

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

Submitted 16 December 2013; accepted 7 August 2014; first published online 23 September 2014

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). 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

Callechelys 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 *Ophichthus 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 *Ophichthus ascensionis*, Lubbock, 1980 as *Ophichthus 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 searid
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 pinnatibarbatus (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.

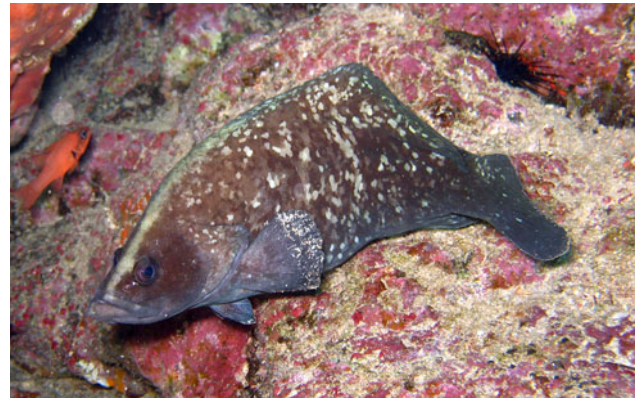


Fig. 6. *Rypticus saponaceus*. Photo Peter Wirtz.

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. sanctaehelena* is the eastern Atlantic species *T. newtoni* (Costagliola *et al.*, 2004).

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

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

Remarks: The presence of *T. sanctaehelena* at Ascension Island was already suspected by Bingeman & Bingeman (2005). We here confirm it. Figure 13 by TH shows a terminal male *T. sanctaehelena* captured in a tide pool at English Bay. *Thalassoma ascensionis* and *T. sanctaehelena* 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 sanctaehelena*, terminal male phase. Photo Tim Hook.

recent appearance of *T. sanctaehelena* 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 sanctaehelena (Günther, 1868) Yellow razorfish

References: Cadenat & Marchal, 1963 as *Novacula sanctaehelena*; 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) Barrelfish
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.

Rhinesomus 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*, *Sphyrna 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).

ACKNOWLEDGEMENTS

The first author is grateful to Paul Brickle and the Shallow Marine Surveys Group for the invitation to take part in the August–September 2012 expedition to Ascension Island. The funding for this work came from a grant to Dr Paul Brickle from the Darwin Initiative (EIDCFo12). We are grateful to the Shallow Marine Surveys Group and the South Atlantic Environmental Research Institute for organizing the

expedition. We are also very grateful to the Ascension Island Government, the members of staff at the Conservation Centre and Ascension Island Dive Club for their cooperation, accommodation and hospitality. Finally we are grateful to British Forces South Atlantic Islands for their logistical support. Thanks to Malcolm Moss for drawing our attention to the presence of *Epinephelus itajara* at Ascension Island. Robert Irving informed us about a *Carapus* specimen from Ascension Island at the British Museum of Natural History and James Maclaine checked on it. Thanks also to Colin Chester and Olaf Grimskowski for sending us photos of rare species captured at Ascension Island, to Sue Scott for sharing all her Ascension Island underwater photos with the first author and to Ross Robertson for sending a list of species collected by him on Ascension Island. William Smith-Vaniz identified the *Caranx bartholomaei* photo, Carole Baldwin identified the *Phaeoptyx pigmentaria*, Alberto Brito, J. McCosker and D.G. Smith commented on moray and snake eel photos. Alberto Brito, Alasdair Edwards, Raphael Macieira and William Smith-Vaniz commented on an early draft of the manuscript. Vladimir Laptikhovskiy contributed insights on Atlantic current systems. The Centro de Ciências do Mar (CCMAR) partly financed the travel costs of the first author.

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