



## SHORT COMMUNICATION

**Check list of the marine commercial and reef fishes of Belitung Timur, Bangka Belitung Islands, Indonesia****Helmy Akbar<sup>1\*</sup>, Jailani Jailani<sup>2</sup>, Iwan Suyatna<sup>2</sup>, Destilawaty Destilawaty<sup>3</sup>, Singgih Afifa Putra<sup>4</sup>, Indra Ambalika<sup>5</sup>**

<sup>1</sup>Department of Marine Science, Faculty of Fisheries and Marine Science, Mulawarman University, Kalimantan Timur, Indonesia; <sup>2</sup>Department Aquatic Resource Management, Faculty of Fisheries and Marine Science, Mulawarman University, Kalimantan Timur, Indonesia; <sup>3</sup>Department of Fisheries Education, Vocational Education and Training Center of Maritime and Information Technology Study (LPPPTK KPTK), Sulawesi Selatan, Indonesia; <sup>4</sup>Department of Marine Education, Vocational Education and Training Center of Maritime and Information Technology Study (LPPPTK KPTK), Sulawesi Selatan, Indonesia; <sup>5</sup>Department of Marine Science, University of Bangka Belitung, Kepulauan Bangka Belitung, Indonesia.

\*Corresponding author's email: [helmy.akbar85@gmail.com](mailto:helmy.akbar85@gmail.com)

**ABSTRACT**

Marine fish community is very sensitive to environmental changes. So the number of species, abundance, and biodiversity index can be used as a reference to assess the quality of the aquatic environment. The aim of this study was to describe fish biodiversity in Belitung Timur, Bangka Belitung Islands, Indonesia. Three islands were visited i.e. Pekandis Island, and Keran Island, Gosong Semut (Gosong refers to sandbar) for reef fish survey and for the economical fish study we also visited fisheries landing sites (i.e. Teluk Pering, Tanjung Batu Pulas, and Pantai Burung Mandi). The underwater visual census was used for in situ surveys of reef fish, and the fish species landed in fisheries landing site also been checked. Forty-two families of economical fish that had been landed by local fishermen were identified, and ten families of reef fish were found in reef systems of research location. A total of 10 families were recorded from three islands in Belitung Timur Regency. In addition, 42 families of commercial fish were also observed in fish landing sites from the coastline of Belitung Timur Regency, Bangka Belitung Islands.

**Keywords:** Belitung Timur, biodiversity, commercial fish, reef fish, Indonesia

**INTRODUCTION**

Reef fish is one of the coastal community that lives with abundant number in the coral reef ecosystem (Sale, 1977; Jones *et al.*, 1999; Mumby *et al.*, 2004). Reef fish is an important resource for people living in coastal areas and also the highest fauna in the utilization rate compared to other community that lives or associates with coral reef ecosystems (Moberg and Folke, 1999; Barbier *et al.*, 2011). It is estimated that around 60% of the source of animal protein consumed by the Indonesian population comes from reef fish (McAlliste and Ansula, 2005).

Several studies on reef fish have been carried out in Indonesia (Allen and Werner, 2002; Allen and Adrim, 2003; Jailani, 2013; Juliani and Suyatna, 2014; Batubara *et al.*, 2017), for study of marine fish resources in Bangka Belitung Islands has been carried out by several researchers (Sumadiharga, 2006; Hukom, 2010; Apriza *et al.*, 2016). In 2004 at Teluk Klabat (Bangka Belitung Islands), Hukom (2010) found 108 reef fish species and suggested 10 dominant species of reef fish (reaching a total of 87% of the total), i.e. *Caesio cuning*, *Leiognathus splendens*, *Chromis ternatensis*, *Neopomacentrus anabatooides*, *Pomacentrus bankanensis*, *Chaetodon octofaciatus*, *Abudefduf sexfasciatus*, *Scarus rivulatus*, *Amblyglyphidodon curacao*, and *Neoglyphidodon nigroris*, which consists of major fish, target fish, and

indicator fish. Apriza *et al.* (2016) found 7 families of reef fish consisting of 13 species in Sungai Liat (Bangka Belitung Islands). Major fish found include Pomacentridae and Nemipteridae, the targets fish consists of Serranidae, Scaridae, Haemulidae, and Acanthuridae, also the indicator fish was obtained from Chaetodontidae.

