

Black Sea Non-Native Fish List



Black Sea Commission Publication
Compiled by Maria Yankova

States	Authors/Contributors
Bulgaria	Maria Yankova, Violin Raykov, Petya Ivanova
Georgia	Revaz Diasamidze, Marina Mgeladze
Romania	Gheorghe Radu, Simion Nicolaev
Russian Federation	Stanislav Agapov, Maria Grinchenko
Turkey	Muammer Oral, Ertuğ Düzgüneş, Bayram Öztürk, Levent Bat
Ukraine	Evgeniya Karpova, Vladislav Shlyakhov, Alexander Boltachev

Authors Names and Organization		<u>email</u>
Maria Yankova	Institute of Fishing Resources, Varna, Bulgaria	maria_y@abv.bg
Violin Raykov	Institute of Oceanology, Varna, Bulgaria	vio_raykov@abv.bg
Petya Ivanova	Institute of Oceanology, Varna, Bulgaria	pavl_petya@yahoo.com
Marina Mgeladze	Water Ecology and Fisheries Laboratory, Black Sea Monitoring Center, National Environmental Agency, Georgia	mari.mgeladze@gmail.com
Revaz Diasamidze	Black Sea Monitoring Center, National Environmental Agency, Georgia	revaz-diasamidze@mail.ru
Gheorghe Radu	National Institute for Marine Research and Development, Constanta, Romania	gpr@alpha.rmri.ro
Simeon Nicolaev	National Institute for Marine Research and Development, Constanta, Romania	nicolaev@alpha.rmri.ro
Stanislav Agapov	Azov Sea Institute of Fishery Problems Rostov na Don, Russian Federation	riasfp@aanet.ru
Maria Grinchenko	Azov Sea Institute of Fishery Problems Rostov na Don, Russian Federation	riasfp@aanet.ru
Muammer Oral	Istanbul University, Faculty of Fisheries, Marine Biology Department, Istanbul, Turkey	oral@istanbul.edu.tr
Bayram Öztürk	Istanbul University, Istanbul, Turkey	ozturkb@istanbul.edu.tr
Levent Bat	Fisheries Faculty of Sinop University, Sinop, Turkey	leventbat@gmail.com
Ertüğ Düzgüneş	Karadeniz Technical University, Faculty of Marine Science, Department of Fisheries, Trabzon, Turkey	ertugduzgunes@gmail.com ,
Evgeniya Karpova	Institute of Biology of Southern Seas NAS Ukraine IBSS, 2, Nakhimov ave., Sevastopol Ukraine	karpova_je@mail.ru
Vladislav Shlyakhov	Pivden NIRO Institute, Kerch, Ukraine	vladshlyahov@rambler.ru
Alexander Boltachev	Institute of Biology of Southern Seas NAS Ukraine IBSS, 2, Nakhimov ave., Sevastopol Ukraine	a_boltachev@mail.ru

CONTENTS

	Pictures of Black Sea non- native fish	5-11
	Black Sea non- native fish list	12-14
	References	15-16

Abbreviations used:

-  BS states: **BG**- Bulgaria; **GE**- Georgia; **RO**- Romania; **RU**- Russian Federation; **TU**- Turkey; **UA**- Ukraine
-  **NA** - North America, **NE** - North Europe, **AO** - Atlantic Ocean, **MS** - Mediterranean Sea, **PO** - Pacific Ocean, **IO** – Indian Ocean, **EW** - European water bodies, **Co** – Cosmopolitan, **SE** - South-Eastern Asia, **Au** – Australia, **Af** - African water bodies, **CS** - Caspian Sea, **BS** - Black Sea

Each species description includes the following information:

- Names: full scientific name, common names in English;
- Taxonomy: family, order;
- Year of the first occurrence in national waters;
- Place of the first occurrence in national waters;



1. *Carassius gibelio* (Bloch, 1782)

English: Prussian carp

Family: Cyprinidae

Order: Cypriniformes



2. *Gambusia holbrooki* (Girard, 1859)

