

**The following supplementary information accompanies the article**

**Updated checklist and analysis of completeness of the marine fish fauna of Isla del Coco, Pacific of Costa Rica**

Manon Fourrière\*, Juan José Alvarado, Arturo Ayala Bocos & Jorge Cortés

\* Corresponding author: manon.fourriere@gmail.com

**SUPPLEMENTARY MATERIALS**

Table S1. Taxonomic list of reef fish species from Isla del Coco.

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>     | Museum data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|--------------------------|--|
| <b>Phylum CHORDATA</b>  |                       |                       |                       |                       |                             |                          |  |
| <b>Class CHONDRICHTHYES</b>   |                       |                       |                       |                       |                             |                          |  |
| <b>Order ORECTOLOBIFORMES</b>   |                       |                       |                       |                       |                             |                          |  |
| <b>Family Ginglymostomatidae</b>  |                       |                       |                       |                       |                             |                          |  |
| <i>Ginglymostoma unami</i> Moral-Flores, Ramírez-Antonio, Angulo & Pérez-Ponce de León 2015 |                       |                       |                       |                       | 18                          |                          | S  |
| <b>Family Rhincodontidae</b>  |                       |                       |                       |                       |                             |                          |  |
| <i>Rhincodon typus</i> (Smith, 1828)  |                       |                       | +                     |                       | 8, 9, 10, 12,<br>13, 14, 18 |                          | D  |
| <b>Order CARCHARHINIFORMES</b>  |                       |                       |                       |                       |                             |                          |  |
| <b>Family Carcharhinidae</b>  |                       |                       |                       |                       |                             |                          |  |
| <i>Carcharhinus albimarginatus</i> (Rüppell, 1837)  |                       |                       |                       | +                     | 3, 8, 9, 10, 12,<br>14, 18  | LACM,<br>MZUCR           | D  |
| <i>Carcharhinus galapagensis</i> (Snodgrass & Heller, 1905)                                 |                       |                       |                       | +                     | 3, 8, 9, 10, 12,<br>14, 18  | USNM<br>LACM,            | D  |
| <i>Carcharhius limbatus</i> (Müller & Henle, 1839)  | +                     |                       | +                     | +                     | 8, 9, 10, 12, 18            | MZUCR                    | S  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>                     | Museum data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|---|--------------------------|--|
| <i>Carcharhinus melanopterus</i> (Quoy & Gaimard, 1824)  |                       |                       |                       |                       | 12, 18                                      |                          | S  |
| <i>Galeocerdo cuvier</i> (Peron & Lesueur, 1822)         |                       |                       | +                     | +                     | 6, 8, 10, 12, 18                            | MZUCR                    | D  |
| <i>Triaenodon obesus</i> (Rüppell, 1837)                 | +                     | +                     | +                     | +                     | 2, 3, 6, 8, 9,<br>10, 12, 13, 14,<br>16, 18 | CAS, MZUCR,<br>SIO       | D  |
| <b>Family Sphyrnidae</b>                                 |                       |                       |                       |                       |   |                          |  |
| <i>Sphyrna lewini</i> (Griffith & Smith, 1834)           |                       | +                     | +                     | +                     | 8, 9, 10, 12,<br>13, 14, 15, 16,<br>18      |                          | D  |
| <i>Sphyrna mokarran</i> (Rüppell 1837)                   |                       |                       |                       |                       | 8, 10, 12, 18                               |                          | S  |
| <b>Order MYLIOBATIFORMES</b>                             |                       |                       |                       |                       |   |                          |  |
| <b>Family Dasyatidae</b>                                 |                       |                       |                       |                       |   |                          |  |
| <i>Dasyatis</i> sp.                                      |                       |                       |                       |                       | 12, 13                                      |                          | S  |
| <i>Taeniura meyeri</i> Müller & Henle, 1841              | +                     |                       | +                     | +                     | 8, 9, 10, 12,<br>13, 14, 18                 | MZUCR                    | S  |
| <b>Family Myliobatidae</b>                               |                       |                       |                       |                       |   |                          |  |
| <i>Aetobatus narinari</i> (Euphrasen 1790)               | +                     |                       | +                     | +                     | 8, 9, 10, 12, 13,<br>18                     |                          | S  |
| <i>Manta birostris</i> (Walbaum, 1792)                   | +                     | +                     |                       |                       | 3, 8, 9, 10, 12,<br>13, 18                  |                          | S  |
| <i>Mobula tarapacana</i> (Philippi, 1893)                |                       |                       |                       |                       | 9, 10, 12, 13,<br>15, 16, 18                |                          | D  |
| <i>Rhinoptera steindachneri</i> Evermann & Jenkins, 1891 |                       |                       |                       |                       | 8, 10, 12, 18                               | MZUCR                    | S  |
| <b>Order ECHINORHINIFORMES</b>                           |                       |                       |                       |                       |   |                          |  |
| <b>Family Echinorhinidae</b>                             |                       |                       |                       |                       |   |                          |  |
| <i>Echinorhinus cookei</i> Pietschmann, 1928             |                       |                       |                       |                       | 11, 12, 13, 16,<br>18                       | LACM,<br>MZUCR           | D  |
| <b>Order TORPEDINIFORMES</b>                             |                       |                       |                       |                       |   |                          |  |
| <b>Family Torpedinidae</b>                               |                       |                       |                       |                       |   |                          |  |
| <i>Torpedo peruana</i> Chirichigno, 1963                 |                       |                       |                       |                       | 12, 13, 16                                  | MZUCR                    | D  |
| <b>Class ACTINOPTERYGII</b>                              |                       |                       |                       |                       |   |                          |  |
| <b>Order ELOPIFORMES</b>                                 |                       |                       |                       |                       |   |                          |  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>       | Museum data <sup>b</sup>         | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|----------------------------------|--|
| <b>Family Elopidae</b>                                     |                       |                       |                       |                       |                               |                                  |  |
| <i>Elops affinis</i> Regan, 1909                           |                       |                       |                       |                       | 12, 18                        |                                  | S  |
| <b>Order ANGUILLIFORMES</b>                                |                       |                       |                       |                       |                               |                                  |  |
| <b>Family Myrocongridae</b>                                |                       |                       |                       |                       |                               |                                  |  |
| <i>Myroconger nigrodentatus</i> Castle & Béarez, 1995      |                       |                       |                       |                       | 11, 12, 15, 18                |                                  | D  |
| <b>Family Muraenidae</b>                                   |                       |                       |                       |                       |                               |                                  |  |
| <i>Anarchias galapagensis</i> (Seale, 1940)                |                       |                       |                       |                       | 8, 10, 12, 18                 | CAS, LACM,<br>MZUCR              | S  |
| <i>Echidna nebulosa</i> (Thunberg in Ahl, 1789)            | +                     |                       |                       |                       | 3, 7, 8, 9, 10,<br>11, 12, 18 | CAS, LACM,<br>MCZ, MZUCR,<br>SIO | S  |
| <i>Echidna nocturna</i> (Cope, 1872)                       |                       |                       |                       |                       | 3, 8, 10, 12, 18              | MCZ, MZUCR                       | S  |
| <i>Enchelycore octaviana</i> (Myers & Wade, 1941)          |                       |                       |                       |                       | 8, 9, 10, 12, 18              | CAS, MZUCR                       | S  |
| <i>Gymnomuraena zebra</i> (Shaw, in Shaw & Nodder, 1797)   |                       |                       |                       |                       | 8, 9, 10, 12, 18              | MZUCR, SIO                       | S  |
| <i>Gymnothorax angusticeps</i> (Hildebrand & Barton, 1949) |                       |                       |                       |                       | 12, 18                        |                                  | S  |
| <i>Gymnothorax buroensis</i> (Bleeker, 1857)               |                       |                       |                       |                       | 7, 8, 10, 12, 18              | LACM,<br>MZUCR                   | S  |
| <i>Gymnothorax castaneus</i> (Jordan & Gilbert, 1883)      |                       |                       |                       | +                     | 8, 9, 10, 12, 18              | MZUCR                            | S  |
| <i>Gymnothorax dovii</i> (Günther, 1870)                   | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18              | LACM,<br>MZUCR, SIO              | S  |
| <i>Gymnothorax eurostus</i> (Abbott, 1860)                 |                       |                       |                       |                       | 12                            |                                  | D  |
| <i>Gymnothorax flavimarginatus</i> (Rüppell, 1830)         | +                     |                       | +                     | +                     | 8, 9, 10, 12, 18              | LACM,<br>MZUCR                   | D  |
| <i>Gymnothorax javanicus</i> (Bleeker, 1859)               | +                     |                       |                       |                       | 7, 8, 9, 10,<br>12, 18        |                                  | S  |
| <i>Gymnothorax meleagris</i> (Shaw & Nodder, 1795)         |                       |                       |                       |                       | 7, 8, 9, 10,<br>12, 18        |                                  | S  |
| <i>Gymnothorax panamensis</i> (Steindachner, 1876)         |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM,<br>MZUCR, SIO              | S  |
| <i>Gymnothorax pictus</i> (Ahl, 1789)                      |                       |                       |                       |                       | 12, 18                        | CAS                              | D  |
| <i>Gymnothorax undulatus</i> (Lacepède, 1803)              |                       |                       |                       |                       | 18                            |                                  | D  |
| <i>Muraena argus</i> (Steindachner, 1870)                  |                       |                       |                       |                       | 8, 9, 10, 12, 18              | MZUCR                            | S  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum data <sup>b</sup>     | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|------------------------------|--|
| <i>Muraena clepsydra</i> Gilbert, 1898                            |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR<br>LACM,               | S  |
| <i>Muraena lentiginosa</i> Jenyns, 1842                           |                       |                       |                       | +                     | 8, 9, 10, 12, 18        | MZUCR, SIO                   | S  |
| <i>Scuticaria tigrina</i> (Lesson, 1829)                          | +                     |                       |                       |                       | 8, 9, 10, 12, 18        | MZUCR                        | S  |
| <i>Sideria picta</i> (Ahl, 1789)                                  |                       |                       |                       |                       | 10, 12                  |                              | D  |
| <i>Uropterygius macrocephalus</i> (Bleeker, 1865)                 |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, LACM,<br>MZUCR, SIO     | S  |
| <i>Uropterygius versutus</i> (Regan, 1991)                        |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, LACM,<br>MZUCR,<br>USNM | S  |
| <b>Family Ophichthidae</b>  |                       |                       |                       |                       |                         |                              |  |
| <i>Callechelys eristigma</i> McCosker & Rosenblatt, 1972          |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                        | S  |
| <i>Ichthyapus selachops</i> (Jordan & Gilbert, 1882)              |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, LACM,<br>MZUCR          | S  |
| <i>Myrichthys aspetocheiros</i> McCosker & Rosenblatt, 1993       |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                        | S  |
| <i>Myrichthys tigrinus</i> (Girard, 1859)                         |                       |                       |                       |                       | 9, 10, 12, 15,<br>18    | MZUCR, SIO                   | S  |
| <i>Paraetharchus opercularis</i> (Myers & Wade, 1941)             |                       |                       |                       |                       | 11, 12, 18              | SIO                          | S  |
| <i>Quassiremus evionthas</i> (Jordan & Bollman, 1889)             |                       |                       |                       |                       | 8, 9, 10, 11,<br>12, 18 |                              | S  |
| <i>Quassiremus nothochir</i> (Gilbert, 1890)                      |                       |                       |                       |                       | 18                      | MZUCR                        | S  |
| <b>Family Congridae</b>   |                       |                       |                       |                       |                         |                              |  |
| <i>Ariosoma gilberti</i> (Ogilby, 1898)                           |                       |                       |                       |                       | 8, 10, 12, 18           | LACM,<br>MZUCR               | S  |
| <i>Heteroconger klausewitzii</i> (Eibl-Eibesfeldt & Köster, 1983) | +                     | +                     |                       |                       | 8, 9, 10, 11,<br>12, 18 | MZUCR                        | S  |
| <i>Paraconger californiensis</i> Kanazawa, 1961                   |                       |                       |                       |                       | 8, 10, 12, 18           | LACM,<br>MZUCR               | S  |
| <b>Order GONORYNCHIFORMES</b>                                     |                       |                       |                       |                       |                         |                              |  |
| <b>Family Chanidae</b>  |                       |                       |                       |                       |                         |                              |  |
| <i>Chanos chanos</i> (Forsskål, 1775)                             |                       |                       |                       | +                     | 8, 9, 10, 12, 18        | MZUCR                        | S  |
| <b>Order AULOPIFORMES</b>   |                       |                       |                       |                       |                         |                              |  |
| <b>Family Synodontidae</b>  |                       |                       |                       |                       |                         |                              |  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>       | Museum data <sup>b</sup>              | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|---------------------------------------|--|
| <i>Synodus lacertinus</i> , Gilbert 1890                     |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM,<br>MZUCR                        | S  |
| <b>Order OPHIDIIFORMES</b>                                   |                       |                       |                       |                       |                               |                                       |  |
| <b>Family Carapidae</b>                                      |                       |                       |                       |                       |                               |                                       |  |
| <i>Carapus dubius</i> (Putnam, 1874)                         |                       |                       |                       |                       | 8, 10, 12, 18                 | MZUCR                                 | S  |
| <i>Encheliophis vermicularis</i> Müller, 1842                |                       |                       |                       |                       | 7, 8, 10, 12, 18              | MZUCR                                 | S  |
| <b>Family Ophidiidae</b>                                     |                       |                       |                       |                       |                               |                                       |  |
| <i>Brotula ordwayi</i> Hildebrand & Barton, 1949             |                       |                       |                       |                       | 12, 15, 18                    |                                       | S  |
| <i>Petrotyx hopkinsi</i> Heller & Snodgrass, 1903            |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM,<br>MZUCR                        | S  |
| <b>Family Bythitidae</b>                                     |                       |                       |                       |                       |                               |                                       |  |
| <i>Grammonus diagrammus</i> (Heller & Snodgrass, 1903)       |                       |                       |                       |                       | 18                            |                                       | S  |
| <i>Ogilbia cocoensis</i> Møller, Schwarzhans & Nielsen, 2005 |                       |                       |                       |                       | 12, 18                        | LACM                                  | S  |
| <i>Ogilbia</i> new species                                   |                       |                       |                       |                       | 10                            | MZUCR                                 | S  |
| <b>Order LOPHIIFORMES</b>                                    |                       |                       |                       |                       |                               |                                       |  |
| <b>Family Antennariidae</b>                                  |                       |                       |                       |                       |                               |                                       |  |
| <i>Fowlerichthys avalonis</i> Jordan & Starks, 1907          |                       |                       |                       |                       | 8, 10, 12, 15,<br>18          | CAS, MZUCR<br>LACM,<br>MZUCR,<br>USNM | D  |
| <i>Antennatus coccineus</i> (Lesson, 1831)                   |                       |                       |                       |                       | 6, 7, 8, 10, 12,<br>18        |                                       | D  |
| <i>Antennarius commerson</i> (Lacepède, 1798)                |                       |                       |                       |                       | 7, 8, 9, 10,<br>12, 18        |                                       | D  |
| <i>Antennarius sanguineus</i> (Gill, 1863)                   |                       |                       |                       |                       | 8, 10, 12, 18                 | CAS, LACM,<br>MZUCR                   | S  |
| <i>Antennatus strigatus</i> (Gill, 1863)                     |                       |                       |                       |                       | 12, 18                        |                                       | S  |
| <b>Family Ogcocephalidae</b>                                 |                       |                       |                       |                       |                               |                                       |  |
| <i>Ogcocephalus darwini</i> Hubbs, 1958                      |                       |                       |                       |                       |                               | MZUCR                                 | S  |
| <i>Ogcocephalus porrectus</i> Garman, 1899                   |                       |                       |                       |                       | 1, 3, 8, 9, 10,<br>11, 12, 18 | CAS, LACM,<br>MZUCR                   | D  |
| <b>Order MUGILIFORMES</b>                                    |                       |                       |                       |                       |                               |                                       |  |
| <b>Family Mugilidae</b>                                      |                       |                       |                       |                       |                               |                                       |  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>      | Museum data <sup>b</sup>           | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|------------------------------------|--|
| <i>Chaenomugil proboscideus</i> (Günther, 1861)         |                       |                       |                       |                       | 8, 10, 12, 18                | MZUCR                              | S  |
| <i>Mugil curema</i> Valenciennes, 1836                  |                       |                       |                       |                       | 8, 9, 10, 12, 18             | MZUCR                              | S  |
| <i>Mugil thoburni</i> (Jordan & Starks, 1896)           |                       |                       |                       |                       | 18                           |                                    | S  |
| <b>Order ATHERINIFORMES</b>                             |                       |                       |                       |                       |                              |                                    |  |
| <b>Family Atherinopsidae</b>                            |                       |                       |                       |                       |                              |                                    |  |
| <i>Atherinella eriarcha</i> Jordan & Gilbert, 1882      |                       |                       |                       |                       | 8, 10, 12, 18                | CAS, MZUCR                         | S  |
| <i>Melanorhinus cyanellus</i> (Meek & Hildebrand, 1923) |                       |                       |                       |                       | 8, 10, 12, 18                | LACM,<br>MZUCR                     | S  |
| <b>Order BELONIFORMES</b>                               |                       |                       |                       |                       |                              |                                    |  |
| <b>Family Belonidae</b>                                 |                       |                       |                       |                       |                              |                                    |  |
| <i>Tylosurus fodiator</i> Jordan & Gilbert, 1882        |                       |                       |                       |                       | 8, 10, 12, 18                | MCZ, MZUCR                         | S  |
| <b>Order BERYCIFORMES</b>                               |                       |                       |                       |                       |                              |                                    |  |
| <b>Family Holocentridae</b>                             |                       |                       |                       |                       |                              |                                    |  |
| <i>Myripristis berndti</i> (Jordan & Evermann, 1903)    | +                     | +                     | +                     | +                     | 8, 9, 10, 12,<br>14, 18      | MZUCR<br>CAS, LACM,<br>MZUCR, SIO, | D  |
| <i>Myripristis leiognathus</i> Valenciennes, 1846       |                       |                       |                       | +                     | 8, 9, 10, 12, 18             | USNM                               | S  |
| <i>Plectrypops lima</i> (Valenciennes, 1831)            |                       |                       |                       |                       | 2, 3, 6, 7, 8,<br>10, 12, 18 | CAS, LACM,<br>MZUCR                | S  |
| <i>Sargocentron suborbitalis</i> (Gill, 1863)           | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18    | CAS, LACM,<br>MZUCR, SIO           | S  |
| <b>Order GASTEROSTEIFORMES</b>                          |                       |                       |                       |                       |                              |                                    |  |
| <b>Family Syngnathidae</b>                              |                       |                       |                       |                       |                              |                                    |  |
| <i>Bryx veleronis</i> Herald, 1940                      |                       |                       |                       |                       | 8, 10, 12, 18                | MZUCR                              | S  |
| <i>Cosmocampus arctus</i> (Jenkins & Evermann, 1889)    |                       |                       |                       |                       | 12, 18                       |                                    | S  |
| <i>Doryrhamphus excisus</i> Kaup, 1856                  |                       |                       |                       |                       | 8, 9, 10, 12, 18             | LACM,<br>MZUCR, SIO                | S  |
| <i>Hippocampus ingens</i> Girard, 1858                  |                       |                       |                       |                       | 8, 9, 10, 12, 18             | LACM,<br>MZUCR                     | S  |
| <b>Family Aulostomidae</b>                              |                       |                       |                       |                       |                              |                                    |  |
| <i>Aulostomus chinensis</i> (Linnaeus, 1766)            | +                     | +                     | +                     | +                     | 6, 8, 9, 10, 12,             | LACM,                              | D  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>          | Museum data <sup>b</sup>     | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|------------------------------|--|
|   |                       |                       |                       |                       | 18                               | MZUCR, SIO                   |  |
| <b>Family Fistulariidae</b>                                     |                       |                       |                       |                       |                                  |                              |  |
| <i>Fistularia commersonii</i> (Rüppell, 1838)                   | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                 | MCZ, MZUCR,<br>SIO           | D  |
| <b>Order SCORPAENIFORMES</b>                                    |                       |                       |                       |                       |                                  |                              |  |
| <b>Family Scorpaenidae</b>                                      |                       |                       |                       |                       |                                  |                              |  |
| <i>Pontinus furcirhinus</i> Garman, 1899                        |                       |                       |                       |                       | 12, 16, 18                       | LACM                         | D  |
| <i>Pontinus strigatus</i> Heller & Snodgrass, 1903              |                       |                       |                       |                       | 8, 10, 11, 12,<br>18             | LACM,<br>MZUCR               | D  |
| <i>Scorpaena afuerae</i> Hildebrand, 1946                       |                       |                       |                       |                       | 8, 10, 12, 18                    | MZUCR                        | D  |
| <i>Scorpaena cocosensis</i> Motomura, 2004                      |                       |                       |                       |                       | 11, 12, 18                       | CAS                          | D  |
| <i>Scorpaena histrio</i> Jenyns, 1840                           | +                     |                       |                       |                       | 8, 9, 10, 12, 18                 | MZUCR                        | D  |
| <i>Scorpaena mystes</i> Jordan & Starks, 1895                   |                       |                       |                       |                       | 8, 9, 10, 12, 18                 | MZUCR                        | D  |
| <i>Scorpaenodes rubrivinctus</i> Poss, McCosker & Baldwin, 2010 |                       |                       |                       |                       | 11, 12, 15, 18                   |                              | D  |
| <i>Scorpaenodes xyris</i> (Jordan & Gilbert, 1882)              |                       |                       |                       |                       | 8, 10, 12, 18                    | CAS, LACM,<br>MZUCR          | S  |
| <b>Order PERCIFORMES</b>  |                       |                       |                       |                       |                                  |                              |  |
| <b>Family Serranidae</b>  |                       |                       |                       |                       |                                  |                              |  |
| <i>Alphestes immaculatus</i> Breder, 1936                       |                       |                       |                       |                       | 8, 9, 10, 12, 18                 | MZUCR,<br>USNM               | S  |
| <i>Alphestes multiguttatus</i> (Günther, 1867)                  |                       |                       |                       |                       | 16, 18                           | MZUCR                        | S  |
| <i>Anthias noeli</i> Anderson & Baldwin, 2000                   |                       |                       |                       |                       | 12, 15, 18                       |                              | D  |
| <i>Baldwinella eos</i> Gilbert, 1890                            |                       |                       |                       |                       | 8, 10, 12, 15,<br>16, 18         | LACM,<br>MZUCR               | S  |
| <i>Cephalopholis colonus</i> (Valenciennes, 1846)               | +                     | +                     | +                     | +                     | 8, 9, 10, 12,<br>14, 18          | CAS, LACM,<br>MZUCR          | S  |
| <i>Cephalopholis panamensis</i> (Steindachner, 1877)            | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                 | LACM,<br>MZUCR               | S  |
| <i>Cratinus agassizii</i> Steindachner, 1878                    |                       |                       |                       |                       | 11, 12                           |                              | S  |
| <i>Dermatolepis dermatolepis</i> (Boulenger, 1895)              | +                     | +                     | +                     | +                     | 2, 3, 5, 8, 9,<br>10, 12, 14, 18 | CAS, LACM,<br>MZUCR,<br>USNM | S  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>           | Museum data <sup>b</sup>                   | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------------|--|--|
| <i>Epinephelus analogus</i> Gill, 1863                              |                       |                       |                       |                       | 18                                |  | S  |
| <i>Epinephelus cifuentesi</i> Lavenberg & Grove, 1993               |                       |                       |                       |                       | 8, 10, 12, 15,<br>18              | CAS, MZUCR                                 | S  |
| <i>Epinephelus quinquefasciatus</i> (Bocourt, 1868)                 |                       |                       |                       |                       | 8, 9, 10, 12, 18                  | MZUCR<br>CAS, LACM,<br>MZUCR, SIO,<br>USNM | S  |
| <i>Epinephelus labriformis</i> (Jenyns, 1840)                       | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18         |  | S  |
| <i>Hyporthodus mystacinus</i> (Poey, 1852)                          |                       |                       |                       |                       | 18                                |  | D  |
| <i>Hyporthodus niphobles</i> (Gilbert & Starks, 1897)               |                       |                       |                       |                       | 8, 10, 12, 15,<br>18              | MZUCR                                      | D  |
| <i>Liopropoma fasciatum</i> (Bussing, 1980)                         |                       |                       |                       |                       | 12, 18                            |  | D  |
| <i>Liopropoma longilepis</i> Garman, 1899                           |                       |                       |                       |                       | 12                                |  | D  |
| <i>Mycteroperca olfax</i> (Jenyns, 1840)                            | +                     |                       | +                     | +                     | 2, 3, 8, 9, 10,<br>11, 12, 15, 18 | MZUCR                                      | S  |
| <i>Pronotogrammus multifasciatus</i> Gill, 1863                     |                       |                       |                       |                       | 2, 3, 8, 10, 12,<br>15, 16, 18    | LACM,<br>MZUCR                             | D  |
| <i>Pseudogramma thaumasia</i> (Gilbert, 1900)                       |                       |                       |                       |                       | 8, 10, 12, 18                     | LACM,<br>MZUCR                             | S  |
| <i>Rypticus bicolor</i> (Valenciennes, 1846)                        | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                  | CAS, LACM,<br>MZUCR                        | S  |
| <i>Serranus aequidens</i> Gilbert, 1890                             |                       |                       |                       |                       | 8, 9, 10, 12,<br>16, 18           | LACM,<br>MZUCR                             | D  |
| <i>Serranus psittacinus</i> Valenciennes, 1846                      |                       |                       |                       |                       | 1, 3                              | CAS  | S  |
| <i>Serranus tico</i> Meisler & Lavenberg in Allen & Robertson, 1998 | +                     | +                     | +                     | +                     | 8, 10, 12, 18                     | LACM,<br>MZUCR, SIO                        | S  |
| <b>Family Opistognathidae</b>                                       |                       |                       |                       |                       |                                   |  |  |
| <i>Opistognathus panamaensis</i> Allen & Robertson, 1991            |                       | +                     |                       |                       | 8, 9, 10, 12, 18                  | CAS, MZUCR,<br>SIO                         | S  |
| <b>Family Priacanthidae</b>   |                       |                       |                       |                       |                                   |  |  |
| <i>Cookeolus japonicus</i> (Cuvier, 1829)                           |                       |                       |                       |                       | 7, 8, 9, 10, 12, 18               |  | D  |
| <i>Heteropriacanthus cruentatus</i> (Lacepède, 1801)                | +                     | +                     | +                     | +                     | 2, 3, 6, 8, 9,<br>10, 12, 18      | CAS, LACM,<br>MZUCR                        | D  |
| <i>Pristigenys serrula</i> (Gilbert, 1891)                          |                       |                       |                       |                       | 9, 12, 16, 18                     | LACM,<br>MZUCR                             | D  |



