

# The fishes of Ascension Island, central Atlantic Ocean – new records and an annotated checklist

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*A checklist of the fishes of Ascension Island is presented. The species Rhincodon typus, Alopias superciliosus, Isurus oxyrinchus, Carcharhinus obscurus, Galeocerdo cuvier, Sphyrna lewini, Hexanchus griseus, Manta birostris, Gymnothorax vicinus, Hippocampus sp., Epinephelus itajara, Cookeolus japonicus, Apogon pseudomaculatus, Phaeoptyx pigmentaria, Remora albens, Caranx bartholomaei, Carangoides ruber, Decapterus tabl, Seriola dumerili, Thalassoma sanctaehelenae, Cryptotomus sp., Ruvettus pretiosus, Acanthocybium solandri, Auxis rochei, Auxis thazard, Euthynnus alletteratus, Katsuwonus pelamis, Thunnus alalunga, Thunnus obesus, Xiphias gladius, Istiophorus platypterus, Kajikia albida, Makaira nigricans, Tetrapturus pfluegeri, Hyperoglyphe perciformis, Schedophilus sp., Cantherhines macrocerus, Sphoeroides pachygaster and Diodon eydouxi are recorded for the first time from Ascension Island. We have recognized two previous records as identification errors and indicate 11 other records as doubtful. Including the 40 new records, we now list 173 fish species from Ascension Island, of which 133 might be considered 'coastal fish species'. Eleven of these (8.3%) appear to be endemic to the island and a further 16 species (12%) appear to be shared endemics with St Helena Island.*

**Keywords:** zoogeography, island biology, ampho-Atlantic

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## INTRODUCTION

Ascension Island lies at 07°57'S, 14°22'W. St Helena Island is about 1200 km south of it. The distance to Brazil is about 2300 km and the distance to West Africa about 1500 km. The molluscs (Rosewater, 1975), as well as the echinoderms (Pawson, 1978), and the fishes (Lubbock, 1980) contain species otherwise only known from the western Atlantic as well as species otherwise only known from the eastern Atlantic. This implies that propagules have reached Ascension from the east and from the west. Surface currents in the area are predominantly from east to west; however, during northern winter and spring, eastwards flows also occur (Stramma, 1991, Stramma & Schott, 1999). Accordingly, juvenile Green turtles (*Chelonia mydas*) from Ascension nesting grounds mainly drift to South America (Suriname) feeding grounds but some of them end up at the Cape Verde Islands (Monzon-Arguello *et al.*, 2010). Simulated trajectories of 'virtual larvae' released at Ascension Island pointed towards Fernando de Noronha Island and slightly north of it (Rudorff *et al.*, 2009).

Cadenat & Marchal (1963) summarized the knowledge about the fishes of Ascension and St Helena Islands.

Lubbock (1980) and Bingeman & Bingeman (2005) added a considerable number of records of shore fish species for Ascension Island. Bingeman & Bingeman (2005) also gave the local names of the species.

In an annotated checklist, we here note the presence of 40 additional fish species at Ascension Island and point out some doubtful records in the literature.

## MATERIALS AND METHODS

Previous fish records for Ascension Island were extracted from the literature, in particular Cadenat & Marchal (1963), Lubbock (1980), Quéro *et al.* (1990), and Bingeman & Bingeman (2005). We have also included the records from Grattan seamount, 260 km south-east of Ascension Island, given by Trunov (2006).

Classification follows Eschmeyer (2013), but subspecies have been raised to species level; references follow Fricke (2013). Family arrangement follows Nelson (2006). Popular names are from fishbase ([www.fishbase.org](http://www.fishbase.org)). Recent photographic records were contributed by the members of the Shallow Marine Surveys Group expedition to Ascension Island (August–September 2012) and by Colin Chester. Specimens collected during the expedition and during a subsequent trip by the first author (February 2014) were

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deposited in the Zoologische Staatssammlung, Munich, Germany; their ZSM numbers are given in the species sections.

By far the largest number of the new records was accumulated by one of us (TH) while running a sport fishing boat out of Georgetown, Ascension Island, between 1995 and 2007; TH fished within 2 miles around the island.

We consider those species as 'coastal fish species' that that can be encountered in the first 60 m depth starting from shore and those open sea species that come close enough to the shore to be (occasionally) seen by swimmers.

## RESULTS

### (1) Chondrichthyes

#### Rhincodontidae

*Rhincodon typus* Smith, 1828 Whale shark

References: New record; TH has photos of the species taken at Ascension Island (e.g. [Figure 1](#)).

#### Alopiidae

*Alopias superciliosus* (Lowe, 1940) Bigeye thresher

References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

#### Lamnidae

*Isurus oxyrinchus* Rafinesque, 1810 Shortfin mako

References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

#### Carcharhinidae

*Prionace glauca* (Linnaeus, 1758) Blue shark

References: Cadenat & Marchal, [1963](#); Eschmeyer, [2013](#) as *Squalus adscensionis* with doubt, based on Nakano & Seki, [2003](#).

Remarks: TH has fished this species at Ascension Island and has a photo of it taken there.

*Carcharhinus galapagensis* Snodgrass & Heller, 1905 Galapagos shark

References: Cadenat & Marchal, [1963](#); Edwards, [1990](#), pp. 60–61; Bingeman & Bingeman, [2005](#), p. 43.

Remarks: TH has fished this species at Ascension Island and has photos of it taken there. He notes that the species can be encountered in large groups of dozens of differently sized individuals. With a weight of 140 kg, the current sport-fishing world record for this species is from Ascension Island.



Fig. 1. *Rhincodon typus* and *Remora albescens*. Photo Tim Hook.

*Carcharhinus obscurus* (Lesueur, 1818) Dusky shark

References: New record, TH has fished a more than 300 kg specimen of this species at Ascension Island, which is far above the maximum recorded for the similar looking species *Carcharhinus galapagensis*.

*Galeocerdo cuvier* (Péron & LeSueur in LeSueur, 1822) Tiger shark

References: New record; TH has fished this species at Ascension Island. Pictures of large individuals (500 kg plus) captured in the past are on display in the Saints Bar Club in Georgetown.

Remarks: TH notes 'All the Tigers that I have seen at Ascension are big ones (1000 lb plus); they are normally only around for 2 or 3 months (starting November/December). They arrive at the same time as the first Green turtles but only stay for about half the turtle season'. Seen cruising shallow beaches at night, presumably searching for Green turtles.

#### Sphyrnidae

*Sphyrna lewini* (Griffith & Smith, 1834) Scalloped hammerhead

References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

Remarks: More common at deep drop-offs on the east side of the island.

#### Hexanchidae

*Hexanchus griseus* (Bonnaterre [ex Broussonet], 1788) Bluntnose sixgill shark

References: New record; TH has fished this species at Ascension Island and has photos of it taken there.

Remarks: Only caught at night, frequently near the pipeline deepwater mooring. With 588.76 kg, the current sport-fishing world record is from Ascension Island.

#### Squalidae

*Euprotomicrus bispinatus* (Quoy & Gaimard, 1824) Pygmy shark

References: Springer in Quéro *et al.*, [1990](#), p. 18.

#### Myliobatidae

*Manta birostris* (Walbaum, 1792) Giant manta

References: New record; Bingeman & Bingeman, [2005](#), p. 38 as *Mobula ?mobula*.

Remarks: John Bingeman has taken the photo in [Figure 2](#) off Comfortless Cove, which clearly shows *M. birostris* and not *M. alfredi* (Kreff, 1868).

*Mobula* sp. Devil ray

References: Bingeman & Bingeman, [2005](#), p. 38 as *Mobula ?hypostoma*.

Remarks: According to Notarbartolo-di-Sciara ([1987](#)), South Atlantic *Mobula* most probably either belong to *Mobula rochebrunei* (Vaillant, 1879) or to *Mobula hypostoma* (Bancroft, 1831). However, the first author has recently photographed *Mobula tarapacana* (Philipi, 1893) at St Helena Island.

### (2) Osteichthyes

#### Muraenidae

*Channomuraena vittata* (Richardson, 1845) Broadbanded moray

References: Lubbock, [1980](#); Bingeman & Bingeman, [2005](#), p. 23.

