



# Correction to: Elasmobranchs of the Mexican Caribbean: biodiversity and conservation status

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The original published version of Table 1 contained errors. The corrected Table 1 is as follows:

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**Table 1** Elasmobranch species for the Mexican Caribbean, number of sources (# S.). Type of source: BC, organisms deposited in national and international scientific collections or museums; JP, articles in refereed journals; BCH, book or book chapter; TR, corroborated reports of governmental, academic, or non-governmental institutions; FS, species found in the catches of the local artisanal fishery; and OD, species reported in online database. Confirmation: confirmed (C) and non-confirmed (NC) and conservation status (NE not evalu-

ate, DD data deficient, LC least concern, NT near threatened, VU vulnerable, EN endangered, CR critically endangered, A threatened, P near extinction, Pr special protection) based on the International Union for Conservation of Nature's Red List of Threatened Species (IUCN), Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and Mexican Law (NOM-059-SEMARNAT). Nomenclature based on Fricke et al. (2021), Ebert et al. (2021), and Last et al. (2016)

| ORDER           | FAMILY  | SPECIES                                       | # S  | Type of source categories | Conf              | IUCN | CITES | NOM-059 |  |
|-----------------|---|---|--|---------------------------|-------------------|------|-------|---------|--|
| Hexanchiformes  | Hexanchidae   | <i>Hexanchus nakamurai</i> Teng, 1962         | 3  | FS:1, JP:1, TR:1          | C                 | NT   |       |         |  |
|                 |   | <i>Hexanchus griseus</i> (Bonnaterre, 1788)   | 2  | BCH:1, JP:1               | C                 | NT   |       |         |  |
| Squaliformes    | Echinorhinidae  | <i>Echinorhinus brucus</i> (Bonnaterre, 1788) | 3  | BC:1, JP:1, OD:1          | C                 | EN   |       |         |  |
|                 |   | Squalidae                                     | <i>Cirrhigaleus asper</i> (Merrett, 1973)                      | 2                         | BCH:1, TR:1       | C    | DD    |         |  |
|                 | <i>Squalus cubensis</i> Howell-Rivero, 1936             |   | 3  | BCH:1, JP:2               | C                 | LC   |       |         |  |
|                 | <i>Centrophorus granulosus</i> (Bloch & Schneider 1801) |   | 4  | BC:1, BCH:1, JP:1, OD:1   | C                 | EN   |       |         |  |
|                 | <i>Centrophorus</i> sp. Del Moral et al., 2016*         |   | 1  | JP:1                      | NC                | NE   |       |         |  |
|                 | <i>Centrophorus uyato</i> (Rafinesque, 1810)            |   | 3  | BC:1, JP:1, OD:1          | C                 | EN   |       |         |  |
|                 | Etmopteridae  |   | <i>Etmopterus bigelowi</i> Shirai & Tachikawa, 1993            | 1                         | BCH:1             | NC   | LC    |         |  |
|                 |   |   | <i>Etmopterus bullisi</i> Bigelow & Schroeder, 1957            | 1                         | JP:1              | C    | LC    |         |  |
|                 |   |   | <i>Etmopterus gracilispinis</i> Krefft, 1968                   | 1                         | BC:1              | NC   | LC    |         |  |
|                 |   |   | <i>Etmopterus hillianus</i> (Poey, 1861)                       | 1                         | JP:1              | C    | LC    |         |  |
|                 |   |   | <i>Etmopterus schultzi</i> Bigelow, Schroeder & Springer, 1953 | 2                         | JP:1, OD:1        | C    | LC    |         |  |
|                 |   |   | <i>Etmopterus virens</i> Bigelow, Schroeder & Springer, 1953   | 3                         | BCH:1, JP:1, OD:2 | C    | LC    |         |  |
|                 | Somniosidae   |   | <i>Centroscymnus owstoni</i> Garman, 1906                      | 1                         | JP:1              | C    | VU    |         |  |
|                 | Oxynotidae  | <i>Oxynotus caribbaeus</i> Cervigon, 1961     | 1  | JP:1                      | C                 | LC   |       |         |  |
| Squatiniiformes | Squatinaidae  | <i>Squatina dumeril</i> Lesueur, 1818         | 3  | BC:1, JP:1, OD:1          | NC                | LC   |       |         |  |
| Laminiiformes   | Alopiidae   | <i>Alopias superciliosus</i> (Lowe, 1841)     | 4  | BCH:1, BC:1, JP:1, OD:1   | C                 | VU   | II    |         |  |