|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>       | Museum data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|--------------------------|--|
| <b>Family Apogonidae</b>                                 |                       |                       |                       |                       |                               |                          |  |
| <i>Apogon atradorsatus</i> Heller & Snodgrass, 1903      |                       | +                     |                       | +                     | 2, 3, 8, 9, 10,<br>11, 12, 18 | CAS, LACM,<br>MZUCR      | S  |
| <i>Apogon atricaudus</i> (Jordan & McGregor, 1898)       |                       |                       |                       |                       |                               | SIO<br>LACM,<br>MZUCR    | S  |
| <i>Apogon dovii</i> Günther, 1862                        |                       |                       |                       |                       | 8, 10, 12, 18                 |                          | S  |
| <i>Apogon pacificus</i> (Herre, 1935)                    |                       |                       |                       |                       | 18                            |                          | S  |
| <i>Apogon retrosella</i> (Gill, 1862)                    |                       |                       |                       |                       | 18                            |                          | S  |
| <b>Family Malacanthidae</b>                              |                       |                       |                       |                       |                               |                          |  |
| <i>Caulolatilus affinis</i> Gill, 1865                   |                       |                       |                       |                       | 8, 10, 12, 18                 | MZUCR                    | D  |
| <i>Caulolatilus hubbsi</i> Dooley, 1978                  |                       |                       |                       |                       | 8, 10, 12                     | MZUCR                    | S  |
| <i>Caulolatilus princeps</i> (Jenyns, 1840)              |                       |                       |                       |                       | 12, 18                        | LACM                     | S  |
| <i>Malacanthus brevirostris</i> Guichenot, 1848          | +                     | +                     | +                     | +                     | 7, 8, 9, 10, 12,<br>18        | CAS, MZUCR               | S  |
| <b>Family Echeneidae</b>                                 |                       |                       |                       |                       |                               |                          |  |
| <i>Echeneis naucrates</i> (Linnaeus, 1758)               |                       |                       |                       |                       | 12, 18                        |                          | S  |
| <b>Family Carangidae</b>                                 |                       |                       |                       |                       |                               |                          |  |
| <i>Alectis ciliaris</i> (Bloch, 1787)                    |                       |                       |                       | +                     | 7, 8, 9, 10, 12,<br>18        | CAS, LACM,<br>MZUCR      | D  |
| <i>Carangoides orthogrammus</i> (Jordan & Gilbert, 1882) |                       |                       |                       |                       | 8, 9, 10, 12, 18              | MZUCR                    | D  |
| <i>Caranx caballus</i> (Günther, 1868)                   | +                     |                       | +                     | +                     | 8, 9, 10, 12,<br>18           | CAS, LACM,<br>MZUCR, SIO | S  |
| <i>Caranx caninus</i> Günther, 1867                      | +                     |                       | +                     |                       | 8, 9, 10, 12,<br>18           | MZUCR                    | D  |
| <i>Caranx lugubris</i> (Poey, 1860)                      | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18              |                          | D  |
| <i>Caranx melampygus</i> (Cuvier, 1833)                  | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 14, 18 | CAS, MCZ,<br>MZUCR, SIO  | D  |
| <i>Caranx sexfasciatus</i> (Quoy & Gaimard, 1825)        |                       |                       | +                     | +                     | 8, 9, 10, 12,<br>14, 18       | MZUCR, SIO               | S  |
| <i>Elagatis bipinnulata</i> (Quoy & Gaimard, 1825)       | +                     | +                     | +                     | +                     | 4, 8, 9, 10, 12,<br>14, 18    | CAS, MZUCR               | D  |
| <i>Gnathanodon speciosus</i> (Forsskål, 1775)            |                       |                       | +                     | +                     | 7, 8, 9, 10, 12,<br>18        | MZUCR                    | S  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>          | Museum data <sup>b</sup>                            | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|---|--|
| <i>Seriola lalandi</i> Valenciennes, 1833              |                       |                       |                       |                       | 10, 12                           | MZUCR   | D  |
| <i>Seriola peruana</i> Steindachner, 1881              |                       |                       |                       |                       | 8, 10, 12                        | MZUCR   | S  |
| <i>Seriola rivoliana</i> (Valenciennes, 1833)          |                       |                       | +                     | +                     | 8, 9, 10, 12,<br>14, 18          | LACM,<br>MZUCR                                      | D  |
| <i>Trachinotus rhodopus</i> Gill, 1863                 |                       |                       |                       |                       | 9, 12, 18                        |   | S  |
| <i>Trachinotus stilbe</i> (Jordan & McGregor, 1898)    |                       |                       |                       | +                     | 8, 9, 10, 12, 18                 | MZUCR   | S  |
| <i>Uraspis helvola</i> (Forster, 1801)                 |                       |                       |                       | +                     | 8, 9, 10, 12, 18                 |   | D  |
| <b>Family Lutjanidae</b>                               |                       |                       |                       |                       |                                  |   |  |
| <i>Aphareus furca</i> (Lacepède, 1801)                 |                       |                       |                       |                       | 5, 7, 8, 9, 10,<br>12, 18        | LACM,<br>MZUCR                                      | D  |
| <i>Hoplopagrus guentherii</i> Gill, 1862               |                       |                       |                       |                       | 8, 10, 12, 18                    | MZUCR   | S  |
| <i>Lutjanus aratus</i> (Günther, 1864)                 |                       |                       | +                     | +                     | 8, 9, 10, 12,<br>14, 18          | CAS, MZUCR<br>CAS, LACM,<br>MZUCR, SIO,<br>UF, USNM | S  |
| <i>Lutjanus argentiventris</i> (Peters, 1869)          | +                     |                       | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 14, 18    |   | S  |
| <i>Lutjanus colorado</i> Jordan & Gilbert, 1882        |                       |                       |                       |                       | 12, 18                           |   | S  |
| <i>Lutjanus guttatus</i> (Steindachner, 1869)          |                       |                       |                       |                       | 9, 12, 18                        | SIO   | S  |
| <i>Lutjanus inermis</i> (Peters, 1869)                 |                       |                       |                       | +                     | 8, 10, 12, 18                    | MZUCR<br>CAS, LACM,<br>MZUCR, SIO,<br>USNM          | S  |
| <i>Lutjanus jordani</i> (Gilbert, 1898)                | +                     |                       | +                     | +                     | 2, 3, 5, 8, 9,<br>10, 12, 18     |   | S  |
| <i>Lutjanus novemfasciatus</i> Gill, 1862              |                       |                       | +                     | +                     | 8, 9, 10, 12,<br>14, 18          | MZUCR<br>CAS, LACM,<br>MZUCR,<br>USNM               | S  |
| <i>Lutjanus viridis</i> (Valenciennes, 1846)           | +                     | +                     | +                     | +                     | 2, 3, 4, 8, 9,<br>10, 12, 14, 18 |   | S  |
| <b>Family Haemulidae</b>                               |                       |                       |                       |                       |                                  |   |  |
| <i>Anisotremus caesioides</i> (Jordan & Gilbert, 1882) |                       |                       |                       |                       | 8, 10, 12, 18                    | LACM,<br>MZUCR                                      | S  |
| <i>Anisotremus scapularis</i> (Tschudi, 1846)          |                       |                       |                       |                       | 2, 3, 18                         | CAS   | S  |
| <i>Anisotremus interruptus</i> (Gill, 1862)            | +                     |                       | +                     | +                     | 8, 9, 10, 12, 18                 | MZUCR, SIO  | S  |
| <i>Anisotremus taeniatus</i> Gill, 1861                |                       |                       |                       |                       | 8, 9, 10, 12, 18                 | MZUCR   | S  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>      | Museum data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|--------------------------|--|
| <i>Haemulon scudderii</i> Gill, 1862                     |                       |                       |                       |                       | 18                           | CAS                      | S  |
| <i>Haemulon sexfasciatum</i> Gill, 1862                  |                       |                       |                       |                       | 18                           |                          | S  |
| <i>Haemulon steindachneri</i> (Jordan & Gilbert, 1882)   |                       |                       |                       |                       | 18                           |                          | S  |
| <b>Family Sciaenidae</b>                                 |                       |                       |                       |                       |                              |                          |  |
| <i>Corvula macrops</i> (Steindachner, 1876)              |                       |                       |                       |                       | 12, 18                       |                          | S  |
| <i>Odontoscion eurymesops</i> (Heller & Snodgrass, 1903) |                       |                       |                       |                       | 12, 18                       |                          | S  |
| <i>Umbrina galapagorum</i> Steindachner, 1878            |                       |                       |                       |                       | 12, 18                       | MCZ                      | S  |
| <b>Family Mullidae</b>                                   |                       |                       |                       |                       |                              |                          |  |
| <i>Mulloidichthys dentatus</i> (Gill, 1862)              | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18             | MZUCR                    | S  |
| <b>Family Kyphosidae</b>                                 |                       |                       |                       |                       |                              |                          |  |
| <i>Kyphosus vaigiensis</i> (Gill, 1862)                  |                       |                       | +                     | +                     | 12, 18                       |                          | S  |
| <i>Kyphosus elegans</i> (Peters, 1869)                   | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18    | CAS, LACM,<br>MZUCR      | S  |
| <i>Kyphosus ocyurus</i> (Jordan & Gilbert, 1882)         |                       | +                     | +                     | +                     | 8, 9, 10, 12, 18             | CAS, MZUCR               | S  |
| <b>Family Chaetodontidae</b>                             |                       |                       |                       |                       |                              |                          |  |
| <i>Chaetodon humeralis</i> Günther, 1860                 |                       |                       | +                     | +                     | 8, 9, 10, 12, 18             | LACM,<br>MZUCR, SIO      | S  |
| <i>Chaetodon lunula</i> (Lacepède, 1802)                 |                       |                       |                       |                       | 7, 8, 10, 12, 18             | MZUCR                    | D  |
| <i>Forcipiger flavissimus</i> (Jordan & McGregor, 1898)  |                       |                       |                       |                       | 7, 8, 10, 12, 18             |                          | D  |
| <i>Johnrandallia nigristrois</i> (Gill, 1862)            | +                     | +                     | +                     | +                     | 3, 8, 9, 10, 12,<br>18       | CAS, LACM,<br>MZUCR      | S  |
| <i>Prognathodes carlhubbsi</i> Nalbant, 1995             |                       |                       | +                     |                       | 12, 18                       |                          | S  |
| <i>Prognathodes falcifer</i> (Hubbs & Rehnitz, 1958)     |                       |                       |                       |                       | 8, 10, 12                    | LACM,<br>MZUCR           | D  |
| <b>Family Pomacanthidae</b>                              |                       |                       |                       |                       |                              |                          |  |
| <i>Holacanthus passer</i> Valenciennes, 1846             | +                     | +                     |                       |                       | 2, 3, 8, 9, 10,<br>12, 18    | CAS, LACM,<br>MZUCR      | S  |
| <i>Pomacanthus zonipectus</i> (Gill, 1862)               |                       |                       |                       |                       | 8, 10, 12, 18                | MZUCR                    | S  |
| <b>Family Kuhliidae</b>                                  |                       |                       |                       |                       |                              |                          |  |
| <i>Kuhlia mugil</i> (Forster, 1801)                      |                       |                       |                       |                       | 2, 3, 6, 8, 9,<br>10, 12, 18 | CAS, LACM,<br>MZUCR, SIO | S  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>       | Museum data <sup>b</sup>     | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|------------------------------|--|
| <b>Family Cirrhitidae</b>                             |                       |                       |                       |                       |                               |                              |  |
| <i>Cirrhitichthys oxycephalus</i> (Bleeker, 1855)     | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18              | CAS, LACM,<br>MZUCR,<br>USNM | S  |
| <i>Cirrhitus rivulatus</i> (Valenciennes, 1846)       | +                     | +                     | +                     | +                     | 5, 8, 9, 10, 12,<br>18        | CAS, LACM,<br>MZUCR          | S  |
| <i>Oxycirrhites typus</i> Bleeker, 1857               |                       |                       |                       |                       | 18                            |                              | S  |
| <b>Family Pomacentridae</b>                           |                       |                       |                       |                       |                               |                              |  |
| <i>Abudefduf concolor</i> (Gill, 1862)                |                       |                       |                       |                       | 8, 10, 12, 18                 | MZUCR, SIO                   | S  |
| <i>Abudefduf declivifrons</i> (Gill, 1862)            |                       |                       |                       |                       |                               | UF                           | S  |
| <i>Abudefduf troschelii</i> (Gill, 1862)              |                       |                       | +                     | +                     | 8, 9, 10, 12, 18              | MZUCR, UF                    | S  |
| <i>Azurina eupalama</i> Heller & Snodgrass, 1903      |                       |                       |                       |                       | 18*                           |                              | S  |
| <i>Chromis alta</i> (Greenfield & Woods, 1980)        |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM,<br>MZUCR               | D  |
| <i>Chromis atrilobata</i> Gill, 1862                  | +                     |                       | +                     | +                     | 8, 9, 10, 12, 18              | MZUCR                        | S  |
| <i>Microspathodon bairdii</i> (Gill, 1862)            |                       |                       | +                     |                       | 8, 9, 10, 12, 18              | LACM,<br>MZUCR, SIO          | S  |
| <i>Microspathodon dorsalis</i> (Gill, 1862)           | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18     | LACM,<br>MZUCR               | S  |
| <i>Stegastes acapulcoensis</i> (Fowler, 1944)         |                       |                       |                       |                       | 8, 10, 12, 18                 | MZUCR                        | S  |
| <i>Stegastes arcifrons</i> (Heller & Snodgrass, 1903) | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 14, 18 | CAS, LACM,<br>MZUCR, SIO     | S  |
| <i>Stegastes beebei</i> (Nichols, 1924)               |                       | +                     |                       | +                     | 8, 9, 10, 11,<br>12, 18       | CAS, MZUCR<br>MZUCR, UF,     | S  |
| <i>Stegastes flavilatus</i> (Gill, 1862)              |                       |                       |                       |                       | 8, 10, 12, 18                 | USNM                         | S  |
| <i>Stegastes leucorus</i> (Gilbert, 1892)             |                       |                       |                       |                       | 2, 3                          |                              | S  |
| <b>Family Labridae</b>                                |                       |                       |                       |                       |                               |                              |  |
| <i>Bodianus diplotaenia</i> (Gill, 1862)              | +                     | +                     | +                     | +                     | 2, 3, 4, 8, 9,<br>10, 12, 18  | CAS, LACM,<br>MZUCR,<br>USNM | S  |