English: Eastern mosquitofish

Family: Poeciliidae

Order: Cyprinodontiformes



3. *Gobius cruentatus* Gmelin, 1789

English: Red-mouth Goby

Family: Gobiidae

Order: Perciformes



4. *Gobius xanthocephalus* Heymer et Zander, 1992

English: Yellow headed goby
Family: Gobiidae
Order: Perciformes



5. *Millerigobius macrocephalus* (Kolombatovič, 1891)

English: Large-headed Goby
Family: Gobiidae
Order: Perciformes



6. *Tridentiger trionocephalus* Gill, 1859

English: Chameleon goby
Family: Gobiidae
Order: Perciformes



7. *Pomatoschistus bathi* Miller, 1982

English: Bath's goby
Family: Gobiidae
Order: Perciformes



8. *Heniochus acuminatus* (Linnaeus, 1758)

English: Pennant coralfish
Family: Chaetodontidae
Order: Perciformes



9. *Lepomis gibbosus* (Linnaeus, 1758)

English: Pumpkinseed
Family: Centrarchidae
Order: Perciformes



10. *Lithognatus mormyrus* (Linne, 1758)

English: Sand steenbras
Family: Sparidae
Order: Perciformes
Picture by Patzner, R.



11. *Morone saxatilis* (Walbaum, 1792)

English: Striped bass
Family: Moronidae
Order: Gadiformes



12. *Liza haematocheila* (Temmnick et Schlegel, 1845)

English: So-iuy mullet
Family: Mugilidae
Order: Mugiliformes



13. *Parablennius incognitus* (Bath, 1968)

English: Pygmy blenny
Family: Blenniidae
Order: Perciformes



14. *Sardinella aurita* Valenciennes, 1847

English: Round sardinella
Family: Clupeidae
Order: Clupeiformes



15. *Sphyraena sphyraena* (Linnaeus, 1758)

English: European barracuda
Family: Sphyraenidae
Order: Perciformes



16. *Sphyraena pinguis* Günther, 1874

English: Red Barracuda
Family: Sphyraenidae
Order: Perciformes



17. *Micromesistius poutassou* (Risso, 1827)

English: Blue whiting
Family: Gadidae
Order: Gadiformes



18. *Syngnathus acus* Linnaeus, 1758

English: Greater pipefish
Family: Syngnathidae
Order: Syngnathiformes



19. *Sarpa salpa* (Linnaeus, 175)

English: Salema
Family: Sparidae
Order: Perciformes



20. *Umbra krameri* Walbaum, 1792

English: European mudminnow
Family: Umbridae
Order: Esociformes

Name of Species	Year of the first occurrence in national waters						Place of the first occurrence in national waters						Cited in	Don or area
	BG	GE	RO	RU	TR	UA	BG	GE	RO	RU	TR	UA		
1. <i>Carassius gibelio</i> (Bloch, 1782)						1987							(Salehova <i>et al.</i> , 1987; Boltachev <i>et al.</i> , 2009)	
2. <i>Gambusia holbrooki</i> (Girard, 1859)						2003			Danube Delta			Crimea: Sevastopol Bay	Manea, 1985; Aleksandrov <i>et al.</i> , 2007; TDA, 2007	NA
3. <i>Gobius cruentatus</i> Gmelin, 1789					2006	2002					BS coastal zone	Coast of Turkey; Bays of Sevastopol near Sevastopol Gulf	Engin <i>et al.</i> , 2007; Boltachev <i>et al.</i> , 2009	AO, MS
4. <i>Gobius xanthocephalus</i> Heymer et Zander, 1992 (initially identified as <i>Cabotia schmidtii</i> de Buen, 1930)		2000s				1967		Coast of Abkhazia				Coastal Zone of the Crimea	Boltachev <i>et al.</i> , 2009	AO, MS
5. <i>Millerigobius macrocephalus</i> (Kolombatovič, 1891)						2009						Crimea: Sevastopol Bay	Boltachev <i>et al.</i> , 2010	MS
6. <i>Tridentiger trigonocephalus</i> Gill, 1859						2006						Sevastopol Gulf	Boltachev, A and Karpova, E. 2010; Muammer Oral, 2010	PO
7. <i>Pomatoschistus bathi</i> Miller, 1982						2000						Crimea coast near Sevastopol	Boltachev, A and Karpova, E. 2010	MS

