

Appendix 10. List of the inventory survey spots for the benthos component.

| Area           | Site         | Spot  | Lat.  | Long. | Start |       | End   |       | Method  | Habitat                                   |                                |
|----------------|--------------|-------|-------|-------|-------|-------|-------|-------|---------|---|--------------------------------|
|                |              |       | (N)   | (E)   | Date  | Time  | Date  | Time  |         |   |                                |
| Gulf of Aqaba  | 1            | B52   | 3E+05 | 3E+05 | 2E+07 | 1100  | 2E+07 | 1200  | scuva   | subtidalzone/bedrock                      |                                |
|                |              | B53   | 3E+05 | 3E+05 | 2E+07 | 1200  | 2E+07 | 1300  | snorkel | subtidal zone/sand/scagrassbed            |                                |
|                |              | B85   | 3E+05 | 3E+05 | 2E+07 | 1000  | 2E+07 | 1030  | scuva   | intertidalzone/sand                       |                                |
|                |              | B86   | 3E+05 | 3E+05 | 2E+07 | 1030  | 2E+07 | 1130  | scuva   | subtidalzone/bedrock/sand                 |                                |
|                |              | B87   | 3E+05 | 3E+05 | 2E+07 | 1300  | 2E+07 | 1400  | scuva   | subtidalzone/bedrock/sand                 |                                |
|                |              | B88   | 3E+05 | 3E+05 | 2E+07 | 1400  | 2E+07 | 1430  | scuba   | surper/intertidalzone/bedrock/sar         |                                |
|                | 2            | B67   | 3E+05 | 3E+05 | 2E+07 | 1100  | 2E+07 | 1200  | scuva   | sub/intertidalzone/bedrock/sand           |                                |
|                |              | B89   | 3E+05 | 3E+05 | 2E+07 | 1100  | 2E+07 | 1200  | scuva   | subtidalzone/bedrock                      |                                |
|                |              | B90   | 3E+05 | 3E+05 | 2E+07 | 1200  | 2E+07 | 1230  | scuva   | intertidalzone/rocks/sand                 |                                |
|                |              | B91   | 3E+05 | 3E+05 | 2E+07 | 1230  | 2E+07 | 1300  | foot    | supertidazone/rocks                       |                                |
|                | 3            | B54   | 3E+05 | 3E+05 | 2E+07 | 1200  | 2E+07 | 1300  | scuva   | subtidal zone/sand/patch reefs            |                                |
|                |              | B55   | 3E+05 | 3E+05 | 2E+07 | 1500  | 2E+07 | 1600  | scuva   | subtidal zone/patch reefs/seagrassbed     |                                |
|                |              | B56   | 3E+05 | 3E+05 | 2E+07 | 1600  | 2E+07 | 1630  | foot    | supertidalzone/bedrock                    |                                |
|                |              | B92   | 3E+05 | 3E+05 | 2E+07 | 1100  | 2E+07 | 1200  | scuba   | subtidalzone/patch reef                   |                                |
|                |              | B93   | 3E+05 | 3E+05 | 2E+07 | 1200  | 2E+07 | 1230  | scuba   | subtidalzone/sand                         |                                |
|                |              | B94   | 3E+05 | 3E+05 | 2E+07 | 1230  | 2E+07 | 1300  | foot    | supertidalzone/bedrock                    |                                |
|                | Tiran        | 4     | B57   | 3E+05 | 4E+05 | 2E+07 | 1300  | 2E+07 | 1430    | scuva                                     | subtidalzone/sand/bedrock      |
|                |              |       | B60   | 3E+05 | 4E+05 | 2E+07 | 1445  | 2E+07 | 1530    | scuva                                     | subtidal zone/sand/patch reefs |
| 5              |              | B59   | 3E+05 | 4E+05 | 2E+07 | 1200  | 2E+07 | 1300  | scuva   | subtidal zone/sand/patch reefs            |                                |
| Duba / Al-Wajh | 6            | B63   | 3E+05 | 4E+05 | 2E+07 | 610   | 2E+07 | 710   | foot    | intertidalzone/bedrock                    |                                |
|                |              | B68   | 3E+05 | 4E+05 | 2E+07 | 1000  | 2E+07 | 1100  | scuva   | subtidal zone/sand                        |                                |
|                |              | B98   | 3E+05 | 4E+05 | 2E+07 | 1030  | 2E+07 | 1200  | scuba   | subtidalzone/bedrock                      |                                |
|                |              | B99   | 3E+05 | 4E+05 | 2E+07 | 1030  | 2E+07 | 1200  | foot    | beach / sand                              |                                |
|                |              | B61   | 3E+05 | 4E+05 | 2E+07 | 1130  | 2E+07 | 1230  | scuva   | subtidal zone/sand/patch reef             |                                |
|                | 7            | B62   | 3E+05 | 4E+05 | 2E+07 | 1335  | 2E+07 | 1430  | snorkel | subtidal zone/sand/patch reef             |                                |
|                |              | B64   | 3E+05 | 4E+05 | 2E+07 | 1030  | 2E+07 | 1130  | foot    | intertidalzone/mud/maglove                |                                |
|                |              | B65   | 3E+05 | 4E+05 | 2E+07 | 1300  | 2E+07 | 1400  | scuva   | subtidal zone/sand                        |                                |
|                |              | B66   | 3E+05 | 4E+05 | 2E+07 | 1300  | 2E+07 | 1400  | foot    | intertidalzone/bedrock                    |                                |
|                |              | B95   | 3E+05 | 4E+05 | 2E+07 | 1030  | 2E+07 | 1130  | scuba   | subtidalzone/patch reefs/sand/seagrassbed |                                |
|                |              | B96   | 3E+05 | 4E+05 | 2E+07 | 1130  | 2E+07 | 1200  | foot    | supertidalzone/bedrock                    |                                |
|                | 8            | B97   | 3E+05 | 4E+05 | 2E+07 | 1300  | 2E+07 | 1400  | scuba   | subtidalzone/sand/seagrassbed             |                                |
|                |              | B50   | 3E+05 | 4E+05 | 2E+07 | 1200  | 2E+07 | 1300  | scuva   | subtidalzone/bedrock                      |                                |
|                |              | B51   | 3E+05 | 4E+05 | 2E+07 | 1300  | 2E+07 | 1330  | scuva   | intertidal zone/bedrock/sand              |                                |
|                |              | 9     | B39   | 3E+05 | 4E+05 | 2E+07 | 1800  | 2E+07 | 1900    | scuba                                     | subtidal zone/sand             |
|                |              |       | B40   | 3E+05 | 4E+05 | 2E+07 | 1100  | 2E+07 | 1200    | scuba                                     | subtidal zone/bedrock          |
|                |              |       | B42   | 3E+05 | 4E+05 | 2E+07 | 1800  | 2E+07 | 1900    | trap                                      | intertidal zone/rock           |
|                | B44          |       | 3E+05 | 4E+05 | 2E+07 | 1800  | 2E+07 | 1900  | snorkel | intertidal zone/bedrock                   |                                |
|                | B45          |       | 3E+05 | 4E+05 | 2E+07 | 1800  | 2E+07 | 1900  | snorkel | intertidal zone/bedrock                   |                                |
|                | B46          |       | 3E+05 | 4E+05 | 2E+07 | 1800  | 2E+07 | 1900  | foot    | intertidal zone/bedrock                   |                                |
|                | 10           | B41   | 3E+05 | 4E+05 | 2E+07 | 1130  | 2E+07 | 1210  | scuba   | subtidal zone/patch reef                  |                                |
|                |              | 11    | B01   | 3E+05 | 4E+05 | 2E+07 | 1540  | 2E+07 | 1610    | foot                                      | inter tidal zone/bedrock       |
|                |              |       | B02   | 3E+05 | 4E+05 | 2E+07 | 1620  | 2E+07 | 1700    | snorkel                                   | subtidal zone/sand             |
|                |              |       | B03   | 3E+05 | 4E+05 | 2E+07 | 1800  | 2E+07 | 1100    | trap                                      | subtidal zone/sand/patch reef  |
|                |              |       | B13   | 3E+05 | 4E+05 | 2E+07 | 1400  | 2E+07 | 1430    | scuva                                     | inter tidal zone/bedrock       |
|                |              |       | B14   | 3E+05 | 4E+05 | 2E+07 | 1430  | 2E+07 | 1500    | scuva                                     | subtidal zone/sand             |
|                |              |       | B15   | 3E+05 | 4E+05 | 2E+07 | 1135  | 2E+07 | 13:20   | scuva                                     | subtidal zone/bedrock          |
|                |              |       | B49   | 3E+05 | 4E+05 | 2E+07 | 1100  | 2E+07 | 1200    | scuva                                     | subtidalzone/sand/rocks        |
|                | Al-Wajh Bank |       | 12    | B04   | 3E+05 | 4E+05 | 2E+07 | 1230  | 2E+07   | 1245                                      | foot                           |
|                |              | B05   |       | 3E+05 | 4E+05 | 2E+07 | 1200  | 2E+07 | 1230    | snorkel                                   | subtidal zone/sand/seagrass    |
| B06            |              | 3E+05 |       | 4E+05 | 2E+07 | 1330  | 2E+07 | 1400  | snorkel | subtidal zone/sand/bedrock                |                                |
| B07            |              | 3E+05 |       | 4E+05 | 2E+07 | 1430  | 2E+07 | 1500  | foot    | beach/sand                                |                                |
| B08            |              | 3E+05 |       | 4E+05 | 2E+07 | 1500  | 2E+07 | 1530  | snorkel | inter tidal zone/sand/seagrass            |                                |
| B09            |              | 3E+05 |       | 4E+05 | 2E+07 | 1530  | 2E+07 | 1600  | foot    | beach/sand                                |                                |
| B10            |              | 3E+05 |       | 4E+05 | 2E+07 | 1220  | 2E+07 | 14:00 | scuva   | inter tidal zone/sand/bedrock             |                                |
| B11            |              | 3E+05 |       | 4E+05 | 2E+07 | 1430  | 2E+07 | 1500  | scuva   | inter tidal zone/sand/bedrock             |                                |
| B12            |              | 3E+05 |       | 4E+05 | 2E+07 | 1530  | 2E+07 | 1600  | foot    | beach/sand                                |                                |
| B16            |              | 3E+05 |       | 4E+05 | 2E+07 | 1455  | 2E+07 | 1530  | scuva   | subtidal zone/sand/patch reefs            |                                |
| B17            |              | 3E+05 |       | 4E+05 | 2E+07 | 1406  | 2E+07 | 1420  | dredge  | subtidal zone/sand/patch reefs            |                                |

Appendix 10 (cont.). List of the inventory survey spots for the benthos component.

| Area                | Site | Spot | Lat.<br>(N) | Long.<br>(E) | Start<br>Date | End<br>Time | Start<br>Date | End<br>Time | Method  | Habitat                                   |
|---------------------|------|------|-------------|--------------|---------------|-------------|---------------|-------------|---------|---|
|                     |      | B48  | 3E+05       | 4E+05        | 2E+07         | 1100        | 2E+07         | 1200        | scuba   | intertidal zone/rock                      |
|                     |      | B84  | 3E+05       | 4E+05        | 2E+07         | 1200        | 2E+07         | 1300        | scuba   | subtidal zone/sand/bedrock                |
|                     | 14   | B83  | 3E+05       | 4E+05        | 2E+07         | 1150        | 2E+07         | 1310        | scuba   | subtidal zone/sand/patch reef             |
|                     | 15   | B18  | 3E+05       | 4E+05        | 2E+07         | 1315        | 2E+07         | 1415        | scuba   | subtidal zone/sand/patch reefs            |
|                     |      | B19  | 3E+05       | 4E+05        | 2E+07         | 1515        | 2E+07         | 1545        | snorkel | subtidal zone/patch reef                  |
|                     |      | B20  | 3E+05       | 4E+05        | 2E+07         | 1400        | 2E+07         | 1500        | scuba   | subtidal zone/sand/bedrock                |
|                     | 16   | B81  | 3E+05       | 4E+05        | 2E+07         | 1210        | 2E+07         | 1300        | scuba   | intertidal zone/bedrock/sand              |
|                     |      | B82  | 3E+05       | 4E+05        | 2E+07         | 1450        | 2E+07         | 1530        | scuba   | subtidal zone/sand/patch reef             |
| Umluj / Ra's Baridi | 17   | B26  | 2E+05       | 4E+05        | 2E+07         | 1120        | 2E+07         | 1140        | scuba   | subtidal zone/sand                        |
|                     |      | B27  | 2E+05       | 4E+05        | 2E+07         | 1140        | 2E+07         | 1230        | scuba   | subtidal zone/patch reef                  |
|                     |      | B28  | 2E+05       | 4E+05        | 2E+07         | 1330        | 2E+07         | 1430        | snorkel | subtidal zone/sand/bedrock                |
|                     |      | B79  | 2E+05       | 4E+05        | 2E+07         | 1015        | 2E+07         | 1110        | scuba   | subtidal zone/bedrock/sand/patch reef     |
|                     |      | B80  | 3E+05       | 4E+05        | 2E+07         | 1130        | 2E+07         | 1300        | scuba   | subtidal zone/sand/bedrock                |
|                     | 18   | B21  | 3E+05       | 4E+05        | 2E+07         | 950         | 2E+07         | 1045        | scuba   | inter/subtidal zone/sand/bedrock          |
|                     |      | B22  | 3E+05       | 4E+05        | 2E+07         | 1130        | 2E+07         | 1200        | foot    | intertidal zone/sand/bedrock              |
|                     |      | B23  | 3E+05       | 4E+05        | 2E+07         | 1320        | 2E+07         | 1410        | snorkel | beach subtidal zone/sand/bedrock          |
|                     |      | B24  | 2E+05       | 4E+05        | 2E+07         | 1100        | 2E+07         | 1200        | scuba   | subtidal zone/sand/seagrass               |
|                     |      | B25  | 2E+05       | 4E+05        | 2E+07         | 1200        | 2E+07         | 1300        | scuba   | subtidal zone/bedrock                     |
|                     | 19   | B75  | 2E+05       | 4E+05        | 2E+07         | 1150        | 2E+07         | 1220        | scuba   | intertidal zone/bedrock                   |
|                     |      | B76  | 2E+05       | 4E+05        | 2E+07         | 1220        | 2E+07         | 1300        | scuba   | intertidal zone/sand/patch reef           |
|                     |      | B77  | 2E+05       | 4E+05        | 2E+07         | 1125        | 2E+07         | 1200        | scuba   | subtidal zone/sand/patch reef             |
|                     |      | B78  | 2E+05       | 4E+05        | 2E+07         | 1200        | 2E+07         | 1230        | snorkel | intertidal zone/bedrock                   |
|                     | 20   | B35  | 2E+05       | 4E+05        | 2E+07         | 1020        | 2E+07         | 1110        | scuba   | subtidal zone/bedrock                     |
|                     |      | B36  | 2E+05       | 4E+05        | 2E+07         | 1110        | 2E+07         | 1200        | foot    | intertidal zone/bedrock/sand              |
|                     | 21   | B37  | 2E+05       | 4E+05        | 2E+07         | 1605        | 2E+07         | 1645        | scuba   | subtidal zone/sand/seagrass               |
|                     |      | B38  | 2E+05       | 4E+05        | 2E+07         | 1645        | 2E+07         | 1715        | foot    | beach/sand/bedrock                        |
| Yanbu' / Jeddah     | 22   | B73  | 2E+05       | 4E+05        | 2E+07         | 1115        | 2E+07         | 1210        | scuba   | subtidal zone/sand                        |
|                     |      | B74  | 2E+05       | 4E+05        | 2E+07         | 1300        | 2E+07         | 1400        | snorkel | intertidal zone/bedrock/sand/seagrass bed |
|                     | 23   | B33  | 2E+05       | 4E+05        | 2E+07         | 1230        | 2E+07         | 1250        | foot    | beach/sand                                |
|                     |      | B34  | 2E+05       | 4E+05        | 2E+07         | 1250        | 2E+07         | 1330        | scuba   | subtidal zone/sand/seagrass/patch reef    |
|                     | 24   | B29  | 2E+05       | 4E+05        | 2E+07         | 1330        | 2E+07         | 1400        | scuba   | subtidal zone/sand                        |
|                     |      | B30  | 2E+05       | 4E+05        | 2E+07         | 1400        | 2E+07         | 1450        | snorkel | intertidal zone/bedrock/sand              |
|                     |      | B31  | 2E+05       | 4E+05        | 2E+07         | 1520        | 2E+07         | 1600        | snorkel | intertidal zone/bedrock/sand              |
|                     |      | B32  | 2E+05       | 4E+05        | 2E+07         | 1200        | 2E+07         | 1300        | scuba   | intertidal zone/mangrove                  |
|                     |      | B69  | 2E+05       | 4E+05        | 2E+07         | 1100        | 2E+07         | 1200        | scuba   | subtidal zone/patch reef/sand             |
|                     |      | B70  | 2E+05       | 4E+05        | 2E+07         | 940         | 2E+07         | 1100        | scuba   | intertidal zone/sand/mud                  |
|                     | 25   | B71  | 2E+05       | 4E+05        | 2E+07         | 1330        | 2E+07         | 1400        | scuba   | intertidal zone/bedrock/sand              |
|                     |      | B72  | 2E+05       | 4E+05        | 2E+07         | 1400        | 2E+07         | 1430        | scuba   | subtidal zone/bedrock/sand                |

Appendix 11. List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM    | CLASS          | ORDER             | FAMILY            | SCIENTIFIC NAME                  | ENGLISH NAME                |
|-----|-----------|----------------|-------------------|-------------------|----------------------------------|-----------------------------|
| 1   | PORIFERA  | ZOANTHARIA     | ACTINARIA         | HORMATHIDAE       | <i>Calliactis polyopus</i>       | (Hermit Crab Anemone)       |
| 2   | ANNELIDA  | POLYCHAETA     | SABELLIDA         | SABELLIDAE        |                                  | (Fan-worm)                  |
| 3   | ANNELIDA  | POLYCHAETA     | SABELLIDA         | SERPULIDAE        |                                  | (Calcareous tube-worm)      |
| 4   | SIPUNCULR | unidentified   | unidentified      | unidentified      |                                  | (Peanut-worms)              |
| 5   | MOLLUSCA  | POLYPLACOPHORA | unidentified      | CHITONIDAE        | <i>Acanthopleura haddoni</i>     | (Chitons)                   |
| 6   | MOLLUSCA  | POLYPLACOPHORA | unidentified      | CHITONIDAE        |                                  | (Chitons)                   |
| 7   | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | HALIOTIDAE        | <i>Sanhalotis varia</i>          | (Abalon)                    |
| 8   | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | PATELLIDAE        | <i>Ceilana eucosmia</i>          | (Limpet)                    |
| 9   | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Clanculus pharaonius</i>      | Strawberry Top Shell        |
| 10  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Gibbula decivis</i>           | (Topshell)                  |
| 11  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Monodonta canalifera</i>      | (Topshell)                  |
| 12  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Tectus dentatus</i>           | (Topshell)                  |
| 13  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Tectus erythreus</i>          | (Topshell)                  |
| 14  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Trochus erythreus</i>         | (Topshell)                  |
| 15  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Trochus maculatus</i>         | (Topshell)                  |
| 16  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TROCHIDAE         | <i>Trochus sp.(3-1)</i>          | (Topshell)                  |
| 17  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TURBINIDAE        | <i>Turbo petholatus</i>          | Tapestry Turban             |
| 18  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TURBINIDAE        | <i>Turbo radiatus</i>            | (Turban)                    |
| 19  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | TURBINIDAE        | <i>Turbo sp.(3-12)</i>           | (Turban)                    |
| 20  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | STOMATELLIDAE     | <i>Stomatella auricula</i>       | (False ear shell)           |
| 21  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | STOMATELLIDAE     | <i>Stomatella nigra</i>          | (False ear shell)           |
| 22  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | NERITIDAE         | <i>Nerita albicilla</i>          | (Slipper winkle)            |
| 23  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | NERITIDAE         | <i>Nerita longii</i>             | (Slipper winkle)            |
| 24  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | NERITIDAE         | <i>Nerita polita</i>             | (Slipper winkle)            |
| 25  | MOLLUSCA  | GASTROPODA     | ARCHAEOGASTROPODA | NERITIDAE         | <i>Neritina scabra</i>           | (Periwinkle)                |
| 26  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | LITTORINIDAE      | <i>Nodilittorina tuberculata</i> | (Sundial)                   |
| 27  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | LITTORINIDAE      | <i>Helicaxis variegatus</i>      | (Screw shell)               |
| 28  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | ARCHITECTONICIDAE | <i>Turritella cf.tuloni</i>      | (Screw shell)               |
| 29  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | TURRITELLIDAE     | <i>Turritella sanguinea</i>      | (Worm shell)                |
| 30  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | TURRITELLIDAE     | <i>Dendropoma maxima</i>         | (Cluster winkle)            |
| 31  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Planaxis sulcatus</i>         | (Horn shell)                |
| 32  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium caeruleum</i>       | (Horn shell)                |
| 33  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium columna</i>         | (Horn shell)                |
| 34  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium erythraeense</i>    | (Horn shell)                |
| 35  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium nesioticum</i>      | (Horn shell)                |
| 36  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium sp.(4-11)</i>       | (Horn shell)                |
| 37  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium sp.(4-15)</i>       | (Horn shell)                |
| 38  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium sp.(4-21)</i>       | (Horn shell)                |
| 39  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Cerithium sp.(5-7)</i>        | (Horn shell)                |
| 40  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Clypeomorus concisus</i>      | (Horn shell)                |
| 41  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Rhinoclavis fasciatus</i>     | (Horn shell)                |
| 42  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Rhinoclavis kochi</i>         | (Horn shell)                |
| 43  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        | <i>Rhinoclavis sp.(4-9)</i>      | (Horn shell)                |
| 44  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | VERMETIDAE        |                                  | (Horn shell)                |
| 45  | MOLLUSCA  | GASTROPODA     | MESOGASTROPODA    | STROMBIDAE        | <i>Lambis truncata sebae</i>     | Spider Conch (Finger Conch) |

Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM   | CLASS      | ORDER          | FAMILY     | SCIENTIFIC NAME                  | ENGLISH NAME             |
|-----|----------|------------|----------------|------------|----------------------------------|--------------------------|
| 46  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Strombus fasciatus</i>        | Lineated Conch           |
| 47  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Strombus gibberulus albus</i> | (Conch shell)            |
| 48  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Strombus mutabilis</i>        | (Conch shell)            |
| 49  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Strombus tricornis</i>        | (Conch shell)            |
| 50  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Strombus urceus</i>           | (Conch shell)            |
| 51  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Terebellum terebellum</i>     | Arabian Tibia            |
| 52  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | STROMBIDAE | <i>Tibia insulaechorab</i>       | (Hoof shell)             |
| 53  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | HIPPOCIDAE | <i>Hippomix cf. acuta</i>        | Arabian Cowrie           |
| 54  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea arabica</i>           | (Cowrie)                 |
| 55  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea carneola</i>          | (Cowrie)                 |
| 56  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea caurica</i>           | (Cowrie)                 |
| 57  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea isabella</i>          | (Cowrie)                 |
| 58  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea lynx</i>              | (Cowrie)                 |
| 59  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea macandrewi</i>        | (Cowrie)                 |
| 60  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea nebrides</i>          | (Cowrie)                 |
| 61  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea pantherina</i>        | Panther Cowrie           |
| 62  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea staphylea</i>         | Grape Cowrie             |
| 63  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYPRAEIDAE | <i>Cypraea sp. (juvenile)</i>    | (Cowrie)                 |
| 64  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | NATICIDAE  | <i>Natica onca</i>               | (Moon Snail)             |
| 65  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | NATICIDAE  | <i>Polinices melanostomus</i>    | Black Mouthed Moon Snail |
| 66  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | NATICIDAE  | <i>Polinices tumidus</i>         | (Moon Snail)             |
| 67  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | NATICIDAE  | <i>Sinum papilla</i>             | (Moon Snail)             |
| 68  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYMATIDAE  | <i>Cymatium aquatile</i>         | Hairy Triton             |
| 69  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYMATIDAE  | <i>Cymatium rubecutum</i>        | (Triton shell)           |
| 70  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYMATIDAE  | <i>Cymatium trilineatum</i>      | (Triton shell)           |
| 71  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYMATIDAE  | <i>Distorsio anus</i>            | (Triton shell)           |
| 72  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | CYMATIDAE  | <i>Gyrtium concinnum</i>         | (Triton shell)           |
| 73  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | BURSIDAE   | <i>Bursa granularis</i>          | (Frog shell)             |
| 74  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | BURSIDAE   | <i>Bursa rhodostoma</i>          | (Frog shell)             |
| 75  | MOLLUSCA | GASTROPODA | MESOGASTROPODA | TONNIDAE   | <i>Malca pomum</i>               | Grinning Tun             |
| 76  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Chicoreus ramosus</i>         | (Comb shell)             |
| 77  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Chicoreus virgineus</i>       | (Comb shell)             |
| 78  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Cromia martensi</i>           | (Comb shell)             |
| 79  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Drupa lobata</i>              | (Comb shell)             |
| 80  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Drupa morum morum</i>         | (Comb shell)             |
| 81  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Drupa ricinus hadari</i>      | (Comb shell)             |
| 82  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Drupella cornus</i>           | (Comb shell)             |
| 83  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Homalocantha pele</i>         | (Comb shell)             |
| 84  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Morula cf. ethyosstoma</i>    | (Comb shell)             |
| 85  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Morula granulata</i>          | (Comb shell)             |
| 86  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Morula ura</i>                | Grape Drupe              |
| 87  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Murex tribulus</i>            | (Comb shell)             |
| 88  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Muricodrupa fuscillum</i>     | (Comb shell)             |
| 89  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Nassa francolina</i>          | (Comb shell)             |
| 90  | MOLLUSCA | GASTROPODA | NEOGASTROPODA  | MURICIDAE  | <i>Thais savignyi</i>            | (Comb shell)             |

Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM   | CLASS      | ORDER         | FAMILY                    | SCIENTIFIC NAME                         | ENGLISH NAME       |
|-----|----------|------------|---------------|---------------------------|---|--------------------|
| 91  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | PYRENIDAE                 | <i>Pyrene tesudinaria</i>               | (Dove shell)       |
| 92  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CORALIOPHILIDAE=MAGILIDAE | <i>Coralliophila violacea</i>           | Violet Coral Shell |
| 93  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | BUCCINIDAE                | <i>Engina incarnata</i>                 | (Whelk)            |
| 94  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | BUCCINIDAE                | <i>Engina mendicaria</i>                | (Whelk)            |
| 95  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | MELONGENIDAE              | <i>Volema pyrum</i>                     | (Crown Conch)      |
| 96  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | NASSARIIDAE               | <i>Nassarius albescens gemmuliferus</i> | (Mud snail)        |
| 97  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | NASSARIIDAE               | <i>Nassarius arcularia plicatus</i>     | (Mud snail)        |
| 98  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | NASSARIIDAE               | <i>Nassarius coronatus</i>              | (Mud snail)        |
| 99  | MOLLUSCA | GASTROPODA | NEOGASTROPODA | NASSARIIDAE               | <i>Nassarius protrusidens</i>           | (Mud snail)        |
| 100 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | NASSARIIDAE               | <i>Nassarius splendidulus</i>           | (Mud snail)        |
| 101 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | FASCIOLARIIDAE            | <i>Fusus polygonoides</i>               | (Tulip shell)      |
| 102 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | FASCIOLARIIDAE            | <i>Lattus polygonus</i>                 | (Tulip shell)      |
| 103 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | FASCIOLARIIDAE            | <i>Lattus turritus</i>                  | (Tulip shell)      |
| 104 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | FASCIOLARIIDAE            | <i>Pertisternia</i> sp.                 | (Tulip shell)      |
| 105 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | FASCIOLARIIDAE            | <i>Pleuroploca trapezium</i>            | (Tulip shell)      |
| 106 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | FASCIOLARIIDAE            | FASCIOLARIIDAE                          | (Tulip shell)      |
| 107 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | TRUBINELLIDAE(VASIDAE)    | <i>Vasum turbinellus</i>                | Pacific Top Vase   |
| 108 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | HARPIDAE                  | <i>Harpa amouretta</i>                  | (Harp shell)       |
| 109 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | MITRIDAE                  | <i>Cancilla filaris</i>                 | (Mitre shell)      |
| 110 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | MITRIDAE                  | <i>Neocancilla granatina</i>            | (Mitre shell)      |
| 111 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | MITRIDAE                  | <i>Neocancilla pretiosa</i>             | (Mitre shell)      |
| 112 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | MITRIDAE                  | <i>Subcancilla interirata</i>           | (Mitre shell)      |
| 113 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Pterygia crenulata form undulata</i> | (Gastropod)        |
| 114 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Pusia unifasciata</i>                | (Gastropod)        |
| 115 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Vexillum amabile</i>                 | (Gastropod)        |
| 116 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Vexillum deshayesii</i>              | (Gastropod)        |
| 117 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Vexillum osidiris</i>                | (Gastropod)        |
| 118 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Vexillum pardale</i>                 | (Gastropod)        |
| 119 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Vexillum rugosum intermedium</i>     | (Gastropod)        |
| 120 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | COSTELLARIIDAE            | <i>Vexillum</i> sp.(26-6)               | (Gastropod)        |
| 121 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | TURRIDAE                  | <i>Gemmaia amabilis</i>                 | (Turrid)           |
| 122 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | TURRIDAE                  | <i>Lophiotoma acuta</i>                 | (Turrid)           |
| 123 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | TURRIDAE                  | <i>Xenoturnis cingulifera erythraea</i> | (Turrid)           |
| 124 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus arenatus</i>                   | Sand Cone          |
| 125 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus coronatus</i>                  | (Cone shell)       |
| 126 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus frigidus</i>                   | (Cone shell)       |
| 127 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus fulgetrum</i>                  | (Cone shell)       |
| 128 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus generalis maldivus</i>         | (Cone shell)       |
| 129 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus lividus</i>                    | (Cone shell)       |
| 130 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus musicus parvatus</i>           | (Cone shell)       |
| 131 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus namocanus</i>                  | (Cone shell)       |
| 132 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus nigropunctatus</i>             | (Cone shell)       |
| 133 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus nussarella</i>                 | (Cone shell)       |
| 134 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus pennaceus</i>                  | (Cone shell)       |
| 135 | MOLLUSCA | GASTROPODA | NEOGASTROPODA | CONIDAE                   | <i>Conus rattus</i>                     | (Cone shell)       |

Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM   | CLASS      | ORDER               | FAMILY           | SCIENTIFIC NAME                 | ENGLISH NAME            |
|-----|----------|------------|---------------------|------------------|---------------------------------|-------------------------|
| 136 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus sinatellus</i>         | (Cone shell)            |
| 137 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus striatus</i>           | (Cone shell)            |
| 138 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus taeniatus</i>          | (Cone shell)            |
| 139 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus tessulatus</i>         | Orange Spotted Cone     |
| 140 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus textile</i>            | (Cone shell)            |
| 141 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus vexillum</i>           | (Cone shell)            |
| 142 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | CONIDAE          | <i>Conus virgo</i>              | (Cone shell)            |
| 143 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Duplicaria duplicata</i>     | (Auger shell)           |
| 144 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra affinis</i>          | (Auger shell)           |
| 145 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra amanda</i>           | (Auger shell)           |
| 146 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra babylonica</i>       | (Auger shell)           |
| 147 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra certina</i>          | (Auger shell)           |
| 148 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra consobrina</i>       | (Auger shell)           |
| 149 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra crenulata</i>        | (Auger shell)           |
| 150 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra maculata</i>         | Marlin Spike            |
| 151 | MOLLUSCA | GASTROPODA | NEOGASTROPODA       | TEREBRIDAE       | <i>Terebra nebulosa</i>         | (Auger shell)           |
| 152 | MOLLUSCA | GASTROPODA | BULLOMORPHA         | BULLIDAE         | <i>Chelidonura fiabobata</i>    | (Bubble shell)          |
| 153 | MOLLUSCA | GASTROPODA | BULLOMORPHA         | ATYIDAE          | <i>Arys cylindricus</i>         | (Gastropod)             |
| 154 | MOLLUSCA | GASTROPODA | BULLOMORPHA         | ATYIDAE          | <i>Smargdina cf. calyculata</i> | (Gastropod)             |
| 155 | MOLLUSCA | GASTROPODA | BULLOMORPHA         | AGLAJIDAE        | AGLAJIDAE                       | (Aglajids)              |
| 156 | MOLLUSCA | GASTROPODA | BULLOMORPHA         | PHLINIDAE        | BULLOMORPHA                     | (Gastropod)             |
| 157 | MOLLUSCA | GASTROPODA | PYRAMIDELLOMORPHA   | PYRAMIDELLIDAE   | <i>Pyramidella sulcata</i>      | (Pyramidellid)          |
| 158 | MOLLUSCA | GASTROPODA | APLYSIOMORPHA       | APLYSIIDAE       | <i>Aplysia sp.</i>              | (Sea hare)              |
| 159 | MOLLUSCA | GASTROPODA | APLYSIOMORPHA       | APLYSIIDAE       | <i>Dolabella auricularis</i>    | (Sea hare)              |
| 160 | MOLLUSCA | GASTROPODA | APLYSIOMORPHA       | APLYSIIDAE       | APLYSIIDAE                      | (Sea hare)              |
| 161 | MOLLUSCA | GASTROPODA | PLEUROBRANCHOMORPHA | PLEUROBRANCHIDAE | <i>Berthelina citrina</i>       | (Side-gills Slugs)      |
| 162 | MOLLUSCA | GASTROPODA | PLEUROBRANCHOMORPHA | PLEUROBRANCHIDAE | <i>Pleurobranchus semperi</i>   | (Side-gills Slugs)      |
| 163 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | GYMNODORIDAE     | <i>Gymnodoris ceylonica</i>     | (Gymnodorid)            |
| 164 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | PHYLIDIDAE       | <i>Phyllidia dauzenbergi</i>    | (Phyllid)               |
| 165 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | PHYLIDIDAE       | <i>Phyllidia multifaria</i>     | (Phyllid)               |
| 166 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | PHYLIDIDAE       | <i>Phyllidia pustulosa</i>      | (Phyllid)               |
| 167 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | PHYLIDIDAE       | <i>Phyllidia sp.</i>            | (Phyllid)               |
| 168 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | PHYLIDIDAE       | <i>Phyllidiopsis sp.</i>        | (Phyllid)               |
| 169 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | CHROMODORIDAE    | <i>Chromodoris africana</i>     | (Chromodorid)           |
| 170 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | CHROMODORIDAE    | <i>Chromodoris elizabetina</i>  | (Chromodorid)           |
| 171 | MOLLUSCA | GASTROPODA | NUDIBRANCHIA        | CHROMODORIDAE    | <i>Glossodoris plumbea</i>      | (Chromodorid)           |
| 172 | MOLLUSCA | GASTROPODA | BASOMMATOPHORA      | SIPHONARIIDAE    | <i>Siphonaria sp.</i>           | (Gastropod)             |
| 173 | MOLLUSCA | SCAPHOPODA |                     | DENTALIIDAE      | DENTALIIDAE                     | (Elephant's Tusk Shell) |
| 174 | MOLLUSCA | BIVALVIA   |                     | ARCIDAE          | <i>Anadara antiquata</i>        | Antique Ark             |
| 175 | MOLLUSCA | BIVALVIA   |                     | ARCIDAE          | <i>Arca avellana</i>            | (Ark shell)             |
| 176 | MOLLUSCA | BIVALVIA   |                     | ARCIDAE          | <i>Arca plicata</i>             | Plicata Ark             |
| 177 | MOLLUSCA | BIVALVIA   |                     | ARCIDAE          | <i>Barbatia foliata</i>         | (Ark shell)             |
| 178 | MOLLUSCA | BIVALVIA   |                     | ARCIDAE          | <i>Barbatia parva</i>           | (Ark shell)             |
| 179 | MOLLUSCA | BIVALVIA   |                     | ARCIDAE          | <i>Barbatia setigera</i>        | (Ark shell)             |
| 180 | MOLLUSCA | BIVALVIA   |                     | GLYCYMERIDAE     | <i>Glycymeris lividus</i>       | (Dog cockle)            |

Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM   | CLASS    | ORDER     | FAMILY        | SCIENTIFIC NAME                   | ENGLISH NAME          |
|-----|----------|----------|-----------|---------------|-----------------------------------|-----------------------|
| 181 | MOLLUSCA | BIVALVIA |           | GLYCYMERIDAE  | <i>Glycymeris pectunculus</i>     | Comb Dog Cockle       |
| 182 | MOLLUSCA | BIVALVIA | MYTILOIDA | MYTILOIDAE    | <i>Brachidontes variabilis</i>    | (Mussel)              |
| 183 | MOLLUSCA | BIVALVIA | MYTILOIDA | MYTILOIDAE    | <i>Modiolus auriculatus</i>       | (Mussel)              |
| 184 | MOLLUSCA | BIVALVIA | MYTILOIDA | MYTILOIDAE    | <i>Modiolus cf. barbatus</i>      | (Mussel)              |
| 185 | MOLLUSCA | BIVALVIA | MYTILOIDA | PINNIDAE      | <i>Atrina vexillum</i>            | (Razor pen shell)     |
| 186 | MOLLUSCA | BIVALVIA | MYTILOIDA | PINNIDAE      | <i>Pinna muricata</i>             | Prickly Pen Shell     |
| 187 | MOLLUSCA | BIVALVIA | MYTILOIDA | PINNIDAE      | <i>Streptopinna saccula</i>       | Baggy Pen Shell       |
| 188 | MOLLUSCA | BIVALVIA | PTEROIDEA | PTEROIDAE     | <i>Electroma alacorvi</i>         | Raven's wing          |
| 189 | MOLLUSCA | BIVALVIA | PTEROIDEA | PTEROIDAE     | <i>Pinctada margaritifera</i>     | Black-lip Pearl Shell |
| 190 | MOLLUSCA | BIVALVIA | PTEROIDEA | PTEROIDAE     | <i>Pinctada radiata</i>           | Rayed Pearl Oyster    |
| 191 | MOLLUSCA | BIVALVIA | PTEROIDEA | PTEROIDAE     | <i>Pteria aegyptiaca</i>          | (Pearl shell)         |
| 192 | MOLLUSCA | BIVALVIA | PTEROIDEA | PTEROIDAE     | <i>Pteria macroptera</i>          | (Hammer oyster)       |
| 193 | MOLLUSCA | BIVALVIA | PTEROIDEA | MALLEIDAE     | <i>Malvifundus regula</i>         | (Toothed Pearl shell) |
| 194 | MOLLUSCA | BIVALVIA | PTEROIDEA | ISOGNOMONIDAE | <i>Isoognomon isognomon</i>       | Pod Tree Oyster       |
| 195 | MOLLUSCA | BIVALVIA | PTEROIDEA | ISOGNOMONIDAE | <i>Isoognomon legumen</i>         | (Scallop)             |
| 196 | MOLLUSCA | BIVALVIA | PTEROIDEA | PECTINIDAE    | <i>Chlamys livida</i>             | (Scallop)             |
| 197 | MOLLUSCA | BIVALVIA | PTEROIDEA | PECTINIDAE    | <i>Chlamys maculosa</i>           | (Scallop)             |
| 198 | MOLLUSCA | BIVALVIA | PTEROIDEA | PECTINIDAE    | <i>Excellichlamys spectabilis</i> | (Scallop)             |
| 199 | MOLLUSCA | BIVALVIA | PTEROIDEA | PECTINIDAE    | <i>Pedum spondylioides</i>        | (Scallop)             |
| 200 | MOLLUSCA | BIVALVIA | PTEROIDEA | SPONDYLIDAE   | <i>Spondylus marisrubri</i>       | Red Thorny Oyster     |
| 201 | MOLLUSCA | BIVALVIA | PTEROIDEA | PLICATULIDAE  | <i>Plicatula plicata</i>          | Plicate Kitten's Paw  |
| 202 | MOLLUSCA | BIVALVIA | PTEROIDEA | LIMIDAE       | <i>Lima lima</i>                  | Spiny File Shell      |
| 203 | MOLLUSCA | BIVALVIA | PTEROIDEA | LIMIDAE       | <i>Limaria fragilis</i>           | (File shell)          |
| 204 | MOLLUSCA | BIVALVIA | PTEROIDEA | OSTREIDAE     | <i>Lopha cristagalli</i>          | (True Oyster)         |
| 205 | MOLLUSCA | BIVALVIA | PTEROIDEA | OSTREIDAE     | <i>Saccostrea cucullata</i>       | (True Oyster)         |
| 206 | MOLLUSCA | BIVALVIA | PTEROIDEA | OSTREIDAE     | OSTREIDAE                         | (True Oyster)         |
| 207 | MOLLUSCA | BIVALVIA | VENEROIDA | LUCINIDAE     | <i>Anodonta edentula</i>          | (Saucer shell)        |
| 208 | MOLLUSCA | BIVALVIA | VENEROIDA | LUCINIDAE     | <i>Cavilucina fieldingi</i>       | (Saucer shell)        |
| 209 | MOLLUSCA | BIVALVIA | VENEROIDA | LUCINIDAE     | <i>Codakia tigrina</i>            | Tiger Lucine          |
| 210 | MOLLUSCA | BIVALVIA | VENEROIDA | LUCINIDAE     | <i>Divarcella macandreae</i>      | (Saucer shell)        |
| 211 | MOLLUSCA | BIVALVIA | VENEROIDA | LUCINIDAE     | <i>Lucina dentifera</i>           | Toothed Lucine        |
| 212 | MOLLUSCA | BIVALVIA | VENEROIDA | LUCINIDAE     | <i>Pillucina fischeriana</i>      | (Saucer shell)        |
| 213 | MOLLUSCA | BIVALVIA | VENEROIDA | UNGULINIDAE   | <i>Diplodonta subrotundata</i>    | (Bivalves)            |
| 214 | MOLLUSCA | BIVALVIA | VENEROIDA | CHAMIDAE      | <i>Chama sp.</i>                  | (Chama)               |
| 215 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDITIDAE    | <i>Cardita variegata</i>          | (Cardita clam)        |
| 216 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Ctenocardia formicata</i>      | (Heart cockle)        |
| 217 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Pegum nivale</i>               | (Heart cockle)        |
| 218 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Fulvia australe</i>            | (Heart cockle)        |
| 219 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Fulvia papyracea</i>           | (Heart cockle)        |
| 220 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Laevicardium biradiatum</i>    | (Heart cockle)        |
| 221 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | (Heart cockle)                    | (Heart cockle)        |
| 222 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Trachycardium enode</i>        | (Heart cockle)        |
| 223 | MOLLUSCA | BIVALVIA | VENEROIDA | CARDIIDAE     | <i>Trachycardium flavum</i>       | (Heart cockle)        |
| 224 | MOLLUSCA | BIVALVIA | VENEROIDA | TRIDACNIDAE   | <i>Tridacna maxima</i>            | (Clam)                |
| 225 | MOLLUSCA | BIVALVIA | VENEROIDA | TRIDACNIDAE   | <i>Tridacna squamosa</i>          | Fluted Giant Clam     |

Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM    | CLASS        | ORDER            | FAMILY         | SCIENTIFIC NAME                  | ENGLISH NAME          |
|-----|-----------|--------------|------------------|----------------|----------------------------------|-----------------------|
| 226 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | MACRIDAE       | <i>Macra liliacea</i>            | (Trough shell)        |
| 227 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | MESODESMATIDAE | <i>Ataciodea glabrata</i>        | Smooth Beach Clam     |
| 228 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | TELLINIDAE     | <i>Tellina adamsi</i>            | (Tellin)              |
| 229 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | TELLINIDAE     | <i>Tellina crucigera</i>         | (Tellin)              |
| 230 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | TELLINIDAE     | <i>Tellina scobinata</i>         | (Tellin)              |
| 231 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | TELLINIDAE     | <i>Tellina sulcata</i>           | (Tellin)              |
| 232 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | TRAPEZIIDAE    | <i>Trapezium oblongum</i>        | Oblong Trapezium      |
| 233 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Callista florida</i>          | (Venus clam)          |
| 234 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Circe corrugata</i>           | (Venus clam)          |
| 235 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Circe crocea</i>              | (Venus clam)          |
| 236 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Circentia callipyga</i>       | (Venus clam)          |
| 237 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Dosinia erythraea</i>         | (Venus clam)          |
| 238 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Dosinia histrio</i>           | (Venus clam)          |
| 239 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Gafrarium pectinatum</i>      | (Venus clam)          |
| 240 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Lioconcha castrensis</i>      | (Venus clam)          |
| 241 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Lioconcha ornata</i>          | (Venus clam)          |
| 242 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Periglypta reticulata</i>     | (Venus clam)          |
| 243 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Pitar hebraea</i>             | (Venus clam)          |
| 244 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Samarangia quadrangularis</i> | (Venus clam)          |
| 245 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Tapes literatus</i>           | (Venus clam)          |
| 246 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Tapes sulcarius</i>           | Furrowed Venus        |
| 247 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Timoclea marica</i>           | (Venus clam)          |
| 248 | MOLLUSCA  | BIVALVIA     | VENEROIDA        | VENERIDAE      | <i>Venus verrucosa</i>           | (Venus clam)          |
| 249 | MOLLUSCA  | BIVALVIA     | PHOLADOMYOIDA    | CLAVAGELLIDAE  | <i>Clavagella lata</i>           | (Watering pot)        |
| 250 | CRUSTACEA | CIRRIPIEDIA  | OCTOPODA         | BALANIDAE      | <i>Balanus amphitrite</i>        | (Barnacle)            |
| 251 | CRUSTACEA | CIRRIPIEDIA  | OCTOPODA         | BALANIDAE      | <i>Tetractia</i> sp.             | (Barnacle)            |
| 252 | CRUSTACEA | MALACOSTRACA | INFRA: CARIDAE   | PALAEONIDAE    | <i>Perilimenes</i> sp.           | (Shrimp)              |
| 253 | CRUSTACEA | MALACOSTRACA | INFRA: CARIDAE   | PALAEONIDAE    | PALAEONIDAE                      | (Shrimp)              |
| 254 | CRUSTACEA | MALACOSTRACA | INFRA: CARIDAE   | HIPPOLYTIDAE   | <i>Lysmata amboinensis</i>       | (Hump-backed shrimp)  |
| 255 | CRUSTACEA | MALACOSTRACA | INFRA: CARIDAE   | HIPPOLYTIDAE   | <i>Thor cf. amboinensis</i>      | (Hump-backed shrimp)  |
| 256 | CRUSTACEA | MALACOSTRACA | INFRA: CARIDAE   | STENOPODIDAE   | <i>Stenopus hispidus</i>         | (Cleaner shrimp)      |
| 257 | CRUSTACEA | MALACOSTRACA | INFRA: CARIDAE   | PALINURIDAE    | <i>Panulirus penicillatus</i>    | (Spiny shrimp)        |
| 258 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Calcinus cf. gaimardii</i>    | (Spotted hermit crab) |
| 259 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Calcinus latens</i>           | (Spotted hermit crab) |
| 260 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Clibanarius corallinus</i>    | (Spotted hermit crab) |
| 261 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Clibanarius striolatus</i>    | (Spotted hermit crab) |
| 262 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Dardanus cf. asperus</i>      | (Spotted hermit crab) |
| 263 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Dardanus cf. pedunculatus</i> | (Spotted hermit crab) |
| 264 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Diogenes senex</i>            | (Spotted hermit crab) |
| 265 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Diogenes</i> sp.              | (Spotted hermit crab) |
| 266 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | DIOGENIDAE     | <i>Diogenes</i> sp.              | (Spotted hermit crab) |
| 267 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | COENOBITIDAE   | <i>Coenobita scaevola</i>        | (Land hermit crab)    |
| 268 | CRUSTACEA | MALACOSTRACA | INFRA: ANOMURA   | PORCELLANIDAE  | <i>Petrolisthes</i> sp.          | (Porcelain crab)      |
| 269 | CRUSTACEA | MALACOSTRACA | INFRA: BRACHYURA | DROMIIDAE      | DROMIIDAE                        | (Sponge crab)         |
| 270 | CRUSTACEA | MALACOSTRACA | INFRA: BRACHYURA | CALAPPIDAE     | <i>Calappa hepatica</i>          | (Box crab)            |



Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM        | CLASS        | ORDER            | FAMILY                   | SCIENTIFIC NAME                    | ENGLISH NAME               |
|-----|---------------|--------------|------------------|--------------------------|------------------------------------|----------------------------|
| 271 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | LEUCOSIIDAE(LEUCOSIINAE) | <i>Leucosia anatum</i>             | (Pebble crab)              |
| 272 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | MAJIDAE                  | <i>Menaeethops monoceros</i>       | (Spider crab)              |
| 273 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | MAJIDAE                  | <i>Micippa cf. philya</i>          | (Spider crab)              |
| 274 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | MAJIDAE                  |                                    | (Spider crab)              |
| 275 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PORTUNIDAE(PORTUNINAE)   | Portunus pelagicus                 | (Swimming crab)            |
| 276 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PORTUNIDAE(PORTUNINAE)   | Portunus sp.                       | (Swimming crab)            |
| 277 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PORTUNIDAE(PORTUNINAE)   | <i>Thalassia admete</i>            | (Swimming crab)            |
| 278 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PORTUNIDAE(PORTUNINAE)   | <i>Thalassia crenata</i>           | (Swimming crab)            |
| 279 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PORTUNIDAE(PORTUNINAE)   | <i>Thalassia pygma</i>             | (Swimming crab)            |
| 280 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PORTUNIDAE(PORTUNINAE)   | PORTUNIDAE                         | (Swimming crab)            |
| 281 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PARTHENOPIIDAE           | <i>Ceratocarcinus</i> sp.          | (Parthenopid)              |
| 282 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PARTHENOPIIDAE           | Parthenope sp.                     | (Parthenopid)              |
| 283 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE                | <i>Chlorodiella nigra</i>          | (Dark fingered coral crab) |
| 284 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE                | <i>Etius electra</i>               | (Dark fingered coral crab) |
| 285 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE                | <i>Bisus laevimanus</i>            | (Dark fingered coral crab) |
| 286 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE                | <i>Philidius areolatus</i>         | (Dark fingered coral crab) |
| 287 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE(PILUMINAE)     | <i>Pilumnus cf. scabriscutulus</i> | (Dark fingered coral crab) |
| 288 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE(TRAPEZIINAE)   | <i>Tetralia glaberrima</i>         | (Dark fingered coral crab) |
| 289 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | XANTHIDAE(TRAPEZIINAE)   | <i>Trapezia cymodoce</i>           | (Dark fingered coral crab) |
| 290 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | PINNOTERIDAE             | <i>Pinnoteres</i> sp.              | (Pea crab)                 |
| 291 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | OCYPODIDAE               | <i>Macrophthalmus cf. convexus</i> | (Stalk-eyed crab)          |
| 292 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | OCYPODIDAE               | <i>Ocyrode saratan</i>             | Ghost crab                 |
| 293 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | OCYPODIDAE               | <i>Ocyrode</i> sp.                 | Ghost crab                 |
| 294 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | OCYPODIDAE               | <i>Scopinera cf. globosa</i>       | (Stalk-eyed crab)          |
| 295 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | OCYPODIDAE               | <i>Uca cf. lactea perplexa</i>     | Fiddler crab               |
| 296 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | OCYPODIDAE               | <i>Uca cf. tetragon</i>            | Fiddler crab               |
| 297 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | GRAPSIDAE                | <i>Grapsus albolineatus</i>        | (Shore-crab)               |
| 298 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | GRAPSIDAE                | <i>Grapsus tenuicrustatus</i>      | (Shore-crab)               |
| 299 | CRUSTACEA     | MALACOSTRACA | INFRA: BRACHYURA | GRAPSIDAE                | <i>Metopograpsus messor</i>        | (Shore-crab)               |
| 300 | ECHINODERMATA | CRINOIDEA    | unidentified     | CRINOIDEA                |                                    | (Feather star)             |
| 301 | ECHINODERMATA | ASTEROIDEA   | -                | ASTROPECTINIDAE          | <i>Astropecten polyacanthus</i>    | (Comb star)                |
| 302 | ECHINODERMATA | ASTEROIDEA   | -                | OREASTERIDAE             | <i>Culecita novaequinae</i>        | (Pit-cushion starfish)     |
| 303 | ECHINODERMATA | ASTEROIDEA   | -                | OPHIDIASTERIDAE          | <i>Fromia milleporella</i>         | (Starfish)                 |
| 304 | ECHINODERMATA | ASTEROIDEA   | -                | OPHIDIASTERIDAE          | <i>Fromia</i> sp.                  | (Starfish)                 |
| 305 | ECHINODERMATA | ASTEROIDEA   | -                | OPHIDIASTERIDAE          | <i>Gomphia egyptiaca</i>           | (Starfish)                 |
| 306 | ECHINODERMATA | ASTEROIDEA   | -                | OPHIDIASTERIDAE          | <i>Linscia multiflora</i>          | (Starfish)                 |
| 307 | ECHINODERMATA | ASTEROIDEA   | -                | ASTERINIDAE              | <i>Asterina burtoni</i>            | (Starfish)                 |
| 308 | ECHINODERMATA | ASTEROIDEA   | -                | ASTERINIDAE              | <i>Asteropsis carnifera</i>        | (Starfish)                 |
| 309 | ECHINODERMATA | ASTEROIDEA   | -                | ACANTHASTERIDAE          | <i>Acanthaster planci</i>          | (Crown of thorns starfish) |
| 310 | ECHINODERMATA | OPHUROIDEA   | -                | GORGONOCEPHALIDAE        | <i>Astroba nuda</i>                | (Basket-star)              |
| 311 | ECHINODERMATA | OPHUROIDEA   | -                | OPHIOCOMIDAE             | <i>Ophiocoma erimaeus</i>          | (Ophiocomid)               |
| 312 | ECHINODERMATA | OPHUROIDEA   | -                | OPHIOCOMIDAE             | <i>Ophiocoma scolopendrina</i>     | (Ophiocomid)               |
| 313 | ECHINODERMATA | OPHUROIDEA   | -                | OPHIURIDAE               | <i>Ophiolepis cincta</i>           | (Ophiurid)                 |
| 314 | ECHINODERMATA | OPHUROIDEA   | -                | OPHIURIDAE               | <i>Ophiolepis suporba</i>          | (Ophiurid)                 |
| 315 | ECHINODERMATA | ECHINOIDEA   | -                | CIDARIDAE                | <i>Eucidaris metularia</i>         | (Cidarid)                  |

Appendix 11 (cont.). List of benthos specimens collected in the Biological Inventory Survey.

| No. | PHYLUM        | CLASS         | ORDER | FAMILY         | SCIENTIFIC NAME                    | ENGLISH NAME   |
|-----|---------------|---------------|-------|----------------|------------------------------------|----------------|
| 316 | ECHINODERMATA | ECHINOIDEA    | -     | CIDARIDAE      | <i>Phylacanthus imperialis</i>     | (Cidarid)      |
| 317 | ECHINODERMATA | ECHINOIDEA    | -     | CIDARIDAE      | <i>Prionocidaris verticillata</i>  | (Cidarid)      |
| 318 | ECHINODERMATA | ECHINOIDEA    | -     | DIADEMATIDAE   | <i>Diadema setosum</i>             | (Diademateid)  |
| 319 | ECHINODERMATA | ECHINOIDEA    | -     | DIADEMATIDAE   | <i>Echinothrix diadema</i>         | (Diademateid)  |
| 320 | ECHINODERMATA | ECHINOIDEA    | -     | TEMNOPLEURIDAE | <i>Salmacis cf. belli</i>          | (Temnopleurid) |
| 321 | ECHINODERMATA | ECHINOIDEA    | -     | TEMNOPLEURIDAE | <i>Temnopleurus toreumaticus</i>   | (Temnopleurid) |
| 322 | ECHINODERMATA | ECHINOIDEA    | -     | TOXOPNEUSTIDAE | <i>Tripeustes gratilla</i>         | (Toxopneustid) |
| 323 | ECHINODERMATA | ECHINOIDEA    | -     | ECHINOMETRIDAE | <i>Echinometra mathaei</i>         | (Echinometrid) |
| 324 | ECHINODERMATA | ECHINOIDEA    | -     | ECHINOMETRIDAE | <i>Heterocentrotus mammillatus</i> | (Echinometrid) |
| 325 | ECHINODERMATA | ECHINOIDEA    | -     | CLYPEASTERIDAE | <i>Clypeaster cf. japonicus</i>    | (Clypeaster)   |
| 326 | ECHINODERMATA | ECHINOIDEA    | -     | LAGANIDAE      | <i>Peronella lesueurii</i>         | (Laganid)      |
| 327 | ECHINODERMATA | ECHINOIDEA    | -     | LOVENIIDAE     | <i>Lovenia elongata</i>            | (Loveniid)     |
| 328 | ECHINODERMATA | ECHINOIDEA    | -     | SCHIZASTERIDAE | <i>Schizaster lacunosus</i>        | (Schizasterid) |
| 329 | ECHINODERMATA | ECHINOIDEA    | -     | ECHINOIDEA     | <i>ECHINOIDEA</i>                  | (Brissid)      |
| 330 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Actinopyga mauritiana</i>       | (Holothurid)   |
| 331 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Holothuria atra</i>             | (Holothurid)   |
| 332 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Holothuria edulis</i>           | (Holothurid)   |
| 333 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Holothuria leucospilota</i>     | (Holothurid)   |
| 334 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Holothuria nobilis</i>          | (Holothurid)   |
| 335 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Holothuria pardalis</i>         | (Holothurid)   |
| 336 | ECHINODERMATA | HOLOTHUROIDEA | -     | HOLOTHURIDAE   | <i>Holothuria pervicax</i>         | (Holothurid)   |
| 337 | ECHINODERMATA | HOLOTHUROIDEA | -     | STICHOPODIDAE  | <i>Stichopus variegatus</i>        | (Stichopodid)  |
| 338 | ECHINODERMATA | HOLOTHUROIDEA | -     | CUCUMARIDAE    | <i>Thelenota ananas</i>            | (Cucumariid)   |
| 339 | ECHINODERMATA | HOLOTHUROIDEA | -     | SYNAPTIDAE     | <i>Synapta maculata</i>            | (Synaptid)     |
| 340 | CHORDATA      | ASCIDIACEA    | -     | STYELIDAE      | <i>Polycarpa pigmentata</i> (cf.)  | (Styelid)      |
| 341 | CHORDATA      | ASCIDIACEA    | -     | PYURIDAE       | PYURIDAE                           | (Pyurid)       |

**Appendix 12. Locations of the inventory survey spots for the mangroves/coastal vegetation component.**

| Site No. | Spot No. | Latitude(N) | Longitude (E) | Date     | Method  | Habitat  |
|----------|----------|-------------|---------------|----------|---------|--|
| V1       | M93      | 291954      | 345738        | 19981014 | flora   | wadi (gentle slope)  |
| V2       | M102     | 283334      | 344807        | 19981015 | flora   | bottom of gorge  |
| V3       | M82      | 282222      | 344342        | 19980620 | flora   | pediment   |
| V3       | M81      | 282145      | 344341        | 19980620 | quadrat | pediment   |
| V4       | M84      | 280660      | 343544        | 19980621 | flora   | alluvial sandy flat  |
| V4       | M83      | 280539      | 343651        | 19980621 | quadrat | alluvial sandy flat  |
| V5       | M87      | 280234      | 351344        | 19980621 | flora   | sand beach near seashore                                   |
| V5       | M94      | 280233      | 351343        | 19981015 | flora   | mouth of wadi, sand beach                                  |
| V5       | M85      | 280224      | 351328        | 19980621 | quadrat | sand beach near seashore                                   |
| V5       | M86      | 280221      | 351331        | 19980621 | quadrat | sand beach near seashore                                   |
| V6       | M80      | 280133      | 351218        | 19980620 | flora   | alluvial sandy flat  |
| V6       | M79      | 280117      | 351219        | 19980620 | quadrat | alluvial sandy flat  |
| V7       | M78      | 273529      | 353220        | 19980619 | flora   | alluvial sandy flat, mouth of wadi                         |
| V7       | M76      | 273527      | 353211        | 19980619 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V7       | M77      | 273447      | 353207        | 19980619 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V8       | M73      | 272612      | 353619        | 19980618 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V8       | M72      | 272611      | 353557        | 19980618 | quadrat | shallow water along the shore, sheltered inlet             |
| V8       | M74      | 272554      | 353627        | 19980618 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V8       | M75      | 272548      | 353609        | 19980618 | flora   | alluvial sandy flat, mouth of wadi                         |
| V9       | M65      | 271022      | 354734        | 19980616 | quadrat | shallow water along the shore                              |
| V9       | M66      | 271006      | 354731        | 19980616 | quadrat | alluvial sandy flat  |
| V9       | M64      | 270837      | 354717        | 19980616 | quadrat | sand beach near seashore                                   |
| V9       | M63      | 270832      | 354725        | 19980616 | quadrat | alluvial sandy flat  |
| V9       | M62      | 270820      | 354729        | 19980616 | quadrat | alluvial sandy flat, tidal mud                             |
| V9       | M92      | 270812      | 354742        | 19981013 | flora   | alluvial sandy flat  |
| V9       | M67      | 270811      | 354741        | 19980616 | flora   | alluvial sandy flat  |
| V10      | M68      | 270758      | 354511        | 19980617 | quadrat | sedimentary sand on coral rock, offshore island            |
| V10      | M69      | 270741      | 354521        | 19980617 | quadrat | sedimentary sand on coral rock, offshore island            |
| V10      | M71      | 270508      | 354839        | 19980617 | flora   | sedimentary sand on coral rock, offshore island            |
| V10      | M70      | 270500      | 354643        | 19980617 | quadrat | sand beach near seashore, offshore island                  |
| V11      | M60      | 265425      | 360210        | 19980615 | quadrat | alluvial sandy flat, tidal mud                             |
| V11      | M59      | 265417      | 360215        | 19980615 | quadrat | alluvial sandy flat  |
| V11      | M91      | 265417      | 360204        | 19981012 | flora   | alluvial sandy flat  |
| V11      | M58      | 265415      | 360157        | 19980615 | quadrat | shallow water along the shore                              |
| V11      | M61      | 265415      | 360208        | 19980615 | flora   | alluvial sandy flat  |
| V11      | M57      | 265414      | 360208        | 19980615 | quadrat | alluvial sandy flat, tidal mud                             |
| V12      | M89      | 263703      | 361433        | 19981011 | quadrat | small pond besides cliff                                   |
| V12      | M90      | 263645      | 361409        | 19981011 | flora   | sedimentary sand in mouth of wadi, coral fossil hill, pond |
| V13      | M52      | 263605      | 361530        | 19980614 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V13      | M54      | 263604      | 361530        | 19980614 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V13      | M56      | 263603      | 361520        | 19980614 | flora   | alluvial sandy flat, mouth of wadi                         |
| V13      | M88      | 263551      | 361536        | 19981010 | flora   | alluvial sandy flat, mouth of wadi                         |
| V13      | M55      | 263544      | 361516        | 19980614 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V14      | M49      | 262249      | 362235        | 19980613 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V14      | M50      | 262248      | 362234        | 19980613 | quadrat | alluvial sandy flat, mouth of wadi                         |
| V14      | M51      | 262247      | 362234        | 19980613 | quadrat | sand deposit beside coral fossil cliff                     |
| V14      | M52      | 262246      | 362233        | 19980613 | flora   | alluvial sandy flat, mouth of wadi                         |
| V15      | M47      | 260352      | 363553        | 19980609 | quadrat | sedimentary sand slope to coral cliff                      |
| V15      | M46      | 260340      | 363542        | 19980609 | quadrat | sedimentary sand slope to coral cliff                      |
| V15      | M48      | 260339      | 363545        | 19980609 | flora   | sedimentary sand slope to coral cliff                      |
| V16      | M37      | 255749      | 364305        | 19980607 | quadrat | wadi, alluvial sandy flat                                  |
| V16      | M39      | 255749      | 364230        | 19980607 | quadrat | wadi, alluvial sandy flat, near sabkhah                    |

**Appendix 12 (cont.).** Locations of the inventory survey spots for the mangroves/coastal vegetation component.

| Site No. | Spot No. |       | Latitude(N) | Longitude (E) | Date     | Method  | Habitat   |
|----------|----------|-------|-------------|---------------|----------|---------|---|
| V16      | M38      |       | 255745      | 364247        | 19980607 | quadrat | wadi, alluvial sandy flat                             |
| V16      | M40      |       | 255741      | 364326        | 19980607 | quadrat | wadi, alluvial sandy flat                             |
| V16      | M41      |       | 255733      | 364332        | 19980607 | flora   | wadi, alluvial sandy flat                             |
| V17      | M44      |       | 255033      | 364103        | 19980608 | quadrat | alluvial sandy flat                                   |
| V17      | M45      |       | 255029      | 364104        | 19980608 | flora   | alluvial sandy flat                                   |
| V17      | M43      |       | 255028      | 354057        | 19980608 | quadrat | alluvial sandy flat                                   |
| V17      | M42      |       | 255021      | 364043        | 19980608 | quadrat | alluvial sandy flat, tidal mud                        |
| V18      | M95      |       | 253612      | 365752        | 19981017 | quadrat | shallow water along the shore                         |
| V18      | M96      |       | 253611      | 365753        | 19981017 | flora   | alluvial sandy flat                                   |
| V19      | M35      |       | 252451      | 365326        | 19980531 | quadrat | creek of alluvial sandy flat, offshore island         |
| V19      | M33      |       | 252346      | 365344        | 19980531 | quadrat | alluvial sandy flat, offshore island                  |
| V19      | M34      |       | 252346      | 365343        | 19980531 | quadrat | creek of alluvial sandy flat, offshore island         |
| V19      | M36      |       | 252340      | 365351        | 19980531 | flora   | sandy flat of offshore island                         |
| V20      | M25      |       | 250707      | 371550        | 19980529 | quadrat | alluvial sandy flat                                   |
| V20      | M23      |       | 250706      | 371554        | 19980529 | quadrat | alluvial sandy flat                                   |
| V20      | M24      |       | 250706      | 371552        | 19980529 | quadrat | alluvial sandy flat                                   |
| V20      | M101     |       | 250705      | 371554        | 19981020 | flora   | alluvial sandy flat                                   |
| V20      | M29      |       | 250705      | 371554        | 19980529 | flora   | alluvial sandy flat                                   |
| V20      | M26      |       | 250702      | 371553        | 19980529 | quadrat | alluvial sandy flat                                   |
| V20      | M27      |       | 250700      | 371551        | 19980529 | quadrat | alluvial sandy flat                                   |
| V20      | M28      |       | 250643      | 371557        | 19980529 | quadrat | alluvial sandy flat                                   |
| V21      | M31      |       | 245732      | 370528        | 19980530 | quadrat | wadi, sedimentary sand on coral rock, offshore island |
| V21      | M32      |       | 245725      | 370530        | 19980530 | flora   | coral rocks mountain of offshore island               |
| V21      | M30      |       | 245720      | 370532        | 19980530 | quadrat | sand beach near seashore                              |
| V22      | M21      |       | 244813      | 371049        | 19980528 | quadrat | creek of alluvial sandy flat                          |
| V22      | M19      |       | 244738      | 371029        | 19980528 | quadrat | sedimentary sand on terrace of coral fossil           |
| V22      | M22      |       | 244736      | 371029        | 19980528 | flora   | alluvial sandy flat                                   |
| V22      | M20      |       | 242748      | 371034        | 19980528 | quadrat | alluvial sandy flat                                   |
| V23      | M16      |       | 241731      | 373807        | 19980526 | quadrat | sedimentary sand on terrace of coral fossil           |
| V23      | M17      |       | 241731      | 373808        | 19980526 | quadrat | sedimentary sand on terrace of coral fossil           |
| V23      | M15      |       | 241728      | 373802        | 19980526 | quadrat | sedimentary sand on terrace of coral fossil           |
| V23      | M14      |       | 241721      | 373808        | 19980526 | quadrat | sand deposit beside coral fossil cliff                |
| V23      | M18      |       | 241717      | 373809        | 19980526 | flora   | sedimentary sand on terrace of coral fossil           |
| V24      | M100     |       | 235537      | 381744        | 19981020 | flora   | alluvial sandy flat with shallow water                |
| V25      | M12      |       | 230447      | 384849        | 19980525 | quadrat | alluvial sandy flat                                   |
| V25      | M13      |       | 230438      | 384045        | 19980525 | flora   | alluvial sandy flat                                   |
| V25      | M7       |       | 230438      | 384852        | 19980525 | quadrat | alluvial sandy flat                                   |
| V25      | M8       |       | 230438      | 384858        | 19980525 | quadrat | alluvial sandy flat                                   |
| V25      | M99      |       | 230438      | 384044        | 19981019 | flora   | alluvial sandy flat                                   |
| V25      | M6       |       | 230437      | 384043        | 19980525 | quadrat | shallow water along the shore                         |
| V25      | M9       |       | 230436      | 384907        | 19980525 | quadrat | alluvial sandy flat                                   |
| V25      | M10      |       | 230429      | 384907        | 19980525 | quadrat | alluvial sandy flat                                   |
| V25      | M11      |       | 230426      | 384843        | 19980525 | quadrat | shallow water along the shore                         |
| V26      | M4       |       | 224643      | 390059        | 19980524 | quadrat | alluvial sandy flat                                   |
| V26      | M3       |       | 224634      | 390030        | 19980524 | quadrat | alluvial sandy flat                                   |
| V26      | M98      |       | 224626      | 385839        | 19981018 | flora   | alluvial sandy flat                                   |
| V26      | M1       |       | 224623      | 385840        | 19980524 | quadrat | alluvial sandy flat                                   |
| V26      | M2       |       | 224623      | 385848        | 19980524 | quadrat | alluvial sandy flat                                   |
| V26      | M5       |       | 224623      | 385841        | 19980524 | flora   | alluvial sandy flat                                   |
| V26      | M97      |       | 224623      | 385840        | 19981018 | quadrat | alluvial sandy flat                                   |
| V27      | M103     | Start | 275836      | 351308        | 19980210 | flora   | Al Khuraybah - Marsa Zubaydah                         |
| V27      | M103     | End   | 265507      | 360918        | 19980213 |         |   |
| V28      | M104     | Start | 253561      | 361498        | 19980215 | flora   | Ra's ad Dubbah - Wadi Marakh                          |
| V28      | M104     | End   | 251627      | 370856        | 19980220 |         |   |
| V29      | M105     | Start | 250700      | 371600        | 19980220 | flora   | Umluj - Masturah                                      |
| V29      | M105     | End   | 230656      | 384859        | 19980223 |         |   |