| <i>Decodon melasma</i> Gomon, 1974                    |                       |                       |                       |                       | 8, 10, 12, 15,<br>18          | LACM,<br>MZUCR               | D  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>    | Museum data <sup>b</sup>          | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------------------|--|
| <i>Halichoeres adustus</i> (Gilbert, 1890)                 | +                     | +                     | +                     | +                     | 8, 9, 10, 11,<br>12, 18    | CAS, MZUCR                        | S  |
| <i>Halichoeres chierchiae</i> Di Caporiacco, 1948          |                       |                       |                       |                       | 18                         |                                   | S  |
| <i>Halichoeres discolor</i> Bussing, 1983                  | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18           | CAS, LACM,<br>MZUCR, SIO,<br>USNM | S  |
| <i>Halichoeres dispilus</i> (Günther, 1864)                | +                     | +                     |                       | +                     | 8, 9, 10, 12, 18           | LACM,<br>MZUCR                    | S  |
| <i>Halichoeres melanotis</i> (Gilbert, 1890)               |                       |                       |                       | +                     | 19                         |                                   | S  |
| <i>Halichoeres nicholsi</i> (Jordan & Gilbert, 1882)       |                       |                       |                       |                       | 8, 10, 12, 18              | MZUCR                             | S  |
| <i>Halichoeres notospilus</i> (Günther, 1864)              |                       |                       |                       |                       | 12, 18                     |                                   | S  |
| <i>Halichoeres salmofasciatus</i> Allen & Robertson, 2002  |                       | +                     |                       |                       | 8, 9, 10, 12, 18           | MZUCR,<br>USNM                    | S  |
| <i>Iniistius pavo</i> (Valenciennes, 1840)                 |                       | +                     |                       |                       | 8, 9, 10, 12, 18           | MZUCR                             | S  |
| <i>Novaculichthys taeniourus</i> (Lacepède, 1801)          | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18           | MZUCR                             | S  |
| <i>Polylepion cruentum</i> Gomon, 1977                     |                       |                       |                       |                       | 8, 10, 12, 16,<br>18       | MZUCR                             | D  |
| <i>Semicossyphus darwini</i> (Jenyns, 1842)                |                       |                       |                       |                       | 11                         |                                   | D  |
| <i>Stethojulis bandanensis</i> (Bleeker, 1851)             | +                     | +                     |                       | +                     | 8, 9, 10, 12, 18           | MZUCR, SIO                        | S  |
| <i>Thalassoma grammaticum</i> (Gilbert, 1890)              | +                     | +                     | +                     | +                     | 4, 8, 9, 10, 12,<br>18     | MZUCR,<br>USNM                    | S  |
| <i>Thalassoma lucasanum</i> (Gill, 1862)                   | +                     | +                     | +                     | +                     | 8, 9, 10, 12,<br>14, 18    | CAS, LACM,<br>MZUCR, SIO          | S  |
| <i>Thalassoma purpureum</i> (Forsskål, 1775)               |                       |                       |                       |                       | 7, 12, 18                  |                                   | S  |
| <i>Xyrichtys victori</i> Wellington, 1992                  |                       |                       |                       |                       | 9, 10, 11, 12,<br>18       | MZUCR                             | S  |
| <b>Family Scaridae</b>                                     |                       |                       |                       |                       |                            |                                   |  |
| <i>Scarus compressus</i> (Osburn & Nichols, 1916)          |                       |                       |                       |                       | 18                         |                                   | S  |
| <i>Scarus ghobban</i> Forsskål, 1775                       |                       |                       |                       |                       | 7, 18                      |                                   | S  |
| <i>Scarus perrico</i> Jordan & Gilbert, 1882               |                       |                       |                       |                       | 18                         |                                   | S  |
| <i>Scarus rubroviolaceus</i> (Bleeker, 1847)               | +                     | +                     | +                     | +                     | 6, 8, 9, 10, 12,<br>14, 18 | LACM,<br>MZUCR                    | S  |
| <i>Nicholsina denticulata</i> (Evermann & Radcliffe, 1917) |                       |                       |                       |                       | 18                         |                                   | S  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <b>Family Ammodytidae</b>                                    |                       |                       |                       |                       |                         |                          |  |
| <i>Ammodytoides gilli</i> (Bean, 1895)                       |                       |                       |                       |                       | 18                      |                          | S  |
| <b>Family Tripterygiidae</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <i>Axoclinus cocoensis</i> Bussing, 1991                     |                       | +                     | +                     |                       | 8, 9, 10, 11,<br>12, 18 | CAS, LACM,<br>MZUCR, SIO | S  |
| <b>Family Dactyloscopidae</b>                                |                       |                       |                       |                       |                         |                          |  |
| <i>Dactyloscopus pectoralis</i> Gill, 1861                   |                       |                       |                       |                       | 3, 10                   | CAS, MZUCR               | S  |
| <i>Gillellus chathamensis</i> Dawson, 1977                   |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, LACM,<br>MZUCR      | S  |
| <b>Family Blenniidae</b>                                     |                       |                       |                       |                       |                         |                          |  |
| <i>Entomacrodus chiostictus</i> (Jordan & Gilbert, 1882)     |                       |                       |                       |                       | 8, 10, 12, 18           | MCZ, MZUCR               | S  |
| <i>Hypsoblennius brevipinnis</i> (Günther, 1861)             |                       | +                     |                       |                       | 8, 9, 10, 12, 18        | MZUCR, UF                | S  |
| <i>Ophioblennius steindachneri</i> (Jordan & Evermann, 1898) | +                     | +                     | +                     | +                     | 9, 10 12,18             | LACM,<br>MZUCR, SIO      | S  |
| <i>Plagiotremus azaleus</i> (Jordan & Bollman, 1890)         | +                     | +                     | +                     | +                     | 3, 8, 9, 10, 12,<br>18  | LACM,<br>MZUCR           | S  |
| <b>Family Labrisomidae</b>                                   |                       |                       |                       |                       |                         |                          |  |
| <i>Dialommus fuscus</i> (Gilbert, 1891)                      |                       |                       |                       |                       | 11, 12, 18              |                          | S  |
| <i>Labrisomus multiporosus</i> Hubbs, 1953                   |                       |                       |                       |                       | 18                      |                          | S  |
| <i>Paraclinus mexicanus</i> (Gilbert, 1904)                  |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, SIO               | S  |
| <i>Starksia</i> new species                                  |                       |                       |                       |                       | 10, 12                  | MZUCR                    | S  |
| <b>Family Chaenopsidae</b>                                   |                       |                       |                       |                       |                         |                          |  |
| <i>Acanthemblemaria atrata</i> Hastings & Robertson, 1999    | +                     | +                     |                       | +                     | 8, 9, 10, 11,<br>12, 18 | CAS, LACM,<br>MZUCR, SIO | S  |
| <i>Acanthemblemaria macrospilus</i> Brock, 1940              |                       |                       |                       |                       | 12                      | CAS, LACM                | S  |
| <i>Chaenopsis deltarrhis</i> Böhlke, 1957                    |                       |                       |                       |                       | 18                      |                          | S  |
| <i>Chaenopsis</i> new species                                |                       |                       |                       |                       | 10, 12                  | MZUCR                    | S  |
| <i>Coralliozetus boehlkei</i> Brock, 1940                    |                       |                       |                       |                       | 8, 10, 12, 18           | LACM,<br>MZUCR           | S  |
| <i>Coralliozetus springeri</i> Stephens & Johnson, 1966      |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                    | S  |
| <i>Ekemblemaria myersi</i> Stephens, 1963                    |                       |                       |                       |                       | 12, 18                  |                          | S  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum data <sup>b</sup>         | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|----------------------------------|--|
| <i>Emblemaria nivipes</i> Jordan & Gilbert, 1883       |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, LACM,<br>MZUCR, SIO         | S  |
| <i>Emblemaria piratica</i> Ginsburg, 1942              |                       |                       |                       |                       | 18                      |                                  | S  |
| <i>Stathmonotus culebrai</i> Seale, 1940               |                       |                       |                       |                       | 12, 18                  |                                  | S  |
| <b>Family Gobiesocidae</b>                             |                       |                       |                       |                       |                         |                                  |  |
| <i>Arcos decoris</i> Briggs, 1969                      |                       |                       |                       |                       | 18                      |                                  | S  |
| <i>Arcos poecilophthalmos</i> (Jenyns, 1842)           |                       |                       |                       |                       | 3, 12, 18               |                                  | S  |
| <i>Arcos rhodospilus</i> (Günther, 1864)               |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                            | S  |
| <i>Gobiesox adustus</i> Jordan & Gilbert, 1882         |                       |                       |                       |                       | 12, 18                  |                                  | S  |
| <i>Gobiesox fulvus</i> Meek, 1907                      |                       |                       |                       |                       | 8, 10                   | CAS, MZUCR,<br>SIO, UF           | S  |
| <i>Gobiesox woodsi</i> (Schultz, 1944)                 |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, SIO                       | S  |
| <i>Tomicodon chilensis</i> Brisout de Barneville, 1846 |                       |                       |                       |                       | 11, 12                  |                                  | S  |
| <i>Tomicodon petersii</i> (Garman, 1875)               |                       |                       |                       |                       | 18                      |                                  | S  |
| <i>Tomicodon vermiculatus</i> Briggs, 1955             |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, MZUCR                       | S  |
| <b>Family Microdesmidae</b>                            |                       |                       |                       |                       |                         |                                  |  |
| <i>Clarkichthys bilineatus</i> (Clark, 1936)           |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                            | S  |
| <b>Family Gobiidae</b>                                 |                       |                       |                       |                       |                         |                                  |  |
| <i>Bathygobius lineatus</i> (Jenyns, 1841)             |                       |                       |                       |                       |                         | CAS<br>CAS, LACM,<br>MZUCR, SIO, | S  |
| <i>Bathygobius ramosus</i> (Ginsburg, 1947)            |                       |                       |                       |                       | 8, 10, 12, 18           | UF<br>LACM,                      | S  |
| <i>Chriolepis atrimelum</i> Bussing, 1997              |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR<br>CAS, LACM,              | D  |
| <i>Chriolepis dialepta</i> Bussing, 1990               |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, SIO                       | S  |
| <i>Coryphopterus urospilus</i> Ginsburg, 1938          |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                            | S  |
| <i>Tigrigobius nesiotes</i> Bussing, 1990              |                       |                       |                       |                       | 8, 9, 10, 11,<br>12, 18 | LACM,<br>MZUCR                   | S  |
| <i>Gobulus crescentalis</i> (Gilbert, 1892)            |                       |                       |                       |                       | 12, 18                  |                                  | S  |
| <i>Gobulus hancocki</i> Ginsburg, 1938                 |                       |                       |                       |                       | 8, 10, 12, 18           | LACM,<br>MZUCR, SIO              | S  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>       | Museum data <sup>b</sup>               | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|--|--|
| <i>Lythrypnus alphigena</i> Bussing, 1990               |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM,<br>MZUCR                         | D  |
| <i>Lythrypnus cobalus</i> Bussing, 1990                 |                       |                       |                       |                       | 8, 9, 10, 12, 18              | CAS, LACM,<br>MZUCR, SIO               | D  |
| <i>Lythrypnus dalli</i> (Gilbert, 1890)                 |                       |                       |                       |                       | 18                            |  | S  |
| <i>Lythrypnus lavenbergi</i> Bussing ,1990              |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM,<br>MZUCR                         | D  |
| <i>Lythrypnus rhizophora</i> (Heller & Snodgrass, 1903) |                       |                       |                       |                       | 8, 10, 11, 12,<br>18          | LACM,<br>MZUCR                         | S  |
| <b>Family Scombridae</b>                                |                       |                       |                       |                       |                               |  |  |
| <i>Thunnus albacares</i> (Bonnaterre, 1788)             |                       |                       | +                     | +                     | 8,9, 10, 12,14,<br>18         | MZUCR                                  | D  |
| <b>Family Zanclidae</b>                                 |                       |                       |                       |                       |                               |  |  |
| <i>Zanclus cornutus</i> (Linnaeus, 1758)                | +                     | +                     | +                     | +                     | 3, 6, 8, 8, 10,<br>12, 18     | LACM,<br>MZUCR                         | D  |
| <b>Family Acanthuridae</b>                              |                       |                       |                       |                       |                               |  |  |
| <i>Acanthurus nigricans</i> (Linnaeus, 1758)            | +                     | +                     | +                     | +                     | 2, 3, 6, 8, 9,<br>10, 12, 18  | CAS, LACM,<br>MZUCR                    | S  |
| <i>Acanthurus triostegus</i> (Linnaeus, 1758)           | +                     | +                     | +                     | +                     | 2, 3, 6, 8, 9,<br>10, 12, 18  | CAS, LACM,<br>MCZ, MZUCR,<br>SIO, USNM | S  |
| <i>Acanthurus xanthopterus</i> (Valenciennes, 1835)     | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18     | CAS, MZUCR                             | S  |
| <i>Ctenochaetus marginatus</i> (Valenciennes, 1835)     | +                     | +                     | +                     | +                     | 6, 8, 9, 10, 12,<br>18        | CAS, LACM,<br>MZUCR,<br>USNM           | S  |
| <i>Naso annulatus</i> (Quoy & Gaimard, 1825)            |                       |                       |                       |                       | 7, 12, 18                     |  | S  |
| <i>Naso hexacanthus</i> (Bleeker, 1855)                 |                       |                       |                       |                       | 7, 12, 18                     |  | S  |
| <i>Prionurus laticlavius</i> (Valenciennes, 1846)       | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 14, 18 | CAS, LACM,<br>MZUCR                    | S  |
| <b>Family Sphyraenidae</b>                              |                       |                       |                       |                       |                               |  |  |
| <i>Sphyraena idiaestes</i> Heller & Snodgrass, 1903     |                       |                       | +                     |                       | 9, 10, 12, 18                 |  | S  |
| <b>Order PLEURONECTIFORMES</b>                          |                       |                       |                       |                       |                               |  |  |
| <b>Family Bothidae</b>                                  |                       |                       |                       |                       |                               |  |  |



