

An updated, illustrated inventory of the marine fishes of the US Virgin Islands

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Abstract

The US Virgin Islands (USVI) include St. John and St. Thomas on the Puerto Rican Platform (PRP) and St. Croix, isolated by 2000 m deep water 45 km south of that platform. Previous inventories of the marine fishes of these islands include a comprehensive 2014 checklist of the fishes of St. Croix and a list of the fishes of the PRP produced in 2000. The latter list noted the locations of many records of the plateau's fishes, allowing the construction of a combined inventory for St. John and St. Thomas. Those two islands are treated here as a single faunal unit because they are only 3.5 km apart on a shared shallow shelf with various islets and reefs in between. Here we provide updated information on those two USVI (St. Croix and St. John-Thomas) marine fish faunas. The additions to the St. Croix and St. John-Thomas inventories presented here are based on a combination of information from the two sources indicated above, more recent publications dealing with those faunas, a review of location records on various online sources of biogeographic data, and voucher photographs taken of fishes in the field by authors of this paper and other citizen scientists. This assessment increased the known fauna of St. Croix by 7.5% to 585 species. The inventory for St. John-Thomas increased by 39.9% from 401 species on the 2000 PRP list to 561 with the inclusion of records from other sources. On-site mtDNA (COI) barcodes are available for approximately one-third of the species of the St. John-Thomas fauna, but for only one species collected at St. Croix. A set of underwater photographs of 372 species (34 of them representing the sole record of a species) from St. John-Thomas and of 11 shallow-water species added to the St. Croix fauna is included. These represent occurrence vouchers and also are intended to facilitate future work that builds on the present compendium.

Keywords

Biodiversity, checklist, citizen science, DNA-barcode, photographic voucher, SCUBA survey

Introduction

The United States Virgin Islands (USVI) comprise a US territory adjacent to Puerto Rico, in the northeast Caribbean, that includes three large, inhabited islands, St. John, St. Thomas and St. Croix, and approximately 50 smaller islands and cays around them. The former two are situated only 3.5 km apart, in the center of the Puerto Rico Plateau (PRP), which has an area approximately twice the 9,100 km² of Puerto Rico Island and extends ~ 150 km eastwards from Puerto Rico. St. Croix is located south of St. John and St. Thomas, on its own insular platform, which is separated by 45 km of deep water from the southern edge of the PRP.

The fish fauna of St. Croix was comprehensively reviewed by Smith-Vaniz and Jelks (2014), who built upon an older list by Clavijo et al. (1980), using their own extensive collections of shallow fishes of the Buck Island Reef National Monument on the northern side of St. Croix (Smith-Vaniz et al. 2006), and a review of literature and examination of specimens of fishes collected at St. Croix that are lodged in various museums. In 2000, George Dennis produced an extensive (244 page; 500+ sources cited) U.S. Geological Survey report based on collections and observational records for marine and brackish-water fish from Puerto Rico, St. John and St. Thomas, and other islands on the PRP. Although never formally published in a scientific journal, and no longer available through the USGS source cited by Dennis et al. (2004), that compendium is available online (Dennis 2000).

Here we add new information to update the 2014 list for St. Croix and assemble an inventory for St. John and St. Thomas that includes and expands on data for those two islands contained in Dennis (2000). We extracted the additional information from museum records in online sources of biogeographic data, publications produced since Dennis (2000), digital images of live fishes obtained at the USVI, plus our recent collections and mtDNA barcode records obtained from the database BOLD. The great majority of the species in this compendium are marine, plus we include a small number of species found in fresh to brackish waters.

Materials and methods

Study sites

St. Croix is a 215 km² island in the northeast corner of the Caribbean. It is isolated by ~ 45 km of deep water from the Puerto Rican Platform (**PRP**). Other islands of the Lesser Antilles chain lie within ~ 150 km to the east and southeast of St. Croix. The surrounding

shallow (above ~ 150 m depth) shelf of St. Croix, extending almost 20 km eastward, has approximately the same area as the island. In addition to exposed and sheltered coral reefs and soft bottoms, the island has extensive areas of seagrasses and mangroves.

St. John (area 50 km²) and St. Thomas (area 83 km²) are situated in the center of the shallow (to ~ 150 m deep) tongue of the PRP that extends 150 km eastwards from Puerto Rico. St. Thomas is closest to and 64 km from the main island of Puerto Rico. St. John and St. Thomas are separated from each other by only 3.5 km of water shallower than 20 m deep, with scattered islets and shallow reefs in between them. They have a similar range of habitats as St. Croix, with large areas of both sheltered and deeper shelf-edge coral reefs, rocky shores, seagrass beds and mangroves. Due to their proximity and similarity of habitats we treat them here as a single unit (hereafter St. John-Thomas). The shallow PRP associated with St. John-Thomas extends ~ 25 km north and ~ 15 km south of those islands and covers an area of ~ 2,100 km² (Rohmann et al. 2005).

Suppl. material 2: File S1 shows the bathymetry of bottom habitats on the above-150 m shelves of the USVI. The shelf area of the St. John-Thomas EEZ is not only much larger than that of St. Croix but also differs from the latter in containing a much greater diversity of areas of different depths. There are large expanses, in both absolute and relative terms, of habitat between 40–60 m deep to the north of St. Thomas and to the south of both islands. In contrast, most of the smaller shelf of St. Croix is shallower than 20 m deep.

Data sources

We reviewed and cited only publications from which we extracted information relating to the USVI fishes that were published after those cited by Dennis (2000) for St. John-Thomas, and after that by Smith-Vaniz and Jelks (2014) for St. Croix, plus a few earlier publications that contained additional relevant information.

Smith-Vaniz and Jelks (2014) published a comprehensive, annotated checklist of 544 fishes known from St. Croix. That checklist was based, in large part, on the yield of fishes from 106 rotenone stations obtained by Smith-Vaniz et al. (2006) and by later workers to document the shallow cryptobenthic fauna. That 2014 list identified questionable records, a few of which, as we show, have turned out to be valid. Smith-Vaniz and Jelks (2014). That checklist also excluded deep-water fishes not found above 200 m as well as Exocoetids and Myctophids. For completeness we have included any such species recorded by other sources among the additions noted here. We used the 2014 list of valid species and reviewed fishes listed by other surveys: a SCUBA study of the shallower parts (30–50 m depth) of a mesophotic coral ecosystem at the eastern end of the shelf (García-Sais et al. 2014); two JSL submersible dives off St. Croix to 30–600 m (Nelson and Appeldoorn (1985); and two ROV dives off St. Croix at depths greater than 800 m (Quattrini et al. 2017). In addition, we reviewed the records of fish species from St. Croix available from various online sources: the aggregators GBIF (<https://www.gbif.org/>), FishNet2 (<http://www.fishnet2.net/>), iDigBio (<https://www.idigbio.org/portal>), OBIS (<https://obis.org/>) and Vertnet (<http://vertnet.org/>), and the American

Museum of Natural History (AMNH; <https://www.amnh.org/research/vertebrate-zoology/ichthyology>). Those searches were made within a quadrat with latitudinal limits of 17.62°N to 17.85°N, and longitudinal limits of -64.4°W to -65.0°W, encompassing St. Croix and all of its platform. The sources of St. Croix records produced by those online searches were evaluated and museum records within the known geographic range of various species were accepted. Evaluation of individual records is necessary because aggregator information includes significant numbers of erroneous records.

Finally, the list includes shallow-reef fishes photographed by authors AME and CJE during a month spent at the island from 19 December 2020 to 13 January 2021. Suppl. material 3: File S2A presents a list, with georeferenced locations, of the 11 dive sites at which they together made 25 dives (total 47 hours duration per person) during that period (see also Fig. 1B and Suppl. material 4: File S3, a Google Earth © KMZ file that shows, for each of those sites, its location and georeferenced coordinates, and the number of dives and total dive time spent at that site). These photographs document a few species not previously recorded at the island, plus several not accepted by Smith-Vaniz and Jelks (2014) due to a lack of reliable information.

For St. John-Thomas we extracted a list of 401 species listed at those islands by Dennis (2000) and reviewed various publications dealing with fish records at and near those islands that were subsequently produced. Finally, we also used the same online data sources as for St. Croix (see above) to obtain records of fishes from the part of the Exclusive Economic Zone of the USVI that includes St. John-Thomas and extends between the northern and southern edges of the PRP. That irregularly shaped EEZ was obtained from Marineregions.org, which provides a standard set of global maps of EEZs (<https://www.marineregions.org/eezsearch.php>).

CJE and AME spent six months between 3 November 2020 and 29 May 2021 diving at both islands and photographing fishes to obtain voucher images of as many members of those islands' marine fish fauna as possible. File S2A presents a list, with georeferenced locations, of their dive sites at St. John (37) and St. Thomas (12), at which they made 113 joint dives (involving multiple dives at some sites) totaling 221 hours per person and 37 dives totaling 37 hours per person, respectively. Fig. 1A is a map with those 49 dive sites at St. John-Thomas indicated and File S2 provides additional information. Fig. 1A (and see File S2B) also indicates the location of sites from other sources at which additional species not recorded by CJE and AME were documented photographically by other divers.

Reef-associated bony fishes of the USVI

Greater Caribbean (GC) reef systems have reef-fish faunas that are dominated by members of typical, shallow-reef families of bony fishes extending down to depths of ~ 250–300 m (Baldwin et al. 2018). Here we focus on species belonging to those families, which have traditionally been viewed as reef fishes. We classed species living entirely or largely below 40 m depth as belonging to the deep-reef subset. Species classed here as shallow include both species restricted to depths shallower than 40 m

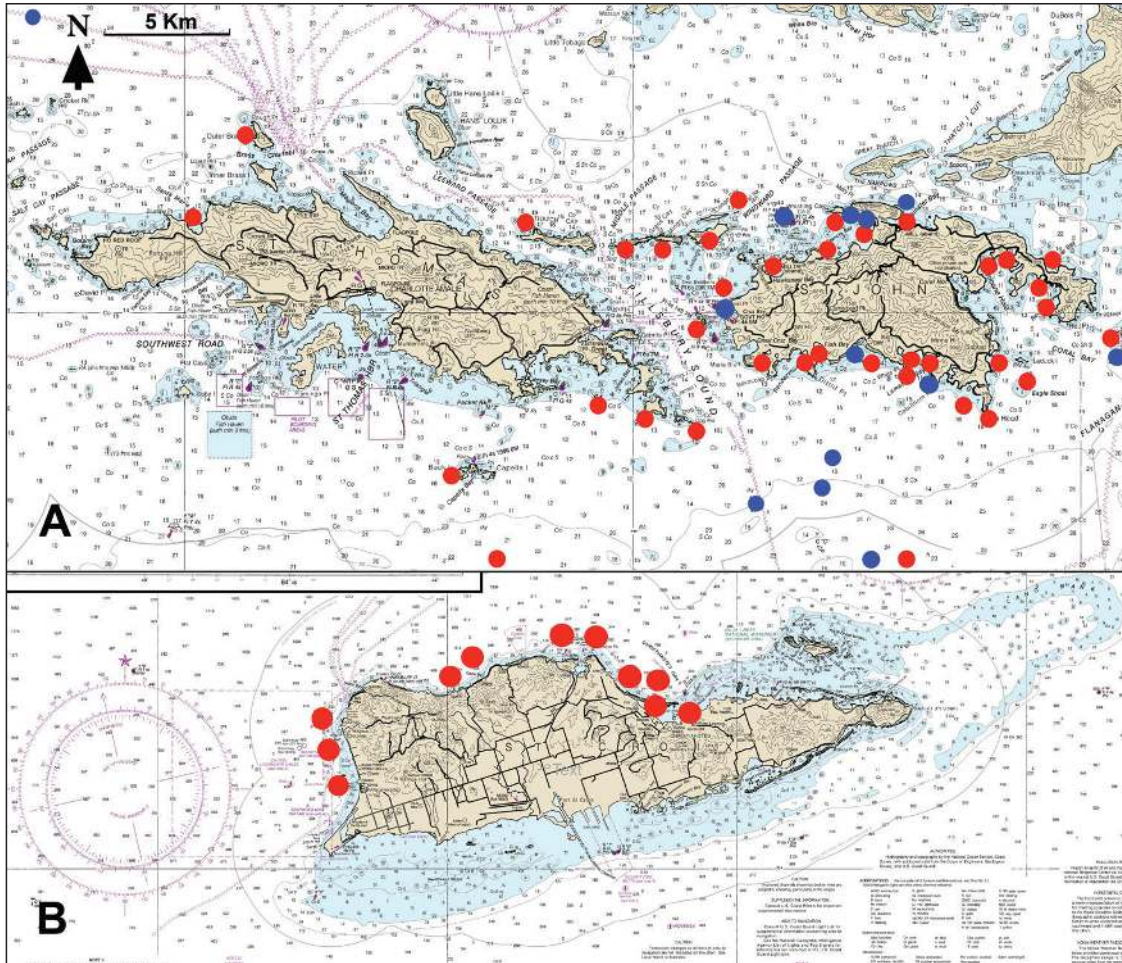


Figure 1. **A** dive sites generating fish-occurrence data at St. John and St. Thomas islands. Dive sites of CJE and AME are indicated by red symbols, and of other sources of voucher photographs by blue symbols. Note that some close-proximity sites are indicated by a single symbol. Symbols at the northern and southern edges of Fig. 1A are representative only, as their latitudes are outside the area of the map **B** dive sites of CJE and AME generating data at St. Croix. See Suppl. material 3: File S2A, B and Suppl. material 4: File S3 for further information. Base map in both cases: NOAA Chart 25641.

and those with depth ranges that extend above and below that level. These reef-associated fishes include not only benthic and demersal species found on hard-reef substrata, but also pelagic fishes that facultatively associate with reefs and benthic and demersal species that live on soft bottoms within and immediately around the fringes of reefs. Benthic species (e.g., eels, flatfishes) are restricted to life on and in different types of substrata, while demersal species (e.g., snappers and grunts) use both substratum habitats and the water column. Cryptobenthic species are visually cryptic and typically small. We followed Brandl et al. (2018) in classifying families dominated by small cryptobenthic coral-reef species as Core Coral Reef Fish families (CCRFs).

We also evaluate the ecological and zoogeographic composition of the two USVI fish faunas (St. Croix and St. John-Thomas) compared to the complete checklist of the regional fauna of reef-associated bony fishes, which includes 992 species in 342 genera and

84 families (Robertson and Tornabene 2021). These aspects of the fauna of the USVI are also compared with results from another recent comprehensive survey of the fish fauna of nearby Sint Eustatius, which is 170 km from St. Croix (Robertson et al. 2020).

mtDNA-barcode coverage of fishes collected in the USVI and Puerto Rico

Relatively few small marine locations have been comprehensively sampled for fish DNA barcoding, i.e., tissues sequenced for the mtDNA COI marker as a standard for identifying fishes, as compiled in the Barcode of Life Database, BOLD (Ward et al. 2009). Notably, BOLD not only includes a wide variety of projects, most of which are publicly available, but also regularly harvests all available COI sequences from GenBank. In contrast, GenBank does not harvest from BOLD, and BOLD sequences are generally submitted to GenBank only by request. As a result, only a fraction (~ 15% for GC fishes) of COI sequences on BOLD also are present on GenBank, despite its widespread use as the sole source for barcoding studies. BOLD further differs from GenBank by applying quality control to sequences and taxon identifications as data is entered, including sequences harvested from GenBank. It also has post-hoc quality control via a tagging and comment option on individual records. BOLD also includes a large number of private sequences, which can be assessed to a limited degree (with some metadata removed) via the BIN portal, which compiles all records, public and private, within a lineage, assigns a code, and presents some statistics, especially variance and nearest neighbor distances, as well as countries of origin.

The BOLD BIN code is a key advance enabling the compilation and comparison of mtDNA barcoding lists, since it supplies an independent identifier for a monophyletic genetic lineage, which is not the same as a species name. BOLD creates **BINs** (Barcode Index Numbers) by clustering barcode sequences algorithmically. The BIN often represents a particular species, but there are many exceptions to the “one-species, one BIN” concept: either multiple BINs per species, indicating genetically divergent populations within species (usually allopatric, but not always), a subset of which are putative new cryptic species awaiting morphological confirmation; or shared BINs by two or more species that retain shared or closely related haplotypes due to a short time since speciation, to incomplete lineage sorting, or to a small degree of hybridization.

Our broad assessment suggests that BOLD has a BIN that can be assigned (with widely varying degrees of confidence) to ~ 900 species of shallow-dwelling, reef-associated bony fishes from the GC. A list of sequences obtained in a particular area is obtained from BOLD by using a vector map in its search engine. The resulting list is from public projects (including all GenBank COI sequences), as well as whichever private projects the user has permission to access (often granted by an email request to the source of the sequence). In our case, we have been given access to all of the larger private projects in the region and barcodes for the vast majority (~ 90%) of sequence records in BOLD that could be evaluated in their respective BINs. The list of records from the geographic-area search on BOLD are individual sequences with metadata (including GenBank number if a sequence has one) and photographs of specimens (when available), together with a link to the BIN code to which it belongs. The species name originally submitted for

each is preserved, and the accuracy of the assignment can be assessed by examining the BIN to which it belongs, which has details on the various names applied to sequences in the BIN and by whom and where they were obtained. Accuracy assessments are critical, especially for more obscure species, since a “majority rules” decision is often inaccurate due to multiple identifications by inexperienced contributors, the tendency to repeat the species-level identification made by others as a shortcut, and the practice of assigning species-level names to submitted records that are from eggs, larvae, isolated tissue, or fish-market specimens. GenBank records are harvested by BOLD with whatever name is assigned in GenBank, often a preliminary one from submission, rather than the one later corrected or published in the subsequent literature.

Results

The island faunas

St. Croix: The checklist of Smith-Vaniz and Jelks (2014) included 544 species from 280 genera in 94 families. We obtained records of 41 species (belonging to 39 genera and 35 families; see Table 1) that were not included on that checklist, an increase of 7.5% in the number of species. Those new records included 19 deep-living species, six of them (11.1% of all deep species at St. Croix) resulting solely from observations by the JSL submersible (Nelson and Appeldoorn 1985; García-Sais et al. 2014) and an ROV (Remotely Operated Vehicle; Quattrini et al. 2017). It should be noted that almost all of that group belong to very deep taxa specifically excluded by Smith-Vaniz and Jelks (2014) from their list, which was focused primarily on shallower fishes. The remaining 22 species are shallow-water, reef-associated fishes. Ten of the latter group were photographed by AME and CJE (Table 1; Suppl. material 1: Plate S1). These additions include three species (*Eucinostomus melanopterus*, *Coryphopterus glaucofrenum* and *Opistognathus macrogathus*) that Smith-Vaniz and Jelks (2014) referred to but did not include in their checklist due to lack of confirmed records. Records of two mobulid rays consisted of identified photographs/videos provided by Mantatruster.org (<https://www.mantatruster.org/>) that were inspected by DRR. The list (Table 1, which includes source information) also includes records from museum collections that provide online data directly or indirectly through aggregators, which were included if consistent with the known geographic range of each of those species.