This study was conducted in the coastline of Belitung Timur Regency (Bangka Belitung Island) in November 2012. The aim of this study is to describe fish biodiversity in Belitung Timur, Bangka Belitung Islands, Indonesia. The result of this study is important as comparative data and complementary for previous and future study. This study is part of "Management and Rehabilitation of Coral Reefs, Mangroves, Seagrass, Estuary and, Gulf – Belitung Timur Regency" study, facilitated by the Regional Environment Agency (BLHD) of Belitung Timur Regency in 2012. Therefore, the objective of the study was to describe fish biodiversity in Belitung Timur, Bangka Belitung Islands, Indonesia.

## MATERIALS AND METHODS

### Study Location

This study was conducted in the coastline of Belitung Timur Regency (Belitung Island) in November 2012 (see Figure 1). The sampling site was defined arbitrarily for represent Belitung Timur Regency.



Figure 1. Location of Study in Belitung Timur Regency, Bangka Belitung Islands

### Data collection

This research was conducted in two methods, First with identifying fish species that had landed by local fishermen in main fisheries landing sites in Belitung Timur Regency (i.e. Teluk Pering, Tanjung Batu Pulas and Pantai Burung Mandi). The study was conducted by identifying landed fishes and also deep-interview with the fishermen, fish traders, and local officials of the Marine and

Fisheries Agency. The fisherman generally used the small fishing boat (< 20-30 GT), so they were capturing fishes commonly near Karimata Strait, and surroundings (Fisheries Management Area Number 711 / WPPNRI 711). Secondly, reef fish community was observed in the northern part of Belitung Timur Regency (i.e. Pekandis Island, Keran Island, Gosong Semut). The Survey was done during daylight with Underwater Visual Census method (Hill and Wilkinson, 2004) using 4 m x 50 m transect line in the coral reef slope area.

#### **Fish identification and data analysis**

The fish sample was taxonomically identified based on morphology following Allen (1999) and Kuitert and Takamasa (2001). The identification of reef fish up to species level. Identification of fish caught by fishermen is limited to the family level. The data were presented in tables and graphs and then analyzed descriptively by comparing the data with previous studies and other relevant reports.

## **RESULTS**

### **Commercial Fish Capture by Fisherman**

Commercial fish species collected based on fishermen interviews and observations on fisheries landing sites showed that the number of fish families in this study was more, from other studies, in coastal and marine areas of the Bangka Belitung Province. We discovered 129 species from 42 families of the commercial fish caught by fishermen at fisheries landing sites in Belitung Timur (Appendix 1). We found 31 families at Teluk Pering and 34 families at Tanjung Batu Pulas, and 28 families at Pantai Burung Mandi, both reef and pelagic fish are obtained (Table 1). The family of Carangidae is the most common commercial fish captured by the fisherman in Belitung Timur Regency.

Table 1. Commercial fish family at fisheries landing sites (i.e. Teluk Pering, Tanjung Batu Pulas and Pantai Burung Mandi) in Belitung Timur Regency, Kepulauan Bangka Belitung, Indonesia.

<b>Fish Family</b>	<b>Teluk Pering</b>	<b>Tg. Batu Pulas</b>	<b>Pantai Burung Mandi</b>
Ariidae	+	+	+
Atherinidae	+		
Balistidae		+	
Belonidae	+	+	+
Carangidae	+	+	+
Carcharhinidae	+	+	+
Centropomidae	+	+	+
Chanidae	+		+
Chirocentridae		+	
Clupeidae	+		+
Coryphaenidae	+	+	+
Dasyatidae	+	+	+
Diodontidae		+	
Gymnuridae	+		
Haemulidae	+	+	+