|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>             | Museum data <sup>b</sup>          | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------------|-----------------------------------|--|
| <i>Bothus constellatus</i> (Jordan, 1889)                           |                       |                       |                       |                       |                                     | LACM, USNM                        | D  |
| <i>Bothus leopardinus</i> (Günther, 1862)                           | +                     |                       |                       |                       | 2, 3, 8, 9, 10,<br>12, 18           | LACM,<br>MZUCR                    | D  |
| <i>Bothus mancus</i> (Broussonet, 1782)                             |                       | +                     |                       | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | D  |
| <b>Family Soleidae</b>  |                       |                       |                       |                       |                                     |                                   |  |
| <i>Aseraggodes herrei</i> Seale, 1940                               |                       |                       |                       |                       | 8, 9, 10, 12, 18                    | LACM,<br>MZUCR                    | D  |
| <b>Order TETRAODONTIFORMES</b>                                      |                       |                       |                       |                       |                                     |                                   |  |
| <b>Family Balistidae</b>  |                       |                       |                       |                       |                                     |                                   |  |
| <i>Balistes polylepis</i> (Steindachner, 1876)                      |                       |                       | +                     | +                     | 8, 9, 10, 12, 18                    | LACM,<br>MZUCR, UF                | D  |
| <i>Canthidermis maculata</i> (Bloch, 1786)                          | +                     |                       | +                     | +                     | 2, 3, 5, 6, 8, 9,<br>10, 12, 18     | CAS, LACM,<br>MZUCR, UF           | D  |
| <i>Melichthys niger</i> (Bloch, 1786)                               | +                     | +                     | +                     | +                     | 2, 3, 4, 6, 8, 9,<br>10, 12, 14, 18 | CAS, LACM,<br>MZUCR, SIO,<br>USNM | S  |
| <i>Melichthys vidua</i> (Richardson, 1845)                          | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |
| <i>Pseudobalistes naufragium</i> (Jordan & Starks, 1895)            |                       |                       |                       | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |
| <i>Sufflamen verres</i> (Gilbert & Starks, 1904)                    | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18           | LACM,<br>MZUCR                    | S  |
| <i>Xanthichthys caeruleolineatus</i> Randall, Matsuura & Zama, 1978 |                       |                       |                       | +                     | 7, 8, 9, 10, 12,<br>18              | MZUCR                             | D  |
| <i>Xanthichthys mento</i> (Jordan & Gilbert, 1882)                  | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |
| <b>Family Monacanthidae</b>   |                       |                       |                       |                       |                                     |                                   |  |
| <i>Aluterus monoceros</i> (Linnaeus, 1758)                          | +                     | +                     |                       | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |
| <i>Aluterus scriptus</i> (Osbeck, 1765)                             | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                    | LACM,<br>MZUCR                    | D  |
| <i>Cantherhines dumerilii</i> (Hollard, 1854)                       | +                     |                       | +                     | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |
| <b>Family Ostraciidae</b>   |                       |                       |                       |                       |                                     |                                   |  |
| <i>Ostracion meleagris</i> Shaw, 1796                               | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |
| <b>Family Tetraodontidae</b>  |                       |                       |                       |                       |                                     |                                   |  |
| <i>Arothron hispidus</i> (Linnaeus, 1758)                           | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18                    | MZUCR                             | S  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>   | Museum data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|--------------------------|--|
| <i>Arothron meleagris</i> (Anonymous, 1798)       | +                     | +                     | +                     | +                     | 2, 3, 8, 9, 10,<br>12, 18 | CAS, LACM,<br>MZUCR      | S  |
| <i>Canthigaster punctatissima</i> (Günther, 1870) | +                     | +                     | +                     | +                     | 8, 9, 10, 12, 18          | CAS, LACM,<br>MZUCR, SIO | S  |
| <i>Lagocephalus lagocephalus</i> (Linnaeus, 1758) |                       |                       |                       |                       | 12, 18                    |                          | S  |
| <i>Sphoeroides angusticeps</i> (Jenyns, 1842)     |                       |                       |                       |                       | 8, 10, 12, 18             |                          | S  |
| <i>Sphoeroides lobatus</i> (Steindachner, 1870)   |                       |                       |                       |                       | 8, 9, 10, 12, 18          | MZUCR                    | D  |
| <b>Family Diodontidae</b>                         |                       |                       |                       |                       |                           |                          |  |
| <i>Chilomycterus reticulatus</i> (Linnaeus, 1758) |                       |                       | +                     | +                     | 8, 9, 10, 12, 18          | MZUCR<br>CAS, LACM,      | S  |
| <i>Diodon holocanthus</i> (Linnaeus, 1758)        |                       |                       |                       | +                     | 8, 9, 10, 12, 18          | MZUCR                    | S  |
| <i>Diodon hystrix</i> (Linnaeus, 1758)            |                       | +                     | +                     | +                     | 8, 9, 10, 12, 18          | MZUCR                    | S  |

