

## **Fish survey of inland lagoons and water surrounding Sammaliah Island – Abu Dhabi, UAE**

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**Abstract** - Fishing was conducted from March, 2001 to August, 2006 in the water surrounding Samalliah Island, Abu Dhabi, UAE and intertidal laggons of this island using different fishing gears. Traps and hooks and lines were used five days a week, cast nets were used once a week, while seine nets and fixed gillnets were used seasonally. A total of 65 fish species belonging to 35 families and to 51 genera were recorded during sampling period. Fish species are classified according to their appearance in the samples to four groups. Very common species comprising 26.1% (17 species), common species comprising 24.6% (16 species), rare species comprising 35.4% (23 species) and very rare species comprising 13.8% (9 species) of total fished species. Sixteen species were captured by hooks and lines, eleven species by garkoors and fourteen species by cast net.

### **Introduction**

The Arabian Gulf is an extension of the Indian Ocean and has an area of about 24832 km<sup>2</sup>, while the volume of its water is around 6000 km<sup>3</sup>, and its average depth is 35 m (Al-Moosawy and Karim, 1991). The Arabian Gulf was bordered by several wealthy states undergoing rapid economic growth involving substantial construction along shores and offshore regions, underpinned by its massive oil and gas industries, and by wealth derived from financial centres (Sheppard *et al.*, 2010). The Arabian Gulf is characterized by the phenomena of the existence of Khors especially in its Arabian Coasts (Karim, 1988).

The United Arab Emirates is a coastal country located on the southern part of the Arabian Gulf having extensive coastlines on its west and east facing the Arabian Gulf and the Gulf of Oman respectively. UAE has numerous islands and lagoons, and length of its coastlines is 700 km and total length of its islands coasts is 700 km. Pelagic, demersal, and migratory fish species can be observed at different periods of the year. Al Sammaliah Island is located between 54 longitude and 24 latitude and approximately 12 km for Abu Dhabi City (Fig.1). The Island has an area of 13.448 km<sup>2</sup> and it has many inland intertidal lagoons.

First fish survey was undertaken during 1977-1978 for the demersal and pelagic resources of the Arabian Gulf and the Gulf of Oman (FAO, 1981a, b). Fishery survey for Arabian Gulf region of UAE was conducted by Marine Resources Research Centre, Umm Al Qaiwain cooperative with Japan International Cooperation Agency during 1980-1998, depending on observations at fish markets, diving and using fine mesh seine net towing on the beach and seaweed areas (Tamaie, 1999). This survey showed a total number of 209 fish species belonging to 72 families and 144 genera.

Another survey was also undertaken during the period February 2002-January 2003 with the objective of assessing the status of demersal and pelagic fishes of UAE waters depending on trawling and trapping (Shallard *et al.*, 2003). This survey showed a total number of 227 species. The aim of this study is determining fish species inhabits inland lagoons and water surrounding Sammaliah Island.



Figure 1. Satellite picture of Sammaliah Island and Abu Dhabi City.

## Materials and Methods

Fishing was conducted during the period from March, 2001 to August, 2006 in water surrounding Samalliah Island and also the intertidal laggons of the island using five fishing methods. These methods are hooks and lines, traps (Garkoors), cast nets, seine nets and fixed gill nets. Traps and hooks and lines were used five days a week, cast nets were used one day a week, while seine nets and fixed gillnets were used seasonally. Different baits were used in hooks method, while only bread were used as a bait in garkoors. Animal baits include living crabs, living small fishes, shrimp, pieces of squids and pecies of fishes, while plant bait was used as boiled dough only. All fishing methods were used in water surrounding Samalliah Island, while in itertidal laggons of the island only cast net was used. Fishes were transported to laboratory and identified according to FAO (1984); Al-Bbaharna (1986); Kuronuma and Abe (1986) and Carpenter *et al.* (1997). The local names of fishes were determined based on fishermen in seven UAE emirates.