Remarks: A very common species in shallow water.



Fig. 2. *Manta birostris*. Photo John Bingeman.

*Echidna catenata* (Bloch, 1795) Chain moray

References: Böhlke & Chaplin, 1968, p. 87; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 24.

*Enchelycore anatina* (Lowe, 1838) Fangtooth moray

References: Smith & Böhlke in Quéro *et al.*, 1990, p. 139; Bingeman & Bingeman, 2005, p. 25 used this name for the species *Muraena pavonina*.

*Enchelycore carychroa* Böhlke & Böhlke, 1976 Caribbean chestnut moray

References: Lubbock, 1980.

Remarks: A specimen from English Bay is deposited as ZSM 43054.

*Enchelycore nigricans* (Bonnaterre [ex Gronow], 1788) Mulatto conger

References: Lubbock, 1980.

*Gymnothorax miliaris* (Kaup, 1856) Goldentail moray

References: Lubbock, 1980 as *Lycodontis miliaris*; Edwards & Glass, 1987a; Edwards, 1990, p. 65; Smith & Böhlke in Quéro *et al.*, 1990, pp. 146–147 (as *Muraena miliaris*).

Remarks: All individuals seen by the first author were of the yellow 'banana' colour type.

*Gymnothorax moringa* (Cuvier, 1829) Spotted moray

References: Lubbock, 1980 as *Lycodontis moringa*; Edwards, 1990, p. 66; Smith & Böhlke in Quéro *et al.*, 1990, pp. 142–143; Bingeman & Bingeman, 2005, p. 26.

Remarks: A very common species in shallow water.

*Gymnothorax unicolor* (Delaroche, 1809) Brown moray

References: Lubbock, 1980 as *Lycodontis unicolor*; Edwards, 1990, pp. 66–67.

*Gymnothorax vicinus* (Castelnau, 1855) Purplemouth moray

Remarks: First record; observed by TH who notes 'I was fishing with a St Helenian who had worked as fisherman in St Helena; when I brought the moray aboard he said straight away that it was a "Deepwater Conger"; this pointed me in the direction of *Gymnothorax vicinus*. When I got back to my accommodation I used Alasdair Edwards' book to ID the moray; it ticked all the boxes (I can remember being pleased to ID the white margins to fins & purplish mouth). The only thing that was different to those recorded in Alasdair's book is that this one was taken from a water depth shallower, more in the region of 100 m.'

*Monopenchelys acuta* (Parr, 1930) Redface moray

References: Lubbock, 1980 as *Rabula acuta*.

*Muraena pavonina* Richardson, 1845 Whitespot moray

References: Lubbock, 1980; Bingeman & Bingeman (2005, p. 25) called this species *Enchelycore anatina*.

Remarks: A very common species in shallow water.

*Uropterygius macularius* (Lesueur, 1825) Marbled moray

References: Böhlke *et al.*, 1989.

### Ophichthidae

*Callochelys bilinearis* Kanazawa, 1952 Twostripe snake eel

References: Edwards & Glass, 1987a; Edwards, 1990, p. 69.

*Herpetoichthys regius* (Richardson, 1848) Ornate snake eel

References: Trunov (2006) records this species from Grattan seamount, 260 km southeast of Ascension Island as *Ophichthys regius*.

Remarks: This species has been considered endemic to the Ascension and St Helena area but J. McCosker (personal communication to PW) has examined two specimens from the St Paul's Rocks.

*Ichthyapus insularis* McCosker, 2004 Ascension snake eel

References: McCosker, 2004.

Remarks: An endemic species.

*Ichthyapus ophioneus* (Evermann & Marsh, 1900) Surf eel

References: Lubbock, 1980 as *Sphagebranchus ophioneus*; Edwards & Glass, 1987a; Edwards, 1990, p. 70.

*Phaenomonas longissima* (Cadenat & Marchal, 1963) Short-maned sand eel

References: Edwards & Glass, 1987a; Edwards, 1990, p. 71.

Remarks: Previously considered endemic to Ascension and St Helena Islands but now also recorded from Ghana and in the western Atlantic from Brazil (J. McCosker, personal communication to PW) and Belize (B. Victor, personal communication to PW).

*Quassiremus ascensionis* (Studer, 1889) Blackspotted snake eel

References: Cadenat & Marchal, 1963 as *Ophichthys ascensionis*, Lubbock, 1980 as *Ophichthys ophis*. A photo of the species was taken during a night dive at English Bay (Figure 3).

### Derichthyidae

*Derichthys serpentinus* Gill, 1884 Narrownecked ocean eel

References: Smith in Quéro *et al.*, 1990, p. 193.

### Nemichthyidae

*Nemichthys scolopaceus* Richardson, 1848 Slender snipe eel

References: Nielsen & Smith, 1978, pp. 38–47.

### Congridae

*Heteroconger camelopardalis* (Lubbock, 1980) Brazilian garden eel

References: Lubbock, 1980.



Fig. 3. *Quassiremus ascensionis*. Photo Shallow Marine Surveys Group.



**Platyroctidae**

*Barbantus elongatus* Krefft, 1970 Elongate searsid  
References: Quéro *et al.*, 1990, p. 265.

**Stomiidae**

*Eustomias intermedius* Clarke, 1998 Intermediate dragonfish  
References: Clarke, 1998, p. 679.

**Synodontidae**

*Saurida brasiliensis* Norman, 1935 Brazilian lizardfish  
References: Sulak in Quéro *et al.*, 1990, pp. 366–367.  
*Synodus synodus* (Linnaeus, 1758) Diamond lizardfish  
References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 73; Bingeman & Bingeman, 2005, p. 32.  
*Trachinocephalus myops* (Forster in Bloch & Schneider, 1801) Snakefish  
References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 73; Sulak in Quéro *et al.*, 1990, pp. 369–370; Bingeman & Bingeman, 2005, p. 32.

**Giganturidae**

*Gigantura chuni* Brauer, 1901 Chun's gigantura  
References: Johnson & Bertelsen, 1991.  
*Gigantura indica* Brauer, 1901 Indian telescopefish  
References: Johnson & Bertelsen, 1991.

**Lampridae**

*Lampris guttatus* (Brünnich, 1788) Opah  
References: Parin & Kukuev, 1983.

**Antennariidae**

*Antennarius multiocellatus* (Valenciennes in Cuvier & Valenciennes, 1837) Longlure frogfish  
References: Cadenat & Marchal, 1963; Lubbock, 1980; Pietsch & Grobecker, 1987.

**Carapidae**

*Carapus acus* (Brünnich, 1768) Pearl fish  
References: Markle & Olney, 1990, p. 375, ANSP specimen.  
Remarks: A specimen at the British Museum of Natural History, deposited by Robert Irving and labelled BMNH 1987.3.24.2, has the original register – 'Carapus ?bermudensis, Ascension Is., Site no. 9, depth 20 m, within anal cavity of holothurian, 7.11.1985'.

**Mugilidae**

*Mugil curvidens* Valenciennes in Cuvier & Valenciennes, 1836 Dwarf mullet  
References: Cadenat & Marchal, 1963 as *Myxus curvidens*; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 33.

**Exocoetidae**

*Cheilopogon exsiliens* (Linnaeus, 1771) Bandwing flyingfish  
References: Cadenat & Marchal, 1963 as *Cypselurus exsiliens*.  
*Cheilopogon pinnatibarbus* (Bennett, 1831) Bennett's flyingfish  
References: Cadenat & Marchal, 1963 as *Cypselurus lineatus*; Parin & Gibbs in Quéro *et al.*, 1990, p. 586.  
*Cypselurus cyanopterus* (Valenciennes in Cuvier & Valenciennes, 1847) Margined flyingfish  
References: Cadenat & Marchal, 1963.  
*Exocoetus volitans* Linnaeus, 1758 Tropical two-wing flyingfish  
References: Cadenat & Marchal, 1963.  
*Hirundichthys rondeletii* (Valenciennes, 1847) Blackwing flyingfish

References: Cadenat & Marchal, 1963 as *Cypselurus rubescens*.  
Remarks: Doubtful record. There is no type material for *Exocoetus rubescens* Rafinesque, 1818 and Eschmeyer (2013) writes 'Uncertain as *Hirundichthys rondeletii* (Valenciennes, 1847)'.