<sup>a</sup> 1) Garman 1899; 2) Snodgrass and Heller 1905; 3) Fowler 1938; 4) Schmitt and Schultz 1940; 5) Seale 1940; 6) Briggs 1961; 7) Robertson et al. 2004; 8) Bussing and López 2005; 9) Garrison 2005; 10) Bussing and López 2009; 11) McCosker and Rosenblatt 2010; 12) Cortés 2012; 13) Cortés et al. 2012; 14) Friedlander et al. 2012; 15) Starr et al. 2012; 16) Angulo 2014; 17) Angulo et al. 2014; 18) Robertson and Allen 2015 (\*Unconfirmed species); 19) Froese and Pauly 2015.

<sup>b</sup> CAS: California Academy of Sciences; USNM: National Museum of Natural History, Smithsonian Institution; LACM: Natural History Museum of Los Angeles County; SIO: Scripps Institution of Oceanography; UF: Florida Museum of Natural History, University of Florida; MCZ: Museum of Comparative Zoology; MZUCR: Museo de Zoología of the Universidad de Costa Rica.

<sup>c</sup> D: Deep-water species (bathymetric midpoint limit higher than –50 m or deeper; S: shallow-water species (resident from surface to 50 m deep). Data from Robertson and Allen (2015) and Froese and Pauly (2015).

Table S2. Taxonomic list of non-reef fish species from Isla del Coco.

