



Zoogeography – part 3

Fish distribution

FAO Areas

The FAO Areas are defined by the FAO to record fisheries catches.

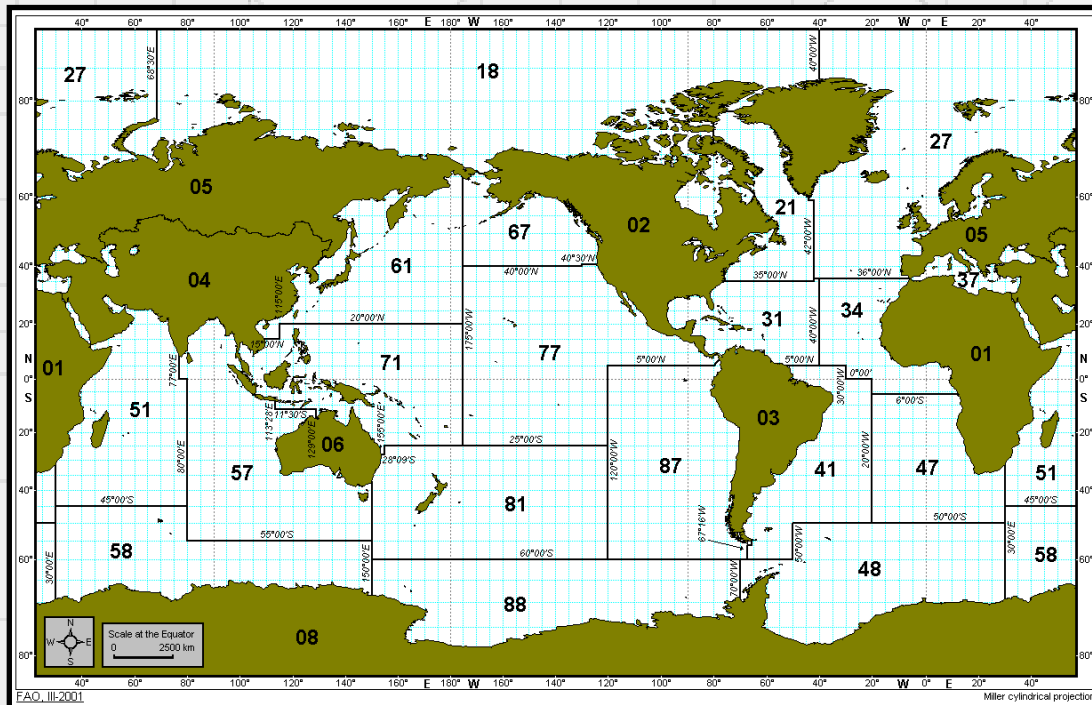
- 01. Africa
- 02. North America
- 03. South America
- 04. Asia
- 05. Europe / Russia (07)
- 06. Australia
- 08. Antarctica

18. Arctic Sea

- 21. Atlantic Ocean, northwest
- 27. Atlantic Ocean, northeast
- 31. Atlantic Ocean, western central
- 34. Atlantic Ocean, eastern central
- 37. Mediterranean and Black Sea
- 41. Atlantic Ocean, southwest
- 47. Atlantic Ocean, southeast
- 48. Atlantic Ocean, Antarctic

- 51. Indian Ocean, western
- 57. Indian Ocean, eastern
- 58. Indian Ocean, Antarctic

- 61. Pacific Ocean, northwest
- 67. Pacific Ocean, northeast
- 71. Pacific Ocean, western central
- 77. Pacific Ocean, eastern central
- 81. Pacific Ocean, southwest
- 87. Pacific Ocean, southeast
- 88. Pacific Ocean, Antarctic

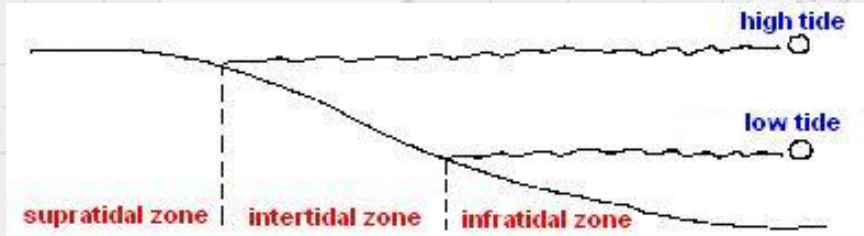


Marine habitats

Zones of the oceanic region

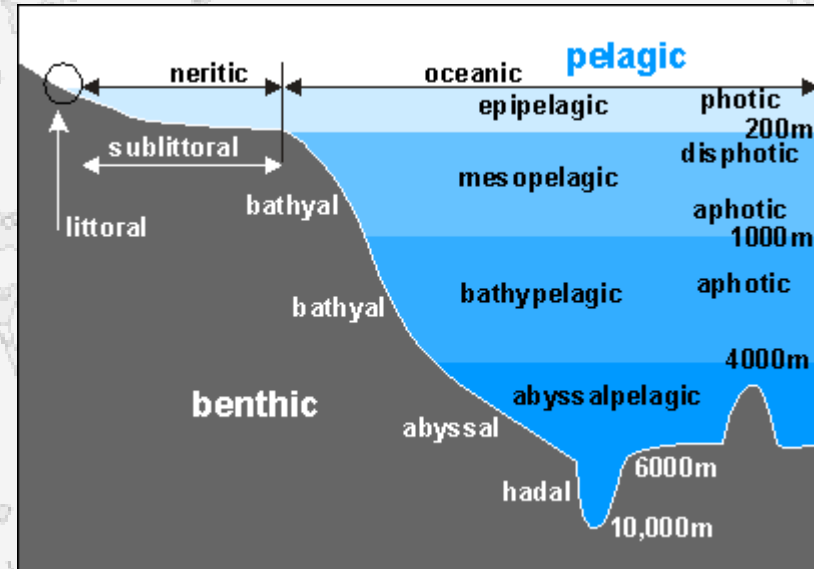
1. Littoral zone.

The littoral zone contains the near-shore waters, delimited by the tide marks of low and high water. It is the region most closely to the coast.



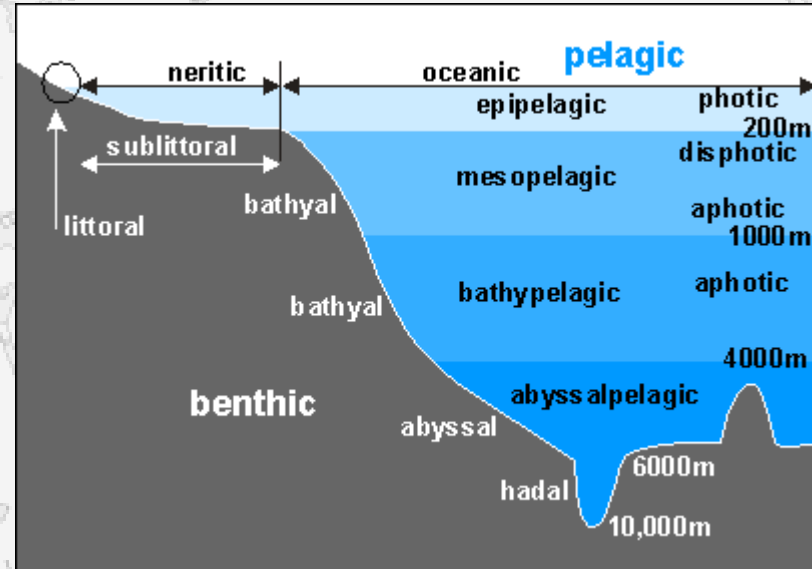
2. Sublittoral zone.

The sublittoral zone extends from the lower edge of the intertidal zone to the outer edge of the continental shelf.



Marine habitats

Zones of the oceanic region

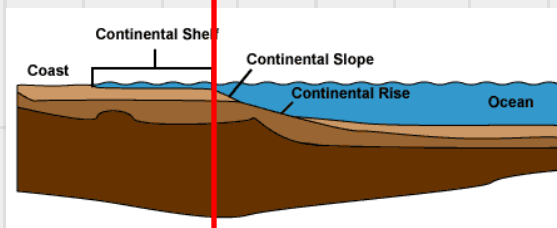


3. Neritic zone.

The neritic zone is the shallow pelagic zone over the continental shelf.

4. Oceanic zone.

The oceanic zone is the open ocean beyond the continental shelf.



Marine habitats

Zones of the oceanic region

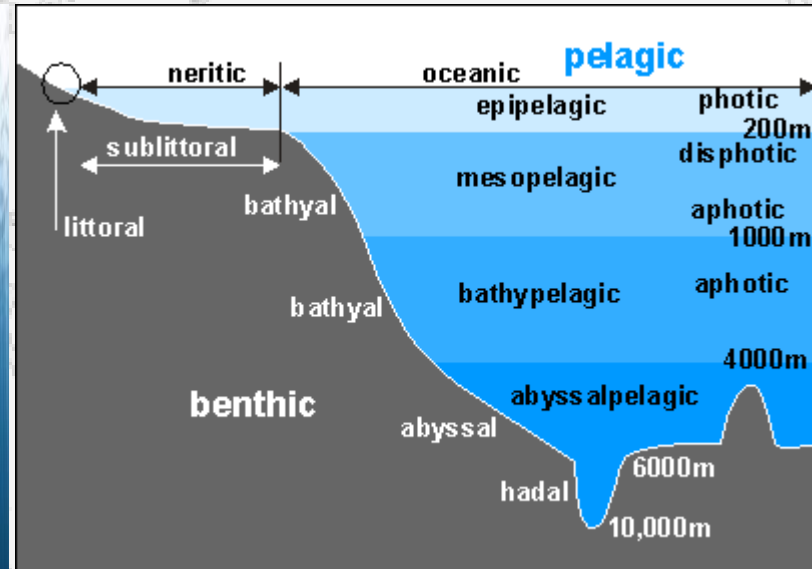
5. Pelagic zone.

The pelagic zone includes those waters further from the land, basically the open sea.

- The **epipelagic zone** is the uppermost normally photic layer of the ocean between the ocean surface and the thermocline (0 – 200m).
- The **mesopelagic zone** is a middle layer of the ocean, characterized by dim light and steep temperature gradients (200 – 1000m).
- The **bathypelagic zone** is a middle layer of the ocean where only the faintest blue/green light penetrates (1000 – 4000m).

6. Abyssal zone.

- The **abyssopelagic zone** is the part of the oceanic zone between 4000 and 6000m.
- The **hadalpelagic zone** is the part of the oceanic zone deeper than 6000m.



© NOAA

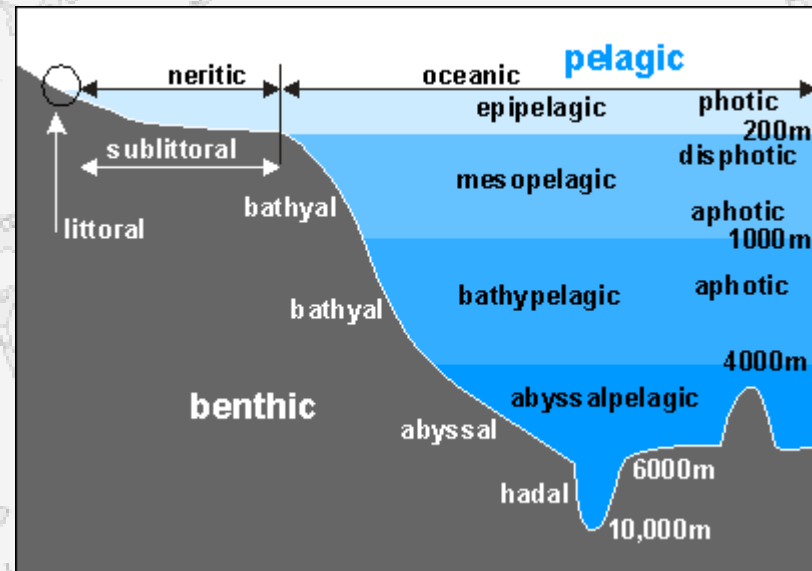


Marine habitats

Zones of the oceanic region

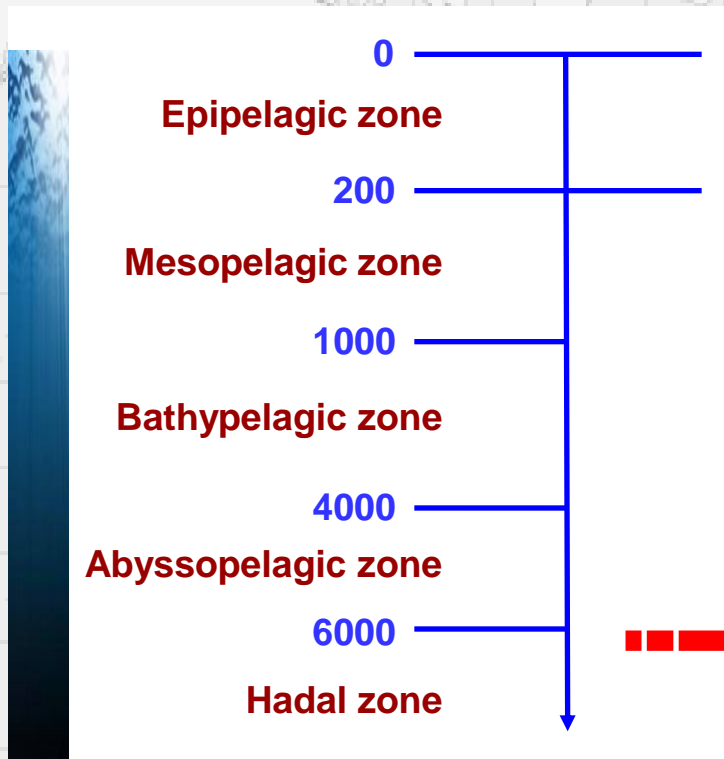
7. Benthic zone.