Appendix 13. List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name    | Species No. | Scientific name              | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|----------------|-------------|------------------------------|---------------|----------|----------|----------|-----------|
| CV0001S     | 1          | EPHEDRACEAE    | 1           | <i>Ephedra alata</i>         | 19980618      | V16      | M75      | 272548   | 353609    |
| CV0002S     | 2          | MENISPERMACEAE | 2           | <i>Cocculus pendulus</i>     | 19980613      | V11      | M52      | 260351   | 363553    |
| CV0001J     | 2          | MENISPERMACEAE | 2           | <i>Cocculus pendulus</i>     | 19980613      | V11      | M52      | 260351   | 363553    |
| CV0003S     | 2          | MENISPERMACEAE | 2           | <i>Cocculus pendulus</i>     | 19980619      | V17      | M78      | 273446   | 353206    |
| CV0002J     | 2          | MENISPERMACEAE | 2           | <i>Cocculus pendulus</i>     | 19980619      | V17      | M78      | 273446   | 353206    |
| CV0004S     | 3          | CAPPARACEAE    | 3           | <i>Cadaba farinosa</i>       | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0005S     | 3          | CAPPARACEAE    | 3           | <i>Cadaba farinosa</i>       | 19980614      | V12      | M56      | 263604   | 361530    |
| CV0006S     | 3          | CAPPARACEAE    | 4           | <i>Cadaba glandulosa</i>     | 19980530      | V6       | M32      | 245741   | 370547    |
| CV0003J     | 3          | CAPPARACEAE    | 4           | <i>Cadaba glandulosa</i>     | 19980530      | V6       | M32      | 245741   | 370547    |
| CV0007S     | 3          | CAPPARACEAE    | 5           | <i>Capparis cartilaginea</i> | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0008S     | 3          | CAPPARACEAE    | 5           | <i>Capparis cartilaginea</i> | 19980530      | V6       | M32      | 245741   | 370547    |
| CV0004J     | 3          | CAPPARACEAE    | 5           | <i>Capparis cartilaginea</i> | 19980530      | V6       | M32      | 245741   | 370547    |
| CV0009S     | 3          | CAPPARACEAE    | 5           | <i>Capparis cartilaginea</i> | 19980620      | V19      | M82      | 282145   | 344341    |
| CV0005J     | 3          | CAPPARACEAE    | 5           | <i>Capparis cartilaginea</i> | 19980620      | V19      | M82      | 282145   | 344341    |
| CV0010S     | 3          | CAPPARACEAE    | 6           | <i>Capparis decidua</i>      | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0006J     | 3          | CAPPARACEAE    | 6           | <i>Capparis decidua</i>      | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0011S     | 3          | CAPPARACEAE    | 6           | <i>Capparis decidua</i>      | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0007J     | 3          | CAPPARACEAE    | 6           | <i>Capparis decidua</i>      | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0012S     | 3          | CAPPARACEAE    | 7           | <i>Cleome brachycarpa</i>    | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0008J     | 3          | CAPPARACEAE    | 7           | <i>Cleome brachycarpa</i>    | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0013S     | 3          | CAPPARACEAE    | 8           | <i>Cleome droserifolia</i>   | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0009J     | 3          | CAPPARACEAE    | 8           | <i>Cleome droserifolia</i>   | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0014S     | 3          | CAPPARACEAE    | 8           | <i>Cleome droserifolia</i>   | 19980620      | V19      | M82      | 282145   | 344341    |
| CV0015S     | 3          | CAPPARACEAE    | 9           | <i>Dipterygium glaucum</i>   | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0010J     | 3          | CAPPARACEAE    | 9           | <i>Dipterygium glaucum</i>   | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0016S     | 3          | CAPPARACEAE    | 9           | <i>Dipterygium glaucum</i>   | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0011J     | 3          | CAPPARACEAE    | 9           | <i>Dipterygium glaucum</i>   | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0017S     | 3          | CAPPARACEAE    | 9           | <i>Dipterygium glaucum</i>   | 19980529      | V5       | M28      | 250672   | 371597    |
| CV0012J     | 3          | CAPPARACEAE    | 9           | <i>Dipterygium glaucum</i>   | 19980529      | V5       | M28      | 250672   | 371597    |
| CV0018S     | 4          | CRUCIFERAE     | 10          | <i>Farselia ramosissima</i>  | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0013J     | 4          | CRUCIFERAE     | 10          | <i>Farselia ramosissima</i>  | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0019S     | 4          | CRUCIFERAE     | 11          | <i>Morettia parviflora</i>   | 19981010      | V12      | M88      | 263551   | 361536    |
| CV0020S     | 5          | RESEDACEAE     | 13          | <i>Caylusea hexagya</i>      | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0021S     | 5          | RESEDACEAE     | 14          | <i>Ochradenus baccatus</i>   | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0014J     | 5          | RESEDACEAE     | 14          | <i>Ochradenus baccatus</i>   | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0022S     | 5          | RESEDACEAE     | 14          | <i>Ochradenus baccatus</i>   | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0015J     | 5          | RESEDACEAE     | 14          | <i>Ochradenus baccatus</i>   | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0023S     | 5          | RESEDACEAE     | 14          | <i>Ochradenus baccatus</i>   | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0016J     | 5          | RESEDACEAE     | 14          | <i>Ochradenus baccatus</i>   | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0017J     | 5          | RESEDACEAE     | 15          | <i>Reseda muricata</i>       | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0024S     | 5          | RESEDACEAE     | 15          | <i>Reseda muricata?</i>      | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0025S     | 5          | RESEDACEAE     | 15          | <i>Reseda</i> sp.            | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0026S     | 5          | RESEDACEAE     | 15          | <i>Reseda</i> sp.            | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0027S     | 5          | RESEDACEAE     | 15          | RESEDACEAE sp.               | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0028S     | 6          | TAMARICACEAE   | 16          | <i>Tamarix aphylla</i>       | 19980607      | V8       | M40      | 255741   | 354326    |
| CV0018J     | 6          | TAMARICACEAE   | 16          | <i>Tamarix aphylla</i>       | 19980607      | V8       | M40      | 255741   | 354326    |
| CV0029S     | 6          | TAMARICACEAE   | 17          | <i>Tamarix aucheriana</i>    | 19980216      | V28      | M104     | 255931   | 364252    |
| CV0019J     | 6          | TAMARICACEAE   | 17          | <i>Tamarix aucheriana</i>    | 19980216      | V28      | M104     | 255931   | 364252    |
| CV0030S     | 6          | TAMARICACEAE   | 18          | <i>Tamarix nilotica</i>      | 19981019      | V2       | M99      | 230438   | 384044    |
| CV0020J     | 6          | TAMARICACEAE   | 18          | <i>Tamarix nilotica</i>      | 19981019      | V2       | M99      | 230438   | 384044    |
| CV0031S     | 6          | TAMARICACEAE   | 18          | <i>Tamarix nilotica</i>      | 19980607      | V8       | M40      | 255741   | 354326    |
| CV0032S     | 6          | TAMARICACEAE   | 18          | <i>Tamarix nilotica</i>      | 19980607      | V8       | M41      | 255748   | 364300    |
| CV0021J     | 6          | TAMARICACEAE   | 18          | <i>Tamarix nilotica</i>      | 19980607      | V8       | M41      | 255748   | 364300    |
| CV0022J     | 6          | TAMARICACEAE   | 18          | <i>Tamarix</i> sp.           | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0033S     | 6          | TAMARICACEAE   | 18          | <i>Tamarix</i> sp.           | 19980210      | V27      | M103     | 274034   | 352843    |

Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name    | Species No. | Scientific name               | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|----------------|-------------|-------------------------------|---------------|----------|----------|----------|-----------|
| CV0034S     | 6          | TAMARICACEAE   | 18          | <i>Tamarix</i> sp.            | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0035S     | 6          | TAMARICACEAE   | 18          | <i>Tamarix</i> sp.            | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0036S     | 7          | CUCURBITACEAE  | 19          | <i>Citrullus coloc ynthis</i> | 19980212      | V27      | M103     | 272548   | 353609    |
| CV0023J     | 7          | CUCURBITACEAE  | 19          | <i>Citrullus coloc ynthis</i> | 19980212      | V27      | M103     | 272548   | 353609    |
| CV0037S     | 7          | CUCURBITACEAE  | 20          | <i>Citrullus lanatus</i>      | 19980609      | V10      | M47      | 260352   | 363553    |
| CV0024J     | 7          | CUCURBITACEAE  | 20          | <i>Citrullus lanatus</i>      | 19980609      | V10      | M47      | 260352   | 363553    |
| CV0038S     | 7          | CUCURBITACEAE  | 21          | <i>Cucumis prophetarum</i>    | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0025J     | 7          | CUCURBITACEAE  | 21          | <i>Cucumis prophetarum</i>    | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0039S     | 8          | TILIACEAE      | 22          | <i>Grewia erythraea</i>       | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0026J     | 8          | TILIACEAE      | 22          | <i>Grewia erythraea</i>       | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0040S     | 8          | TILIACEAE      | 23          | <i>Grewia</i> sp.             | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0027J     | 8          | TILIACEAE      | 23          | <i>Grewia</i> sp.             | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0028J     | 9          | GERANIACEAE    | 24          | <i>Erodium</i> sp.            | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0029J     | 9          | GERANIACEAE    | 25          | <i>Monsonia nivea</i>         | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0041S     | 9          | GERANIACEAE    | 25          | <i>Monsonia nivea</i>         | 19980529      | V5       | M29      | 244021   | 271081    |
| CV0042S     | 9          | GERANIACEAE    | 25          | <i>Monsonia</i> sp.           | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0043S     | 9          | GERANIACEAE    | 25          | <i>Monsonia</i> sp.           | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0044S     | 10         | ZYGOPHYLLACEAE | 26          | <i>Fagonia boveana</i>        | 19980215      | V28      | M104     | 261700   | 362030    |
| CV0045S     | 10         | ZYGOPHYLLACEAE | 26          | <i>Fagonia boveana</i>        | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0046S     | 10         | ZYGOPHYLLACEAE | 26          | <i>Fagonia boveana</i>        | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0047S     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980210      | V27      | M103     | 275836   | 351308    |
| CV0030J     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980210      | V27      | M103     | 275836   | 351308    |
| CV0048S     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0031J     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0049S     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980615      | V13      | M61      | 265317   | 360215    |
| CV0032J     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980615      | V13      | M61      | 265317   | 360215    |
| CV0050S     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980619      | V17      | M78      | 273529   | 353220    |
| CV0051S     | 10         | ZYGOPHYLLACEAE | 27          | <i>Fagonia bruguieri</i>      | 19980621      | V21      | M87      | 280234   | 351344    |
| CV0033J     | 10         | ZYGOPHYLLACEAE | 28          | <i>Fagonia</i> sp.            | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0052S     | 10         | ZYGOPHYLLACEAE | 28          | <i>Fagonia</i> sp.            | 19981014      | V23      | M93      | 291954   | 345738    |
| CV0053S     | 10         | ZYGOPHYLLACEAE | 28          | <i>Fagonia</i> sp.            | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0054S     | 10         | ZYGOPHYLLACEAE | 29          | <i>Seetzenia lanata</i>       | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0055S     | 10         | ZYGOPHYLLACEAE | 30          | <i>Zygodphyllum album</i>     | 19981014      | V23      | M93      | 291954   | 345738    |
| CV0034J     | 10         | ZYGOPHYLLACEAE | 30          | <i>Zygodphyllum album</i>     | 19990222      | -        | -        | 253857   | 365625    |
| CV0056S     | 10         | ZYGOPHYLLACEAE | 30          | <i>Zygodphyllum album</i>     | 19980216      | V28      | M104     | 255931   | 364252    |
| CV0057S     | 10         | ZYGOPHYLLACEAE | 30          | <i>Zygodphyllum album</i>     | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0035J     | 10         | ZYGOPHYLLACEAE | 31          | <i>Zygodphyllum boulosii</i>  | 19990222      | -        | -        | 253857   | 365625    |
| CV0036J     | 10         | ZYGOPHYLLACEAE | 31          | <i>Zygodphyllum boulosii</i>  | 19990222      | -        | -        | 253857   | 365625    |
| CV0037J     | 10         | ZYGOPHYLLACEAE | 31          | <i>Zygodphyllum boulosii</i>  | 19990222      | -        | -        | 253857   | 365625    |
| CV0058S     | 10         | ZYGOPHYLLACEAE | 31          | <i>Zygodphyllum boulosii</i>  | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0059S     | 10         | ZYGOPHYLLACEAE | 32          | <i>Zygodphyllum decumbens</i> | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0060S     | 10         | ZYGOPHYLLACEAE | 32          | <i>Zygodphyllum decumbens</i> | 19980219      | V28      | M104     | 253300   | 365200    |
| CV0061S     | 10         | ZYGOPHYLLACEAE | 32          | <i>Zygodphyllum decumbens</i> | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0062S     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980215      | V28      | M104     | 263561   | 361498    |
| CV0038J     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980215      | V28      | M104     | 263561   | 361498    |
| CV0063S     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0039J     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0040J     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980525      | V2       | M10      | 230449   | 384911    |
| CV0064S     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980617      | V15      | M71      | 270757   | 354510    |
| CV0065S     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980210      | V27      | M103     | 275836   | 351308    |
| CV0041J     | 10         | ZYGOPHYLLACEAE | 33          | <i>Zygodphyllum simplex</i>   | 19980210      | V27      | M103     | 275836   | 351308    |
| CV0066S     | 11         | NITRARIACEAE   | 35          | <i>Nitraria retusa</i>        | 19980212      | V27      | M103     | 272548   | 353609    |
| CV0042J     | 11         | NITRARIACEAE   | 35          | <i>Nitraria retusa</i>        | 19980212      | V27      | M103     | 272548   | 353609    |
| CV0067S     | 11         | NITRARIACEAE   | 35          | <i>Nitraria retusa</i>        | 19980216      | V28      | M104     | 260817   | 362932    |
| CV0043J     | 11         | NITRARIACEAE   | 35          | <i>Nitraria retusa</i>        | 19980216      | V28      | M104     | 260817   | 362932    |

Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name     | Species No. | Scientific name                                | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|-----------------|-------------|--|---------------|----------|----------|----------|-----------|
| CV0068S     | 11         | NITRARIACEAE    | 35          | <i>Nitraria retusa</i>                         | 19980609      | V10      | M48      | 260340   | 363542    |
| CV0069S     | 12         | EUPHORBIACEAE   | 36          | <i>Andrachne aspera</i> var. <i>glandulosa</i> | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0070S     | 12         | EUPHORBIACEAE   | 37          | <i>Chrozophora oblongifolia</i>                | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0044J     | 12         | EUPHORBIACEAE   | 37          | <i>Chrozophora oblongifolia</i>                | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0071S     | 12         | EUPHORBIACEAE   | 38          | <i>Euphorbia granulata</i>                     | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0045J     | 12         | EUPHORBIACEAE   | 38          | <i>Euphorbia granulata</i>                     | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0072S     | 12         | EUPHORBIACEAE   | 38          | <i>Euphorbia granulata</i>                     | 19980608      | V9       | M45      | 255029   | 364104    |
| CV0073S     | 12         | EUPHORBIACEAE   | 39          | <i>Euphorbia retusa</i>                        | 19980213      | V27      | M103     | 270823   | 354754    |
| CV0074S     | 12         | EUPHORBIACEAE   | 39          | <i>Euphorbia retusa</i>                        | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0075S     | 12         | EUPHORBIACEAE   | 39          | <i>Euphorbia retusa</i>                        | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0046J     | 12         | EUPHORBIACEAE   | 39          | <i>Euphorbia retusa</i>                        | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0076S     | 12         | EUPHORBIACEAE   | 40          | <i>Euphorbia scordifolia</i>                   | 19981020      | V5       | M101     | 250705   | 371554    |
| CV0077S     | 12         | EUPHORBIACEAE   | 41          | <i>Ricinus communis</i>                        | 19980529      | V5       | M29      | 244021   | 271081    |
| CV0078S     | 13         | POLYGALACEAE    | 43          | <i>Polygala</i> sp.                            | 19980526      | V3       | M15      | 241747   | 373804    |
| CV0079S     | 13         | POLYGALACEAE    | 43          | <i>Polygala</i> sp.                            | 19980529      | V5       | M29      | 244021   | 271081    |
| CV0047J     | 13         | POLYGALACEAE    | 43          | <i>Polygala</i> sp.                            | 19980529      | V5       | M29      | 244021   | 271081    |
| CV0080S     | 14         | SALVADORACEAE   | 44          | <i>Salvadora persica</i>                       | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0048J     | 14         | SALVADORACEAE   | 44          | <i>Salvadora persica</i>                       | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0081S     | 14         | SALVADORACEAE   | 44          | <i>Salvadora persica</i>                       | 19980613      | V11      | M52      | 260351   | 363553    |
| CV0082S     | 15         | RHAMNACEAE      | 45          | <i>Ziziphus spina-christi</i>                  | 19981014      | V23      | M93      | 291954   | 345738    |
| CV0049J     | 15         | RHAMNACEAE      | 45          | <i>Ziziphus spina-christi</i>                  | 19981014      | V23      | M93      | 291954   | 345738    |
| CV0083S     | 16         | URTICACEAE      | 46          | <i>Forsskaolea tenacissima</i>                 | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0084S     | 16         | URTICACEAE      | 46          | <i>Forsskaolea tenacissima</i>                 | 19980215      | V28      | M104     | 263536   | 361600    |
| CV0085S     | 16         | URTICACEAE      | 46          | <i>Forsskaolea tenacissima</i>                 | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0086S     | 16         | URTICACEAE      | 47          | <i>Parietaria alsinifolia</i>                  | 19980215      | V28      | M104     | 261700   | 362030    |
| CV0087S     | 17         | AIZOACEAE       | 48          | <i>Aizoon canariense</i>                       | 19980215      | V28      | M104     | 261700   | 362030    |
| CV0088S     | 17         | AIZOACEAE       | 48          | <i>Aizoon canariense</i>                       | 19980620      | V19      | M82      | 282145   | 344341    |
| CV0089S     | 18         | CARYOPHYLLACEAE | 49          | <i>Gypsophila capillaris</i>                   | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0090S     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0050J     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0091S     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980608      | V9       | M45      | 255029   | 364104    |
| CV0092S     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980609      | V10      | M48      | 260340   | 363542    |
| CV0093S     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980618      | V16      | M75      | 272612   | 353605    |
| CV0051J     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0094S     | 18         | CARYOPHYLLACEAE | 50          | <i>Polycarpha repens</i>                       | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0095S     | 18         | CARYOPHYLLACEAE | 51          | <i>Polycarpha robbairea</i>                    | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0096S     | 18         | CARYOPHYLLACEAE | 51          | <i>Polycarpha robbairea</i>                    | 19980530      | V6       | M30      | 245733   | 376553    |
| CV0052J     | 18         | CARYOPHYLLACEAE | 51          | <i>Polycarpha robbairea</i>                    | 19980530      | V6       | M30      | 245733   | 376553    |
| CV0097S     | 18         | CARYOPHYLLACEAE | 51          | <i>Polycarpha robbairea</i>                    | 19980617      | V15      | M71      | 270740   | 354521    |
| CV0053J     | 18         | CARYOPHYLLACEAE | 51          | <i>Polycarpha robbairea</i>                    | 19980617      | V15      | M71      | 270740   | 354521    |
| CV0098S     | 18         | CARYOPHYLLACEAE | 51          | <i>Polycarpha robbairea</i>                    | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0099S     | 18         | CARYOPHYLLACEAE | 52          | <i>Polycarpha spicata</i>                      | 19980215      | V28      | M104     | 263536   | 361600    |
| CV0054J     | 18         | CARYOPHYLLACEAE | 52          | <i>Polycarpha spicata</i>                      | 19980215      | V28      | M104     | 263536   | 361600    |
| CV0100S     | 18         | CARYOPHYLLACEAE | 52          | <i>Polycarpha spicata</i>                      | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0055J     | 18         | CARYOPHYLLACEAE | 52          | <i>Polycarpha spicata</i>                      | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0056J     | 18         | CARYOPHYLLACEAE | 53          | <i>Sphaerocoma aucheri</i>                     | 19980609      | V10      | M47      | 260348   | 363536    |
| CV0057J     | 18         | CARYOPHYLLACEAE | 53          | <i>Sphaerocoma aucheri</i>                     | 19990302      | -        | -        | 253250   | 365110    |
| CV0101S     | 18         | CARYOPHYLLACEAE | 53          | <i>Sphaerocoma aucheri</i>                     | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0102S     | 19         | CHENOPODIACEAE  | 54          | <i>Anabasis ehrenbergii</i>                    | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0058J     | 19-1       | CHENOPODIACEAE  | 54          | <i>Anabasis ehrenbergii</i>                    | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0103S     | 19         | CHENOPODIACEAE  | 54          | <i>Anabasis ehrenbergii</i>                    | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0104S     | 19         | CHENOPODIACEAE  | 55          | <i>Anabasis setifera</i>                       | 19980608      | V9       | M45      | 255029   | 364104    |
| CV0059J     | 19-1       | CHENOPODIACEAE  | 55          | <i>Anabasis setifera</i>                       | 19980608      | V9       | M45      | 255029   | 364104    |
| CV0060J     | 19-1       | CHENOPODIACEAE  | 56          | <i>Arthrocnemum macrostachyum</i>              | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0061J     | 19-1       | CHENOPODIACEAE  | 56          | <i>Arthrocnemum macrostachyum</i>              | 19990217      | -        | -        | 253033   | 365100    |

Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name    | Species No. | Scientific name                   | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|----------------|-------------|-----------------------------------|---------------|----------|----------|----------|-----------|
| CV0105S     | 19         | CHENOPODIACEAE | 56          | <i>Arthrocnemum macrostachyum</i> | 19980616      | V14      | M67      | 271006   | 354731    |
| CV0106S     | 19         | CHENOPODIACEAE | 56          | <i>Arthrocnemum macrostachyum</i> | 19980618      | V16      | M75      | 272610   | 353556    |
| CV0062J     | 19-1       | CHENOPODIACEAE | 56          | <i>Arthrocnemum macrostachyum</i> | 19980618      | V16      | M75      | 272610   | 353556    |
| CV0107S     | 19         | CHENOPODIACEAE | 57          | <i>Atriplex farinosa</i>          | 19980211      | V27      | M103     | 265632   | 355937    |
| CV0063J     | 19-1       | CHENOPODIACEAE | 57          | <i>Atriplex farinosa</i>          | 19980211      | V27      | M103     | 265632   | 355937    |
| CV0108S     | 19         | CHENOPODIACEAE | 58          | <i>Cornulaca ehrenbergii</i>      | 19980530      | V6       | M30      | 245733   | 376553    |
| CV0109S     | 19         | CHENOPODIACEAE | 59          | <i>Halocnemum strobilaceum</i>    | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0064J     | 19-1       | CHENOPODIACEAE | 59          | <i>Halocnemum strobilaceum</i>    | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0110S     | 19         | CHENOPODIACEAE | 59          | <i>Halocnemum strobilaceum</i>    | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0111S     | 19         | CHENOPODIACEAE | 59          | <i>Halocnemum strobilaceum</i>    | 19980616      | V14      | M65      | 271006   | 354731    |
| CV0065J     | 19-1       | CHENOPODIACEAE | 59          | <i>Halocnemum strobilaceum</i>    | 19980616      | V14      | M65      | 271006   | 354731    |
| CV0112S     | 19         | CHENOPODIACEAE | 60          | <i>Halopeplis perfoliata</i>      | 19980211      | V27      | M103     | 265632   | 355937    |
| CV0066J     | 19-1       | CHENOPODIACEAE | 60          | <i>Halopeplis perfoliata</i>      | 19980211      | V27      | M103     | 265632   | 355937    |
| CV0113S     | 19         | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0067J     | 19-2       | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0114S     | 19         | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0068J     | 19-2       | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0115S     | 19         | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19980607      | V8       | M37      | 255749   | 364305    |
| CV0069J     | 19-2       | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19980607      | V8       | M37      | 255749   | 364305    |
| CV0116S     | 19         | CHENOPODIACEAE | 61          | <i>Haloxylon salicornicum</i>     | 19980621      | V21      | M87      | 280234   | 351344    |
| CV0117S     | 19         | CHENOPODIACEAE | 62          | <i>Salsola imbricata</i>          | 19980223      | V29      | M105     | 230656   | 384859    |
| CV0070J     | 19-2       | CHENOPODIACEAE | 62          | <i>Salsola imbricata</i>          | 19980223      | V29      | M105     | 230656   | 384859    |
| CV0118S     | 19         | CHENOPODIACEAE | 62          | <i>Salsola imbricata</i>          | 19980525      | V2       | M8       | 230463   | 384896    |
| CV0071J     | 19-2       | CHENOPODIACEAE | 62          | <i>Salsola imbricata</i>          | 19980525      | V2       | M8       | 230463   | 384896    |
| CV0119S     | 19         | CHENOPODIACEAE | 63          | <i>Salsola tetrandra</i>          | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0120S     | 19         | CHENOPODIACEAE | 63          | <i>Salsola tetrandra?</i>         | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0121S     | 19         | CHENOPODIACEAE | 64          | <i>Salsola villosa</i>            | 19980607      | V8       | M41      | 255753   | 364332    |
| CV0072J     | 19-2       | CHENOPODIACEAE | 64          | <i>Salsola villosa</i>            | 19980607      | V8       | M41      | 255753   | 364332    |
| CV0122S     | 19         | CHENOPODIACEAE | 65          | <i>Seidlitzia rosmarinus</i>      | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0123S     | 19         | CHENOPODIACEAE | 65          | <i>Seidlitzia rosmarinus</i>      | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0124S     | 19         | CHENOPODIACEAE | 65          | <i>Seidlitzia rosmarinus</i>      | 19980615      | V13      | M59      | 265417   | 360215    |
| CV0073J     | 19-2       | CHENOPODIACEAE | 65          | <i>Seidlitzia rosmarinus</i>      | 19980615      | V13      | M59      | 265417   | 360215    |
| CV0074J     | 19-2       | CHENOPODIACEAE | 66          | <i>Sevada schimperi</i>           | 19990227      | -        | -        | 253033   | 365100    |
| CV0125S     | 19         | CHENOPODIACEAE | 66          | <i>Sevada schimperi</i>           | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0075J     | 19-2       | CHENOPODIACEAE | 66          | <i>Sevada schimperi</i>           | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0126S     | 19         | CHENOPODIACEAE | 67          | <i>Suaeda aegyptiaca</i>          | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0076J     | 19-2       | CHENOPODIACEAE | 67          | <i>Suaeda aegyptiaca</i>          | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0077J     | 19-3       | CHENOPODIACEAE | 68          | <i>Suaeda fruticosa</i>           | 19990227      | -        | -        | 253033   | 365100    |
| CV0078J     | 19-3       | CHENOPODIACEAE | 68          | <i>Suaeda fruticosa</i>           | 19990227      | -        | -        | 253033   | 365100    |
| CV0127S     | 19         | CHENOPODIACEAE | 68          | <i>Suaeda fruticosa</i>           | 19980211      | V27      | M103     | 265632   | 355937    |
| CV0128S     | 19         | CHENOPODIACEAE | 68          | <i>Suaeda fruticosa</i>           | 19980618      | V16      | M75      | 272548   | 353609    |
| CV0129S     | 19         | CHENOPODIACEAE | 68          | <i>Suaeda fruticosa?</i>          | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0130S     | 19         | CHENOPODIACEAE | 69          | <i>Suaeda monoica</i>             | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0079J     | 19-3       | CHENOPODIACEAE | 69          | <i>Suaeda monoica</i>             | 19981013      | V14      | M92      | 270812   | 354742    |
| CV0131S     | 19         | CHENOPODIACEAE | 69          | <i>Suaeda monoica</i>             | 19980216      | V28      | M104     | 255108   | 363952    |
| CV0132S     | 19         | CHENOPODIACEAE | 69          | <i>Suaeda monoica</i>             | 19980217      | V28      | M104     | 254900   | 364230    |
| CV0133S     | 19         | CHENOPODIACEAE | 69          | <i>Suaeda monoica</i>             | 19980617      | V15      | M69      | 270741   | 354521    |
| CV0134S     | 19         | CHENOPODIACEAE | 70          | <i>Suaeda vera</i>                | 19981019      | V2       | M99      | 230438   | 384044    |
| CV0080J     | 19-3       | CHENOPODIACEAE | 70          | <i>Suaeda vera</i>                | 19981019      | V2       | M99      | 230438   | 384044    |
| CV0081J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>         | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0082J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>         | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0135S     | 19         | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>         | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0083J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>         | 19981019      | V2       | M99      | 230438   | 384044    |
| CV0084J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>         | 19990227      | -        | -        | 253033   | 365100    |
| CV0085J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>         | 19990228      | -        | -        | 253033   | 365100    |



Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name    | Species No. | Scientific name                | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|----------------|-------------|--------------------------------|---------------|----------|----------|----------|-----------|
| CV0086J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>      | 19990302      | -        | -        | 253250   | 365110    |
| CV0136S     | 19         | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>      | 19980219      | V28      | M104     | 253300   | 365200    |
| CV0137S     | 19         | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>      | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0138S     | 19         | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>      | 19980608      | V9       | M43      | 255028   | 354057    |
| CV0087J     | 19-3       | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i>      | 19980608      | V9       | M43      | 255028   | 354057    |
| CV0139S     | 19         | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i> ?    | 19981019      | V2       | M99      | 230438   | 384044    |
| CV0140S     | 19         | CHENOPODIACEAE | 71          | <i>Suaeda vermiculata</i> ?    | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0141S     | 20         | AMARANTHACEAE  | 72          | <i>Aerva javanica</i>          | 19981010      | V12      | M88      | 263551   | 361536    |
| CV0088J     | 20         | AMARANTHACEAE  | 72          | <i>Aerva javanica</i>          | 19981010      | V12      | M88      | 263551   | 361536    |
| CV0142S     | 20         | AMARANTHACEAE  | 72          | <i>Aerva javanica</i>          | 19980614      | V12      | M56      | 263543   | 361515    |
| CV0089J     | 20         | AMARANTHACEAE  | 72          | <i>Aerva javanica</i>          | 19980614      | V12      | M56      | 263543   | 361515    |
| CV0143S     | 21         | LEGUMINOSAE    | 73          | <i>Acacia ehrenbergiana</i>    | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0090J     | 21-1       | LEGUMINOSAE    | 73          | <i>Acacia ehrenbergiana</i>    | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0144S     | 21         | LEGUMINOSAE    | 74          | <i>Acacia oerfota</i>          | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0091J     | 21-1       | LEGUMINOSAE    | 74          | <i>Acacia oerfota</i>          | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0145S     | 21         | LEGUMINOSAE    | 75          | <i>Acacia tortilis</i>         | 19980212      | V27      | M103     | 272548   | 353609    |
| CV0092J     | 21-1       | LEGUMINOSAE    | 75          | <i>Acacia tortilis</i>         | 19980212      | V27      | M103     | 272548   | 353609    |
| CV0146S     | 21         | LEGUMINOSAE    | 75          | <i>Acacia tortilis</i>         | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0093J     | 21-1       | LEGUMINOSAE    | 75          | <i>Acacia tortilis</i>         | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0147S     | 21         | LEGUMINOSAE    | 75          | <i>Acacia tortilis</i>         | 19980525      | V2       | M10      | 230449   | 384911    |
| CV0094J     | 21-1       | LEGUMINOSAE    | 75          | <i>Acacia tortilis</i>         | 19980525      | V2       | M10      | 230449   | 384911    |
| CV0148S     | 21         | LEGUMINOSAE    | 76          | <i>Astragalus hispidulus</i>   | 19980619      | V17      | M78      | 273534   | 353148    |
| CV0095J     | 21-1       | LEGUMINOSAE    | 76          | <i>Astragalus hispidulus</i>   | 19980619      | V17      | M78      | 273534   | 353148    |
| CV0149S     | 21         | LEGUMINOSAE    | 77          | <i>Astragalus sieberi</i>      | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0150S     | 21         | LEGUMINOSAE    | 78          | <i>Astragalus vogelii</i>      | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0096J     | 21-1       | LEGUMINOSAE    | 78          | <i>Astragalus vogelii</i>      | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0151S     | 21         | LEGUMINOSAE    | 78          | <i>Astragalus vogelii</i>      | 19980525      | V2       | M13      | 230438   | 384045    |
| CV0152S     | 21         | LEGUMINOSAE    | 79          | <i>Crotalaria</i> sp.          | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0097J     | 21-1       | LEGUMINOSAE    | 79          | <i>Crotalaria</i> sp.          | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0153S     | 21         | LEGUMINOSAE    | 80          | <i>Indigofera articulata</i>   | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0098J     | 21-1       | LEGUMINOSAE    | 80          | <i>Indigofera articulata</i>   | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0154S     | 21         | LEGUMINOSAE    | 80          | <i>Indigofera articulata</i>   | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0099J     | 21-1       | LEGUMINOSAE    | 80          | <i>Indigofera articulata</i>   | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0155S     | 21         | LEGUMINOSAE    | 80          | <i>Indigofera articulata</i>   | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0156S     | 21         | LEGUMINOSAE    | 80          | <i>Indigofera articulata</i>   | 19980613      | V11      | M51      | 262247   | 362234    |
| CV0157S     | 21         | LEGUMINOSAE    | 81          | <i>Indigofera oblongifolia</i> | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0100J     | 21-2       | LEGUMINOSAE    | 81          | <i>Indigofera oblongifolia</i> | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0158S     | 21         | LEGUMINOSAE    | 81          | <i>Indigofera oblongifolia</i> | 19980613      | V11      | M51      | 262247   | 362234    |
| CV0101J     | 21-2       | LEGUMINOSAE    | 81          | <i>Indigofera oblongifolia</i> | 19980613      | V11      | M51      | 262247   | 362234    |
| CV0159S     | 21         | LEGUMINOSAE    | 82          | <i>Indigofera</i> sp.          | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0160S     | 21         | LEGUMINOSAE    | 84          | <i>Senna alexandrina</i>       | 19980618      | V16      | M73      | 272612   | 353619    |
| CV0102J     | 21-2       | LEGUMINOSAE    | 84          | <i>Senna alexandrina</i>       | 19980618      | V16      | M73      | 272612   | 353619    |
| CV0161S     | 21         | LEGUMINOSAE    | 85          | <i>Senna holosericea</i>       | 19980526      | V3       | M15      | 241747   | 373804    |
| CV0103J     | 21-2       | LEGUMINOSAE    | 85          | <i>Senna holosericea</i>       | 19980526      | V3       | M15      | 241747   | 373804    |
| CV0162S     | 21         | LEGUMINOSAE    | 86          | <i>Senna italica</i>           | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0163S     | 21         | LEGUMINOSAE    | 86          | <i>Senna italica</i>           | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0104J     | 21-2       | LEGUMINOSAE    | 86          | <i>Senna italica</i>           | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0164S     | 21         | LEGUMINOSAE    | 86          | <i>Senna italica</i>           | 19980613      | V11      | M51      | 262247   | 362234    |
| CV0105J     | 21-2       | LEGUMINOSAE    | 86          | <i>Senna italica</i>           | 19980613      | V11      | M51      | 262247   | 362234    |
| CV0165S     | 21         | LEGUMINOSAE    | 87          | <i>Taverniera aegyptiaca</i>   | 19981018      | V1       | M98      | 224626   | 385839    |
| CV0106J     | 21-2       | LEGUMINOSAE    | 87          | <i>Taverniera aegyptiaca</i>   | 19980215      | V28      | M104     | 260351   | 363553    |
| CV0166S     | 21         | LEGUMINOSAE    | 87          | <i>Taverniera aegyptiaca</i>   | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0107J     | 21-2       | LEGUMINOSAE    | 87          | <i>Taverniera aegyptiaca</i>   | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0167S     | 21         | LEGUMINOSAE    | 87          | <i>Taverniera aegyptiaca</i>   | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0108J     | 21-2       | LEGUMINOSAE    | 87          | <i>Taverniera aegyptiaca</i>   | 19980613      | V11      | M52      | 262246   | 362233    |

Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name    | Species No. | Scientific name                    | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|----------------|-------------|------------------------------------|---------------|----------|----------|----------|-----------|
| CV0168S     | 21         | LEGUMINOSAE    | 88          | <i>Taverniera lappacea</i>         | 19980617      | V15      | M69      | 270741   | 354521    |
| CV0169S     | 21         | LEGUMINOSAE    | 88          | <i>Taverniera lappacea</i>         | 19980619      | V17      | M78      | 273534   | 353148    |
| CV0109J     | 21-2       | LEGUMINOSAE    | 88          | <i>Taverniera lappacea</i>         | 19980619      | V17      | M78      | 273534   | 353148    |
| CV0170S     | 21         | LEGUMINOSAE    | 89          | <i>Tephrosia apollinea</i>         | 19980213      | V27      | M103     | 272145   | 354040    |
| CV0110J     | 21-2       | LEGUMINOSAE    | 89          | <i>Tephrosia apollinea</i>         | 19980213      | V27      | M103     | 272145   | 354040    |
| CV0171S     | 21         | LEGUMINOSAE    | 89          | <i>Tephrosia apollinea</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0111J     | 21-2       | LEGUMINOSAE    | 89          | <i>Tephrosia apollinea</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0172S     | 21         | LEGUMINOSAE    | 90          | <i>Tephrosia purpurea</i>          | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0112J     | 22         | RHIZOPHRACEAE  | 91          | <i>Rhizophora mucronata</i>        | 19990216      | -        | -        | 253609   | 365753    |
| CV0173S     | 22         | RHIZOPHRACEAE  | 91          | <i>Rhizophora mucronata</i>        | 19980217      | V28      | M104     | 253612   | 365752    |
| CV0113J     | 22         | RHIZOPHRACEAE  | 91          | <i>Rhizophora mucronata</i>        | 19980217      | V28      | M104     | 253612   | 365752    |
| CV0114J     | 23         | UMBELLIFERAE   | 92          | <i>Deverra</i> sp.                 | 19980215      | V28      | M104     | 260351   | 363553    |
| CV0174S     | 23         | UMBELLIFERAE   | 92          | <i>Deverra triradiata</i>          | 19980613      | V11      | M51      | 262247   | 362234    |
| CV0175S     | 23         | UMBELLIFERAE   | 92          | <i>Deverra</i> sp.?                | 19980215      | V28      | M104     | 260351   | 363553    |
| CV0176S     | 24         | LORANTHACEAE   | 93          | <i>Plicosepalus</i> sp.            | 19980619      | V17      | M78      | 273529   | 353220    |
| CV0115J     | 24         | LORANTHACEAE   | 93          | <i>Plicosepalus</i> sp.            | 19980619      | V17      | M78      | 273529   | 353220    |
| CV0177S     | 25         | PLUMBAGINACEAE | 94          | <i>Limonium axillare</i>           | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0116J     | 25         | PLUMBAGINACEAE | 94          | <i>Limonium axillare</i>           | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0178S     | 25         | PLUMBAGINACEAE | 94          | <i>Limonium axillare</i>           | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0179S     | 26         | APOCYNACEAE    | 95          | <i>Rhazya stricta</i>              | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0117J     | 26         | APOCYNACEAE    | 95          | <i>Rhazya stricta</i>              | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0180S     | 27         | ASCLEPIADACEAE | 96          | <i>Blyttia spiralis</i>            | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0118J     | 27         | ASCLEPIADACEAE | 96          | <i>Blyttia spiralis</i>            | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0181S     | 27         | ASCLEPIADACEAE | 98          | <i>Glossonema boveanum</i>         | 19980617      | V15      | M69      | 270741   | 354521    |
| CV0119J     | 27         | ASCLEPIADACEAE | 98          | <i>Glossonema boveanum</i>         | 19980617      | V15      | M69      | 270741   | 354521    |
| CV0182S     | 27         | ASCLEPIADACEAE | 99          | <i>Pergularia tomentosa</i>        | 19980619      | V17      | M78      | 273526   | 353210    |
| CV0120J     | 27         | ASCLEPIADACEAE | 99          | <i>Pergularia tomentosa</i>        | 19980619      | V17      | M78      | 273526   | 353210    |
| CV0183S     | 27         | ASCLEPIADACEAE | 101         | <i>Steinheilii radicans</i>        | 19980529      | V5       | M29      | 244021   | 271081    |
| CV0121J     | 27         | ASCLEPIADACEAE | 101         | <i>Steinheilii radicans</i>        | 19980529      | V5       | M29      | 244021   | 271081    |
| CV0184S     | 27         | ASCLEPIADACEAE | 101         | ASCLEPIADACENEsp.                  | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0122J     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0185S     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0123J     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0186S     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980220      | V29      | M105     | 233709   | 383107    |
| CV0124J     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980220      | V29      | M105     | 233709   | 383107    |
| CV0187S     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980530      | V6       | M32      | 245752   | 375046    |
| CV0125J     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980530      | V6       | M32      | 245752   | 375046    |
| CV0188S     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0126J     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0189S     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980619      | V17      | M78      | 273526   | 353210    |
| CV0127J     | 28         | RUBIACEAE      | 102         | <i>Kohautia caespitosa</i>         | 19980619      | V17      | M78      | 273526   | 353210    |
| CV0190S     | 29         | CONVOLVULACEAE | 103         | <i>Convolvulus asyrensis</i>       | 19980620      | V18      | M80      | 280130   | 351225    |
| CV0191S     | 29         | CONVOLVULACEAE | 104         | <i>Convolvulus glomeratus</i>      | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0128J     | 29         | CONVOLVULACEAE | 104         | <i>Convolvulus glomeratus</i>      | 19980613      | V11      | M52      | 262246   | 362233    |
| CV0192S     | 29         | CONVOLVULACEAE | 105         | <i>Convolvulus hystrix</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0129J     | 29         | CONVOLVULACEAE | 105         | <i>Convolvulus hystrix</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0193S     | 29         | CONVOLVULACEAE | 106         | <i>Convolvulus pilosellifolius</i> | 19980223      | V29      | M105     | 230656   | 384859    |
| CV0194S     | 29         | CONVOLVULACEAE | 107         | <i>Convolvulus</i> sp.             | 19980615      | V13      | M61      | 265416   | 360214    |
| CV0195S     | 29         | CONVOLVULACEAE | 108         | <i>Cressa cretica</i>              | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0130J     | 29         | CONVOLVULACEAE | 108         | <i>Cressa cretica</i>              | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0196S     | 29         | CONVOLVULACEAE | 108         | <i>Cressa cretica</i>              | 19980524      | V1       | M1       | 224639   | 385867    |
| CV0131J     | 29         | CONVOLVULACEAE | 108         | <i>Cressa cretica</i>              | 19980524      | V1       | M1       | 224639   | 385867    |
| CV0197S     | 29         | CONVOLVULACEAE | 108         | <i>Cressa cretica</i>              | 19980621      | V21      | M87      | 280220   | 351330    |
| CV0198S     | 30         | BORAGINACEAE   | 109         | <i>Echium</i> sp.                  | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0132J     | 30         | BORAGINACEAE   | 109         | <i>Echium</i> sp.                  | 19980530      | V6       | M32      | 245752   | 396546    |

Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name      | Species No. | Scientific name                  | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|------------------|-------------|----------------------------------|---------------|----------|----------|----------|-----------|
| CV0199S     | 30         | BORAGINACEAE     | 110         | <i>Heliotropium arbainense</i>   | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0133J     | 30         | BORAGINACEAE     | 110         | <i>Heliotropium arbainense</i>   | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0200S     | 30         | BORAGINACEAE     | 110         | <i>Heliotropium arbainense</i>   | 19980619      | V17      | M78      | 273534   | 353148    |
| CV0134J     | 30         | BORAGINACEAE     | 110         | <i>Heliotropium arbainense</i>   | 19980619      | V17      | M78      | 273534   | 353148    |
| CV0201S     | 30         | BORAGINACEAE     | 110         | <i>Heliotropium arbainense</i>   | 19980620      | V19      | M82      | 282145   | 344341    |
| CV0135J     | 30         | BORAGINACEAE     | 110         | <i>Heliotropium arbainense</i>   | 19980620      | V19      | M82      | 282145   | 344341    |
| CV0202S     | 30         | BORAGINACEAE     | 111         | <i>Heliotropium crispum</i>      | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0136J     | 30         | BORAGINACEAE     | 111         | <i>Heliotropium crispum</i>      | 19980215      | V28      | M104     | 261820   | 362422    |
| CV0203S     | 30         | BORAGINACEAE     | 111         | <i>Heliotropium crispum</i>      | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0204S     | 30         | BORAGINACEAE     | 112         | <i>Heliotropium curassavicum</i> | 19980607      | V8       | M41      | 255748   | 364300    |
| CV0137J     | 30         | BORAGINACEAE     | 112         | <i>Heliotropium curassavicum</i> | 19980607      | V8       | M41      | 255748   | 364300    |
| CV0205S     | 30         | BORAGINACEAE     | 113         | <i>Heliotropium longiflorum</i>  | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0138J     | 30         | BORAGINACEAE     | 113         | <i>Heliotropium longiflorum</i>  | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0206S     | 30         | BORAGINACEAE     | 114         | <i>Heliotropium pterocarpum</i>  | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0139J     | 30         | BORAGINACEAE     | 114         | <i>Heliotropium pterocarpum</i>  | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0207S     | 31         | AVCENNIACEAE     | 115         | <i>Avicennia marina</i>          | 19980210      | V27      | M103     | 272548   | 353609    |
| CV0140J     | 31         | AVCENNIACEAE     | 115         | <i>Avicennia marina</i>          | 19980210      | V27      | M103     | 272548   | 353609    |
| CV0208S     | 32         | LABIATAE         | 116         | <i>Lavandula stricta</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0209S     | 32         | LABIATAE         | 117         | <i>Salvia aegyptiaca</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0141J     | 32         | LABIATAE         | 117         | <i>Salvia aegyptiaca</i>         | 19980619      | V17      | M78      | 273534   | 353208    |
| CV0142J     | 32         | LABIATAE         | 118         | <i>Teucrium oliverianum</i>      | 19981012      | V13      | M91      | 265417   | 360204    |
| CV0210S     | 32         | LABIATAE         | 119         | <i>Teucrium sp.</i>              | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0211S     | 33         | SOLANACEAE       | 120         | <i>Hyoscyamus albus</i>          | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0212S     | 33         | SOLANACEAE       | 121         | <i>Hyoscyamus muticus</i>        | 19980217      | V28      | M104     | 254900   | 364230    |
| CV0143J     | 33         | SOLANACEAE       | 121         | <i>Hyoscyamus muticus</i>        | 19980217      | V28      | M104     | 254900   | 364230    |
| CV0213S     | 33         | SOLANACEAE       | 122         | <i>Lycium shawii</i>             | 19980217      | V28      | M104     | 254900   | 364230    |
| CV0214S     | 33         | SOLANACEAE       | 122         | <i>Lycium shawii</i>             | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0215S     | 34         | SCROPHULARIACEAE | 123         | <i>Bacopa monnieri</i>           | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0144J     | 34         | SCROPHULARIACEAE | 123         | <i>Bacopa monnieri</i>           | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0216S     | 34         | SCROPHULARIACEAE | 124         | <i>Kickxia aegyptiaca</i>        | 19980619      | V17      | M78      | 273446   | 353206    |
| CV0145J     | 34         | SCROPHULARIACEAE | 124         | <i>Kickxia aegyptiaca</i>        | 19980619      | V17      | M78      | 273446   | 353206    |
| CV0217S     | 34         | SCROPHULARIACEAE | 125         | <i>Lindenbergia sinaica</i>      | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0146J     | 34         | SCROPHULARIACEAE | 125         | <i>Lindenbergia sinaica</i>      | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0218S     | 35         | ACANTHACEAE      | 126         | <i>Blepharis ciliaris</i>        | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0147J     | 35         | ACANTHACEAE      | 126         | <i>Blepharis ciliaris</i>        | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0219S     | 35         | ACANTHACEAE      | 126         | <i>Blepharis ciliaris</i>        | 19980615      | V13      | M61      | 265416   | 360214    |
| CV0148J     | 35         | ACANTHACEAE      | 126         | <i>Blepharis ciliaris</i>        | 19980618      | V16      | M73      | 272612   | 353619    |
| CV0220S     | 36         | OROBANCHACEAE    | 127         | <i>Cistanche phelypaea</i>       | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0149J     | 36         | OROBANCHACEAE    | 127         | <i>Cistanche phelypaea</i>       | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0221S     | 37         | COMPOSITAE       | 128         | <i>Blumea sp.</i>                | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0150J     | 37         | COMPOSITAE       | 128         | <i>Blumea sp.</i>                | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0222S     | 37         | COMPOSITAE       | 129         | <i>Echinops sp.</i>              | 19981010      | V12      | M88      | 263551   | 361536    |
| CV0223S     | 37         | COMPOSITAE       | 130         | <i>Iphionia scabra</i>           | 19980210      | V27      | M103     | 273529   | 353220    |
| CV0224S     | 37         | COMPOSITAE       | 130         | <i>Iphionia scabra</i>           | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0225S     | 37         | COMPOSITAE       | 130         | <i>Iphionia scabra</i>           | 19980619      | V17      | M78      | 273529   | 353220    |
| CV0226S     | 37         | COMPOSITAE       | 130         | <i>Iphionia scabra</i>           | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0151J     | 37         | COMPOSITAE       | 130         | <i>Iphionia scabra</i>           | 19980530      | V6       | M31      | 245753   | 370547    |
| CV0227S     | 37         | COMPOSITAE       | 131         | <i>Launaea capitata</i>          | 19980215      | V28      | M104     | 261700   | 362030    |
| CV0228S     | 37         | COMPOSITAE       | 132         | <i>Launaea fragilis</i>          | 19980619      | V17      | M78      | 273446   | 353206    |
| CV0229S     | 37         | COMPOSITAE       | 133         | <i>Launaea mucronata</i> ssp.    | 19980617      | V15      | M69      | 270741   | 354521    |
| CV0230S     | 37         | COMPOSITAE       | 134         | <i>Launaea sp.?</i>              | 19980218      | V28      | M104     | 251627   | 370856    |
| CV0231S     | 37         | COMPOSITAE       | 134         | <i>Pulicaria crispa</i>          | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0152J     | 37         | COMPOSITAE       | 134         | <i>Pulicaria crispa</i>          | 19980530      | V6       | M32      | 245752   | 396546    |
| CV0232S     | 37         | COMPOSITAE       | 135         | <i>Pulicaria incisa</i>          | 19980621      | V21      | M87      | 280234   | 351344    |
| CV0233S     | 37         | COMPOSITAE       | 136         | <i>Pulicaria sp.</i>             | 19981018      | V1       | M98      | 224626   | 385839    |

Appendix 13 (cont.). List of mangroves / coastal Vegetation specimens collected in the Biological Inventory Survey.

| Sample code | Family No. | Family name | Species No. | Scientific name                | Sampling date | Site No. | Spot No. | Latitude | Longitude |
|-------------|------------|-------------|-------------|--------------------------------|---------------|----------|----------|----------|-----------|
| CV0234S     | 37         | COMPOSITAE  | 136         | <i>Pulicaria</i> sp.           | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0235S     | 37         | COMPOSITAE  | 136         | <i>Pulicaria</i> sp.           | 19980213      | V27      | M103     | 265507   | 360918    |
| CV0236S     | 38         | LILIACEAE   | 137         | <i>Asphodelus fistulosus</i>   | 19980210      | V27      | M103     | 274034   | 352843    |
| CV0237S     | 38         | LILIACEAE   | 137         | <i>Asphodelus fistulosus</i>   | 19980213      | V27      | M103     | 270823   | 354754    |
| CV0238S     | 38         | LILIACEAE   | 137         | <i>Asphodelus fistulosus</i>   | 19980215      | V28      | M104     | 263561   | 361498    |
| CV0239S     | 38         | LILIACEAE   | 137         | <i>Asphodelus fistulosus</i>   | 19980608      | V9       | M45      | 255029   | 364104    |
| CV0240S     | 39         | JUNCACEAE   | 138         | <i>Juncus rigidus</i>          | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0241S     | 39         | JUNCACEAE   | 138         | <i>Juncus rigidus</i>          | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0153J     | 39         | JUNCACEAE   | 138         | <i>Juncus rigidus</i>          | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0242S     | 40         | GRAMINEAE   | 139         | <i>Aeluropus lagopoides</i>    | 19980215      | V28      | M104     | 260351   | 363553    |
| CV0154J     | 40         | GRAMINEAE   | 139         | <i>Aeluropus lagopoides</i>    | 19980215      | V28      | M104     | 260351   | 363553    |
| CV0243S     | 40         | GRAMINEAE   | 139         | <i>Aeluropus lagopoides</i>    | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0155J     | 40         | GRAMINEAE   | 139         | <i>Aeluropus lagopoides</i>    | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0244S     | 40         | GRAMINEAE   | 139         | <i>Aeluropus lagopoides</i>    | 19980607      | V8       | M37      | 255749   | 364305    |
| CV0245S     | 40         | GRAMINEAE   | 140         | <i>Cenchrus gracillimus</i>    | 19980220      | V29      | M105     | 250200   | 371600    |
| CV0246S     | 40         | GRAMINEAE   | 141         | <i>Cynodon dactylon</i>        | 19981020      | V5       | M101     | 250705   | 371554    |
| CV0156J     | 40         | GRAMINEAE   | 141         | <i>Cynodon dactylon</i>        | 19981020      | V5       | M101     | 250705   | 371554    |
| CV0247S     | 40         | GRAMINEAE   | 141         | <i>Cynodon dactylon</i>        | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0157J     | 40         | GRAMINEAE   | 141         | <i>Cynodon dactylon</i>        | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0248S     | 40         | GRAMINEAE   | 142         | <i>Dichanthium foveolatum</i>  | 19980609      | V10      | M43      | 260352   | 363553    |
| CV0249S     | 40         | GRAMINEAE   | 143         | <i>Echinochloa</i> sp.         | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0158J     | 40         | GRAMINEAE   | 143         | <i>Echinochloa</i> sp.         | 19980524      | V1       | M5       | 224623   | 385841    |
| CV0250S     | 40         | GRAMINEAE   | 144         | <i>Lasiurus scindicus</i>      | 19980609      | V10      | M47      | 260352   | 363553    |
| CV0159J     | 40         | GRAMINEAE   | 144         | <i>Lasiurus scindicus</i>      | 19980609      | V10      | M47      | 260352   | 363553    |
| CV0251S     | 40         | GRAMINEAE   | 145         | <i>Panicum turgidum</i>        | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0160J     | 40         | GRAMINEAE   | 145         | <i>Panicum turgidum</i>        | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0252S     | 40         | GRAMINEAE   | 145         | <i>Panicum turgidum</i>        | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0161J     | 40         | GRAMINEAE   | 145         | <i>Panicum turgidum</i>        | 19980609      | V10      | M46      | 260348   | 363536    |
| CV0253S     | 40         | GRAMINEAE   | 146         | <i>Phragmites australis</i>    | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0162J     | 40         | GRAMINEAE   | 146         | <i>Phragmites australis</i>    | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0254S     | 40         | GRAMINEAE   | 147         | <i>Sporobolus spicatus</i>     | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0163J     | 40         | GRAMINEAE   | 147         | <i>Sporobolus spicatus</i>     | 19980220      | V29      | M105     | 250700   | 371600    |
| CV0255S     | 40         | GRAMINEAE   | 148         | <i>Stipagrostis hirtigluma</i> | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0164J     | 40         | GRAMINEAE   | 148         | <i>Stipagrostis hirtigluma</i> | 19980614      | V12      | M56      | 263603   | 361529    |
| CV0256S     | 40         | GRAMINEAE   | 149         | <i>Stipagrostis plumosa</i>    | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0165J     | 40         | GRAMINEAE   | 149         | <i>Stipagrostis plumosa</i>    | 19980212      | V27      | M103     | 273529   | 353220    |
| CV0257S     | 40         | GRAMINEAE   | 151         | <i>Tricholaena teneriffae</i>  | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0166J     | 40         | GRAMINEAE   | 151         | <i>Tricholaena teneriffae</i>  | 19981011      | V22      | M90      | 263645   | 361409    |
| CV0258S     | 40         | GRAMINEAE   | 151         | GRAMINEAE sp.                  | 19980220      | V29      | M105     | 250200   | 371600    |
| CV0259S     | 43         | CYPERACEAE  | 155         | <i>Cyperus conglomeratus</i>   | 19980529      | V5       | M28      | 250672   | 371597    |
| CV0260S     | 43         | CYPERACEAE  | 155         | <i>Cyperus conglomeratus</i>   | 19980608      | V9       | M45      | 255029   | 364104    |
| CV0261S     | 43         | CYPERACEAE  | 156         | <i>Cyperus jeminicus</i>       | 19980216      | V28      | M104     | 260415   | 363412    |
| CV0167J     | 43         | CYPERACEAE  | 156         | <i>Cyperus jeminicus</i>       | 19980216      | V28      | M104     | 260415   | 363412    |
| CV0262S     | 43         | CYPERACEAE  | 156         | <i>Cyperus jeminicus</i>       | 19980530      | V6       | M30      | 245733   | 376553    |
| CV0263S     | 43         | CYPERACEAE  | 157         | <i>Cyperus laevigatus</i>      | 19981015      | V26      | M102     | 283334   | 344807    |
| CV0264S     | 43         | CYPERACEAE  | 158         | <i>Cyperus rubicundus</i>      | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0168J     | 43         | CYPERACEAE  | 158         | <i>Cyperus rubicundus</i>      | 19980222      | V29      | M105     | 233709   | 383107    |
| CV0265S     | 43         | CYPERACEAE  | 159         | <i>Cyperus</i> sp.             | 19980210      | V27      | M103     | 273529   | 353220    |

**Appendix 14. Locations of the inventory survey spots for the birds component.**

| Site | Spot No. | Latitude(N) | Longitude (E) | Date     | Time  |      | Method       | Habitat                            |
|------|----------|-------------|---------------|----------|-------|------|--------------|------------------------------------|
|      |          |             |               |          | Start | End  |              |                                    |
| 1    | O63      | 292026      | 345707        | 19981014 | 640   | 825  | observation  | a residential area and a wadi      |
|      | O64      | 292026      | 345707        | 19981014 | 1035  | 1135 | point census | a residential area                 |
| 2    | O46      | 282218      | 344344        | 19980620 | 1750  | 1910 | census       | rocky mountains                    |
|      | O47      | 282218      | 344344        | 19980620 | 1747  | 1910 | observation  | rocky mountains                    |
| 3    | O48      | 280600      | 343541        | 19980621 | 750   | 912  | observation  | a sandy beach                      |
| 4    | O49      | 280237      | 351346        | 19980621 | 1022  | 1111 | census       | a sandy beach with palm trees      |
|      | O50      | 280237      | 351346        | 19980621 | 1010  | 1115 | observation  | a sandy beach with palm trees      |
|      | O67      | 280237      | 351346        | 19981015 | 1114  | 1215 | observation  | a sandy beach with palm trees      |
| 5    | O44      | 280127      | 351209        | 19980620 | 830   | 930  | census       | sandy and Sabkh area               |
|      | O45      | 280127      | 351209        | 19980620 | 810   | 1000 | observation  | sandy and Sabkh area               |
| 6    | O41      | 273524      | 353222        | 19980619 | 740   | 845  | census       | a grassland and patchy shrubs      |
|      | O42      | 273506      | 353209        | 19980619 | 927   | 947  | census       | a grassland                        |
|      | O43      | 273524      | 353222        | 19980619 | 720   | 1010 | observation  | a grassland and patchy shrubs      |
| 7    | O39      | 272549      | 353609        | 19980618 | 732   | 830  | census       | mangrove, farms and a wadi         |
|      | O40      | 272549      | 353609        | 19980618 | 724   | 930  | observation  | mangrove, farms and a wadi         |
| 8    | O33      | 270811      | 354739        | 19980616 | 750   | 850  | census       | a mangrove forest and shrubs       |
|      | O34      | 271012      | 354735        | 19980616 | 1000  | 1050 | census       | a mangrove forest and shrubs       |
|      | O35      | 270811      | 354739        | 19980616 | 730   | 1120 | observation  | a mangrove forest and shrubs       |
|      | O61      | 270811      | 354739        | 19981013 | 800   | 915  | observation  | a mangrove forest and shrubs       |
| 9    | O62      | 271012      | 354735        | 19981013 | 925   | 1030 | observation  | a mangrove forest and shrubs       |
|      | O36      | 270758      | 354509        | 19980617 | 930   | 1040 | census       | an arid area                       |
|      | O37      | 270509      | 354639        | 19980617 | 1115  | 1149 | census       | an arid area                       |
| 10   | O38      | 270758      | 354509        | 19980617 | 920   | 1155 | observation  | an arid area                       |
|      | O30      | 265414      | 360205        | 19980615 | 800   | 830  | census       | a mangrove forest                  |
|      | O31      | 265423      | 360212        | 19980615 | 830   | 930  | census       | an arid area                       |
|      | O32      | 265414      | 360205        | 19980615 | 755   | 1010 | observation  | a mangrove forest and an arid area |
|      | O59      | 265414      | 360205        | 19981012 | 737   | 850  | observation  | a mangrove forest and an arid area |
| 11   | O60      | 265514      | 360059        | 19981012 | 900   | 1010 | observation  | a mangrove forest and an arid area |
|      | O28      | 263601      | 361526        | 19980614 | 735   | 904  | census       | a wadi with shrubs                 |
|      | O29      | 263601      | 361526        | 19980614 | 725   | 920  | observation  | a wadi with shrubs                 |
|      | O51      | 263550      | 361533        | 19981010 | 800   | 1000 | mist netting | a wadi with shrubs                 |
|      | O52      | 263550      | 361533        | 19981010 | 717   | 1105 | observation  | a wadi with shrubs                 |
|      | O53      | 263550      | 361533        | 19981010 | 1655  | 1815 | mist netting | a wadi with shrubs                 |
|      | O54      | 263550      | 361533        | 19981010 | 1645  | 1820 | observation  | a wadi with shrubs                 |
|      | O55      | 263550      | 361533        | 19981011 | 725   | 945  | mist netting | a wadi with shrubs                 |
| 12   | O56      | 263550      | 361533        | 19981011 | 715   | 955  | observation  | a wadi with shrubs                 |
|      | O26      | 262227      | 362221        | 19980613 | 1635  | 1733 | census       | a salt marsh                       |
|      | O27      | 262227      | 362221        | 19980613 | 1625  | 1745 | observation  | a salt marsh                       |
| 13   | O23      | 260340      | 363543        | 19980609 | 728   | 834  | census       | a grassland                        |
|      | O24      | 260349      | 363540        | 19980609 | 841   | 925  | census       | an arid area                       |
|      | O25      | 260340      | 363543        | 19980609 | 721   | 933  | observation  | a grassland and an arid area       |
| 14   | O19      | 255733      | 364331        | 19980607 | 730   | 825  | census       | a <i>Tamarix</i> forest in a wadi  |
|      | O20      | 255733      | 364331        | 19980607 | 725   | 1010 | observation  | a <i>Tamarix</i> forest in a wadi  |
| 15   | O21      | 255026      | 364106        | 19980608 | 756   | 931  | census       | a salt marsh                       |
|      | O22      | 255026      | 364106        | 19980608 | 740   | 1000 | observation  | a salt marsh                       |
| 16   | O68      | 253611      | 365753        | 19981017 | 930   | 1025 | observation  | a mangrove forest and a salt marsh |
| 20   | O17      | 252452      | 365325        | 19980531 | 1055  | 1140 | census       | a mangrove forest                  |
|      | O18      | 252452      | 365325        | 19980531 | 945   | 1155 | observation  | a mangrove forest                  |
| 21   | O12      | 250718      | 371546        | 19980529 | 752   | 840  | census       | a grassland                        |
|      | O13      | 250700      | 371550        | 19980529 | 905   | 930  | census       | a farm                             |
|      | O14      | 250718      | 371546        | 19980529 | 747   | 955  | observation  | a grassland and a farm             |
|      | O74      | 250718      | 371546        | 19981020 | 1540  | 1650 | observation  | a grassland and a farm             |
| 22   | O15      | 245711      | 370604        | 19980530 | 930   | 1010 | census       | an arid area                       |
|      | O16      | 245711      | 370604        | 19980530 | 900   | 1115 | observation  | an arid area                       |
| 23   | O9       | 244738      | 371029        | 19980528 | 820   | 909  | census       | an arid area                       |
|      | O10      | 244831      | 371040        | 19980528 | 927   | 1005 | census       | a mangrove forest and an arid area |
|      | O11      | 244738      | 371029        | 19980528 | 810   | 1015 | observation  | a mangrove forest and an arid area |
| 24   | O7       | 241720      | 373806        | 19980526 | 1520  | 1640 | census       | rocky hills                        |

**Appendix 14 (cont.).** Locations of the inventory survey spots for the birds component.

| Site | Spot No. | Latitude(N) | Longitude (E) | Date     | Time  |      | Method      | Habitat                             |
|------|----------|-------------|---------------|----------|-------|------|-------------|-------------------------------------|
|      |          |             |               |          | Start | End  |             |                                     |
|      | O8       | 241720      | 373806        | 19980526 | 1520  | 1640 | observation | rocky hills                         |
| 25   | O73      | 235538      | 381743        | 19981020 | 750   | 900  | observation | a mangrove forest                   |
| 26   | O4       | 230407      | 384844        | 19980525 | 902   | 1016 | census      | a grassland with patchy shrubs      |
|      | O5       | 230446      | 384911        | 19980525 | 1100  | 1137 | census      | scattered shrubs with <i>Acacia</i> |
|      | O6       | 230407      | 384844        | 19980525 | 900   | 1150 | observation | a grassland and shrub-type area     |
|      | O71      | 230407      | 384844        | 19981019 | 750   | 1025 | observation | a grassland and shrub-type area     |
| 27   | O1       | 224622      | 385841        | 19980524 | 947   | 1052 | census      | a grassland                         |
|      | O2       | 224640      | 390026        | 19980524 | 1108  | 1155 | census      | a sandy area with shrubs            |
|      | O3       | 224622      | 385841        | 19980524 | 935   | 1200 | observation | a grassland and shrub-type area     |
|      | O69      | 224622      | 385841        | 19981018 | 715   | 830  | observation | a grassland                         |
|      | O70      | 224640      | 390026        | 19981018 | 855   | 1000 | observation | a sandy area with shrubs            |

Note: Site 17, 18 and 19 were surveyed in Phase III.

