

# Contribution to the knowledge of echinoid fauna from Persian Gulf (Echinodermata: Echinoidea)

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Species identification is always important. Records of sea urchins and sand dollars species (Echinodermata, Echinoidea) are given from Iranian waters. Nine Species of Echinoderms were identified through the study. The species identification was made using morphological characteristics and review of checklist key. Nine species were identified here, including *Echinometra mathaei*, *Prionocidaris baculosa*, *Temnopleurus toreumaticus*, *Echinobrix calamaris*, *Clypeaster humilis*, *Echinodiscus auritus*, *Diadema setosum*, *Diadema savignyi* and *Parasalenia gratiosa* of which three species namely *Echinobrix calamaris*, *Diadema savignyi* and *Parasalenia gratiosa* were new records to Persian Gulf.

**Key words:** Echinoderm, Sea urchin, Sand dollar, Persian Gulf.

## INTRODUCTION

The class Echinoidea Leske, 1778 is composed of some 995 living species sand dollars, sea urchins, and sea biscuits (Serafy and Fell, 1985). Echinoids are considered conspicuous and important components of many marine benthic communities (e.g. Kier and Grant, 1965; Nebelsick, 1996; Barnes and Brockington, 2003). Sea urchin and sand dollars are common in near shore marine ecosystem worldwide, often playing an important ecological role in shallow subtidal environments (Harrold and Pearse, 1987).

Previous extensive studies have been conducted in the Persian Gulf area to characterize echinoderm assemblages in Iranian waters. The first report of Echinodermata were *Thesaurus locupletissimus*, Seba's, 1758 which *Echinodiscus auritus* Leske, 1778 were recorded. After which, Agassiz (1872), Clark (1925) also reported several species in the waters of the Persian Gulf and Oman Sea, and the Danish Group (Mortensen and Gislen and Heding, 1940) extended the reports to about 70 species of echinoderms. This was followed by Clark *et al.*, (1949), Price (1981), and Basson *et al.*, (1977). However, it seems that that, there may exist more species of echinoderms since environmental conditions are variable along the Persian Gulf. The aim of the present study was to extend the knowledge on echinoid fauna of the Northern Gulf.



FIGURE 1. Map of sampling site in Persian Gulf.

#### MATERIAL AND METHODS

The present study was conducted in Kharg, Hendorabi, Kish, Qeshm, Larak, and Hengam Islands (Fig. 1). During the study, echinoid specimens were collected from September 2010 to December 2012 by Scuba diving at three different depth zones (0-5m, 5-10m, 10-15m). Samples were then transferred to the laboratory where morphological examinations were performed, using a Leica Ez40 stereomicroscope and identifications were done accordingly. In this study was used to identify the Nisiyaman (1968) and Clark and Rowe (1971).

**Abbreviations:** (VTD): Vertical Test Diameter; (HTD): Horizontal Test Diameter.

#### RESULTS

Total of nine species including *Chlypeaster humilis* (Leske, 1778), *Diadema setosum* (Leske, 1778), *Diadema savignyi* (Audouin, 1829), *Echinodiscus auritus* Leske, 1778, *Echinometra mathaei* (Blainville, 1825), *Echinobrix calamaris* (Pallas, 1774), *Parasalenia gratiosa* A. Agassiz, 1863, *Prionocidaris baculosa* (Lamarck, 1816) and *Temnopleurus toreumaticus* (Leske, 1778), belonging to eight genera, seven families and four orders (Table 1, 2 and 3) were identified. Descriptions of species are based on Nisiyaman (1968) and Clark and Rowe (1971).

**TABLE 1.** The checklist of echinoids species in different Islands.

Class	Species	Islands					
		Kharg	Hendorabi	Kish	Larak	Hengam	Qeshm
Echinoidea	<i>Echinometra mathaei</i>	•	•	•	•	•	•
	<i>Prionocidaris baculosa</i>	•	•	•	•	•	•
	<i>Temnopleurus toreumaticus</i>		•	•			
	<i>Echinothrix calamaris</i>		•		•		•
	<i>Chypeaster humilis</i>		•	•	•		•
	<i>Echinodiscus auritus</i>			•			
	<i>Diadema setosum</i>	•	•	•	•	•	•
	<i>Diadema savignyi</i>		•	•	•	•	•
	<i>Parasalenia gratiosa</i>			•	•		

