

A New Grey Mullet Species “*Mugil so-iuy* Basilewsky” (Teleostei: Mugilidae) From the Aegean Coast of Turkey

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Abstract: *Mugil so-iuy* is a freshwater fish living in Amu Darya River Basin, Far East Asia. It was first introduced to the area around the Sea of Azov for fish farming but, then migrated to the Black Sea, and from there to the Sea of Marmara. The present study is the first report from the Aegean Sea. Morphometrical and meristic characteristics of the two specimens caught are described.

Key Words: *Mugil so-iuy*, Russian grey mullet, Far East Pelingas.

Türkiye'nin Ege Sahillerinden Yeni Bir Kefal Balığı Türü “*Mugil so-iuy* Basilewsky” (Teleostei: Mugilidae).

Özet: Asya'nın Uzakdoğu Amur Havzası'nda bir tatlısu balığı olan ve sonradan Azak Denizi yakınlarına yetiştiricilik amacı ile getirilen *Mugil so-iuy* türü, önce Karadeniz'e daha sonra ise Marmara denizine göç yapmıştır. Bu çalışmada ilk kez Ege Denizi'nden rapor edilmekte ve yakalanan 2 örneğin bazı morfometrik ve meristik karakterleri verilmektedir.

Anahtar Sözcükler: *Mugil so-iuy*, Rus kefali, Pelingas.

Introduction

Until the beginning of the present decade, the only known Mugilidae members of the Turkish marine fish fauna were *Chelon labrosus*, *Liza aurata*, *Liza carinata*, *Liza ramada*, *Liza saliens*, *Mugil cephalus* and *Odeachilus labeo* (1-12). Unsal (13) reported the first occurrence of a new species, *M.so-iuy*, from the northeastern Black Sea coast of Turkey.

M.so-iuy, which is known locally named as "Pelingas" or "Russian grey mullet" by Turkish fishermen, is in fact a freshwater fish originating from Amu Darya River Basin in Far East Asia (14). This species was later introduced to the Sabolat (Hacıbey) Lagoon, 60 km from Odessa in the northeastern Black Sea. However, during the 1970s, these introduced specimens died out and an additional 400 specimens were introduced to the Molochny Lagoon in the Sea of Azov, but there was mass mortality in 1976-1977. In the same years, 1000 more specimens were introduced to the same lagoon, only 50 % of which were successful in acclimating to the region. In 1985, a number of *M.so-iuy* fry were released into the Sea of Azov. A large stock of *M.so-iuy* (several tons) was released into the Sea of Azov in the latter part of 1989 and the early part of 1990, after the advent of heavy mortalities observed in both of the breeding areas in the lagoon (13).

The Russian grey mullet found a suitable environment on the eastern Black Sea coast of Turkey, after leaving the Sea of Azov and following the northeastern coast of the Black Sea. Although this species is known to migrate towards rivers in winter, no such migration was observed on the eastern Black Sea coasts of Turkey (13). In time, the species migrated to the west, reaching the Sea of Marmara via the Bosphorus, and from there to coasts of the western Anatolia via the Dardanelles (Figure 1).

It was thought that the specimens sold in the fish markets of Izmir in the second half of 1995 and during 1996 were brought from the Black Sea, but later it was understood that some of these had been caught by local fishermen.

Material

The first specimen of *M.so-iuy* was caught in Homa Lagoon, which is managed by the Fisheries Faculty, Ege University; the second was obtained from local fishermen in Foca (Figure 1).

Results

The head is small and flattened dorsally (Figure 2). Maxillae protractile. The jaws, vomer and palatine are