St. John-Thomas: Table 2 presents a list of species recorded from those islands together with the source(s) of each record (images, publications, DNA barcodes, or online museum records) and which species have a voucher image in the supplementary plates (Suppl. material 1: Plates S2–S18). In addition, for uncommon species (those encountered by AME, CJE, LR, or third-party photographers at three or fewer dive sites) the names of the sites at which those uncommon species were found are included, to aid future investigations. Dennis (2000) also included information on species that were collected using the ichthyocide Rotenone (see Table 2). Smith-Vaniz and Jelks (2014) list for St. Croix also included some species recorded at these St. John-Thomas as a result of collections using

Table 1. Species of fishes added to the St. Croix checklist of fishes of Smith-Vaniz and Jelks (2014).

| Scientific name | Common name | Deep | Image plate | Literature source | Online source |
|--|-----------------------------|------|-------------|-------------------|---------------|
| Antennariidae | | | | | |
| <i>Fowlerichthys ocellatus</i> (Bloch & Schneider, 1801) | Ocellated Frogfish | | | | TNHCI |
| Bathygadidae | | | | | |
| <i>Gadomus arcuatus</i> (Goode & Bean, 1886) | Doublethread Grenadier | yes | | 6 | |
| Blenniidae | | | | | |
| <i>Hypleurochilus pseudoaequipinnis</i> Bath, 1994 | Oyster Blenny | | S1 | | |
| Bramidae | | | | | |
| <i>Eumegistus brevorti</i> (Poey, 1860) | Tropical Pomfret | yes | | | FIMNH |
| Chaenopsidae | | | | | |
| <i>Emblemariopsis leptocirris</i> Stephens, 1970 | Fine-cirrus Blenny | | S1 | | |
| Chimaeridae | | | | | |
| <i>Chimaera cubana</i> Howell Rivero, 1936 | Cuban Chimaera | yes | | 1 | |
| Etmopteridae | | | | | |
| <i>Etmopterus hillianus</i> (Poey, 1861) | Caribbean Lantern Shark | yes | | | FIMNH |
| Exocoetidae | | | | | |
| <i>Cheilopogon melanurus</i> (Valenciennes, 1847) | Atlantic Flyingfish | | | | CF |
| <i>Cypselurus comatus</i> (Mitchill, 1815) | Clearwing Flyingfish | | | | CF |
| Gempylidae | | | | | |
| <i>Lepidocybium flavobrunneum</i> (Smith, 1843) | Escolar | yes | | | NOAA |
| <i>Nesiarchus nasutus</i> Johnson, 1862 | Black Gemfish | yes | | | NMNH |
| Gerreidae | | | | | |
| <i>Eucinostomus melanopterus</i> (Bleeker, 1863) | Flagfin Mojarra | | S1 | 5,7* | |
| Gobiesocidae | | | | | |
| <i>Acyrtus lanthanum</i> Conway, Baldwin & White, 2014 | Orange-spotted Clingfish | | | | FIMNH |
| Gobiidae | | | | | |
| <i>Coryphopterus glaucofraenum</i> Gill, 1863 | Bridled Goby | | S1 | 2,5,7* | |
| <i>Coryphopterus kuna</i> Victor, 2007 | Kuna Goby | | S1 | | |
| <i>Oxyurichthys stigmalocephus</i> (Mead & Böhlke, 1958) | Spotfin Goby | | S1 | | NOAA |
| Kyphosidae | | | | | |
| <i>Kyphosus cinerascens</i> (Forsskål, 1775) | Topsail Seachub | | S1 | | |
| Macrouridae | | | | | |
| <i>Nezumia aequalis</i> (Günther, 1878) | Atlantic Blacktip Grenadier | yes | | 6 | |
| Malakichthyidae | | | | | |
| <i>Verilus pseudomicrolepis</i> (Schultz, 1940) | False-smallscale Bass | yes | | | CAS |
| Mobulidae | | | | | |
| <i>Mobula cf birostris</i> | Giant Manta | | | 4 | |
| <i>Mobula tarapacana</i> (Philippi, 1892) | Sicklefin Devil Ray | | | 4 | |
| Muraenidae | | | | | |
| <i>Gymnothorax nigromarginatus</i> (Girard, 1858) | Blackedge Moray | | | | CAS |
| Nemichthyidae | | | | | |
| <i>Nemichthys curvirostris</i> (Strömman, 1896) | Spottedbelly Snipe Eel | yes | | 6 | |
| Neoscopelidae | | | | | |
| <i>Neoscopelus microchir</i> Matsubara, 1943 | Shortfin Blackchin | yes | | 6 | |
| Ophichthidae | | | | | |
| <i>Myrophis punctatus</i> Lütken, 1852 | Speckled Worm Eel | | | | MCZ |
| Ophidiidae | | | | | |
| <i>Monomitopus agassizii</i> (Goode & Bean, 1896) | Threespine Cusk-eel | yes | | | MCZ |

| Scientific name | Common name | Deep | Image plate | Literature source | Online source |
|--|---------------------------|------|-------------|-------------------|---------------|
| Opistognathidae | | | | | |
| <i>Opistognathus macrognathus</i> Poey, 1860 | Banded Jawfish | | S1 | 5,7* | |
| Paralichthyidae | | | | | |
| <i>Syacium micrurum</i> Ranzani, 1842 | Channel Flounder | | S1 | | |
| Peristediidae | | | | | |
| <i>Peristedion longispatha</i> Goode & Bean, 1886 | Widehead Armored Searobin | yes | | | MCZ |
| Pleuronectidae | | | | | |
| <i>Poecilopsetta inermis</i> (Breder, 1927) | Unarmed Deepwater Dab | yes | | | CAS, NMNH |
| Polymixiidae | | | | | |
| <i>Polymixia nobilis</i> Lowe, 1836 | Noble Beardfish | yes | | 3 | |
| Scombroptidae | | | | | |
| <i>Scombroptus oculatus</i> (Poey, 1860) | Atlantic Scombropt | yes | | | FIMNH |
| Sparidae | | | | | |
| <i>Calamus calamus</i> (Valenciennes, 1830) | Saucereye Porgy | | | 5 | |
| Squalidae | | | | | |
| <i>Cirrhitigaleus asper</i> (Merrett, 1973) | Roughskin Spiny Dogfish | yes | | | FIMNH |
| Stomiidae | | | | | |
| <i>Borostomias mononema</i> (Regan & Trewavas, 1929) | Sickle Snaggletooth | yes | | 8 | |
| Synagropidae | | | | | |
| <i>Synagrops bellus</i> (Goode & Bean, 1896) | Blackmouth Bass | yes | | 6 | |
| Syngnathidae | | | | | |
| <i>Hippocampus erectus</i> Perry, 1810 | Lined Seahorse | | | | NCSM |
| Synodontidae | | | | | |
| <i>Synodus foetens</i> (Linnaeus, 1766) | Inshore Lizardfish | | | | ANSP |
| <i>Trachinocephalus myops</i> (Forster, 1801) | Snakefish | | S1 | | |
| Trachipteridae | | | | | |
| <i>Zu cristatus</i> (Bonelli, 1820) | Scalloped Ribbonfish | yes | | 8 | |
| Tripterygiidae | | | | | |
| <i>Enneanectes quadra</i> Victor, 2017 | Squartail Triplefin | | | | FIMNH |

Notes: Deep – restricted to depths below 40 m. Image Plate – see Suppl. material 1: Plate S1 for voucher images. Literature source – 1 Bunkley-Williams and Williams (2004); 2 Garcia-Sais et al. (2014); 3 Nelson and Appeldoorn (1985); 4 Mantatrust.org; 5 Pittman et al. (2008); 6 Quattrinni et al. (2017); 7 Smith-Vaniz and Jelks (2014) (asterisk indicates a species that was discussed by not included by those authors); 8 Clavijo et al. (1980). Online source - TNHCi (University of Texas at Austin, Biodiversity Center, Ichthyology collection; FIMNH (Florida Museum of Natural History); CF (Biological observations from the Dana Expedition Reports); NOAA (National Oceanographic and Atmospheric Administration); CAS (California Academy of Sciences); MCZ (Museum of Comparative Zoology); NMNH (National Museum of Natural History); NCSM (North Carolina State Museum of Natural Sciences); ANSP (Academy of Natural Sciences of Philadelphia). *Coryphopterus*: Smith-Vaniz et al. (2014) concluded that *C. tortugae*, but not *C. glaucopennum*, was present at St. Croix. However, CJE and AME photographed both species at St. Croix, illustrated in Suppl. material 1: Plate S1.

that ichthyocide. Two ROV dives of Quattrinni et al. (2017) and four dives (including one to only 50 m depth on the PRP a little to the north of St. Thomas) by the JSL submersible at St. John-Thomas (Nelson and Appeldoorn 1985; Garcia-Sais 2005) yielded 75 species records. Of those 19 were of deep-living species, with 14 (28%) representing sole-source records of the 50 deep-living fishes currently known to occur at St. John-Thomas.

Table 2. Checklist of the fishes of St. John-Thomas islands.

| Scientific name | Common name | Image Plate | Literature source | Online source | Uncommon (site code) | Ichthyocide | DNA |
|--|----------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Acanthuridae | | | | | | | |
| <i>Acanthurus chirurgus</i> (Bloch, 1787) | Doctorfish | S2 | 2,4,8 | 1 | | 1 | |
| <i>Acanthurus coeruleus</i> Bloch & Schneider, 1801 | Blue Tang | S2 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Acanthurus tractus</i> Poey, 1860 | Northern Ocean Surgeonfish | S2 | 2,4,5,8 | 1 | | 1 | YES |
| Achiridae | | | | | | | |
| <i>Gymnachirus nudus</i> Kaup, 1858 | Flabby Sole | S2 | 2,11 | 1 | SJ5, SJ18, SJ25 | | YES |
| Aetobatidae | | | | | | | |
| <i>Aetobatus narinari</i> (Euphrasen, 1790) | Spotted Eagle Ray | S2 | 2 | 1 | | | |
| Albulidae | | | | | | | |
| <i>Albula goreensis</i> Valenciennes, 1847 | Senegalese Bonefish | | | | NOAA-BOLD | | YES |
| <i>Albula vulpes</i> (Linnaeus, 1758) | Bonefish | | 2,4 | 1 | | | YES |
| Anguillidae | | | | | | | |
| <i>Anguilla rostrata</i> (Lesueur, 1817) | American Eel | | 6 | 1 | | | |
| Antennariidae | | | | | | | |
| <i>Antennarius multiocellatus</i> (Valenciennes, 1837) | Longlure Frogfish | S2 | 2 | 1 | | 1 | |
| <i>Antennarius pauciradiatus</i> Schultz, 1957 | Dwarf Frogfish | | 2 | 1 | | | |
| <i>Histrio histrio</i> (Linnaeus, 1758) | Sargassumfish | S2 | 12 | | O22 | | |
| Apogonidae | | | | | | | |
| <i>Apogon aurolineatus</i> (Mowbray, 1927) | Bridle Cardinalfish | S2 | 2,4 | 1 | | | YES |
| <i>Apogon binotatus</i> (Poey, 1867) | Barred Cardinalfish | S2 | 2,4 | 1 | | 1 | |
| <i>Apogon lachmeri</i> Böhlke, 1959 | Whitestar Cardinalfish | S2 | 2,4 | 1 | SJ2 | 1 | |
| <i>Apogon maculatus</i> (Poey, 1860) | Flamefish | S2 | 2,4 | 1 | | 1 | YES |
| <i>Apogon phenax</i> Böhlke & Randall, 1968 | Mimic Cardinalfish | S2 | 2,11 | | | 1 | |
| <i>Apogon planifrons</i> Longley & Hildebrand, 1940 | Pale Cardinalfish | S2 | 2 | 1 | | 1 | |
| <i>Apogon pseudomaculatus</i> Longley, 1932 | Twospot Cardinalfish | | 2,4 | 1 | | | |
| <i>Apogon quadrisquamatus</i> Longley, 1934 | Sawcheek Cardinalfish | S2 | 2,4 | 1 | SJ22, SJ25 | 1 | YES |
| <i>Apogon robinsi</i> Böhlke & Randall, 1968 | Roughlip Cardinalfish | | 2 | | | -1 | |
| <i>Apogon townsendi</i> (Breder, 1927) | Belted Cardinalfish | S2 | 2,4 | 1 | | 1 | YES |
| <i>Astrapogon puncticulatus</i> (Poey, 1867) | Blackfin Cardinalfish | S2 | 2 | 1 | | | YES |
| <i>Astrapogon stellatus</i> (Cope, 1867) | Conchfish | S2 | 2,4 | 1 | SJ5, SJ13 | | YES |
| <i>Paroncheilus affinis</i> (Poey, 1875) | Bigtooth Cardinalfish | | 2 | 1 | | | |

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|---|------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Phaeoptyx conklini</i> (Silvester, 1915) | Freckled Cardinalfish | S2 | 2 | 1 | | 1 | YES |
| <i>Phaeoptyx pigmentaria</i> (Poey, 1860) | Dusky Cardinalfish | S2 | 2 | 1 | | 1 | YES |
| <i>Phaeoptyx xenus</i> (Böhlke & Randall, 1968) | Sponge Cardinalfish | S2 | 2 | 1 | | 1 | YES |
| <i>Zapogon evermanni</i> (Jordan & Snyder, 1904) | Oddscales Cardinalfish | S2 | | | SJ22 | | YES |
| Atherinidae | | | | | | | |
| <i>Atherina harringtonensis</i> Goode, 1877 | Reef Silverside | | 2 | 1 | | 1 | YES |
| <i>Atherinomorus stipes</i> (Müller & Troschel, 1848) | Hardhead Silverside | S2 | 2,6 | 1 | | 1 | |
| Aulostomidae | | | | | | | |
| <i>Aulostomus maculatus</i> Valenciennes, 1841 | Atlantic Trumpetfish | S2 | 2,4 | 1 | | 1 | |
| Balistidae | | | | | | | |
| <i>Balistes capricus</i> Gmelin, 1789 | Gray Triggerfish | S3 | 2 | | | | |
| <i>Balistes vetula</i> Linnaeus, 1758 | Queen Triggerfish | S3 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Canthidermis sufflamen</i> (Mitchill, 1815) | Ocean Triggerfish | S3 | 2 | 1 | SJ33 | | |
| <i>Melichthys niger</i> (Bloch, 1786) | Black Durgon | S3 | 2,4 | 1 | SJ33 | | |
| <i>Xanthichthys ringens</i> (Linnaeus, 1758) | Sargassum Triggerfish | S3 | 2,5 | 1 | SJ33 | | |
| Belontiidae | | | | | | | |
| <i>Ablennes hians</i> (Valenciennes, 1846) | Barred Needlefish | S3 | | | | | |
| <i>Platybelone argalus argalus</i> (Lesueur, 1821) | Keeltail Needlefish | S3 | 2 | 1 | | 1 | |
| <i>Strongylura timucu</i> (Walbaum, 1792) | Timucú | | 2,6 | 1 | | | |
| <i>Tylosurus acus</i> (Lacepède, 1803) | Atlantic Agujón | | | | FIMNH, MCZ | | |
| <i>Tylosurus crocodilus</i> (Péron & Lesueur, 1821) | Houndfish | S3 | 2 | 1 | | | |
| Blenniidae | | | | | | | |
| <i>Entomacrodus nigricans</i> Gill, 1859 | Pearl Blenny | S3 | 2 | 1 | | 1 | YES |
| <i>Hypleurochilus pseudoaequipinnis</i> Bath, 1994 | Oyster Blenny | S3 | 2,11 | 1 | | | YES |
| <i>Hypleurochilus springeri</i> Randall, 1966 | Orangespotted Blenny | S3 | 2 | 1 | | | |
| <i>Hypsoblennius invemar</i> Smith-Vaniz & Acero P., 1980 | Tessellated Blenny | S3 | 11 | 1 | ST11 | | YES |
| <i>Ophioblennius macclurei</i> (Silvester, 1915) | Redlip Blenny | S3 | 2,4 | 1 | | 1 | YES |
| <i>Parablennius marmoratus</i> (Poey, 1876) | Seaweed Blenny | S3 | 2,4 | 1 | | 1 | YES |
| <i>Scartella cristata</i> (Linnaeus, 1758) | Molly Miller | S3 | 2,4 | 1 | | 1 | YES |
| Bothidae | | | | | | | |
| <i>Bothus lunatus</i> (Linnaeus, 1758) | Peacock Flounder | S3 | 2,4 | 1 | | 1 | |
| <i>Bothus maculiferus</i> (Poey, 1860) | Mottled Flounder | S3 | | | SJ3, SJ5, SJ28 | | |

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|---|--------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Bothus ocellatus</i> (Agassiz, 1831) | Eyed Flounder | S3 | 2,4 | 1 | | | |
| <i>Bothus robinsi</i> Topp & Hoff, 1972 | Twospot Flounder | | 2,3 | | | | |
| Bythitidae | | | | | | | |
| <i>Calamopteryx goslinei</i> Böhlke & Cohen, 1966 | Longarm Brotula | | 2 | | | | -1 |
| <i>Grammonus claudei</i> (de la Torre y Huerta, 1930) | Reef-cave Brotula | | 2 | 1 | | | -1 |
| <i>Petrotax sanguineus</i> (Meek & Hildebrand, 1928) | Redfin Brotula | | 2 | 1 | | | -1 |
| Callionymidae | | | | | | | |
| <i>Callionymus bairdi</i> Jordan, 1888 | Lancer Dragonet | S3 | 2,4 | 1 | | | YES |
| <i>Chalinops pauciradiatus</i> (Gill, 1865) | Spotted Dragonet | S3 | 2 | 1 | SJ28, SJ3, SJ5 | | YES |
| Carangidae | | | | | | | |
| <i>Alectis ciliaris</i> (Bloch, 1787) | African Pompano | S4 | 2 | 1 | ST1, SJ13 | | |
| <i>Caranx bartholomaei</i> Cuvier, 1833 | Yellow Jack | S4 | 2,4 | 1 | | | |
| <i>Caranx crysos</i> (Mitchill, 1815) | Blue Runner | S4 | 2,4 | 1 | | | |
| <i>Caranx hippos</i> (Linnaeus, 1766) | Crevalle Jack | S4 | | | SJ29 | | |
| <i>Caranx latus</i> Agassiz, 1831 | Horse-eye Jack | S4 | 2,6 | 1 | | | |
| <i>Caranx lugubris</i> Poey, 1860 | Black Jack | S4 | 2,4,5,8 | 1 | SJ33 | | |
| <i>Caranx ruber</i> (Bloch, 1793) | Bar Jack | S4 | 2,4,8 | 1 | | | 1 |
| <i>Chloroscombrus chrysurus</i> (Linnaeus, 1766) | Atlantic Bumper | | 2 | | | | |
| <i>Decapterus macarellus</i> (Cuviers, 1833) | Mackerel Scad | S4 | 2 | 1 | | | |
| <i>Decapterus punctatus</i> (Cuvier, 1829) | Round Scad | S4 | 2 | 1 | | | |
| <i>Decapterus tabl</i> Berry, 1968 | Redtail Scad | S4 | | | SJ11 | | |
| <i>Elagatis bipinnulata</i> (Quoy & Gaimard, 1825) | Rainbow Runner | S4 | 2 | 1 | SJ33 | | |
| <i>Oligoplites saurus saurus</i> (Bloch & Schneider, 1801) | Leatherjack | | 2 | 1 | | | |
| <i>Selar crumenophthalmus</i> (Bloch, 1793) | Bigeye Scad | S4 | 2 | 1 | SJ13 | | |
| <i>Selene brownii</i> (Cuvier, 1816) | Caribbean Moonfish | | 2 | 1 | | | |
| <i>Selene vomer</i> (Linnaeus, 1758) | Lookdown | | | | FIMNH | | |
| <i>Seriola dumerili</i> (Risso, 1810) | Greater Amberjack | | 2,5 | | | | |
| <i>Seriola rivoliana</i> Valenciennes, 1833 | Almaco Jack | S4 | 2 | 1 | SJ16, SJ23 | | |
| <i>Trachinotus falcatus</i> (Linnaeus, 1758) | Permit | S4 | 2 | 1 | SJ22, SJ23 | | |
| <i>Trachinotus goodei</i> Jordan & Evermann, 1896 | Palometa | S4 | 2,4 | 1 | SJ23, SJ15 | | |
| Carcharhinidae | | | | | | | |
| <i>Carcharhinus acronotus</i> (Poey, 1860) | Blacknose Shark | S4 | 1,2,10 | 1 | SJ35, SJ27, ST7 | | |
| <i>Carcharhinus falciformis</i> (Müller & Henle, 1839) | Silky Shark | S4 | | | 1, O1 | | |
| <i>Carcharhinus galapagensis</i> (Snodgrass & Heller, 1905) | Galapagos Shark | | 2 | | | | |
| <i>Carcharhinus limbatus</i> (Müller & Henle, 1839) | Blacktip Shark | | 1,2 | 1 | | | |