Fish Family	Teluk Pering	Tg. Batu Pulas	Pantai Burung Mandi
Hemiramphidae	+		+
Hemiscyllidae		+	
Hexanchidae		+	
Holocentridae	+	+	+
Istiophoridae	+		+
Labridae	+	+	+
Lamnidae		+	
Lethrinidae	+	+	+
Lutjanidae	+	+	+
Monodactylidae		+	
Mugilidae	+	+	+
Mullidae		+	
Myliobatidae	+	+	+
Nemipteridae	+	+	+
Odontaspidae	+	+	+
Plotosidae	+	+	+
Pomacentridae		+	
Rachycentridae	+		+
Rajidae	+		
Rhynchobatidae	+	+	+
Scaridae		+	
Scombridae	+	+	+
Serranidae	+	+	+
Siganidae	+	+	+
Sphyraenidae	+	+	+
Stegastomidae	+	+	+
Terapontidae		+	
<b>Grand Total</b>	<b>31</b>	<b>34</b>	<b>28</b>

### Reef fish community

Reef fish surveyed at Pekandis Island, Keran Island, and Gosong Semut found 45 species from 10 fish families i.e. Pomacentridae (8 genera), Apogonidae (2 genera), Labridae (9 genera), Siganidae (2 genera), Lutjanidae (2 genera), Blenniidae, Chaetodontidae, Nemipteridae, Scaridae and Carangidae (each is one genus). This result is only represented sampling locations, we expected to be more reef fish species found if the survey can be done on a wider scale (Figure 2 and Table 2). Detail of species was presented in Appendix 2.

Table 2. Number of reef fish community (family, genera, species) found in Belitung Timur Regency (i.e. Pekandis Island, Gosong Semut and Keran Island).

Family	Genera	Species
<i>Pomacentridae</i>	8	18
<i>Apogonidae</i>	2	2
<i>Chaetodontidae</i>	1	4
<i>Scaridae</i>	1	2
<i>Labridae</i>	9	12
<i>Nemipteridae</i>	1	1
<i>Siganidae</i>	2	2
<i>Lutjanidae</i>	2	2
<i>Blenniidae</i>	1	1
<i>Carangidae</i>	1	1
<b>Grand Total</b>	<b>28</b>	<b>45</b>