**Table 1** (continued)

| ORDER   | FAMILY             | SPECIES  | # S                                 | Type of source categories     | Conf | IUCN | CITES | NOM-059 |
|---|--------------------|--|-------------------------------------|-------------------------------|------|------|-------|---------|
| Orectolobiformes  | Lamnidae           | <i>Isurus oxyrinchus</i> Rafinesque, 1810        | 6                                   | BCH:2, FS:1, JP:1, OD:1, TR:1 | C    | EN   | II    |         |
|   | Cetorhinidae       | <i>Cetorhinus maximus</i> (Gunnerus, 1765)       | 1                                   | BCH:1                         | NC   | EN   | II    | A       |
|   | Ginglymostomatidae | <i>Ginglymostoma cirratum</i> (Bonnaterre, 1788) | 6                                   | BCH:2, FS:1, JP:2, TR:1       | C    | VU   |       |         |
| Carcharhiniformes                                       | Rhincodontidae     | <i>Rhincodon typus</i> Smith, 1828               | 5                                   | BCH:2, FS:1, JP:1, TR:1       | C    | EN   | II    | A       |
|   | Scyliorhinidae     | <i>Galeus arae</i> (Nichols, 1927)               | 4                                   | JP:1, BCH:1, BC:1, OD:1       | C    | LC   |       |         |
|   |                    | <i>Scyliorhinus hesperius</i> Springer, 1966     | 3                                   | BC:1, JP:1, OD:1              | C    | LC   |       |         |
|   |                    | <i>Scyliorhinus retifer</i> (Garman, 1881)       | 4                                   | BCH:1, BC:1, JP:1, OD:1       | C    | LC   |       |         |
|   |                    | <i>Scyliorhinus meadi</i> Springer, 1966         | 3                                   | BCH:1, JP:1, TR:1             | C    | LC   |       |         |
|   | Triakidae          | <i>Mustelus canis</i> (Mitchill, 1815)           | 4                                   | BCH:1, FS:1, JP:1, TR:1       | C    | NT   |       |         |
|   |                    | <i>Mustelus higmani</i> Springer & Lowe, 1963    | 3                                   | BCH:1, FS:1, JP:1             | C    | EN   |       |         |
|   | Carcharhinidae     | <i>Carcharhinus acronotus</i> (Poey, 1860)       | 6                                   | BCH:2, FS:1, JP:2, TR:1       | C    | EN   |       |         |
|   |                    | <i>Carcharhinus altimus</i> (Springer, 1950)     | 2                                   | BCH:1, JP:1                   | C    | NT   |       |         |
|   |                    | <i>Carcharhinus brachyurus</i> (Günther, 1870)   | 2                                   | OD:1, TR:1                    | C    | VU   |       |         |
| <i>Carcharhinus brevipinna</i> (Valenciennes, 1839)     |                    | 5  | BC:1, FS:1, JP:1, OD:1, TR:1        | C                             | VU   |      |       |         |
| <i>Carcharhinus falciiformis</i> (Müller & Henle, 1839) |                    | 7  | BC:1, BCH:1, FS:1, JP:2, OD:1, TR:1 | C                             | VU   | II   |       |         |
| <i>Carcharhinus leucas</i> (Valenciennes, 1839)         |                    | 7  | BCH:2, FS:1, JP:3, TR:1             | C                             | VU   |      |       |         |
| <i>Carcharhinus limbatus</i> (Valenciennes, 1839)       |                    | 7  | BCH:2, FS:1, JP:3, TR:1             | C                             | VU   |      |       |         |
| <i>Carcharhinus longimanus</i> (Poey, 1861)             |                    | 2  | BCH:1, JP:1                         | C                             | CR   | II   |       |         |
| <i>Carcharhinus obscurus</i> (Lesueur, 1818)            |                    | 7  | BCH:2, FS:1, JP:2, OD:1, TR:1       | C                             | EN   |      |       |         |
| <i>Carcharhinus perezii</i> (Poey, 1876)                |                    | 8  | BC:1, BCH:2, FS:1, JP:2, OD:1, TR:1 | C                             | EN   |      |       |         |
| <i>Carcharhinus plumbeus</i> (Nardo, 1827)              | 6                  | BCH:2, FS:1, JP:1, OD:1, TR:1                    | C                                   | EN                            |      |      |       |         |