**TABLE 2.** Occurrence of the observed echinoid species at various depths.

Depth (m)	Species	~ 5						~ 10						~ 15					
		Kharg	Hendorabi	Kish	Larak	Hengam	Qeshm	Kharg	Hendorabi	Kish	Larak	Hengam	Qeshm	Kharg	Hendorabi	Kish	Larak	Hengam	Qeshm
	<i>Echinometra mathaei</i>	•	•	•	•	•	•												
	<i>Prionocidaris baculosa</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	<i>Temnopleurus toreumaticus</i>		•	•				•	•						•	•			
	<i>Echinothrix calamaris</i>							•			•		•		•		•		•
	<i>Chypeaster humilis</i>		•	•	•		•	•	•	•	•		•		•	•	•		•
	<i>Echinodiscus auritus</i>			•						•									
	<i>Diadema setosum</i>	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	<i>Diadema savignyi</i>		•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•
	<i>Parasalenia gratiosa</i>			•	•														

**TABLE 3.** Habitat preference of the observed echinoids.

Species	Depth (m) and location	Type of seabed
<i>Echinometra mathaei</i>	5m total Islands	sandy, coral reefs
<i>Prionocidaris baculosa</i>	10-15m and occasionally 3-5m total Islands	sand, coral reefs
<i>Temnopleurus toreumaticus</i>	10-15m total Islands and Kish and Hendorabi 3-5m	sandy, rocky and coral
<i>Echinothrix calamaris</i>	10- 15m Qeshm, Larak and Hendorabi Islands	sandy, coral reefs
<i>Chypeaster humilis</i>	5-15m Qeshm, Larak, Kish and Hendorabi Islands	clay, sandy and gravel
<i>Echinodiscus auritus</i>	5-10m Kish Island	Sandy
<i>Diadema setosum</i>	5-15m total Islands	sand, gravel and rubble stone
<i>Diadema savignyi</i>	5-15m Qeshm, Larak, Hengam, Kish and Hendorabi Islands	sand, gravel and rubble stone
<i>Parasalenia gratiosa</i>	5m Larak and Kish Islands	sand, gravel and rubble stone

**Class Echinoidea Leske, 1778**

**Order Camarodonta Jackson, 1912**

**Family Echinometridae Gray, 1855**

**Genus *Echinometra* Gray, 1825**

***Echinometra mathaei* (Blainville, 1825)**

**Remarks:** Size: 3-15 cm; Test height (VTD): 2-4 cm; Test width (HTD): 3-4 cm; Spine length: 0/2-4 cm, that via very spines. Color: Usually black, gray, dark purple or dark red (green and red spines were also observed in some areas).

Mostly in shallow waters, sandy, sandy and pebble stone was found at greater depths, the density decreases as the number of such additional 0-2m depth in areas was seen in the calm waters were sometimes up to 5 meters down are also seen. This species was one of the few species that were abundant in all fields, sampled Islands. Considering that this type of drilling and among the coral and rocks were further grazing (Fig. 2).

**Material examined:** More than 500 specimens in Kharg, Hendorabi, Kish, Qeshm, Larak, and Hengam Islands diving. Sandy and coral reefs.

**Comments:** The species are found in beds of sand, rock and coral sand and rubble at depth of 5 meters and this species reported from the Saudi Arabia (Price, 1982a).

**Global distribution:** Onotoa Atoll, Marshall Islands, Tuamotus, Guam, Saipan, Okinawa, Solomon Islands, Seleo Island, Netherlands New Guinea, New Caledonia (Clark, 1954); Hasikaya Island (Kuria Muria Islands) (Herring, 1972); SE Arabia, Persian Gulf, W India, Pakistan, Maldives, Ceylon, Bay of Bengal, East Indies, north Australia, Philippine, China, south Japan, South Pacific Islands and Hawaiian Island (Clark and Rowe, 1971); Australia (Kalk, 1958 and Rowe and Gates, 1995); India (Lakshadweep, Tamilnadu, Andaman and Nicobar Islands)(Sastry, 1997).



**FIGURE 2.** *Echinometra mathaei* (Blainville, 1825).

**Family Parasaleniidae Mortensen, 1903b**

**Genus *Parasalenia* A. Agassiz, 1863**

***Parasalenia gratiosa* A. Agassiz, 1863**

**Remarks:** Size: 3-13 cm; Test height (VTD): 2-4 cm; Test width (HTD): 2-5 cm; Spine length: The thorns have relatively flat spines; thick with distinct bands are the same lengths. Color: Dark green to olive; thorns with the same size, relatively short, dark green bands are identified.