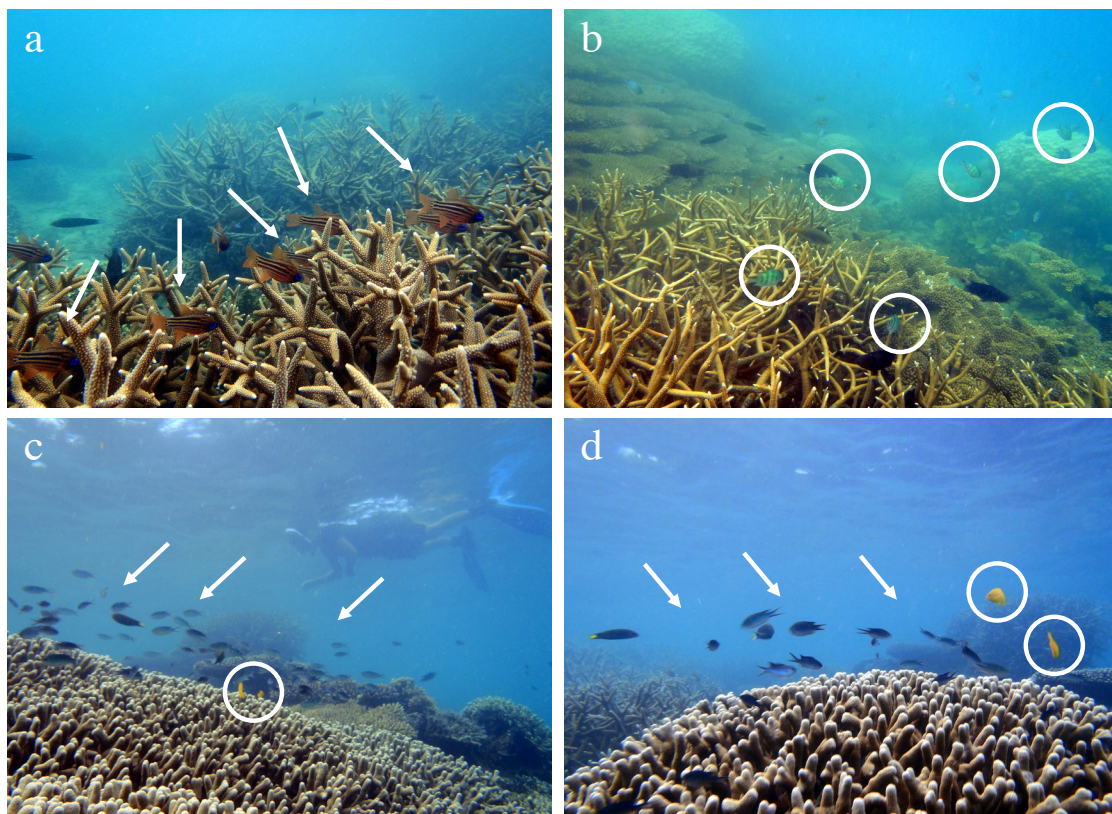


Figure 2. Some of reef fishes found at location study, *Apogon compressus* (Apogonidae) (arrows) in associated with branching *Acropora* sp. (a); *Abudefduf sexfasciatus* (Pomacentridae) (circles) in associated with branching *Acropora* sp. (b); schooling of Pomacentridae i.e. *Chromis viridis* (arrows) and few yellow *Chromis* sp. (circles) in associated with branching *Porites* sp. (c-d).

## DISCUSSION

Thirty-one family from 93 species of commercial fishes from fisheries landing sites around Belitung Timur Regency (i.e. Teluk Pering, Tanjung Batu Pulas and Pantai Burung Mandi) were recorded in this study. These fishes were caught from surrounding waters of Bangka Belitung Islands as far as Karimata Strait to the North. Commercial fish from family of Carangidae is the commonly captured by the fisherman in the Bangka Belitung waters. This fish characteristically inhabits shallow coral reefs (Iwatsuki *et al.*, 2000), such being common around Bangka Belitung Islands.

Ten reef fish families were found in the coastline of Belitung Timur, Bangka Belitung Islands (i.e. Pekandis Island, Keran Island, Gosong Semut). In Comparison, Hukom (2010) reported 108 species from 25 families in Teluk Kelabat, and Apriza *et al.*, (2016) reported 7 families (from 13 species) of reef fish in Sungailiat (both in Bangka Island). In Belitung Island, Sumadiharga *et. al.* (2006) found 18 fish families (from 42 species) in the coastline of Belitung Barat (western part of the present study, inside Gaspar Strait). Generally, the reef fish community in the study area are dominated by two families, i.e. Pomacentridae, Labridae (Figure 2b-d). Both of these families are well-known reef fish that commonly found in Indo-Pacific coral reef ecosystems (Barber and Bellwood, 2005; Read *et al.*, 2006; Allen, 2008). Pomacentridae family is classified as ornamental reef fish which are widely exported as seawater aquarium decorations such as clownfish (Chan and Sadovy, 2000). Fish from the Labridae family are both ornamental fish and consumption (Watson *et al.*, 1996; Letourneur *et la.*, 1998; Chan and Sadovy, 2000; Kaunda-Arara *et al.*, 2003).

One species of the Labridae group i.e. *Choerodon rubescens* is an economically important fish for the coastal people of Belitung Island and another region across Indo-Pacific (Cure, 2016), also found the Lutjanidae and Carangidae families who are often found foraging in the coral reef ecosystem (Robertson, 1982; Glynn, 2004). Family Serranidae (Grouper) is another reef fish consumption with high economic value, but this fish is not found in the observation area. However, based on fishing gear type used by fishermen in the Teluk Pering and the presence of floating net cages from grouper collectors in Keran Island, it can be concluded that there is actually Serranidae family in this area. Scaridae family were also found at the study site. Scaridae is an important ecological role in coral reef ecosystem (Bellwood and Choat, 1990). This fish is a dominant herbivorous fish by eating microalgae attached to dead coral, play an important role in limiting the growth rate of algae in coral reef ecosystems.