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|--|---------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Carcharhinus longimanus</i> (Poey, 1861) | Oceanic Whitetip Shark | | | | NMNH | | |
| <i>Carcharhinus perezi</i> (Poey, 1876) | Reef Shark | S4 | 2,10 | 1 | SJ13 | | |
| <i>Carcharhinus plumbeus</i> (Nardo, 1827) | Sandbar Shark | | | ANSP | | | |
| <i>Negaprion brevirostris</i> (Poey, 1868) | Lemon Shark | S4 | 1,2,6,10 | 1 | SJ12, O2 | | |
| <i>Rhizoprionodon porosus</i> (Poey, 1861) | Caribbean Sharpnose Shark | | 1,2,10 | 1 | | | |
| Centrophoridae | | | | | | | |
| <i>Centrophorus uyato</i> (Rafinesque, 1810) | Little Gulper Shark | | | | CAS | | |
| Centropomidae | | | | | | | |
| <i>Centropomus ensiferus</i> Poey, 1860 | Swordspine Snook | | 6 | 1 | | | |
| <i>Centropomus undecimalis</i> (Bloch, 1792) | Common Snook | S4 | 2,6 | 1 | | | |
| Chaenopsidae | | | | | | | |
| <i>Acanthemblemaria aspera</i> (Longley, 1927) | Roughhead Blenny | S5 | 2 | 1 | ST3 | | YES |
| <i>Acanthemblemaria maria</i> Böhlke, 1961 | Secretary Blenny | S5 | 4 | 1 | | | YES |
| <i>Acanthemblemaria spinosa</i> Metzelaar, 1919 | Spinyhead Blenny | S5 | 2,4 | 1 | | 1 | YES |
| <i>Chaenopsis limbaughii</i> Robins & Randall, 1965 | Yellowface Pikeblenny | S5 | 2,4 | 1 | | | YES |
| <i>Chaenopsis ocellata</i> Poey, 1865 | Bluethroat Pikeblenny | | 2,4 | 1 | | | |
| <i>Coralliozetus cardonae</i> Evermann & Marsh, 1899 | Twinhorn Blenny | S5 | 11 | 1 | | | YES |
| <i>Emblemaria pandionis</i> Evermann & Marsh, 1900 | Sailfin Blenny | S5 | 2,4 | 1 | | | YES |
| <i>Emblemaria vitta</i> Williams, 2002 | Ribbon Blenny | S5 | 2,3 | 1 | ST6 | -1 | YES |
| <i>Emblemariopsis bahamensis</i> Stephens, 1961 | Blackhead Blenny | S5 | | 1 | | | YES |
| <i>Emblemariopsis carib</i> Victor, 2010 | Carib Blenny | | 2 | 1 | | -1 | YES |
| <i>Emblemariopsis leptocirris</i> Stephens, 1970 | Fine-cirrus Blenny | S5 | 2,11 | | | -1 | YES |
| <i>Emblemariopsis ruetzleri</i> Tyler & Tyler, 1997 | Ruetzler's Blenny | | | | BOLD, NMNH | | YES |
| <i>Lucayablennius zingaro</i> (Böhlke, 1957) | Arrow Blenny | S5 | | | | SJ18, SJ19 | |
| Chaetodontidae | | | | | | | |
| <i>Chaetodon capistratus</i> Linnaeus, 1758 | Foureye Butterflyfish | S5 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Chaetodon ocellatus</i> Bloch, 1787 | Spotfin Butterflyfish | S5 | 2,4 | 1 | | | |
| <i>Chaetodon sedentarius</i> Poey, 1860 | Reef Butterflyfish | S5 | 2,4,5,8 | 1 | | | |
| <i>Chaetodon striatus</i> Linnaeus, 1758 | Banded Butterflyfish | S5 | 2,4 | 1 | | 1 | |
| <i>Prognathodes aculeatus</i> (Poey, 1860) | Longsnout Butterflyfish | S5 | 2,5,8 | 1 | | | |
| <i>Prognathodes guyanensis</i> (Durand, 1960) | Guyana Butterflyfish | | 2,5,8,11 | | | | |

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|--|-------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Chaunacidae | | | | | | | |
| <i>Chaunax pixtus</i> Fowler, 1946 | Uniform Gaper | | 5 | | | | |
| <i>Chaunax suttkusi</i> Caruso, 1989 | Pale-cavity Gaper | | | CAS | | | |
| Chlopsidae | | | | | | | |
| <i>Chilorhynchus suenonii</i> Lütken, 1852 | Seagrass Eel | | 2 | 1 | | | |
| <i>Kaupichthys hyoproroides</i> (Strömman, 1896) | False Moray | | 2 | 1 | | -1 | |
| <i>Kaupichthys nuchalis</i> Böhlke, 1967 | Collared Eel | | 2,11 | 1 | | | |
| Chlorophthalmidae | | | | | | | |
| <i>Parasudis truculenta</i> (Goode & Bean, 1896) | Longnose Greeneye | | 5 | | | | |
| Cichlidae | | | | | | | |
| <i>Oreochromis mossambicus</i> (Peters, 1852) | Mozambique Tilapia | | 6 | 1 | | | |
| Cirrhitidae | | | | | | | |
| <i>Amblycirrhitus pinos</i> (Mowbray, 1927) | Redspotted Hawkfish | S5 | 2,4 | 1 | | 1 | |
| Clupeidae | | | | | | | |
| <i>Harengula clupeola</i> (Cuvier, 1829) | False Pilchard | | 2 | 1 | | | YES |
| <i>Harengula humeralis</i> (Cuvier, 1829) | Redear Sardine | S5 | 2 | 1 | SJ28, SJ13 | | YES |
| <i>Harengula jaguana</i> Poey, 1865 | Scaled Sardine | | | FIMNH | | | |
| <i>Opisthonema oglinum</i> (Lesueur, 1818) | Atlantic Thread Herring | | | FIMNH | | | YES |
| <i>Sardinella aurita</i> Valenciennes, 1847 | Spanish Sardine | | | FIMNH | | | |
| Congridae | | | | | | | |
| <i>Ariosoma balearicum</i> (Delaroche, 1809) | Bandtooth Conger | | 2 | | | | |
| <i>Conger triporiceps</i> Kanazawa, 1958 | Manytooth Conger | | 4 | 1 | | | |
| <i>Heteroconger longissimus</i> Günther, 1870 | Brown Garden Eel | S5 | 2,4 | 1 | | | |
| <i>Xenomystax bidentatus</i> (Reid, 1940) | Rabbit Conger | | | NMNH | | | |
| Coryphaenidae | | | | | | | |
| <i>Coryphaena equiselis</i> Linnaeus, 1758 | Pompano Dolphinfish | | | ROM | | | |
| <i>Coryphaena hippurus</i> Linnaeus, 1758 | Dolphinfish | S5 | 2 | 1 | | | |
| Cynoglossidae | | | | | | | |
| <i>Symphurus arawak</i> Robins & Randall, 1965 | Caribbean Tonguefish | | 2 | 1 | | 1 | |
| Dactylopteridae | | | | | | | |
| <i>Dactylopterus volitans</i> (Linnaeus, 1758) | Flying Gurnard | S5 | 4 | 1 | | | YES |
| Dactyloscopidae | | | | | | | |
| <i>Dactyloscopus comptus</i> Dawson, 1982 | Ornamented Stargazer | | 2,11 | 1 | | | |
| <i>Dactyloscopus crossotus</i> Starks, 1913 | Bigeye Stargazer | | | AMNH | | | |
| <i>Dactyloscopus poeyi</i> Gill, 1861 | Shortchin Stargazer | | | FIMNH | | | |
| <i>Dactyloscopus tridigitatus</i> Gill, 1859 | Sand Stargazer | S5 | 2 | 1 | | 1 | |
| <i>Gillellus greyae</i> Kanazawa, 1952 | Arrow Stargazer | | 2 | | | -1 | |
| <i>Gillellus uranidea</i> Böhlke, 1968 | Warteye Stargazer | | 2 | | | -1 | YES |

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|--|------------------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Platygillellus rubrocinctus</i> (Longley, 1934) | Saddle Stargazer | | | | | | |
| Dasyatidae | | | | | | | |
| <i>Hypanus americanus</i> (Hildebrand & Schroeder, 1928) | Southern Stingray | S5 | 1,2,4,10 | 1 | | | |
| Diodontidae | | | | | | | |
| <i>Chilomycterus antennatus</i> (Cuvier, 1816) | Bridled Burrfish | S5 | 2,4 | 1 | SJ18 | | |
| <i>Chilomycterus antillarum</i> Jordan & Rutter, 1897 | Web Burrfish | | 2 | 1 | | | |
| <i>Diodon holocanthus</i> Linnaeus, 1758 | Balloonfish | S5 | 2,4 | 1 | SJ11, SJ13 | -1 | |
| <i>Diodon hystrix</i> Linnaeus, 1758 | Porcupinefish | S5 | 2,4 | 1 | | 1 | |
| Echeneidae | | | | | | | |
| <i>Echeneis naucrates</i> Linnaeus, 1758 | Sharksucker | S6 | 2,4 | 1 | SJ19, SJ23 | | YES |
| <i>Echeneis neucratoides</i> Zuiew, 1789 | Whitefin Sharksucker | S6 | | 1 | | | |
| <i>Remora remora</i> (Linnaeus, 1758) | The Remora | S6 | | 1 | O3 | | YES |
| Eleotridae | | | | | | | |
| <i>Dormitor maculatus</i> (Bloch, 1792) | Fat Sleeper | S6 | 6 | 1 | SJ10 | | |
| <i>Eleotris perniger</i> (Cope, 1871) | Smallscaled Spinycheek Sleeper | S6 | 6 | 1 | SJ10 | | |
| <i>Erotelis smaragdus</i> (Valenciennes, 1837) | Emerald Sleeper | | 6 | 1 | | | |
| <i>Gobiomorus dormitor</i> Lacepède, 1800 | Bigmouth Sleeper | S6 | | 1 | | | |
| Elopidae | | | | | | | |
| <i>Elops smithi</i> McBride, Rocha, Ruiz-Carus & Bowen, 2010 | Malacho | | 2,6 | | | | YES |
| Engraulidae | | | | | | | |
| <i>Anchoa lyolepis</i> (Evermann & Marsh, 1900) | Dusky Anchovy | | 2 | 1 | | | YES |
| Ephippidae | | | | | | | |
| <i>Chaetodipterus faber</i> (Broussonet, 1782) | Atlantic Spadefish | S6 | 2,4 | 1 | SJ18, ST2 | | |
| Epigonidae | | | | | | | |
| <i>Epigonus pandionis</i> (Goode & Bean, 1881) | Caudal-ring Deepwater Cardinalfish | | | CAS | | | |
| Exocoetidae | | | | | | | |
| <i>Cheilopogon exsiliens</i> (Linnaeus, 1771) | Bandwing Flyingfish | | 2 | 1 | | | |
| <i>Exocoetus obtusirostris</i> Günther, 1866 | Oceanic Two-wing Flyingfish | | | MCZ | | | |
| <i>Hirundichthys affinis</i> (Günther, 1866) | Fourwing Flyingfish | | 2 | | | | |
| <i>Hirundichthys speculiger</i> (Valenciennes, 1847) | Mirrorwing Flyingfish | | 2 | 1 | | | |
| <i>Prognichthys occidentalis</i> Parin, 1999 | Bluntnose Flyingfish | S6 | | | | | YES |
| Fistulariidae | | | | | | | |
| <i>Fistularia tabacaria</i> Linnaeus, 1758 | Bluespotted Cornetfish | S6 | 2 | | O4 | | |

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|---|---------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Galeocerdonidae | | | | | | | |
| <i>Galeocerdo cuvier</i> (Peron & Lesueur, 1822) | Tiger Shark | | 10 | | | | |
| Gempylidae | | | | | | | |
| <i>Epinnula magistralis</i> Poey, 1854 | Domine | | 5 | 1 | | | |
| Gerreidae | | | | | | | |
| <i>Eucinostomus argenteus</i> Baird & Girard, 1855 | Spotfin Mojarra | | 2 | 1 | | | YES |
| <i>Eucinostomus gula</i> (Quoy & Gaimard, 1824) | Silver Jenny | S6 | 4 | 1 | SJ18, SJ13, SJ3 | | |
| <i>Eucinostomus harengulus</i> Goode & Bean, 1879 | Tidewater Mojarra | S6 | | 1 | SJ28 | | |
| <i>Eucinostomus havana</i> (Nichols, 1912) | Bigeye Mojarra | | | FIMNH | | | |
| <i>Eucinostomus jonesii</i> (Günther, 1879) | Slender Mojarra | S6 | 4,6 | | SJ28 | | |
| <i>Eucinostomus lefroyi</i> (Goode, 1874) | Mottled Mojarra | S6 | | | SJ28, SJ21 | | |
| <i>Eucinostomus melanopterus</i> (Bleeker, 1863) | Flagfin Mojarra | S6 | 4 | 1 | SJ28 | | |
| <i>Eugerres brasilianus</i> (Cuvier, 1830) | Brazilian Mojarra | | 6,11 | 1 | | | |
| <i>Gerres cinereus</i> (Walbaum, 1792) | Yellowfin Mojarra | S6 | 2,4,6 | 1 | | | |
| Ginglymostomatidae | | | | | | | |
| <i>Ginglymostoma cirratum</i> (Bonnaterre, 1788) | Nurse Shark | S6 | 1,2,4,10 | 1 | | | |
| Gobiesocidae | | | | | | | |
| <i>Acyrtops amplicirrus</i> Briggs, 1955 | Flarenostril Clingfish | | 2 | | | | |
| <i>Acyrtops beryllinus</i> (Hildebrand & Ginsburg, 1927) | Emerald Clingfish | | 2 | 1 | | | |
| <i>Acyrtus artius</i> Briggs, 1955 | Papillate Clingfish | | 2 | | | | |
| <i>Acyrtus rubiginosus</i> (Poey, 1868) | Red Clingfish | S6 | | 1 | SJ23, SJ13, SJ5 | | YES |
| <i>Arcos nudus</i> (Linnaeus, 1758) | Padded Clingfish | S6 | 2 | 1 | SJ23 | 1 | |
| <i>Gobiesox nigripinnis</i> (Peters, 1859) | Dark-finned Clingfish | S6 | 2 | 1 | SJ29 | | |
| <i>Gobiesox punctulatus</i> (Poey, 1876) | Stippled Clingfish | S6 | 2 | 1 | | 1 | YES |
| <i>Tomicodon cryptus</i> Williams & Tyler, 2003 | Cryptic Clingfish | S6 | | | | | YES |
| <i>Tomicodon fasciatus</i> (Peters, 1859) | Barred Clingfish | | 2 | 1 | | 1 | |
| <i>Tomicodon leurodiscus</i> Williams & Tyler, 2003 | Smooth-suckered Clingfish | | 11 | 1 | | | |
| <i>Tomicodon reitzae</i> Briggs, 2001 | Accidental Clingfish | S6 | | | | | YES |
| <i>Tomicodon rhabdotus</i> Smith-Vaniz, 1969 | Antillean Clingfish | S6 | | | O24 | | |
| <i>Tomicodon rupestris</i> (Poey, 1860) | Barred Clingfish | | 11 | 1 | | | |
| Gobiidae | | | | | | | |
| <i>Awaous banana</i> (Valenciennes, 1837) | River Goby | S7 | | 1 | SJ10 | | |
| <i>Barbulifer ceuthoecus</i> (Jordan & Gilbert, 1884) | Bearded Goby | | 2 | 1 | | | YES |
| <i>Bathygobius antilliensis</i> Tornabene, Baldwin & Pezold, 2010 | Antilles Frillfin | S7 | | | SJ36 | | YES |

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|---|-----------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Bathygobius curacao</i> (Metzelaar, 1919) | Notchtongue Goby | | 11 | 1 | | | YES |
| <i>Bathygobius lacertus</i> (Poey, 1860) | Checkerboard Frillfin | | | FIMNH | | | YES |
| <i>Bathygobius mystacium</i> Ginsburg, 1947 | Island Frillfin | S7 | | | SJ21, SJ19 | | YES |
| <i>Bathygobius soporator</i> (Valenciennes, 1837) | Frillfin Goby | | 2,6,11 | 1 | | | YES |
| <i>Bollmannia boqueronensis</i> Evermann & Marsh, 1899 | White-eye Goby | S7 | 4 | | SJ19 | | YES |
| <i>Cerdale floridana</i> Longley, 1934 | Pugjaw Wormfish | S7 | 2 | 1 | SJ23 | 1 | |
| <i>Coryphopterus alloides</i> Böhlke & Robins, 1960 | Barfin Goby | | 2 | 1 | | -1 | |
| <i>Coryphopterus dicrus</i> Böhlke & Robins, 1960 | Colon Goby | S7 | 2,4 | 1 | | 1 | YES |
| <i>Coryphopterus eidolon</i> Böhlke & Robins, 1960 | Pallid Goby | S7 | 2,4 | 1 | | 1 | YES |
| <i>Coryphopterus glaucofraenum</i> Gill, 1863 | Bridled Goby | S7 | 2,4 | 1 | | 1 | YES |
| <i>Coryphopterus hyalinus</i> Böhlke & Robins, 1962 | Glass Goby | S7 | 2 | 1 | | -1 | YES |
| <i>Coryphopterus kuna</i> Victor, 2007 | Kuna Goby | S7 | | | SJ5, SJ12 | | |
| <i>Coryphopterus lipernes</i> Böhlke & Robins, 1962 | Peppermint Goby | S7 | 2,4 | 1 | ST6 | | YES |
| <i>Coryphopterus personatus</i> (Jordan & Thompson, 1905) | Masked Goby | S7 | 2 | 1 | | 1 | YES |
| <i>Coryphopterus thrix</i> Böhlke & Robins, 1960 | Bartail Goby | | 2 | 1 | | 1 | YES |
| <i>Coryphopterus tortugae</i> (Jordan, 1904) | Sand Goby | S7 | | 1 | | | YES |
| <i>Coryphopterus venezuelae</i> Cervigón, 1966 | Venezuela Goby | S7 | | 1 | | | YES |
| <i>Ctenogobius boleosoma</i> (Jordan & Gilbert, 1882) | Darter Goby | S7 | 6 | 1 | SJ28 | | YES |
| <i>Ctenogobius saepepallens</i> (Gilbert & Randall, 1968) | Dash Goby | S7 | 2,4 | 1 | | | YES |
| <i>Ctenogobius smaragdus</i> (Valenciennes, 1837) | Emerald Goby | | 11 | | | | |
| <i>Ctenogobius stigmaturus</i> (Goode & Bean, 1882) | Spottail Goby | S7 | | | SJ28 | | YES |
| <i>Elacatinus chancei</i> (Beebe & Hollister, 1933) | Shortstripe Goby | S7 | 2,4 | 1 | | | YES |
| <i>Elacatinus evelynae</i> (Böhlke & Robins, 1968) | Sharknose Goby | S7 | 2,4 | 1 | | 1 | YES |
| <i>Elacatinus prochilos</i> (Böhlke & Robins, 1968) | Broadstripe Goby | S7 | | 1 | | | YES |
| <i>Evorthodus lyricus</i> (Girard, 1858) | Lyre Goby | | 6 | 1 | | | |
| <i>Ginsburgellus novemlineatus</i> (Fowler, 1950) | Nineline Goby | S7 | | 1 | SJ23, SJ5 | | YES |
| <i>Gnatholepis thompsoni</i> Jordan, 1904 | Goldspot Goby | S7 | 2,4 | 1 | | 1 | YES |
| <i>Gobionellus oceanicus</i> (Pallas, 1770) | Highfin Goby | S7 | | 1 | SJ28 | | |
| <i>Gobiosoma grosvenori</i> (Robins, 1964) | Rockcut Goby | | 4 | 1 | | | |

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|--|---------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Lophogobius cyprinoides</i> (Pallas, 1770) | Crested Goby | S8 | 6 | 1 | SJ28 | | |
| <i>Lythrypnus elasson</i> Böhlke & Robins, 1960 | Dwarf Goby | S8 | 2 | AMNH | ST5 | 1 | YES |
| <i>Lythrypnus minimus</i> Garzón-Ferreira & Acero P., 1988 | Pygmy Goby | S8 | | | | | YES |
| <i>Lythrypnus nesiotus</i> Böhlke & Robins, 1960 | Island Goby | S8 | 2 | 1 | SJ34 | 1 | YES |
| <i>Lythrypnus spilus</i> Böhlke & Robins, 1960 | Bluegold Goby | S8 | | | ST3 | | |
| <i>Microgobius carri</i> Fowler, 1945 | Seminole Goby | S8 | 2,4 | 1 | SJ19, SJ25 | 1 | YES |
| <i>Microgobius signatus</i> Poey, 1876 | Signal Goby | S8 | | 1 | SJ28, SJ22, SJ3 | | YES |
| <i>Nes longus</i> (Nichols, 1914) | Orangespotted Goby | S8 | 4 | 1 | | | YES |
| <i>Oxyurichthys stigmalophius</i> (Mead & Böhlke, 1958) | Spotfin Goby | S8 | 4 | 1 | SJ5, SJ19, SJ28 | | |
| <i>Palatogobius paradoxus</i> Gilbert, 1971 | Mauve Goby | | 2,11 | 1 | | | |
| <i>Priolepis hipoliti</i> (Metzelaar, 1922) | Rusty Goby | S8 | 2,4 | 1 | | 1 | |
| <i>Psilotris celsa</i> Böhlke, 1963 | Highspine Goby | | 2 | 1 | | | |
| <i>Ptereleotris helenae</i> (Randall, 1968) | Hovering Dartfish | S8 | 2,4 | 1 | | | |
| <i>Risor ruber</i> (Rosén, 1911) | Tusked Goby | S8 | 2 | 1 | | 1 | YES |
| <i>Sicydium plumieri</i> (Bloch, 1786) | Sirajo Goby | S8 | 6 | 1 | SJ10 | | YES |
| <i>Sicydium punctatum</i> Perugia, 1896 | Spotted Algae-eating Goby | S8 | | 1 | SJ10 | | YES |
| <i>Tigrigobius dilepis</i> (Robins & Böhlke, 1964) | Orangesided Goby | | 4 | 1 | | | |
| <i>Tigrigobius multifasciatus</i> (Steindachner, 1876) | Greenbanded Goby | S8 | 2 | 1 | | | YES |
| <i>Tigrigobius pallens</i> (Ginsburg, 1939) | Semiscaled Goby | S8 | | | SJ23 | | |
| <i>Tigrigobius saucrus</i> (Robins, 1960) | Leopard Goby | S8 | 2 | 1 | | 1 | YES |
| Grammatidae | | | | | | | |
| <i>Gramma linki</i> Starck & Colin, 1978 | Yellowcheek Basslet | | 2,5,8 | | | 1 | |
| <i>Gramma loreto</i> Poey, 1868 | Fairy Basslet | S8 | 2,4 | 1 | | | YES |
| Haemulidae | | | | | | | |
| <i>Anisotremus surinamensis</i> (Bloch, 1791) | Black Margate | S9 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Anisotremus virginicus</i> (Linnaeus, 1758) | Porkfish | S9 | 2,5,6,8 | 1 | | | YES |
| <i>Brachygenys chrysargyrea</i> (Günther, 1859) | Smallmouth Grunt | S9 | 2,4 | 1 | | 1 | YES |
| <i>Emmelichthys atlanticus</i> Schultz, 1945 | Bonnetmouth | S9 | 2 | | ST8 | | |
| <i>Haemulon album</i> Cuvier, 1830 | Margate | S9 | 2,4 | 1 | SJ7 | | |
| <i>Haemulon aurolineatum</i> Cuvier, 1830 | Tomtate | S9 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Haemulon carbonarium</i> Poey, 1860 | Caesar Grunt | S9 | 2,4 | 1 | | 1 | |
| <i>Haemulon flavolineatum</i> (Desmarest, 1823) | French Grunt | S9 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Haemulon macrostoma</i> Günther, 1859 | Spanish Grunt | S9 | 2,4 | 1 | | 1 | |
| <i>Haemulon melanurum</i> (Linnaeus, 1758) | Cottonwick | S9 | 2 | 1 | O5 | | YES |

