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, Sphyraena lewini, Hexanchus griseus, Manta birostris, Gymnothorax vicinus, Hippocampus sp., Epinephelus itajara, Cookeolus japonicus, Apogon pseudomaculatus, Phaeopteryx pigmentaria, Remora albscens, 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, Xiphius gladius, Istiophorus platypterus, Kajikia albida, Makaira nigricans, Tetrapturus pfluegeri, Hyperoglyphe perciformis, Schedophilus sp., Cantherhines macrocerus, Spheroideidae pachyaster and Diodon edouxi 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, amphi-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 (Rudoff 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...
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 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


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

*Carcharhinus galapagensis* Snodgrass & Heller, 1905 Galapagos shark


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

*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*.

**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


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

*Mobula sp.* Devil ray


Remarks: According to Notarbartolo-di-Sciara (1987), South Atlantic *Mobula* most probably either belong to *Mobula rochebrunii* (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


Remarks: A very common species in shallow water.
**Echidna catenata** (Bloch, 1795) Chain moray

**Enchelycore anatina** (Lowe, 1838) Fangtooth moray
References: Smith & Böhlke in Queiro et al., 1990, p. 139; Bingeman & Bingeman, 2005, p. 25 used this name for the species *Muraena pavonina*.

**Enchelycore carymroa** 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 Queiro 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
Remarks: A very common species in shallow water.

**Gymnothorax unicolor** (Delaroche, 1809) Brown moray

**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

**Herpetocilithys regius** (Richardson, 1848) Ornate snake eel
References: Trunov (2006) records this species from Gratten 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
Remarks: An endemic species.

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

**Phaenomonas longissima** (Cadenat & Marchal, 1963) Short-maned sand eel
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 Queiro et al., 1990, p. 193.

**Nemichthyidae**

**Nemichthys scolopaceus** Richardson, 1848 Slender snipe eel

**Congridae**

**Heteroconger camelopardalis** (Lubbock, 1980) Brazilian garden eel
References: Lubbock, 1980.

![Fig. 2. *Manta birostris*. Photo John Bingeman.](https://doi.org/10.1017/S0025315414001301)

![Fig. 3. *Quassiremus ascensionis*. Photo Shallow Marine Surveys Group.](https://doi.org/10.1017/S0025315414001301)
Platytroctidae
Barbantus elongatus Krefft, 1970 Elongate searsid
References: Quéro et al. in Quéro et al., 1990, p. 265.

Stomiidae
Eustomias intermedius Clarke, 1998 Intermediate dragonfish

Synodontidae
Saurida brasiliensis Norman, 1935 Brazilian lizardfish

Trachinocephalus myops (Forster in Bloch & Schneider, 1801) Snakefish

Giganturidae
Gigantura chuni Brauer, 1901 Chun's gigantura
Gigantura indica Brauer, 1901 Indian teleosofispeche

Lampridae
Lampris guttatus (Brünich, 1788) Opah
References: Parin & Kukuev, 1983.

Antennariidae
Antennarius multiocellatus (Valenciennes in Cuvier & Valenciennes, 1837) Longlure frogfish

Carapidae
Carapus acus (Brünich, 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 1897.3.24.2, has the original register – ‘Carapus ?bermu densis, 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

Exocoetidae
Chelidonichthys exiliensis (Linnaeus, 1771) Bandwing flyingfish
References: Cadenat & Marchal, 1963 as Cypselurus exiliensis.
Chelidonichthys 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
Exocoetus volitans Linnaeus, 1758 Tropical two-wing flyingfish
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. 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 & Steinachner, 1867, p. 364, pl. 2, Fig. 11.

Belonidae
Platylebale trachura (Valenciennes in Cuvier & Valenciennes, 1846) Ascension keeled needlefish
Remarks: Endemic to Ascension and St Helena Islands.
Tylosurus sp.
References: Cadenat & Marchal, 1961 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.

Scrombersocoideidae
Scrombersesosaurus (Walbaum, 1792) Atlantic saury
Remarks: This identification needs verification. Edwards & Glass, 1987b re-identified the record of Scrombersesosaurus from mid-Atlantic to actually being Nanichthys simulans Hubbs & Wisner, 1980.

Diretmidae
Diretmoides pauciradiatus (Woods in Woods & Sonoda, 1973) Longwing spinifish

Holocentridae
Holocentrus adscensionis (Osbeck, 1765) Squirrelfish
Remarks: A genetic study by Bowen et al. (2006) showed little genetic variation between mid-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
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.
**Fistulariidae**

*Fistularia commersonii* Rüppell, 1838

Bluespotted cornetfish

References: Eschmeyer, 2013.

Remarks: Doubtful record, no source found.

References: Lubbock, 1980.

**Scorpaenidae**

*Scorpaena ascensionis* Cuvier in Cuvier & Valenciennes, 1829

Plumed scorpionfish

References: Eschmeyer, 1971

Ascension scorpionfish

Remarks: Edwards (1993) predicted the discovery of this species at 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


**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.

**Scorpaenidae**

*Scorpaena grattanica* Trunov, 2006

Grattan scorpionfish

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).

**Scorpaenidae**

*Scorpaena plumieri* Bloch, 1789

Spotted scorpionfish


**Scorpaenidae**

*Scorpaenodes insularis* Eschmeyer, 1971

Ascension scorpaenodes


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

**Serranidae**

*Epinephelus aeneus* (Norman, 1935);

*Caudal scorpionfish*

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: Lubbock, 1980.