There were seen shallow waters, clay, sandy and rubble stone, at depths of 5m in Larak and Kish Islands (Fig. 3).

**Material examined:** 3 specimens, Kish Is. and 1 specimen, Larak Is. diving. Sandy substrates.

**Global distribution:** Maldives, East Indies, North Australia, Philippine, China, South Japan and South Pacific Is. (Clark and Rowe, 1971); Indo-west Pacific Ocean, Australia (Rowe and Gates, 1995).



FIGURE 3. *Parasalenia gratiosa* A. Agassiz, 1863

**Family Temnopleuridae A. Agassiz, 1872**

**Genus *Temnopleurus* L. Agassiz, 1841b**

***Temnopleurus toreumaticus* (Leske, 1778)**

**Remarks:** Size: 3-18 cm; Test height (VTD): 0/5-5 cm; Test width (HTD): 1-6 cm; Spine length: 0/5-3 cm, that this species has small thorns that both have been with the distance and containing dark and light bands. Color: Olive green, yellowish, toward the mouth partly white or reddish bands seen with the distance tape also has spines moderately dark and bright colors are testing.

Mostly in sandy, coral reef and rocky bed was found. They are observed at 10-15m but Hendorabi and Kish Islands were also detected at 3-5 meters (Fig. 4).

**Material examined:** 4 specimens, Kish Is. and 3 specimens, Hendorabi Is. diving. Sandy and coral reefs.

**Comments:** This species was observed in subtidal sand, subtidal mud, rock tidal flat and mixed rock and sand tidal flat at 0-5m depth along Safaniya, Abu-Ali, Ras Tanura, Tarut Bay and Dammam Channel in Persian Gulf (Price, 1983). Mortensen and Gislén (1940); *Temnopleurus toreumaticus* seen sandy and soft clay depth of 3-79m in Bushehr, Qeshm and Hormuz Island, near the Strait of Hormuz.

**Global distribution:** SE Arabia, Persian Gulf, W India, Pakistan, Maldives, Ceylon, Bay of Bengal, East Indies, north Australia, Philippine, China, south Japan and South Pacific Is. (Clark and Rowe, 1971); India (West Bengal); Andamans, Orissa, Andhra Pradesh, Tamil Nadu, Maharashtra and Gujarat (Sastry, 1995); Indo-west-central Pacific Ocean, Australia (Rowe and Gates, 1995).



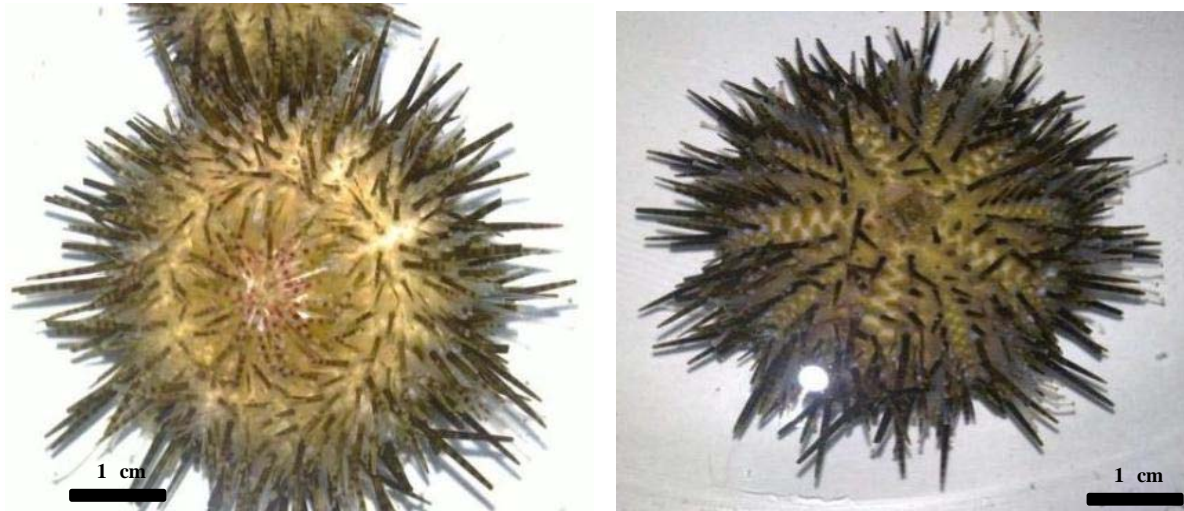


FIGURE 4. *Temnopleurus toreumaticus* (Leske, 1778)