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|--|--------------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Haemulon parra</i> (Desmarest, 1823) | Sailors Choice | S9 | 2,4 | 1 | SJ1, SJ21 | | YES |
| <i>Haemulon plumierii</i> (Lacepède, 1801) | White Grunt | S9 | 2,4 | 1 | | 1 | YES |
| <i>Haemulon sciurus</i> (Shaw, 1803) | Bluestriped Grunt | S9 | 2,4,5 | 1 | | 1 | YES |
| <i>Haemulon striatum</i> (Linnaeus, 1758) | Striped Grunt | | 2,4 | 1 | | | YES |
| <i>Haemulon vittatum</i> (Poey, 1860) | Boga | S9 | 2,4 | 1 | ST6, ST8, ST2 | 1 | |
| Hemiramphidae | | | | | | | |
| <i>Euleptorhamphus velox</i> Poey, 1868 | Flying Halfbeak | | | | MCZ | | |
| <i>Hemiramphus balao</i> Lesueur, 1821 | Balao | | | | MCZ | | |
| <i>Hemiramphus brasiliensis</i> (Linnaeus, 1758) | Ballyhoo | S9 | 2 | 1 | | | |
| <i>Hyporhamphus unifasciatus</i> (Ranzani, 1841) | Atlantic Silverstripe Halfbeak | | 2 | 1 | | | |
| Hexanchidae | | | | | | | |
| <i>Heptranchias perlo</i> (Bonnaterre, 1788) | Sharpnose Sevengill Shark | | | | FIMNH | | |
| <i>Hexanchus vitulus</i> Springer & Waller, 1969 | Atlantic Sixgill Shark | | | | FIMNH | | |
| Holocentridae | | | | | | | |
| <i>Holocentrus adscensionis</i> (Osbeck, 1765) | Squirrelfish | S9 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Holocentrus rufus</i> (Walbaum, 1792) | Longspine Squirrelfish | S9 | 2,4,5,8 | 1 | | 1 | |
| <i>Myripristis jacobus</i> Cuvier, 1829 | Blackbar Soldierfish | S9 | 2,4,5,8 | 1 | | 1 | |
| <i>Neoniphon coruscum</i> (Poey, 1860) | Reef Squirrelfish | S9 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Neoniphon marianus</i> (Cuvier, 1829) | Longjaw Squirrelfish | S9 | 2,4,5,8 | 1 | | 1 | |
| <i>Neoniphon vexillarium</i> (Poey, 1860) | Dusky Squirrelfish | S9 | 2,4 | 1 | | 1 | |
| <i>Ostichthys trachypoma</i> (Günther, 1859) | Bigeye Soldierfish | | 2,5,8 | 1 | | | |
| <i>Plectrypops retrospinis</i> (Guichenot, 1853) | Cardinal Soldierfish | S9 | 2,5,8 | 1 | SJ9, SJ22, ST3 | 1 | |
| <i>Sargocentron bullisi</i> (Woods, 1955) | Deepwater Squirrelfish | | 2,11 | 1 | | | |
| Ipnoptidae | | | | | | | |
| <i>Bathypterois bigelowi</i> Mead, 1958 | Spottail Tripodfish | | | | CAS | | |
| <i>Bathypterois phenax</i> Parr, 1928 | Blackfin Spiderfish | | 9 | | | | |
| <i>Bathypterois viridensis</i> (Roule, 1916) | Twobanded Tripodfish | | 9 | | | | |
| <i>Ipnoptis murrayi</i> Günther, 1878 | Grideye Fish | | 9 | | | | |
| Istiophoridae | | | | | | | |
| <i>Istiophorus platypterus</i> (Shaw, 1792) | Sailfish | S9 | 2 | | | | |
| <i>Kajikia albida</i> (Poey, 1860) | White Marlin | S9 | 2 | | | | |
| <i>Makaira nigricans</i> Lacepède, 1802 | Blue Marlin | | 2 | | | | YES |
| <i>Tetrapturus pfluegeri</i> Robins & de Sylva, 1963 | Longbill Spearfish | | 2 | | | | |

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|---|------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Kyphosidae | | | | | | | |
| <i>Kyphosus cinerascens</i> (Forsskål, 1775) | Topsail Seachub | S10 | | | | | |
| <i>Kyphosus sectatrix</i> (Linnaeus, 1758) | Bermuda Chub | S10 | 2,4 | 1 | | | |
| <i>Kyphosus vaigiensis</i> (Quoy & Gaimard, 1825) | Yellow Chub | S10 | | 1 | | | |
| Labridae | | | | | | | |
| Labrinae | | | | | | | |
| <i>Bodianus rufus</i> (Linnaeus, 1758) | Spanish Hogfish | S10 | 2,4,5,8 | 1 | | | YES |
| <i>Clepticus parrae</i> (Bloch & Schneider, 1801) | Creole Wrasse | S10 | 2,4,5,8 | 1 | | | YES |
| <i>Decodon puellaris</i> (Poey, 1860) | Red Hogfish | | 2 | 1 | | | |
| <i>Doratonotus megalepis</i> Günther, 1862 | Dwarf Wrasse | | 2 | 1 | | | |
| <i>Halichoeres bivittatus</i> (Bloch, 1791) | Slippery Dick | S10 | 2,4 | 1 | | 1 | YES |
| <i>Halichoeres caudalis</i> (Poey, 1860) | Painted Wrasse | | | NOAA | | | |
| <i>Halichoeres cyanocephalus</i> (Bloch, 1791) | Yellowcheek Wrasse | | 2 | 1 | | | |
| <i>Halichoeres garnoti</i> (Valenciennes, 1839) | Yellowhead Wrasse | S10 | 2,4 | 1 | | 1 | YES |
| <i>Halichoeres maculipinna</i> (Müller & Troschel, 1848) | Clown Wrasse | S10 | 2,4 | 1 | | 1 | |
| <i>Halichoeres pictus</i> (Poey, 1860) | Rainbow Wrasse | S10 | 2,4 | 1 | | 1 | |
| <i>Halichoeres poeyi</i> (Steindachner, 1867) | Blackear Wrasse | S10 | 2,4 | 1 | | | |
| <i>Halichoeres radiatus</i> (Linnaeus, 1758) | Puddingwife | S10 | 2,4 | 1 | | 1 | YES |
| <i>Lachmolaimus maximus</i> (Walbaum, 1792) | Hogfish | S10 | 2,4,5,8 | 1 | | | |
| <i>Thalassoma bifasciatum</i> (Bloch, 1791) | Bluehead | S10 | 2,4 | 1 | | 1 | |
| <i>Xyrichtys martinicensis</i> Valenciennes, 1840 | Rosy Razorfish | S10 | 2,4 | 1 | | | |
| <i>Xyrichtys novacula</i> (Linnaeus, 1758) | Pearly Razorfish | S10 | 2,4 | 1 | | | YES |
| <i>Xyrichtys splendens</i> Castelnau, 1855 | Green Razorfish | S10 | 2,4 | 1 | | | |
| Scarinae | | | | | | | |
| <i>Cryptotomus roseus</i> Cope, 1871 | Bluelip Parrotfish | S10 | 2,4 | 1 | | | YES |
| <i>Scarus coelestinus</i> Valenciennes, 1840 | Midnight Parrotfish | S10 | 2 | 1 | O6 | 1 | |
| <i>Scarus coeruleus</i> (Edwards, 1771) | Blue Parrotfish | | 2,4 | 1 | | 1 | |
| <i>Scarus guacamaia</i> Cuvier, 1829 | Rainbow Parrotfish | S10 | 2,4 | 1 | SJ28, SJ33, O2 | | |
| <i>Scarus iseri</i> (Bloch, 1789) | Striped Parrotfish | S10 | 2,4 | 1 | | 1 | YES |
| <i>Scarus taeniopterus</i> Lesson, 1829 | Princess Parrotfish | S10 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Scarus vetula</i> Bloch & Schneider, 1801 | Queen Parrotfish | S10 | 2,4 | 1 | | 1 | YES |
| <i>Sparisoma atomarium</i> (Poey, 1861) | Greenblotch Parrotfish | S11 | 2,4 | 1 | | | |
| <i>Sparisoma aurofrenatum</i> (Valenciennes, 1840) | Redband Parrotfish | S11 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Sparisoma chrysopterygum</i> (Bloch & Schneider, 1801) | Redtail Parrotfish | S11 | 2,4 | 1 | | 1 | YES |
| <i>Sparisoma radians</i> (Valenciennes, 1840) | Bucktooth Parrotfish | S11 | 2,4 | 1 | | 1 | YES |
| <i>Sparisoma rubripinne</i> (Valenciennes, 1840) | Yellowtail Parrotfish | S11 | 2,4 | 1 | | 1 | YES |

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|---|--------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Sparisoma viride</i> (Bonnaterre, 1788) | Stoplight Parrotfish | S11 | 2,4,5,8 | 1 | | 1 | YES |
| Labrisomidae | | | | | | | |
| <i>Brockius albigens</i> Beebe & Tee-Van, 1928 | Whitecheek Blenny | | DNA | | Berry Bay, St. John | | YES |
| <i>Brockius nigricinctus</i> (Howell Rivero, 1936) | Spotcheek Blenny | S11 | | 1 | SJ21 | | YES |
| <i>Gobioclinus bucciferus</i> (Poey, 1868) | Puffcheek Blenny | S11 | 2 | 1 | | | YES |
| <i>Gobioclinus filamentosus</i> (Springer, 1960) | Quillfin Blenny | S11 | 3,11 | 1 | O7 | | YES |
| <i>Gobioclinus gobio</i> (Valenciennes, 1836) | Palehead Blenny | S11 | 2 | 1 | | 1 | YES |
| <i>Gobioclinus guppyi</i> (Norman, 1922) | Mimic Blenny | S11 | 2 | 1 | | -1 | YES |
| <i>Gobioclinus haitiensis</i> (Beebe & Tee-Van, 1928) | Longfin Blenny | S11 | 2 | 1 | SJ12 | 1 | YES |
| <i>Labrisomus cricota</i> Sazima, Gasparini & Moura, 2002 | Mock Blenny | S11 | | | SJ10 | | |
| <i>Labrisomus nuchipinnis</i> (Quoy & Gaimard, 1824) | Hairy Blenny | S11 | 2,4 | 1 | | 1 | YES |
| <i>Malacoctenus aurolineatus</i> Smith, 1957 | Goldline Blenny | S11 | 2,4 | 1 | | 1 | YES |
| <i>Malacoctenus boehlkei</i> Springer, 1959 | Diamond Blenny | S11 | 2,4 | 1 | | 1 | YES |
| <i>Malacoctenus erdmani</i> Smith, 1957 | Imitator Blenny | S11 | | | SJ23 | | YES |
| <i>Malacoctenus gilli</i> (Steindachner, 1867) | Dusky Blenny | S11 | 2,4 | 1 | | | YES |
| <i>Malacoctenus macropus</i> (Poey, 1868) | Rosy Blenny | S11 | 2,4 | 1 | | | YES |
| <i>Malacoctenus triangulatus</i> Springer, 1959 | Saddled Blenny | S11 | 2,4 | 1 | | 1 | YES |
| <i>Malacoctenus versicolor</i> (Poey, 1876) | Barfin Blenny | S11 | 2,4 | 1 | SJ23, SJ12 | | YES |
| <i>Nemaclinus atelestos</i> Böhlke & Springer, 1975 | Threadfin Blenny | | 2,11 | 1 | | | |
| <i>Paraclinus barbatus</i> Springer, 1955 | Goatee Blenny | | 2,11 | | | | |
| <i>Paraclinus cingulatus</i> (Evermann & Marsh, 1899) | Coral Blenny | | 2 | | | | |
| <i>Paraclinus fasciatus</i> (Steindachner, 1876) | Banded Blenny | S11 | 2 | | SJ12 | | |
| <i>Paraclinus nigripinnis</i> (Steindachner, 1867) | Blackfin Blenny | S11 | 2 | 1 | SJ12 | | YES |
| <i>Starksia culebrae</i> (Evermann & Marsh, 1899) | Culebra Blenny | S11 | 2 | 1 | ST2, SJ13 | | YES |
| <i>Starksia hassi</i> Klauswitz, 1958 | Ringed Blenny | S11 | 2,11 | 1 | SJ24 | 1 | |
| <i>Starksia lepicoelia</i> Böhlke & Springer, 1961 | Blackcheek Blenny | | 2 | 1 | | 1 | |
| <i>Starksia nanodes</i> Böhlke & Springer, 1961 | Dwarf Blenny | | 2 | 1 | | | |
| <i>Starksia williamsi</i> Baldwin & Castillo, 2011 | Williams's Blenny | S11 | | | SJ2, SJ13 | | YES |
| <i>Stathmonotus gymnodermis</i> Springer, 1955 | Naked Blenny | | 2 | 1 | | | |
| <i>Stathmonotus stabli</i> (Evermann & Marsh, 1899) | Southern Eelgrass Blenny | | 2 | 1 | | | |

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|--|------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Latilidae | | | | | | | |
| <i>Caulolatilus cyanops</i> Poey, 1866 | Blackline Tilefish | | 2 | | | | |
| Lobotidae | | | | | | | |
| <i>Lobotes surinamensis</i> (Bloch, 1790) | Atlantic Tripletail | S11 | 2 | 1 | O18 | | |
| Lutjanidae | | | | | | | |
| <i>Apsilus dentatus</i> Guichenot, 1853 | Black Snapper | | 2 | | | | |
| <i>Etelis oculatus</i> (Valenciennes, 1828) | Queen Snapper | S12 | 2,5,8 | | | | YES |
| <i>Lutjanus analis</i> (Cuvier, 1828) | Mutton Snapper | S12 | 2,4,5,8 | 1 | | | YES |
| <i>Lutjanus apodus</i> (Walbaum, 1792) | Schoolmaster | S12 | 2,4,5,6,8 | 1 | | 1 | YES |
| <i>Lutjanus buccanella</i> (Cuvier, 1828) | Blackfin Snapper | S12 | 2,5,8 | 1 | | | YES |
| <i>Lutjanus cyanopterus</i> (Cuvier, 1828) | Cubera Snapper | S12 | 2,4 | 1 | | | YES |
| <i>Lutjanus griseus</i> (Linnaeus, 1758) | Gray Snapper | S12 | 2,4,6 | 1 | | 1 | |
| <i>Lutjanus jocu</i> (Bloch & Schneider, 1801) | Dog Snapper | S12 | 2,4,5,8 | 1 | | | YES |
| <i>Lutjanus mahogoni</i> (Cuvier, 1828) | Mahogany Snapper | S12 | 2,4 | 1 | | 1 | YES |
| <i>Lutjanus purpureus</i> (Poey, 1866) | Caribbean Red Snapper | | 2 | 1 | | | |
| <i>Lutjanus synagris</i> (Linnaeus, 1758) | Lane Snapper | S12 | 2,4 | 1 | | | YES |
| <i>Lutjanus vivanus</i> (Cuvier, 1828) | Silk Snapper | S12 | 2,5,8 | 1 | | | YES |
| <i>Ocyurus chrysurus</i> (Bloch, 1791) | Yellowtail Snapper | S12 | 2,4 | 1 | | 1 | YES |
| <i>Pristipomoides macrophthalmus</i> (Müller & Troschel, 1848) | Cardinal Snapper | | 2 | | | | |
| <i>Rhomboplites aurorubens</i> (Cuvier, 1829) | Vermilion Snapper | S12 | 2 | | SJ20 | | |
| Malacanthidae | | | | | | | |
| <i>Malacanthus plumieri</i> (Bloch, 1786) | Sand Tilefish | S12 | 2,4,5,8 | 1 | | 1 | |
| Megalopidae | | | | | | | |
| <i>Megalops atlanticus</i> Valenciennes, 1847 | Tarpon | S12 | 2,6 | 1 | | | |
| Mobulidae | | | | | | | |
| <i>Mobula birostris</i> (Walbaum, 1792) | Giant Manta | S12 | 2 | | | | |
| <i>Mobula cf birostris</i> | Caribbean Manta | S12 | | | SJ12 | | |
| Monacanthidae | | | | | | | |
| <i>Aluterus monoceros</i> (Linnaeus, 1758) | Unicorn Filefish | S12 | | | O23 | | |
| <i>Aluterus schoepfii</i> (Walbaum, 1792) | Orange Filefish | S12 | | 1 | SJ34 | | |
| <i>Aluterus scriptus</i> (Osbeck, 1765) | Scrawled Filefish | S12 | 4 | 1 | | | |
| <i>Cantherhines macrocerus</i> (Hollard, 1853) | Whitespotted Filefish | S12 | 2 | 1 | | | YES |
| <i>Cantherhines pullus</i> (Ranzani, 1842) | Orangespotted Filefish | S12 | 2,4 | 1 | | 1 | |
| <i>Monacanthus ciliatus</i> (Mitchill, 1818) | Fringed Filefish | S12 | 2,4 | 1 | | | YES |
| <i>Monacanthus tuckeri</i> Bean, 1906 | Slender Filefish | S12 | 2,4 | 1 | | | |
| <i>Stephanolepis hispidus</i> (Linnaeus, 1766) | Planehead Filefish | | | FIMNH | | | |
| <i>Stephanolepis setifer</i> (Bennett, 1831) | Pygmy Filefish | | 2 | | | | |
| Moringuidae | | | | | | | |
| <i>Moringua edwardsi</i> (Jordan & Bollman, 1889) | Spaghetti Eel | | 2 | 1 | | -1 | |

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|---|------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Mugilidae | | | | | | | |
| <i>Dajaus monticola</i> (Bancroft, 1834) | Mountain Mullet | S13 | 6 | 1 | SJ10 | | |
| <i>Mugil curema</i> Valenciennes, 1836 | White Mullet | S13 | 2,6 | | SJ21 | | YES |
| <i>Mugil rubrioculus</i> Harrison, Nirchio, Oliveira, Ron & Gaviria, 2007 | Redeye Mullet | S13 | DNA | | | | YES |
| <i>Mugil trichodon</i> Poey, 1875 | Fantail Mullet | | | ROM | | | |
| Mullidae | | | | | | | |
| <i>Mulloidichthys martinicus</i> (Cuvier, 1829) | Yellow Goatfish | S13 | 2,4,6 | 1 | | 1 | YES |
| <i>Pseudupeneus maculatus</i> (Bloch, 1793) | Spotted Goatfish | S13 | 2,4,5,8 | 1 | | 1 | |
| Muraenidae | | | | | | | |
| <i>Echidna catenata</i> (Bloch, 1795) | Chain Moray | S13 | 2,4 | 1 | SJ21, SJ10 | 1 | |
| <i>Enchelycore carychroa</i> Böhlke & Böhlke, 1976 | Chestnut Moray | S13 | 2 | 1 | SJ5 | 1 | |
| <i>Enchelycore nigricans</i> (Bonnaterre, 1788) | Viper Moray | S13 | 2 | 1 | SJ9 | 1 | |
| <i>Gymnothorax conspersus</i> Poey, 1867 | Saddled Moray | | | ANSP | | | |
| <i>Gymnothorax funebris</i> Ranzani, 1839 | Green Moray | S13 | 2,4 | 1 | | 1 | YES |
| <i>Gymnothorax maderensis</i> (Johnson, 1862) | Sharktooth Moray | | 2 | 1 | | | |
| <i>Gymnothorax miliaris</i> (Kaup, 1856) | Goldentail Moray | S13 | 2,4 | 1 | | 1 | |
| <i>Gymnothorax moringa</i> (Cuvier, 1829) | Spotted Moray | S13 | 2,4 | | | 1 | YES |
| <i>Gymnothorax vicinus</i> (Castelnau, 1855) | Purplemouth Moray | S13 | 2,4 | 1 | | 1 | |
| <i>Uropterygius macularius</i> (Lesueur, 1825) | Marbled Moray | S13 | 2 | 1 | | 1 | |
| Myctophidae | | | | | | | |
| <i>Centrobranchus nigroocellatus</i> (Günther, 1873) | Roundnose Lanternfish | | | ROM | | | |
| Neoscopelidae | | | | | | | |
| <i>Neoscopelus macrolepidotus</i> Johnson, 1863 | Largescale Blackchin | | | CAS | | | |
| Nomeidae | | | | | | | |
| <i>Psenes cyanophrys</i> Valenciennes, 1833 | Freckled Driftfish | | 2 | 1 | | | |
| Ogcocephalidae | | | | | | | |
| <i>Ogcocephalus nasutus</i> (Cuvier, 1829) | Shortnose Batfish | | 2 | 1 | | | |
| <i>Ogcocephalus pumilus</i> Bradbury, 1980 | Dwarf Batfish | | | CAS | | | |
| Ophichthidae | | | | | | | |
| <i>Ahlia egmontis</i> (Jordan, 1884) | Key Worm Eel | | 2 | 1 | | | |
| <i>Aprognathodon platyventris</i> Böhlke, 1967 | Stripe Eel | | 2 | 1 | | | |
| <i>Callechelys guineensis</i> (Osório, 1893) | Shorttail Snake Eel | | 11 | 1 | | | |
| <i>Echiophis intertinctus</i> (Richardson, 1848) | Spotted Spoon-nose Eel | | 2 | | | | |
| <i>Ichthyapus ophioneus</i> (Evermann & Marsh, 1900) | Surf Eel | | | FIMNH | | | |
| <i>Myrichthys breviceps</i> (Richardson, 1848) | Sharptail Eel | S13 | 2 | | SJ13 | | |