The benthic zone is that part of the ocean below the pelagic zone, but it does not include the deepest parts (below 400m). It comprises the bottom, the sediment surface and some sub-surface layers.



Marine habitats

Zones of the oceanic region



In FishBase

Pelagic: fishes occurring mainly in the water column between 0 and 200m, and not feeding on benthic organisms.

Bathypelagic: fishes occurring mainly in open water below 200m, and not feeding on benthic organisms.

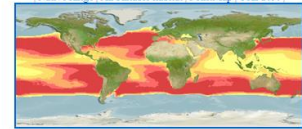
Thunnus alalunga (Bonnaterre, 1788)
Albacore

Upload your photos and videos
Pictures | Stamps, Coins | Google image



Thunnus alalunga
Picture by Hofinger, E.

Add your observation in Fish Watcher
(Native range | All suitable habitat | PointMap | Year 2050)



Classification / Names

Common names | Synonyms | Catalog of Fishes (gen., sp.) | ITIS | Col | WoRMS
Actinopterygii (ray-finned fishes) > Perciformes (Perch-likes) > Scombridae (Mackerels, tunas, bonitos) > Scombrinae
Etymology: *Thunnus*: Greek, thynnos = tunna (Ref. 45335).

Environment / Climate / Range

Marine; pelagic-oceanic; oceanodromous (Ref. 51243); depth range 0 - 600 m (Ref. 168). Subtropical; 10°C - 24°C (Ref. 168); 40°N - 40°S, 180°W - 180°E

Length at first maturity / Size / Weight / Age

Maturity: L_m 85.0, range 85 - ? cm
Max length: 140 cm FL male/unsexed; (Ref. 3669); common length: 100.0 cm FL male/unsexed; (Ref. 9684); max. published weight: 60.3 kg (Ref. 40637); max. reported age: 9 years (Ref. 72462)

Benthopelagic: fishes living and/or feeding on or near the bottom, as well as in midwater, between 0 and 200m.

Reef-associated: fishes living and/or feeding on or near reefs, between 0 and 200m.

Demersal: fishes living and/or feeding on or near the bottom, between 0 and 200m.

Bathydemersal: fishes living and/or feeding on or near the bottom, below 200m.

Marine habitats

Zones of the oceanic region

Pelagic

Benthopelagic

Reef-associated

Bathypelagic

Demersal

Bathydemersal

→ While this classification works well for marine species, it is often difficult to apply to freshwater fishes.



Freshwater habitats

Zones of lakes

1. Littoral zone.

The littoral zone is the zone close to the shore, and where light reaches the bottom.

2. Limnetic zone.

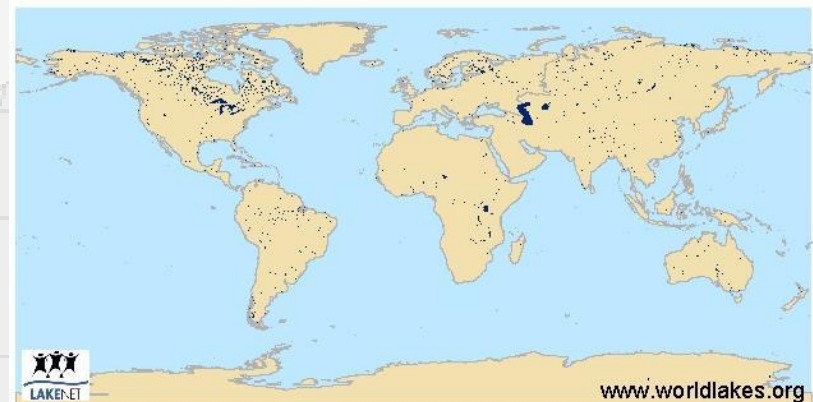
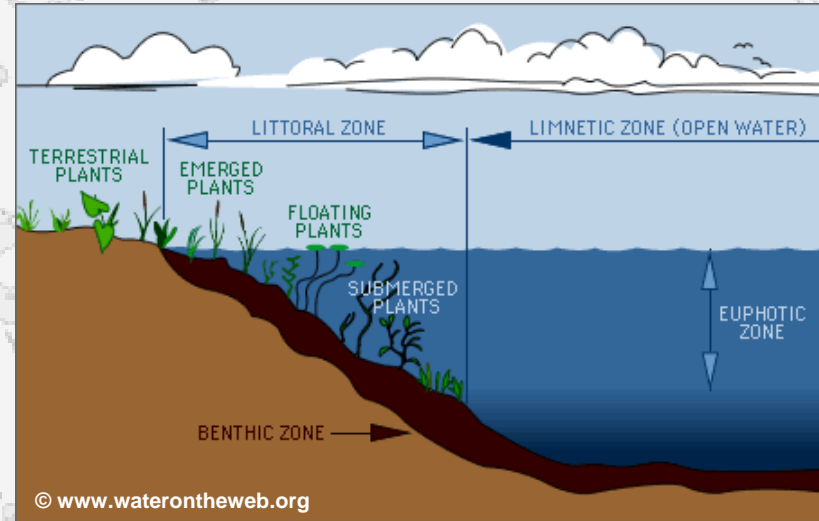
The limnetic zone is the layer of open water where photosynthesis can occur.

3. Profundal zone.

The profundal zone is a deep zone below the range of effective light penetration.

4. Benthic zone.

The benthic zone concerns the bottom of the lake.






LakeNet Explorer

Sources: Lehner, B. & P. D. Oll (2003); Birkett, C.M. & I.M. Mason (1995); Commonwealth of Australia - Geoscience Australia (1990); ESRI (2002)


Zoogeography in FishBase

Species summary page

 [About this page](#) [Languages](#) [User feedbacks](#) [Citation](#) [Uploads](#) [Related species](#)   Like 0

Limnothrissa miodon (Boulenger, 1906)
Lake Tanganyika sardine

Upload your photos and videos
[Pictures](#) | [Google image](#)


Limnothrissa miodon
Picture by Mohamed, A.D.

Classification / Names [Common names](#) | [Synonyms](#) | [Catalog of Fishes \(gen., sp.\)](#) | [ITIS](#) | [CoL](#) | [WoRMS](#)
Actinopterygii (ray-finned fishes) > [Clupeiformes](#) (Herrings) > [Clupeidae](#) (Herrings, shads, sardines, menhadens)
Etymology: *Limnothrissa*: Greek, limne = swamp + Greek, thrissa, es = shad (Ref. 45335).

Environment / Climate / Range [Ecology](#)
Freshwater; pelagic; non-migratory; depth range 20 - 40 m (Ref. 27631). Tropical; 21°C - 29°C (Ref. 5392); 3° S - 18°S

Length at first maturity / Size / Weight / Age
Maturity: L_m 6.8 range ? - ? cm
Max length : 17.0 cm SL male/unsexed; (Ref. 4967); common length : 10.0 cm SL male/unsexed; (Ref. 4967)

Short description [Morphology](#) | [Morphometrics](#)
Dorsal spines (total): 0; Dorsal soft rays (total): 13-18; Anal spines: 0; Anal soft rays: 15 - 19; Vertebrae: 41 - 44. Body fairly slender. Pre-pelvic scutes not strongly keeled, beginning behind base of last pectoral fin ray. Maxilla blade over 4 times as long as its shaft, its lower toothed edge continued forward to meet hind tip of pre-maxilla; second supra-maxilla asymmetrical, lower half larger. Lower gill rakers long and slender. A distinct silver stripe along flank. Snout broad with tapering sides, not concave when viewed from above. It has a large air bladder which is responsible for its ability to move great vertical distances.

Distribution [Countries](#) | [FAO areas](#) | [Ecosystems](#) | [Occurrences](#) | [Introductions](#)
Africa: endemic to Lake Tanganyika (Ref. 28136), but introduced into several other lakes (Lake Kivu, Lake Kariba, and Cabora Bassa reservoir) (Ref. 188, 28136).

(2) & (3)

(1)

The 'species summary page' contains information on:

- (1) distribution,
- (2) environment [aquatic biome, habitat zone, migration pattern, depth],
- (3) climate [climate zone, temperatures].

Zoogeography in FishBase

FAO areas

More information

Common names	Age/Size	References	Collaborators
FAO areas	Growth	Aquaculture	Pictures
Ecosystems	Length-weight	Aquaculture profile	Stamps, Coins
Occurrences	Length-length	Strains	Sounds
Introductions	Length-frequencies	Genetics	Ciguatera
Stocks	Morphometrics	Allele frequencies	Speed
Ecology	Morphology	Heritability	Swim. type
Diet	Larvae	Diseases	Gill area
Food items	Fecundity	Processing	Otoliths
Food consumption	Eggs	Mass conversion	Brains
Ration	Egg development	Abundance	Vision

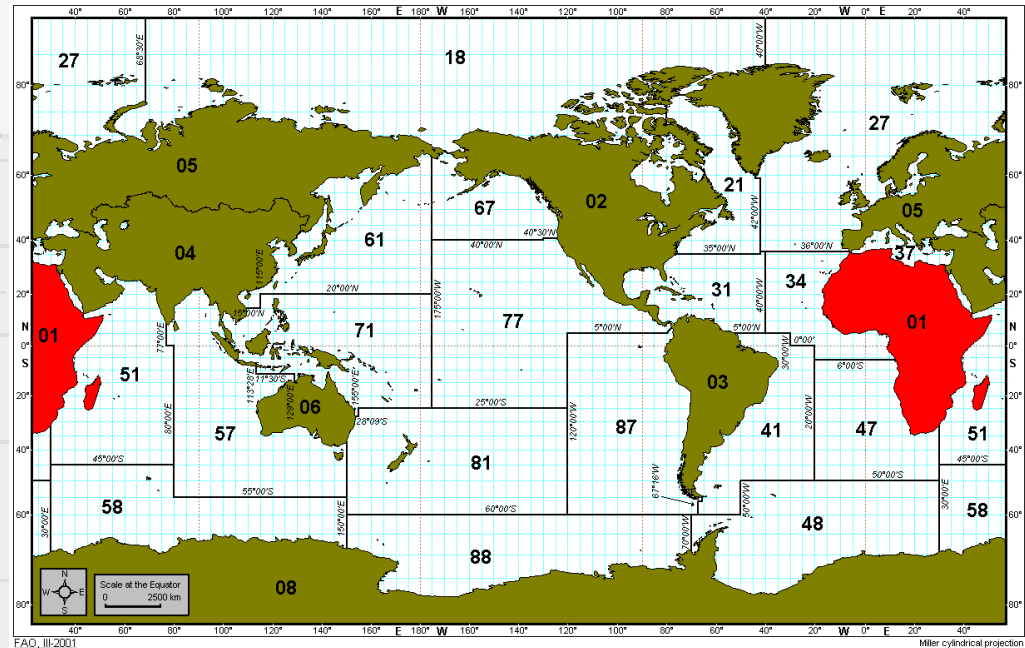
FAO areas where *Oreochromis niloticus niloticus* occurs

n = 6

FAO Area	Status	Note
Africa - Inland Waters	native	Complete
America, North - Inland waters	introduced	includes Central America
America, South - Inland waters	introduced	
Asia - Inland waters	introduced	
Europe - Inland waters	introduced	excludes former USSR
Oceania - Inland waters	introduced	



© Bernd Überschär



Zoogeography in FishBase

Country tables

More information				
Countries	Common names	Age/size	References	Global status
IAC areas	Synonyms	Growth	Aquaculture	Pictures
Ecosystems	Metabolism	Length-weight	Aquaculture profile	Stamps, Coins
Occurrences	Predators	Length-length	Strains	Sounds
Introductions	Ecotoxicology	Length-frequencies	Genetics	Ciguatera
Stocks	Reproduction	Morphometrics	Allele frequencies	Speed
Ecology	Maturity	Morphology	Heritability	Swim. type
Diet	Spawning	Larvae	Diseases	Gill area
Food items	Fecundity	Larval dynamics	Processing	Otoliths
Food consumption	Eggs	Recruitment	Mass conversion	Brains
Ration	Egg development	Abundance	Vision	

Countries where *Pantodon buchholzi* is found

Point map (with point info) n = 9

Country	ABB	Occurrence	Main Ref.
Benin	BEN	native	81272
Cameroon	CMR	native	81633
Chad	TCD	questionable	81633
Congo Dem Rep	COD	native	45441
Congo Rep	COG	native	44840
Gabon	GAB	native	81633
Nigeria	NGA	native	81272
Sierra Leone	SLE	native	81272
Zimbabwe	ZWE	misidentification	41543

1. Native.

If the species exists in that area in free-living and self-maintaining populations and has established itself there independent of men.