*Hirundichthys rufipinnis* (Valenciennes in Cuvier & Valenciennes, 1847) Redfin flyingfish

References: Eschmeyer, 2013 (as *Exocoetus lamellifer* which is a junior synonym according to Parin & Belyanina, 2002, p. 40), based on original description from south-west of Ascension Island by Kner & Steindachner, 1867, p. 364, pl. 2, Fig. 11.

**Belonidae**

*Platybelone trachura* (Valenciennes in Cuvier & Valenciennes, 1846) Ascension keeled needlefish

References: Collette & Parin, 1970, p. 33 (valid as subspecies of *P. argalus*); Edwards & Glass, 1987b; Edwards, 1990, p. 82; Collette & Parin in Quéro *et al.*, 1990, p. 594; Bingeman & Bingeman, 2005, p. 33 as *Platybelone argalus trachura*.

Remarks: Endemic to Ascension and St Helena Islands.

*Tylosurus* sp.

References: Cadenat & Marchal, 1963 as *Belone imperialis*.

Remarks: The species *Tylosurus imperialis* (Rafinesque, 1810) was split into several subspecies, subsequently raised to species level (see Eschmeyer, 2013). It is currently unknown if the western Atlantic *T. acus* (Lacepède, 1803) or the eastern Atlantic *T. rafale* Collette & Parin, 1970 is present at Ascension Island.

**Scomberesocidae**

*Scomberesox saurus* (Walbaum, 1792) Atlantic saury

References: Cadenat & Marchal, 1963.

Remarks: This identification needs verification. Edwards & Glass, 1987b re-identified the record of *Scomberesox saurus* of Cadenat & Marchal, 1963 for St Helena Island as actually being *Nanichthys simulans* Hubbs & Wisner, 1980.

**Diretmidae**

*Diretmoides pauciradiatus* (Woods in Woods & Sonoda, 1973) Longwing spinyfish

References: Post & Quéro, 1981, p. 56.

**Holocentridae**

*Holocentrus adscensionis* (Osbeck, 1765) Squirrelfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 85; Bingeman & Bingeman, 2005, p. 46.

Remarks: A genetic study by Bowen *et al.* (2006) showed little genetic variation between western Atlantic, mid-Atlantic and eastern Atlantic populations, with mid-Atlantic animals (from Ascension and St Helena Islands) being slightly more similar to western Atlantic populations.

*Myripristis jacobus* Cuvier in Cuvier & Valenciennes, 1829 Blackbar soldierfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 85; Bingeman & Bingeman, 2005, p. 45.

Remarks: A genetic study by Bowen *et al.* (2006) showed very little genetic variation between western Atlantic, mid-Atlantic and eastern Atlantic populations.

**Zenionidae**

*Zenion longipinnis* Kotthaus, 1970

References: Karrer in Quéro *et al.*, 1990, p. 629.

**Aulostomidae**

*Aulostomus strigosus* Wheeler, 1955 Atlantic cornetfish

References: Cadenat & Marchal, 1963 as *Aulostomus maculatus*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 87; Bowen *et al.*, 2001; Bingeman & Bingeman, 2005, p. 52.

**Fistulariidae**

*Fistularia commersonii* Rüppell, 1838 Bluespotted cornetfish

References: Eschmeyer, 2013.

Remarks: Doubtful record, no source found.

*Fistularia petimba* Lacepède [ex Commerson], 1803 Red cornetfish

References: Trunov (2006) records this species from Grattan seamount, 260 km south-east of Ascension Island.

**Syngnathidae**

*Hippocampus* sp.

References: One of us (JY) saw a seahorse on a fishing line at about 60 m depth well over 20 years ago. This is most likely to be the species *Hippocampus erectus* Poey, 1810, which is recorded, also from more than 40 m depth, from St Helena Island (Edwards, 1990, p. 88).

**Dactylopteridae**

*Dactylopterus volitans* (Linnaeus, 1758) Flying gurnard

References: Cadenat & Marchal, 1963; Lubbock, 1980.

**Scorpaenidae**

*Pontinus nigropunctatus* (Günther, 1868) Saint Helena deep-water scorpionfish

References: Trunov (2006) records this species from Grattan seamount, 260 km south-east of Ascension Island; TH has fished it close to Ascension Island (Figure 4).

Remarks: Edwards (1993) predicted the discovery of this species at Ascension Island. Previously considered endemic for St Helena Island and the nearby Bonaparte seamount (Edwards, 1993), it has since also been discovered at St Peter and St Paul Archipelago (Vaske *et al.*, 2008).

*Scorpaena ascensionis* Eschmeyer, 1971 Ascension scorpionfish

References: Lubbock, 1980.

Remarks: An endemic species.

*Scorpaena grandicornis* Cuvier in Cuvier & Valenciennes, 1829 Plumed scorpionfish

References: Eschmeyer (2013) with doubt.

*Scorpaena grattanica* Trunov, 2006 Grattan scorpionfish

References: Trunov (2006) records this species from Grattan seamount, 260 km south-east of Ascension Island.

Remarks: An endemic species to Grattan seamount, which is included with Ascension Island *sensu lato* here, as stated in the Materials and methods section.

*Scorpaena plumieri* Bloch, 1789 Spotted scorpionfish

References: Günther, 1881; Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, pp. 88–89; Eschmeyer & Dempster in Quéro *et al.*, 1990, p. 674; Bingeman & Bingeman, 2005, p. 41.

*Scorpaenodes insularis* Eschmeyer, 1971 Ascension scorpaenodes

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 89; Bingeman & Bingeman, 2005, p. 40. One specimen deposited as ZSM 42236.

Remarks: Endemic species to Ascension and St Helena Islands and the St Paul's Rocks.

**Serranidae**

*Epinephelus adscensionis* (Osbeck, 1765) Rock hind

References: Cadenat & Marchal, 1963 as *Epinephelus ascensionis*; Lubbock, 1980; Edwards & Glass, 1987a; Heemstra, 1991, pp. 17–20; Bingeman & Bingeman, 2005, p. 39.

*Epinephelus aeneus* (Geoffroy Saint-Hilaire, 1817) White grouper

References: Norman (1935); Cadenat & Marchal, 1963; Lubbock (1980).

Remarks: As noted by Lubbock (1980), this is a doubtful record, possibly due to the accidental inclusion of West African samples in a collection from Ascension Island.

*Epinephelus itajara* (Lichtenstein, 1822) Atlantic goliath grouper

References: New record.

Remarks: There is a black and white photo of *Epinephelus itajara* on page 69 of an unpublished report, edited by John Taylor and Robert Irving, on a joint services expedition entitled 'Operation Origin – Ascension Island 1985'. On 31 October and 4 November they saw the Jewfish illustrated to the east of Power House cove. They found it in a cave open at both ends and estimated it as 1.3 m long. Additionally, RAF dive instructor Malcolm Moss wrote to TH: 'The one & only time I ever saw a Jewfish on Asi was when I was diving on an RAF exped on 8 Sep 98 diving in Eddies Gully from 1327 hrs to 1406 hrs according to my logbook. It was an awesome sight to say the least. Neither I nor my buddy (Dave Ball – ex RAF) had a camera at the time. My logbook tells me the fish was about 7 ft long. It was laying on a rocky plateau under an arch hardly moving but its huge eyes followed our every move. We were with it for approx 10 mins at a depth of approx 10 mtrs. The log goes on... 2 other pairs of divers then turned up – glad too as no one would have believed us otherwise. We only found out what the fish was after we discussed it with some of the Sainty fishermen later that day. They told us that it was a fairly rare occurrence to see one. I did a further 4 military expeds on Asi after that but never saw another Goliath Grouper. I did however see some Jewfish whilst diving West Palm Beach Florida with Mac McDowell (CSR Asi) on 15 July 2008. Got them on video too.' Finally, one of us (JY) has seen Jewfish at the deep tanker wreck off the pier head and near Klinka Club.

*Holanthias caudalis* Trunov, 1976 Ascension swallowtail

References: Trunov, 1976.



Fig. 4. *Pontinus nigropunctatus*. Photo Tim Hook.



Remarks: An endemic species.