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| <i>Myrichthys ocellatus</i> (Lesueur, 1825) | Goldspotted Eel | | 2 | 1 | | | |
| <i>Myrophis anterodorsalis</i> McCosker, Böhlke & Böhlke, 1989 | Longfin Worm Eel | S13 | | | SJ28 | | |
| <i>Myrophis platyrhynchus</i> Breder, 1927 | Broadnose Worm Eel | | 2 | 1 | | | YES |
| <i>Myrophis punctatus</i> Lütken, 1852 | Speckled Worm Eel | | 2,11 | 1 | | | |
| Ophidiidae | | | | | | | |
| <i>Brotula barbata</i> (Bloch & Schneider, 1801) | Atlantic Bearded Brotula | | 2 | 1 | | -1 | |
| <i>Lepophidium pheromystax</i> Robins, 1960 | Upsilon Cusk-eel | | 2 | 1 | | | |
| <i>Luciobrotula corethromycter</i> * Cohen, 1964 | Broomnose Cusk-eel | | 9 | | | | |
| <i>Ophidion holbrookii</i> Putnam, 1874 | Bank Cusk-eel | | 2,3,11 | 1 | | -1 | |
| <i>Parophidion schmidti</i> (Woods & Kanazawa, 1951) | Dusky Cusk-eel | | | 1 | | | |
| <i>Xyelacyba myersi</i> * Cohen, 1961 | Gargoyle Cusk-eel | | 9 | | | | |
| Opistognathidae | | | | | | | |
| <i>Lonchopisthus micrognathus</i> (Poey, 1860) | Swordtail Jawfish | S13 | 4 | 1 | SJ28, SJ19 | | YES |
| <i>Opistognathus aurifrons</i> (Jordan & Thompson, 1905) | Yellowhead Jawfish | S13 | 2,4 | 1 | | | YES |
| <i>Opistognathus macrogathus</i> Poey, 1860 | Banded Jawfish | S13 | 2,4,11 | 1 | SJ5, SJ13, SJ19 | | |
| <i>Opistognathus maxillosus</i> Poey, 1860 | Mottled Jawfish | S13 | 2 | 1 | SJ5, SJ13, SJ19 | 1 | |
| <i>Opistognathus whitehursti</i> (Longley, 1927) | Dusky Jawfish | S13 | | 1 | SJ12 | | |
| Ostraciidae | | | | | | | |
| <i>Acanthostracion polygonium</i> Poey, 1876 | Honeycomb Cowfish | S13 | 2 | 1 | | | |
| <i>Acanthostracion quadricornis</i> (Linnaeus, 1758) | Scrawled Cowfish | S13 | 2 | 1 | | | |
| <i>Lactophrys bicaudalis</i> (Linnaeus, 1758) | Spotted Trunkfish | S13 | 2,4 | 1 | | | |
| <i>Lactophrys trigonus</i> (Linnaeus, 1758) | Trunkfish | S13 | 2,4 | 1 | | | |
| <i>Lactophrys triqueter</i> (Linnaeus, 1758) | Smooth Trunkfish | S13 | 2,4 | 1 | | 1 | |
| Paralichthyidae | | | | | | | |
| <i>Citharichthys cornutus</i> (Günther, 1880) | Horned Whiff | | | | FMNH | | |
| <i>Citharichthys uhleri</i> Jordan, 1889 | Voodoo Whiff | | | | FIMNH | | |
| <i>Cyclosetta fimbriata</i> (Goode & Bean, 1885) | Spotfin Flounder | S14 | 2 | 1 | SJ12, O14 | | |
| <i>Syacium micrurum</i> Ranzani, 1842 | Channel Flounder | | 2 | 1 | | | YES |
| Parazenidae | | | | | | | |
| <i>Cyttopsis rosea</i> (Lowe, 1843) | Red Dory | | 5 | | | | |
| Pempheridae | | | | | | | |
| <i>Pempheris schomburgkii</i> Müller & Troschel, 1848 | Glassy Sweeper | S14 | 2,4 | 1 | SJ13, ST3, SJ15 | | YES |

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|---|----------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Poeciliidae | | | | | | | |
| <i>Poecilia reticulata</i> Peters, 1859 | Guppy | S14 | | 1 | SJ10 | | |
| Polymixiidae | | | | | | | |
| <i>Polymixia lowei</i> Günther, 1859 | Beardfish | | | FIMNH, CAS | | | |
| <i>Polymixia nobilis</i> Lowe, 1836 | Noble Beardfish | | 5,8 | | | | |
| Polynemidae | | | | | | | |
| <i>Polydactylus virginicus</i> (Linnaeus, 1758) | Barbu | | | FIMNH | | | |
| Pomacanthidae | | | | | | | |
| <i>Centropyge argi</i> Woods & Kanazawa, 1951 | Cherubfish | S14 | 2,4,5,8 | 1 | O21 | | |
| <i>Holacanthus ciliaris</i> (Linnaeus, 1758) | Queen Angelfish | S14 | 2,4 | 1 | | 1 | YES |
| <i>Holacanthus tricolor</i> (Bloch, 1795) | Rock Beauty | S14 | 2,4,5,8 | 1 | | 1 | |
| <i>Pomacanthus arcuatus</i> (Linnaeus, 1758) | Gray Angelfish | S14 | 2,4,5,8 | 1 | | 1 | |
| <i>Pomacanthus paru</i> (Bloch, 1787) | French Angelfish | S14 | 2,4,5 | 1 | | 1 | |
| Pomacentridae | | | | | | | |
| <i>Abudefduf saxatilis</i> (Linnaeus, 1758) | Sergeant Major | S14 | 2,4,6 | 1 | | 1 | YES |
| <i>Abudefduf taurus</i> (Müller & Troschel, 1848) | Night Sergeant | S14 | 2,4 | 1 | | 1 | |
| <i>Azurina cyanea</i> (Poey, 1860) | Blue Chromis | S14 | 2,4,8 | 1 | | 1 | YES |
| <i>Azurina multilineata</i> (Guichenot, 1853) | Brown Chromis | S14 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Chromis insolata</i> (Cuvier, 1830) | Sunshinifish | S14 | 2,5,8 | 1 | O20 | | |
| <i>Microspathodon chrysurus</i> (Cuvier, 1830) | Yellowtail Damsel | S14 | 2,4,5 | 1 | | 1 | |
| <i>Stegastes adustus</i> (Troschel, 1865) | Dusky Damsel | S14 | 2,4,6 | 1 | | 1 | |
| <i>Stegastes dienaecus</i> (Jordan & Rutter, 1897) | Longfin Damsel | S14 | 2,4 | 1 | | | YES |
| <i>Stegastes leucostictus</i> (Müller & Troschel, 1848) | Beaugregory | S14 | 2,4 | 1 | | 1 | YES |
| <i>Stegastes partitus</i> (Poey, 1868) | Bicolor Damsel | S14 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Stegastes planifrons</i> (Cuvier, 1830) | Threespot Damsel | S14 | 2,4 | 1 | | 1 | YES |
| <i>Stegastes xanthurus</i> (Poey, 1860) | Cocoa Damsel | S14 | 2,4 | 1 | | 1 | YES |
| Priacanthidae | | | | | | | |
| <i>Heteropriacanthus cruentatus</i> (Lacepède, 1801) | Glasseye Snapper | S15 | 2,4 | 1 | | 1 | YES |
| <i>Priacanthus arenatus</i> Cuvier, 1829 | Bigeye | S15 | 2 | 1 | SJ24 | | |
| <i>Pristigenys alta</i> (Gill, 1862) | Short Bigeye | | 2 | 1 | | | |
| Rachycentridae | | | | | | | |
| <i>Rachycentron canadum</i> (Linnaeus, 1766) | Cobia | S15 | | | ST3 | | |
| Rhincodontidae | | | | | | | |
| <i>Rhincodon typus</i> Smith, 1828 | Whale Shark | S15 | | | | | |
| Rivulidae | | | | | | | |
| <i>Kryptolebias marmoratus</i> (Poey, 1880) | Mangrove Rivulus | | 6 | 1 | | | |

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|--|-------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| Sciaenidae | | | | | | | |
| <i>Corvula batabana</i> (Poey, 1860) | Blue Croaker | | 2,11 | 1 | | | |
| <i>Eques lanceolatus</i> (Linnaeus, 1758) | Jackknife-fish | S15 | 2,4 | 1 | SJ30 | | |
| <i>Eques punctatus</i> Bloch & Schneider, 1801 | Spotted Drum | S15 | 2,4 | 1 | | 1 | |
| <i>Odontoscion dentex</i> (Cuvier, 1830) | Reef Croaker | S15 | 2,4 | 1 | | 1 | |
| <i>Pareques acuminatus</i> (Bloch & Schneider, 1801) | High-hat | S15 | 2,4 | 1 | | 1 | YES |
| <i>Umbrina coroides</i> Cuvier, 1830 | Sand Drum | | 2 | 1 | | | |
| Scomberesocidae | | | | | | | |
| <i>Scomberesox saurus</i> (Walbaum, 1792) | Atlantic Saury | | | | KU | | |
| Scombridae | | | | | | | |
| <i>Acanthocybium solandri</i> (Cuvier, 1832) | Wahoo | S15 | 2 | | | | |
| <i>Euthynnus alletteratus</i> (Rafinesque, 1810) | Little Tunny | S15 | 2 | 1 | | | YES |
| <i>Katsuwonus pelamis</i> (Linnaeus, 1758) | Skipjack Tuna | S15 | 2 | | | | |
| <i>Scomberomorus brasiliensis</i> Collette, Russo & Zavala-Camin, 1978 | Serra | | 2 | 1 | | | |
| <i>Scomberomorus cavalla</i> (Cuvier, 1829) | King Mackerel | S15 | 2 | | SJ4, ST6 | | |
| <i>Scomberomorus regalis</i> (Bloch, 1793) | Cero | S15 | 2,4 | 1 | | | |
| <i>Thunnus albacares</i> (Bonnaterre, 1788) | Yellowfin Tuna | S15 | 2 | | | | |
| <i>Thunnus atlanticus</i> (Lesson, 1831) | Blackfin Tuna | S15 | 2 | 1 | | | |
| Scorpaenidae | | | | | | | |
| <i>Pontinus castor</i> Poey, 1860 | Longsnout Scorpionfish | | 2 | 1 | | | |
| <i>Pterois volitans</i> (Linnaeus, 1758) | Red Lionfish | S15 | | 1 | | | YES |
| <i>Scorpaena albifimbria</i> Evermann & Marsh, 1900 | Coral Scorpionfish | S15 | 2,11 | 1 | O8 | | |
| <i>Scorpaena bergii</i> Evermann & Marsh, 1900 | Goosehead Scorpionfish | | | | FIMNH | | |
| <i>Scorpaena brasiliensis</i> Cuvier, 1829 | Barbfish | | 2,11 | 1 | | | |
| <i>Scorpaena calcarata</i> Goode & Bean, 1882 | Smoothhead Scorpionfish | | 2,11 | 1 | | | |
| <i>Scorpaena grandicornis</i> Cuvier, 1829 | Plumed Scorpionfish | | 2,6 | 1 | | | |
| <i>Scorpaena inermis</i> Cuvier, 1829 | Mushroom Scorpionfish | S15 | 2 | 1 | SJ5 | | |
| <i>Scorpaena plumieri</i> Bloch, 1789 | Spotted Scorpionfish | S15 | 2,4 | 1 | | 1 | |
| <i>Scorpaenodes caribbaeus</i> Meek & Hildebrand, 1928 | Reef Scorpionfish | S15 | 2 | 1 | SJ34, SJ23, SJ13 | 1 | |
| Serranidae | | | | | | | |
| <i>Alphestes afer</i> (Bloch, 1793) | Mutton Hamlet | S16 | 2 | 1 | SJ23 | 1 | |
| <i>Bullisichthys caribbaeus</i> Rivas, 1971 | Pugnose Bass | | 5,8 | | | | |
| <i>Cephalopholis cruentata</i> (Lacepède, 1802) | Graysby | S16 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Cephalopholis fulva</i> (Linnaeus, 1758) | Coney | S16 | 2,4,5,8 | 1 | | 1 | |
| <i>Diplectrum bivittatum</i> (Valenciennes, 1828) | Dwarf Sand Perch | S16 | 2 | 1 | | 1 | YES |
| <i>Diplectrum formosum</i> (Linnaeus, 1766) | Sand Perch | | 4 | 1 | | | |

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| <i>Epinephelus adscensionis</i> (Osbeck, 1765) | Rock Hind | S16 | 2,4 | 1 | SJ22, SJ15 | 1 | |
| <i>Epinephelus guttatus</i> (Linnaeus, 1758) | Red Hind | S16 | 2,4,5,8 | 1 | | 1 | |
| <i>Epinephelus itajara</i> (Lichtenstein, 1822) | Atlantic Goliath Grouper | S16 | 2 | | | | |
| <i>Epinephelus morio</i> (Valenciennes, 1828) | Red Grouper | S16 | 2 | 1 | | | |
| <i>Epinephelus striatus</i> (Bloch, 1792) | Nassau Grouper | S16 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Hypoplectrus aberrans</i> Poey, 1868 | Yellowbelly Hamlet | S16 | 2,4 | 1 | | 1 | |
| <i>Hypoplectrus chlorurus</i> (Cuvier, 1828) | Yellowtail Hamlet | S16 | 2,4,5,8 | 1 | | | |
| <i>Hypoplectrus guttavarius</i> (Poey, 1852) | Shy Hamlet | S16 | 2,4 | 1 | SJ19, ST6 | | |
| <i>Hypoplectrus indigo</i> (Poey, 1851) | Indigo Hamlet | S16 | 2,4 | 1 | | | |
| <i>Hypoplectrus nigricans</i> (Poey, 1852) | Black Hamlet | S16 | 2,4 | 1 | | 1 | |
| <i>Hypoplectrus puella</i> (Cuvier, 1828) | Barred Hamlet | S16 | 2,4 | 1 | | 1 | |
| <i>Hypoplectrus unicolor</i> (Walbaum, 1792) | Butter Hamlet | S16 | 2,4 | 1 | | 1 | |
| <i>Hyporthodus mystacinus</i> (Poey, 1852) | Misty Grouper | | 2,8 | | | | |
| <i>Liopropoma mowbrayi</i> Woods & Kanazawa, 1951 | Cave Basslet | | 2,5 | | | | |
| <i>Liopropoma rubre</i> Poey, 1861 | Peppermint Basslet | S16 | 2,4 | 1 | ST1, SJ9, SJ13 | 1 | |
| <i>Mycteroperca acutirostris</i> (Valenciennes, 1828) | Western Comb Grouper | | 2 | 1 | | | |
| <i>Mycteroperca bonaci</i> (Poey, 1860) | Black Grouper | S17 | 2 | 1 | SJ33, O9, O10 | | |
| <i>Mycteroperca interstitialis</i> (Poey, 1860) | Yellowmouth Grouper | S17 | 2,4,5 | 1 | SJ7 | | YES |
| <i>Mycteroperca tigris</i> (Valenciennes, 1833) | Tiger Grouper | S17 | 2,5,8 | 1 | O11, O12, O13 | 1 | |
| <i>Mycteroperca venenosa</i> (Linnaeus, 1758) | Yellowfin Grouper | S17 | 2,4,5,8 | 1 | | 1 | YES |
| <i>Paranthias furcifer</i> (Valenciennes, 1828) | Atlantic Creolefish | S17 | 2,5,8 | 1 | SJ33 | | |
| <i>Pronotogrammus martinicensis</i> (Guichenot, 1868) | Roughtongue Bass | | 5 | | | | |
| <i>Rypticus bistrispinus</i> (Mitchill, 1818) | Freckled Soapfish | S17 | | | O14 | | |
| <i>Rypticus carpenteri</i> Baldwin & Weigt, 2012 | Slope Soapfish | S17 | | | | | |
| <i>Rypticus saponaceus</i> (Bloch & Schneider, 1801) | Greater Soapfish | S17 | 2,4 | 1 | | 1 | |
| <i>Rypticus subbifrenatus</i> Gill, 1861 | Spotted Soapfish | | 2 | 1 | | 1 | |
| <i>Schultzea beta</i> (Hildebrand, 1940) | School Bass | S17 | 2 | 1 | O19 | | YES |
| <i>Serraniculus pumilio</i> Ginsburg, 1952 | Pygmy Sea Bass | S17 | 11 | 1 | SJ19 | | YES |
| <i>Serranus annularis</i> (Günther, 1880) | Orangeback Bass | S17 | 2,11 | 1 | O17 | | |
| <i>Serranus baldwini</i> (Evermann & Marsh, 1899) | Lantern Bass | S17 | 2,4 | 1 | SJ32, SJ12, SJ22 | | YES |
| <i>Serranus luciopercanus</i> Poey, 1852 | Crosshatch Bass | | 2,5,8 | | | | |
| <i>Serranus phoebe</i> Poey, 1851 | Tattler | | 2 | 1 | | | |
| <i>Serranus tabacarius</i> (Cuvier, 1829) | Tobaccofish | S17 | 2,4 | 1 | | | YES |
| <i>Serranus tigrinus</i> (Bloch, 1790) | Harlequin Bass | S17 | 2,4 | 1 | | 1 | |
| <i>Serranus tortugarum</i> Longley, 1935 | Chalk Bass | S17 | 2,4,5 | 1 | | | YES |

