

Chapter 7

Geographic and Ecological Information Model—“Portrait” of the Black Sea Kerch Strait

The great tragedy of the classic of the ancient drama Aeschylus *Prometheus Bound* created at the turn of the VI–V centuries BC tells a touching story of love of the lord of all elements Zeus and daughter of Greek king Inachus beauty Io, maiden of Zeus' wife Hera. According to myth, to hide dalliance from his jealous spouse, Thunder-Bearer transformed the passion into a white heifer. But Hera was not fooled. She demanded the heifer as a present and charged one hundred-eyed giant Argus to guard the heifer. However, the powerful lord of gods did not like this. He commanded Hermes to kill the guardian that has been done; Hermes cut off the head of Argos by crescent. After this action, eyes of the giant spread all over his body, began to dim, but Hera appeared here with flock of white peacocks, scattered carefully their rests on tails of birds. People say that since then peacocks have such spotted “big-eyed” tails. Hera then forced Io to wander the earth without rest, plagued by a big gadfly to sting her into madness. Escaping from the gadfly, in the mountains of Tauris she met Prometheus chained on the rock. He told her the escapement pathway to Egypt via the Cimmerian Bosphorus known now as the Kerch Strait:

Next, just at the narrow portals of the harbor, you shall reach the Cimmerian isthmus. This you must leave with stout heart and pass through the channel of Maeotis; and ever after among mankind there shall be great mention of you passing, and it shall be called after you the Bosphorus.

Translated by H.W. Smyth

In Greek, *Bosporus* means “the passage of the cow”. According to other version of the unknown author lived in the IV century BC, an origin of such name of the Kerch Strait is not so romantic. As it happens, the ancient myths kept a “dossier” of thievish titan Helios, who chose this area of Taurida (from a word “Taurus” that means bull) for his residence and simple hobby. According to the ancient tradition, he owned uncounted herds of bulls, constantly recruiting them by animals stolen at local tribes. One fine day, running from a chase on the back of just stolen bull, Helios has understood that this time he had no chance to escape.

Photo 7.8 Eelgrass *Zostera marina* is a typical representative for bottom landscapes of the central part of the Kerch Strait between the Tuzla and Chushka Spits (www.algascbase.org)



Photo 7.9 Barnacles *Balanus improvisus*



7.3.3 Fishery Characteristic of the Strait

The main fish species met in the Kerch Strait zone permanently or periodically include: goby (16 species in the Sea of Azov), Azov shad, Black Sea shad, striped mullet, golden mullet, small scad, goatfish, Azov turbot, flounder, kilka, and zander. The life cycle features of the most abundant fishes are presented in Table 7.7.

In summer, the occurrence of increased concentrations of anchovy adults in the Kerch Strait and near-strait zone is 30%, that of eggs is 50%, and their larvae is met here in 50–70% of cases (Fashchuk et al. 1995).

Table 7.7 Biological state and behavior of main commercial fishes of the Kerch Strait throughout the year

Object	Season			
	Spring	Summer	Autumn	Winter
Goby	Migration to the coast for spawning in late March–early April ($T_w = 10^\circ\text{C}$). Biomass is 20–60 kg/ha	From July to August (until November) adults and fingerlings feed in the zone of Port Krym–Port Kavkaz, Kerch Bay, SW coast of the strait	Feeding in the coastal zone of the strait until November. Then, migration to the deeper areas of the Sea of Azov	Wintering in the Sea of Azov, mainly outside the strait zone
Azov anchovy	In April ($T_w = 9\text{--}11^\circ\text{C}$) within 20 days adults migrate through the strait as sparse shoals from wintering grounds in the Black Sea into the Sea of Azov for feeding and spawning. In May–June they are followed by juveniles	Until late July, spawning and feeding in the Sea of Azov outside the strait zone at $T_w = 18\text{--}26^\circ\text{C}$ In July–September juveniles began to migrate back into the Black Sea	In September–November juveniles migrating into the Black Sea are joined by adults. Some shoals stay in the strait for more than a month. Under sharp cooling migrations are more active	Wintering in the eastern Black Sea outside the strait zone
Stripped mullet	In the middle of March fish enter the strait from the Black Sea, and in late April–early May mass migrations of shoals through the strait into the Sea of Azov for feeding is observed. In May–June adults leave the strait for spawning in the Black Sea	In July–September juveniles feed in the strait and Sea of Azov. Spawning of adults in the Black Sea outside the strait zone	In September juveniles and fingerlings migrate from the strait and Sea of Azov into the Black Sea for wintering.	Wintering in bays of the North Caucasus outside the strait zone
Golden mullet	In mid-March–early May fish migrate into the strait from the Black Sea side for feeding. In May–June adults leave the strait (until September) for spawning in the Black Sea	Feeding in the strait and Sea of Azov. In August–September adults leave the strait. From the second half of August (until November) fingerlings stay in the strait	In October–November immature individuals migrate from the strait into the Black Sea ($T_w = 12.4\text{--}16^\circ\text{C}$)	Wintering in the Black Sea in bays of the Crimea outside the strait zone

(continued)

Table 7.7 (continued)

Object	Season			
	Spring	Summer	Autumn	Winter
Azov shad, Black Sea (Kerch) shad	From the middle, maximally from the end, of March-early April fish migrate into the strait from the Black Sea at $T_w = 4-5^\circ\text{C}$ and higher. Large individuals enter the strait from early March to early May, and small individuals, from late March to late May	Feeding in the Sea of Azov until July. In late July the back migration of small forms through the strait into the Black Sea begins	Migration of large individuals into the Black Sea through the strait	Wintering in the Black Sea outside the strait zone