## Results

A total of 65 fish species were recorded during the sampling period. These species are belonging to 35 families and to 51 genus (Table 1). Fish species were classified according to their presence in fish sampling to four groups, very common species appeared in all samples, common species appeared in most samples, rare species appeared in some samples and very rare species that appeared one time only. Very common species comprised 26.1% (17 species), common species 24.6% (16 species), rare species 35.4%

Table 1. List of fish species in inland lagoons and water surrounding Sammaliah Island.

| Family          | Scientific Name                        | Common Name                  |
|-----------------|--|------------------------------|
| Sparidae        | <i>Acanthopagrus latus</i>             | Yellowfin seabream           |
|                 | <i>Acanthopagrus bifasciatus</i>       | Two-bar seabream             |
|                 | <i>Crenidens crenidens</i>             | Karanteen seabream           |
|                 | <i>Diplodus sargus kotscheyi</i>       | One spot seabream            |
|                 | <i>Rhabdosargus sarba</i>              | Goldlined seabream           |
|                 | <i>Sparidentex hasta</i>               | Sobaity seabream             |
| Carangidae      | <i>Carangoides bajad</i>               | Orange spotted trevally      |
|                 | <i>Gnathanodon speciosus</i>           | Golden trevally              |
|                 | <i>Scomberoides commersonianus</i>     | Talang queenfish             |
|                 | <i>Trachinotus blochii</i>             | Snubnose pompano             |
| Haemulidae      | <i>Plectorhinchus flavomaculatus</i>   | Lemon sweetlip               |
|                 | <i>Plectorhinchus schotaf</i>          | Minstrel sweetlip            |
|                 | <i>Plectorhinchus sordidus</i>         | Sordid rybberlips            |
|                 | <i>Pomadasys hasta</i>                 | Silver grunt                 |
|                 | <i>Pomadasys stridens</i>              | Striped piggy                |
| Clupeidae       | <i>Nematalosa nasus</i>                | Gizzard shad                 |
|                 | <i>Amblygaster sirm</i>                | Spotted sardinella           |
|                 | <i>Sardinella longiceps</i>            | Indian oil sardine           |
| Gerreidae       | <i>Gerres acinances</i>                | Longtail silver-biddy        |
|                 | <i>Gerres oyena</i>                    | Common silver-biddy          |
|                 | <i>Gerres filamentosus</i>             | Wipfin mojarra               |
| Lutjanidae      | <i>Lutjanus argentimaculatus</i>       | Mangrove red snapper         |
|                 | <i>Lutjanus ehrenbergi</i>             | Blackspot snapper            |
|                 | <i>Lutjanus quinque-lineatus</i>       | Five-lined snapper           |
| Sphyraenidae    | <i>Sphyraena pulnamiae</i>             | Chevron barracuda            |
|                 | <i>Sphyraena jello</i>                 | Pickhandle barracuda         |
|                 | <i>Sphyraena obtusata</i>              | Obtuse barracuda             |
| Lethrinidae     | <i>Lethrinus mahsena</i>               | Mahsena emperor              |
|                 | <i>Lethrinus lentjan</i>               | Redspot emperor              |
|                 | <i>Lethrinus nebulosus</i>             | Spangled emperor             |
| Terapontidae    | <i>Terapon puta</i>                    | Smallscaled terapon          |
|                 | <i>Terapon jarbua</i>                  | Jarbua terapon               |
|                 | <i>Pelates quadrilineatus</i>          | Fourlined terapon            |
| Belonidae       | <i>Tylosurus crocodilus crocodilus</i> | Hound needlefish             |
|                 | <i>Strongylura leiura</i>              | Banded needlefish            |
| Mullidae        | <i>Upeneus sulphureus</i>              | Sulphur goatfish             |
|                 | <i>Parupeneus rubescens</i>            | Rosy goatfish                |
|                 | <i>Upeneus tragula</i>                 | Freckled goatfish            |
| Mugilidae       | <i>Valamugil seheli</i>                | Blue-spot mullet             |
|                 | <i>Liza macrolepis</i>                 | Largescale mullet            |
| Nemipteridae    | <i>Scolopsis ghanam</i>                | Arabian monocle bream        |
|                 | <i>Scolopsis taeniatus</i>             | Black-streaked monocle bream |
| Scaridae        | <i>Scarus persicus</i>                 | Gulf parrotfish              |
|                 | <i>Scarus ghobban</i>                  | Yellowscale parrotfish       |
| Siganidae       | <i>Siganus canaliculatus</i>           | White-spotted spinefoot      |
| Serranidae      | <i>Epinephelus malabaricus</i>         | Malabar grouper              |
| Holocentridae   | <i>Sargocentron rubrum</i>             | Redcoat                      |
| Syngnathidae    | <i>Hippocampus kuda</i>                | Spotted seahorse             |
| Apogonidae      | <i>Apogon thurstoni</i>                | One spot cardinal fish       |
| Atherinidae     | <i>Atherinomorus lacunosus</i>         | Hardyhead silverside         |
| Batrachoididae  | <i>Batrachus grunniens</i>             | Toadfish                     |
| Sillaginidae    | <i>Sillago sihama</i>                  | Silver sillago               |
| Chanidae        | <i>Chanos chanos</i>                   | Milkfish                     |
| Gobiidae        | <i>Amblygobius albimaculatus</i>       | Butterfly goby               |
| Pomacanthidae   | <i>Pomacanthus maculosus</i>           | Yellow-marked butterflyfish  |
| Cyprinodontidae | <i>Aphanius dispar</i>                 | Arabian barred killifish     |
| Hemirhamphidae  | <i>Hemirhamphus archipelagicus</i>     | Jumping halfpeak             |
| Platacidae      | <i>Platax orbicularis</i>              | Orbicular batfish            |
| Platycephalidae | <i>Platycephalus indicus</i>           | Bartail flathead             |
| Pomacentridae   | <i>Abdefduf saxatilli</i>              | Sergeant major               |
| Monodactylidae  | <i>Monodactylus argenteus</i>          | Silver moony                 |
| Soleidae        | <i>Pardachirus marmoratus</i>          | Finless sole                 |
| Plotosidae      | <i>Plotosus lineatus</i>               | Striped eel catfish          |
| Monacanthidae   | <i>Paramonacanthus japonicus</i>       | Hairfinned leatherjacket     |
| Dasyatidae      | <i>Dasyatis imbricatus</i>             | Scaly stingray               |