2. Endemic.

If the species is native and restricted to that particular area.

3. Extirpated.

If the species is extinct in that particular area, but surviving in others.

7. Misidentification.

This is for records that are known to be wrong.

4. Introduced.

If the species is not native in that area, but brought in through human activities.

5. Reintroduced.

If the species is brought into that particular area after initial introductions failed or after the extinction of the native species.

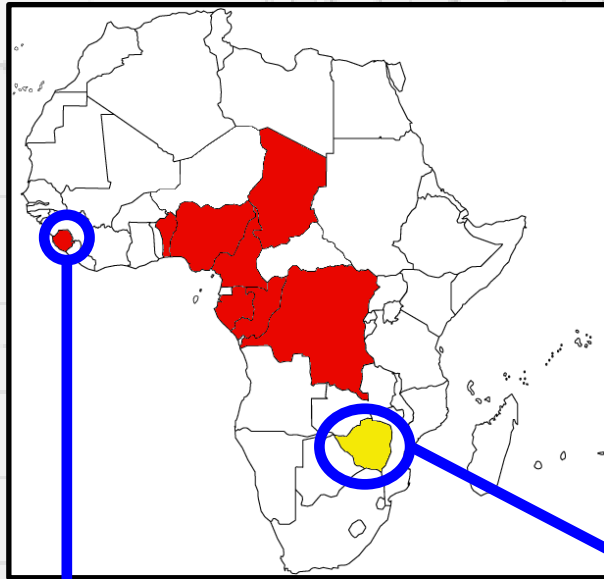
6. Questionable.

If the occurrence in that particular area needs confirmation.



Zoogeography in FishBase

Country tables



Countries where *Pantodon buchholzi* is found

Point map (with point info) n = 9

Country	ABB	Occurrence	Main Ref.
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Zimbabwe	ZWE	misidentification	41543

Sierra Leone: Teugels (1990) assumes there is a relict population of *Pantodon buchholzi* in Sierra Leone, because of its specific characters.

Zimbabwe: Jubb (1963) has considered the occurrence of this species in Zimbabwe as a misidentification.

Pantodon buchholzi in Sierra Leone

Point map (Pantodon buchholzi) | Occurrence records | Field guide | Gazetteer | Country Species Summary

Main Ref. Teugels, G.G., 1990
Also Ref. Paugy, D., K. Traoré and P.S. Diouf, 1994

Status	native	Ref.
Importance	never/rarely	Ref.
Aquaculture	no regulations	Ref.
Regulations	Yes	
Freshwater	No	
Brackish	No	
Saltwater	No	
Live export	No	
Bait	No	
Gamefish	No	
Abundance		Ref.
Comments	Known from Jong River (Ref. 2921, Ref. 13231), mentioned in a non-published report of Chaytor (1969) (=Ref. 2996). Because of the specific characters of the species, it is assumed that it is a relict population instead of an erroneous identification (Ref. 2921, Ref. 51626).	
States/Provinces		
States/Provinces Complete?	No	
National Checklist		
Country information	http://www.ci.gov/ci/publications/factbook/geos/sl.html	

Update Main Ref. (e.g. 9948) Search Glossary (e.g. cephalopods) Search

Pantodon buchholzi in Zimbabwe

Point map (Pantodon buchholzi) | Occurrence records | Field guide | Gazetteer | Country Species Summary

Main Ref. Jubb, R.A., 1963

Status	misidentification	Ref.
Importance		Ref.
Aquaculture	never/rarely	Ref.
Regulations		Ref.
Freshwater	Yes	
Brackish	No	
Saltwater	No	
Live export	No	
Bait	No	
Gamefish	No	
Abundance		Ref.
Comments	Its occurrence in the upper Zambezi River of Zambia is mentioned in Gilchrist & Thompson (1913) [Ref. 41577]. This distribution record was copied by other references (Ref. 1890, Ref. 3515, Ref. 5295). But the occurrence of this species in Zambia was considered as a misidentification (Ref. 41543).	
States/Provinces		
States/Provinces Complete?	No	
National Checklist		
Country information	http://www.ci.gov/ci/publications/factbook/geos/zi.html	

Update Main Ref. (e.g. 9948) Search Glossary (e.g. cephalopods) Search



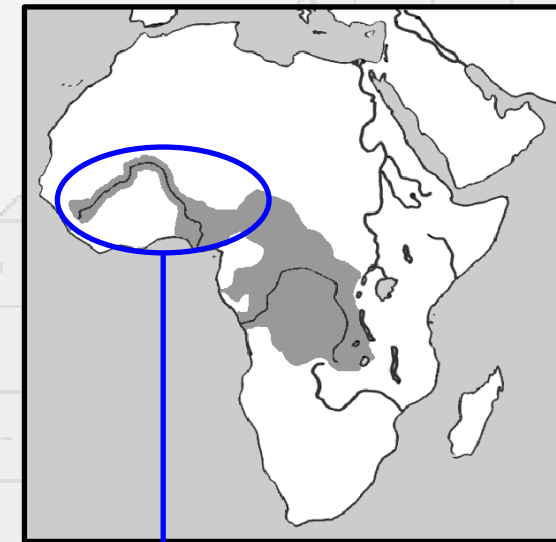
© Wolfgang Ross

Zoogeography in FishBase

Ecosystem tables

More information

Countries	Common names	Age/Size	References	Collaborators
FAO areas	Synonyms	Growth	Aquaculture	Pictures
Ecosystems	Metabolism	Length-weight	Aquaculture profile	Stamps, Coins
Occurrences	Predators	Length-length	Strains	Sounds
Introductions	Ecotoxicology	Length-frequencies	Genetics	Ciguatera
Stock	Reproduction	Morphometrics	Allele frequencies	Speed
Ecology	Maturity	Morphology	Heritability	Swim. type
Diet	Spawning	Larvae	Diseases	Gill area
Food items	Fecundity	Larval dynamics	Processing	Otoliths
Food consumption	Eggs	Recruitment	Mass conversion	Brains
Ration	Egg development	Abundance	Vision	



Ecosystems where *Pantodon buchholzi* occurs

n = 23

Ecosystem	Type	Status	Ref.
Ethiopian	Zoogeographic realm	endemic	3515
Aruwimi River	River (basin)	native	41590
Benue River	River (basin)	native	81272
Congo	River (basin)	native	3515
Cross	River (basin)	native	81272
Itimbiri River	River (basin)	native	41590
Malilang River	River (basin)	native	13331
Niger	River (basin)	native	81272
Ogoué	River (basin)	native	81633
Ogun	River (basin)	native	3076
Osse	River (basin)	native	81272
Ouémé	River (basin)	native	81272
Pampana	River (basin)	native	81272
Rio del Rey	River (basin)	native	81633
Ruki River Region	River (basin)	native	41580
Sangha	River (basin)	native	46901
Ubangui	River (basin)	native	45441
Uélé	River (basin)	native	53267
Wouri	River (basin)	native	81633
Zambezi	River (basin)	misidentification	
Chad/Chari River	Lake	native	
Malebo Pool	Lake	native	
Tumba	Lake	native	

Pantodon buchholzi in Niger

Reference no.	Paugy, D., K. Traoré and P.S. Diouf, 1994
Ecosystem	Niger
Status	native
Abundance	
Lifestage	adults
Regional database	
Remarks	Known from the Lower Niger (Ref. 3515, Ref. 13331). Also Ref. 2921.

Zoogeography in FishBase

Introductions tables

More information

Countries	Common names	Age/Size	References	Collaborators
FAO areas	Synonyms	Growth	Aquaculture	Pictures
Ecosystems	Metabolism	Length-weight	Aquaculture profile	Stamps, Coins
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Food items	Fecundity	Larval dynamics	Processing	Otoliths
Food consumption	Eggs	Recruitment	Mass conversion	Brains
Ration	Egg development	Abundance	Vision	



Introductions of *Heterotis niloticus*

[n = 12]

Year / Period	From	To	Established	Ecol. effects
unknown	Unknown	Togo	established	
1950	Cameroon	Congo	established	some
1950	Sudan	Congo	established	some
1950	Congo	Zaire	established	
1955	Cameroon	Gabon	established	unknown
1955	Chad	South Cameroon	unknown	
1956	Cameroon (Chari river)	Bangui, Central African Republic	established	
1958	Benue River, Cameroon	Bouaké, Côte d'Ivoire	unknown	
1960	Black Volta River	Aboisso, Côte d'Ivoire	unknown	
1963	Ubangui River	Congo River	established	
1963	Cameroon	Madagascar	established	
1989	Unknown	Philippines	unknown	

International Introductions of *Heterotis niloticus*

Introductions as compiled by FAO

Main Ref:	Depierre, D. and J. Vivien 1977
To:	South Cameroon
FAO area:	Africa-Inland Waters
From:	Chad
FAO area:	Africa-Inland Waters
Year:	1955
Range:	-
Period:	1950-1974
Established in the wild:	unknown,
Established in aquaculture:	-
Significant ecological interactions:	-
Significant socio-economic effects:	-
Introduced by:	
Reason:	aquaculture
Other reason:	
Comments:	Introduced for the development of aquaculture in South Cameroon (Melen, Yaounde, Bertoua, Ngaoundere) (Ref. 50415), originating from Fort-Lamy (Ref. 50153). Also Ref. 1978. Ref: Depierre, D. and J. Vivien, 1977

Zoogeography in FishBase

Country biodiversity

Information by Country / Island

Biodiversity

- All fishes
- Freshwater
- Marine
- Introduced
- Endemic
- Threatened
- Dangerous
- Reef-associated
- Pelagic
- Deep-water

Uses

- Commercial
- Aquaculture
- Aquarium trade
- Invasiveness
- Game fishes
- FAO aquaculture
- FAO catches
- ICES catch
- SAUP catch
- Fish Loss

Tools

- Identification
- Identification keys
- Field guide
- Occurrences
- Type localities
- References
- Missing data
- Missing photos
- Ecopath data
- Species Ecology Matrix
- Checklist (extended)

Miscellaneous

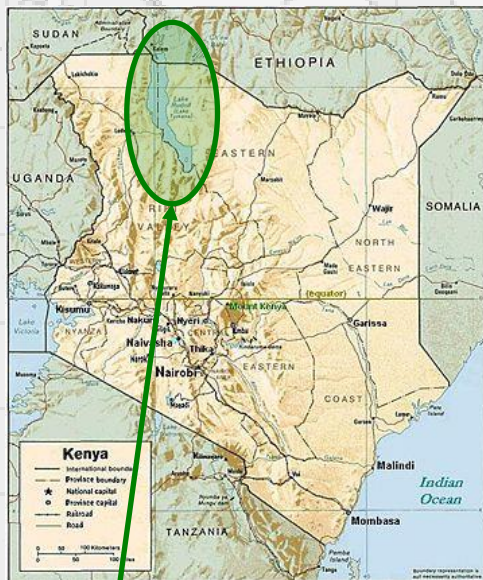
- Country info
- FAO profile
- ReefBase profile
- Treaties & Conv.
- Collaborators
- Fish stamps
- Common names
- Public aquariums
- MPA database
- Spawning aggregation

Note: Lists may be incomplete. Some lists may be very long and will take time to load.

Zoogeography in FishBase

Country biodiversity

Example: list of freshwater fishes of Kenya.



Kenya country information

Common names: [No common name]
 Occurrence: native
 Salinity: freshwater
 Abundance: Ref:
 Importance: Ref:
 Aquaculture: never rarely | Ref:
 Regulations: Ref:

Use live export: yes

Comments: Known from Lake Turkana (Ref. 52331, 52871).