**Order Cidaroida Claus, 1880**

**Family Cidaridae Gray, 1825**

**Genus *Prionocidaris* A. Agassiz, 1863**

***Prionocidaris baculosa* (Lamarck, 1816)**

**Remarks:** Size: 5-30 cm; Test height (VTD): 4-6 cm, Test width (HTD): 4-7 cm; Spine length: 3-7 cm, those small thorns that sparse and thick. The thorns are cylindrical or conical. Pull the crown of thorns and the thorns around the stem. Longitudinal series of coarse spines which are planned to be started. Thorns also be seen at the base of a ring containing blobs are willing to purple. Color: brown, dark purple, very thick and sturdy spines, the distance, like dark purple or dark red that in most cases the symbiotic algae that are found on their spines.

Mostly in subtidal waters, sandy, coral reef and rocky bed was found at greater depths. The areas most affected by coral reefs are found depths of 10-15m and but sometimes they are rarely observed at 3-5m. This species lives in symbiotic algae (Fig. 5).

**Material examined:** 26 specimens were noticed in all the Islands. 3 specimens, Kharg Is.; 1 specimen, Hendorabi Is.; 2 specimens, Kish Is.; 7 specimens, Qeshm Is.; 8 specimens, Larak Is. and 5 specimens, Hengam Island diving. Sandy and coral reefs.

**Comments:** *Prionocidaris baculosa* has seen in coral reefs and artificial structures at 5-32m depth along Safaniya, Manifa, Jana Island, Jurayd Island in Persian Gulf and Islands of west Indian ocean to east Indies (Price, 1982a,b).

**Global distribution:** SE Arabia, W India, Pakistan, Maldive, Ceylon, Bay of Bengal, East Indies, Philippine, China and south Japan (Clark and Rowe, 1971); Australia (Rowe and Gates, 1995).



FIGURE 5. *Prionocidaris baculosa* (Lamarck, 1816)

**Order Clypeasteroida Agassiz, 1872**

**Family Clypeasteridae Agassiz, 1835**

**Genus *Clypeaster* Lamarck, 1801**

***Clypeaster humilis* (Leske, 1778)**

**Remarks:** Size: 3-20 cm; Test: They are oval, flat and compact test that no seen lunules or gaps in test; Color: Brown - dark cream to brighten. They are seen similar of coins and flat.

There are many at all depths (5, 10 and 15 m) and Qeshm, Larak, Kish and Hendorabi Islands (Fig. 6).

**Material examined:** 4 specimens Hendorabi Is., 13 specimens Kish Is., 5 specimens Qeshm Is., 3 specimens Larak Is., and 5 specimens Hengam Is. diving. Sandy and coral reefs.

**Comments:** *Clypeaster humilis* has been reported from subtidal sandy or clay beds of sea grass beds, sandy bays and sandy tidal zone at depths of 0-5m along the western coast of Saudi Arabia (Price, 1982a).

**Global distribution:** SE Arabia, Persian Gulf, W India, Pakistan, Ceylon, East Indies, North Australia, Philippine and South Pacific Is. (Clark and Rowe, 1971); Indo-west Pacific Ocean, Australia (Rowe and Gates, 1995).



FIGURE 6. *Clypeaster humilis* (Leske, 1778)

**Family Atriclepidae Stefanini, 1912****Genus *Echinodiscus* Leske, 1778*****Echinodiscus auritus* Leske, 1778**

**Remarks:** Size: 5-22 cm; Test: They are oval, globular and compact test that two lunules are in lower test. Color: Brown brightens. They are seen similar of coins and flat that there are two lunules. There were seen shallow waters of clay and sandy bed to depth waters of about 10 meters Kish Island (Fig. 7).

**Material examined:** 3 specimens Kish Is. diving. Sandy substrates.

**Comments:** *Echinodiscus auritus* is found in subtidal, sandy, substrates sea grass beds, sandy tidal flat of 0-5m, in Abu-Ali, Juaymah, Ras-Abu Muraykhah, Tarut bays and Damman canal in western coast of Saudi Arabia (Price, 1981).