**Table 1** (continued)

| ORDER             | FAMILY          | SPECIES  | # S | Type of source categories           | Conf | IUCN | CITES | NOM-059 |
|-------------------|-----------------|--|-----|-------------------------------------|------|------|-------|---------|
|                   |                 | <i>Carcharhinus porosus</i> (Ranzani, 1839)          | 4   | BCH:2, JP:2                         | C    | CR   |       |         |
|                   |                 | <i>Carcharhinus signatus</i> (Poey, 1868)            | 2   | JP: 1, TR:1                         | C    | EN   |       |         |
|                   |                 | <i>Rhizoprionodon porosus</i> (Poey, 1861)           | 6   | BCH:2, FS:1, JP:1, OD:2             | C    | VU   |       |         |
|                   |                 | <i>Rhizoprionodon terraenovae</i> (Richardson, 1837) | 8   | BC:1, BCH:1, FS:1, JP:2, OD:2, TR:1 | C    | LC   |       |         |
|                   |                 | <i>Prionace glauca</i> (Linnaeus, 1758)              | 2   | BCH:1, OD:1                         | C    | NT   |       |         |
|                   |                 | <i>Negaprion brevirostris</i> (Poey, 1868)           | 8   | BC:1, BCH:1, FS:1, JP:2, OD:2, TR:1 | C    | VU   |       |         |
|                   | Galeoceridae    | <i>Galeocerdo cuvier</i> (Perón & Lesueur, 1822)     | 7   | BCH:2, FS:1, JP:3, TR:1             | C    | NT   |       |         |
|                   | Sphyrnidae      | <i>Sphyrna lewini</i> (Griffith & Smith, 1834)       | 4   | BCH:1, FS:1, JP:1, TR:1             | C    | CR   | II    |         |
|                   |                 | <i>Sphyrna mokarran</i> (Rüppell, 1837)              | 6   | BCH:1, FS:1, JP:2, OD:1, TR:1       | C    | CR   | II    |         |
|                   |                 | <i>Sphyrna tiburo</i> (Linnaeus, 1758)               | 7   | BCH:2, FS:1, JP:3, TR:1             | C    | EN   |       |         |
| Rhinopristiformes | Pristidae       | <i>Pristis pectinata</i> Latham, 1794                | 5   | BCH:2, JP:2, TR:1                   | C    | CR   | I     | P       |
|                   |                 | <i>Pristis pristis</i> (Linnaeus, 1758)              | 2   | BC:1, JP:1                          | C    | CR   | I     | P       |
|                   | Rhinobatidae    | <i>Pseudobatos lentiginosus</i> (Garman, 1880)       | 6   | BC:1, BCH:1, FS:1, JP:1, OD:2       | C    | VU   |       |         |
|                   |                 | <i>Pseudobatos percellens</i> (Walbaum, 1792)        | 3   | BC:1, JP:2                          | C    | EN   |       |         |
| Torpediniformes   | Narcinidae      | <i>Narcine bancroftii</i> (Griffith & Smith, 1834)   | 4   | BC:1, BCH:1, FS:1, JP:1             | C    | LC   |       |         |
|                   |                 | <i>Narcine brasiliensis</i> (Olfers, 1831)           | 4   | BC:2, JP:2,                         | C    | NT   |       |         |
|                   | Torpedinidae    | <i>Torpedo andersoni</i> Bullis, 1962                | 2   | BCH:1, JP:1                         | C    | LC   |       |         |
| Rajiformes        | Arhynchobatidae | <i>Pseudoraja fischeri</i> Bigelow & Schroeder, 1954 | 5   | BC:1, BCH:1, JP:1, OD:2             | C    | LC   |       |         |
|                   | Rajidae         | <i>Cruriraja poeyi</i> Bigelow & Schroeder, 1948     | 1   | BCH:1                               | NC   | LC   |       |         |
|                   |                 | <i>Cruriraja rugosa</i> Bigelow & Schroeder, 1958    | 1   | BCH:1                               | NC   | LC   |       |         |
|                   |                 | <i>Breviraja spinosa</i> Bigelow & Schroeder 1950    | 3   | BC:1, OD:2                          | C    | LC   |       |         |