## CONCLUSIONS

In this study, 10 fish families were discovered using underwater visual census in three islands in Belitung Timur Regency (i.e. Pekandis Island, and Keran Island, Gosong Semut). Also, 42 families of commercial fish were observed in fisheries landing sites from the coastline of Belitung Timur Regency, Bangka Belitung Islands.

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Received: 5 November 2018

Accepted: 25 December 2018



**Appendix 1.** The commercial fishes observed at fisheries landing sites in Belitung Timur Regency (i.e. Teluk Pering, Tanjung Batu Pulas and Pantai Burung Mandi).

Family/Species	Pantai Burung Mandi	Teluk Pering	Tg. Batu Pulas	Total
<b>Ariidae</b>				
<i>Arius thalassinus</i> (Ruppell, 1837)	1	1	1	1
<b>Atherinidae</b>				
<i>Hypoatherina teminckii</i> (Bleeker, 1853)		1		1
<b>Balistidae</b>				
<i>Abalistes stellatus</i> (Bloch & Schneider, 1801)			1	1
<i>Balistoides viridescens</i> (Bloch & Schneider, 1801)			1	1
<b>Belonidae</b>				
<i>Ablennes bians</i> (Valenciennes, 1847)	1	1	1	1
<i>Platybelone platyura</i> (Bennet, 1837)	1	1	1	1
<i>Strongylura leiura</i> (Bleeker, 1873)	1	1	1	1
<i>Tylosurus crocodilus</i> (Peron & Lesueur, 1821)	1	1	1	1
<i>Tylosurus gavaloides</i> (Castelnau, 1873)	1	1	1	1
<b>Carangidae</b>				
<i>Alectis ciliaris</i> (Bloch, 1788)	1	1	1	1
<i>Alectis indicus</i> (Ruppel, 1828)	1	1	1	1
<i>Alepes</i> sp.		1	1	1
<i>Atule mate</i> (Cuvier, 1833)	1	1	1	1
<i>Carangoides caeruleopinnatus</i> (Ruppel, 1830)	1	1	1	1
<i>Carangoides chrysophrys</i> (Cuvier, 1833)	1	1	1	1
<i>Carangoides equula</i> (Temminck & Schlegel, 1844)	1	1	1	1
<i>Carangoides ferdau</i> (Forsskal, 1775)	1	1	1	1
<i>Carangoides fulvoguttatus</i> (Forsskal, 1775)	1	1	1	1
<i>Carangoides gymnotethus</i> (Cuvier, 1833)	1	1	1	1
<i>Carangoides bedlandis</i> (Whitley, 1934)	1	1	1	1
<i>Carangoides humerosus</i> (McCulloch, 1915)		1		1
<i>Carangoides malabaricus</i> (Bloch & Schnelder, 1801)	1	1	1	1
<i>Carangoides orthogrammus</i> (Jordan & Gilbert, 1882)	1	1	1	1
<i>Carangoides talamparoides</i> Bleeker, 1852	1	1	1	1
<i>Carangoides uii</i> Wakiya, 1924	1	1	1	1
<i>Caranx ignobilis</i> (Forsskal, 1775)	1	1	1	1
<i>Caranx sexfaciatus</i> Quoy & Gaimard, 1825	1	1	1	1
<i>Caranx tille</i> Valenciennes, 1833	1	1	1	1

