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## **Marine and inland fishes of St. Croix, U. S. Virgin Islands: an annotated checklist**

WILLIAM F. SMITH-VANIZ<sup>1</sup> & HOWARD L. JELKS<sup>2</sup>

<sup>1</sup>*Florida Museum of Natural History, University of Florida, Gainesville, Florida 32611–7800, USA. E-mail: smithvaniz@gmail.com*

<sup>2</sup>*U. S. Geological Survey, Southeast Ecological Science Center, 7920 NW 71<sup>st</sup> Street, Gainesville, Florida 32653, USA.*

*E-mail: hjelks@usgs.gov*



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WILLIAM F. SMITH-VANIZ & HOWARD L. JELKS

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## Abstract

An historical account is given for the ichthyological research at St. Croix, U. S. Virgin Islands, followed by an annotated list of 544 species of mostly marine shore fishes known or reported from the island to depths of 200 m. Color photographs are included for 103 of these species. Collections made at Buck Island Reef National Monument with the ichthyocide rotenone in 2001 and 2005 increased the known ichthyofauna by about 80 species. The rationale for inclusion of each species in the checklist is given, with remarks for those species for which additional documentation or voucher specimens are needed. Reports of species known or presumed to have been based on misidentifications are discussed. Of the total marine fish fauna of the island, 404 species (75%) are restricted to the western Atlantic Ocean, (223 of these species are essentially Caribbean endemics that do not occur south of the Amazon River outflow), and no St. Croix endemic species are known. An additional 17 species (3.2%) also occur at mid-Atlantic islands, 57 species (10.6 %) are limited to both sides of the Atlantic Ocean, and 40 species (7.4%) have circumtropical distributions. The four most species-rich families are the Gobiidae (47 species), Serranidae (groupers and sea basses, 41), Labridae (wrasses and parrotfishes, 31), and Labrisomidae (scaly blennies, 27). Literature reports of Mosquitofish, *Gambusia* sp., from St. Croix apparently were based on misidentifications of a different introduced poeciliid genus. Four species of the amphidromus goby genus *Sicydium* occur in St. Croix inland waters, together with three established introduced species (one cichlid and two poeciliids). Also included are one catfish (Ictaluridae) and three sunfishes (Centrarchidae) known only from ponds. The Lionfish, *Pterois volitans*, the only introduced marine species, was first reported from St. Croix in 2008 and is now common despite control efforts.

**Key words:** Caribbean, distribution, biogeography, rotenone, visual censuses, introduced species

## List of families and common names

Acanthuridae (surgeonfishes)	81	Callionymidae (dragonets)	74
Achiridae (American soles)	85	Caproidae (boarfishes)	35
Acropomatidae (lanternbellies)	5	Carangidae (jacks)	47
Albulidae (bonefishes)	22	Carapidae (pearlfishes)	28
Anguillidae (freshwater eels)	22	Carcharhinidae (requiem sharks)	19
Anomalopidae (flashlight fishes)	33	Centrarchidae (sunfishes)	44
Antennariidae (frogfishes)	29	Centropomidae (snooks)	38
Apogonidae (cardinalfishes)	45	Chaenopsidae (tube blennies)	70
Atherinidae (silversides)	31	Chaetodontidae (butterflyfishes)	59
Aulostomidae (trumpetfishes)	36	Chlopsidae (false eels)	23
Balistidae (triggerfishes)	86	Cichlidae (cichlids and tilapias)	59
Belonidae (needlefishes)	32	Cirrhitidae (hawkfishes)	60
Blenniidae (combtooth blennies)	72	Clupeidae (herrings)	27
Bothidae (lefteye flounders)	85	Congridae (conger eels)	26
Bythitidae (viviparous brotulas)	29	Coryphaenidae (dolphinfishes)	49

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## Addendum

While this monograph was in press a new species of gobiesocid, *Acyrtus lanthanum*, common name orange-spotted clingfish, was described by Conway, Baldwin and White (2014). This shallow-water species (0-5 m) was reported from the Bahamas, Turks and Caico, Tobago, and Belize. Most of the specimens from St. Croix that we had identified as *Acyrtus artius* are based on misidentification of the new species (12 specimens from 5 BIRNM stations, while only 3 specimens, each from a different BIRNM station are actually *A. artius*). *Acyrtus lanthanum* differs from *A. artius* most notably in having papillae on the anterolateral margin of disc region C (papillae absent); a longer head 42–47 % SL (40–43%); subopercular spine large, grooved ventrally (small, circular in cross-section); skin medial to subopercle opaque and granular (undifferentiated); and branchiostegal membrane with lateral pocket between 6th branchiostegal ray and subopercle (without pocket).

- Conway, K.W., Baldwin, C. & White, M.D. (2014) Cryptic diversity and venom glands in Western Atlantic clingfishes of the genus *Acyrtus* (Teleostei: Gobiesocidae). *PLOS ONE*, 9 (5), e97664. <http://dx.doi.org/10.1371/journal.pone.0097664>.