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>  | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|--------------------------|--|
| <b>Phylum CHORDATA</b>                                  |                       |                       |                       |                       |                          |                          |  |
| <b>Class CHONDRICHTHYES</b>                             |                       |                       |                       |                       |                          |                          |  |
| <b>Order CHIMAERIFORMES</b>                             |                       |                       |                       |                       |                          |                          |  |
| <b>Family Chimaeridae</b>                               |                       |                       |                       |                       |                          |                          |  |
| <i>Hidrolagus sp.</i>                                   |                       |                       |                       |                       | 11, 12                   |                          | D  |
| <b>Order LAMNIFORMES</b>                                |                       |                       |                       |                       |                          |                          |  |
| <b>Family Odontaspidae</b>                              |                       |                       |                       |                       |                          |                          |  |
| <i>Odontaspis ferox</i> (Risso, 1810)                   |                       |                       |                       |                       | 12, 13, 16, 18           |                          | D  |
| <b>Family Pseudocarchariidae</b>                        |                       |                       |                       |                       |                          |                          |  |
| <i>Pseudocarcharias kamoharai</i> (Matsubara, 1936)     |                       |                       |                       |                       | 12, 18                   |                          | D  |
| <b>Family Lamnidae</b>                                  |                       |                       |                       |                       |                          |                          |  |
| <i>Carcharodon carcharias</i> (Linnaeus, 1758)          |                       |                       |                       |                       | 10, 12                   |                          | D  |
| <i>Isurus oxyrinchus</i> (Rafinesque, 1810)             |                       |                       |                       |                       | 12, 18                   |                          | D  |
| <b>Order CARCHARHINIFORMES</b>                          |                       |                       |                       |                       |                          |                          |  |
| <b>Family Triakidae</b>                                 |                       |                       |                       |                       |                          |                          |  |
| <i>Alopias pelagicus</i> Nakamura, 1935                 |                       |                       |                       |                       | 18*                      |                          | D  |
| <i>Alopias superciliosus</i> Lowe, 1841                 |                       |                       |                       |                       | 18*                      |                          | D  |
| <i>Alopias vulpinus</i> (Bonnaterre, 1788)              |                       |                       |                       |                       | 8, 10, 12, 18            | MZUCR                    | D  |
| <i>Mustelus mento</i> Cope, 1877                        |                       |                       |                       |                       | 11                       |                          | S  |
| <b>Family Carcharhinidae</b>                            |                       |                       |                       |                       |                          |                          |  |
| <i>Carcharhinus falciformis</i> (Müller & Henle, 1839)  |                       |                       |                       |                       | 8, 9, 10, 12, 14, 15, 18 | MZUCR                    | D  |
| <i>Carcharhinus longimanus</i> (Poey, 1861)             |                       |                       |                       |                       | 12, 18                   |                          | D  |
| <i>Prionace glauca</i> (Linnaeus, 1758)                 |                       |                       |                       |                       | 12, 18                   |                          | D  |
| <i>Rhizoprionodon longurio</i> (Jordan & Gilbert, 1882) |                       |                       |                       |                       | 8, 10, 12, 18            | MZUCR                    | D  |
| <b>Family Sphyrnidae</b>                                |                       |                       |                       |                       |                          |                          |  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Sphyrna tiburo</i> (Linnaeus 1758)                    |                       |                       |                       |                       | 18                      |                          | S  |
| <b>Order MYLIOBATIFORMES</b>                             |                       |                       |                       |                       |                         |                          |  |
| <b>Family Dasyatidae</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <i>Pteroplatytrygon violacea</i> (Bonaparte, 1832)       |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <b>Family Myliobatidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Mobula japanica</i> (Müller and Henle, 1841)          |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <i>Mobula munkiana</i> Notabartolo di Sciara, 1987       |                       |                       |                       |                       | 8, 10, 12, 18           |                          | S  |
| <i>Mobula thurstoni</i> (Lloyd, 1908)                    |                       |                       |                       |                       | 16                      |                          | S  |
| <i>Myliobatis peruvianus</i> Garman, 1913                |                       |                       |                       |                       | 11, 12                  |                          | S  |
| <b>Order SQUALIFORMES</b>                                |                       |                       |                       |                       |                         |                          |  |
| <b>Family Etmopteridae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Centroscyllium nigrum</i> Garman, 1899                |                       |                       |                       |                       | 16, 19                  | CAS, MZUCR               | D  |
| <b>Order RAJIFORMES</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <b>Family Arhynchobatidae</b>                            |                       |                       |                       |                       |                         |                          |  |
| <i>Bathyraja spinosissima</i> (Beebe & Tee-Van, 1941)    |                       |                       |                       |                       | 11, 12                  |                          | D  |
| <b>Family Rhinobatidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Rhinobatos planiceps</i> Garman, 1913                 |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                    | S  |
| <b>Family Rajidae</b>                                    |                       |                       |                       |                       |                         |                          |  |
| <i>Raja equatorialis</i> Jordan & Bollman, 1890          |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <b>Clase ACTINOPTERYGII</b>                              |                       |                       |                       |                       |                         |                          |  |
| <b>Order ANGUILLIFORMES</b>                              |                       |                       |                       |                       |                         |                          |  |
| <b>Family Chlopsidae</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <i>Chlopsis bicollaris</i> (Myers & Wade, 1941)          |                       |                       |                       |                       |                         | SIO                      | S  |
| <b>Family Ophichthidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Bascanichthys bascanoides</i> Osborn & Nichols, 1916  |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, SIO               | S  |
| <i>Gordiiichthys combilus</i> McCosker & Lavenberg, 2001 |                       |                       |                       |                       |                         | MZUCR                    | S  |
| <i>Herpetoichthys fossatus</i> (Myers & Wade, 1941)      |                       |                       |                       |                       | 8, 10, 12, 18           | CAS, MZUCR               | S  |
| <i>Ophichthus rugifer</i> Jordan & Bollman, 1890         |                       |                       |                       |                       | 8, 9, 10, 11, 12, 18    | CAS, MZUCR               | D  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Ophichthus triserialis</i> (Kaup, 1856)              |                       |                       |                       |                       | 12, 18                  | LACM, MZUCR              | D  |
| <i>Paraetharchus pacificus</i> (Osburn & Nichols, 1916) |                       |                       |                       |                       | 8, 10, 12               | LACM, MZUCR              | S  |
| <i>Scytalichthys miurus</i> (Jordan & Gilbert, 1882)    |                       |                       |                       |                       | 8, 10, 12, 19           | LACM, MZUCR              | S  |
| <b>Family Nemichthyidae</b>                             |                       |                       |                       |                       |                         |                          |  |
| <i>Avocettina bowersii</i> (Garman, 1899)               |                       |                       |                       |                       | 3                       | MZUCR                    | D  |
| <i>Nemichthys scolopaceus</i> Richardson, 1848          |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Family Congridae</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <i>Bathycongrus varidens</i> (Garman, 1899)             |                       |                       |                       |                       | 12, 15                  |                          | D  |
| <i>Chiloconger dentatus</i> (Garman, 1899)              |                       |                       |                       |                       | 18*                     |                          | D  |
| <b>Family Nettastomatidae</b>                           |                       |                       |                       |                       |                         |                          |  |
| <i>Facciolella</i> sp.                                  |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Venefica tentaculata</i> Garman, 1899                |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <i>Saurenhelys</i> new species                          |                       |                       |                       |                       |                         | LACM                     | D  |
| <b>Family Serrivomeridae</b>                            |                       |                       |                       |                       |                         |                          |  |
| <i>Serrivomer sector</i> Garman, 1899                   |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Order CLUPEIFORMES</b>                               |                       |                       |                       |                       |                         |                          |  |
| <b>Family Engraulidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Anchoa argentivittata</i> (Regan, 1904)              |                       |                       |                       |                       | 18                      |                          | S  |
| <i>Anchoa ischana</i> (Jordan & Gilbert, 1882)          |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <i>Anchoa nasus</i> (Kner & Steindachner, 1867)         |                       |                       |                       |                       | 18                      |                          | D  |
| <b>Order ARGENTINIFORMES</b>                            |                       |                       |                       |                       |                         |                          |  |
| <b>Family Alepocephalidae</b>                           |                       |                       |                       |                       |                         |                          |  |
| <i>Alepocephalus fundulus</i> Garman, 1899              |                       |                       |                       |                       | 3                       |                          | D  |
| <i>Bathytroctes inspector</i> Garman, 1899              |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <i>Narcetes stomias</i> (Gilbert, 1890)                 |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <b>Order STOMIIFORMES</b>                               |                       |                       |                       |                       |                         |                          |  |
| <b>Family Gonostomatidae</b>                            |                       |                       |                       |                       |                         |                          |  |
| <i>Cyclothone acclinidens</i> Quéro, 1974               |                       |                       |                       |                       |                         | MZUCR                    | D  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Diplophos proximus</i> Parr, 1931                       |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Diplophos taenia</i> Günther, 1873                      |                       |                       |                       |                       |                         | SIO                      | D  |
| <b>Family Sternoptychidae</b>                              |                       |                       |                       |                       |                         |                          |  |
| <i>Argyropelecus lychnus</i> Garman, 1899                  |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Sternoptyx diaphana</i> Hermann, 1781                   |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Family Phosichthyidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Ichthyococcus irregularis</i> Rechnitzer & Böhlke, 1958 |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Vinciguerria lucetia</i> (Garman, 1899)                 |                       |                       |                       |                       | 3                       | MZUCR, SIO               | D  |
| <b>Family Stomiidae</b>                                    |                       |                       |                       |                       |                         |                          |  |
| <i>Astronesthes niger</i> Richardson, 1845                 |                       |                       |                       |                       |                         | SIO                      | D  |
| <i>Bathophilus filifer</i> (Garman, 1899)                  |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Borostomias panamensis</i> Regan & Trewavas, 1929       |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Chauliodus barbatus</i> Garman, 1899                    |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Stomias atriventer</i> Garman, 1899                     |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Order ATELEOPODIFORMES</b>                              |                       |                       |                       |                       |                         |                          |  |
| <b>Family Ateleopodidae</b>                                |                       |                       |                       |                       |                         |                          |  |
| <i>Guentherus altivela</i> Osório, 1917                    |                       |                       |                       |                       | 12, 15                  |                          | D  |
| <b>Order AULOPIFORMES</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <b>Family Aulopidae</b>                                    |                       |                       |                       |                       |                         |                          |  |
| <i>Aulopus bajacali</i> Parin & Kotlyar, 1984              |                       |                       |                       |                       | 8, 10, 11, 12, 18       | LACM, MZUCR              | D  |
| <b>Family Chlorophthalmidae</b>                            |                       |                       |                       |                       |                         |                          |  |
| <i>Chlorophthalmus mento</i> Garman, 1899                  |                       |                       |                       |                       | 8, 10, 12, 15, 18       | LACM, MZUCR              | D  |
| <b>Family Scopelarchidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Scopelarchoides nicholsi</i> Parr, 1929                 |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Order MYCTOPHIFORMES</b>                                |                       |                       |                       |                       |                         |                          |  |
| <b>Family Neoscopelidae</b>                                |                       |                       |                       |                       |                         |                          |  |
| <i>Scopelengys tristis</i> Alcock, 1890                    |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Family Myctophidae</b>                                  |                       |                       |                       |                       |                         |                          |  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Diaphus pacificus</i> Parr, 1931                            |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Diogenichthys laternatus</i> (Garman, 1899)                 |                       |                       |                       |                       |                         | MZUCR, SIO               | D  |
| <i>Gonichthys tenuiculus</i> (Garman, 1899)                    |                       |                       |                       |                       |                         | MZUCR, SIO               | D  |
| <i>Lampanyctus omostigma</i> Gilbert, 1908                     |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Myctophum aurolaternatum</i> (Garman, 1899)                 |                       |                       |                       |                       |                         | LACM, SIO                | D  |
| <i>Myctophum nitidulum</i> Garman, 1899                        |                       |                       |                       |                       |                         | LACM, SIO                | D  |
| <i>Nannobrachium idostigma</i> (Parr, 1931)                    |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Notolychnus valdiviae</i> (Brauer, 1904)                    |                       |                       |                       |                       |                         | SIO                      | D  |
| <i>Protomyctophum</i> sp.                                      |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Symbolophorus evermanni</i> (Gilbert, 1905)                 |                       |                       |                       |                       |                         | LACM, SIO                | D  |
| <i>Symbolophorus reversus</i> Gago & Ricord, 2005              |                       |                       |                       |                       |                         | LACM, SIO                | D  |
| <i>Triphoturus mexicanus</i> (Gilbert, 1890)                   |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Order GADIFORMES</b>  |                       |                       |                       |                       |                         |                          |  |
| <b>Family Bregmacerotidae</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <i>Bregmaceros bathymaster</i> (Jordan & Bollman, 1890)        |                       |                       |                       |                       | 18*                     | MZUCR                    | D  |
| <b>Family Macrouridae</b>                                      |                       |                       |                       |                       |                         |                          |  |
| <i>Caelorinchus canus</i> (Garman, 1899)                       |                       |                       |                       |                       | 12, 19                  |                          | D  |
| <i>Coryphaenoides anguliceps</i> (Garman, 1899)                |                       |                       |                       |                       | 12                      |                          | D  |
| <i>Coryphaenoides boops</i> (Garman, 1899)                     |                       |                       |                       |                       | 12                      |                          | D  |
| <i>Coryphaenoides bucephalus</i> (Garman, 1899)                |                       |                       |                       |                       | 12, 16, 19              |                          | D  |
| <i>Coryphaenodes bulbiceps</i> (Garman, 1899)                  |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <i>Coryphaenoides delsolari</i> Chirichigno F. & Iwamoto, 1977 |                       |                       |                       |                       | 19                      |                          | D  |
| <i>Mataeocephalus tenuicaudus</i> (Garman, 1899)               |                       |                       |                       |                       | 12                      |                          | D  |
| <i>Nezumia convergens</i> (Garman, 1899)                       |                       |                       |                       |                       | 16                      | LACM, MZUCR              | D  |
| <b>Family Moridae</b>  |                       |                       |                       |                       |                         |                          |  |
| <i>Laemonema</i> sp.   |                       |                       |                       |                       | 15                      |                          | D  |
| <i>Physiculus</i> sp.  |                       |                       |                       |                       | 15                      |                          | D  |
| <b>Family Merlucciidae</b>                                     |                       |                       |                       |                       |                         |                          |  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Merluccius angustimanus</i> Garman, 1899                |                       |                       |                       |                       | 8, 10, 12               | MZUCR                    | D  |
| <i>Merluccius gayi gayi</i> (Guichenot, 1848)              |                       |                       |                       |                       | 18                      | MZUCR                    | D  |
| <b>Order OPHIDIIFORMES</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <b>Family Carapidae</b>                                    |                       |                       |                       |                       |                         |                          |  |
| <i>Echiodon exsilium</i> Rosenblatt, 1961                  |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, MZUCR              | D  |
| <b>Family Ophidiidae</b>                                   |                       |                       |                       |                       |                         |                          |  |
| <i>Brotulotaenia nielsenii</i> Cohen, 1974                 |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <i>Lepophidium pardale</i> (Gilbert 1890)                  |                       |                       |                       |                       | 18                      |                          | D  |
| <i>Ophidion</i> sp.  |                       |                       |                       |                       |                         | LACM                     | ?  |
| <i>Otophidium indefatigabile</i> Jordan & Bollman, 1890    |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, MZUCR              | S  |
| <i>Porogadus atripectus</i> Garman, 1899                   |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <b>Family Bythitidae</b>                                   |                       |                       |                       |                       |                         |                          |  |
| <i>Cataetys simus</i> Garman 1899                          |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <b>Family Aphyonidae</b>                                   |                       |                       |                       |                       |                         |                          |  |
| <i>Sciadonus pedicellaris</i> Garman 1899                  |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <b>Order LOPHIIFORMES</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <b>Family Lophiidae</b>                                    |                       |                       |                       |                       |                         |                          |  |
| <i>Lophiodes caulinaris</i> (Garman, 1899)                 |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, MZUCR              | D  |
| <i>Lophiodes spilurus</i> (Garman, 1899)                   |                       |                       |                       |                       | 12, 15, 18              |                          | D  |
| <i>Lophiomus setigerus</i> (Vahl, 1797)                    |                       |                       |                       |                       |                         | MZUCR                    | D  |
| <b>Family Chaunacidae</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <i>Chaunacops coloratus</i> (Garman 1899)                  |                       |                       |                       |                       | 1, 3, 16                |                          | D  |
| <b>Family Ogcocephalidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Dibranchius crasens</i> Bradbury, McCosker & Long, 1999 |                       |                       |                       |                       | 15                      |                          |  |
| <i>Dibranchius erinaceus</i> (Garman, 1899)                |                       |                       |                       |                       | 11, 12, 16, 19          | CAS, LACM,<br>MZUCR      | D  |
| <i>Dibranchius hystrix</i> Garman, 1899                    |                       |                       |                       |                       | 1, 3, 16                | CAS, LACM,<br>MZUCR      | D  |
| <i>Zalieutes elater</i> (Jordan & Gilbert, 1882)           |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, MZUCR              | D  |