*Holanthias fronticinctus* (Günther, 1868) Saint Helena seaperch

References: David (2011) filmed this species at Grattan seamount, 260 km south-east of Ascension Island; also fished by TH close to Ascension Island (Figure 5).

Remarks: Previously considered endemic for St Helena Island and the nearby Bonaparte Seamount (Edwards, 1993).

*Paranthias furcifer* (Valenciennes in Cuvier & Valenciennes, 1828) Creole fish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Heemstra, 1991, pp. 57–58; Bingeman & Bingeman, 2005, pp. 19–20. Three specimens deposited as ZSM 42248.

Remarks: A molecular study by Craig & Hasting (2007) indicated that this species may belong to the genus *Cephalopholis*.

*Pseudogramma gregoryi* (Breder, 1927) Reef bass

References: Lubbock, 1980.

Remarks: *Pseudogramma gregoryi* is easily confused with *P. guineensis* (Norman, 1935); see Wirtz et al. (2007). The identity of the Ascension *Pseudogramma* needs checking.

*Rypticus saponaceus* (Bloch & Schneider, 1801) Greater soapfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Maugé in Quéro et al., 1990, p. 709; Bingeman & Bingeman, 2005, p. 45. Two specimens deposited as ZSM 42240.

Remarks: Both juveniles and adults of the Ascension soapfish differ in colour from West-African individuals; adult animals also differ in body shape (PW, personal observations, cf. Figure 6). In a genetic study by Carlin et al. (2003), *Rypticus saponaceus* specimens from the eastern Atlantic differed greatly from mid-Atlantic and western Atlantic specimens and mid-Atlantic specimens also differed considerably from western Atlantic specimens. As the type locality of *Rypticus saponaceus* is from the western Atlantic, the eastern Atlantic (and possibly also the mid-Atlantic) populations will have to be described as separate species.

*Serranus sanctaehelenae* Boulenger, 1895 Saint Helena comber

References: Cadenat & Marchal, 1963; Lubbock, 1980, Edwards & Glass, 1987a; Edwards, 1990, p. 90; Trunov, 2006.

Remarks: Endemic to Ascension and St Helena Islands.

#### Priacanthidae

*Cookeolus japonicus* (Cuvier [ex Langsdorff] in Cuvier & Valenciennes, 1829) Longfinned bullseye



Fig. 5. *Holanthias fronticinctus*. Photo Tim Hook.



Fig. 6. *Rypticus saponaceus*. Photo Peter Wirtz.

References: New record, fished at Ascension Island by TH (Figure 7); also fished at Grattan Seamount, as documented in a photo by Ingrid Vincent-Andersen.

*Heteropriacanthus cruentatus* (Lacepède, 1801) Glasseye

References: Cadenat & Marchal, 1963 as *Priacanthus cruentatus*; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 44.

#### Apogonidae

*Apogon axillaris* Valenciennes, 1832 Axillary-spot cardinalfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 92; Bingeman & Bingeman, 2005, p. 14. Two specimens deposited as ZSM 42237.

Remarks: Endemic to Ascension and St Helena Islands.

*Apogon pseudomaculatus* Longley, 1932 Twospot cardinalfish

References: New record; a single individual was photographed (Figure 8) and captured during a night dive in English Bay in September 2012; the specimen is in the Zoologische Staatssammlung in Munich (ZSM 42234, one specimen). After its capture at São Tomé Island (Wirtz et al., 2007), this is the second record of the species outside the western Atlantic.

*Phaeoptyx pigmentaria* (Poey, 1860) Dusky cardinalfish

References: New record; two individuals were captured by spraying clove oil into a crack in the rock in English Bay in about 12 m depth in January 2014. The specimens are in the Zoologische Staatssammlung in Munich



Fig. 7. *Cookeolus japonicus*. Photo Tim Hook.



Fig. 8. *Apogon pseudomaculatus*. Photo Peter Wirtz.

(ZSM 43055). This species has previously been recorded from Bermuda to Brazil in the Western Atlantic and from the Gulf of Guinea in the Eastern Atlantic (Baldwin *et al.*, 2009).

#### Malacanthidae

*Malacanthus plumieri* (Bloch, 1786) Sand tilefish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Dooley in Quéro *et al.*, 1990, p. 720; Bingeman & Bingeman, 2005, p. 50. One specimen deposited as ZSM 42247.

#### Coryphaenidae

*Coryphaena equiselis* Linnaeus, 1758 Pompano dolphinfish

References: Cadenat & Marchal, 1963 as *Coryphaena equisetis*.

Remarks: This record needs confirmation.

*Coryphaena hippurus* Linnaeus, 1758 Common dolphinfish

References: Bingeman & Bingeman, 2005, p. 22.

Remarks: TH has fished this species at Ascension Island and has photos of it taken there. He notes that the species usually occurs in groups.

#### Echeneidae

*Echeneis naucrates* Linnaeus, 1758 Live sharksucker

References: Cadenat & Marchal, 1963.

*Remora albescens* (Temminck & Schlegel, 1850) White suckerfish

References: New record; TH has photographed the species in association with a whale shark (Figure 1).

*Remora remora* (Linnaeus, 1758) Sharksucker

References: Cadenat & Marchal, 1963.

Remarks: Also documented in a photo by Colin Chester that shows a *Remora remora* attached to *Mobula* sp.

#### Carangidae

*Caranx bartholomaei* Cuvier, 1833 Yellow jack

References: New record; documented by a photo taken by Colin Chester near Boatswain Bird Island (Figure 9)

*Caranx crysos* (Mitchill, 1815) Blue runner

References: Edwards & Glass, 1987b; Edwards, 1990, p. 96; Smith-Vaniz *et al.* in Quéro *et al.*, 1990, p. 732.

*Caranx fischeri* Smith-Vaniz & Carpenter, 2007 Longfin crevalle jack

References: Smith-Vaniz & Carpenter, 2007.

*Caranx hippos* (Linnaeus [ex Garden], 1766) Crevalle jack

References: Cadenat & Marchal, 1963, Edwards & Glass, 1987b and Edwards, 1990, p. 97 list *Caranx hippos* for Ascension Island; however, at that time the closely related species *Caranx fischeri* Smith-Vaniz & Carpenter,



Fig. 9. *Caranx bartholomaei*. Photo Colin Chester.

2007 had not yet been described. Edward's record based on specimen 'BMNH 1927.12.7.49 (358), J. Simpson' later even became a paratype of *C. fischeri*. TH is fairly certain that he has fished *Caranx hippos* (but not *Caranx fischeri*) at Ascension Island but the record of *C. hippos* for Ascension Island needs verification.

*Caranx latus* Agassiz in Spix & Agassiz, 1831 Horse-eye jack  
References: Bingeman & Bingeman, 2005, p. 31; Smith-Vaniz *et al.* in Quéro *et al.*, 1990, p. 733.

*Caranx lugubris* Poey, 1860 Black jack

References: Cadenat & Marchal, 1963 as *Caranx lugubris* and as *Caranx ascensionis*; Edwards, 1990, p. 97; Bingeman & Bingeman, 2005, p. 31; Smith-Vaniz *et al.* in Quéro *et al.*, 1990, p. 734; Trunov, 2006.

*Carangoides ruber* (Bloch, 1793) Bar jack

References: New record; TH has fished this species at Ascension Island; there is no photographic record but the species is unmistakable.

*Decapterus macarellus* (Cuvier in Cuvier & Valenciennes, 1833) Mackerel scad

References: Smith-Vaniz *et al.* in Quéro *et al.*, 1990, pp. 736–737; fished by TH, who has a photo of the species taken at Ascension Island.

*Decapterus punctatus* (Cuvier, 1829) Round scad

References: Cadenat & Marchal, 1963 as *Decapterus sanctaehelena*; Edwards & Glass, 1987b; Edwards, 1990, p. 100; Smith-Vaniz *et al.* in Quéro *et al.*, 1990, pp. 737–738.

*Decapterus tabl* Berry, 1968 Roughear scad

References: New record; fished by TH, who has a photo of the species taken at Ascension Island (Figure 10).



Fig. 10. *Decapterus tabl*. Photo Tim Hook.



*Elagatis bipinnulata* (Quoy & Gaimard, 1825) Rainbow runner

References: Bingeman & Bingeman, 2005, p. 40.