**Global distribution:** SE Arabia, Persian Gulf, W India, Pakistan, Ceylon, Bay of Bengal, East Indies, North Australia, Philippine, China and South Japan (Clark and Rowe, 1971); India (West Bengal), Andamans, Orissa, Andhra Pradesh, Tamil Nadu and Kerala (Sastri, 1995); western Indian Ocean, west Pacific Ocean, Australia (Rowe and Gates, 1995).

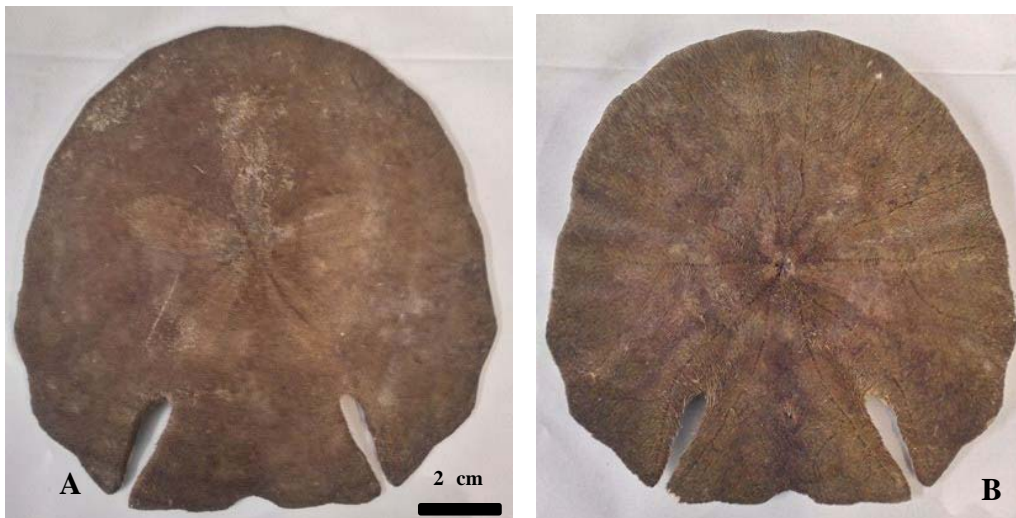


FIGURE 7. Dorsal (A) and ventral (B) surface of the *Echinodiscus auritus* Leske, 1778

**Class Echinoidea Leske, 1778****Order Diadematoida Duncan, 1889****Family Diadematidae Gray, 1855****Genus *Diadema* Gray, 1825*****Diadema savignyi* (Audouin, 1829)**

**Remarks:** Size: 7-30 cm; Test height (VTD): 3-5 cm; Test width (HTD): 3-6 cm; spine length: The thorns have large size and usually slender by length 1-14 cm. Color: Black to grayish brown, thorns - black with brown and white, but gray, not red ring around the anus.

There were seen shallow waters, sandy, coral, rubble stone to greater depths in Qeshm, Hengam, Larak, Kish and Hendorabi Islands (Fig. 8).

**Material examined:** 4 specimens Hendorabi Is., 5 specimens Kish Is., 11 specimens Qeshm Is., 6 specimens Larak Is., and 4 specimens Hengam Is. diving. Sandy and coral reefs.

**Global distribution:** SE Arabia, Maldives, Ceylon, East Indies, North Australia, Philippine, China, South Japan and South Pacific Is. (Clark and Rowe, 1971); Lakshadweep (India), East coast of Africa to South Pacific Islands (Sastri, 1991); Indo-Pacific Ocean, Australia (Rowe and Gates, 1995).