|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <b>Family Oneirodidae</b>                                |                       |                       |                       |                       |                         |                          |  |
| <i>Dolopichthys allector</i> Garman, 1899                |                       |                       |                       |                       | 1, 3                    |                          | D  |
| <b>Family Linophrynidae</b>                              |                       |                       |                       |                       |                         |                          |  |
| <i>Linophryne arcturi</i> (Beebe, 1926)                  |                       |                       |                       |                       | 16, 19                  | CAS                      | D  |
| <b>Order MUGILIFORMES</b>                                |                       |                       |                       |                       |                         |                          |  |
| <b>Family Mugilidae</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <i>Agonostomus monticola</i> (Brancroft, 1834)**         |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, SIO               | S  |
| <i>Mugil cephalus</i> Linnaeus, 1758                     |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <b>Order BELONIFORMES</b>                                |                       |                       |                       |                       |                         |                          |  |
| <b>Family Exocoetidae</b>                                |                       |                       |                       |                       |                         |                          |  |
| <i>Cheilopogon cyanopterus</i> (Valenciennes, 1847)      |                       |                       |                       |                       | 3                       |                          | S  |
| <i>Cheilopogon furcatus</i> (Mitchill, 1815)             |                       |                       |                       |                       | 12                      |                          | S  |
| <i>Cheilopogon spilonotopterus</i> (Bleeker, 1866)       |                       |                       |                       |                       | 12, 18                  | SIO                      | S  |
| <i>Cheilopogon xenopterus</i> (Gilbert, 1890)            |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <i>Cypselurus callopterus</i> (Günther, 1866)            |                       |                       |                       |                       | 18*                     |                          | S  |
| <i>Exocoetus monocirrhus</i> (Richardson, 1846)          |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, MZUCR,<br>SIO      | S  |
| <i>Exocoetus volitans</i> (Linnaeus, 1758)               |                       |                       |                       |                       | 10, 12, 18              | MZUCR, SIO               | S  |
| <i>Hirundichthys marginatus</i> (Nichols & Breder, 1928) |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <i>Hirundichthys rondeletii</i> (Valenciennes, 1846)     |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <i>Hirundichthys speculiger</i> (Valenciennes, 1846)     |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                    | S  |
| <i>Parexocoetus brachypterus</i> (Richardson, 1846)      |                       |                       |                       |                       | 18*                     |                          | S  |
| <i>Prognichthys sealei</i> (Abe, 1955)                   |                       |                       |                       |                       | 8, 12, 18               |                          | S  |
| <i>Prognichthys tringa</i> Breder, 1928                  |                       |                       |                       |                       | 8, 10, 12, 18           |                          | S  |
| <b>Family Hemiramphidae</b>                              |                       |                       |                       |                       |                         |                          |  |
| <i>Euleptorhamphus viridis</i> (Van Hasselt, 1823)       |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, SIO                | S  |
| <i>Hemiramphus saltator</i> Gilbert & Starks, 1904       |                       |                       |                       |                       | 12, 18                  | USNM                     | S  |
| <i>Hyporhamphus gilli</i> Meek & Hildebrand, 1923        |                       |                       |                       |                       | 18                      |                          | S  |
| <i>Hyporhamphus rosae</i> (Jordan & Gilbert, 1880)       |                       |                       |                       |                       | 12                      | MZUCR                    | S  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Oxyporhamphus micropterus</i> (Valenciennes, 1847)       |                       |                       |                       |                       | 8, 10, 12, 18           | LACM                     | S  |
| <b>Family Belonidae</b>                                     |                       |                       |                       |                       |                         |                          |  |
| <i>Ablennes hians</i> (Valenciennes, 1846)                  |                       |                       |                       |                       | 12, 18                  |                          | S  |
| <i>Platybelone argalus pterura</i> (Osburn & Nichols, 1916) |                       |                       |                       |                       | 8, 10, 12, 18           | LACM, MZUCR              | S  |
| <i>Strongylura exilis</i> (Girard, 1854)                    |                       | +                     |                       |                       | 8, 9, 10, 12, 18        | LACM, MZUCR              | S  |
| <i>Tylosurus acus melanotus</i> (Bleeker, 1850)             |                       |                       |                       |                       | 7, 12, 18               |                          | S  |
| <i>Tylosurus pacificus</i> (Steindachner, 1876)             |                       |                       |                       |                       | 8, 10, 12, 18           | LACM                     | S  |
| <b>Order GASTEROSTEIFORMES</b>                              |                       |                       |                       |                       |                         |                          |  |
| <b>Family Syngnathidae</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <i>Syngnathus auliscus</i> (Swain, 1882)                    |                       |                       |                       |                       |                         | CAS                      | S  |
| <b>Family Fistulariidae</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <i>Fistularia corneta</i> Gilbert & Starks, 1904            |                       |                       |                       |                       | 18                      |                          | S  |
| <b>Order SCORPAENIFORMES</b>                                |                       |                       |                       |                       |                         |                          |  |
| <b>Family Scorpaenidae</b>                                  |                       |                       |                       |                       |                         |                          |  |
| <i>Pontinus clemensi</i> Fitch, 1955                        |                       |                       |                       |                       | 8, 10, 12, 15, 18       | LACM, MZUCR              | D  |
| <i>Pontinus</i> new species                                 |                       |                       |                       |                       | 10                      | MZUCR                    | D  |
| <i>Pontinus sierra</i> Gilbert, 1890                        |                       |                       |                       |                       | 8, 10, 12               | MZUCR                    | D  |
| <i>Scorpaena</i> new species                                |                       |                       |                       |                       | 10, 12                  | MZUCR                    | D  |
| <i>Scorpaena russula</i> Jordan & Bollman, 1890             |                       |                       |                       |                       | 10, 12, 16, 18          | MZUCR                    | S  |
| <b>Family Triglidae</b>                                     |                       |                       |                       |                       |                         |                          |  |
| <i>Bellator</i> new species                                 |                       |                       |                       |                       | 8, 12                   |                          | D  |
| <i>Bellator farrago</i> Richards & McCosker, 1998           |                       |                       |                       |                       | 11, 18                  |                          | D  |
| <i>Bellator loxias</i> (Jordan, 1897)                       |                       |                       |                       |                       | 8, 10, 12, 15, 16, 18   | LACM, MZUCR              | D  |
| <i>Prionotus</i> new species                                |                       |                       |                       |                       | 8, 10, 12               |                          | D  |
| <b>Family Peristediidae</b>                                 |                       |                       |                       |                       |                         |                          |  |
| <i>Peristedion crustosum</i> Garman, 1899                   |                       |                       |                       |                       | 8, 10, 12, 15           | MZUCR<br>CAS, LACM,      | D  |
| <i>Peristedion nesium</i> Bussing, 2010                     |                       |                       |                       |                       | 8, 9, 10, 12, 18        | MZUCR                    | D  |
| <b>Family Liparidae</b>                                     |                       |                       |                       |                       |                         |                          |  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup>       | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|--------------------------|--|
| <i>Paraliparis attenuatus</i> Garman, 1899            |                       |                       |                       |                       | 3                             |                          | D  |
| <b>Order PERCIFORMES</b>                              |                       |                       |                       |                       |                               |                          |  |
| <b>Family Coryphaenidae</b>                           |                       |                       |                       |                       |                               |                          |  |
| <i>Coryphaena equiselis</i> (Linnaeus, 1758)          |                       |                       |                       |                       | 8, 10, 12, 18                 | LACM, MZUCR              | S  |
| <i>Coryphaena hippurus</i> (Linnaeus, 1758)           |                       |                       |                       |                       | 3, 8, 10, 12, 18              | LACM, MZUCR              | S  |
| <b>Family Echeneidae</b>                              |                       |                       |                       |                       |                               |                          |  |
| <i>Phtheichthys lineatus</i> (Menzies, 1791)          |                       |                       |                       |                       | 12, 18                        |                          | S  |
| <i>Remora australis</i> (Bennett, 1840)               |                       |                       |                       |                       | 12, 18                        | CAS                      | D  |
| <i>Remora brachyptera</i> (Lowe, 1839)                |                       |                       |                       |                       | 3, 8, 10, 12, 18              | MCZ, MZUCR,<br>USNM      | D  |
| <i>Remora osteochir</i> (Cuvier, 1829)                |                       |                       |                       |                       | 8, 10, 12, 18                 | MZUCR, USNM              | D  |
| <i>Remora remora</i> (Linnaeus, 1758)                 |                       |                       |                       |                       | 3, 4, 8, 9, 10, 12, 15,<br>18 | MCZ, MZUCR,<br>UF        | D  |
| <i>Remorina albescens</i> (Temminck & Schlegel, 1850) |                       |                       |                       |                       | 8, 10, 12, 18                 | CAS                      | D  |
| <b>Family Carangidae</b>                              |                       |                       |                       |                       |                               |                          |  |
| <i>Decapterus macarellus</i> (Cuvier, 1833)           |                       |                       |                       |                       | 8, 9, 10, 12, 18              | MZUCR                    | D  |
| <i>Naucrates ductor</i> (Linnaeus, 1758)              |                       |                       |                       |                       | 8, 9, 10, 12, 18              | LACM                     | D  |
| <i>Selar crumenophthalmus</i> (Bloch, 1793)           |                       |                       |                       |                       | 8, 9, 10, 12, 18              | LACM, MZUCR,<br>SIO      | D  |
| <i>Trachurus murphyi</i> Nichols, 1920                |                       |                       |                       |                       | 11, 12                        |                          | D  |
| <b>Family Bramidae</b>                                |                       |                       |                       |                       |                               |                          |  |
| <i>Brama dussumieri</i> Cuvier, 1831                  |                       |                       |                       |                       | 7, 12, 18                     |                          | D  |
| <i>Taractes rubescens</i> (Jordan & Evermann, 1887)   |                       |                       |                       |                       | 7, 18                         |                          | D  |
| <b>Family Caristiidae</b>                             |                       |                       |                       |                       |                               |                          |  |
| <i>Paracaristius</i> sp.                              |                       |                       |                       |                       | 17                            |                          | D  |
| <b>Family Lobotidae</b>                               |                       |                       |                       |                       |                               |                          |  |
| <i>Lobotes pacificus</i> Gilbert, 1898                |                       |                       |                       |                       | 18                            |                          | S  |
| <b>Family Gerreidae</b>                               |                       |                       |                       |                       |                               |                          |  |
| <i>Eucinostomus currani</i> Zahuranec, 1980           |                       |                       |                       |                       | 8, 10, 12, 18                 | MZUCR                    | S  |
| <b>Family Polynemidae</b>                             |                       |                       |                       |                       |                               |                          |  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup>         | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|----------------------------------|--|
| <i>Polydactylus approximans</i> (Lay & Bennett, 1839)  |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                            | S  |
| <b>Family Sciaenidae</b>                               |                       |                       |                       |                       |                         |                                  |  |
| <i>Menticirrhus paitensis</i> Hildebrand, 1946         |                       |                       |                       |                       |                         | CAS                              | S  |
| <i>Umbrina xanti</i> Gill, 1862                        |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, SIO                       | S  |
| <b>Family Labridae</b>                                 |                       |                       |                       |                       |                         |                                  |  |
| <i>Sagittalarva inornatus</i> (Gilbert, 1890)          |                       |                       |                       |                       | 8, 11, 12, 18           |                                  | D  |
| <b>Family Zoarcidae</b>                                |                       |                       |                       |                       |                         |                                  |  |
| <i>Pachycara bulbiceps</i> (Garman, 1899)              |                       |                       |                       |                       | 1, 3                    |                                  | D  |
| <b>Family Dactyloscopidae</b>                          |                       |                       |                       |                       |                         |                                  |  |
| <i>Dactyloscopus amnis</i> Miller & Briggs, 1962**     |                       |                       |                       |                       |                         | MZUCR                            | S  |
| <i>Dactyloscopus lacteus</i> (Myers & Wade, 1946)      |                       |                       |                       |                       | 12, 18                  |                                  | S  |
| <i>Dactyloscopus fallax</i> Dawson, 1975               |                       |                       |                       |                       | 8, 12, 18               | CAS, LACM,<br>MZUCR              | S  |
| <b>Family Callionymidae</b>                            |                       |                       |                       |                       |                         |                                  |  |
| <i>Synchiropus atrilabiatus</i> (Garman, 1899)         |                       |                       |                       |                       | 8, 10, 12, 16, 18       | LACM, MZUCR,<br>SIO              | D  |
| <b>Family Eleotridae</b>                               |                       |                       |                       |                       |                         |                                  |  |
| <i>Eleotris picta</i> Kner, 1863**                     |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR, UF<br>CAS, MZUCR,<br>SIO  | S  |
| <i>Eleotris tubularis</i> Heller & Snodgrass, 1903**   |                       |                       |                       |                       | 2, 3, 8, 10, 19         |                                  | S  |
| <i>Gobiomorus maculatus</i> (Günther, 1859)**          |                       |                       |                       |                       | 12, 18                  |                                  | S  |
| <b>Family Gobiidae</b>                                 |                       |                       |                       |                       |                         |                                  |  |
| <i>Sicydium cocoensis</i> (Heller & Snodgrass, 1903)** |                       |                       |                       |                       | 2, 3, 5, 8, 10, 12      | CAS, MCZ,<br>MZUCR, SIO,<br>USNM | S  |
| <b>Family Schindleriidae</b>                           |                       |                       |                       |                       |                         |                                  |  |
| <i>Schindleria praematura</i> (Schindler, 1930)        |                       |                       |                       |                       | 18                      |                                  | D  |
| <b>Family Luvaridae</b>                                |                       |                       |                       |                       |                         |                                  |  |
| <i>Luvarus imperialis</i> (Rafinesque, 1810)           |                       |                       |                       |                       | 12, 18                  |                                  | D  |
| <b>Family Gempylidae</b>                               |                       |                       |                       |                       |                         |                                  |  |