National Checklist:

Country Information: <https://www.cia.gov/cia/publications/factbook/geos/ke.html>

National Fisheries Authority: <https://www.recosicx.org/openscm.htm>

Occurrences: Occurrences Point map

Main Ref: Seegers, L., L. De Vos and D.O. Okeyo, 2003

National Database:

List of Freshwater Fishes for Kenya

n = 303

Sort by: Family Species Occurrence Phylogenetic Extended checklist Show photos

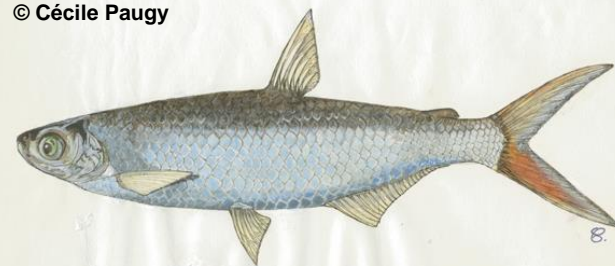
Filter: All fishes Freshwater Saltwater Introduced Endemic Threatened

Dangerous Reef-associated Pelagic Deep-water Game fishes Commercial

1 of 8 Next All | Jump to: 1 | Go down | Select another country

Order	Family	Species	Occurrence	FishBase name	Name
Perciformes	Sparidae	<i>Acanthopagrus berda</i>	native	Goldfish seabream	
Perciformes	Gobiidae	<i>Acentrogobius simplex</i>	native	Bagamojo goby	Bagamojo goby
Perciformes	Cichlidae	<i>Alcolapia alcalica</i>	native	Magadi tilapia	Lake Natron tilapia
Perciformes	Cichlidae	<i>Alcolapia grahami</i>	native		Lake Magadi tilapia
Characiformes	Alestidae	<i>Alestes baremoze</i>	native	Silversides	Delete
Characiformes	Alestidae	<i>Alestes demersus</i>	native	Characin	Delete
Characiformes	Alestidae	<i>Alestopetersius leopoldianus</i>	misidentification		
Perciformes	Ambassidae	<i>Ambassia gymnocephalus</i>	native	Bald glassy	Dodosi
Siluriformes	Amphiliidae	<i>Amphilius athiensis</i>	endemic		
Siluriformes	Amphiliidae	<i>Amphilius grandis</i>	endemic		
Siluriformes	Amphiliidae	<i>Amphilius jacksonii</i>	native	Marbled mountain catfish	Mumi
Siluriformes	Amphiliidae	<i>Amphilius krefftii</i>	native		
Siluriformes	Amphiliidae	<i>Amphilius uranoscopus</i>	native	Stargazer mountain catfish	Stargazer mountain catfish
Siluriformes	Amphiliidae	<i>Andersonia leptura</i>	questionable		Whiptailed Nile catfish
Anguilliformes	Anguillidae	<i>Anguilla anguilla</i>	introduced	European eel	European eel
Anguilliformes	Anguillidae	<i>Anguilla bengalensis labiata</i>	native	African mottled eel	Fiyoka
Anguilliformes	Anguillidae	<i>Anguilla bicolor bicolor</i>	native	Indonesian shorfin eel	Mkungu
Anguilliformes	Anguillidae	<i>Anguilla marmorata</i>	native	Giant mottled eel	
Anguilliformes	Anguillidae	<i>Anguilla mossambica</i>	native	African longfin eel	Mkungu
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys antinorii</i>	native	Black lampeye	
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys bukobanus</i>	native	Bukoba lampeye	Mande
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys jeanneli</i>	native	Omo lampeye	Omo lampeye
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys kongoranensis</i>	native	Kongoro lampeye	
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys meyerburghi</i>	native		
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys pumilus</i>	misidentification	Tanganyika lampeye	
Cyprinodontiformes	Poeciliidae	<i>Aplocheilichthys rudolfianus</i>	native	Lake Rudolf lampeye	Turkana lampeye
Ariidae		<i>Arius africanus</i>	native		
Cichlidae		<i>Astatoreochromis alluaudi</i>	native		

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Zoogeography in FishBase

Ecosystem biodiversity

Information by Ecosystem

 All fishes

 Ecosystem info

 Trophic pyramids

 Ecopath parameters

 Point data

 Resilience of fishes

 Species Ecology Matrix

 Identification

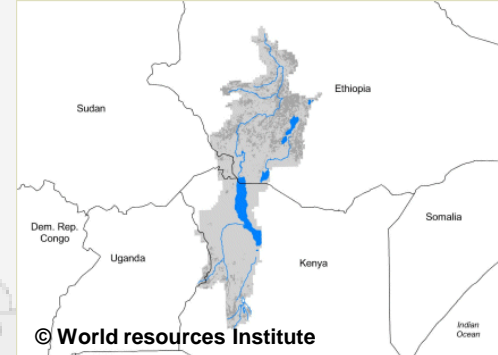
 Deep-water

 Identification keys

Note: Lists may be incomplete. Some lists may be very long and will take time to load

Example: list of fishes from Lake Turkana.

FishBase gives a list with all fish species distributed in this ecosystem.



Species in *Lake Turkana*
See pictures
n = 59 (Incomplete)
See pictures

Species	Name	Family	Habitat	Length (cm)	Trophic Level	Status
<i>Alestes baremoze</i>	Silversides	Alestidae	benthopelagic	43.0 TL	3.0	native
<i>Alestes dentex</i>	Characin	Alestidae	pelagic	55.0 TL	2.9	native
<i>Brycinus ferax</i>	Large-toothed Lake Turkana robber	Alestidae	pelagic	9.9 TL	2.9	endemic
<i>Brycinus macrolepidotus</i>	True big-scale tetra	Alestidae	pelagic	64.7 TL	2.3	native
<i>Brycinus minutus</i>	Dwarf Lake Turkana robber	Alestidae	pelagic	4.0 TL	3.0	endemic
<i>Brycinus nurse</i>	Nurse tetra	Alestidae	pelagic	25.0 TL	2.4	native
<i>Hydrocynus forskahlii</i>	Elongated tigerfish	Alestidae	pelagic	95.2 TL	4.0	native
<i>Hydrocynus vittatus</i>	Tiger fish	Alestidae	demersal	116.6 TL	4.4	native
<i>Micralestes elongatus</i>	Elongated Lake Turkana robber	Alestidae	pelagic	6.0 TL	3.3	native
<i>Andersonia leptura</i>		Amphiliidae	demersal	50.0 TL	3.1	native
<i>Heterotis niloticus</i>	African bonytongue	Arapaimidae	pelagic	122.0 TL	2.5	native
<i>Bagrus bajad</i>	Bayad	Bagridae	demersal	124.3 TL	4.0	native
<i>Bagrus docmak</i>	Semutundu	Bagridae	benthopelagic	70.5 TL	4.1	native
<i>Haasiichromis macconnelli</i>		Cichlidae	benthopelagic	9.4 TL	3.3	native
<i>Haasiichromis rudolfianus</i>		Cichlidae	benthopelagic	7.1 TL	3.2	native
<i>Haasiichromis turkanae</i>	Turkana haplo	Cichlidae	benthopelagic	10.5 TL	3.5	native
<i>Hemichromis exsul</i>	Turkana jewel cichlid	Cichlidae	benthopelagic	12.2 TL	3.4	endemic
<i>Hemichromis letourneuxi</i>	Jewel fish	Cichlidae	benthopelagic	14.5 TL	3.0	native
<i>Oreochromis niloticus niloticus</i>	Nile tilapia	Cichlidae	benthopelagic	73.2 TL	2.0	native
<i>Oreochromis niloticus vulcani</i>		Cichlidae	benthopelagic	31.2 TL	2.2	native
<i>Sarotherodon galilaeus galilaeus</i>	Mango tilapia	Cichlidae	demersal	41.0 TL	2.0	native
<i>Tilapia zillii</i>	Redbelly tilapia	Cichlidae	benthopelagic	48.8 TL	2.0	introduced
<i>Citharus citharus citharus</i>	Moon fish	Citharinidae	demersal	70.8 TL	2.0	native
<i>Citharus citharus intermedius</i>		Citharinidae	pelagic	70.8 TL	2.1	endemic
<i>Clarias gariepinus</i>	North African catfish	Clariidae	benthopelagic	170.0 TL	3.2	native
<i>Heterobranchius longifilis</i>	Sampa	Clariidae	demersal	183.0 TL	3.7	native

Ecosystem Reference

Ecosystem	Lake Turkana				
Type	Lake				
Salinity	freshwater				
Other Names	Lake Rudolf (old name)				
Location	East Africa 5° N 2° n - 35° E 37° E				
Location Map					
Size Ref	River Length	Area	Drainage Area	203300	
Depth	Average Depth	Max Depth	Ref		
Temperature	Surface	100 Meters	Depth		
Description	http://www.ilec.or.jp/database/afr/afr-20.html				
URL 1					
URL 2					
Ecosystem Checklist Link					
Total	FishBase	Literature			
	Species	Families	Species	Families	Reference
	61	19			

FishBase also gives some general information about the ecosystem [locality, depth,...].



Distribution maps

Occurrences – fish collections

FishBase contains records and data of more than 40 fish collections of different musea all over the world [including MRAC, BMNH, AMNH, SAIAB].

Search Fish Collections: (40 collections, 24,109 species, 2,339,491 records)

AMNH | ARC | AUT | ASIZ | BMNH | BPBM | CAS | CICIMAR-IPN | CSIC-ICM | GRL | IEO | KUNHM | MNHN | MRAC | MSU-IIT | NM-MP | NMK | NTM | NTU | NMSM | NMBA | NMZB | NRM | NSMT | RBCM | ROM | SAIAB | SIO | SPCP | SU-DCP | UBC | USC | USNM | UPMSI | UPVMS | XU-P | ZMH (incl. ISH) | ZMUC

[View collection history movie.](#)
[Africa](#) | [Asia](#) | [Europe](#) | [Oceania](#) | [North America](#) | [South America](#) | [World](#) (loading may take 2-4 minutes)

By Catalog No. (e.g. BMNH 1892.6.17.4)

Scientific Name
Genus (e.g. *Lates*)
Species (e.g. *niloticus*)

Name used in collection
Genus (e.g. *Chromis*)
Species (e.g. *niloticus*)

By Station No. (e.g. UBC 58-0253)

Family

Country

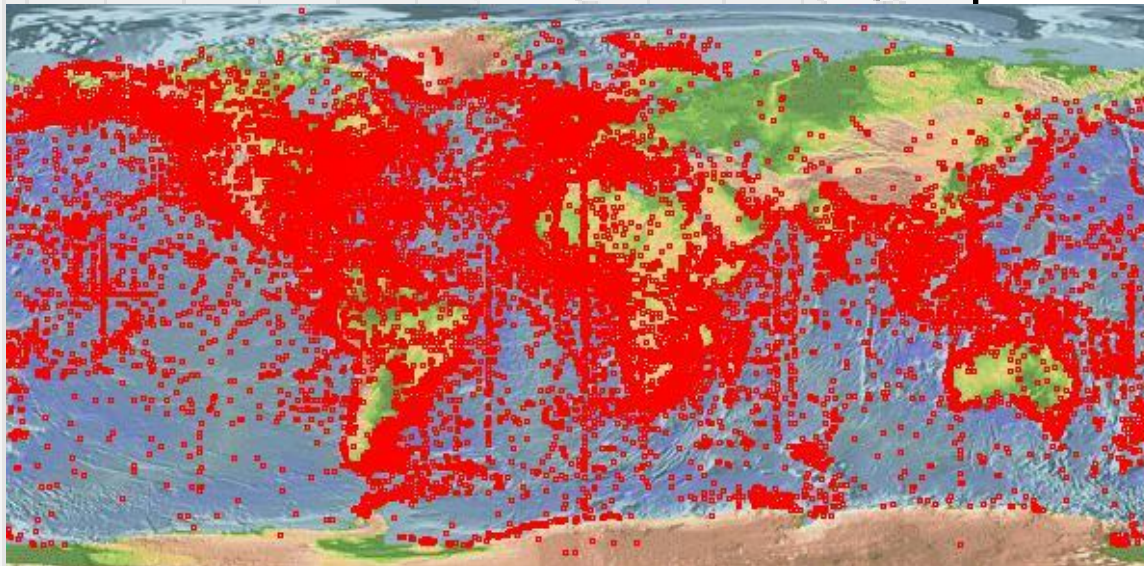
FAO Area

Locality (e.g. Red Sea)

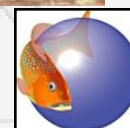
Collector (e.g. Kellog)