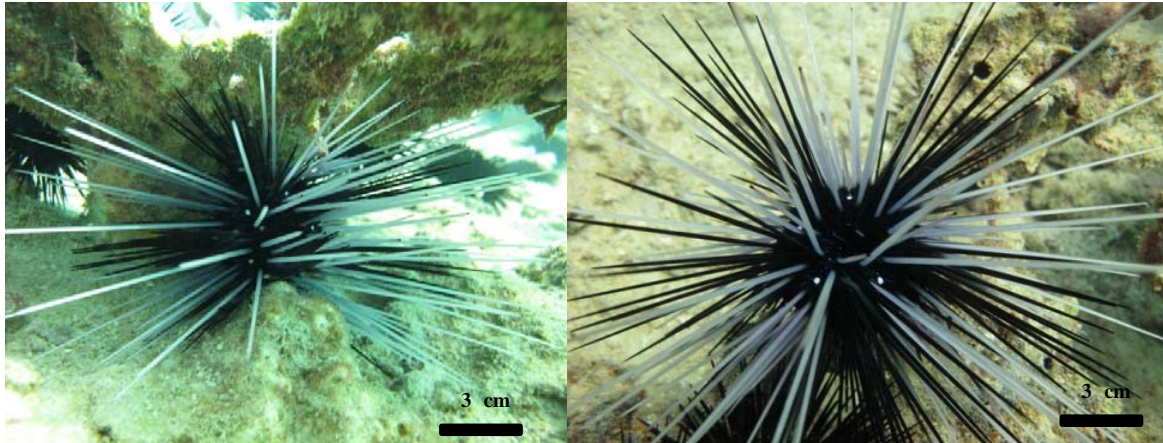


FIGURE 8. *Diadema savignyi* (Audouin, 1829)

***Diadema setosum* (Leske, 1778)**

**Remarks:** Size: 3-38 cm; Test height (VTD): 3-7 cm; Test width (HTD): 4-9 cm; Spine length: The spines have relatively large spines and usually hollow, long, cylindrical, with a rough surface and thin and fragile by average length of between 1-16 cm thorns. Color: Brown test, brown thorns, red mouth, a red ring around the anus on the living conditions of the most important aspects is their identification, although in the case of fixed or dead this part is not seen.

There were seen shallow waters of sandy, rocky and reef bed to different depth waters at all depths and in all the sampling Islands (Fig. 9).

**Material examined:** More than 100 specimens in Kharg, Hendorabi, Kish, Qeshm, Larak, and Hengam Islands diving. Sandy and coral reefs.

**Comments:** These species observed in coral reefs, sandy and coral reefs, rocky subtidal, artificial structures and sea grass beds at depths of 1-8m Jana Islands, Jurayd, Ras-Tanura and Bay Tarut (Price, 1982a).

**Global distribution:** Saudi Arabia (Clark, 1954); Australia (Kalk, 1958; Rowe and Gates, 1995); SE Arabia, Persian Gulf, Ceylon, Bay of Bengal, East Indies, North Australia, Philippine, China, South Japan and South Pacific Is. (Clark and Rowe, 1971); India (Sastry, 1997); Indo-Pacific (Kalk, 1958); Indo-west-central Pacific Ocean (Rowe and Gates, 1995).

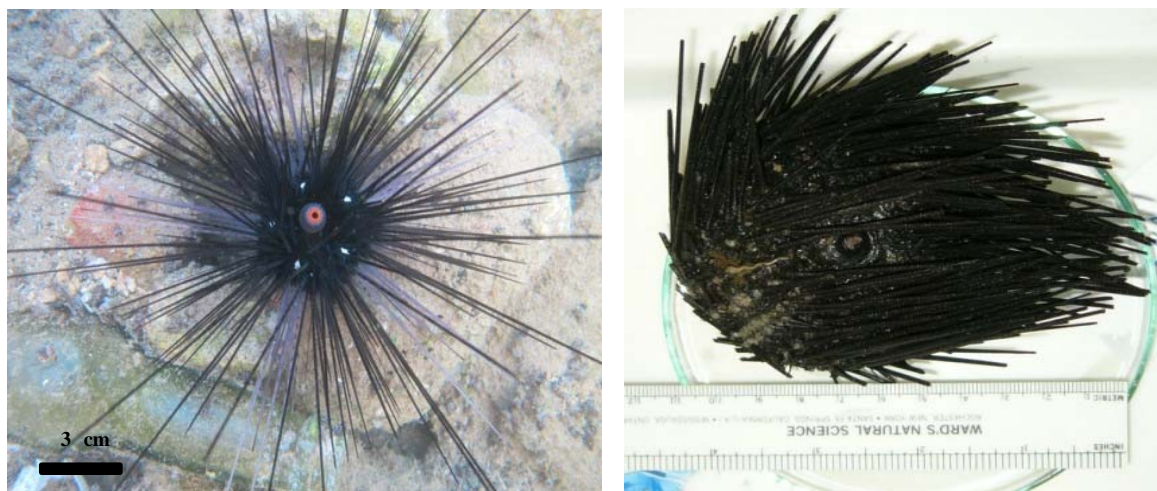


FIGURE 9. *Diadema setosum* (Leske, 1778)