|   | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <i>Gempylus serpens</i> (Cuvier, 1829)              |                       |                       |                       |                       | 3, 12, 18               | LACM, MCZ                | D  |
| <i>Lepidocybium flavobrunneum</i> (Smith, 1843)     |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <i>Nealotus tripes</i> Johnson, 1865                |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <b>Family Trichiuridae</b>                          |                       |                       |                       |                       |                         |                          |  |
| <i>Trichiurus lepturus</i> Linnaeus, 1758           |                       |                       |                       |                       | 7                       |                          | D  |
| <b>Family Scombridae</b>                            |                       |                       |                       |                       |                         |                          |  |
| <i>Acanthocybium solandri</i> (Cuvier, 1832)        |                       |                       |                       | +                     | 4, 5, 8, 9, 10, 12, 18  | MZUCR, SIO,<br>USNM      | S  |
| <i>Auxis rochei</i> (Risso, 1862)                   |                       |                       |                       |                       | 8, 10, 12               | MZUCR                    | D  |
| <i>Auxis thazard</i> (Lacepède, 1800)               |                       |                       |                       |                       | 8, 10, 12               | MZUCR                    | D  |
| <i>Auxis brachydorax</i> Collette & Aadland, 1996   |                       |                       |                       |                       | 18                      |                          | D  |
| <i>Auxis eudorax</i> Collette & Aadland, 1996       |                       |                       |                       |                       | 18                      |                          | D  |
| <i>Euthynnus lineatus</i> (Kishinouye, 1920)        |                       |                       |                       | +                     | 8, 10, 12, 18           | CAS, MZUCR               | S  |
| <i>Katsuwonus pelamis</i> (Linnaeus, 1758)          |                       |                       |                       |                       | 3, 8, 10, 12, 18        | MZUCR                    | D  |
| <i>Sarda orientalis</i> (Temminck & Schlegel, 1844) |                       |                       |                       |                       | 8, 9, 10, 12, 18        | MZUCR                    | S  |
| <i>Scomber japonicus</i> Houttuyn, 1782             |                       |                       |                       |                       | 7, 12, 18               |                          | D  |
| <i>Scomberomorus sierra</i> Jordan & Starks, 1895   |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                    | S  |
| <i>Thunnus obesus</i> (Lowe, 1839)                  |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <b>Family Xiphiidae</b>                             |                       |                       |                       |                       |                         |                          |  |
| <i>Xiphias gladius</i> (Linnaeus, 1758)             |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <b>Family Istiophoridae</b>                         |                       |                       |                       |                       |                         |                          |  |
| <i>Istiophorus platypterus</i> (Saw, 1792)          |                       |                       |                       |                       | 8, 9, 10, 12, 18        | LACM, USNM               | D  |
| <i>Istiompax indica</i> (Cuvier, 1832)              |                       |                       |                       |                       | 8, 12, 18               |                          | D  |
| <i>Kajikia audax</i> (Philippi, 1887)               |                       |                       |                       |                       | 18                      |                          | D  |
| <i>Makaira nigricans</i> Lacepède, 1802             |                       |                       |                       |                       | 8, 10, 12, 18           |                          | D  |
| <i>Tetrapturus angustirostris</i> (Tanaka, 1915)    |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <i>Tetrapturus audax</i> (Philippi, 1887)           |                       |                       |                       |                       | 8, 9, 10, 12            |                          | D  |
| <b>Family Centrolophidae</b>                        |                       |                       |                       |                       |                         |                          |  |
| <i>Seriotelella violacea</i> Guichenot, 1848        |                       |                       |                       |                       | 11, 12                  |                          | D  |

|  | Field<br>work<br>2006 | Field<br>work<br>2009 | Field<br>work<br>2013 | Field<br>work<br>2014 | References <sup>a</sup> | Museum Data <sup>b</sup> | Bathymetric<br>distribution <sup>c</sup> |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|--------------------------|--|
| <b>Family Nomeidae</b>                               |                       |                       |                       |                       |                         |                          |  |
| <i>Cubiceps pauciradiatus</i> (Günther, 1872)        |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <i>Nomeus gronovii</i> (Gmelin, 1789)                |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <i>Psenes arafurensis</i> Günther, 1889              |                       |                       |                       |                       | 18*                     |                          | D  |
| <i>Psenes cyanophrys</i> Valenciennes, 1833          |                       |                       |                       |                       | 7, 12, 18               |                          | D  |
| <i>Psenes sio</i> (Haedrich, 1970)                   |                       |                       |                       |                       | 18*                     |                          | D  |
| <b>Order PLEURONECTIFORMES</b>                       |                       |                       |                       |                       |                         |                          |  |
| <b>Family Paralichthyidae</b>                        |                       |                       |                       |                       |                         |                          |  |
| <i>Citharichthys platophrys</i> Gilbert, 1891        |                       |                       |                       |                       | 12, 18                  | LACM                     | S  |
| <i>Hippoglossina bollmani</i> Gilbert, 1890          |                       |                       |                       |                       | 8, 10, 12, 16, 18       | LACM, MZUCR              | D  |
| <i>Syacium latifrons</i> (Jordan & Gilbert, 1882)    |                       |                       |                       |                       | 8, 10, 12, 18           | MZUCR                    | D  |
| <i>Syacium maculiferum</i> (Garman, 1899)            |                       |                       |                       |                       | 1, 3, 8, 10, 12, 18     | MZUCR, SIO               | D  |
| <i>Syacium ovale</i> (Günther, 1864)                 |                       |                       |                       |                       |                         | LACM                     | S  |
| <b>Family Cynoglossidae</b>                          |                       |                       |                       |                       |                         |                          |  |
| <i>Symphurus atramentatus</i> Jordan & Bollman, 1890 |                       |                       |                       |                       | 12, 18                  | LACM                     | D  |
| <i>Symphurus diabolicus</i> Mahadeva & Munroe, 1990  |                       |                       |                       |                       | 18                      |                          | D  |
| <i>Symphurus oligomerus</i> Mahadeva & Munroe, 1990  |                       |                       |                       |                       | 12, 16, 18              | LACM, MZUCR              | D  |
| <i>Symphurus varius</i> Garman, 1899                 |                       |                       |                       |                       | 1, 3, 8, 10, 12, 18     | LACM, MZUCR              | D  |
| <b>Order TETRAODONTIFORMES</b>                       |                       |                       |                       |                       |                         |                          |  |
| <b>Family Diodontidae</b>                            |                       |                       |                       |                       |                         |                          |  |
| <i>Diodon eydouxii</i> (Brisout de Barneville, 1846) |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <b>Family Molidae</b>                                |                       |                       |                       |                       |                         |                          |  |
| <i>Mola mola</i> (Linnaeus, 1758)                    |                       |                       |                       |                       | 12, 18                  |                          | D  |
| <i>Ranzania laevis</i> (Pennant, 1776)               |                       |                       |                       |                       | 12, 18                  |                          | D  |

<sup>a</sup> 1) Garman 1899; 2) Snodgrass and Heller 1905; 3) Fowler 1938; 4) Schmitt and Schultz 1940; 5) Seale 1940; 6) Briggs 1961; 7) Robertson et al. 2004; 8) Bussing and López 2005; 9) Garrison 2005; 10) Bussing and López 2009; 11) McCosker and Rosenblatt 2010; 12) Cortés 2012; 13) Cortés et al. 2012; 14)

Friedlander et al. 2012; 15) Starr et al. 2012; 16) Angulo 2014; 17) Angulo et al. 2014; 18) Robertson and Allen 2015 (\*Unconfirmed species); 19) Froese and Pauly 2015.

<sup>b</sup> CAS: California Academy of Sciences; USNM: National Museum of Natural History, Smithsonian Institution; LACM: Natural History Museum of Los Angeles County; SIO: Scripps Institution of Oceanography; UF: Florida Museum of Natural History, University of Florida; MCZ: Museum of Comparative Zoology; MZUCR: Museo de Zoología of the Universidad de Costa Rica.

<sup>c</sup> D: Deep-water species (bathymetric midpoint limit higher than –50 m or Deeper; S: Shallow-water species (resident from surface to 50 m Deep). Data from Robertson and Allen (2015) and Froese and Pauly (2015).

\*\*Brackish water species.

## Reference

Angulo A (2014) Deep-water Fishes of the Pacific of Costa Rica: Diversity, Distribution and Biogeographic relationships. Master

Thesis, Universidad de Costa Rica, San José, Costa Rica

Angulo A, Naranjo-Elizondo B, Corrales-Ugalde M, Cortés J (2014) First record of the genus *Paracaristius* (Perciformes: Caristiidae)

from the Pacific of Central America, with comments on their association with the siphonophore *Praya reticulata*

(Siphonophorae: Prayidae). Mar Biodiv Rec 7:1-7. doi: 10.1017/s1755267214001262

Briggs JC (1961) The East Pacific Barrier and the Distribution of Marine Shore Fishes. Evol 15:545-554. doi: 10.2307/2406322

Bussing WA, López M (2005) Peces de la Isla del Coco y peces arrecifales de la costa Pacífica de América Central meridional/Fishes

of Cocos Island and Reef Fishes of the Pacific Coast of Lower Central America. Rev Biol Trop 53 (Suppl 2):1-192

Bussing WA, López M (2009) Marine fish. In: Wehrtmann IS, Cortés J (eds) Marine Biodiversity of Costa Rica, Central America.

Springer, Berlín, pp 453-458, pp 412-473(CD)

- Cort s J (2012) Marine biodiversity of an Eastern Tropical Pacific oceanic island, Isla del Coco, Costa Rica. *Rev Biol Trop* 60 (Suppl 3):131-185
- Cort s J, S nchez-Jim nez A, Rodr guez-Arrieta JA, Quir s-Barrantes G, Gonz lez PC, Blum S (2012). Elasmobranchs observed in deepwaters (45-330m) at Isla del Coco National Park, Costa Rica (Eastern Tropical Pacific). *Rev Biol Trop* 60 (Suppl 3):257-273
- Fowler HW (1938) The fishes of the George Vandervilt South Pacific Expedition 1937. *Monogr Acad Nat Sci Phil* 2:1-349
- Friedlander A, Zgliczynski BJ, Ballesteros E, Aburto-Oropeza O, Bola os A, Sala E (2012) The shallow-water fish assemblage of Isla del Coco National Park, Costa Rica: structure and patterns in an isolated, predator-dominated ecosystem. *Rev Biol Trop* 60 (Suppl 3):321-338
- Froese R, Pauly D (2015) FishBase. <http://www.fishbase.org>. Accessed 20 March 2015
- Garman S (1899) Reports on an exploration off the west coasts of Mexico, Central and South America, and off the Gal pagos Islands, in charge of Alexander Agassiz, by the U.S. Fish Commission Steamer “Albatross”, during 1891, Lieut. Commander Z.L. Tanner U.S.N., commanding. XXVI. The Fishes. *Mem Mus Comp Zo l Harvard Coll* 24:1-432
- Garrison G (2005) Peces de la Isla del Coco/Isla del Coco Fishes, 2nd ed. Edit. INBio, Heredia
- McCosker JE, Rosenblatt RH (2010) The Fishes of the Gal pagos Archipelago: An Update. *Proc Calif Acad Sci* 61:167-195
- Robertson DR, Grove JS, McCosker JE (2004) Tropical transpacific shore fishes. *Pac Sci* 58:507-565. doi: 10.1353/psc.2004.0041



- Robertson DR, Allen GR (2015). Shore fishes of the Tropical Eastern Pacific. Smithsonian Tropical Research Institute, Balboa, Panama. <http://www.stri.org/sftep/>. Accessed 23 March 2015
- Schmitt WL, Schultz LP (1940) List of the fishes taken on the Presidential Cruise of 1938. *Smithson Misc Coll* 98:1-10
- Seale A (1940) Report on fishes from Allan Hancock Expeditions in the California Academy of Sciences. *Allan Hancock Pac Exp* 9:1-46
- Snodgrass RE, Heller E (1905) Papers from the Hopkins-Stanford Galápagos Expedition, 1898-1899. XVII. Shore fishes of the Revillagigedo, Clipperton, Cocos and Galápagos islands. *Proc Wash Acad Sci* 6:333-427. doi: 10.5962/bhl.title.18212
- Sterr RM, Green K, Sala E (2012) Deepwater fish assemblages at Coco Island National Park and Las Gemelas Seamounts, Costa Rica. *Rev Biol Trop* 60 (Suppl 3):347-362