(23 species) and very rare species 13.8% (9 species) of total species (Table 2). The results based on UAE fishermen in seven emirates indicated that most species have more than one local names in different emirates (Table 3). The differences between local names of fishes were cleared between Abu Dhabi Emirate and Northern Emirates (Fujairah Emirate, Ras Al Khaimah Emirate and Umm Al Qaiwain Emirate). From 65 species fished in Samalliah Island, only two species (*Plotosus lineatus*, *Paramonacanthus japonicus*) haven't local names.

Table (4) shows the arrangement of common species caught by three fishig methods (Hooks and lines, traps and cast net). Thirteen species were caught by using animal bait, the first was *Rhabdosargus sarba* and the last was *Lutjanus argentimaculatus*, while seven species were fished by using boiled dough, the first was *Siganus canaliculatus* and the seventh was *Gerres acinacea*. Eleven fish species were fished by garkoors, the first was *Pomacanthus maculosus* and the eleventh was *Lethrinus mahsena*. Fourteen species were captured by using cast net, the first was *Gerres oyena* and the fourteenth was *Terapon jarbua*.

## Discussion

In the present study sixty five fish species recorded. Eighty two fish species were recorded at sea grass zones in Umm Al Qaiwain lagoon during 1990-1996, these species are belonging to 35 families and 63 genera. Tamaei (1999) found 209 species belonging to 72 families and 144 genera during the fishery survey for Arabian Gulf region of UAE waters. Shallard *et al.* (2003) collected 227 species during 2002-2003 by trawling and trapping.

Table 2. Four groups of fish species classified according to their appearance in fish sampling.