	Year of the first occurrence in national waters						Place of the first occurrence in national waters						Cited in	Don or area
	BG	GE	RO	RU	TR	UA	BG	GE	RO	RU	TR	UA		
8. <i>Heniochus acuminatus</i> (Linnaeus, 1758)						2003						Crimea (Balaklava Bay)	Boltachev and Astachov, 2004;	
9. <i>Lepomis gibbosus</i> (Linnaeus, 1758) fresh									Danube Delta			Danube Delta	Busnita, 1929; Aleksandrov <i>et. al.</i> , 2007; TDA, 2007	NA
10. <i>Lithognathus mormyrus</i> (Linnaeus, 1758)			1980						Shelf area				Stanciu and Ilie, 1980; TDA, 2007	AO, MS
11. <i>Morone saxatilis</i> (Walbaum, 1792)		1965		+		1965		Coastal zone				NWBS: Dniester liman	Zaitsev and Öztürk, 2001; Aleksandrov <i>et. al.</i> , 2007; TDA, 2007	NA
12. <i>Liza haematocheila</i> Temmnick et Schlegel, 1845		1975	1975		1992	1968	Shelf area	Shelf area	Shelf area	Shelf area	Shelf area	NWBS limans, Molochny liman in SA	Aleksandrov <i>et. al.</i> , 2007; TDA, 2007	PO
13. <i>Parablennius incognitus</i> (Bath, 1968)						2002						Crimea coast near Sevastopol	Boltachev <i>et al.</i> , 2009	AO, MS
14. <i>Sardinella aurita</i> Valenciennes, 1847					1997	1999						Crimea: Balaklava Bay	Aleksandrov <i>et. al.</i> , 2007	AO, PO
15. <i>Sphyraena sphyraena</i> (Linnaeus, 1758)			1905			1905	Coastal area		Coastal waters		Bosporus region	Odessa coast	Boltachev, 2009	AO

Name of Species	Year of the first occurrence in national waters						Place of the first occurrence in national waters					Cited in	Don or area	
	BG	GE	RO	RU	TR	UA	BG	GE	RO	RU	TR			UA
16. <i>Sphyraena pinguis</i> Günther, 1874						1999						Balaklava Bay	Boltachev and Yurakhno, 2002	PO
17. <i>Micromesistius poutassou</i> (Risso, 1827)						1999						Cape Aiya	Boltachev <i>et al.</i> , 1999	AO
18. <i>Syngnathus acus</i> Linnaeus, 1758					2006	2006					BS coastal zone	River mouth of Chernaya river	Boltachev <i>et al.</i> , 2009	AO
19. <i>Sarpa sarpa</i> (Linnaeus, 1758)					1998	1999					Sinop-Samsun rocky, vegetation	Crimea	Bat, L., Erdem, Y., Ustaoglu, S., Yardim, Ö., Satilmis, H., 2005	AO, MS
20. <i>Umbra krameri</i> Walbaum, 1792	2010												Raykov V. <i>et al.</i> , 2010	EW

References:

- Aleksandrov B., Boltachev A., Kharchenko T., Liashenko A., Son M., Tsarenko P., Zhukinsky V. Trends of aquatic alien species invasion in Ukraine. Aquatic Invasions, The European Journal of Applied Research on Biological Invasions in Aquatic Ecosystems, 2007, Vol. 2, Issue 3., 215-242p.*
- Bat, L., Demirci G. G., Öztürk, M., 2006. Occurrence of *Apletodon dentatus bacescui* (Murgoci, 1940) (Gobiesocidae) and *Coryphoblennius galerita* (Linnaeus, 1758) (Blenniidae) at the central Black Sea coast of Turkey. *Black Sea/ Mediterranean Environment*, 12 (1), 59-65.*
- Bat, L., Erdem, Y., Ustaoglu, S., Yardim, Ö., Satılmış, H., 2005. A Study on the Fish of the Central Black Sea Coast of Turkey. *J.Black Sea /Mediterranean Environment*. 11(3): 287-302.*
- Bat, L., Erdem, Y., Ustaoglu-Tirul, S., Yardim, Ö., 2008. Balık Sistematiği (Fish Systematic). Nobel Yayın Dağıtım Ltd. Şti., Ankara, Nobel Yayın No: 1330, ISBN 978-605-395-127-8, 1. Baskı, XVIII, 270 p. (In Turkish).*
- Black Sea Transboundary Diagnostic Analysis.- May, 2007, 227pp.*
- Boltachev A.R. and Yurakhno V.M.2002. New evidences of the Black Sea ichthyofauna mediterraneanization. *Voprosy ichtiologii*. T. 42, No 6., 744-750 p. (in Russian).*
- Boltachev A.R., Astakhov D.A. 2004. Neobychnaya nakhodka dlinnoperoi vypel'noi ryby-babochki *Heniochus acunimatus* (Chaetodontidae) v Balaklavskoi bukhte (Sevastopol', yugo-zapadnyi Krym). *Vopr. Ikhtiologii* T. 44. №. 6. S. 853–854 (in Russian).*
- Boltachev A.R. 2009. Specifying species belonging of Barracuda of Group *Sphyraena obtusata* (Pisces: Sphyraenidae) found in the Black Sea. *Voprosy Ikhtiologii*.Vol. 49, No. 1., 135-137p.*
- Boltachev, A.R., Karpova, E.P. and Danilyuk, O. N. 2009. Findings of new and rare fish species in the coastal zone of the Crimea (the Black Sea). *J. Ichthyology* 49: 277–291.*
- Boltachev A.R., Karpova E.P., Machkevsky V.K. 2010. The naturalization of Miller's goby *Millerigobius macrocephalus* (Perciformes, Gobiidae) in the Sevastopol bay. *Marine Ecological Journal*. T. 9, No 1., 32p. (in Russian).*

Boltachev A.R., Karpova E.P. 2010. Bath's goby Pomatoschistus bathi (Perciformes, Gobiidae) is the new species for the ichthyofauna of the Crimean Black Sea coastal zone. Marine Ecological Journal. T. 9, No 2, 57p. (in Russian).

Busnita T., Pescaria si Piscicultura, nr. din Sept. 1929.

Engin S., Turan D., Kovacic M. 2007. First Record of the Red Mouthed Goby, Gobius cruentatus (Gobiidae), in the Black Sea.. Cybrim, T.31, 87-88p.

Manea Gh., 1985. Acclimatization of New Species of Fish and Other Aquatic Organisms. Ceres Publishing House, Bucharest.

Muammer Oral, 2010. Alien fish species in the Mediterranean- Black Sea Basin, J. Black Sea/Mediterranean Environment Vol. 16(1):87-132.

Raykov V., Panayotova M., Ivanova P., Dobrovolov, I. Maximov V. 2010. First discovery of European mud-minnow Umbra krameri WALBAUM, 1792 (Pisces: Umbridae) in the Black Sea. Comptes rendus de l'Academie bulgare des Sciences (in press).

Salehova L.P., Kostenko N.S., Bogachik T.A., Minibaeva O.N.1987. The composition of fish fauna in the area of Karadag State Reserve (Black Sea). Journal of Ichthyology, 27., Issue 6, 898-905p.(in Russian).

Stanciu M., Ilie G. Lithognatus mormyrus, a new species of Sparidae at the Romanian littoral // Pontus Euxinus, Studii si cercetari CSMN-Constanta, 1980. No 1,107-110 p.

Zaitsev Yu. and Öztürk B. (Eds), 2001. Exotic species in the Aegean, Marmara, Black, Azov and Caspian Seas. Published by Turkish Marine Research Foundation. Istanbul, Turkey, 267 pp.