<i>Gnathanodon speciosus</i> (Forsskal, 1775)	1	1	1	1
<i>Pantolobus radiates</i> (Macleay, 1881)		1	1	1
<i>Parastromeus niger</i> (Bloch, 1795)	1	1	1	1
<i>Scomberoides commersonianus</i> Lacepede, 1801	1	1	1	1
<i>Scomberoides lysan</i> (Forsskal, 1775)			1	1
<i>Scomberoides tala</i> (Cuvier, 1832)	1	1	1	1
<i>Scomberoides tol</i> (Cuvier, 1832)	1	1	1	1
<i>Selar boops</i> (Cuvier, 1883)	1	1	1	1
<i>Selar crumentalmops</i> (Bloch, 1793)	1	1	1	1
<i>Selaroides leptolepis</i> (Kubler & Van Hasselt, 1833)	1	1	1	1
<b>Carcharhinidae</b>				
<i>Carcharinus dussumieri</i> (Valenciennes, 1839)			1	1
<i>Carcharinus leucas</i> (Valenciennes, 1839)			1	1
<i>Carcharinus plumbeus</i> (Nardo, 1827)	1	1		1
<i>Carcharinus sorrah</i> (Valenciennes, 1839)	1	1		1
<i>Galeocerdo cuvier</i> (Peron & Le Sueur, 1822)	1	1		1
<b>Centropomidae</b>				
<i>Lates carcarifer</i> (Bloch, 1790)	1	1	1	1
<b>Chanidae</b>				
<i>Chanos chanos</i> (Forsskal, 1775)	1	1		1
<b>Chirocentridae</b>				
<i>Chirocentrus dorab</i> Forsskal, 1775			1	1
<b>Clupeidae</b>				
<i>Amblygaster leiogaster</i> (Valenciennes, 1847)	1	1		1
<i>Amblygaster sirm</i> (Walbaum, 1792)	1	1		1
<i>Anodontostoma chacunda</i> (Hamilton, 1822)	1	1		1
<b>Coryphaenidae</b>				
<i>Coryphaena hippurus</i> (Linnaeus, 1758)	1	1	1	1
<b>Dasyatidae</b>				
<i>Dasyatis annotatus</i> Last, 1987		1	1	1
<i>Dasyatis kublii</i> (Muller & Henle, 1841)	1	1	1	1
<i>Himantura toshi</i> Whitley, 1939	1	1	1	1
<i>Pastinacbus sephen</i> (Forsskal, 1775)	1	1		1
<b>Diodontidae</b>				
<i>Diodon liturosus</i> (Shaw, 1804)			1	1
<b>Gymnuridae</b>				
<i>Gymnura australis</i> (Ramsay & Ogilby, 1886)		1		1

<b>Haemulidae</b>				
<i>Diagramma pictum</i> (Thunberg, 1792)			1	1
<i>Plectorhinchus unicolor</i> (Macleay, 1883)	1	1		1
<i>Plectorhinchus chaetodontoides</i> Lacepede, 1800			1	1
<b>Hemiramphidae</b>				
<i>Euleptorhamphus viridis</i> (van Hasselt, 1823)			1	1
<i>Hemiramphus far</i> (Forsskal, 1775)	1	1		1
<i>Hemiramphus robustus</i> (Gunther, 1866)			1	1
<i>Hyporhamphus affinis</i> (Gunther, 1866)	1	1		1
<i>Hyporhamphus quoyi</i> (Valenciennes, 1847)	1	1		1
<i>Zenarchopterus buffonis</i> (Valenciennes, 1847)	1	1		1
<b>Hemiscyllidae</b>				
<i>Chiloscyllium punctatum</i> Muller & Henle, 1838			1	1
<b>Hexanchidae</b>			1	
<i>Hexanchus griseus</i> (Bonnaterre, 1788)			1	1
<b>Holocentridae</b>				
<i>Myripristis hexagonatus</i> (Lacepede, 1802)	1	1		1
<i>Myripristis murdjan</i> (Forsskal, 1775)			1	1
<i>Sargocentron rubrum</i> (Forsskal, 1775)	1	1	1	1
<b>Istiophoridae</b>				
<i>Makaira indica</i> (Cuvier, 1832)	1	1		1
<b>Labridae</b>				
<i>Anampses caeruleopunctatus</i> Ruppell, 1828	1	1		1
<i>Cheilinus unifasciatus</i> (Streets, 1878)			1	1
<i>Choerodon anchorago</i> (Bloch, 1791)			1	1
<i>Hemigymnus melapterus</i> (Bloch, 1791)	1	1		1
<b>Lamnidae</b>				
<i>Isurus Oxyrinchus</i> Rafinesque, 1809			1	1
<b>Lethrinidae</b>				
<i>Lethrinus genivittatus</i> Valenciennes, 1830			1	1
<i>Lethrinus laticaudis</i> Allyn & Mcleay, 1877	1	1		1
<i>Lethrinus nebulosus</i> (Forsskal, 1775)	1	1		1
<i>Lethrinus rubrioperculatus</i> Sato, 1978	1	1		1
<i>Lethrinus</i> sp.	1	1		1
<b>Lutjanidae</b>				
<i>Lutjanus carponotatus</i> (Richardson, 1842)			1	1
<i>Lutjanus fulviflamma</i> (Forsskal, 1775)	1	1		1