Year (e.g., 1903)

Survey



Royal Museum for Central Africa (RMCA Tervuren)



FishBase and Fish Taxonomy Training
Session 2017

Distribution maps

Occurrences – species

More information

Countries	Common names	Age/Size	References	Collaborators
FAO areas	Synonyms	Growth	Aquaculture	Pictures
Ecosystems	Metabolism	Length-weight	Aquaculture profile	Stamps, Coins
Occurrences	Predators	Length-length	Strains	Sounds
Introductions	Ecotoxicology	Length-frequencies	Genetics	Ciguatera
Stocks	Reproduction	Morphometrics	Allele frequencies	Speed
Ecology	Maturity	Morphology	Heritability	Swim. type
Diet	Spawning	Diseases	Gill area	Gill area
Food items	Fecundity	Larval dynamics	Processing	Otoliths
Food consumption	Eggs	Recruitment	Mass conversion	Brains
Ration	Egg development	Abundance	Vision	

Records 1 - 67

Barbus somereni : Occurrence Records

Refresh n = 67 (FB = 67)

Sort by: Country Locality Year Depth Source


Country	Year	Collector	Identifier	Catalog No.	Depth (m)	Locality	Source
Burundi	1936	Lestrade A.	David L.	MRAC P 46952-46962		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	David L.	MRAC P 46966-46979		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	David L.	MRAC P 46980-46996		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	David L.	MRAC P 46997-46999		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	David L.	MRAC P 46963-46965		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	David L.	MRAC P 47000-47002		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	Poll M.	MRAC P 47308-47335		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	Poll M.	MRAC P 47336-47339		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1936	Lestrade A.	Poll M.	MRAC P 47342		rv. Malagarazi et ses affluents, terr. de Bururi	Portal: FB, Source: MRAC
Burundi	1938	Lestrade A.	Poll M.	MRAC P 55788-55792		Bururi, haute Malagarazi	Portal: FB, Source: MRAC
Burundi	1952	Marlier G.	Matthes H.	MRAC P 92601-		rv. Nyamagana	Portal: FB, Source: MRAC
Burundi	1953	Marlier G.	Matthes H.	MRAC P 92604-92607		rv. Nyakagunda	Portal: FB, Source: MRAC
Burundi	1953	Kalmer G.	Matthes H.	MRAC P 129108		rv. Nyakagunda	Portal: FB, Source: MRAC
Burundi	1984	Thys vd Audenaerde, De Vos & Reuens	De Vos L.	MRAC 87.049.P.0020-0024		rv. Mutasa, près du pont sur la route Rutana-Gihofi	Portal: FB, Source: MRAC
Burundi	1984	Thys vd Audenaerde, De Vos & Reuens	De Vos L.	MRAC 89.013.P.0008-0009		rv. Muyovoti, près du pont de Gihofi	Portal: FB, Source: MRAC
Burundi	1987	Borgström, R.		BHMH 1987.2.3.84-87		Nyamugereza/Inampare Junction, Burundi	Portal: FB, Source: BMNH
Burundi	1987	Borgström, R.		BHMH 1987.2.3.107-112		Kagunuzi River, Burundi	Portal: FB, Source: BMNH
Burundi	1987	Borgström, R.		BHMH 1987.2.3.121-122		Karongwe River (tributary of Gtengwe), Burundi	Portal: FB, Source: BMNH
Burundi	1987	Borgström, R.		BHMH 1987.2.3.113-120		Inampare River (tributary of Gtengwe), Burundi	Portal: FB, Source: BMNH

More info | Plus d'info | Mais info

FishBase

Occurrence Record of *Barbus somereni*

Gazetteer



Main Ref :	Anonymous, 1997 (Ref. 12818)	Museum :	MRAC
Name used :	Barbus somereni	Sex :	
Catalog No. :	MRAC P 92604-92607	Picture :	
Locality :	rv. Nyakagunda	Gazetteer :	
Station :		Date :	19/02/1953
Year :	1953	Salinity :	
Water depth :	- m	Temperature :	°C
Altitude :	- m	Accuracy :	
Coordinates :	In decimal: -2.78 , 29.07		
Geog. area :			
Country :	108 - Burundi		
Length :	cm	Range :	-
Collector :	Marlier G.	Identifier :	Matthes H.
Gear :			

Update

Back to Search

Refresh n = 66 (FB = 66)

View map: [Google Earth](#) | [C-square Mapper](#) | [KGS Mapper](#)

Records 1 - 68

Barbus somereni : Occurrence Records

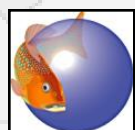
Refresh n = 66 (FB = 66)

Sort by: Country Locality Year Depth Source

Country	Year	Collector	Identifier	Catalog No.	Depth (m)	Locality	Source
Burundi	1953	Marlier G.	Matthes H.	MRAC P 92601-		rv. Nyamagana	Portal: FB, Source: MRAC
Burundi	1953	Marlier G.	Matthes H.	MRAC P 92604-92607		rv. Nyakagunda	Portal: FB, Source: MRAC
Burundi	1953	Kalmer G.	Matthes H.	MRAC P 129108		rv. Nyakagunda	Portal: FB, Source: MRAC
Burundi	1984	Thys vd Audenaerde, De Vos & Reuens	De Vos L.	MRAC 87.049.P.0020-0024		rv. Mutasa, près du pont sur la route Rutana-Gihofi	Portal: FB, Source: MRAC
Burundi	1984	Thys vd Audenaerde, De Vos & Reuens	De Vos L.	MRAC 89.013.P.0008-0009		rv. Muyovoti, près du pont de Gihofi	Portal: FB, Source: MRAC
Burundi	1987	Borgström, R.		BHMH 1987.2.3.84-87		Nyamugereza/Inampare Junction, Burundi	Portal: FB, Source: BMNH
Burundi	1987	Borgström, R.		BHMH 1987.2.3.107-112		Kagunuzi River, Burundi	Portal: FB, Source: BMNH
Burundi	1987	Borgström, R.		BHMH 1987.2.3.121-122		Karongwe River (tributary of Gtengwe), Burundi	Portal: FB, Source: BMNH
Burundi	1987	Borgström, R.		BHMH 1987.2.3.113-120		Inampare River (tributary of Gtengwe), Burundi	Portal: FB, Source: BMNH

FishBase contains some possibilities to reproduce distribution maps.

Royal Museum for Central Africa (RMCA Tervuren)



FishBase and Fish Taxonomy Training Session 2017

Distribution maps

'C-square mapper'.

Example: *Clarias gariepinus* (Burchell, 1822)

There are different possibilities to reproduce a distribution map with the 'C-square mapper'.

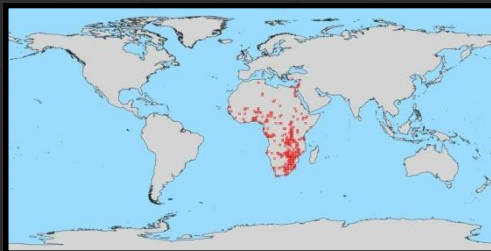
With the option 'landmask on', only the marine occurrences of the species are visible.



It is also possible to zoom in on a certain part of the world.



Another possibility with the 'C-square mapper' are the outline maps.



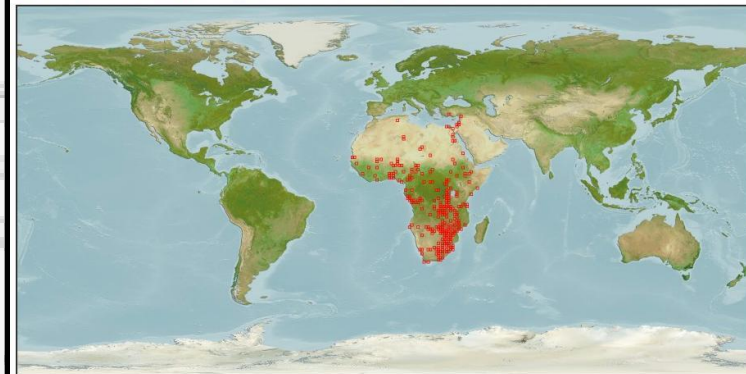
Point Map for *Clarias gariepinus*

Africa: almost Pan-Africa, absent from Maghreb, the upper and lower Guinea and the Cape province and probably also Nogal province. Asia: Jordan, Israel, Lebanon, Syria and southern Turkey. Widely introduced to other parts of Africa, Europe and Asia. Several countries report adverse ecological impact after introduction. Trade restricted in Germany (Anl.3 BfRTSchV).

-Back to previous page-

Click on map to see points and environmental data.

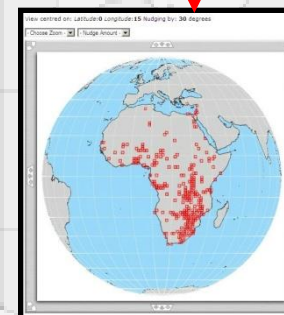
Map: [World map:Globe views 1 (photorealistic)] [Largest size] [No mask] [visibility: Bold] [Refresh...]



Globe / polar views - Quick links (including seamless pan/zoom):
[Poles] Antarctic | Arctic
[Continents] N America | S America | Europe | Africa | Asia | Australia
[Oceans] Atlantic | N Atlantic | S Atlantic | Pacific | Indian

List of Point Data
Range map
Download data (as csv)
*Save image to cache

Back to previous page

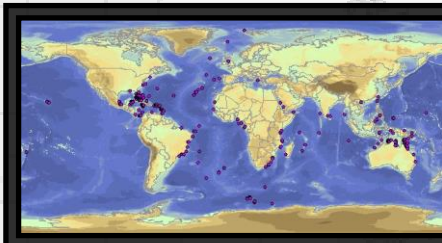
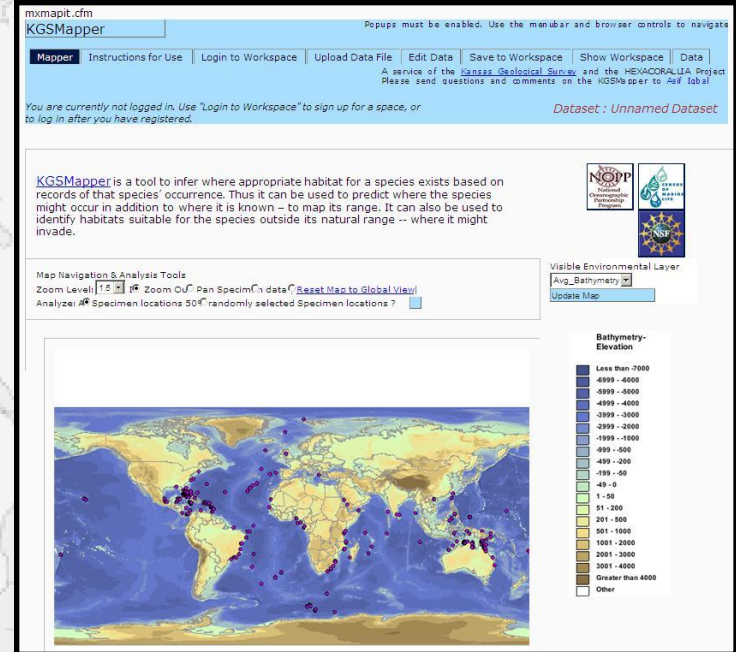


Distribution maps

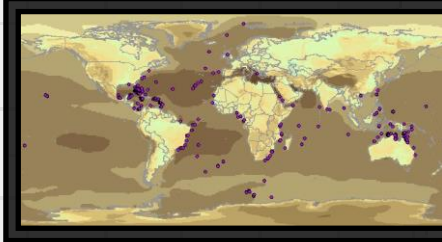
'KGS mapper' (OBIS).

Example: *Sphyraena barracuda* (Edwards, 1771)

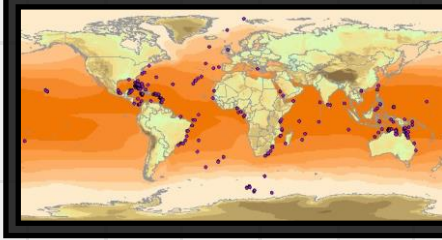
OBIS (Ocean Biogeographic Information System) contains different world maps. Because FishBase contains data of different fish collections of musea, it is possible to reproduce distribution maps of species in function of different parameters.



a. bathymetry



b. salinity



c. average surface temperature

Distribution maps

'KGS mapper' (OBIS).

Example: *Sphyraena barracuda* (Edwards, 1771)

It is possible to obtain the data for different points on the distribution map [coordinates and other parameters of the area].