*Pseudocaranx dentex* (Bloch & Schneider, 1801) White trevally

References: Edwards & Glass, 1987b; Edwards, 1990, p. 102; Smith-Vaniz *et al.* in Quéro *et al.*, 1990, pp. 742–743.

*Selar crumenophthalmus* (Bloch, 1793) Bigeye scad

References: Cadenat & Marchal, 1963.

Remarks: A common species, also documented in photos taken by TH and by the Shallow Marine Surveys Group.

*Seriola rivoliana* (Valenciennes in Cuvier & Valenciennes, 1833) Longfin yellowtail

References: Bingeman & Bingeman, 2005, p. 30.

Remarks: Only the photo page 30 bottom right in Bingeman & Bingeman, 2005 shows *Seriola rivoliana*, the photo bottom left shows *Seriola dumerili*.

*Seriola dumerili* (Risso, 1810) Greater amberjack

References: New record; the photo page 30 bottom left in Bingeman & Bingeman, 2005 shows this species but calls it *Seriola rivoliana*; TH has fished this species at Ascension Island and has a photo of it taken there.

*Trachinotus ovatus* (Linnaeus, 1758) Pompano

References: Cadenat & Marchal, 1963 as *Trachinotus glaucus*; Bingeman & Bingeman, 2005, p. 36; Eschmeyer, 2013 (as *Scomber ascensionis*, *Scomber glaucus*).

*Uraspis helvola* (Forster in Bloch & Schneider, 1801) Whitetongue jack

References: Edwards & Glass, 1987b; Edwards, 1990, p. 105; TH has fished this species at Ascension Island and has a photo of it taken there.

#### Lutjanidae

*Lutjanus jocu* (Bloch & Schneider [ex Parra], 1801) Dog snapper

References: Lubbock, 1980; Bingeman & Bingeman, 2005, p. 44.

#### Sparidae

*Diplodus ascensionis* (Valenciennes in Cuvier & Valenciennes, 1830) Ascension seabream

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 106 (as *Diplodus sargus ascensionis*); Bingeman & Bingeman, 2005, p. 42.

Remarks: An endemic species.

#### Mullidae

*Mulloidichthys martinicus* (Cuvier in Cuvier & Valenciennes, 1829) Yellow goatfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 107; Bingeman & Bingeman, 2005, p. 29.

#### Kyphosidae

*Kyphosus bigibbus* Lacepède, 1801 Brown chub

References: Knudsen & Clements (2013)

*Kyphosus sectatrix* (Linnaeus, 1758) Bermuda sea chub

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 108; Bingeman & Bingeman, 2005, p. 13.

*Kyphosus vaigensis* (Quoy & Gaimard, 1825) Brassy chub

References: Knudsen & Clements (2013).

#### Chaetodontidae

*Chaetodon sanctaehelena* Günther, 1868 Saint Helena butterflyfish

References: Cadenat & Marchal, 1963 as *Chaetodon sanctaehelena*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 109; Bingeman & Bingeman, 2005, p. 13.

Remarks: Endemic to Ascension and St Helena Island but stray individuals, almost certainly transported by man, have been recorded at the Canary Islands (Brito *et al.*, 2002).

*Prognathodes dichrous* (Günther, 1869) Bicolour butterflyfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, pp. 108–109; Bingeman & Bingeman, 2005, p. 13, as *Chaetodon dichrous*; Maugé in Quéro *et al.*, 1990, p. 839; Trunov, 2006.

Remarks: Endemic to Ascension and St Helena Islands.

#### Pomacanthidae

*Centropyge resplendens* Lubbock & Sankey, 1975 Resplendent angelfish

References: Lubbock, 1980; Lubbock & Sankey, 1975; Bingeman & Bingeman, 2005, p. 8.

Remarks: An endemic species. The Brazilian *Centropyge aurantonotus* appears to be the most closely related species (Gaither *et al.*, 2014).

*Pomacanthus paru* (Bloch, 1787) French angelfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 7.

#### Cirrhitidae

*Amblycirrhitus earnshawi* Lubbock, 1978 Ascension hawkfish

References: Lubbock, 1978; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 30.

Remarks: An endemic species. The colour pattern shows some similarity with the western Atlantic *A. pinos* (Mowbray, 1927), also present at St Helena Island, from which it is probably derived.

#### Pomacentridae

*Abudefduf saxatilis* (Linnaeus, 1758) Sergeant-major

References: Cadenat & Marchal, 1963 as *Abudefduf marginatus*; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 41.

*Chromis multilineata* (Guichenot, 1853)

References: Cadenat & Marchal, 1963 as *Chromis chromis*; Lubbock, 1980 as *Chromis* sp.; Edwards & Glass, 1987a; Edwards, 1990, pp. 109–110; Bingeman & Bingeman, 2005, p. 21 as *Chromis* sp.

Remarks: *Chromis multilineata* from Ascension differ from the population at St Helena Island in having a bright spot at the rear end of the base of the dorsal fin (Figure 11). Rocha *et al.* (2008) could not find genetic



Fig. 11. *Chromis multilineata*. Photo Sue Scott.



differences between the populations of Ascension and of St Helena Islands. The population genetically closest to these mid-Atlantic islands appears to be the one at Brazil (Rocha *et al.*, 2008).

*Stegastes lubbocki* Allen & Smith, 1992 Lubbock's gregory  
References: Cadenat & Marchal, 1963 as *Pomacentrus leucostictus*; Lubbock, 1980 as *Stegastes* sp.; Lloris & Rucabado in Quéro *et al.*, 1990, pp. 849–850 as *Pomacentrus leucostictus* (non Müller & Troschel, 1848); Allen & Smith, 1992; Bingeman & Bingeman, 2005, p. 21.

Remarks: An endemic species. The first author has observed juveniles of this species cleaning numerous other fish species. In the description of *Stegastes lubbocki*, Allen & Smith (1992) write that the most similar looking *Stegastes* species in the Atlantic is *S. partitus* (Poey, 1868) but the most similar one is in fact the Brazilian species *S. pictus* (Castelnau, 1855). See Figure 12.

### Labridae

*Bodianus insularis* Gomon & Lubbock, 1980 Island hogfish  
References: Cadenat & Marchal, 1963 as *Cossyphus rufus*; Gomon & Lubbock, 1980; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 111; Bingeman & Bingeman, 2005, pp. 59–60.

Remarks: Endemic to the islands of Ascension, St Helena and the St Paul's Rocks.

*Thalassoma ascensionis* (Quoy & Gaimard, 1834) Greenfish  
References: Cadenat & Marchal, 1963; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 56.

Remarks: An endemic species. Juveniles have been observed by PW to clean many other species of fish. The sister species of the closely related *Thalassoma ascensionis* and *T. sanctaehelenae* is the eastern Atlantic species *T. newtoni* (Costagliola *et al.*, 2004).

*Thalassoma sanctaehelenae* (Valenciennes in Cuvier & Valenciennes, 1839) Saint Helena wrasse

References: Bingeman & Bingeman (2005, p. 58).

Remarks: The presence of *T. sanctaehelenae* at Ascension Island was already suspected by Bingeman & Bingeman (2005). We here confirm it. Figure 13 by TH shows a terminal male *T. sanctaehelenae* captured in a tide pool at English Bay. *Thalassoma ascensionis* and *T. sanctaehelenae* are clearly distinct in colour and in their mitochondrial genome (Costagliola *et al.*, 2004). We suspect that the



Fig. 12. *Stegastes lubbocki*, territorial male. Photo Peter Wirtz.



Fig. 13. *Thalassoma sanctaehelenae*, terminal male phase. Photo Tim Hook.

recent appearance of *T. sanctaehelenae* at Ascension is due to human transport. The species has also been recorded by TH at the east coast of the island; to have such a large area of distribution, it must have been in the area for some time already.

*Xyrichtys blanchardi* (Cadenat & Marchal, 1963) Marmalade razorfish

References: Cadenat & Marchal, 1963 as *Novaculichthys blanchardi*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 112; Bingeman & Bingeman, 2005, p. 39.

Remarks: Endemic to Ascension and St Helena Islands.