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| Sparidae | | | | | | | |
| <i>Archosargus rhomboidalis</i> (Linnaeus, 1758) | Sea Bream | S17 | 2,8 | 1 | SJ13, SJ3 | | |
| <i>Calamus bajonado</i> (Bloch & Schneider, 1801) | Jolthead Porgy | S17 | 2 | 1 | | | |
| <i>Calamus calamus</i> (Valenciennes, 1830) | Saucereye Porgy | S17 | 2,4 | 1 | | | |
| <i>Calamus penna</i> (Valenciennes, 1830) | Sheepshead Porgy | S17 | 2,4 | 1 | | | |
| <i>Calamus pennatula</i> Guichenot, 1868 | Pluma Porgy | S17 | 2,4 | 1 | | | YES |
| <i>Calamus proridens</i> Jordan & Gilbert, 1884 | Littlehead Porgy | | | CMN | | | |
| <i>Diplodus caudimacula</i> (Poey, 1860) | Silver Porgy | S17 | 2,4,11 | 1 | ST6 | | |
| Sphyraenidae | | | | | | | |
| <i>Sphyraena barracuda</i> (Edwards, 1771) | Great Barracuda | S17 | 2,4,5,6,8 | 1 | | | YES |
| <i>Sphyraena borealis</i> DeKay, 1842 | Sennet | S17 | 2 | 1 | SJ13, SJ12, SJ21 | | |
| Sphyrnidae | | | | | | | |
| <i>Sphyrna lewini</i> (Griffith & Smith, 1834) | Scalloped Hammerhead | | 10 | 1 | | | |
| <i>Sphyrna mokarran</i> (Rüppell, 1837) | Great Hammerhead | | 10 | | | | |
| Spratelloididae | | | | | | | |
| <i>Jenkinsia lamprotaenia</i> (Gosse, 1851) | Dwarf Herring | | 2,6 | 1 | | 1 | YES |
| <i>Jenkinsia parvula</i> Cervigón & Velazquez, 1978 | Shortstriped Round Herring | | 2 | | | | |
| <i>Jenkinsia stolifera</i> (Jordan & Gilbert, 1884) | Shortband Herring | | 2 | | | | |
| Squalidae | | | | | | | |
| <i>Squalus cubensis</i> Howell Rivero, 1936 | Cuban Dogfish | | | | FIMNH | | |
| Sternoptychidae | | | | | | | |
| <i>Sonoda paucilampa</i> Grey, 1960 | Deepsea Hatchetfish | | | | NMNH | | |
| Stomiidae | | | | | | | |
| <i>Astronesthes similis</i> Parr, 1927 | Similar Snaggletooth | | | | NMNH | | |
| Syngnathidae | | | | | | | |
| <i>Amphelikurus dendriticus</i> (Barbour, 1905) | Pipehorse | S18 | | | SJ12 | | |
| <i>Bryx dunckeri</i> (Metzelaar, 1919) | Pugnose Pipefish | S18 | 2 | 1 | SJ13 | 1 | YES |
| <i>Cosmocampus brachycephalus</i> (Poey, 1868) | Crested Pipefish | | 2 | | | 1 | |
| <i>Cosmocampus elucens</i> (Poey, 1868) | Shortfin Pipefish | S18 | 2,4 | 1 | SJ19 | | |
| <i>Cosmocampus profundus</i> (Herald, 1965) | Deepwater Pipefish | | 2 | | | | |
| <i>Halicampus crinitus</i> (Jenyns, 1842) | Banded Pipefish | S18 | | | SJ34, SJ13, SJ22 | | |
| <i>Hippocampus erectus</i> Perry, 1810 | Lined Seahorse | | 11 | 1 | | | YES |
| <i>Hippocampus reidi</i> Ginsburg, 1933 | Longsnout Seahorse | S18 | 4 | 1 | SJ19 | | YES |
| <i>Microphis lineatus</i> (Kaup, 1856) | Opposum Pipefish | S18 | | | O23 | | |
| <i>Pseudophallus mindii</i> (Meek & Hildebrand, 1923) | Freshwater Pipefish | | 11 | | | | |

| Scientific name | Common name | Image Plate | Literature source | Online source | Uncommon (site code) | Ichthyocide | DNA |
|---|---------------------------|-------------|-------------------|---------------|----------------------|-------------|-----|
| <i>Syngnathus caribbaeus</i> Dawson, 1979 | Caribbean Pipefish | S18 | 2 | | SJ21 | | |
| <i>Syngnathus dawsoni</i> (Herald, 1969) | Antillean Pipefish | | 2,4,11 | 1 | | | |
| <i>Syngnathus pelagicus</i> Linnaeus, 1758 | Sargassum Pipefish | | | ROM | | | |
| Synodontidae | | | | | | | |
| <i>Saurida brasiliensis</i> Norman, 1935 | Largescale Lizardfish | | 2 | | | | |
| <i>Saurida suspicio</i> Breder, 1927 | Doubtful Lizardfish | S18 | 2 | 1 | SJ5, SJ13 | | YES |
| <i>Synodus foetens</i> (Linnaeus, 1766) | Inshore Lizardfish | S18 | 2 | 1 | SJ5, SJ13 | 1 | YES |
| <i>Synodus intermedius</i> (Spix & Agassiz, 1829) | Sand Diver | S18 | 2,4 | 1 | | 1 | YES |
| <i>Synodus poeyi</i> Jordan, 1887 | Offshore Lizardfish | | 2 | | | | |
| <i>Synodus synodus</i> (Linnaeus, 1758) | Red Lizardfish | S18 | 2 | 1 | SJ11, SJ21 | 1 | |
| <i>Trachinocephalus myops</i> (Forster, 1801) | Snakefish | | | CAS | | | |
| Tetraodontidae | | | | | | | |
| <i>Canthigaster rostrata</i> (Bloch, 1786) | Sharpnose Puffer | S18 | 2,4,5,8 | 1 | | 1 | |
| <i>Sphoeroides spengleri</i> (Bloch, 1785) | Bandtail Puffer | S18 | 2,4 | 1 | | 1 | YES |
| <i>Sphoeroides testudineus</i> (Linnaeus, 1758) | Checkered Puffer | S18 | 2,4,6 | 1 | O15 | 1 | |
| Triakidae | | | | | | | |
| <i>Mustelus canis</i> (Mitchill, 1815) | Smooth Dogfish | | | FIMNH | | | |
| Triglidae | | | | | | | |
| <i>Peristedion longispatha</i> Goode & Bean, 1886 | Widehead Armored Searobin | | | CAS | | | |
| Tripterygiidae | | | | | | | |
| <i>Enneanectes altivelis</i> Rosenblatt, 1960 | Lofty Triplefin | S18 | 2 | 1 | | 1 | |
| <i>Enneanectes atrorus</i> Rosenblatt, 1960 | Blackedge Triplefin | | 2,11 | 1 | | | |
| <i>Enneanectes boehlkei</i> Rosenblatt, 1960 | Roughhead Triplefin | S18 | 2 | 1 | | -1 | YES |
| <i>Enneanectes jordani</i> (Evermann & Marsh, 1899) | Mimic Triplefin | S18 | 2 | 1 | SJ21 | | |
| <i>Enneanectes matador</i> Victor, 2013 | Matador Triplefin | S18 | | 1 | | | YES |
| Xiphiidae | | | | | | | |
| <i>Xiphias gladius</i> Linnaeus, 1758 | Swordfish | S18 | | | | | |

Notes: Image voucher – supplementary plate number is given; photographer name is imbedded in each image. Literature source – 1 DeAngelis et al. (2008); 2 Dennis (2000); 3 Dennis et al. (2004); 4 Friedlander et al. (2013); 5 Garcia-Sais (2005); 6 Loftus (2003); 7 Mantatrust.org pers. comm. to DRR; 8 Nelson and Appledorn (1985); 9 Quatrinni et al. (2017); 10 Recksiek et al. (2006), 11 Smith-Vaniz and Jelks (2014); 12 Rogers et al. (2010). Online source – 1 indicates that an aggregator source exists, with the source named whenever it represents the sole voucher: AMNH (American Museum of Natural History); NOAA (National Oceanographic and Atmospheric Administration); BOLD (Barcode of Life); FIMNH (Florida Museum of Natural History); MCZ (Museum of Comparative Zoology); NMNH (National Museum of Natural History); ANSP (Academy of Natural Sciences of Philadelphia); CAS (California Academy of Sciences); ROM (Royal Ontario Museum); KUBI (University of Kansas Biodiversity Institute); CMN (Canadian Museum of Nature). Uncommon – species seen at 3 or less named sites by CJE and AME (see Suppl material 3: File S2a, b (for site codes) and Suppl. material 4: File S3). Ichthyocide – species collected by this method as noted in Dennis (2000); parentheses indicate ichthyocide was the only collection method noted by Dennis (2000). Gobiidae – we follow Thacker (2009) in including *Cerdales* and *Ptereleotris* among the Gobiidae. *Hypoplectrus* – we follow Puebla et al. (2022) in treating *H. maculiferus* as a synonym of *H. aberrans*.

Table 3. Fishes from St. John-Thomas recorded by different sources.

| Types of fish taxa recorded | Species | Genera | Families |
|-------------------------------------|----------------|---------------|-----------------|
| Total from all sources | 561 | 296 | 108 |
| From Literature sources All | 451 | 251 | 89 |
| Dennis 2000 All | 401 | 216 | 79 |
| Sole source is Dennis 2000 | 164 | 126 | 55 |
| Sources other than Dennis 2000 | 50 | 44 | 25 |
| From Online sources All | 453 | 253 | 97 |
| Online sources only | 50 | 46 | 42 |
| From Images All | 371 | 20 | 73 |
| Images only | 34 | 29 | 20 |
| Deep species All sources | 49 | 44 | 33 |
| Recorded by Dennis 2000 | 19 | 18 | 13 |
| Uncommon shallow species | 138 | 104 | 45 |
| Ichthyocide Collection All | 173 | 99 | 45 |
| Ichthyocide only | 18 | 15 | 11 |
| mtDNA BARCODES | Species | Genera | Families |
| St. John-Thomas | 156 | 93 | 41 |
| Sole record is from barcode data | 1 | 1 | 1 |
| Puerto Rico | 90 | 50 | 25 |
| St. John-Thomas but not Puerto Rico | 113 | 61 | 24 |
| Puerto Rico but not St. John-Thomas | 47 | 18 | 8 |
| St. Croix | 1 | 1 | 1 |
| British Virgin Islands | 3 | 2 | 1 |
| All sites combined | 207 | 112 | 49 |

Notes: Data sources (literature, online sources, images) are listed in Table 2. Deep species are those exclusively or typically found below 40 m depth. Uncommon shallow species are those found at 1–3 sites by CJE, AME, LR, and third-party photographers as indicated in Table 2. Ichthyocide collection: recorded as being collected with rotenone by a source cited by Dennis (2000). Ichthyocide only: the only collection method listed for a species from St. John-Thomas by Dennis (2000). DNA barcodes: (see Suppl. material 7: File S6). The single DNA Barcoded species collected at St. Croix (see Suppl. material 7: File S6) is not known from St. John-Thomas. The St. John-Thomas species count includes four identified only to genus. DNA barcode data for *Pterois volitans* are not included in this table.

Dennis (2000) listed 401 species from 216 genera and 79 families from those two islands (Table 2). We found records of an additional 159 species, producing an increase of 39.7% in the number of species, 37.0% in the number of genera and 36.7% in the number of families known from there (Table 3). The additions include 34 species for which the only source is a voucher image, 50 species recorded in post-2000 publications, and 49 species recorded only by online sources of museum (and other) data (Table 3). Of the 561 in Table 2, 24.6% were uncommon. Although 30.1% were collected using rotenone, species accounts by Dennis (2000) mentioned no other collecting method for only 10.4% of that subgroup of species. The 561 include three non-natives to the area (*Oreochromis niloticus*, *Poecilia reticulata* and *Pterois volitans*), 11 freshwater/estuarine species (*Anguilla rostratus*, *Dormitator maculatus*, *Eleotris perniger*, *Gobiomorus dormitor*, *Awaous banana*, *Sicydium plumieri*, *Sicydium punctatum*, *Dajaus monticola*, *Microphis lineatus* and *Pseudophallus mindii* and 547 marine species native to the GC.

Table 4. Taxonomic comparisons of St. John-Thomas and St. Croix marine fish faunas.

| Site | Species | Genera | Families |
|---------------------------------|---------|--------|----------|
| Both US Virgin Islands | | | |
| Entire fauna (n) | 679 | 345 | 122 |
| Shallow fishes (n) | 590 | 279 | 90 |
| Deep fishes (n) | 89 | 77 | 54 |
| St. John-Thomas | | | |
| Entire Fauna (n) | 547 | 283 | 105 |
| Percent of USVI fauna | 80.6 | 82.0 | 86.0 |
| Percent only at St. John-Thomas | 19.3 | 15.5 | 10.5 |
| Shallow fishes (n) | 497 | 245 | 86 |
| Percent of USVI shallow fauna | 84.2 | 86.6 | 94.5 |
| Percent only at St. John-Thomas | 13.0 | 7.4 | 1.9 |
| Deep fishes (n) | 50 | 44 | 34 |
| Percent of USVI deep fauna | 56.2 | 57.1 | 63.0 |
| Percent only at St. John-Thomas | 70.0 | 50.0 | 26.5 |
| St. Croix | | | |
| Entire fauna (n) | 573 | 301 | 112 |
| Percent of USVI fauna | 84.5 | 87.2 | 91.8 |
| Percent only at St. Croix | 23.4 | 20.4 | 15.5 |
| Shallow fishes (n) | 519 | 256 | 88 |
| Percent of USVI fauna | 88.0 | 91.8 | 97.8 |
| Percent only at St. Croix | 18.3 | 13.1 | 2.7 |
| Deep fishes (n) | 54 | 50 | 39 |
| Percent of USVI deep fauna | 61.4 | 64.9 | 62.2 |
| Percent only St. Croix | 72.2 | 60.0 | 41.0 |

Notes: USVI fauna = combined fauna of St. John-Thomas and St. Croix, with exotic and primarily freshwater species excluded. Some genera and families have a deep member in one site but not the other, which affects USVI totals for deep and shallow genera and families. Shallow fishes: species exclusively or commonly found shallower than 40 m. Deep fishes: species exclusively or largely found deeper than 40 m (see methods for further details).

Comparative taxonomic composition of the USVI fish faunas (Table 4, Suppl. material 5: File S4)

The species richness of the USVI marine fauna (i.e., the combined St. John-Thomas plus St. Croix faunas) was 15–20% greater than that of either of the two insular faunas (Table 4). Those two faunas had slightly higher relative rates of richness of genera and families than of species. The larger size of the USVI fauna of species derives from ~ 1/5 of species in each insular fauna not being present in the other, with lower proportions of genera and families also being recorded only at one of the two islands. Relative faunal richness at all three taxonomic levels and the relative abundance of taxa present at only one island were ~ 5% higher at St. Croix than St. John-Thomas. In both island faunas the relative representation of species, genera, and families in the entire USVI fauna was substantially greater among shallow species than deep species. The deep fauna was much smaller than the shallow fauna at each island and there was much less overlap in occurrence of species, genera, and families between the two insular deep faunas than between their shallow faunas (Table 4).

Table 5. Abundance of ecotypes of reef-associated bony fishes in the Greater Caribbean and the USVI.

| | Region | St. John-Thomas | St. Croix |
|--|-------------|-----------------|-------------|
| All species (n) | 992 | 470 | 493 |
| Pelagic species % of fauna | 8.0 | 10.4 | 10.3 |
| Non-pelagic species % of fauna | 92.0 | 89.6 | 89.7 |
| Demersal species % | 34.6 | 46.3 | 45.0 |
| Benthic species % | 65.4 | 53.7 | 55.0 |
| Cryptobenthic species % | 64.6 | 53.0 | 54.3 |
| Small cryptobenthic species % | 42.6 | 31.6 | 32.5 |
| CCRF species % | 45.9 | 36.3 | 35.7 |
| SHALLOW NON-PELAGIC SPECIES (n) | 772 | 400 | 424 |
| Percent of fauna | 84.6 | 95.0 | 95.9 |
| Demersal species % | 34.9 | 45.3 | 44.0 |
| Benthic species % | 65.1 | 54.7 | 56.0 |
| Cryptobenthic species % | 64.0 | 54.3 | 55.2 |
| Small cryptobenthic species % | 42.5 | 33.3 | 34.0 |
| CCRF species % | 46.0 | 37.5 | 37.3 |
| DEEP NON-PELAGIC SPECIES (n) | 141 | 21 | 18 |
| Percent of fauna | 15.4 | 5.0 | 4.2 |
| Demersal species % | 33.3 | 66.7 | 66.7 |
| Benthic species % | 66.7 | 33.3 | 33.3 |
| Cryptobenthic species % | 66.7 | 33.3 | 33.3 |
| Small cryptobenthic species % | 43.3 | 4.8 | 0 |
| CCRF species % | 45.4 | 19.0 | 0 |

Notes: Data for the region pattern are from Robertson and Tornabene (2021), for St. Croix are from Robertson et al. (2022), and for St. John-Thomas are in File S5. Bold percentages indicate whether the value(s) for either the region or the USVI islands were > 5% higher than the value(s) for the other group in each case.

Table 6. Zoogeographic composition of the USVI and Sint Eustatius faunas. Percentage of species in each category. Non-native species are not included.

| Site (n) | Northwest Atlantic | Western Atlantic | Trans-Atlantic | Atlantic & Indo-Pacific |
|-----------------------|--------------------|------------------|----------------|-------------------------|
| St. Croix (534) | 41.6 | 33.9 | 13.9 | 10.6 |
| St. John-Thomas (558) | 39.5 | 36.5 | 14.0 | 10.0 |
| Sint Eustatius (406) | 41.1 | 33.3 | 15.3 | 10.3 |

Notes: St. Croix data are from Smith-Vaniz and Jelks 2014. Sint Eustatius values are from Robertson et al. (2020). St. John-Thomas values are from the present study. Northwest Atlantic = Greater Caribbean, with or without range extensions to the north of that region. Western Atlantic = Northwestern Atlantic + Brazil. Trans-Atlantic = anywhere in the western Atlantic + any of the islands of the central Atlantic and/or the Eastern Atlantic. Atlantic & Indo-Pacific = Anywhere in the Western Atlantic + anywhere in the Indo-Pacific.

Ecotypic structure of the USVI reef-fish faunas vs. the region (Table 5, Suppl. material 6: File S5)

We compared the ecotypic structure of the St. John-Thomas and St. Croix faunas of reef-associated fishes with that of the GC fauna (see Robertson and Tornabene 2021). Both St. Croix and St. John-Thomas have faunas that are almost half the size of the total regional

fauna, with the listed St. John-Thomas fauna being ~ 5% smaller than that of St. Croix (Table 5). Compared to the GC fauna both islands have slightly higher percentages of pelagic species, distinctly higher percentages of demersal species, and correspondingly lower percentages of benthic, cryptobenthic, small cryptobenthic, and CCRF species. These differences for non-pelagic types apply to each entire USVI fauna, and to both shallow- and deep-reef subgroups of those faunas. Both USVI sites also have markedly lower relative abundances (~ 1/3) of deep-reef species than the regional fauna. The relative abundances of different ecotypes are remarkably similar at both islands, except for the presence of a few deep cryptobenthic and CCRF species detected only at St. John-Thomas.

Zoogeographic structure of the USVI faunas (Table 6)

The zoogeographic structures of the faunas of the two USVI sites and nearby Sint Eustatius are quite similar (Table 6). Species that are endemic to the Greater Caribbean and, in a few cases, surrounding areas are the largest group in all three faunas, with West Atlantic species also found in Brazil being the second largest by a small margin in each case. The two smallest groups in each case are Trans-Atlantic and Atlantic & Indo-Pacific. The ranks of those four groups are the same in all three faunas, a measure of their strong similarities.

mtDNA-Barcode Coverage (Tables 2, 3; Suppl. material 7: File S6)

Table 2 indicates which members of the St. John-Thomas fauna have mtDNA-barcode sequences on the BOLD database derived from specimens collected at that site. Table 3 presents a summary of taxa that have sequences obtained from St. John-Thomas, Puerto Rico, the British Virgin Islands and St. Croix, singly and in combination. File S6 provides technical information about those barcode data for the various species. We obtained local DNA-barcodes for 156 fish species in 156 BINs from St. John-Thomas, with one additional from St. Croix, and three additional species from around the British Virgin Islands (total 160 species). Of these, two are only from GenBank records harvested by BOLD, and 10 are added from specimens collected in offshore larval plankton tows described in Lamkin et al. (2009). We obtained 91 species records (including one non-native, *Pterois volitans*) for Puerto Rico, 44 of them shared with the Virgin Islands. Of the 91, 27 are added from Harms-Tuohy et al. (2016), 14 from GenBank records harvested by BOLD, and seven from other sources, including the University of Kansas (UKFBJ), Smithsonian (Birmingham/Lessios; BSMUA & BSOPA), the Guy Harvey Research Institute (Hanner et al. 2011; EBFSF), and the Museum and Art Gallery of the Northern Territory (GOBY) in Australia.

The available DNA-barcode sequence records from specimens collected at St. John-Thomas represent coverage of 27.8% of the species, 31.4% of the genera and 38% of the families of fishes known from that site. Barcode records represent the sole source of information on the presence of one species known from those islands and are also available for another four species currently identifiable only to genus. Distinctly fewer species have been barcoded from fish taken at Puerto Rico, and there are almost no

such data available from either St. Croix or the British Virgin Islands. Barcode records from Puerto Rico and the British Virgin Islands exist for 52 species occurring in St. John-Thomas but not sequenced from there, bringing the total PRP DNA-barcoded species to 36.5% of St. John-Thomas fauna. All but seven of the 200 barcoded species are reef-associated bony fishes. The vast majority (98.5%) of barcoded species are shallow forms. Deep-living species are especially under-represented among the barcoded forms: only three of 51 such species have barcode data (File S6).

Discussion

St. Croix

The species records we have added increased the size of that island's fauna by 7.5%. Almost a third of the additions arise from voucher photographs of shallow-reef species photographed by CJE and AME (and provided by Mantatrust.org). Those include several not accepted by Smith-Vaniz and Jelks (2014) due to inadequate information available at that time. Cryptobenthic fishes, which, by definition, are generally difficult to observe, are a major component of Greater Caribbean reef-fish faunas, including that of St. Croix. Such species comprised all but one of those added by CJE and AME. The exception, *Kyphosus cinerascens*, may have been misidentified previously, since the taxonomic status and global distributions of members of the genus were only comprehensively reviewed by Knudsen and Clements (2016), after Smith-Vaniz and Jelks (2014) published their checklist. Almost half the additions were deep-living species, one third of which were recorded only by submersible or ROV, with the remainder coming from online and literature records.