<i>Lutjanus quinquelineatus</i> (Bloch, 1790)	1	1		1
<i>Lutjanus russelli</i> (Bleeker, 1849)	1	1	1	1
<i>Lutjanus sebae</i> (Cuvier, 1828)			1	1
<b>Monodactylidae</b>				
<i>Monodactylus argenteus</i> (Linnaeus, 1758)			1	1
<b>Mugilidae</b>				
<i>Valamugil buchanani</i> (Bleeker, 1853)	1	1	1	1
<b>Mullidae</b>				
<i>Parupeneus barberinoides</i> (Bleeker, 1801)			1	1
<i>Upeneus tragula</i> (Richardson, 1846)			1	1
<i>Upeneus vittatus</i> (Forsskal, 1775)			1	1
<b>Myliobatidae</b>				
<i>Aetobatus narinari</i> (Euphrasen, 1790)	1	1	1	1
<b>Nemipteridae</b>				
<i>Nemipterus bathybius</i> Snyder, 1911			1	1
<i>Nemipterus isacanthus</i> (Bleeker, 1873)	1	1		1
<i>Nemipterus japonicus</i> (Bloch, 1791)			1	1
<b>Odontaspidae</b>				
<i>Carcharias Taurus</i> (Rafinesque, 1810)	1	1	1	1
<b>Plotosidae</b>				
<i>Euristhmus leputurus</i> (Gunther, 1864)	1	1		1
<i>Paraplotosus albilabris</i> (Valenciennes, 1840)	1	1	1	1
<i>Plotosus lineatus</i> (Thunberg, 1791)	1	1		1
<b>Pomacentridae</b>				
<i>Neoglyphidodon melas</i> (Cuvier, 1830)			1	1
<b>Rachycentridae</b>				
<i>Rachycentron canadus</i> Linnaeus, 1758	1	1		1
<b>Rajidae</b>				
<i>Raja</i> sp.		1		1
<b>Rhynchobatidae</b>				
<i>Rhynchobatus djiddensis</i> (Forsskal, 1775)	1	1	1	1
<b>Scaridae</b>				
<i>Balbometopon muricatum</i> (Valenciennes, 1840)			1	1
<i>Chlorurus</i> spp.			3	1
<i>Scarus</i> spp.			5	1
<b>Scombridae</b>				
<i>Acanthocybium solandri</i> (Cuvier, 1831)			1	1