**Appendix 15. Location of the survey spots of the seagrasses/algae component in the Model Area.**

| Location                                  | Spot   | Latitude(N) | Longitude (E) | Date                   | Habitat   | Method                   |
|---|--------|-------------|---------------|------------------------|---|--------------------------|
| South of Duqm Sabq                        | SA1    | 253610      | 365758        | 19990216               | Intertidal bare sand flat with few young mangrove | Observation              |
|   | SA2    | 253615      | 365734        | 19990216               | Mangrove stand                                    | Observation              |
|   | SA3    | 253614      | 365732        | 19990216               | Turf/small algae community                        | Observation and sampling |
| South of Qumma'an                         | SA4    | 253227      | 365107        | 19990217               | Mangrove stand                                    | Observation and sampling |
|   | SA5    | 253229      | 365152        | 19990217               | Small algae/sponge                                | Observation              |
| Offshore east of Jazirat Shaybararh       | SA6    | 252350      | 365420        | 19990221               | Cyanophyceae community                            | Observation              |
|   | SA7    | 252222      | 365341        | 19990221               | Cyanophyceae community                            | Observation and sampling |
|   | SA8    | 252355      | 365454        | 19990221               | <i>Sargassum</i> bed                              | Observation and sampling |
| Offshore east of Jazirat Suwayhil         | SA9    | 252550      | 365709        | 19990223               | Seagrass bed with some Cyanophyceae               | Observation              |
|   | SA10   | 252542      | 365717        | 19990223               | Cyanophyceae community                            | Observation              |
| West coast of Jazirat Suwayhil            | SA11   | 252551      | 365634        | 19990223               | Seagrass bed                                      | Observation              |
|   | SA12   | 252239      | 365243        | 19990224               | Cyanophyceae community                            | Observation              |
|   | SA13   | 252235      | 365244        | 19990224               | Turf/small algae community                        | Observation              |
|   | SA14   | 252235      | 365245        | 19990224               | Crustose coralline algae community                | Observation              |
|   | SA15   | 252237      | 365243        | 19990224               | Coral community with few small algae              | Observation and sampling |
| South Qara'ir                             | SA16   | 252838      | 370119        | 19990225               | Bare sand area with some seagrass and small algae | Observation and sampling |
|   | SA17   | 252840      | 370124        | 19990225               | Small algae community with some seagrass          | Observation and sampling |
|   | SA18   | 252845      | 370116        | 19990225               | Drifted <i>Sargassum</i> bed                      | Observation and sampling |
| Coast of Duqm Abu Awashiz                 | SA19   | 252842      | 370159        | 19990227               | Small algae community with some seagrass          | Observation and sampling |
|   | SA20   | 252842      | 370156        | 19990227               | Bare sand area with some seagrass                 | Observation              |
|   | SA21   | 252842      | 370151        | 19990227               | Seagrass bed                                      | Observation and sampling |
|   | SA22   | 252809      | 370244        | 19990227               | Small algae community                             | Observation              |
|   | SA23   | 252807      | 370240        | 19990227               | <i>Sargassum</i> bed                              | Observation and sampling |
|   | SA24   | 252805      | 370234        | 19990227               | Cyanophyceae community                            | Observation and sampling |
|   | SA25   | 252805      | 370243        | 19990227               | Bare intertidal rock                              | Observation              |
| SA26                                      | 252858 | 370156      | 19990227      | Cyanophyceae community | Observation and sampling                          |                          |
| Offshore north of Jazirat Suwayhil        | SA27   | 252916      | 365825        | 19990228               | Bare sand area with some Cyanophyceae             | Observation              |
|   | SA28   | 252911      | 365822        | 19990228               | Coral community with few small algae              | Observation              |
|   | SA29   | 252906      | 365828        | 19990228               | Bare sand area with some Cyanophyceae             | Observation              |
|   | SA30   | 252858      | 365826        | 19990228               | Bare sand area with some coral and small algae    | Observation              |
|   | SA31   | 252851      | 365833        | 19990228               | Bare sand area with some seagrass                 | Observation              |
|   | SA32   | 252843      | 365846        | 19990228               | Turf/small algae community                        | Observation and sampling |
|   | SA33   | 252828      | 365836        | 19990228               | Cyanophyceae community                            | Observation              |
| Offshore south east of Jazirat Shaybararh | SA34   | 252319      | 365532        | 19990301               | Coral community with few small algae              | Observation and sampling |
|   | SA35   | 252317      | 365530        | 19990301               | Bare sand area with some Cyanophyceae             | Observation              |
| North of Al-Khurj                         | SA36   | 252315      | 365525        | 19990301               | Seagrass bed with some Cyanophyceae               | Observation and sampling |
|   | SA37   | 254045      | 365214        | 19990606               | Seagrass bed                                      | Observation              |
|   | SA38   | 254245      | 365215        | 19990606               | Seagrass bed                                      | Observation              |

**Appendix 15. Location of the survey spots of the seagrasses/algae component in the Model Area.**

| Location                                 | Spot | Latitude(N) | Longitude (E) | Date     | Habitat  | Method                   |
|--|------|-------------|---------------|----------|--|--------------------------|
|  | SA39 | 254042      | 365214        | 19990606 | Coral community with few small algae           | Observation              |
| Sandbar near the channel Shunbuzah       | SA40 | 253550      | 364105        | 19990607 | Coral community with few small algae           | Observation              |
|  | SA41 | 253551      | 364105        | 19990607 | Small algae community                          | Observation              |
|  | SA42 | 253552      | 364105        | 19990607 | Bare sand area with some coral and small algae | Observation              |
| South of Qumma'an                        | SA43 | 253130      | 365020        | 19990608 | Coral community with few small algae           | Observation              |
|  | SA44 | 253218      | 365042        | 19990608 | Seagrass bed                                   | Observation              |
|  | SA45 | 253218      | 365045        | 19990608 | Seagrass bed                                   | Observation              |
| Bank in south of                         | SA46 | 253826      | 364615        | 19990609 | Coral community with few small algae           | Observation              |
| Jazirat al 'Ishsh                        | SA47 | 253827      | 364615        | 19990609 | Coral community with some small algae          | Observation              |
| South of Al-Khurj                        | SA48 | 253913      | 365357        | 19990609 | Seagrass bed                                   | Observation              |
|  | SA49 | 253913      | 365356        | 19990609 | Coral community with few small algae           | Observation              |
|  | SA50 | 234000      | 365236        | 19990609 | Seagrass bed                                   | Observation              |
| Front of Umluj coast gard station        | SA51 | 250054      | 371606        | 19990613 | Coral community with some small algae          | Observation              |
| Northwest of Jazirat Umm Sahar           | SA52 | 245611      | 371020        | 19990614 | Coral community with some turf and small algae | Observation              |
|  | SA53 | 245611      | 371024        | 19990614 | Drifted <i>Cladophora</i> community            | Observation and sampling |
|  | SA54 | 245611      | 371022        | 19990614 | Seagrass bed                                   | Observation              |
| South of Umluj                           | SA55 | 245556      | 371530        | 19990615 | Seagrass bed                                   | Observation              |
| South of Ash                             | SA56 | 251605      | 370916        | 19990615 | Seagrass bed                                   | Observation              |
| Shawara                                  | SA57 | 251603      | 370918        | 19990615 | Turf and small algae community                 | Observation              |
| Front of Al Khawwarah coast gard station | SA58 | 252224      | 370526        | 19990616 | Seagrass bed                                   | Observation              |
| East of Jajirat Suwayhill                | SA59 | 252617      | 370131        | 19960619 | Sargassum bed                                  | Observation and sampling |



Appendix 16. Summary of ecological features at survey sites in Model Area.

| Spot                        | SA1     | SA2     | SA3  | SA4     | SA5  | SA6  | SA7  | SA8  | SA9  | SA10 | SA11    | SA12 | SA13 | SA14 | SA15    | SA16 | SA17 | SA18 |
|-----------------------------|---------|---------|------|---------|------|------|------|------|------|------|---------|------|------|------|---------|------|------|------|
| Area(m <sup>2</sup> )       | 3x3     | 3x3     | 3x3  | 1x9     | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3     | 3x3  | 3x3  | 3x3  | 3x3     | 3x3  | 3x3  | 3x3  |
| Depth(m)                    | 0.1-0.0 | 0.2-0.4 | 0.4  | 0.0-0.5 | 2.0  | 3.8  | 3.9  | 0.7  | 2.5  | 3.8  | 0.7-0.8 | 13.8 | 0.8  | 0.9  | 3.0-5.5 | 0.8  | 0.4  | 1.2  |
| Temperature(°C)             | -       | 23.9    | 24.4 | 23.9    | 23.5 | 24.5 | 23.2 | 24.3 | 22.9 | 23.6 | 25.0    | 24.1 | 24.6 | 24.6 | 24.3    | 22.1 | 23.6 | 22.6 |
| Rate of substratum(%)       |         |         |      |         |      |      |      |      |      |      |         |      |      |      |         |      |      |      |
| Rock                        |         |         |      |         | 97   |      |      | 100  |      |      |         |      | 100  | 100  | 100     |      |      | 33   |
| Pebble                      |         |         |      |         | 3    |      |      | 100  |      |      |         |      |      |      |         |      |      |      |
| Rubble                      |         |         | 13   |         |      |      |      |      |      |      | 7       |      |      |      |         | +    | 5    |      |
| Sand                        | 70      | 2       | 67   | 100     |      | 20   | 30   |      | 60   | 80   | 93      | 60   |      |      |         | 100  | 62   | 100  |
| Silt                        | 30      | 98      | 20   | +       |      | 80   | 70   |      | 40   | 20   |         | 40   |      |      |         | +    |      |      |
| Silt-sand on hard substrata |         |         |      |         | 100  |      |      |      |      |      |         |      |      |      |         |      |      |      |
| Coverage(%)                 |         |         |      |         |      |      |      |      |      |      |         |      |      |      |         |      |      |      |
| Hard coral                  |         |         |      |         | 4    |      |      | 4    |      |      |         |      | 13   | 8    | 82      |      |      |      |
| Dead coral                  |         |         |      |         |      |      |      |      |      |      |         |      |      |      | +       |      |      |      |
| Soft coral                  |         |         |      |         | +    |      |      |      |      |      |         |      |      | 20   | 3       |      |      |      |
| Hydoroza                    |         |         |      |         |      |      |      | +    |      |      |         |      |      |      | 4       |      |      |      |
| Sponge                      |         |         |      |         | 20   |      |      |      | 20   |      | 7       |      |      |      |         |      |      |      |
| Sea urchin                  |         |         |      |         |      |      |      |      |      |      |         |      |      |      |         |      |      |      |
| Cyanophyceae                |         |         |      |         |      | 68   | 93   |      | 17   | 22   |         | 80   |      |      |         |      |      |      |
| Crustose algae              |         |         |      |         | +    |      |      | 50   |      |      | 2       |      | 50   | 72   | 7       |      |      |      |
| Turf algae                  |         |         |      |         | 3    |      |      | 32   |      |      | +       |      | 68   | 3    | +       |      |      |      |
| Small algae                 |         |         | 68   | +       | 20   |      |      |      |      |      | 42      |      | 7    |      | +       | 3    | 53   |      |
| Sargassaceae                |         |         | 13   |         | +    |      |      | 72   |      |      |         |      |      |      |         |      |      |      |
| Drifted Sargassum           |         |         |      |         |      |      |      |      | 3    | +    |         |      |      |      |         |      |      | 100  |
| Drifted Cladophora          |         |         |      |         |      |      |      |      |      |      |         |      |      |      |         |      |      |      |
| Seagrass                    |         |         |      |         |      |      |      |      | 32   |      |         |      |      |      |         |      |      | 18   |
| Mangrove                    | +       | 90      |      | 77      |      |      |      |      |      |      | 83      |      |      |      |         |      |      | 27   |

Appendix 16 (cont.). Summary of ecological features at survey sites in Model Area.

| Spot                        | SA19 | SA20 | SA21 | SA22 | SA23 | SA24 | SA25 | SA26 | SA27 | SA28 | SA29 | SA30 | SA31 | SA32 | SA33 | SA34    | SA35 | SA36 |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|------|
| Area(m <sup>2</sup> )       | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3     | 3x3  | 3x3  |
| Depth(m)                    | 0.2  | 0.3  | 0.4  | 0.2  | 0.3  | 0.8  | +0.1 | +0.2 | 6.0  | 2.9  | 5.3  | 1.2  | 1.0  | 0.5  | 0.1  | 4.0-4.1 | 4.6  | 5.6  |
| Temperature(°C)             | 22   | 22.2 | 23.1 | 25.8 | 25.3 | 23.8 | -    | -    | 22.8 | 22.9 | 22.7 | 23.0 | 23.6 | 24.8 | 30.2 | 23.1    | 23.3 | 23.3 |
| Rate of substratum(%)       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Rock                        | 100  |      |      | 100  | 100  |      | 100  |      |      | 90   |      |      |      | 100  |      | 100     | 95   |      |
| Pebble                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Rubble                      |      |      |      |      |      |      |      |      |      | 5    |      | 20   |      |      |      |         |      |      |
| Sand                        |      | 100  | 100  |      |      | 50   | 50   | 90   | 90   | 5    | 95   | 80   | 100  |      |      |         |      | 10   |
| Silt                        |      |      |      |      |      | 50   |      | 10   | 10   | +    | 5    | +    | +    | 100  |      |         | 5    | 90   |
| Silt-sand on hard substrata | 40   |      |      | 43   | 20   |      |      |      |      |      |      |      |      | 43   |      | 70      |      |      |
| Coverage(%)                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Hard coral                  |      |      |      |      |      |      |      |      |      | 87   |      | 6    |      |      |      | 17      |      |      |
| Dead coral                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Soft coral                  |      |      |      |      |      |      |      |      | 6    |      |      |      |      |      |      | 20      |      |      |
| Haydoroza                   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Sponge                      |      |      | 3    |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Sea urchin                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Cyanophyceae                |      |      |      |      |      | 57   |      | 93   | 3    |      | 8    |      |      | 95   |      | 23      | 37   |      |
| Crustose algae              |      |      |      |      |      |      |      |      |      | +    |      |      |      |      |      | +       |      |      |
| Turf algae                  |      |      |      |      |      |      |      |      |      | +    |      | +    |      | 7    |      | 9       |      |      |
| Small algae                 | 27   |      |      | 43   | 53   | +    |      |      |      |      |      | +    |      | 53   |      | 17      |      |      |
| Sargassaceae                |      |      |      |      | 52   |      |      |      |      |      |      |      |      | 4    |      |         |      |      |
| Drifted Sargassum           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Drifted Cladophora          |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Seagrass                    | 13   | 22   | 70   |      |      |      |      |      |      |      | 3    |      | 7    |      |      |         |      | 75   |
| Mangrove                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |

Appendix 16 (cont.). Summary of ecological features at survey sites in Model Area.

| Spot                        | SA37 | SA38 | SA39 | SA40    | SA41 | SA42 | SA43 | SA44    | SA45    | SA46 | SA47 | SA48 | SA49 | SA50 | SA51 | SA52    | SA53 | SA54 |
|-----------------------------|------|------|------|---------|------|------|------|---------|---------|------|------|------|------|------|------|---------|------|------|
| Area(m <sup>2</sup> )       | 3x3  | 3x3  | 3x3  | 3x3     | 3x3  | 3x3  | 3x3  | 3x3     | 3x3     | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3  | 3x3     | 3x3  | 3x3  |
| Depth(m)                    | 4.4  | 8.6  | 1.4  | 2.8-3.1 | 0.3  | 0.4  | 9.5  | 0.2-0.3 | 0.4-0.5 | 15.0 | 8.2  | 12.2 | 6.0  | 6.5  | 15.0 | 2.6-3.4 | 8.6  | 7.6  |
| Temperature(°C)             | 29.5 | 29.8 | 30.0 | 28.7    | 28.6 | 29.0 | 29.1 | -       | -       | 28.9 | 29.1 | 29.5 | 29.6 | 29.6 | 29.0 | -       | -    | -    |
| Rate of substratum(%)       |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         |      |      |
| Rock                        |      |      | 20   | 100     | 98   |      | 92   |         |         | 53   | 35   |      | 90   |      | 75   | 100     | 100  |      |
| Pebble                      |      |      | 10   |         |      | 17   |      |         |         | 27   | 5    |      | +    |      |      |         |      |      |
| Rubble                      |      |      | 50   |         |      | 1    |      |         |         | 5    | 10   |      | +    |      | 4    |         |      |      |
| Sand                        | 90   | 30   | 20   |         | 2    | 82   | 7    | 100     | 100     | 15   | 50   | 90   | 10   | 70   | 21   |         |      | 100  |
| Silt                        | 10   | 70   |      |         |      |      | 1    |         |         | +    | +    | 10   | +    | 30   |      |         |      |      |
| Silt-sand on hard substrata |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         |      |      |
| Coverage(%)                 |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         |      |      |
| Hard coral                  |      |      | 27   | 50      | 12   | +    | 63   |         |         | 33   | 27   |      | 80   |      | 20   | 40      | 6    |      |
| Dead coral                  |      |      |      |         |      |      | 27   |         |         |      |      |      |      |      | +    | 4       |      |      |
| Soft coral                  |      |      |      | +       | 20   | 3    |      |         |         | +    |      |      | 4    |      |      | 20      |      |      |
| Haydoroza                   |      |      |      |         |      |      |      |         |         | +    |      |      |      |      |      | 3       |      |      |
| Sponge                      |      |      |      |         |      |      |      |         |         |      |      |      |      |      | 5    |         |      |      |
| Sea urchin                  |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         |      |      |
| Cyanophyceae                | +    | +    |      |         |      |      |      |         |         |      |      |      | +    | +    | 7    | 5       |      |      |
| Crustose algae              |      |      |      | 17      | 12   | +    | 5    |         |         | 19   | +    |      | 5    |      | 25   | 23      | 30   |      |
| Turf algae                  |      |      | +    | 17      | 40   | 8    | 7    |         |         | 5    |      |      |      |      |      | 6       | 5    |      |
| Small algae                 |      |      | +    | +       | 7    | +    | 3    |         |         | 10   | +    |      | +    |      | 3    | +       | +    |      |
| Sargassaceae                |      |      | +    | +       | 4    |      |      |         |         |      |      |      |      |      |      |         |      |      |
| Drifted <i>Sargassum</i>    |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         |      |      |
| Drifted <i>Cladophora</i>   |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         | 97   |      |
| Seagrass                    | 78   | 87   |      |         |      |      |      | 65      | 50      |      |      | 83   |      | 75   |      |         |      | 25   |
| Mangrove                    |      |      |      |         |      |      |      |         |         |      |      |      |      |      |      |         |      |      |

Appendix 16 (cont.). Summary of ecological features at survey sites in Model Area.

| Spot                        | SA55 | SA56 | SA57 | SA58    | SA59 |
|-----------------------------|------|------|------|---------|------|
| Area(m <sup>2</sup> )       | 3x3  | 3x3  | 3x3  | 3x3     | 3x3  |
| Depth(m)                    | 7.5  | 1.0  | 0.0  | 0.4-0.8 | 0.5  |
| Temperature(°C)             | 29.8 | 31.8 | -    | 30.7    | 33.3 |
| Rate of substratum(%)       |      |      |      |         |      |
| Rock                        |      |      | 83   |         | 63   |
| Pebble                      |      |      | 17   |         |      |
| Rubble                      |      |      |      |         |      |
| Sand                        | 70   | 90   |      | 95      | 37   |
| Silt                        | 30   | 10   |      | 5       |      |
| Silt-sand on hard substrata |      |      |      |         |      |
| Coverage(%)                 |      |      |      |         |      |
| Hard coral                  |      |      |      |         |      |
| Dead coral                  |      |      |      |         |      |
| Soft coral                  |      |      |      |         |      |
| Hydoroza                    |      |      |      |         |      |
| Sponge                      |      |      |      |         |      |
| Sea urchin                  |      |      |      |         |      |
| Cyanophyceae                | 5    | +    |      | +       | +    |
| Crustose algae              |      |      |      |         |      |
| Turf algae                  |      |      | 30   |         | +    |
| Small algae                 |      | +    | 15   |         | +    |
| Sargassaceae                |      |      |      |         | 60   |
| Drifted <i>Sargassum</i>    |      |      |      |         |      |
| Drifted <i>Cladophora</i>   |      |      |      |         |      |
| Seagrass                    | 60   | 90   |      | 87      |      |
| Mangrove                    |      |      |      |         |      |

Appendix 17. Fishes selected for monitoring.

| Family                            | English name                    | Scientific name                    | Reason for selection |                 |                          | Method of observation |                          |                 |
|-----------------------------------|---------------------------------|------------------------------------|----------------------|-----------------|--------------------------|-----------------------|--------------------------|-----------------|
|                                   |                                 |                                    | Commercial target    | Endemic species | Rare and aquarium target | Number counting       | Using abundance category | Size estimation |
| Groupers (Serranidae)             | Coral Hind                      | <i>Cephalopholis miniata</i>       | X                    |                 |                          | X                     |                          | X               |
|                                   | Vermilion Hind                  | <i>Cephalopholis oligosticta</i>   | X                    |                 |                          | X                     |                          | X               |
|                                   | Lyretail Grouper                | <i>Variola louti</i>               | X                    |                 |                          | X                     |                          | X               |
|                                   | Summana Grouper                 | <i>Epinephelus summana</i>         | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
| Snappers (Lutjanidae)             | Twinspot Snapper                | <i>Lutjanus bohar</i>              | X                    |                 |                          | X                     |                          | X               |
|                                   | Bluetail Snapper                | <i>Lutjanus kasmira</i>            | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
| Emperors (Lethrinidae)            | Blackspot Emperor               | <i>Lethrinus harak</i>             | X                    |                 |                          | X                     |                          | X               |
|                                   | Sky Emperor                     | <i>Lethrinus mahsena</i>           | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
| Sweet Lips (Haemulidae)           | Blackspotted Sweetlips          | <i>Plectorhynchus gaterinus</i>    | X                    |                 |                          | X                     |                          | X               |
|                                   | Painted Sweetlips               | <i>Diagramma peltum</i>            | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
| Butterfly Fishes (Chaetodontidae) | Redsea Bannerfish               | <i>Hemiochus intermedius</i>       |                      | X               |                          | X                     |                          | X               |
|                                   | Exquisite Butterflyfish         | <i>Chaetodon aaustricus</i>        |                      | X               |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
| Surgeon Fishes (Acanthuridae)     | Striped Bristletooth            | <i>Ctenochaetus striatus</i>       | X                    |                 |                          | X                     |                          | X               |
|                                   | Sailfin Surgeonfish             | <i>Zebrafish voliferum</i>         | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Suez Fusilier                   | <i>Caesio suevica</i>              | X                    |                 |                          | X                     |                          | X               |
|                                   | Goldband Fusilier               | <i>Pterocaesio chrysozona</i>      | X                    |                 |                          | X                     |                          | X               |
| Jacks (Carangidae)                | Orangespotted Trevally          | <i>Carangoides bajad</i>           | X                    |                 |                          | X                     |                          | X               |
|                                   | Bigeye Trevally                 | <i>Caranx sexfasciatus</i>         | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Clown Coris                     | <i>Coris aygula</i>                |                      |                 | X                        | X                     |                          | X               |
|                                   | Broomtail Wrasse                | <i>Cheilinus lunulatus</i>         |                      |                 | X                        | X                     |                          | X               |
| Wrasses (Labridae)                | Humphead Wrasse                 | <i>Cheilinus undulatus</i>         | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Redsea Dascyllus                | <i>Dascyllus marginatus</i>        |                      |                 | X                        | X                     |                          | X               |
| Damsels (Pomacentridae)           | Black Damsel                    | <i>Neoglyphidodon nigrum</i>       |                      |                 | X                        | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Bumphead parrotfish             | <i>Rhabdamtopon muricatum</i>      |                      |                 | X                        | X                     |                          | X               |
| Parrotfishes (Scaridae)           | Indianocean Longnose Parrotfish | <i>Hippocarrus harid</i>           | X                    |                 |                          | X                     |                          | X               |
|                                   | Bicolor Parrotfish              | <i>Caraacus bicolor</i>            |                      |                 | X                        | X                     |                          | X               |
|                                   | Shearhead Parrotfish            | <i>Scaurus gibbus</i>              |                      | X               |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Yellowfin Goatfish              | <i>Mulloidichthys vanicolensis</i> | X                    |                 |                          | X                     |                          | X               |
| Goatfishes (Mullidae)             | Yellowsaddle Goatfish           | <i>Parupeneus cyclostomus</i>      | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Rivuloid Rabbitfish             | <i>Siganus rivulatus</i>           | X                    |                 |                          | X                     |                          | X               |
| Rabbitfishes (Siganidae)          | Stellate Rabbitfish             | <i>Siganus stellatus</i>           | X                    |                 |                          | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |
|                                   | Yellowbar Angelfish             | <i>Pomacanthus maculatus</i>       |                      |                 | X                        | X                     |                          | X               |
| Angelfishes (Pomacanthidae)       | Regal Angelfish                 | <i>Pygoplites diacanthus</i>       |                      |                 | X                        | X                     |                          | X               |
|                                   | Others                          |                                    |                      |                 |                          | X                     |                          | X               |