**Genus *Echinothrix* Peters, 1853**

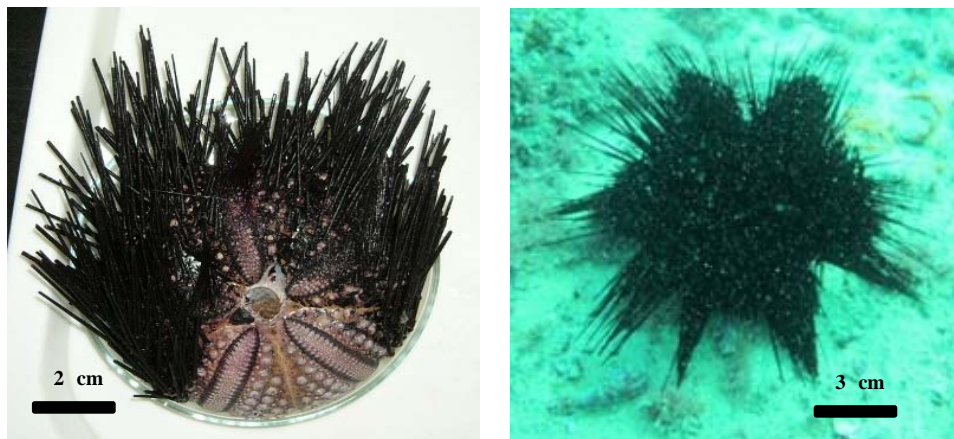
***Echinothrix calamaris* (Pallas, 1774)**

**Remarks:** Size: 3-27 cm; Test height (VTD): 3-10 cm; Test width (HTD): 4-13 cm; Spine length: Spines vary in size and shape and the lengths of spines were seen 1-8 cm. Color: Brown to black, black to brown spines, spines vary (two forms): length and thick, short and thin and brittle.

Mostly in sandy and coral reef was found. They are observed Qeshm, Larak and Hendorabi Islands at 10-15m (Fig. 10).

**Material examined:** 3 specimens, Hendorabi Is.; 5 specimens, Larak Is. and 4 specimens, Qeshm Is. diving. Sandy and coral reefs.

**Global distribution:** Solomon Islands (Clark, 1954); SE Arabia, Maldives, Bay of Bengal, East Indies, North Australia, Philippines, China, South Japan, South Pacific Is. and Hawaiian Is. (Clark and Rowe, 1971); Indo-west-central Pacific Ocean, Australia (Rowe and Gates, 1995); India (Lakshadweep), East coast of Africa to Hawaiian Islands (Sastry, 1991); Indo-Pacific (Kalk, 1958).



**FIGURE 10.** *Echinothrix calamaris* (Pallas, 1774)

**DISCUSSION**

The echinoderms are largest animal groups inhabiting marine ecosystems (Raven and Johnson, 2002). These animals are mainly utilized for pharmaceutical, industrial, and aquarium trading (Bhakuni and Rawat, 2005). In this study, nine species of Echinozoa were identified amongst which some were recorded for the first time in the Persian Gulf. Six species of Echinoderms (*Echinometra mathaei*, *Temnopleurus toreumaticus*, *Clypeaster humilis*, *Echinodiscus auritus*, *Diadema setosum* and *Prionocidaris baculosa*) have been previously reported from the Persian Gulf, but the species *Echinothrix calamaris*, *Diadema savignyi* and *Parasalenia gratiosa* are new to the region.

*Echinometra mathaei*, *Echinostrephus molaris* and *Stomopneustes variolaris* species were also reported from Pakistan waters (Munir and Almas 2008). Clark and Bowen (1949) recorded *Temnopleurus toreumaticus*, *Echinometra mathaei*, *Echinodiscus auritus*, *Clypeaster humilis*, *Metalia townsendi* and *Lovenia elongate* from the Saudi Arabian coast. Also, Clark (1925) recorded *Echinometra mathaei* from Taub Island, *Clypeaster humilis* from east Persian Gulf and *Echinodiscus auritus* from the Iranian Gulf without more exact locality. In a separate reports, *Prionocidaris baculosa* seen on 5-32m deep coral reefs and artificial structures in Safaniya, Manifa, Jana Islands, Jurayd and Bay Tarut also refers to the high-affinity *Diadema setosum* and *D. savignyi* distinguishing aspect of this is that the water has a red ring around his anus (Clark and Rowe, 1971; Price, 1982a,b).