<i>Katsuwonus pelamis</i> (Linnaeus, 1758)	1	1		1
<i>Scomberomorus commerson</i> (Lacepede, 1800)	1	1	1	1
<i>Thunnus alalunga</i> (Bonnaterre, 1788)	1	1	1	1
<i>Thunnus obesus</i> (Lowe, 1839)	1	1		1
<b>Serranidae</b>				
<i>Cromileptes altivelis</i> (Valenciennes, 1828)	1	1	1	1
<i>Epinephelus coiodes</i> (Hamilton, 1822)	1	1	1	1
<i>Epinephelus rivulatus</i> (Valenciennes, 1830)	1	1		1
<i>Plectropomus areolatus</i> (Ruppell, 1830)	1	1	1	1
<i>Plectropomus leopardus</i> (Lacepede, 1802)	1	1	1	1
<i>Plectropomus maculatus</i> (Bloch, 1790)	1	1		1
<i>Plectropomus oligocanthus</i> (Bleeker, 1854)	1	1	1	1
<b>Siganidae</b>				
<i>Siganus canaliculatus</i> (Park, 1797)	1	1	1	1
<i>Siganus doliatus</i> (Cuvier, 1830)			1	1
<i>Siganus lineatus</i> (Linnaeus, 1835)			1	1
<i>Siganus punctatus</i> (Forster, 1801)			1	1
<b>Sphyraenidae</b>				
<i>Sphyraena barracuda</i> (Walbaum, 1792)	1	1	1	1
<i>Sphyraena qenie</i> Klunzinger, 1870	1	1	1	1
<b>Stegastomidae</b>				
<i>Stegostoma Fasciatum</i> (Hermann, 1783)	1	1	1	1
<b>Terapontidae</b>				
<i>Pelates quadrilineatus</i> (Bloch, 1790)			1	1
<i>Terapo jarbua</i> (Forsk. , 1775)			1	1
<i>Terapon puta</i> Cuvier, 1829			1	1
<i>Terapon theraps</i> Cuvier, 1829			1	1
<b>Grand Total</b>	<b>84</b>	<b>93</b>	<b>98</b>	<b>129</b>

**Appendix 2.** Reef fish community found in Belitung Timur Regency (i.e. Pekandis Island, Gosong Semut and Keran Island).

No	Family	Genera	Species	Species
1	<i>Pomacentridae</i>	8	18	<i>Abhyglyphidodon curaco</i>
				<i>Acanthochromis polyacanthus</i>
				<i>Amphiprion ocellaris</i>
				<i>Amphiprion frenatus</i>
				<i>Abudefduf vaigiensis</i>
				<i>Chromis viridis</i>
				<i>Discistodus prosopotaenia</i>
				<i>Neoglyphidodon nigroris</i>
				<i>Neoglyphidodon crossi</i>
				<i>Neoglyphidodon melas</i>
				<i>Pomacentrus chryсарus</i>
				<i>Pomacentrus moluccensis</i>
				<i>Pomacentrus nigromarginatus</i>
				<i>Pomacentrus taenlometopon</i>
				<i>Pomacentrus alleni</i>
				<i>Pomacentrus grammarhynchus</i>
				<i>Pomacentrus smithi</i>
				<i>Pomacentrus milleri</i>
2	<i>Apogonidae</i>	2	2	<i>Apogon compressus</i>
				<i>Cheilodipterus quinguelineatus</i>
3	<i>Chaetodonidae</i>	1	4	<i>Chaetodon octofasciatus</i>
				<i>Chaetodon chaetodon</i>
				<i>Chaetodon rostratus</i>
				<i>Chaetodon mesoleucus</i>
4	<i>Scaridae</i>	1	2	<i>Scarus viridifucatus</i>
				<i>Scarus microbinos</i>
5	<i>Labridae</i>	9	12	<i>Bolbometopon muricatum</i>
				<i>Choerodon anchorago</i>
				<i>Cheilinus fasciatus</i>
				<i>Gomphosus varius</i>
				<i>Halichoeres chloropterus</i>
				<i>Halichoeres hortulanus</i>
				<i>Halichoeres biocellatus</i>
				<i>Labroides dimidiatus</i>

				<i>Pseudogotus elongatus</i>
				<i>Pseudodax moluccanus</i>
				<i>Thalassoma lunare</i>
				<i>Thalassoma janseni</i>
6	<i>Nemipteridae</i>	1	1	<i>Pentapodus bijasciatus</i>
7	<i>Siganidae</i>	2	2	<i>Siganus tetrazona</i>
				<i>Scodopsis brilineatus</i>
8	<i>Lutjanidae</i>	2	2	<i>Caesio cuning</i>
				<i>Lutjanus rufolineatus</i>
9	<i>Blenniidae</i>	1	1	<i>Salarias spaldingi</i>
10	<i>Carangidae</i>	1	1	<i>Selaroides leptolepis</i>