**Table 1** (continued)

| ORDER           | FAMILY        | SPECIES  | # S | Type of source categories           | Conf | IUCN | CITES | NOM-059 |
|-----------------|---------------|--|-----|-------------------------------------|------|------|-------|---------|
| Myliobatiformes | Urotrygonidae | <i>Dipturus olseni</i> (Bigelow & Schroeder, 1951)           | 2   | BC:1, JP:1                          | C    | LC   |       |         |
|                 |               | <i>Dipturus teevani</i> (Bigelow & Schroeder 1951)           | 1   | BCH:1                               | NC   | LC   |       |         |
|                 |               | <i>Fenestraja ishiyamai</i> (Bigelow & Schroeder, 1962)      | 2   | BC:1, JP:1                          | C    | LC   |       |         |
|                 |               | <i>Fenestraja plutonia</i> (Garman, 1881)                    | 2   | BC:1, JP:1                          | C    | LC   |       |         |
|                 |               | <i>Fenestraja sinusmexicanus</i> (Bigelow & Schroeder, 1950) | 2   | BC:1, JP:1                          | C    | LC   |       |         |
|                 |               | <i>Leucoraja garmani</i> (Whitley, 1939)                     | 6   | BC:2, JP:2, OD:2                    | C    | LC   |       |         |
|                 |               | <i>Leucoraja yucatanensis</i> (Bigelow & Schroeder, 1950)    | 6   | BC:1, BCH:1, JP:2, OD:2             | C    | LC   |       |         |
|                 |               | <i>Rajella fuliginea</i> (Bigelow & Schroeder, 1954)         | 1   | BCH:1                               | NC   | LC   |       |         |
|                 |               | <i>Rostroraja ackleyi</i> (Garman, 1881)                     | 3   | BC:1, BCH:1, JP:1                   | C    | LC   |       |         |
|                 |               | <i>Rostroraja texana</i> (Chandler, 1921)                    | 5   | BC:1, BCH:1, JP:2, OD:1             | C    | LC   |       |         |
|                 |               | <i>Urobatis jamaicensis</i> (Cuvier, 1817)                   | 7   | BC:2, BCH:1, FS:1, JP:2, OD:1       | C    | LC   |       |         |
|                 |               | <i>Hypanus americanus</i> (Hildebrand & Schroeder, 1928)     | 6   | BC:2, FS:1, JP:2, OD:1, TR:1        | C    | NT   |       |         |
|                 |               | <i>Hypanus say</i> (Lesueur, 1817)                           | 3   | FS:1, JP:1, TR:1                    | C    | NT   |       |         |
|                 |               | <i>Hypanus sabinus</i> (Lesueur, 1824)                       | 2   | JP:1, OD:1                          | C    | LC   |       |         |
|                 |               | <i>Hypanus guttatus</i> (Bloch & Schneider, 1801)            | 4   | BC:1, BCH:1, FS:1, OD:1             | C    | NT   |       |         |
|                 |               | <i>Pteroplatytrygon violacea</i> (Bonaparte, 1832)           | 1   | BCH:1                               | NC   | LC   |       |         |
|                 |               | <i>Styracura schmardae</i> (Werner, 1904)                    | 9   | BC:1, BCH:2, FS:1, JP:2, OD:2, TR:1 | C    | EN   |       |         |
|                 |               | <i>Gymnura micrura</i> (Bloch & Schneider, 1801)             | 6   | BC:1, BCH:1, FS:1, JP:1, OD:2       | C    | NT   |       |         |
|                 |               | <i>Aetobatus narinari</i> (Eupharasen, 1790)                 | 5   | BCH:1, FS:1, JP:1, OD:1, TR:1       | C    | EN   |       |         |
|                 |               | <i>Myliobatis goodei</i> Garman, 1885                        | 1   | BCH:1                               | NC   | VU   |       |         |

**Table 1** (continued)

| ORDER | FAMILY        | SPECIES   | # S | Type of source categories  | Conf | IUCN | CITES | NOM-059 |
|-------|---------------|---|-----|----------------------------|------|------|-------|---------|
|       | Rhinopteridae | <i>Rhinoptera bonasus</i><br>(Mitchill, 1815)                   | 3   | BCH:1, FS:1, OD:1          | C    | VU   |       |         |
|       |               | <i>Rhinoptera brasiliensis</i> Müller, 1836                     | 1   | BCH:1                      | NC   | VU   |       |         |
|       | Mobulidae     | <i>Mobula hypostoma</i><br>(Bancroft, 1831)                     | 3   | FS:1, JP:1, OD:1           | C    | EN   | II    | Pr      |
|       |               | <i>Mobula birostris</i><br>(Walbaum, 1792)                      | 5   | BCH:1, FS:1, JP:2,<br>OD:1 | C    | EN   | II    | Pr      |
|       |               | <i>Mobula cf. birostris</i><br>Hinojosa-Alvarez<br>et al. 2016* | 2   | FS:1, JP:1                 | NC   | EN   | II    | Pr      |

\*Authors report evidence for new species but there are not yet described

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