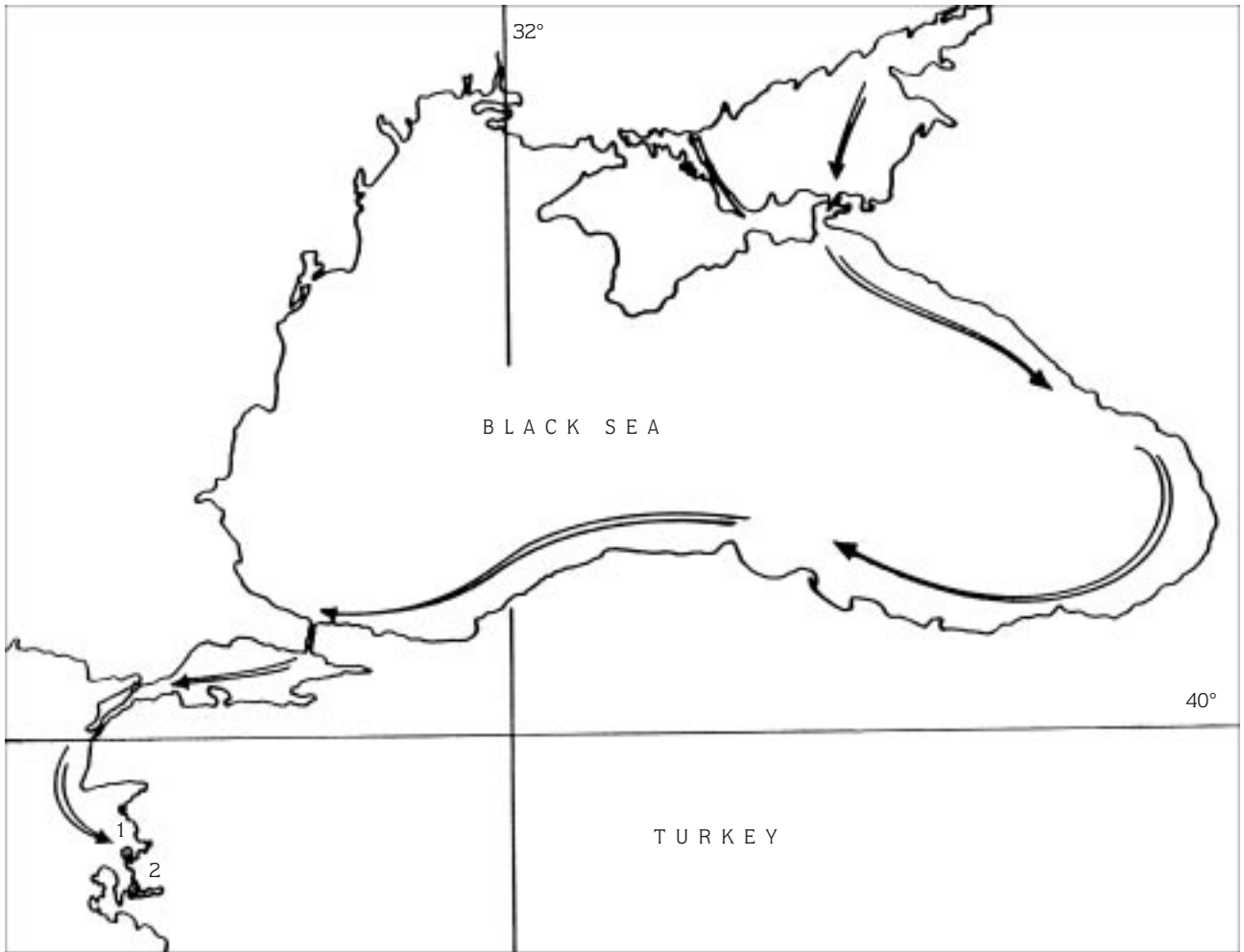


Figure 1. The probable migration of *M.so-iuy* to the Aegean Sea and the points where the two specimens were caught: 1–Foça and 2–Homa Lagoon.



Figure 2. *M.so-iuy* Basilewsky.

without dentition; small teeth are present only on the arch of the tongue. The body scales are present especially pre and postorbital on the head. Suborbital without scales.

A total of 6 pyloric caeca in a single group, all of approximately equal length (Figure 3). This character easily differentiates this species from some other grey mullets (5 and 15).

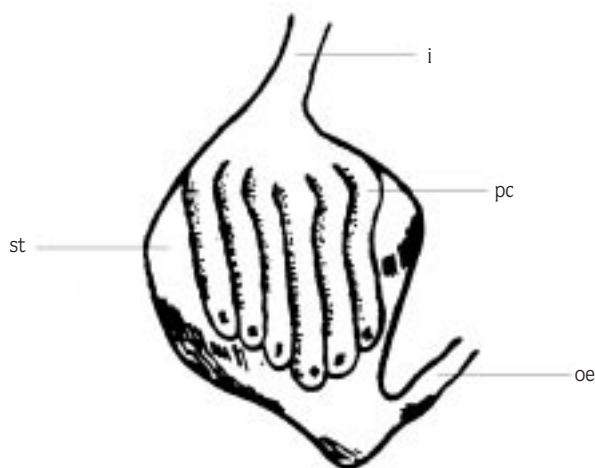


Figure 3. The shape of the pyloric caeca of *M. so-iuy*: i-Intestine, pc-pyloric caeca, oe-oesophaga, st-stomach.

The color pattern of the dorsal is green-gray or greenish-brown, the flanks lighter colored and the ventral pink-white. Both of the dorsal fins are blackish, the anal fin and ventrals with yellow pigments.

The two *M. so-iuy* specimens caught in the Aegean Sea were quite similar to other Mugilidae members in terms of general appearance. However, the red-orange pigmentation of the iris surrounding the lens, the large

scales similar to those of a carp, wide pectoral fins and the relatively slight fork in the tail fin easily distinguish them from the other mugilids.

Some of the morphological and meristic characteristics of the two specimens are given below (Table 1).

Table 1. Some morphometric and meristic characteristics of the two *M. so-iuy* specimens.

Morphometric and meristic characters	Specimen (1)	Specimen (2)
Total Length	550.20 mm	453.18 mm
Standard Length	478.67 mm	378.55 mm
Body Height	90.30 mm	65.00 mm
Head Length	115.00 mm	97.00 mm
Preorbital Length	22.00 mm	23.29 mm
Eye Diameters	20.00 mm	18.26 mm
First dorsal fin	IV	IV
Second dorsal fin	1.8	1.8
Anal fin	1.8	1.9
Pelvic fin	1.5	1.5
Pectoral fin	1.14	1.14
Longitudinal number of scale series	45 (±2)	45 (±2)

M. so-iuy is a eurybiontic, eurythermal and euryhaline species. It grows very rapidly (16).

The migration and acclimation of this species to the Aegean Sea is a positive asset in terms of its commercial importance. We believe that this species will become an alternative source for pisciculture in the Aegean region.

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