*Xyrichtys sanctaehelenae* (Günther, 1868) Yellow razorfish

References: Cadenat & Marchal, 1963 as *Novacula sanctaehelenae*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 112.

Remarks: Considered endemic to Ascension and St Helena Islands until a single individual was recorded from São Tomé Island (Wirtz *et al.*, 2007).

### Scaridae

*Cryptotomus* sp.

References: First record. An initial phase specimen was collected by Ross Robertson in 1997 (personal communication to PW).

Remarks: This is most likely to be the western Atlantic *Cryptotomus roseus* Cope 1871.

*Scarus hoefleri* (Steindachner, 1881) Guinean parrotfish

References: Norman (1935) as *Pseudoscarus guacamaia* (Cuvier, 1829); Lubbock (1980).

Remarks: Lubbock (1980) notes that Norman's (1935) record is doubtful, possibly due to the accidental inclusion of West African samples in a collection from Ascension Island.

*Sparisoma strigatum* (Günther, 1862) Strigate parrotfish

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 113; Bingeman & Bingeman, 2005, p. 35.

Remarks: Endemic to Ascension and St Helena Islands. The sister species of *Sparisoma strigatum* is the eastern Atlantic *Sparisoma cretense* (Robertson *et al.*, 2006).

### Tripterygiidae

*Helcogramma ascensionis* Lubbock, 1980 Ascension triplefin

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 113; Holleman, 2007.

Remarks: Endemic to Ascension and St Helena Islands (Holleman, 2007).

**Blenniidae**

*Entomacrodus textilis* (Valenciennes [ex Quoy & Gaimard] in Cuvier & Valenciennes, 1836) Textile blenny

References: Günther, 1881 as *Salarias vomerinus*; Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 114; Bingeman & Bingeman, 2005, p. 12. Two specimens deposited as ZSM 42244 and 42245.

Remarks: Endemic to Ascension and St Helena Islands.

*Ophioblennius* sp.

References: Cadenat & Marchal, 1963 and Lubbock, 1980 as *Ophioblennius atlanticus*; Edwards & Glass, 1987a; Edwards, 1990, p. 114; Bath in Quéro *et al.*, 1990, pp. 914–915; Bingeman & Bingeman, 2005, p. 11 as *Ophioblennius atlanticus atlanticus*. Three specimens deposited as ZSM 42235 and 42241.

Remarks: *Ophioblennius* observed by the first author at Ascension Island differ from eastern Atlantic and from the Caribbean and Brazilian populations seen by the first author in colour pattern: they occasionally display yellow-orange to light brown bands on the head and/or body (e.g. Figure 14). Muss *et al.* (2001) have shown that specimens from Ascension and St Helena Islands are genetically similar to each other and quite distinct from other populations. They are likely to belong to a separate species, endemic to Ascension and St Helena Islands. Their closest relatives appear to be eastern Atlantic populations (Muss *et al.*, 2001).

*Scartella nuchifilis* (Valenciennes [ex Quoy & Gaimard] in Cuvier & Valenciennes, 1836) Filamentous rockskipper

References: Cadenat & Marchal, 1963 as *Blennius cristatus*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 114; Bath in Quéro *et al.*, 1990, p. 913; Rangel *et al.*, 2004; Bingeman & Bingeman, 2005, p. 11.

Remarks: An endemic species. Note that *Scartella cristata* (Linnaeus, 1758) is supposed to have been originally described from Ascension Island (see Eschmeyer, 2013); this may need clarification.

**Callionymidae**

*Callionymus bairdi* (Jordan in Eigenmann & Eigenmann, 1888) Lancer dragonet

References: Fricke, 2002. Two specimens deposited as ZSM 42245 and 42246.

Remarks: Also recorded during the Shallow Water Survey Expedition at Porpoise Rock, on gravel in about 15 m depth.



Fig. 14. *Ophioblennius* sp. Photo Shallow Marine Surveys Group.

**Gobiidae**

*Gnatholepis thompsoni* Jordan, 1904 Goldspot goby

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 116; Larson & Buckle, 2012.

*Gobius tropicus* Osbeck, 1765

References: According to Miller in Quéro *et al.*, 1990, p. 951, 'unlikely to be a gobiid, since original description refers to a single long dorsal fin, and serrated preopercle'; Eschmeyer (2013) writes 'status uncertain'.

*Priolepis ascensionis* (Dawson & Edwards in Edwards & Glass, 1987a) Ascension goby

References: Lubbock, 1980 as *Quisquilius* sp.; Dawson & Edwards in Edwards & Glass, 1987a; Edwards, 1990, p. 116; Miller in Quéro *et al.*, 1990, p. 946 (as *Quisquilius* sp.); Bingeman & Bingeman, 2005, p. 28. One specimen deposited as ZSM 42238.

Remarks: Endemic to Ascension and St Helena Islands.

**Acanthuridae**

*Acanthurus bahianus* Castelnau, 1855 Barber surgeon fish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 49.

Remarks: We confirm that Ascension individuals show the yellow margin of the caudal fin typical for the south-western Atlantic species *A. bahianus* and not the blue margin of the caudal fin typical for its north-western sister species *Acanthurus tractus* (Poey, 1860) (Bernal & Rocha, 2011).

*Acanthurus chirurgus* (Bloch, 1787) Doctorfish

References: Rocha *et al.*, 2002; Bingeman & Bingeman, 2005, p. 49.

*Acanthurus coeruleus* Bloch & Schneider, 1801 Blue tang

References: Cadenat & Marchal, 1963; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 48.

*Paracanthurus hepatus* (Linnaeus, 1766) Palette surgeonfish

References: Cadenat & Marchal, 1963 as *Acanthurus hepatus*. Remarks: Mistaken record. *Paracanthurus hepatus* is an Indo-Pacific species. Possibly a confusion with *Acanthurus coeruleus*.

**Sphyraenidae**

*Sphyraena barracuda* (Edwards in Catesby, 1771) Great barracuda

References: Bingeman & Bingeman, 2005, p. 9.

**Gempylidae**

*Promethichthys prometheus* (Cuvier in Cuvier & Valenciennes, 1832) Roudi escolar

References: Cadenat & Marchal, 1963 as *Thyrsites prometheus*; Nakamura & Parin, 1993.

*Ruvettus pretiosus* Cocco, 1833 Oilfish

References: New record, fished by TH, who has a photo of the species taken at Ascension Island.

**Trichiuridae**

*Aphanopus intermedius* Parin, 1983 Intermediate scabbardfish

References: Nakamura & Parin, 1993.

**Scombridae**

*Acanthocybium solandri* (Cuvier, 1832) Wahoo

References: New record; TH has fished this species at Ascension Island.

*Auxis rochei* (Risso, 1810) Bullet tuna

References: New record; TH has fished this species at Ascension Island.



*Auxis thazard* (Lacepède [ex Commerson], 1800) Frigate tuna  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Euthynnus alletteratus* (Rafinesque, 1810) Little tunny  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Katsuwonus pelamis* (Linnaeus, 1758) Skipjack tuna  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Thunnus alalunga* (Bonnaterre [ex Cetti], 1788) Albacore  
References: New record; TH has fished this species at Ascension Island. There is no photographic record but the species is unmistakable.

Remarks: TH notes that they are only caught rarely in the southern hemisphere winter when the sea temperatures are down.

*Thunnus albacares* (Bonnaterre [ex Sloane], 1788) Yellowfin tuna

References: Cadenat Marchal, 1963 as *Neothunnus albacora*; TH has fished this species at Ascension Island and has a photo of it taken there.

*Thunnus obesus* (Lowe, 1839) Bigeye tuna  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Thunnus thynnus* (Linnaeus, 1758) Atlantic bluefin tuna  
References: Cadenat & Marchal, 1963

Remarks: Presence at Ascension confirmed by Ezequiel Conde (to TH), who knows the species well from the Azores and recorded individuals of *Thunnus thynnus* of at least 300 kg weight.

#### Xiphiidae

*Xiphias gladius* Linnaeus, 1758 Swordfish  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

#### Istiophoridae

*Istiophorus platypterus* (Shaw in Shaw & Nodder, 1792) Indo-Pacific sailfish

References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Kajikia albida* (Poey, 1860) Atlantic white marlin  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Makaira nigricans* Lacepède, 1802 Blue marlin  
References: New record; TH has fished this species at Ascension Island; see also Figure 15.