The process of obtaining location records is an ongoing one for online aggregators, which have vastly increased the amounts of data they host during the last half decade. Although the aggregators offer such information, and are involved in collaborative data sharing, such sharing is sufficiently incomplete that it is necessary to examine records from multiple aggregators to obtain a comprehensive picture of all the data available for any particular site. Even “old” data becomes newly available on the aggregators from time to time and needs to be included in faunal inventories of well-studied sites. The increase in faunal size, although not large in percentage terms, demonstrates the utility of citizen-science efforts to provide photographic vouchers, of reviews of submersible and ROV studies of deep-living fishes, and of periodic evaluations of information available online from aggregators.

St. John-Thomas

Although the 401 species list for this site extracted from Dennis (2000) was substantial (74% the size of Smith-Vaniz and Jelks (2014) count for St. Croix), our use of the same methods as those that produced an increase in the St. Croix fauna produced a much larger increase in the St. John-Thomas fauna: 40% vs. 7.5% for St. Croix. Dennis (2000) was

the sole source for 29% of species recorded in our expanded list of the St. John-Thomas fauna. Records from additional sources brought the size of the St. John-Thomas fauna to within 5% of the size of the St. Croix fauna. Citizen-scientists' photographic records accounted for 22% of the new additions and data only available from online databases for 33%, while other literature sources provided the sole records for 32% of the additional species. Multiple types of sources accounted for the remaining 13% of new records.

The size, and taxonomic- and ecotypic structure of the two USVI marine faunas

Both insular marine faunas are over 80% the size of the combined USVI fauna in terms of species richness. Species found at only one of the two islands represent ~ 20% of each fauna. For shallow species the size of each insular fauna is 85–90% that of the combined fauna, with correspondingly lower rates of occurrence at only one island. Two factors may contribute to these differences between the island faunas: variation in ecological conditions between the islands and inadequate sampling. The possibility of differing ecological conditions seems small as both islands have the same range of large-scale habitat types, although those vary in abundance between the islands. The shelf area of St. John-Thomas is close to 10 times the size of the St. Croix shelf, yet the former has the smaller known fauna. At both islands the great majority of sampling has occurred in quite shallow water, often very close to shore in the case of St. John-Thomas. Shelf habitats likely are under-sampled at both islands, strongly so at St. John-Thomas, where there are large areas of habitat between 40–60 m depth some distance from the islands on both the northern and southern parts of the PRP. At St. Croix most shallow sampling has occurred in and near the Buck Island Reef National Monument, rather than spread around different parts of the platform and different sides of the island. Hence both insular faunas likely are larger than indicated here, particularly in the case of St. John-Thomas.

Review of the two USVI marine species lists show that species not shared between the two islands are distributed through many genera and families (Suppl. material 5: File S4; Table 4). None are endemic to either USVI island and single-island endemics are rare amongst the Greater Caribbean fauna and limited to highly isolated islands such as Cayman. Most species in that region have geographic ranges much larger than the USVIs. The larger size of the St. Croix fauna, particularly of cryptobenthic species can be attributed to a greater effort to find such species. This was done using rotenone during two intensive sampling campaigns that occurred ~ 40 y after rotenone sampling at St. John-Thomas, plus some subsequent minor efforts in the shallow part of a Buck Island Reef National Monument that, in its entirety constitutes ~ 1/3 of the St. Croix insular platform: 46% (262) of the native marine species known from St. Croix are shallow species collected using rotenone (Smith-Vaniz and Jelks 2014), vs. 31.7% (173) of such species from St. John-Thomas. Later sampling by Pittman et al. (2008) at the same small, shallow St. Croix site as studied by Smith-Vaniz et al. (2006) added 10.9% more species to the tally of the first two series of collections. Smith-Vaniz and Jelks (2014) produced a list of 41 species from 22 families that, at that time, were known from St. John-Thomas but not St. Croix. Since then, five of the 35 shallow species on that table have been added to the St. Croix fauna (Table 1 here), together with two others that were listed as unconfirmed

by those authors. Photographic sampling of shallow reef fishes at St. John-Thomas by CJE, AME and other citizen scientists, by itself increased the size of the fauna registered by Dennis (2000) by 8.5%. Finally, the species composition of local reef-fish faunas can change substantially through time at intensively sampled sites, for varying reasons (e.g., see changes registered by Starck et al. 2017 over a 50y period), highlighting the utility of temporally dispersed sampling. With further sampling many shallow species currently known from only one of the USVI should be expected to be found at the other, in which case the shallow faunas of each island would be 10–15% larger than the current figures.

The deep-species fauna represents only 13.1% of the entire (shallow plus deep) USVI fauna and deep species exhibit much lower rates of faunal overlap between the two islands than occurs among shallow species. The two islands have experienced low rates of exploration of deep habitats, particularly deep reefs, by submersibles and ROVs, which were limited to observational studies. The few ROV (Quattrini et al. 2017) and submersible dives (Nelson and Appeldoorn 1985; Garcia-Sais 2005) were the sole source of only 11.1% and 28% of records of deep fishes at St. Croix and St. John-Thomas, respectively. The edges of the insular platforms of the two USVIs are < 50 km apart and the suite of deep species involved have ranges much larger than the area occupied by the USVI. Low levels of sampling can account for the small size of both USVI deep faunas, particularly the deep-reef component, and to the low level of overlap between the deep faunas of the two islands.

At both USVI sites the deep-reef species represent only 4.2–5% of the entire local reef-fish fauna, i.e., $\sim 1/3$ of the percentage for the GC regional fauna (Robertson et al. 2022). In contrast, when intensive submersible collecting and observations have been aimed specifically at assessing the diversity of deep-reef fish faunas, such as has occurred at other Caribbean islands (Curacao, Roatan and Sint Eustatius), the inventory of deep-reef species at individual islands has increased ~ 9 fold, with such species representing 16% of the entire (shallow plus deep) reef-fish fauna at the most intensively sampled island (Robertson et al. 2022), i.e., more than three times the level at each USVI. Similar sampling at both USVI undoubtedly will increase the absolute and relative sizes of their deep-reef faunas. Smith-Vaniz and Jelks (2014) concluded that there was no indication at the time of their study that the St. Croix fauna had reached asymptotic size. The additions reported here and patterns of variation in faunal composition between the two islands support that view for St. John-Thomas as well as St. Croix.

Reef-associated bony fishes comprised 84% and 91%, respectively, of the faunas of St. John-Thomas and St. Croix, and the St. John-Thomas reef-fish fauna was 94.3% the size of the equivalent fauna of St. Croix. The ecotypic structure of those two USVI reef-fish faunas was very similar, with both differing from the broad structure of the GC regional fauna by having larger proportions of pelagic and demersal species that are readily visible to observers and correspondingly smaller proportions of cryptic species. Similarities in the zoogeographic structures and sizes of the two USVI faunas support the view that both can be considered to be sampled with a similar level of efficiency, at least in terms of their shallow faunas.

mtDNA-barcode coverage

In terms of the availability of DNA-barcodes for marine fishes, the Greater Caribbean currently is the most well-sampled large marine biogeographic region in the tropics, with ~ 90% of the shore-fishes barcoded and up to 95% of the shallow reef-associated species (Victor et al. 2015). However, several specific locations account for the vast majority of sequences. Those include Florida, Yucatan (Mexico), Belize, Panama, and Curacao; with species lists published for Yucatan by Valdez-Moreno et al. (2010) and lists for additional locations in Weigt et al. (2012). The Puerto Rican Plateau has been only lightly sampled, with information derived mostly from older collections by author BV at St. John-Thomas and Puerto Rico, and from a set of lionfish stomach contents from La Parguera in Puerto Rico sequenced by Harms-Tuohy et al. (2016). The latter identified 39 species from 16 families. A few additional sequences come from open-ocean sampling for larvae around the USVI, by Lamkin et al. (2009). The older collections from St. Thomas and Puerto Rico were collected by BV for recruitment and otolith studies as well as some taxonomic reviews (e.g., the genera *Coryphopterus* and *Emblemariopsis*). The recent additions of 19 species from St. John were collected by CJE and AME mainly for DNA confirmation of the species identification of diagnostic underwater photographs that serve as vouchers here, mostly of cryptobenthic fishes. No collections at St. John-Thomas or elsewhere on the PRP that provided DNA barcodes were expressly made for assembling an inventory of fish species- hence the absence of some of the most abundant and widespread shallow reef fishes in the barcode list presented here (e.g., the Bluehead Wrasse, *Thalassoma bifasciatum*).

We cannot directly compare barcode coverage of fishes at St. John-Thomas with that at other intensively barcoded locations noted above because neither the number of barcoded species nor the local species inventory have been comparably evaluated at any of those sites. The results of the present assessment of DNA-barcode coverage for the USVI and the remainder of the PRP highlight the usefulness of the DNA-barcode database for ancillary projects. Accumulating sequences for unrelated purposes, such as taxonomic reviews, stomach-content studies, larval or e-DNA surveys (environmental DNA, where water is sampled for dissolved DNA sequences), augments the general DNA-barcode coverage for specific biogeographic regions and helps confirm species identifications for faunal surveys.

Permits

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References

- Baldwin CC, Tornabene L, Robertson DR (2018) Below the mesophotic. *Scientific Reports* 8: e4920. <https://doi.org/10.1038/s41598-018-23067-1>
- Brandl SJ, Goatley CHR, Bellwood DR, Tornabene L (2018) The hidden half: Ecology and evolution of cryptobenthic fishes on coral reefs. *Biological Reviews of the Cambridge Philosophical Society* 93(4): 1846–1873. <https://doi.org/10.1111/brv.12423>
- Bunckley-Williams L, Williams EH (2004) New Locality, Depth, and Size Records and Species Character Modifications of Some Caribbean Deep-Reef/Shallow Slope Fishes and a New Host and Locality Record for the Chimaera Cestodarian. *Caribbean Journal of Science* 40: 88–119.
- Clavijo IE, Yntema JA, Ogden JC (1980) An annotated list of the fishes of St. Croix, U.S. Virgin Islands. West Indies Lab, Special Publication, 2nd edn. West Indies Laboratory, Christiansted, 49 pp. <https://doi.org/10.5281/zenodo.5510695>
- DeAngelis BM, McCandless CT, Kohler NE, Recksiek CW, Skomal GB (2008) First characterization of shark nursery habitat in the United States Virgin Islands: Evidence of habitat partitioning by two shark species. *Marine Ecology Progress Series* 358: 257–271. <https://doi.org/10.3354/meps07308>
- Dennis GD (2000) Annotated checklist of shallow-water marine fishes from the Puerto Rico Plateau including Puerto Rico, Culebra, Vieques, St. Thomas, St. John, Tortola, Virgin Gorda and Anegada. Florida Caribbean Science Center, Gainesville, [244 + 26] 286 pp. <https://doi.org/10.5281/zenodo.5770763>

- Dennis GD, Hensley D, Colin PL, Kimmel JJ (2004) New Records of Marine Fishes from the Puerto Rican Plateau. *Caribbean Journal of Science* 40: 70–87. <https://doi.org/10.5281/zenodo.5512853>
- Friedlander AM, Jeffrey CFG, Hile SD, Pittman SJ, Monaco ME, Caldow C [Eds] (2013) Coral reef ecosystems of St. John, U.S. Virgin Islands: Spatial and temporal patterns in fish and benthic communities (2001–2009). NOAA Technical Memorandum 152. Silver Spring, MD, 150 pp. <https://repository.library.noaa.gov/view/noaa/789>
- García-Sais JR (2005) Inventory and Atlas of Corals and Coral Reefs, with Emphasis on Deep-Water Coral Reefs from the U. S. Caribbean EEZ Final Report; Caribbean Fishery Management Council San Juan, Puerto Rico, 214 pp. http://sedarweb.org/docs/wsupp/S26_RD_02_deep_reefs_report_2005.pdf
- García-Sais JR, Williams SM, Sabater-Clavell J, Esteves R, Carlo M (2014) Mesophotic benthic habitats and associated reef communities at Lang Bank, St. Croix, USVI. Final Report; Caribbean Fishery Management Council San Juan, Puerto Rico, 124 pp.
- Hanner R, Floyd R, Bernard A, Collette BB, Shivji M (2011) DNA barcoding of billfishes. *Mitochondrial DNA* 22(sup1, S1): 27–36. <https://doi.org/10.3109/19401736.2011.596833>
- Harms-Tuohy CA, Schizas NV, Appeldoorn RS (2016) Use of DNA metabarcoding for stomach content analysis in the invasive lionfish *Pterois volitans* in Puerto Rico. *Marine Ecology Progress Series* 558: 181–191. <https://doi.org/10.3354/meps11738>
- Knudsen SW, Clements KC (2016) World-wide species distributions in the family Kyphosidae (Teleostei: Perciformes). *Molecular Phylogenetics and Evolution* 101: 252–266. <https://doi.org/10.1016/j.ympev.2016.04.037>
- Lamkin JT, Gerard TL, Malca E, Shiroza A, Muhling BA, Davis N, Fuenmayor F, Whitecraft S, Johns L, Smith R, Melo N, Rawson G, Idrisi N, Smith T, Brown K (2009) USVI larval reef fish supply study: 2007-08 report. Coral Reef Conservation Program (U.S.). U.S. Dept. of Commerce, National Oceanic and Atmospheric Administration, Southeast Fisheries Science Center, Miami, 43 pp. <https://repository.library.noaa.gov/view/noaa/548>
- Loftus WF (2003) Inventory of fishes in inland fresh and brackish-water habitats of Virgin Island National Park. Final Report, U.S. Inventory and Monitoring Program 3207–24F29 VIIS-1102, 52 pp. <https://irma.nps.gov/DataStore/Reference/Profile/2175778>
- Nelson WR, Appeldoorn RS (1985) Cruise Report R/V Seward Johnson. A Submersible Survey of the Continental Slope of Puerto Rico and the U.S. Virgin Islands, 1–23 October 1985, 76 pp. https://link.springer.com/chapter/10.1007/978-3-319-92735-0_7
- Pittman SJ, Hile SD, Jeffrey CFG, Caldow C, Kendall MS, Monaco ME, Hillis-Starr Z (2008) Fish assemblages and benthic habitats of Buck Island Reef National Monument (St. Croix, U.S. Virgin Islands) and the surrounding seascape: A characterization of spatial and temporal patterns. NOAA Technical Memorandum NOS NCCOS 71. Silver Spring, MD, 96 pp. https://coastalscience.noaa.gov/data_reports/fish-assemblages-and-benthic-habitats-of-buck-island-reef-national-monument-st-croix-u-s-virgin-islands-and-the-surrounding-seascape-a-characterization-of-spatial-and-temporal-patterns-2/
- Puebla O, Coulmance F, Estape CJ, Morgan Estape A, Robertson DR (2022) A review of 263 years of taxonomic research on *Hypoplectrus* (Perciformes: Serranidae), with a redescription of *Hypoplectrus affinis* (Poey, 1861). *Zootaxa* 5093(2): 101–141. <https://doi.org/10.11646/zootaxa.5093.2.1>

- Quattrini AM, Demopoulos AWJ, Singer R, Roa-Varon A, Chaytor JD (2017) Demersal fish assemblages on seamounts and other rugged features in the northeastern Caribbean. Deep-sea Research. Part I, Oceanographic Research Papers 123: 90–104. <https://doi.org/10.1016/j.dsr.2017.03.009>
- Recksiek C, Wetherbee BM, DeAngelis B (2006) Assessment of the Status of Shark Populations in the USVI. Final Report. University of Rhode Island, Kingston, 22 pp. https://www.ncei.noaa.gov/data/oceans/coris/library/NOAA/CRCP/project/1413/NA04NMF4630343_FinalReport_shark_usvi.pdf
- Robertson DR, Tornabene L (2021) Reef-associated Bony Fishes of the Greater Caribbean: a Checklist (Version 4) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.5592149>
- Robertson DR, Estapé CJ, Estapé AM, Peña E, Tornabene L, Baldwin CC (2020) The marine fishes of St Eustatius Island, northeastern Caribbean: an annotated, photographic catalog. Zookeys 1007: 145–180. <https://doi.org/10.3897/zookeys.1007.58515>
- Robertson DR, Tornabene L, Lardizabal CC, Baldwin CC (2022) Submersibles greatly enhance research on the diversity of deep-reef fishes in the Greater Caribbean. Frontiers in Marine Science 8: e800250. <https://doi.org/10.3389/fmars.2021.800250>
- Rogers CS, Pietsch TW, Randall JE, Arnold RJ (2010) The Sargassum Frog-fish (*Histrio histrio* Linnaeus) Observed in Mangroves in St. John, U.S. Virgin Islands. Coral Reefs 29(3): 577. <https://doi.org/10.1007/s00338-010-0636-z>
- Rohmann SO, Hayes JJ, Newhall RC, Monaco ME, Grigg RW (2005) The area of potential shallow-water tropical and subtropical coral ecosystems in the United States. Coral Reefs 24(3): 370–383. <https://doi.org/10.1007/s00338-005-0014-4>
- Smith-Vaniz W, Jelks HL (2014) Marine and inland fishes of St. Croix, U. S. Virgin Islands: an annotated checklist. Zootaxa 3803: 1–120. <https://doi.org/10.11646/zootaxa.3803.1.1>
- Smith-Vaniz W, Jelks HL, Rocha LA (2006) Relevance of cryptic fishes in biodiversity assessments: A case study at Buck Island Reef National Monument, St. Croix. Bulletin of Marine Science 79: 17–48. <https://www.ingentaconnect.com/content/umrsmas/bull-mar/2006/00000079/00000001/art00002>
- Starck WA, Estapé CJ, Morgan Estapé A (2017) The fishes of Alligator Reef and environs in the Florida Keys: A half-century update. Journal of the Ocean Science Foundation 27: 74–117. <https://doi.org/10.5281/ZENODO.851651>
- Thacker CE (2009) Phylogeny of Gobioidae and placement within Acanthomorpha, with a new classification and investigation of diversification and character evolution. Copeia 2009(1): 93–104. <https://doi.org/10.1643/CI-08-004>
- Valdez-Moreno M, Vásquez-Yeomans L, Elías-Gutiérrez M, Ivanova NV, Hebert PDN (2010) Using DNA barcodes to connect adults and early life stages of marine fishes from the Yucatan Peninsula, Mexico: Potential in fisheries management. Marine and Freshwater Research 61(6): 655–671. <https://doi.org/10.1071/MF09222>
- Victor BC, Valdez-Moreno M, Vasquez-Yeomans L (2015) Status of DNA Barcoding Coverage for the Tropical Western Atlantic Shore-fishes and Reef Fishes. DNA Barcodes 3(1): 89–93. <https://doi.org/10.1515/dna-2015-0011>

- Ward RD, Hanner R, Hebert PDN (2009) The campaign to DNA barcode all fishes, FISH-BOL. *Journal of Fish Biology* 74(2): 329–356. <https://doi.org/10.1111/j.1095-8649.2008.02080.x>
- Weigt LA, Baldwin CC, Driskell A, Smith DG, Ormos A, Reyley EA (2012) Using DNA Barcoding to Assess Caribbean Reef Fish Biodiversity: Expanding Taxonomic and Geographic Coverage. *PLoS ONE* 7(7): e41059. <https://doi.org/10.1371/journal.pone.0041059>

Supplementary material 1

Plates S1–S18

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: images (jpg. images in ZIP arhiv)

Explanation note: Fishes of St. Croix (Plate S1), fishes of St. John-Thomas (Plates S2–S18).

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl1>

Supplementary material 2

File S1

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: image (jpg file)

Explanation note: Bathymetry of the US Virgin Islands.

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl2>

Supplementary material 3

File S2

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: GPS data (excel file)

Explanation note: File S2A: Georeferencing coordinates and site codes for dive sites of authors Carlos and Allison Estapé at St John, St Thomas and St. Croix during 2021. File S2B: Georeferencing coordinates and site codes for dive sites used by non-author photographers at St John-Thomas. File S2C: Names and emails of third party Citizen Scientists who provided voucher images of various St John-Thomas fishes.

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl3>

Supplementary material 4

File S3

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: GPS data (kmz. file)

Explanation note: KMZ file of USVI dive sites.

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl4>

Supplementary material 5

File S4

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: occurrences (excel file)

Explanation note: File S4. Native marine fish faunas of St. John-Thomas and St. Croix.

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl5>

Supplementary material 6

File S5

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: occurrences (excel file)

Explanation note: Ecological Characteristics of Reef-Associated Bony Fishes from St John-Thomas. See Methods of paper for details.

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl6>

Supplementary material 7

File S6

Authors: D. Ross Robertson, Carlos J. Estapé, Allison M. Estapé, Lee Richter, Ernesto Peña, Benjamin Victor

Data type: genomic (excel file)

Explanation note: File S6: mtDNA-Barcode information for fishes from islands on the Puerto Rico Platform (St John-Thomas, Puerto Rico and the British Virgin Islands) and St. Croix. For coding of differently colored highlighting see bottom of table. For explanations of "Reef Associated" and "Deep" see main text.