| Very Common Species             | Common Species             | Rare Species              | Very Rare Species          |
|---------------------------------|----------------------------|---------------------------|----------------------------|
| <i>A. bifasciatus</i>           | <i>A. saxatilli</i>        | <i>A. dispar</i>          | <i>A. thurstoni</i>        |
| <i>A. latus</i>                 | <i>A. albimaculatus</i>    | <i>G. filamentosus</i>    | <i>B. grunniens</i>        |
| <i>A. sirm</i>                  | <i>A. lacunosus</i>        | <i>H. archipelagicus</i>  | <i>C. crenidens</i>        |
| <i>G. acinances</i>             | <i>C. bajad</i>            | <i>L. quinquelineatus</i> | <i>D. imbricatus</i>       |
| <i>G. oyena</i>                 | <i>C. chanos</i>           | <i>N. nasus</i>           | <i>D. sargus kotscheyi</i> |
| <i>L. lentjan</i>               | <i>E. malabaricus</i>      | <i>P. marmoratus</i>      | <i>H. kuda</i>             |
| <i>L. nebulosus</i>             | <i>G. speciosus</i>        | <i>P. rubescens</i>       | <i>P. japonicus</i>        |
| <i>L. ehrenbergi</i>            | <i>L. mahsena</i>          | <i>P. orbicularis</i>     | <i>S. ghobban</i>          |
| <i>P. flavomaculatus</i>        | <i>L. macrolepis</i>       | <i>P. lineatus</i>        | <i>S. persicus</i>         |
| <i>P. schotaf</i>               | <i>L. argentimaculatus</i> | <i>P. hasta</i>           |                            |
| <i>P. sordidus</i>              | <i>M. argenteus</i>        | <i>P. stridens</i>        |                            |
| <i>P. maculosus</i>             | <i>P. quadrilineatus</i>   | <i>S. rubrum</i>          |                            |
| <i>R. sarba</i>                 | <i>P. indicus</i>          | <i>S. commersonnianus</i> |                            |
| <i>S. longiceps</i>             | <i>T. puta</i>             | <i>S. ghanam</i>          |                            |
| <i>S. canaliculatus</i>         | <i>T. jarbua</i>           | <i>S. taeniatus</i>       |                            |
| <i>S. leiura</i>                | <i>V. seheli</i>           | <i>S. sihama</i>          |                            |
| <i>T. crocodilus crocodiles</i> |                            | <i>S. hasta</i>           |                            |
|                                 |                            | <i>S. jello</i>           |                            |
|                                 |                            | <i>S. obtusata</i>        |                            |
|                                 |                            | <i>S. pulnamiae</i>       |                            |
|                                 |                            | <i>T. blochii</i>         |                            |
|                                 |                            | <i>U. sulphureus</i>      |                            |
|                                 |                            | <i>U. tragula</i>         |                            |

Table 3. Local names of species fished in inland lagoons and water surrounding Sammaliah Island.