**Appendix 18.** Locations of the survey spots in the Model Area for the fish component.

| Spot No. | Depth (m) | Longitude (E) |         | Latitude (N) |      | Habitat  | Location | Orientation of transect | Human Impact                               | Horizontal Visibility in water |          |     |
|----------|-----------|---------------|---------|--------------|------|----------|----------|-------------------------|--|--------------------------------|----------|-----|
|          |           | Start         | End     | Start        | End  |          |          |                         |  |                                |          |     |
| FMO01B   | 9m        | 253837N       | 364841E | 19990217     | 1245 | 19990217 | 1500     | Patch reef              | NW side of Juzur Madrah                    | NE-SW                          | None     | 15m |
| FMO02U   | 3m        | 253405N       | 364233E | 19990218     | 1150 | 19990218 | 1230     | Seaward reef edge       | Out side of Shunbuzah                      | SE-NW                          | None     | 25m |
| FMO02B   | 10m       | 253405N       | 364233E | 19990218     | 1110 | 19990218 | 1145     | Seaward reef edge       | Out side of Shunbuzah                      | SE-NW                          | None     | 25m |
| FMO03B   | 9m        | 253549N       | 364655E | 19990220     | 1100 | 19990220 | 1225     | Patch reef              | NW side of Jazirat Qumma'an                | E-W                            | Low      | 15m |
| FMO04B   | 10m       | 253441N       | 364638E | 19990220     | 1300 | 19990220 | 1345     | Patch reef              | NW side of Jazirat Qumma'an                | E-W                            | Low      | 15m |
| FMO05U   | 3m        | 252140N       | 365304E | 19990221     | 1207 | 19990221 | 1245     | Seaward reef edge       | South side of Jazirat Shaybarah            | N-S                            | Low      | 5m  |
| FMO05B   | 7m        | 252140N       | 365304E | 19990221     | 1115 | 19990221 | 1150     | Seaward reef edge       | South side of Jazirat Shaybarah            | N-S                            | Low      | 5m  |
| FMO06U   | 3m        | 252138N       | 365447E | 19990221     | 1430 | 19990221 | 1510     | Seaward reef edge       | South side of Jazirat Shaybarah            | E-W                            | Low      | 20m |
| FMO06B   | 8m        | 252138N       | 365447E | 19990221     | 1348 | 19990221 | 1415     | Seaward reef edge       | South side of Jazirat Shaybarah            | E-W                            | Low      | 20m |
| FMO07B   | 10m       | 253238N       | 364854E | 19990222     | 1130 | 19990222 | 1210     | Patch reef              | West edge of Jazirat Qumma'an              | E-W                            | Low      | 10m |
| FMO08B   | 9m        | 253213N       | 365231E | 19990222     | 1320 | 19990222 | 1400     | Patch reef              | East edge of Jazirat Qumma'an              | E-W                            | Low      | 10m |
| FMO09U   | 1m        | 252452N       | 365521E | 19990224     | 1110 | 19990224 | 1200     | Sandbank with coral     | East side of Jazirat Shaybarah             | N-S                            | Moderate | 3m  |
| FMO10U   | 2m        | 252552N       | 365542E | 19990224     | 1315 | 19990224 | 1400     | Seagrass bed            | West side of Jazirat Suwayhil              | N-S                            | Low      | 10m |
| FMO11B   | 9m        | 253455N       | 365203E | 19990227     | 1110 | 19990227 | 1150     | Patch reef              | NE side of Jazirat Qumma'an                | NE-SW                          | None     | 20m |
| FMO12B   | 6m        | 253208N       | 364954E | 19990227     | 1320 | 19990227 | 1400     | Patch reef              | East side of Jazirat Shaybarah             | N-S                            | Low      | 10m |
| FMO13B1  | 9m        | 253211N       | 364952E | 19990302     | 1120 | 19990302 | 1150     | Patch reef              | SW side of Jazirat Qumma'an                | N-S                            | Low      | 10m |
| FMO13B2  | 6m        | 253211N       | 364952E | 19990302     | 1200 | 19990302 | 1230     | Patch reef              | SW side of Jazirat Qumma'an                | N-S                            | Low      | 10m |
| FMO14B   | 8m        | 253149N       | 365124E | 19990302     | 1335 | 19990302 | 1422     | Patch reef              | South side of Jazirat Qumma'an             | W-E                            | Low      | 12m |
| FMO15U   | 3m        | 254003N       | 365259E | 19990606     | 1425 | 19990606 | 1500     | Patch reef              | In front of Al-Khurj                       | N-S                            | None     | 5m  |
| FMO16B   | 10m       | 254222N       | 363214E | 19990607     | 1115 | 19990607 | 1200     | Seaward leaf edge       | Outside of channel at south of J.Umm Rumah | E-W                            | None     | 20m |
| FMO17U   | 3m        | 254247N       | 363608E | 19990608     | 1010 | 19990608 | 1400     | Patch reef              | Eastside of Jazirat Umm Rumah              | W-E                            | None     | 8m  |
| FMO18B   | 9m        | 253219N       | 363523E | 19990608     | 1010 | 19990608 | 1100     | Seaward reef edge       | Outside of Al-Wajh Bank through Shunbuzah  | E-W                            | None     | 30m |
| FMO19B   | 8m        | 253404N       | 364103E | 19990608     | 1246 | 19990608 | 1330     | Channel                 | Big Channel named Shunbuzah                | NE-SW                          | None     | 8m  |
| FMO20B   | 9m        | 253131N       | 364106E | 19990609     | 1140 | 19990609 | 1230     | Reef edge               | Outside of channel named Shunbuzah         | N-S                            | Low      | 9m  |
| FMO20U   | 4m        | 253131N       | 364106E | 19990609     | 1420 | 19990609 | 1530     | Reef edge               | Outside of channel named Shunbuzah         | N-S                            | Low      | 9m  |
| FMO21B   | 8m        | 253206N       | 364950E | 19990614     | 1015 | 19990614 | 1100     | Patch reef              | Westside of Jazirat Qumma'an               | N-S                            | None     | 5m  |
| FMO22B   | 7m        | 253335N       | 365204E | 19990614     | 1200 | 19990614 | 1235     | Patch reef              | Eastside of Jazirat Qumma'an               | N-S                            | None     | 5m  |
| FMO23U   | 5m        | 252912N       | 365854E | 19990615     | 1140 | 19990615 | 1215     | Patch reef              | South of Juzur Shurayrat                   | E-W                            | None     | 3m  |
| FMO24B   | 8m        | 252844N       | 365401E | 19990616     | 1025 | 19990616 | 1110     | Patch reef              | Mid Al-Wajh Bank                           | N-W                            | Low      | 5m  |

### Appendix 19. Findings of the fish survey (Model Study).

| Site name:                        | FM001B                              | FM002U                      | FM002B                      | FM003B                      | FM004B                      | FM005B                      | FM006B                      | FM006U                      | FM007B                      |
|-----------------------------------|-------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Date:                             | 990217                              | 990218                      | 990218                      | 990220                      | 990220                      | 990221                      | 990221                      | 990221                      | 990222                      |
| Time:                             | 12:45-15:00                         | 11:50-12:30                 | 11:10-11:45                 | 11:00-12:25                 | 13:00-13:45                 | 12:07-12:45                 | 11:15-11:50                 | 14:30-15:10                 | 13:48-14:15                 |
| Depth:                            | 9m                                  | 3m                          | 10m                         | 5m                          | 10m                         | 3m                          | 7m                          | 3m                          | 10m                         |
| Observer:                         | Harada, Hachi-Harada, Haini         | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini | Harada, Hachi-Harada, Haini |
| Longitude:                        | 36-48-41E                           | 36-42-33E                   | 36-42-33E                   | 36-46-33E                   | 36-46-38E                   | 36-53-04E                   | 36-53-04E                   | 36-54-47E                   | 36-54-47E                   |
| Latitude:                         | 253837N                             | 253403N                     | 253405N                     | 253349N                     | 253441N                     | 252140N                     | 252140N                     | 252138N                     | 252238N                     |
| Weather:                          | Sunny                               | Sunny                       | Sunny                       | Cloudy                      | Cloudy                      | Cloudy                      | Cloudy                      | Cloudy                      | Cloudy                      |
| Habitat:                          | Patch reef                          | Seaward reef edge           | Seaward reef edge           | Patch reef                  | Patch reef                  | Seaward reef edge           | Seaward reef edge           | Seaward reef edge           | Patch reef                  |
| Horizontal visibility in water    | 15m                                 | 25m                         | 25m                         | 15m                         | 15m                         | 3m                          | 5m                          | 20m                         | 10m                         |
| Orientation of transect line      | NE-SW                               | SE-NW                       | SE-NW                       | E-W                         | E-W                         | N-S                         | N-S                         | E-W                         | E-W                         |
| Human impact                      | None                                | None                        | None                        | Low                         | Low                         | Low                         | Low                         | Low                         | Low                         |
| Family                            | English name                        | No.                         | Size                        | No.                         | Size                        | No.                         | Size                        | No.                         | Size                        |
| Groupers (Serranidae)             | Coral Hind                          |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Vermilion Hind                      |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Lizard Grouper                      |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Shamama Grouper                     | 0.5                         | 30                          |                             |                             |                             |                             |                             |                             |
|                                   | Others                              | 0.0                         | 23                          |                             |                             |                             |                             |                             |                             |
| Snappers (Lutjanidae)             | Twinspot Snapper                    |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Bluehead Snapper                    |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Emperors (Lethrinidae)            | Blackspot Emperor                   |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Sky Emperor                         |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Sweet lips (Haemulidae)           | Blackspotted Sweetlip               | 3.5                         | 28                          |                             |                             |                             |                             |                             |                             |
|                                   | Painted Sweetlips                   |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Butterfly fishes (Chaetodontidae) | Redsea Bannerfish                   | 3.5                         | 16                          |                             |                             |                             |                             |                             |                             |
|                                   | Exquisite Butterflyfish             | 2.3                         | 17                          |                             |                             |                             |                             |                             |                             |
|                                   | Others                              | 3                           | 2                           |                             |                             |                             |                             |                             |                             |
| Surgeon fishes (Acanthuridae)     | Striped Surge wrasse                | 3.5                         | 14                          |                             |                             |                             |                             |                             |                             |
|                                   | Shaffin Surge wrasse                | 0.1                         | 25                          |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Fusiliers (Caetomidae)            | Suez Fusilier                       |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Goldband Fusilier                   |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Jacks (Carangidae)                | Orange spotted Trevally             |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Bigeye Trevally                     |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Wrasses (Labridae)                | Crown Corn                          |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Bronzed Wrasse                      |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Humphead Wrasse                     |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Damselfishes (Pomacentridae)      | Redsea Damselfish                   | 4                           |                             |                             |                             |                             |                             |                             |                             |
|                                   | Black Damselfish                    | 1                           |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              | 5                           |                             |                             |                             |                             |                             |                             |                             |
| Parrotfishes (Scaridae)           | Bumphead Parrotfish                 |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Indo-Pacific Parrotfish             | 2.8                         | 15                          |                             |                             |                             |                             |                             |                             |
|                                   | Bicolor Parrotfish                  | 0.5                         | 35                          |                             |                             |                             |                             |                             |                             |
|                                   | Steathead Parrotfish                | 0.3                         | 35                          |                             |                             |                             |                             |                             |                             |
|                                   | Others                              | 2                           |                             |                             |                             |                             |                             |                             |                             |
| Gobies (Gobiidae)                 | Yellowfin Goby                      |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Yellow sandline Goby                |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Rabbitfishes (Siganidae)          | Spotted Rabbitfish                  |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Stellate Rabbitfish                 |                             |                             |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Angelfishes (Pomacanthidae)       | Yellowbar Angelfish                 | 5.0                         | 17                          |                             |                             |                             |                             |                             |                             |
|                                   | Red Angelfish                       | 0.5                         | 18                          |                             |                             |                             |                             |                             |                             |
|                                   | Others                              |                             |                             |                             |                             |                             |                             |                             |                             |
| Comments:                         | Many Crown-of-thorns were observed. |                             |                             |                             |                             |                             |                             |                             |                             |

No. - Averaged number of species in the four segments.  
 Number of Damselfishes (Pomacentridae), Fusiliers (Caetomidae) and "Others" except Groupers (Serranidae) were given by abundance categories. (1.1, 2.2-4, 3.5-16, 4.1, 7-64, 5.65-256, 6.257-1024, 7.1025-4096, 8-4097-16384)  
 Size - Averaged size of fishes in the four segments.





Appendix 19 (cont.). Findings of the fish survey (Model Study).

| Site name:                        | FM0217U                          | FM0218                            | FM0219B      | FM0220B      | FM0201U      | FM021B       | FM022B       | FM023U       | FM024B       |    |     |    |     |    |     |    |     |    |
|-----------------------------------|----------------------------------|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|-----|----|-----|----|-----|----|-----|----|
| Date:                             | 13-29-14-201                     | 10-10-11-20                       | 12-24-13-20  | 11-24-12-20  | 14-20-13-20  | 10-13-11-20  | 12-20-11-20  | 11-20-12-20  | 10-25-11-10  |    |     |    |     |    |     |    |     |    |
| Time:                             | 5m                               | 9m                                | 8m           | 9m           | 4m           | 8m           | 5m           | 5m           | 8m           |    |     |    |     |    |     |    |     |    |
| Depth:                            | Harada-Harim                     | Harada-Harim                      | Harada-Harim | Harada-Harim | Harada-Harim | Harada-Harim | Harada-Harim | Harada-Harim | Harada-Harim |    |     |    |     |    |     |    |     |    |
| Observer:                         | 3655008E                         | 3655235E                          | 364103E      | 364106E      | 364106E      | 3649503E     | 3649503E     | 3655008E     | 3655008E     |    |     |    |     |    |     |    |     |    |
| Longitude:                        | 25 42 47 N                       | 25 32 19 N                        | 25 34 04 N   | 25 31 31 N   | 25 31 31 N   | 25 33 35 N   | 25 33 35 N   | 25 29 15 N   | 25 28 44 N   |    |     |    |     |    |     |    |     |    |
| Latitude:                         | Patch reef                       | Seawall reef                      | Channel      | Sunny        | Reef edge    | Patch reef   | Patch reef   | Patch reef   | Patch reef   |    |     |    |     |    |     |    |     |    |
| Habitat:                          | 8m                               | 30m                               | 8m           | 9m           | 8m           | 5m           | 5m           | 5m           | 5m           |    |     |    |     |    |     |    |     |    |
| Horizontal visibility in water:   | W-E                              | E-W                               | NE-SW        | N-S          | N-S          | N-S          | N-S          | N-S          | N-S          |    |     |    |     |    |     |    |     |    |
| Orientation of transect line:     | None                             | None                              | None         | Low          | Low          | None         | None         | None         | Low          |    |     |    |     |    |     |    |     |    |
| Human impact:                     | No. Size                         | No. Size                          | No. Size     | No. Size     | No. Size     | No. Size     | No. Size     | No. Size     | No. Size     |    |     |    |     |    |     |    |     |    |
| Groupers (Serranidae)             | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Coral Head                       | <i>Cephalopis minata</i>          |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Vertical Groupers                | <i>Cephalopis oligostica</i>      |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Viviparis laevis</i>           | 0.3          | 35           |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Snappers (Lutjanidae)             | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Thornspine Snapper               | <i>Lutjanus fulvus</i>            | 0.3          | 35           | 0.5          | 40           | 2.3          | 36           | 1.3          | 30 | 0.5 | 27 | 0.3 | 20 |     |    |     |    |
|                                   | Blue-lined Snapper               | <i>Lutjanus fulvus</i>            | 3.0          | 40           | 0.3          | 40           | 1.0          | 29           | 3.5          | 24 | 6.3 | 20 | 0.5 | 37 | 5.0 | 23 |     |    |
|                                   | Others                           | <i>Lutjanus fulvus</i>            | 1            | 1            |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Emperors (Lethrinidae)            | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Blackspot Emperor                | <i>Lethrinus harak</i>            |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Sweet Lip (Haemulidae)            | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Blackspotted Sweetlips           | <i>Plectrocinchus gaterinus</i>   | 0.3          | 28           | 0.3          | 28           |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Painted Sweetlips                | <i>Dicentrarchus labrax</i>       |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Dicentrarchus labrax</i>       |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Butterfly Fishes (Chaetodontidae) | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Redsea Bannerfish                | <i>Forcipiger niger</i>           | 1.3          | 21           | 0.6          | 23           | 0.5          | 18           | 1.8          | 13 | 0.5 | 18 | 1.3 | 20 | 1.5 | 18 | 0.3 | 22 |
|                                   | Exquisite Butterflyfish          | <i>Chaetodon auratus</i>          | 1.0          | 12           | 2.0          | 12           | 1.5          | 9            | 3.0          | 10 |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Chaetodon auratus</i>          | 5            | 1            | 2            | 2            |              |              |              |    |     |    |     |    |     |    |     |    |
| Surgeon Fishes (Acanthuridae)     | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Striped Surge wrasse             | <i>Acanthurus lineatus</i>        | 1.0          | 18           | 7.5          | 15           | 0.3          | 20           | 4.5          | 14 | 6.8 | 14 |     |    |     |    |     |    |
|                                   | Sailfin Surge wrasse             | <i>Acanthurus lineatus</i>        | 0.3          | 10           | 0.8          | 23           | 0.3          | 18           | 1.3          | 12 | 0.8 | 23 |     |    |     |    |     |    |
|                                   | Others                           | <i>Acanthurus lineatus</i>        | 1            | 1            | 2            | 2            |              |              |              |    |     |    |     |    |     |    |     |    |
| Favillers (Caenidae)              | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Suez Faviler                     | <i>Caesia suezica</i>             |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Jack (Carangidae)                 | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Goldband Favilier                | <i>Pteronarcys obovatus</i>       |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Pteronarcys obovatus</i>       |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Pteronarcys obovatus</i>       | 5            | 3            |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Wrasses (Labridae)                | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Orange spotted Trawlly           | <i>Thalassoma lineare</i>         | 1.0          | 16           |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Blackeye Trawlly                 | <i>Thalassoma lineare</i>         |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Thalassoma lineare</i>         | 0.3          | 35           | 0.3          | 6            | 0.5          | 31           |              |    |     |    |     |    |     |    |     |    |
| Damself (Pomacentridae)           | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Clown Goby                       | <i>Pomacentrus niger</i>          | 0.3          | 27           | 0.3          | 25           |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Bronnial Wrasse                  | <i>Pomacentrus niger</i>          | 2            | 2            | 2            | 2            |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Pomacentrus niger</i>          | 3            | 2            | 2            | 2            |              |              |              |    |     |    |     |    |     |    |     |    |
| Parrotfishes (Scaridae)           | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Redsea Damself                   | <i>Dascyllus marginatus</i>       | 5            | 3            | 2            | 2            |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Black Damself                    | <i>Dascyllus marginatus</i>       |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Dascyllus marginatus</i>       | 3            | 3            | 5            | 5            |              |              |              |    |     |    |     |    |     |    |     |    |
| Goadfishes (Mullidae)             | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Bumphead Parrotfish              | <i>Bomolobus muricatus</i>        | 0.3          | 35           |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Indian Ocean Longnose Parrotfish | <i>Hippocampus harid</i>          | 2.5          | 17           | 5.0          | 25           | 0.3          | 10           | 0.3          | 15 | 0.8 | 22 | 2.3 | 21 | 2.0 | 18 | 1.5 | 13 |
|                                   | Others                           | <i>Hippocampus harid</i>          | 0.3          | 35           | 0.3          | 45           |              |              |              |    |     |    |     |    |     |    |     |    |
| Rabbitfishes (Siganidae)          | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Scaphead Parrotfish              | <i>Siganus rivulatus</i>          | 2            | 3            | 3            | 3            |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Yellowfin Goadfish               | <i>Mullidichthys vanicolensis</i> |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Yellow saddle Goadfish           | <i>Parupeneus cyclopterus</i>     |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
| Angelfishes (Pomacanthidae)       | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Rivuloid Rabbitfish              | <i>Siganus rivulatus</i>          |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Siganus rivulatus</i>          | 1.0          | 23           |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Siganus rivulatus</i>          | 4.0          | 28           | 1            | 1            | 0.3          | 25           | 0.8          | 24 |     |    |     |    |     |    |     |    |
| Others                            | Scientific name                  |                                   |              |              |              |              |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Yellowfin Angelfish              | <i>Pomacanthus maculatus</i>      | 0.8          | 20           | 0.8          | 13           | 0.3          | 25           |              |    |     |    |     |    |     |    |     |    |
|                                   | ESRA Angelfish                   | <i>Pygoplites diabolus</i>        | 2            | 1            | 2            | 2            |              |              |              |    |     |    |     |    |     |    |     |    |
|                                   | Others                           | <i>Pygoplites diabolus</i>        | 1            | 1            | 1            | 1            | 1            | 1            | 1            | 1  | 1   | 1  | 1   | 1  | 1   | 1  | 1   | 1  |

No. Averaged number of species in the four segments.  
 Number of Damselfs (Pomacentridae), Favillers (Caenidae) and "Others" except Groupers (Serranidae) were given by abundance categories. (1.1, 2.2-4, 3.5-16, 4.17-64, 5.65-256, 6.257-1024, 7.1025-4096, 8.4097-16384)  
 Size-Averaged size of fishes in the four segments.