*Echinometra mathaei* and *D. setosum* has been reported from subtidal, rocky, artificial structures, coral reefs, of 0-31m along, Safaniya, Abu-Ali, Jubail, Juaymah, Ras-Abu Muraykhah and Tarut Bay

(Price, 1982a). Mortensen and Gislen (1940) recorded, *T. toreumaticus* can inhabit clay and sandy depth of 4-79m in Bushehr, Jask, Hormuz Island, near the Strait of Hormuz and Bahrain with smaller specimens and the pale apical system. Khaleghi and Oofi (2010) observed four species (*Clypeaster humilis*, *Diadema setosum*, *Echinometra mathaei* and *Stomopneustes variolaris*) in Chabahar Bay on the Coast of Makran. Eizadi *et al.* (2011) examined 551 Echinoidea samples in south Qeshm Island and was able to identify, three species recorded; *Clypeaster reticulatus*, *Diadema setosum* and *Echinometra mathaei*. Badri (2007) reported some specimens in the Gulf of Nay-Band and Kharg and Khargo Islands. Also, Khaleghi *et al.* (2010) reported it from Chabahar Bay and Eizadi *et al.* (2011) from the south Qeshm Island. In the present study the specimens were found in Kish, Hendorabi, Hengam and Larak Islands.

This species inhabits sandy beds, coral reefs, 10-15m deep and 3-5m, the islands were occasionally that this species in Iranian waters previously by Mortensen (1940) has not been reported, but Price (1982a) observed in the Saudi Arabia, Badri (2007) recorded in Kharg and Khargo Island it is reported that the present results demonstrated for the first time in Qeshm, Hengam, Larak, Kish and Hendorabi Islands. *T. toreumaticus* is observed in sandy, rocky and coral reefs at depths of 10-15m and also 3-5m Kish and Hendorabi Islands that in Iranian waters previously by Mortensen (1940) in the coastal of Bushehr, Bandar Abbas, Qeshm, Hengam and west Sea of Oman and Price (1982a) on the Saudi Arabia was reported and in the present study were first reported on the islands of Kish and Hendorabi. In this study, this species was observed in beds of gravel, sand and reef areas at depths of 10-15m Qeshm, Larak and Hendorabi Islands see that for the first time in Iranian waters. *C. humilis* species recorded in clay, sand and more sand to depths of Qeshm, Larak, Kish and Hendorabi Islands at all depths of 5, 10 and 15 m that this species in Iranian waters reported by Clark in 1912 in the coast of Makran and Mortensen (1940) in the Gulf of Nay-Band and Qeshm and Price (1982a) on the Saudi Arabia, Khaleghi *et al.* (2010) reported; in Chabahar Bay. In this study for the first time in Larak, Kish and Hendorabi Islands observed and reported. *E. auritus* species observed in shallow waters to depths of about 10m sandy beds in Kish Island that this species previously by Mortensen (1940) on the coast of Bushehr and Nay-Band Gulf and Price (1982a) of Saudi Arabia and in present study was performed for the first time on the Kish Island. *D. setosum* species were observed in beds of gravel, sand and stone rubble and reef areas at depths of 5, 10 and 15m in total Islands. This species in Iranian waters previously by Mortensen (1940) did not report and Price (1982a) on the Saudi Arabia, Badri (2007) on Kharg and Khargo Islands, Khaleghi *et al.* (2010) in Chabahar Bay and Eizadi *et al.* (2011) on the Qeshm Island has recorded that in the present study has recorded the first in Kish, Hendorabi, Larak and Hengam Islands. *D. savignyi* species was observed in beds of gravel, sand and rubble areas of coral stone, all depths (5, 10 and 15m) in Qeshm, Hengam, Larak, Kish and Hendorabi Islands that so far no reports of this species in Iranian waters and the first view in area. The last species is *Parasalenia gratiosa* that in sandy, sandy and rocky at depths of 5m Larak and Kish Islands observed and noted that this is the first report.

Finally, with regard to the identification of nine species of echinoderms, the initial hypothesis of the present study, based on observations and the full report is correct, with new varieties, such as five, *Diadema savignyi*, *Echinobrix calamaris*, *Parasalenia gratiosa* were reported for the first time in the Persian Gulf. Among the many species for the first time, the islands were observed and sampled.

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