| Fish Species                    | Local Name         |               |              |                |
|---------------------------------|--------------------|---------------|--------------|----------------|
|                                 | First              | Second        | Third        | Fourth         |
| <i>A. saxatilli</i>             | Shenianoh          | Rakeab Awal   |              |                |
| <i>A. bifasciatus</i>           | Bent Al Nochaza    | Faskar        |              |                |
| <i>A. latus</i>                 | Shaam              | Shaam Khishri | Shaam Abyath | Shaam Al-Khour |
| <i>A. sirm</i>                  | Oama               | Oama Zeinaba  |              |                |
| <i>A. albimaculatus</i>         | Haffar             |               |              |                |
| <i>A. dispar</i>                | Fangal             |               |              |                |
| <i>A. thurstoni</i>             | Neisaraha Al Aamak |               |              |                |
| <i>A. lacunosus</i>             | Chesschus          |               |              |                |
| <i>B. grunniens</i>             | Anza               |               |              |                |
| <i>C. bajad</i>                 | Jesh               | Umm Al Halla  |              |                |
| <i>C. chanos</i>                | Nemir              | Eiffah        |              |                |
| <i>C. crenidens</i>             | Ebaiseyah          | Bitanah       |              |                |
| <i>D. imbricatus</i>            | Luchmah            | Samha         |              |                |
| <i>D. sargus kotscheyi</i>      | Ebaiseyah          | Mijwah        |              |                |
| <i>E. malabaricus</i>           | Hamoor             |               |              |                |
| <i>G. filamentosus</i>          | Bedha              | Bedh Farisi   |              |                |
| <i>G. ovena</i>                 | BedhArabi          | Badeh Mahaly  |              |                |
| <i>G. acinancea</i>             | Bedha              |               |              |                |
| <i>G. speciosus</i>             | Zereiday           | Kifdar        |              |                |
| <i>H. archipelagicus</i>        | Sils               |               |              |                |
| <i>H. kuda</i>                  | Buzizi             |               |              |                |
| <i>L. nebulosus</i>             | Sheiri Arabi       |               |              |                |
| <i>L. mahsena</i>               | Sheiri yemah       |               |              |                |
| <i>L. lentjan</i>               | Sheiri shekaily    | Bontea        | Shekhabi     |                |
| <i>L. macrolepis</i>            | Biah sfeti         | Maid          |              |                |
| <i>L. argentimaculatus</i>      | Umm Al durais      |               |              |                |
| <i>L. ehrenbergi</i>            | Neisarrah          |               |              |                |
| <i>L. quinquelineatus</i>       | Neisarrah          | Akllah        | Tymmoh       |                |
| <i>M. argenteus</i>             | Farsoug            |               |              |                |
| <i>N. nasus</i>                 | Yawafa             |               |              |                |
| <i>P. japonicus</i>             | None               |               |              |                |
| <i>P. marmoratus</i>            | Khubzet Al Bahar   | Tabak Lazik   | Kalbiyah     | Samakat Moosa  |
| <i>P. rubescens</i>             | Hedie              |               |              |                |
| <i>P. quadrilineatus</i>        | Yamyam             |               |              |                |
| <i>P. orbicularis</i>           | Omaad              |               |              |                |
| <i>P. indicus</i>               | Waharah            |               |              |                |
| <i>P. flavomaculatus</i>        | Yanam              |               |              |                |
| <i>P. schotaf</i>               | Yanam              |               |              |                |
| <i>P. sordidus</i>              | Yanam              | Farsh         |              |                |
| <i>P. lineatus</i>              | None               |               |              |                |
| <i>P. maculosus</i>             | Anfooz             |               |              |                |
| <i>P. hasta</i>                 | Nakroor            | Kinkser       |              |                |
| <i>P. stridens</i>              | Yemyamah           |               |              |                |
| <i>R. sarba</i>                 | Gabet              |               |              |                |
| <i>S. longiceps</i>             | Oama Aifa          | Salyah        |              |                |
| <i>S. rubrum</i>                | Sorkhoo            |               |              |                |
| <i>S. ghobban</i>               | Gain               | Gain Arabi    |              |                |
| <i>S. persicus</i>              | Gain               |               |              |                |
| <i>S. ghanam</i>                | Bezaimy            | Owanat Saad   | Eyn Batwa    | Eyn Shmaloooh  |
| <i>S. taeniatus</i>             | Bezaimy            |               |              |                |
| <i>S. commersonianus</i>        | Zelaa              | Bassar        |              |                |
| <i>S. canaliculatus</i>         | Safi Arabi         |               |              |                |
| <i>S. sihama</i>                | Hasoom             |               |              |                |
| <i>Sparidentex hasta</i>        | Sobaity            | Halam         |              |                |
| <i>Sphyraena jello</i>          | Gidd               | Kheli         |              |                |
| <i>Sphyraena obtusata</i>       | Gidd               | Kheli         |              |                |
| <i>S. pulnamiae</i>             | Gidd               |               |              |                |
| <i>S. leiura</i>                | Hakool             |               |              |                |
| <i>T. jarbua</i>                | Yaly               | Baam          |              |                |
| <i>T. puta</i>                  | Keswan             | Yamyam        | Kalbah       |                |
| <i>T. blochii</i>               | Al seben           | Seben Arabi   | Farsouk      |                |
| <i>T. crocodilus crocodilus</i> | Hakool             |               |              |                |
| <i>U. sulphureus</i>            | Hammer             | Hedie Farisi  |              |                |
| <i>U. tragula</i>               | Hedie              |               |              |                |
| <i>V. seheli</i>                | Biah Arabi         |               |              |                |

Table 4. Arrangement of species fished by hooks and lines, garkoors and cast net in inland lagoons and water surrounding Sammaliah Island.