Delete Selected records

1 Records found

Select for deletion	Latitude, Longitude of cell-centers	Scientific Name
<input type="checkbox"/>	26.25, -50.75	<i>Sphyraena barracuda</i>

ENVIRONMENT SUMMARY STATISTICS FOR ALL LOCATIONS

	18-year Mean Monthly Sea Surface Temp. (°C)	Mean Ann. Salinity (psu)	Mean Ann. Ocean Color (chl-a band)	Minimum 2° pixel Depth in 30° cell (m)	Mean 2° pixel Depth in 30° cell (m)	Maximum 2° pixel Depth in 30° cell (m)
Average over 30° cell values	25.09	37.07	54.71	4,043.00	4,897.05	5,613.00
Minimum 30° cell value	25.09	37.07	54.71	4,043.00	4,897.05	5,613.00
Maximum 30° cell value	25.09	37.07	54.71	4,043.00	4,897.05	5,613.00
Std. dev. of cell values	0.00	0.00	0.00	0.00	0.00	0.00

Cell and Co-ordinate Definitions

ENVIRONMENTAL DATA FOR EACH LOCATION

Coordinates are centers of half degree grid cells (55km x 55km at equator)

CELL-CENTER LATITUDE (°)	CELL-CENTER LONGITUDE (°)	CELL-TYPE	18-year Mean Monthly Sea Surface Temp (°C)	Mean Ann. Salinity (psu)	Mean Ann. Ocean Color (chl-a band)	Minimum 2° pixel Depth in 30° cell (m)	Mean 2° pixel Depth in 30° cell (m)	Maximum 2° pixel Depth in 30° cell (m)
26.25	-50.75	Oceanic	25.1	37.1	55	4043	4897	5613

+

BATHYMETRY OTHER BOTTOM OTHER SURFACE TEMPERATURE ARAGONITE

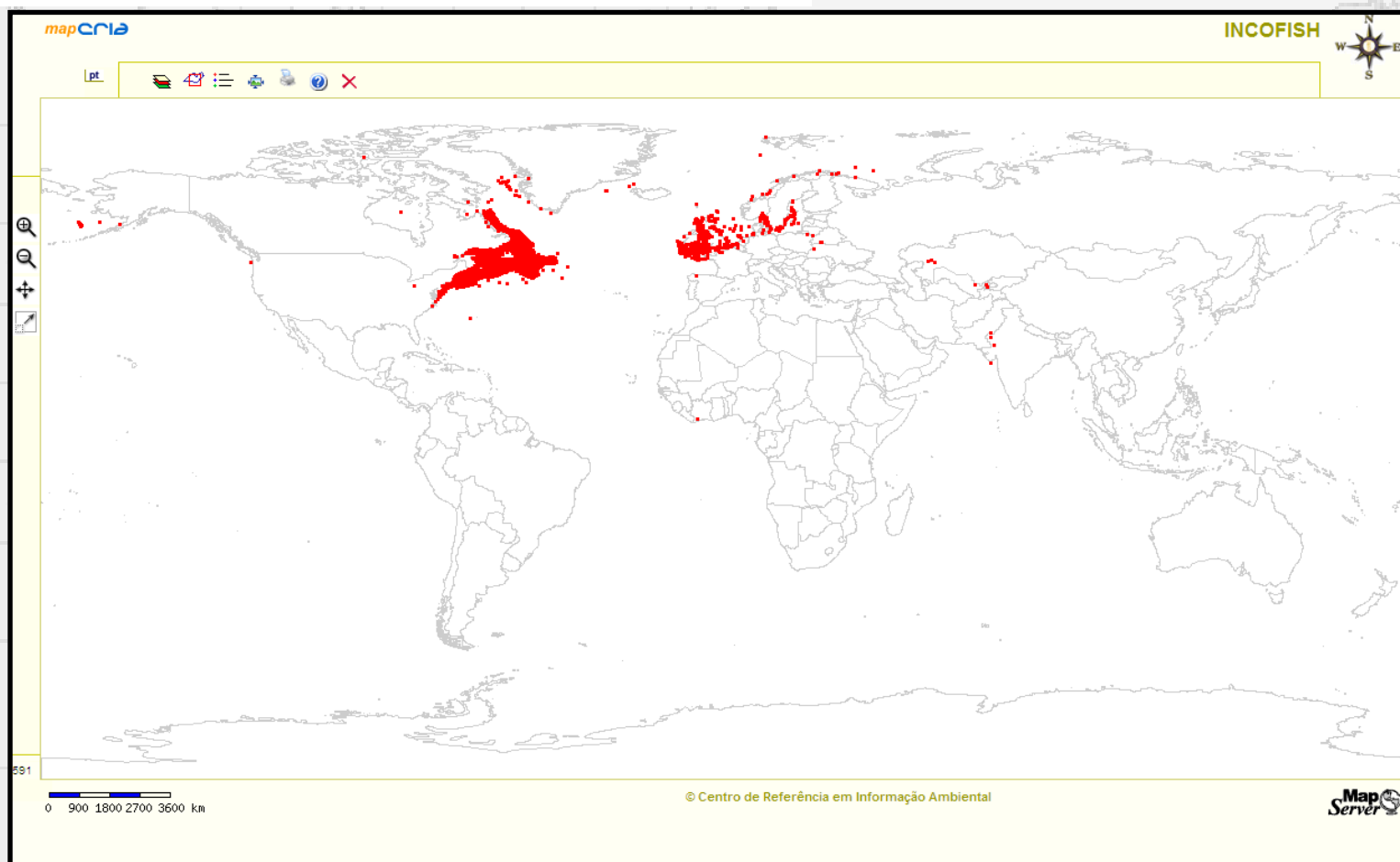
Variable Name	Mean	Std. Dev.	One Std. Dev. Range	Two Std. Dev. Range	Entire Range	Use to Find Similar Areas	Use for upper limit	Use for lower limit
MAXIMUM BATHYMETRY Source: ETOPO2	1800.22	1828.91	1 to 3629.14	1 to 5458.05	1 to 6593	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MEAN BATHYMETRY Source: ETOPO2	1176.73	1618.49	1 to 2795.22	1 to 4413.71	1 to 5463.52	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MINIMUM BATHYMETRY Source: ETOPO2	645.24	1438.99	1 to 2084.23	1 to 3523.21	1 to 5374	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STD DEV BATHYMETRY Source: ETOPO2	312.8	387.76	0 to 700.56	0 to 1088.31	0 to 1962.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Distribution maps

'CRIA mapper'.

Example: *Gadus morhua* Linnaeus, 1758

The CRIA mapper gives a clear overview of the different point data in FishBase, with the possibility to zoom.

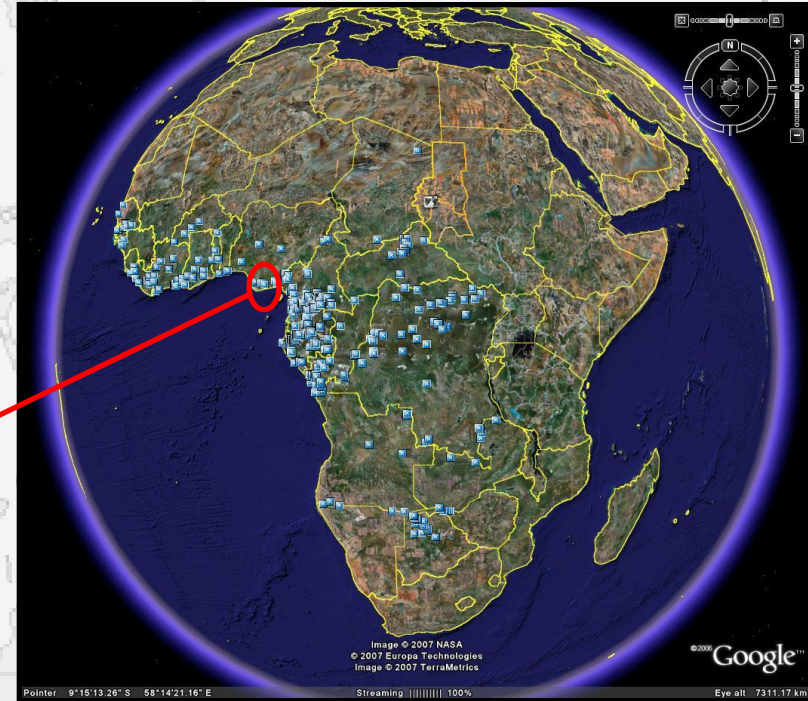


Distribution maps

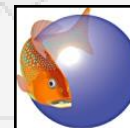
‘Google Earth’.

Example: *Hepsetus odoe* (Bloch, 1794)

With ‘Google Earth’ it is possible to look at the distribution of freshwater fishes. The locality can be seen in detail thanks to the ‘zoom’ option.



Royal Museum for Central Africa (RMCA Tervuren)



FishBase and Fish Taxonomy Training
Session 2017

Distribution maps

'Google Earth'

Example: *Hepsetus odoe* (Bloch, 1794)

Data of the different records can be obtained by clicking on the respective points. These data are present in FishBase.



Occurrence Record of <i>Hepsetus odoe</i> Gazetteer		
Main Ref:	Anon., 1997 (Ref. 12818)	Museum: MRAC
Name used:	Hepsetus odoe	Sex:
Catalog No.:	MRAC P 91055.0236	Picture:
Locality:	Forcados river, about 1 km W of Oboro and 7km NW of Bomadi	
Station:		Gazetteer: Nigeria
Year:		Date: 21/04/1991
Water depth:	- m	Salinity:
Altitude:	- m	Temperature: °C
Coordinates:	5 11 N5 52 E	Accuracy:
Geog. area:		
Country:	566 - Nigeria	
Length:	cm	Range: -
Collector:	Powell C.B.	Identifier: Teugels G. 1992
Gear:		
Update		
Back to Search		

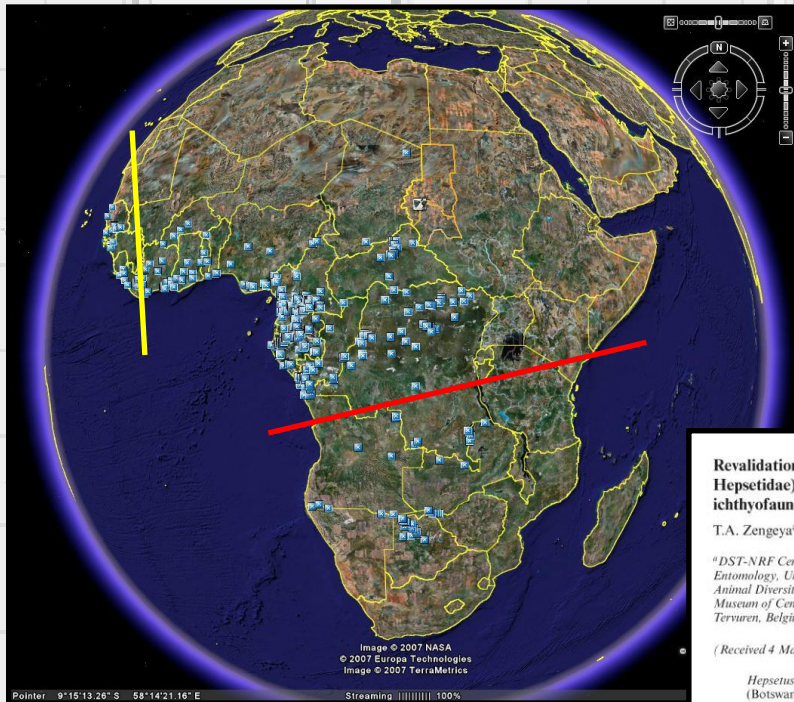


Distribution maps

'Google Earth'.

Example: *Hepsetus odoe* (Bloch, 1794)

These maps can be used for further studies on the species.



Revalidation of *Hepsetus cuvieri* (Castelnaud, 1861) (Characiformes: Hepsetidae) from the Quanza, Zambezi and southern part of the Congo ichthyofaunal provinces

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(Received 4 May 2010; final version received 26 January 2011; printed 12 May 2011)

Hepsetus cuvieri (Castelnaud, 1861), originally described from "lae N'gami" (Botswana) and synonymized with *H. odoe* (Bloch, 1794) by Roberts (1984), is revalidated. *Hepsetus cuvieri* can be readily distinguished from *H. odoe* based on a lower total number of gill rakers (8–13 versus 14–21); a generally higher number of scales between the dorsal fin and the lateral line (10½–11½ versus 7½–10½) and a higher number of scales between the adipose fin and the lateral line (6½–7½ versus 4½–6½) and other characters. A neotype is designated, as the holotype of this nominal species is apparently lost. *Hepsetus cuvieri* is restricted to the Quanza, Zambezi ichthyofaunal provinces and the southern part of the Congo Basin, i.e. the Congo ichthyofaunal province.

