4	66.50	Sornito 2015
Ilocos Sur	14	700.00	Sanidad and Sanidad 2015
Rasa Island (Cortido Area, CA)	5	26.80	This study
Rasa Island (Hanginan Area, HA)	7	89.05	This study
Rasa Island (combined CA and HA)	8	52.95	This study

Table 5. Density (ind. ha^{-1}) of *H. scabra* and *Stichopus* spp. in Rasa Island Wildlife Sanctuary, Narra, Palawan compared with other areas.

Species	Locality	Density (ind. ha^{-1})	Source
Holothuria scabra	Rasa Island, Narra, Palawan	19	This study
	Mahout Bay, Sultanate of Oman	1770–4000	Al-Rashdi et al. 2007
	Solomon Islands	20–220	Mercier et al. 2000
	Warrior Reef, Torres Strait, Australia	472.83 (1995/96)	Skewes et al. 2000
		102.04 (1998)	
		137.76 (2000)	
	Abu Rhamada Island, Red Sea	(before fishing): 8570–9519	Hasan 2005
		(after 4 years of fishing): 40–3070	
Stichopus horrens	Rasa Island, Narra, Palawan	25	This study
	Western Central Pacific	70	Carpenter and Niem 1998
	Santa Cruz, Galapagos	>100 (ind. 100 m^{-2})	Hearn and Pinillos 2006

Purcell et al. 2012). Five of the harvested species in RIWS have average dried sizes falling within and below the country's 5-cm size limit across species (DA 2013). Sizes at sexual maturity vary among species (Purcell et al. 2012) and the implementation of the country's policy on size limit might be only beneficial for species maturing at small sizes. In the study by Kinch et al. (2008) and Hasan (2005), the declining population status of sea cucumbers was attributed to high fishing pressure. At Helen Reef, Republic of Palau, populations of trochus and giant clams are extremely depleted due to intense harvesting (Weng and Guilbeaux 2000). Similarly, trochus populations in TRNP have sharply declined after some poaching events (Jontila et al. 2014b; Dolorosa et al. 2016).

Population declines of sea cucumber can be a consequence of overfishing (Hasan 2005; Anderson et al. 2011; Kumar 2012). Regional assessments of sea cucumber fisheries made by Anderson et al. (2011) revealed that population declines from overfishing

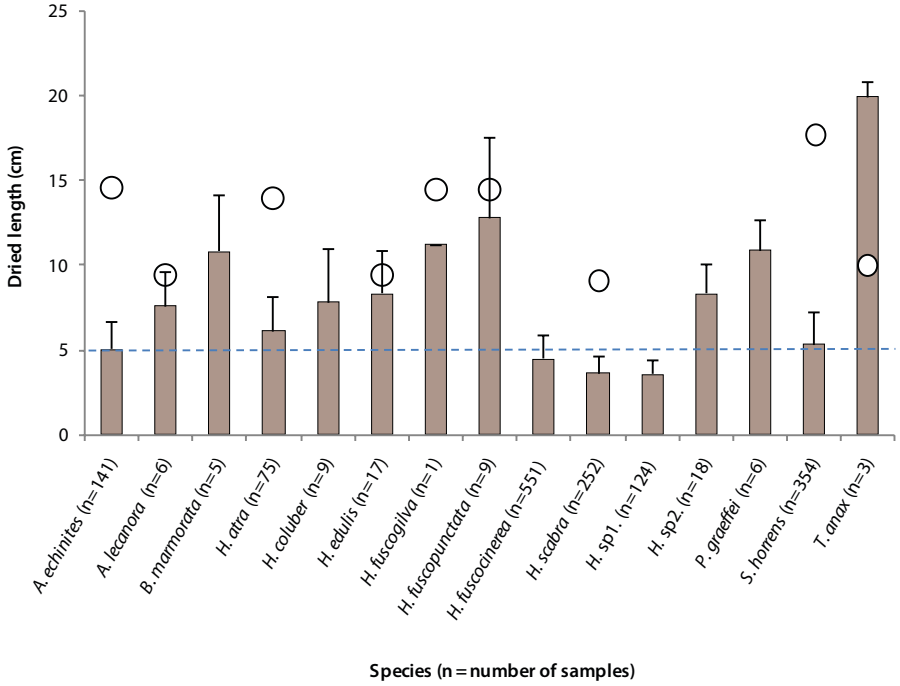

Figure 10. Average (±SD) dried body length of sea cucumbers harvested in Rasa Island Wildlife Sanctuary. Open circle represents the dried size limit imposed in other countries as reported by Purcell et al. (2012). Horizontal broken line indicates the size limit in the Philippines as stipulated in BFAR Administrative Circular No. 248 (DA 2013).

occurred in 81% of sea cucumber fisheries. About 51% of harvesters have moved from nearshore to offshore areas, and 76% of harvesters have shifted collecting high-value species to low-value species, and the average harvested sea cucumber body size has declined by 35%. All of these factors are considered to be signs of overexploitation.

Figure 10. Average (±sd) dried body length of sea cucumbers harvested in Rasa Island Wildlife Sanctuary. Open circle represents the dried size limit imposed in other countries as reported by Purcell et al. (2012). Horizontal broken line indicates the size limit in the Philippines as stipulated in BFAR Administrative Circular No. 248 (DA 2013).

The average monthly earnings by interviewed sea cucumber fishers was twice as high as the projected earnings of sea cucumber fishers at CA and HA (PHP 1,600.00), but comparable to the monthly earnings of sea cucumber fishers from northern Luzon (PHP 3,000–5,000) (Sanidad and Sanidad 2015). The study shows that RIWS is an important habitat for various species of sea cucumbers. However, abundance of sea cucumbers in the RIWS is very low compared to other areas. The respondents declared a decline in both volume of catch and sizes of sea cucumbers collected from RIWS. The catch per unit effort is low but earnings derived from processing constitute at least 50% of the monthly earnings of the respondents. Given the significant contribution of sea cucumber fisheries in the lives of the respondents, it is important to sustainably manage and prevent the collapse of this fishery resource. Other than the country's uniform dried size limit, species-specific live size limits must be determined and implemented to prevent the capture of immature species and enhance the earnings derived from sea cucumber fishing. Strict implementation of laws specific to RIWS is needed to allow the recovery of sea cucumber stocks.

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