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Link: <https://doi.org/10.3897/zookeys.1103.83795.suppl7>

Plate S1



© Allison & Carlos Estapé *Coryphopterus kuna*



© Carlos & Allison Estapé *Coryphopterus glaucofraenum*



© Carlos & Allison Estapé *Coryphopterus tortugae*



© Carlos & Allison Estapé *Emblemariopsis leptocirris*



© Allison & Carlos Estapé *Eucinostomus melanopterus*



© Allison & Carlos Estapé *Hypleurochilus pseudoaequipinnis*



© Carlos & Allison Estapé *Kyphosus cinerascens*



© Jenny Keith *Mobula tarapanaca*



© Carlos & Allison Estapé *Opistognathus macrognathus*



© Carlos & Allison Estapé *Oxyurichthys stigmatophius*



© Carlos & Allison Estapé *Syacium micrurum*



© Carlos & Allison Estapé *Trachinocephalus myops*

Plate S2



© Allison & Carlos Estapé

Acanthurus chirurgus



© Carlos & Allison Estapé

Acanthurus coeruleus



© Carlos & Allison Estapé

Acanthurus tractus



© Allison & Carlos Estapé

Gymnarchus nactus



© Allison & Carlos Estapé

Aetobatus narinosa



Andres Goolishian

Antennarius multocellatus



C Rogers

Histrio histrio



© Allison & Carlos Estapé

Apogon aurolineatus



© Carlos & Allison Estapé

Apogon binotatus



© Carlos & Allison Estapé

Apogon lachnoides



© Carlos & Allison Estapé

Apogon maculatus



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Apogon phenax



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Apogon planifrons



© Carlos & Allison Estapé

Apogon quadrisquamatus



© Carlos & Allison Estapé

Apogon townsendi



© Allison & Carlos Estapé

Astrapogon puncticulatus



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Astrapogon stellatus



© Carlos & Allison Estapé

Phaeoptyx conklini



© Allison & Carlos Estapé

Phaeoptyx pigmentaria



© Lee Richter

Phaeoptyx xenus



© Lee Richter

Zapogon evermanni



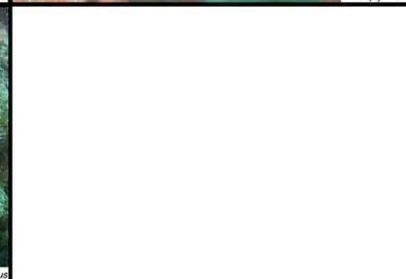
© Carlos & Allison Estapé

Atherinomorus stipes



© Carlos & Allison Estapé

Aulostomus maculatus



© Allison & Carlos Estapé

Sponge cardinalfish
Phaeoptyx xenus
Klein Bay, St. John
Martha 021

Plate S3



Plate S4



© Allison & Carlos Estapé *Alectia ciliata*



© Carlos & Allison Estapé *Caranx bartholomae*



© Allison & Carlos Estapé *Caranx crysos*



© Carlos & Allison Estapé *Caranx hippos*



© Allison & Carlos Estapé *Caranx latus*



© Carlos & Allison Estapé *Caranx lugubris*



© Allison & Carlos Estapé *Caranx ruber*



© Allison & Carlos Estapé *Decapterus macrurus*



© Allison & Carlos Estapé *Decapterus punctatus*



© Carlos & Allison Estapé *Decapterus tabi*



© Allison & Carlos Estapé *Etagus bipinnulatus*



March 2021 © Lee Richter *Squalus crumenophthalmus*



© Carlos & Allison Estapé *Seriola rivoliana*



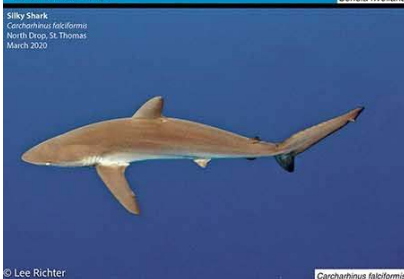
© Allison & Carlos Estapé *Trachinotus falcatulus*



© Carlos & Allison Estapé *Trachinotus goodii*



© Carlos & Allison Estapé *Carcharhinus acronotus*



© Lee Richter *Carcharhinus falciformis*



© Carlos & Allison Estapé *Carcharhinus porosus*



© Lee Richter *Negaprion brevirostris*



© Juan Baschick *Centropomus undecimalis*

Plate S5



Acanthemblemaria aspera



Acanthemblemaria maria



Acanthemblemaria spinosa



Chaenopsis limbaughi



Coraliozetes cardonae



Emblemaria pandionis



Emblemaria vitini



Emblemaropsis bahamensis



Emblemaropsis leptocelis



Lucayablennius zingaro



Chaetodon capistratus



Chaetodon ocellatus



Chaetodon sedentarius



Chaetodon striatus



Prognathodes aculeatus



Ambyciphius pinos



Harengula humeralis



Heteroconger longissimus



Coryphaena hippurus



Dactylopterus volitans



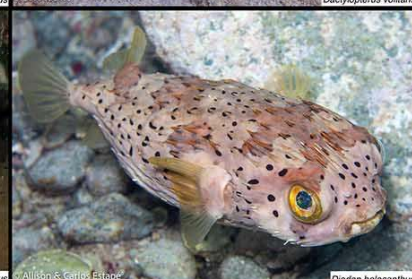
Dactyloscopus tridigitatus



Hypanus americanus



Chilomycterus antennatus



Diodon holocentrus



Diodon hystrix



Diodon hystrix

Plate S6



© Carlos & Allison Estapé *Echeneis naucrates*



© Allison & Carlos Estapé January 2021 *Echeneis naucratoides*



© Lee Richter *Remora sp.*



© Lee Richter *Dormitator maculatus*



© Lee Richter *Eleotris perimor*



© Lee Richter *Gobiomorus dormitor*



© Carlos & Allison Estapé *Chaetodipterus fabeli*



© Lee Richter *Prognichthys occidentalis*



© Lee Richter *Fistularia tabacaria*



© Carlos & Allison Estapé *Eucinostomus gula*



© Carlos & Allison Estapé *Eucinostomus harengulus*



© Carlos & Allison Estapé *Eucinostomus jonesii*



© Allison & Carlos Estapé *Eucinostomus leroyi*



© Carlos & Allison Estapé *Eucinostomus melanopterus*



© Carlos & Allison Estapé November 2020 *Gerres cinereus*



© Allison & Carlos Estapé *Ginglymostoma cirratum*



© Carlos & Allison Estapé *Acyrtus rubiginosus*



© Lee Richter *Arcos nudus*



© Lee Richter *Gobioxo nigripinnis*



© Carlos & Allison Estapé *Gobioxo punctulatus*



© Carlos & Allison Estapé *Tomiscodon cryptus*



© Carlos & Allison Estapé *Tomiscodon reitzwani*



M.A. Goolishian Hernandez *Tomiscodon rhabdotus*

Plate S7



Awaous banana



December 2020

Bathygobius antillaricus



Bathygobius mystacinus



Bolmannia boqueronensis



Cerata floridana



Coryphopterus dicus



Coryphopterus eidolon



Coryphopterus glaucofraenum



Coryphopterus hyalinus



Coryphopterus krus



Coryphopterus lipemus



Coryphopterus personatus



Coryphopterus tortuaria



Coryphopterus venezuelae



Ctenogobius boleosomi



Ctenogobius saepepallens



Ctenogobius stigmaturus



Elacatinus chancei



Elacatinus ewelinae



Elacatinus prochlorus



Ginsburgellus novemlineatus



Gnatholepis thompsoni



Gobionellus oceanicus

Plate S8



Lophogobius cyprinoides



© Allison & Carlos Estapé

Lythrypnus elasson



© Carlos & Allison Estapé

Lythrypnus minimus



© Carlos & Allison Estapé

Lythrypnus neocetes



© Allison & Carlos Estapé

Lythrypnus spilus



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Microgobius carn



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Microgobius signatus



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Nes longus



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Oxyurichthys stigmalephus



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Proteopsis hipolit



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Ptereleotris heteran



© Allison & Carlos Estapé

Risor ruber



© Lee Richter

Sicydium plumier



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Sicydium punctatum



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Tigrigobius multivasciatus



© Carlos & Allison Estapé

Tigrigobius pallens



© Allison & Carlos Estapé

Tigrigobius saucrus



© Carlos & Allison Estapé

Gramma loreto

Plate S9



Anisotremus surinamensis



Anisotremus virginicus



Brachygenys chrysaerythra



Ermmelichthys atlanticus



Haemulon album



Haemulon aurolineatum



Haemulon carbonarium



Haemulon flavolineatum



Haemulon macrostomus



Haemulon melanurum



Haemulon parra



Haemulon plumieri



Haemulon sciurus



Haemulon vittatum



Hemiramphus brasiliensis



Holocentrus adscensionis



Holocentrus rufus



Myripristis jacobus



Neoniphon coruscum



Neoniphon marianus



Neoniphon vexillarium



Plectrypops retrospinus



Istiophorus platypterus



Kajika albida

Plate S10



© Carlos & Allison Estapé
Kyphosus cinerascens



© Carlos & Allison Estapé
Kyphosus sectatrix



© Allison & Carlos Estapé
Kyphosus vagioides



© Carlos & Allison Estapé
Bodianus rufus



© Carlos & Allison Estapé
Ctenopoma parva



© Allison & Carlos Estapé
Halichoeres bivittatus



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Halichoeres garnoti



© Allison & Carlos Estapé
Halichoeres garnoti



© Carlos & Allison Estapé
Halichoeres maculipinna



© Allison & Carlos Estapé
Halichoeres pictus



© Allison & Carlos Estapé
Halichoeres poeyi



© Allison & Carlos Estapé
Halichoeres radiatus



© Carlos & Allison Estapé
Lachnolaimus maximus



© Allison & Carlos Estapé
Thalassoma bifasciatum



© Carlos & Allison Estapé
Xyrichtys martinicensis



© Allison & Carlos Estapé
Xyrichtys novacula



© Allison & Carlos Estapé
Xyrichtys splendens



© Allison & Carlos Estapé
Cryptotomus roseus



© Lee Richter
Scarus coelestinus



© Lee Richter
Scarus guacamaia



© Allison & Carlos Estapé
Scarus iseri



© Allison & Carlos Estapé
Scarus taenioplerus



© Allison & Carlos Estapé
Scarus vetulus

Plate S11



Sparisoma atomarium



Sparisoma aurofenatum



Sparisoma chrysopterygum



Sparisoma radens



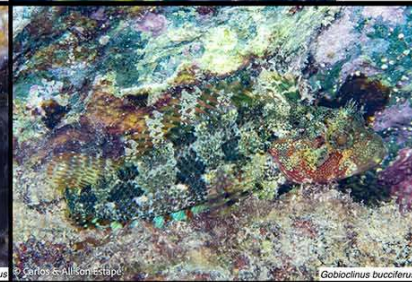
Sparisoma rubrinum



Sparisoma viride



Brockius nigricinctus



Gobioclinus bucciferus



Gobioclinus filamentosus



Gobioclinus gobioides



Gobioclinus guppyi



Gobioclinus haitiensis



Labrisomus cricoides



Labrisomus nuchipinnis



Malacocentrus aurolineatus



Malacocentrus boehlkei



Malacocentrus erdmanni



Malacocentrus gilli



Malacocentrus macropus



Malacocentrus triangulatus



Malacocentrus versicolor



Paraclinus lascivus



Paraclinus nigripinnis



Starksia cultrata



Starksia hasae



Starksia williamsi



Lobotes surinamensis

Athens, Tripetou
Coastal Swamphores
South of St. John
8 September 2021



Starksia hasae



Alasdair Dunlap-Smith

Starksia williamsi



Lobotes surinamensis

Leo Richter

Plate S12



Chris Rapchick

Etelis oculatus



© Carlos & Allison Estapé

Lufjanus analis



© Carlos & Allison Estapé

Lufjanus apodus



Chris Rapchick

Lufjanus buccanella



© Carlos & Allison Estapé

Lufjanus cyanopterus



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Lufjanus griseus



© Carlos & Allison Estapé

Lufjanus jactans



© Allison & Carlos Estapé

Lufjanus mathognus



© Carlos & Allison Estapé

Lufjanus synagris



Chris Rapchick

Lufjanus vivanus



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Ocyurus chrysurus



Lee Richter

Rhomboplites aurorbens



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Malescanthus plumieri



© Allison & Carlos Estapé

Megalops atlanticus



© Lee Richter

Mobula birostris



© Kessler

Mobula species A



© Carlos & Allison Estapé

Aluterus monoceros



Lee Richter

Aluterus schoepfii



© Carlos & Allison Estapé

Aluterus scriptus



© Carlos & Allison Estapé

Cantherhines macrocerus



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Cantherhines pullus



Allison & Carlos Estapé

Monacanthus ciliatus



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Monacanthus tomentosus

Plate S13

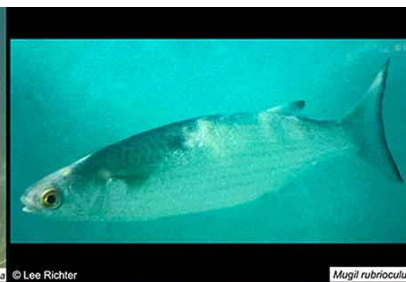


Plate S14



© Lee Richter
Cyclosetta limbrata



© Allison & Carlos Estapé
Pempheris schomburgkii



© Lee Richter
Poecilia reticulata



© Lee Richter
Centropyge argi



© Carlos & Allison Estapé
Holocentrus ciliatus



© Carlos & Allison Estapé
Holocentrus tricolor



© Allison & Carlos Estapé
Pomacanthus arcuatus



© Carlos & Allison Estapé
Pomacanthus paru



© Allison & Carlos Estapé
Abudefduf saxatilis



© Carlos & Allison Estapé
Abudefduf taurus



© Carlos & Allison Estapé
Azurina cyanea



© Carlos & Allison Estapé
Azurina multilineata



© Lee Richter
Chromis inactiva



© Allison & Carlos Estapé
Microspathodon chrysurus



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Stegastes adustus



© Allison & Carlos Estapé
Stegastes diencaeus



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Stegastes leucostictus



© Allison & Carlos Estapé
Stegastes partitus



© Allison & Carlos Estapé
Stegastes partitus



© Carlos & Allison Estapé
Stegastes planifrons



© Allison & Carlos Estapé
Stegastes xanthurus

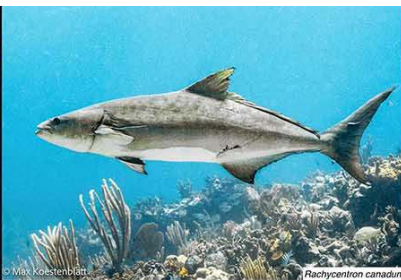
Plate S15



© Carlos & Allison Estapé
Heteropriacanthus cruentatus



© Allison & Carlos Estapé
Priacanthus arenatus



© Max Koestenblatt
Rachycentron canadum



© Jamie Irving
Rhinochondrus typus



© Andres Goodishian Hernandez
Eques lanceolatus



© Carlos & Allison Estapé
Eques punctatus



© Allison & Carlos Estapé
Odonotocion dentus



© Allison & Carlos Estapé
Pareques acuminatus



© Mario Flapchick
Acanthocybium solandri



© Lee Richter
Euthynnus alleuteratus



© Lee Richter
Katsuwonus pelamis



© Allison & Carlos Estapé
Scomberomorus cavalla



© Allison & Carlos Estapé
Scomberomorus regalis



© Lee Richter
Thunnus albacares



© Lee Richter
Thunnus atlanticus



© Carlos & Allison Estapé
Pterois voltans



© Lee Richter
Scorpaena albimbrans



© Carlos & Allison Estapé
Scorpaena inermis



© Carlos & Allison Estapé
Scorpaena plumieri



© Carlos & Allison Estapé
Scorpaenodes caribbaeus

Plate S16



Alphestes aloy



Cephalopholis cruentata



Cephalopholis fulva



Diplacrum bivittatum



Epinephelus adonansoni



Epinephelus guttatus



Epinephelus itajuru



Epinephelus morio



Epinephelus striatus



Hypoplectrus aberrans



Hypoplectrus aberrans



Hypoplectrus chlorurus



Hypoplectrus guttaevarius



Hypoplectrus indigo, large adult



Hypoplectrus indigo, small adult



Hypoplectrus nigricans



Hypoplectrus nigricans



Hypoplectrus puella



Hypoplectrus unicolor



S. Rapoport Hyporthodus mystacinus



Liopropoma rubre

Plate S17



© Lee Richter
Mycteroperca bonas



© Carlos & Allison Estapé
Mycteroperca interstitialis



© Lee Richter
Mycteroperca tigris



Andres Goolishian Hernandez
Mycteroperca venenosa



© Allison & Carlos Estapé
Paranthias furcifer



© Lee Richter
Pyloricus bistriatus



© Carlos & Allison Estapé
Pyloricus carpenteri



© Carlos & Allison Estapé
Pyloricus saponaceus



© Lee Richter
Schultzea beta



© Carlos & Allison Estapé
Serraniculus pumilio



© Lee Richter
Serranus annularis



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Serranus baldwini



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Serranus tabacarius



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Serranus tigrinus



© Allison & Carlos Estapé
Serranus tortugarum



© Allison & Carlos Estapé
Archosargus rhomboidalis



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Calamus bajonado



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Calamus calamus



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Calamus pennu



© Allison & Carlos Estapé
Calamus pennatula



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Diplodus caudimaculatus



© Carlos & Allison Estapé
Sphyrna barracuda



© Carlos & Allison Estapé
Sphyrna borealis

Plate S18



Amphelkturus dendriticus



Bryx dunckeri



Cosmocampus elucens



Halcampus crinitus



Hippocampus reidi



Microphis lineatus



Synnathus caribaetus



Saurida suspiciosa



Synodus loietars



Synodus intermedius



Synodus synodus



Canthigaster rostrata



Sphoeroides spengleri



Sphoeroides testudineus



Enneanectes altivelis



Enneanectes boehleri



Enneanectes jordan



Enneanectes matador



Xiphias gladius

Addendum and Corrigendum: Robertson DR, Estapé CJ, Estapé AM, Richter L, Peña E, Victor B (2022) An updated, illustrated inventory of the marine fishes of the US Virgin Islands. Zookeys 1103: 79–122. doi:10.3897/zookeys.1103.83795

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Abstract

Review of the image plates shows that an image of *Rypticus subbifrenatus* was incorrectly identified as that of its similarly colored congener *R. carpenter*. Hence the latter was deleted from the St. John-Thomas inventory. In addition, an image of the blennioid fish *Hypsoblennius exstochilus* was obtained from St. Thomas, and it is now added to that inventory. These two changes did not substantially affect data on the ecological structure of the St. John-Thomas fauna.

Keywords

Biodiversity, Caribbean, identification, reef fishes

Introduction

Prompt publication of corrections to faunal inventories helps ensure the accuracy of biogeographical data. Here we correct the erroneous occurrence of a misidentified ser-ranid fish in the St. John-Thomas inventory. In addition, a newly available photograph of a blenniid taken at St. Thomas provides a voucher for its addition to that inventory.



Figure 1. *Hypsoblennius exstochilus*. Photo: Natasha Bestrom (natasha.bestrom@uvi.edu) St Thomas, US Virgin Islands.

Erratum

Supplementary Plate S17: The label embedded in the image that reads “*Rypticus carpenteri*” is incorrect and should read “*Rypticus subbifrenatus*”. The distributions of large dark spots on the interorbital areas and the colors of the fins of those two species differ (Baldwin and Weigt, 2012) and the color pattern of the fish in Plate S17 is that of *R. subbifrenatus*. As that image represents the sole-source voucher of the occurrence of *R. carpenteri* it is removed from the St. John-Thomas inventory.

Addition

Fig. 1 here is an image of a Longhorn Blenny, *Hypsoblennius exstochilus* Bohlke, 1959, taken at Botany Bay (18.3585, -65.0335) at St. Thomas. That species is easily recognized by its diagnostic pair of orbital cirri, each of which consists of a very large, branched stalk, and the color pattern of its head. This image represents the sole-source record for the addition of this species to the St. John-Thomas faunal inventory.

The combination of the removal of *R. carpenteri* from and addition of *H. exstochilus* to the St. John-Thomas inventory had very little effect on data in Tables 3-6: In Table 3 the only change is the addition of one to the number of uncommon shallow species. The only changes in Table 5 are small increases (< 0.5%) in the percentages of Core Coral Reef Fishes. There are no changes to Tables 4, 6.

References

Baldwin C, Weigt LA (2012) A New Species of Soapfish (Teleostei: Serranidae: *Rypticus*), with Redescription of *R. subbifrenatus* and Comments on the Use of DNA Barcoding in Systematic Studies. *Copeia* 2012: 23–36. <https://doi.org/10.1643/CG-11-035>