Keywords: *Hepsetus*; *H. odoe*; *H. cuvieri*; revalidation

A revision of the West African *Hepsetus* (Characiformes: Hepsetidae) with a description of *Hepsetus akawo* sp. nov. and a redescription of *Hepsetus odoe* (Bloch, 1794)

E. Decru^a, E. Vreven^b and J. Snoeks^{a,b*}

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Within the genus *Hepsetus*, a new species from the eastern part of West Africa is described. *Hepsetus akawo* sp. nov. is mainly distinguished from *Hepsetus odoe* by a smaller number of lateral line scales [43–51 vs 50–60 (exceptionally 49)] and a shallower head depth [38.0–45.6 (mean 42.0) % head length vs 41.4–49.0 (44.6) % head length] (positively allometric). *Hepsetus akawo* sp. nov. differs mainly from the recently rehabilitated *Hepsetus cuvieri* by: a higher number of gill rakers (17–23 vs 8–13), and a lower number of scales between the dorsal fin and the lateral line (7½–9½ vs 10½–11½). Within West Africa, the distribution area of the new species is restricted to the Sassandra River (Ivory Coast) in the west up to the Cross River (Cameroon) in the east. The species is entirely allopatric with *H. odoe*, which has a far more restricted distribution than previously thought and occurs from the Senegal River (Senegal) in the west to the Cavally River (Ivory Coast) in the east.

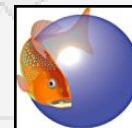
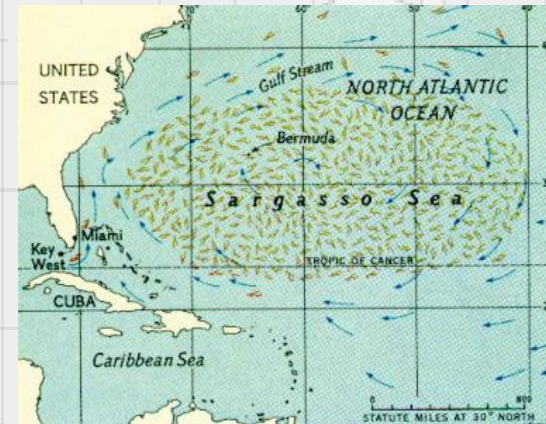
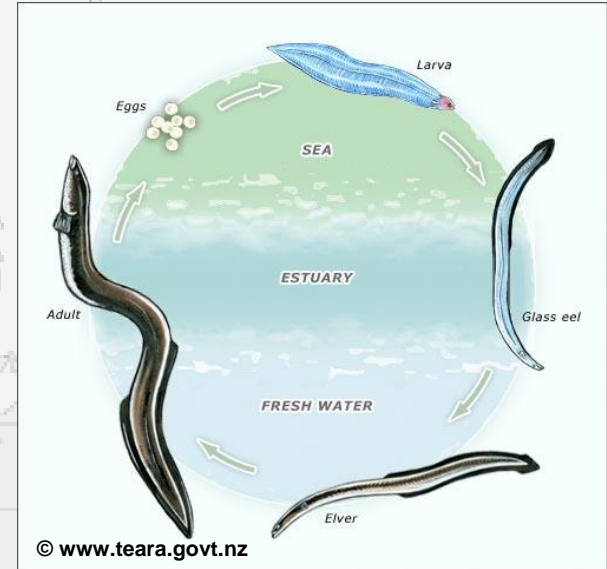
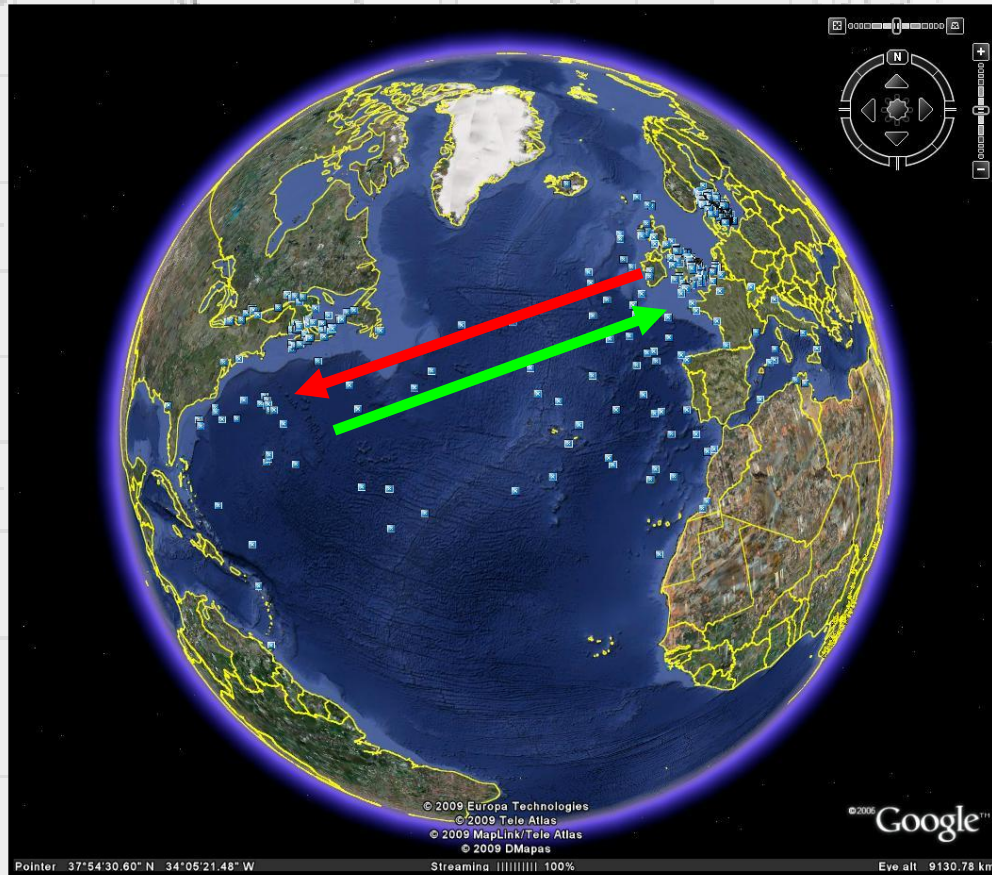
Keywords: *Hepsetus odoe*; *Hepsetus akawo* sp. nov.; West Africa; revision; new species

Distribution maps

'Google Earth'.

Example: *Anguilla anguilla* (Linnaeus, 1758)

The distribution of the European eel (*Anguilla anguilla*) reflects its catadromous behaviour. The freshwater fish species migrates to the Sargasso Sea to spawn.



Distribution maps

'AquaMaps'.

Example: *Thunnus alalunga* (Bonnaterre, 1788)

'AquaMaps' is nearly the same as the 'C-square mapper'.

- 'C-square mapper' shows only those points which are part of the fish collection data.
- 'AquaMaps' shows the probability of the occurrence of that particular species in a certain area.

Thunnus alalunga
Albacore
Thunnus alalunga (Bonnaterre, 1788)

Family: [Scombridae](#) (Mackerels, tunas, bonitos), subfamily: [Scombrinae](#)

Order: [Perciformes](#) (perch-like)

Class: [Actinopterygii](#) (ray-finned fishes)

FishBase name: [Albacore](#)

Max. size: 140 cm FL (male unsexed) (Ref. 1669); max. published weight: 60.3 kg (Ref. 1663); max. reported age: 9 years (Ref. 12162)

Environment: pelagic-oceanic; oceanodromous (Ref. 11243); marine; depth range 0 - 600 m (Ref. 168)

Climate: subtropical, 10 - 25°C (Ref. 168); 59°N - 40°S, 180°W - 180°E

Importance: fisheries: highly commercial; gamefish: yes; price category: high; price reliability: reliable based on assessed price for this species

Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (R=0.13,10.18; mu=1.6; mean=10; Fe=2, million)

Vulnerability: High to very high vulnerability (2.45) (Ref. 12162)

Distribution: Cosmopolitan in tropical and temperate waters of all oceans including the Mediterranean Sea but not at the surface between 10°N and 10°S. Western Pacific: range extend in a broad band between 40°N and 40°S (Ref. 168). Often confused with juvenile *Thunnus obesus* which also have very long pectorals but with rounded tips. Highly migratory species. Annex I of the 1982 Convention on the Law of the Sea (Ref. 26139).

Morphology: **Dorsal spines** (total): 11 - 14. **Pectoral soft rays** (total): 12 - 16. **Anal soft rays**: 0. **Anal soft rays**: 11 - 16. Anterior spines much higher than posterior spines giving the fin a strongly concave outline. Interopercle process small and blunt. Body with very small scales. Pectoral fins remarkably long, about 50% of fork length or longer in 30 cm or longer fish. Ventral surface of liver smoothened and the central lobe is largest.

Biology: An epipelagic and mesopelagic, oceanic species, abundant in surface waters of 15.6° to 19.1°C; deeper swimming, large albacore are found in waters of 13.5° to 25.2°C; temperatures as low as 5.2°C may be tolerated for short periods (Ref. 168). Known to concentrate along thermal discontinuities (Ref. 168). Form mixed schools with skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*) and bluefin tuna (*T. macrocoylis*), schools may be associated with floating objects, including sargassum weeds (Ref. 168). Fed on fishes, crustaceans and squids. Eggs and larvae are pelagic (Ref. 1709). Sexual maturity reached at 90 cm (Ref. 35731). Highly appreciated and marketed fresh, smoked, deep frozen or canned. Eaten steamed, broiled, fried and microwave (Ref. 3882). Also Ref. 1762, 1798, 1804. The American Albacore Fishing Association Pacific (North and South > Pacific) fishery of this species has been certified by the Marine Stewardship Council (http://www.msc.org) as well-managed and sustainable (http://www.msc.org/html/content/1366.htm).

Red List Status: [Data deficient \(DD\)](#) (Ref. 1702)

Dangerous: [harmless](#)

Coordinates: [Collette, B.B. and C.E. Nauen, 1983](#) (Ref. 168)

Main Ref: [Collette, B.B. and C.E. Nauen, 1983](#) (Ref. 168)

Update: [Add](#) [Get XML file](#) [Print data in XML](#) [Common names in XML](#) [Photos in XML](#)



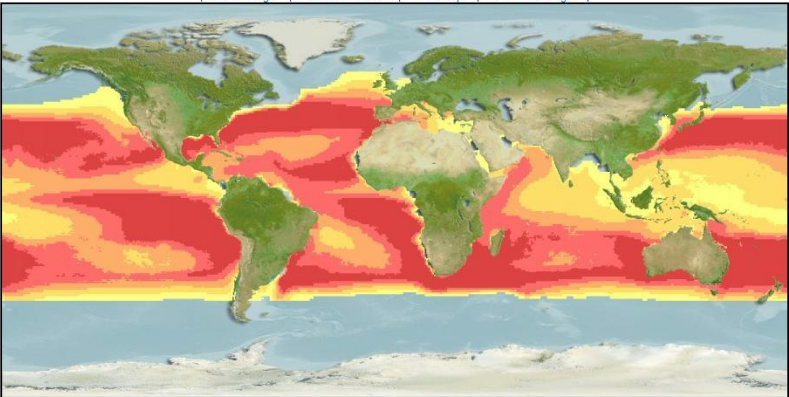
Computer Generated Maps for *Thunnus alalunga* (un-reviewed)

Distribution: Cosmopolitan in tropical and temperate waters of all oceans including the Mediterranean Sea but not at the surface between 10°N and 10°S. Western Pacific: range extend in a broad band between 40°N and 40°S (Ref. 9684). Often confused with juvenile *Thunnus obesus* which also have very long pectorals but with rounded tips. Highly migratory species, Annex I of the 1982 Convention on the Law of the Sea (Ref. 26139).

List of countries | List of FAO areas | List of ecosystems | [-Close window-](#)

Reminder on all pages: Please use the respective "-Close window-" to exit the page. Do not use the browser's X button.

[Native range](#) | [Suitable habitat](#) | [PointMap](#) | [Year 2050 range](#)



Data sources: GBIF, OBIS

<p>Relative likelihood of occurrence</p> <ul style="list-style-type: none"> 0.80 - 1.00 0.60 - 0.79 0.40 - 0.59 0.20 - 0.39 0.01 - 0.19 	<p>Explore range map</p> <p>Explore all suitable habitat</p> <p>Explore point map</p> <p>Show mapping parameters</p> <p>Create your own map</p> <p>Before-after Map</p> <p>Seasonal Map</p>	<p>Download data (as csv)</p> <p>About AquaMaps</p> <p>Comments & Corrections</p> <p>Rate this map</p>	<p>-Close window-</p> <p>Session no. 16</p>
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The probability of occurrence is graded from highest (red) to lowest (yellow).