*Tetrapturus pfluegeri* Robins & Sylva, 1963 Longbill spearfish  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

#### Centrolophidae

*Hyperoglyphe perciformis* (Mitchill, 1818) Barrellfish  
References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Schedophilus* sp.  
References: New record; TH has fished this species at Ascension Island; the photographic record was lost. This is most likely to be *Schedophilus velaini* (Sauvage, 1879).

#### Caproidae

*Antigonia capros* Lowe, 1843 Deepbody boarfish  
References: Cadenat & Marchal, 1963; Edwards & Glass, 1987a; Edwards, 1990, pp. 86–87.



Fig. 15. *Makaira nigricans*. Photo Tim Hook.

Remarks: TH has fished this species at Ascension Island and has a photo of it taken there.

#### Paralichthyidae

*Syacium micrurum* Ranzani, 1842 Channel flounder  
References: Cadenat & Marchal (1963).

Remarks: This is probably a mistaken record. The eastern Atlantic species *Syacium guineensis* (Bleeker, 1862) has in the past frequently been called *Syacium micrurum*, which is a western Atlantic species (see remarks in Wirtz *et al.*, 2013). Moreover, Fraser (1971) considered the record of *S. micrurum* by Cadenat & Marchal as misidentification of *S. papillosum*.

*Syacium papillosum* (Linnaeus, 1758) Dusky flounder  
References: Cadenat & Marchal, 1963; Lubbock, 1980.

#### Bothidae

*Arnoglossus capensis* Boulenger, 1889 Cape scaldfish  
References: Nielsen, 1961; Cadenat & Marchal, 1963; Edwards & Glass, 1987a; Edwards, 1990, p. 131.

*Bothus lunatus* (Linnaeus, 1758) Platefish  
References: Cadenat & Marchal, 1963 as *Platophrys lunatus*; Lubbock, 1980; Edwards, 1990, p. 131; Bingeman & Bingeman, 2005, p. 28.

*Bothus mellissi* Norman, 1931 Saint Helena flounder  
References: Cadenat & Marchal, 1963 as *Platophrys mellissi*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 131; Bingeman & Bingeman, 2005, p. 28.

Remarks: Endemic to Ascension and St Helena Islands.

#### Cynoglossidae

*Symphurus lubbocki* Munroe, 1990 Ascension tonguefish  
References: Lubbock, 1980 as *Symphurus* sp.; Munroe, 1990; Desoutter in Quérou *et al.*, 1990, pp. 1053–1054 as *Symphurus nigrescens* (Rafinesque, 1810); Munroe *et al.*, 2000.

Remarks: Endemic to Ascension Island.

#### Balistidae

*Balistes pellucidus* Hermann, 1804  
References: Eschmeyer, 2013, no status assigned.  
Remarks: Doubtful species; needs redescription if valid.

*Balistes vetula* Linnaeus, 1758 Queen triggerfish  
References: Cadenat & Marchal, 1963; Lubbock, 1980; Bingeman & Bingeman, 2005, p. 51.

*Canthidermis maculata* (Bloch, 1786) Ocean triggerfish

Remarks: Cadenat & Marchal, 1963 as *Canthidermis maculatus*.

*Canthidermis sufflamen* (Mitchill, 1815) Atlantic ocean triggerfish

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 133.

*Melichthys niger* (Bloch, 1786) Black triggerfish

References: Cadenat & Marchal, 1963 as *Melichthys buniva*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, pp. 133–134; Bingeman & Bingeman, 2005, p. 51.

Remarks: The extraordinary population density of this species at Ascension Island has been remarked upon by many authors, e.g. Lubbock (1980) and Kavanagh & Olney (2006). Mass mortalities of this species have been recorded repeatedly (Pinheiro *et al.*, 2010).

*Xanthichthys ringens* (Linnaeus, 1758) Sargassum triggerfish

References: Cadenat & Marchal, 1963 as *Balistes ringens*.

Remarks: This is probably a confusion with the light colour phase of *Melichthys niger*, which does, on first glance, resemble *Xanthichthys ringens* (personal observation of the first author).

#### Monacanthidae

*Aluterus scriptus* (Osbeck, 1765) Scribbled leatherjacket filefish

References: Cadenat & Marchal, 1963 as *Alutera scripta*; Lubbock, 1980; Harmelin-Vivien & Quéro in Quéro *et al.*, 1990, p. 1063; Bingeman & Bingeman, 2005, p. 27.

*Cantherhines macrocerus* (Hollard, 1853) American white-spotted filefish

References: New record, based on two photos by JY, identified by John Bingeman, and several photos taken by the Shallow Marine Surveys Group (Figure 16).

#### Ostraciidae

*Acanthostracion notacanthus* (Bleeker, 1863) Island cowfish

References: Günther, 1881 as *Ostracion quadricornis* (non Linnaeus, 1758); Cadenat & Marchal, 1963 as *Ostracion notacanthus*; Lubbock, 1980 as *Lactophrys notacanthus*; Edwards & Glass, 1987a; Edwards, 1990, p. 135; Bingeman & Bingeman, 2005, p. 12.

*Rhinosomus bicaudalis* (Linnaeus, 1758) Spotted trunkfish

References: Cadenat & Marchal, 1963 as *Ostracion bicaudalis*; Duron & Quéro in Quéro *et al.*, 1990, p. 1068.

Remarks: This record needs confirmation.



Fig. 16. *Cantherhines monocerus*. Photo Shallow Marine Surveys Group.

#### Tetraodontidae

*Canthigaster sanctaehelenae* (Günther, 1870) Saint Helena sharpnose pufferfish

References: Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 135; Bingeman & Bingeman, 2005, p. 37.

Remarks: Endemic to St Helena and Ascension Islands.

*Spherooides pachygaster* (Müller & Troschel in Schomburgk, 1848) Blunthead puffer

References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

#### Diodontidae

*Chilomycterus reticulatus* (Linnaeus, 1758) Spotfin burrfish

References: Cadenat & Marchal, 1963; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 137.

*Diodon eydouxii* Brisout de Barneville, 1846 Pelagic porcupinefish

References: New record; TH has fished this species at Ascension Island and has a photo of it taken there.

*Diodon holacanthus* Linnaeus, 1758 Longspined porcupinefish

References: Cadenat & Marchal, 1963 as *Diodon holacanthus*; Lubbock, 1980; Edwards & Glass, 1987a; Edwards, 1990, p. 138; Bingeman & Bingeman, 2005, p. 9.

*Diodon hystrix* Linnaeus, 1758 Spot-fin porcupinefish

References: Lubbock, 1980; Bingeman & Bingeman, 2005, p. 37.

## DISCUSSION

We have recognized two previous records as identification errors and indicate 11 other records as doubtful. Including the 40 new records, we now list 173 fish species from Ascension Island. The species *Ophioblennius* sp. of Ascension and St Helena Islands almost certainly is an undescribed species; the species *Rypticus (saponaceus?)* may also be undescribed (see the species sections above).

The total number of species is low when compared with other tropical islands in the Atlantic, e.g. 314 coastal fish species from the Cape Verde Islands or 330 coastal fish species from the Canary Islands (Brito *et al.*, 2002; Wirtz *et al.*, 2013). This is probably due to the very isolated position, very small size and comparatively young geological age of Ascension Island. Ascension Island thus is better compared with the St Paul's Rocks, another isolated and even smaller mid-Atlantic island, where 117 fish species have been recorded up to now (Vaske *et al.*, 2008). As already pointed out by Floeter *et al.* (2008, figure 2), the families Muraenidae and Carangidae are by far the most species-rich families at Ascension Island.

One hundred and thirty-three of the recorded species might be considered 'coastal fish species'. Table 1 lists their known distribution. Eleven of them (8.3%) appear to be endemic to the island and a further 16 species (12%) appear to be shared endemics with St Helena Island. Note, however, that cryptic species, like snake eels for instance, could merely be unrecorded from but present at other places.