| Species Arrangement | Hooks and Lines                 |                        | Traps (Karkoors)          | Cast Net                |
|---------------------|---------------------------------|------------------------|---------------------------|-------------------------|
|                     | Animal Bait                     | Boiled Dough           |                           |                         |
| 1                   | <i>R. sarba</i>                 | <i>S.canaliculatus</i> | <i>P. maculosus</i>       | <i>G. oyena</i>         |
| 2                   | <i>A. bifasciatus</i>           | <i>P. maculosus</i>    | <i>A. bifasciatus</i>     | <i>G. acinances</i>     |
| 3                   | <i>L. ehrenbergi</i>            | <i>A. saxatilli</i>    | <i>E. malabaricus</i>     | <i>A. lacunosus</i>     |
| 4                   | <i>P. flavomaculatus</i>        | <i>A. bifasciatus</i>  | <i>R. sarba</i>           | <i>A. sirm</i>          |
| 5                   | <i>P. sordidus</i>              | <i>R. sarba</i>        | <i>L. ehrenbergi</i>      | <i>S. longiceps</i>     |
| 6                   | <i>A. latus</i>                 | <i>A. latus</i>        | <i>P.flavomaculatus</i>   | <i>A. bifasciatus</i>   |
| 7                   | <i>L. lentjan</i>               | <i>G. acinances</i>    | <i>P. schotaf</i>         | <i>S.canaliculatus</i>  |
| 8                   | <i>L. nebulosus</i>             |                        | <i>L.argentimaculatus</i> | <i>V. seheli</i>        |
| 9                   | <i>S. leiura</i>                |                        | <i>L. lentjan</i>         | <i>L. macrolepis</i>    |
| 10                  | <i>T. crocodilus crocodiles</i> |                        | <i>L. nebulosus</i>       | <i>L. ehrenbergi</i>    |
| 11                  | <i>E. malabaricus</i>           |                        | <i>L. mahsena</i>         | <i>A. albimaculatus</i> |
| 12                  | <i>L. argentimaculatus</i>      |                        |                           | <i>P. indicus</i>       |
| 13                  |                                 |                        |                           | <i>T. puta</i>          |
| 14                  |                                 |                        |                           | <i>T. jarbua</i>        |

Very common species in the present study comprised 26.1% (17 species), common species 24.6% (16 species), rare species 35.4% (23 species) and very rare species 13.8% (9 species). Tamaei (1999) found different group classification and species numbers, where very common species comprised 19.5% (16 species), common species 70.7% (58) and rare species 9.7% (8 species). About 35 fish species were recorded in both survey of Samalliah Island and Umm Al Qaiwain lagoon, so more than 50% of species were differed between Umm Al Qaiwain lagoon and Samalliah Island. These differences in number and kind of fish species may be related to high water salinity (more than 55 ppt) in Samalliah Island (Taher *et al.*, 2011) compared with moderate water salinity (less than 40 ppt) in Umm Al Quain lagoon (Personal Observations), and also due to very shallow water (about 4 meters) in Samalliah Island compared with more than 10 meters depth in Umm Al Quain lagoon. There was another reason of higher water temperature in Abu Dhabi shallow waters especially during long summer season. Shallard *et al.* (2003) stated that there aren't differences between surface and bottom water temperature in Abu Dhabi Emirates compared with small differences in Northern Emirates and very big differences in East Coast Emirates.

Sixteen species were fished by hooks and lines, eleven are carnivorous feed mainly on crustacean, mollusks, sponges, sea urchins and fishes, two are (*Strongylura leiura* and *Tylosurus crocodilus crocodiles*) piscivorous, two are (*Pomacanthus maculosus* and *Abdefduf saxatilli*) omnivorous and one species (*Siganus canaliculatus*) is herbivorous fed mainly on seaweeds and benthos algae (Taher, 2006). The first preferred animal bait was live crabs for all species fished by animal baits except three species (*E. malabaricus*, *Lethrinus lentjan* and *Lethrinus nebulosus*) that preferred pieces of fishes. It is important to point out that crabs don't recorded as food items for all species fished by hooks and lines. This may be related to availability of live crabs in hooks compared with free crabs in the nature that hide very well in pores of the bottom and coast.

According to the present survey a total of 17 very common species recorded in all samples, while Shallard *et al.* (2003) recorded only 8 species. Four species were recorded in both surveys as very common species (*G. acinances*, *L. lentjan*, *L. nebulosus*, *p. sordidus*). These differences may be related to differences of coastal habitats only of Samalliah Island and open habitats for trawling in the survey of Shallard *et al.* (2003). As example *G. oyena* noticed swimming in small shoals (50-100 individuals) in the very shallow coast (20-50 cm) of Samalliah Island (Personal Observations), while it isn't recorded as very common species in the survey of Shallard *et al.* (2003), and recorded (with other 15 species) as a very common species at sea grass zone in Umm Al Quwain lagoon (Tamaei, 1999).