Distribution maps

'AquaMaps'.

Example: *Thunnus alalunga* (Bonnaterre, 1788)

For 'AquaMaps', an environmental tolerance profile is made based on point data, but also on depth, salinity, temperature, primary productivity, and its association with sea ice and coastal areas.

Mapping parameters for *Thunnus alalunga* (Albacore) [View graphs](#) | [About AquaMaps](#) | [Download data \(as csv\)](#)
[Close window](#)

Area restrictions:
 FAO Areas: 47, 51, 57, 61, 71, 77, 81, 87 Pelagic: False
 Bounding Box (NSWE): 26-36|25-88

Environmental envelope:

	Min	Pref Min (10th)	Pref Max (90th)	Max
Depth (m)	0	0	90	90
Water temp. (°C) (surface)	21.2	24.5	28.86	33.06
Salinity (psu) (surface)	31.54	34.09	35.58	38.66
Primary Production	0	203	809	1681
Sea Ice Concentration (% cover)	-1	0	0	0
Distance to Land (km)	0	13	203	1074

Cells used for creating environmental envelope n = 0
 Note: Yellow rows will not be used in generating the environmental envelope.

#	Center Lat	Center Long	Depth	Sea Temp.	Salinity	Primary Production	Sea Ice Conc.	Distance to Land
			Surface	Bottom	Surface	Bottom		

AquaMaps (10/2008):
 Standardized distribution maps for currently 9,000 species of fishes, marine mammals and invertebrates.
 AquaMaps is a joint project of FishBase and SeaLifeBase.
[Home](#) | [About AquaMaps](#) | [Tools](#) | [Environmental Data](#) | [Services](#)

Marine Biodiversity Map: click on the map to obtain local species list for that area.

All Sharks & rays Bony fish Invertebrates Deep-sea Marine mammals

Data sources: GBIF, OBIS

Common Name (e.g. blue whale)
 *Species No. 630 - 3150
 127 - 629
 26 - 126
 6 - 25
 1 - 5

Scientific Name (e.g. Balaenoptera)
 Genus (e.g. musculus)
 Species (e.g. musculus)

On the main page of 'AquaMaps' is a Marine Biodiversity Map. A click on the map gives you a species list for that particular area.

Common species in this area [Close window](#) [Advanced users](#) [Page down](#)
 Records 1 - 10 of 887 [Next page](#) [Previous page](#) [Probability](#) 0.2 [Refresh](#) [Species](#) native Potential invasives All

#	Species	Common name	Picture	Map
1	Rhincodon typus	Whale shark		
7	<i>Thunnus alalunga</i>	Albacore		
10	Manta birostris	Giant manta		

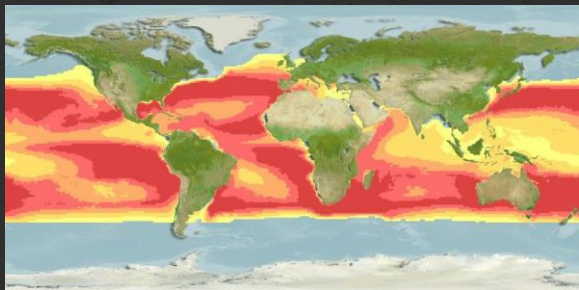
Records 1 - 10 of 887 [Next page](#) [Page up](#)

AquaMaps
 AquaMaps is a joint project of FishBase and SeaLifeBase.
 You clicked here: Latitude = 24.25 Longitude = -75.25 CoarseCode = T207.245.1
 You can also enter your own Latitude | 24.25 Longitude | -75.25
 Search by CoarseCode | T207.245.1 | 0.5 cells
 This cell lies in the ecosystem Caribbean Sea
 This cell contains 937 species for which AquaMaps exist and which have a probability of > 0.2 to occur here
 This represents 61.1% of the 1532 native species with AquaMaps in ecosystem Caribbean Sea

Distribution maps

'AquaMaps'.

Example: *Thunnus alalunga* (Bonnaterre, 1788)



Native range: These are all areas with suitable environmental conditions that fall within the species distributional range known from literature.



Point map: This is an overview of point data originating from collection records (FishBase, IOBIS and GBIF). These were used to generate an environmental tolerance profile.

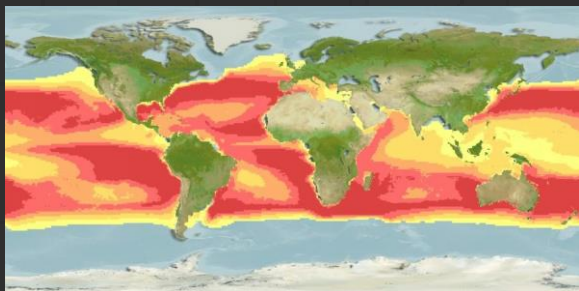
| Native range

| Suitable habitat

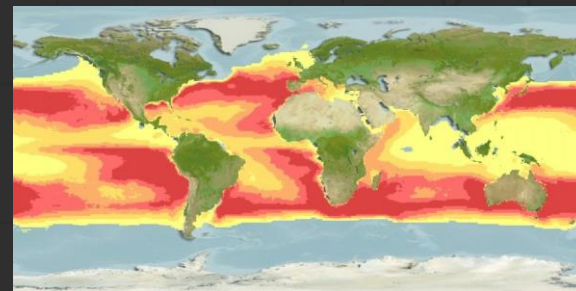
| PointMap

| Year 2050 range

Suitable habitat: These are all possible areas where environmental conditions are suitable for the species to exist.



Year 2050 range: this is a prediction of all possible areas where the species can exist in the year 2050.



Distribution maps

'AquaMaps'.

Example: *Squalus acanthias* Linnaeus, 1758

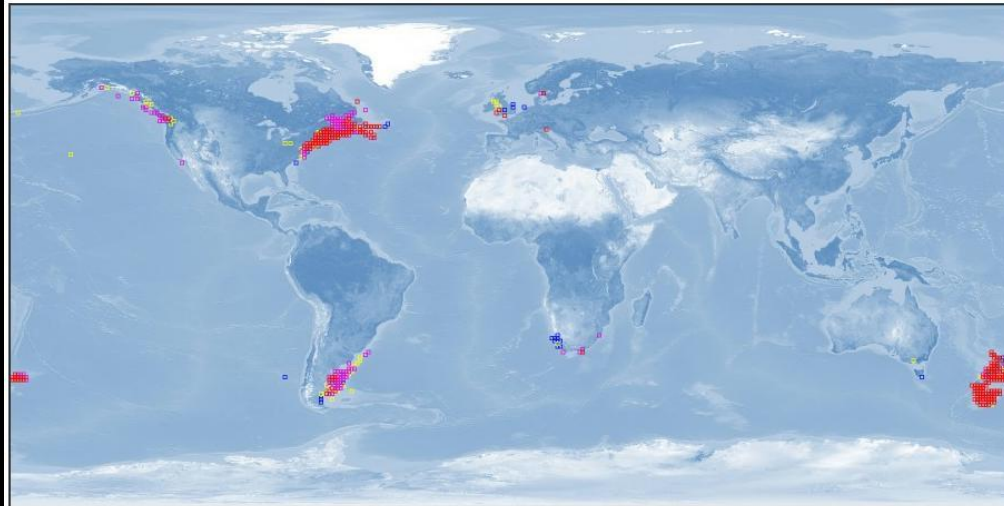
Point Map for *Squalus acanthias*

Western Atlantic: Greenland to Argentina. Eastern Atlantic: Iceland and Murmansk Coast (Russia) to South Africa, including the Mediterranean and Black Sea. Western Pacific: Bering Sea to New Zealand. Reports from off New Guinea are doubtful (Ref. 6871). Eastern Pacific: Bering Sea to Chile.

-Exit Map-
Click on map to see points and environmental data.

Code	Month collected	n
■	Jan-Mar	5892
■	Apr-Jun	4105
■	Jul-Sep	4129
■	Oct-Dec	5037
	Total:	19163

Map: World map/Globe views 4 (grey toned) | Largest size | No mask | Visibility: Bold | Refresh...



Globe / polar views - Quick links (including seamless pan/zoom):
[Poles] [Antarctic](#) | [Arctic](#)
[Continents] [N America](#) | [S America](#) | [Europe](#) | [Africa](#) | [Asia](#) | [Australia](#)
[Oceans] [Atlantic](#) | [N Atlantic](#) | [S Atlantic](#) | [Pacific](#) | [Indian](#)

A seasonal map is available, which is based on point data in time. These point data are colour-coded by season collected.



© Monterey Bay Aquarium

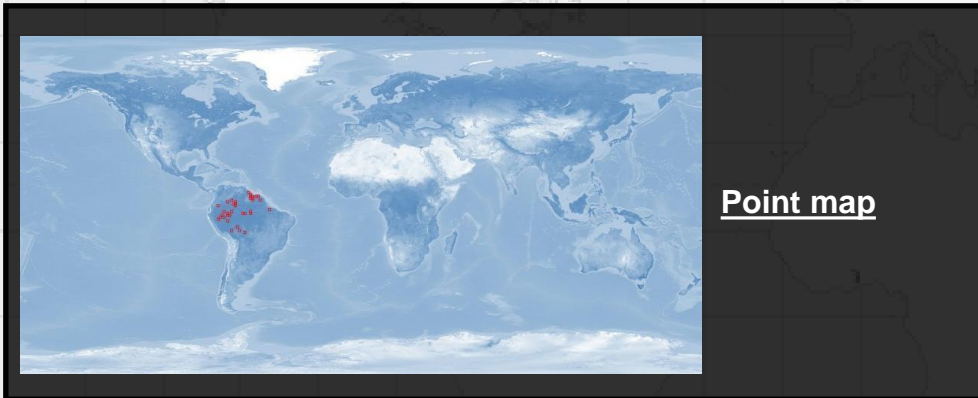
Distribution maps

'Freshwater AquaMaps'.

Example: *Carnegiella strigata* (Günther, 1864)

'Freshwater AquaMaps' is an extension of the model to freshwater ecosystems*.

* Currently for a limited number of species from South America (600), Africa (258), Europe (33) and China (32).



Point map



Native range



Suitable habitat

Mapping parameters for [View graphs](#) | [About AquaMaps](#) | [Download data \(as csv\)](#)
Carnegiella strigata (Marbled hatchetfish) [Close Map Parameters](#)

Area restrictions:
 Basins = Amazon, Guianas Pelagic: False

Environmental envelope:

	Min	Pref Min (10th)	Pref Max (90th)	Max
Elevation	29.12	36.97	223.76	554.31
Mean Annual Temp	23	24	26	27.5
Net Primary Productivity	0.69831252	0.80756247	0.99712497	1.05799997
Soil pH	4.2665	4.7665	5.7665	6.2665
Soil Moisture	26.572	80.546	148.772	212.414
Soil Carbon	4.0335	5.335	8.719	11.233
CTI	1246	1539	2221	2393
Annual Runoff				
Annual Precipitation	106.265	154.93	265.69	306.945

Cells used for creating environmental envelope n = 37
 Note: Yellow rows will not be used in generating the environmental envelope.

#	Center Lat	Center Long	Temperature	Elevation	Soil pH	Soil moisture	Soil carbon	Precipitation	Runoff	CTI	Net Prim Prod
1	-13.75	-61.25	25.25	199.11	5.063	80.905	6.274	3	425	1951	0.773
2	-12.75	-68.75	25	215.84	5.28	95.896	5.715	5	1111	2028	0.925
3	-12.75	-64.25	26.42	134.09	5.412	60.255	7.181	3	502	2041	0.705
4	-10.75	-65.25	26.08	166.28	5.248	74.818	6.371	3	588	1530	0.698
5	-7.75	-70.25	25.67	194.42	4.879	121.591	7.64	5	1028	1848	0.970
6	-6.75	-75.75	25.33	554.31	5.505	105.550	5.059	3	33	1981	0.994
7	-5.25	-72.75	26.17	134.7	4.96	141.044	6.81	5	1616	2144	0.969
8	-5.25	-74.75	26.42	119.36	4.969	113.112	7.045	5	121	1539	0.933
9	-4.75	-73.75	26.25	114.58	5.378	142.724	7.834	6	245	2124	0.935
10	-4.25	-68.75	25.75	80.84	4.9	144.513	7.085	6	2867	1750	0.976

The parameters used to generate these 'AquaMaps' include elevation, temperature and soil characters (pH,...).

Distribution maps

'Freshwater AquaMaps'

Example: *Synodontis obesus* Boulenger, 1898