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 Origins – 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 expedit 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...’

*Of particular interest is that after this I did a further 4 military expedi ons 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


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

Paranthias gregoryi (Breder, 1927) Reef bass

References: Lubbock, 1980.

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

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


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


Remarks: Endemic to Ascension and St Helena Islands.

**Priacanthidae**

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

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


Remarks: Endemic to Ascension and St Helena Islands.

*Apogon axillaris* Valenciennes, 1832 Axillary-spot cardinalfish


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.
(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


**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


*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


*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


**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. 8. Apogon pseudomaculatus. Photo Peter Wirtz.](https://doi.org/10.1017/S0025315414001301)

![Fig. 9. Caranx bartholomaei. Photo Colin Chester.](https://doi.org/10.1017/S0025315414001301)

![Fig. 10. Decapterus tabl. Photo Tim Hook.](https://doi.org/10.1017/S0025315414001301)
Elagatis bipinnulata (Quoy & Gaimard, 1825) Rainbow runner

Pseudocaranx dentex (Bloch & Schneider, 1801) White trevally

Selar crumenophthalmus (Bloch, 1793) Bigeye scad
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
Remarks: Endemic to Ascension and St Helena Islands.

Pomacanthidae
Centropyge resplendens Lubbock & Sankey, 1975 Resplendent angelfish
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

Cirrhitidae
Amblycirrhitus earmshawi Lubbock, 1978 Ascension hawkfish
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
Abudesfuf saxatilis (Linnaeus, 1758) Sergeant-major

Chromis multilineata (Guichenot, 1853)
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
Remarks: An endemic species. The first author has observed the presence 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
Remarks: Endemic to the islands of Ascension, St Helena and the St Paul’s Rocks.
Thalassoma ascensionis (Quoy & Gaimard, 1834) Greenfish
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
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 phase of this species 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 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
Remarks: Endemic to Ascension and St Helena Islands.
Xyrichtys sanctaehelenae ( Günther, 1868) Yellow razorfish
Remarks: Considered endemic to Ascension and St Helena Islands until a single individual was recorded from São Tomé Island (Wirtz et al., 2007).

Scridae
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
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
Helogramma ascensionis Lubbock, 1980 Ascension triplefin
Remarks: Endemic to Ascension and St Helena Islands (Holleman, 2007).
Blenniidae

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


Remarks: Endemic to Ascension and St Helena Islands.

Ophioblennius sp.


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: Muss & partners, 2013 as Blenniurus 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


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


Remarks: Endemic to Ascension and St Helena Islands.

Acanthuridae

Acanthurus bahianus Castelnau, 1855 Barber surgeon fish


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 trachis (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


Paracanthurus hepatus (Linnaeus, 1766) Palette surgeonfish

References: Cadet & Marchal, 1963 as Acanthurus hepatus; Edwards in Catesby, 1771; Rangel et al., 2002; Bingeman & Bingeman, 2005, p. 28. One specimen deposited as ZSM 42238.

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


Gempylidae

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


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


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.

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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.

Remarks: Presence at Ascension confirmed by Ezequiel Conde of at least 300 kg weight.

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

Bothus melissi Norman, 1931 Saint Helena flounder

Remarks: Endemic to Ascension and St Helena Islands.

Caproidae
Antigonia capros Lowe, 1843 Deepbody boarfish

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

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

Boothidae
ArnoGLOSSUS CAPENSIS Boulenger, 1889 Cape scadfish

Bothus lunatus (Linnaeus, 1758) Platefish

Bothus melissi Norman, 1931 Saint Helena flounder

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 Queiro 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
Remarks: The extraordinary population density of this species (Osbeck, 1765) Scribbled leatherjacket *Aluterus scriptus*.


*Mellichthys niger* (Bloch, 1786) Black triggerfish


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 *Mellichthys niger*, which does, on first glance, resemble *Xanthichthys ringens* (personal observation of the first author).

*Monacanthidae*

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


*Cantherhines macrocerus* (Holland, 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


*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


Remarks: Endemic to St Helena and Ascension Islands.

*Sphoeroides 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


*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


*Diodon hystrix* Linnaeus, 1758 Spot-fin porcupinefish


**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 *Ophiolepidus* sp. of Ascension and St Helena Islands almost certainly is an undescribed species; the species *Rypticus* (*sapoacanus* ?) 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 north-west of Ascension Island. Lubbock (1980) and Edwards & Lubbock (1983) already noted that *Bodianus insularis* and *Scorpaenodes insularis* were endemic to Ascension and St...
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 splendens* has its closest relative in the western Atlantic; the endemic *Amphiprion ocellaris* is probably derived from the western Atlantic *A. pichianus*; the closest relative to *Stegastes hubbei* appears to be the western Atlantic *S. pictus*; the sister species of *Thalassoma ascensionis* and *T. sanctae-helenae* is the eastern Atlantic *T. newtoni*; *Sparisoma strigatum* is the eastern Atlantic *S. crenulatus; the *Ophiolepis sp.* of Ascension Island appears to be derived from the eastern Atlantic (see 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 *Helmogramma ascensionis* is the only Atlantic member of this otherwise Indo-Pacific genus (Hollemann, 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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