Four more species appear to be shared endemics of Ascension Island, St Helena Island and the St Paul's Rocks (Table 1). The St Paul's Rocks are about 1900 km to the northwest of Ascension Island. Lubbock (1980) and Edwards & Lubbock (1983) already noted that *Bodianus insularis* and *Scorpaenodes insularis* were endemic to Ascension and St



**Table 1. Distribution pattern of Ascension coastal fishes.**

1. Endemic to Ascension Island and Grattan Seamount (N = 11): *Ichthyapus insularis*, *Scorpaena ascensionis*, *Scorpaena grattanica*, *Holanthias caudalis*, *Diplodus ascensionis*, *Centropyge resplendens*, *Amblycirrhitus earnshawi*, *Stegastes lubbocki*, *Thalassoma ascensionis*, *Scartella nuchifilis*, *Symphurus lubbocki*
2. Endemic to Ascension and St Helena Islands (N = 16): *Platybelone trachura*, *Holanthias fronticinctus*, *Serranus sanctaehelenae*, *Apogon axillaris*, *Chaetodon sanctaehelenae*, *Prognathodes dichrous*, *Thalassoma sanctaehelenae*, *Xyrichtys blanchardi*, *Xyrichtys sanctaehelenae*, *Sparisoma strigatum*, *Helcogramma ascensionis*, *Entomacrodus textilis*, *Ophioblennius* sp., *Priolepis ascensionis*, *Bothus mellissi*, *Canthigaster sanctaehelenae*
3. Endemic to Ascension and St Helena Islands and St Paul's Rocks (N = 4): *Herpetoichthys regius*, *Pontinus nigropunctatus*, *Scorpaenodes insularis*, *Bodianus insularis*
4. Western Atlantic species (N = 25): *Echidna catenata*, *Enchelycore carychroa*, *Gymnothorax moringa*, *Monopenchelys acuta*, *Muraena pavonina*, *Uropterygius macularius*, *Callechelys bilinearis*, *Ichthyapus ophioneus*, *Quassiremum ascensionis*, *Heteroconger camelopardalis*, *Mugil curvidens*, *Cheilopogon exsiliens*, *Scorpaena plumieri*, *Pseudogramma gregoryi*, *Apogon pseudomaculatus*, *Cryptotomus* sp., *Malacanthus plumieri*, *Carangoides ruber*, *Decapterus tabl*, *Lutjanus jocu*, *Pomacanthus paru*, *Acanthurus bahianus*, *Acanthurus chirurgus*, *Acanthurus coeruleus*, *Syacium papillosum*
5. Eastern Atlantic species (N = 9): *Enchelycore anatina*, *Gymnothorax unicolor*, *Carapus acus*, *Cheilopogon pinnatibarbat*, *Aulostomus strigosus*, *Caranx fischeri*, *Trachinotus ovatus*, *Arnoglossus capensis*, *Acanthostracion notacanthus*
6. Amphi-Atlantic species: *Rhincodon typus*, *Galeocerdo cuvier*, *Manta birostris*, *Channomuraena vittata*, *Enchelycore nigricans*, *Gymnothorax miliaris*, *Gymnothorax vicinus*, *Phaenomonas longissima*, *Saurida brasiliensis*, *Synodus synodus*, *Trachinocephalus myops*, *Antennarius multiocellatus*, *Cheilopogon pinnatibarbat*, *Cypselurus cyanopterus*, *Exocoetus volitans*, *Holocentrus adscensionis*, *Myripristis jacobus*, *Dactylopterus volitans*, *Epinephelus adscensionis*, *Epinephelus itajara*, *Paranthias furcifer*, *Heteropriacanthus cruentatus*, *Phaeoptyx pigmentaria*, *Coryphaena equiselis*, *Coryphaena hippurus*, *Echeneis naucrates*, *Remora albescens*, *Remora remora*, *Caranx bartholomaei*, *Caranx crysos*, *Caranx latus*, *Caranx lugubris*, *Decapterus macarellus*, *Decapterus punctatus*, *Elagatis bipinnulata*, *Pseudocaranx dentex*, *Selar crumenophthalmus*, *Seriola rivoliana*, *Seriola dumerili*, *Mulloidichthys martinicus*, *Kyphosus bigibbus*, *Kyphosus sectatrix*, *Kyphosus vaigensis*, *Abudefduf saxatilis*, *Chromis multilineata*, *Callionymus bairdi*, *Gnatholepis thompsoni*, *Sphyaena barracuda*, *Acanthocybium solandri*, *Auxis rochei*, *Auxis thazard*, *Euthynnus alletteratus*, *Katsuwonus pelamis*, *Thunnus alalunga*, *Thunnus albacares*, *Thunnus obesus*, *Thunnus thynnus*, *Bothus lunatus*, *Balistes vetula*, *Canthidermis maculata*, *Canthidermis sufflamen*, *Melichthys niger*, *Aluterus scriptus*, *Cantherhines macrocerus*, *Sphoeroides pachygaster*, *Chilomycterus reticulatus*, *Diodon eydouxi*, *Diodon holocanthus*, *Diodon hystrix*
7. Species of Indo-Pacific origin: *Uraspis helvola*, *Helcogramma ascensionis*
8. Uncertain cases: *Mobula* sp., *Tylosurus* sp., *Hippocampus* sp., *Rypticus saponaceus*

Helena Islands plus the St Paul's Rocks and suggested a faunal link between these places. With two more species that are currently only known from Ascension and St Helena Islands plus the St Paul's Rocks, this has now been confirmed. The sea urchin *Eucidaris clavata* also is known only from Ascension and St Helena Islands plus the St Paul's Rocks (Edwards & Lubbock, 1983).

The level of endemism of 8.3% of the shore fishes is lower than the 15.7% indicated by Lubbock (1980) or the 11% indicated by Floeter *et al.* (2008). Note, however, that the percentage value of endemism depends on the somewhat arbitrary definition of 'coastal species', e.g. if one does or does not include those open water species that come close to the shore.

Endemic fish species of Ascension Island are derived from the eastern Atlantic as well as from the western Atlantic: The endemic *Diplodus ascensionis* clearly originated from the eastern Atlantic *D. sargus*; the endemic *Centropyge resplendens* has its closest relative in the western Atlantic; the endemic *Amblycirrhitus earnshawi* is probably derived from the western Atlantic *A. pinos*; the closest relative to *Stegastes lubbocki* appears to be the western Atlantic *S. pictus*; the sister species of *Thalassoma ascensionis* and *T. sanctaehelenae* is the eastern Atlantic *T. newtoni*; *Sparisoma strigatum* is the sister species of the eastern Atlantic *S. cretense*; the *Ophioblennius* sp. of Ascension Island appears to be derived from the eastern Atlantic (see species sections for references).

A similar picture of western Atlantic and eastern Atlantic origin emerges when looking at the distribution pattern of all shore fish species (Table 1). The largest fraction is taken up by species that occur on both sides of the Atlantic. Obviously, species that are able to cross the entire Atlantic are particularly likely to settle at mid-Atlantic islands.

The fraction of species derived from the western Atlantic is more than twice the size of the fraction derived from the

eastern Atlantic. In a recent 'Global biogeography of reef fishes' (Kulbicki *et al.*, 2013), Ascension Island also clusters with the western Atlantic. As pointed out by Briggs & Bowen (2012), the western Atlantic affinity of the Ascension fish fauna is with the Brazilian coast rather than the Caribbean area. This is indicated by the presence of *Acanthurus bahianus* rather than *A. tractus* and various genetic studies, e.g. on *Chromis multilineata* (see species sections for references). The most likely reason for the preponderance of western Atlantic species is that the Brazilian coast is much more speciose than the African coast and therefore propagules from a larger number of species from the western Atlantic are likely to arrive at Ascension Island.

Finally and surprisingly, a small fraction of the Ascension (and St Helena) marine fauna is of Indian Ocean origin. In the Atlantic Ocean, the Indo-Pacific carangid *Uraspis helvola* is only known from Ascension and St Helena Islands (Edwards, 1990) and the endemic *Helcogramma ascensionis* is the only Atlantic member of this otherwise Indo-Pacific genus (Holleman, 2007). The link with the Indo-Pacific is confirmed by the presence on Ascension Island of the crab *Percnon abbreviatum*, not known from any other Atlantic locality (Manning & Chace, 1990).

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