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### References

- Al-Baharan, W.S. 1986. Fishes of Bahrain. Ministry of Commerce and Agriculture and fisheries. Bahrain, 294 pp.
- Al-Moosawy, S.N. and Karim, H.H. 1991. Introduction in marine geology. Marine Science Center Publication No. 8, 650 pp. (in Arabic).
- Carpenter, K.E., Krupp, F., Jones, D.A. and Zajons, U. 1997. FAO species identification guide for fishery purposes. The living marine resources of Kuwait, Eastern Saudi Arabia, Bahrain, Qatar and the United Arab Emirates. Rome, FAO, 293 pp.
- FAO 1981a. Demersal resources of the Gulf and Gulf of Oman. Regional Fishery Survey and Development Project. FI:DP/RAB/71/278/11. 122 pp.
- FAO 1981b. Pelagic resources of the Gulf and Gulf of Oman. Regional Fishery Survey and Development Project. FI:DP/RAB/71/278/11. 143 pp.
- FAO 1984. Species Identification Sheets for Fishery Purposes, Western Indian Ocean, Fishing Area 51. Volumes I-V. FAO Rome.
- Karim, H.H. 1988. The phenomena of multi laggonal system in the Northern Arabian Gulf. *Marina Mesopotamica*, 3(2): 225-238. (in Arabic).
- Kuronuma, K and Abe, Y. 1986. Fishes of the Arabian Gulf. Kuwait Institute for Scientific Research, Kuwait, 356 pp.
- Shallard, B., *et al.* 2003. Fish resources assessment survey project of Abu Dhabi and UAE waters. Environmental Research and Wildlife Development Agency, 132 pp.
- Sheppard, C., Al-Husiani, M., Al-Jamali, F., Al-Yamani, F., Baldwin, R., Bishop, J., Benzoni, F., Dutrieux, E., Dulvy, N.K., Durvasula, S.R.V., Jones, D.A., Loughland, R., Medio, D., Nithyanandan, M., Pillingm, G.M., Polikarpov, I., Price, A.R.G., Purkis, S., Riegl, B., Saburova, M., Namin, K.S., Taylor, O., Wilson, S. and Zainal, K. 2010. The Gulf: A young sea in decline. *Mar. Pollut. Bull.*, 60: 13-38.

- Taher, M.M. 2006. Emirates Fishes. 349 pp. (Unpublished).
- Taher, M.M., Mohamed, A.R.M. and Al-Ali, A.K.H. 2011. Physical and chemical characteristics and ichthyofauna of waters surrounding Sammaliah Island, Abu Dhabi, UAE. Ecology Conference of Science, 2011, (Accepted).
- Tamaei, S. 1999. Operation manual of fish hatchery, aquarium and mangrove cultivation in UAE. Marine Resources Research Center-Ministry of Agriculture and Fisheries, UAE, 45 pp.

## المسح السمكي في الخيران الداخلية والمياه المحيطة بجزيرة السمالية - أبوظبي، الإمارات العربية المتحدة

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**المستخلص** - جمعت الأسماك من المياه المحيطة بجزيرة السمالية في إمارة أبوظبي ومن خيراتها المدية الداخلية باستخدام طرق صيد مختلفة للفترة من آذار 2001 لغاية آب 2006. استخدمت القراقير والخيوط لمدة خمسة أيام في الأسبوع وشبكة السلية يوم واحد في الأسبوع، بينما استخدمت شبك الجر الساحلية وشباك النصب الخيشومية فصلياً. سجل 65 نوعاً من الأسماك تعود لـ 35 عائلة و 51 جنساً خلال فترة الصيد، وصنفت الأسماك اعتماداً على ظهورها في الصيد أربعة مجاميع، وشكلت مجموعة الأنواع الشائعة جداً 35.4% (17 نوعاً) من الأنواع ومجموعة الأنواع الشائعة 24.6% (16 نوعاً) ومجموعة الأنواع النادرة 35.4% (23 نوعاً)، بينما شكلت مجموعة الأنواع النادرة جداً 13.8% (9 أنواع). إصطيدي 16 نوعاً بواسطة الخيوط والسنارات و 11 نوعاً بواسطة القراقير و 14 نوعاً بواسطة شبكة السلية.