A new maximum length for the grey triggerfish, *Balistes capriscus* Gmelin, 1789 (Pisces: Balistidae) from the Adriatic Sea

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One specimen of the grey triggerfish, *Balistes capriscus* Gmelin, 1789, was caught in the vicinity of the Prigradica, island Korčula in the eastern Adriatic, along the Croatian coast. Its total length was 525.0 mm, the maximum observed length for the Adriatic Sea.

Key words: maximum length, *Balistes capriscus*, Adriatic Sea

INTRODUCTION

Maximum length and age are important theoretical parameters in fisheries science. Directly or indirectly, these measurements enter in most models used in stock assessments. Therefore, updating information about the maximum size of a species that might be commercially or recreationally exploited in the future is important.

The grey triggerfish, *Balistes capriscus* Gmelin, 1789, occurs on reefs and in open waters in tropical and subtropical seas, chiefly over rocky bottoms at 10-100 m. It is common in the Mediterranean Sea and on both sides of the Atlantic from the North Sea to Angola and from Nova Scotia to Argentina (TORTONESE, 1986) but rare in the Black Sea. The species occurs in the Adriatic Sea, especially in its southern part (JARDAS, 1983, 1996; PALLAORO, 1988. In warm years, it may also be found in the northern Adriatic (PALLAORO, 1988; DULČIĆ & LIPEJ, 1997). The grey triggerfish has recently became more abundant in the Adriatic, due to climatic and
hydrographic changes (DULČIĆ et al., 1999). Hence, the grey triggerfish has potential to become an important fishery resource in the Adriatic.

Data on the biology and ecology of the grey triggerfish in the Adriatic Sea are scarce. DULČIĆ et al. (1997) published data on the occurrence of grey triggerfish fingerlings in Croatian waters in the eastern Adriatic.

In this communication, we present new data on the maximum recorded length and body measurements for grey triggerfish from the Adriatic Sea.

MATERIAL AND METHODS

One grey triggerfish specimen was caught in the vicinity of Prigradica, Korčula Island on the Croatian coast in the eastern Adriatic (Fig. 1) by bottom trawl at depth of approx. 50 m on January 7, 2005.

Fig.1. The grey triggerfish (total length = 525.0 mm)
The specimen was measured to the nearest millimeter and weighed to the nearest gram. Meristic characters considered were dorsal, anal, and pectoral fin rays and number of scales in the longitudinal line according to RANDALL et al. (1987). The specimen is deposited in the Ichthyological Collection of the Institute of Oceanography and Fisheries in Split.

RESULTS AND DISCUSSION

The morphometric and meristic characters of the specimen closely correspond with those reported by BINI (1968) and DULČIĆ et al. (1997; Table 1). The total length was 525.0 mm (Fig. 2).

Table 1. Morphometric (mm) and meristic data of the grey triggerfish specimen caught near Korčula Island in the eastern Adriatic

<table>
<thead>
<tr>
<th>Character</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length</td>
<td>525.0</td>
</tr>
<tr>
<td>Fork length</td>
<td>451.0</td>
</tr>
<tr>
<td>Standard length</td>
<td>400.0</td>
</tr>
<tr>
<td>Predorsal length</td>
<td>115.8</td>
</tr>
<tr>
<td>Preanal length</td>
<td>211.4</td>
</tr>
<tr>
<td>Preventral length</td>
<td>151.6</td>
</tr>
<tr>
<td>First dorsal fin, length</td>
<td>87.6</td>
</tr>
<tr>
<td>Second dorsal fin, length</td>
<td>133.0</td>
</tr>
<tr>
<td>Anal fin, length</td>
<td>110.5</td>
</tr>
<tr>
<td>Pectoral fin, length</td>
<td>51.9</td>
</tr>
<tr>
<td>Body depth (max)</td>
<td>189.5</td>
</tr>
<tr>
<td>Body depth (min)</td>
<td>41.2</td>
</tr>
<tr>
<td>Head length</td>
<td>103.9</td>
</tr>
<tr>
<td>Ocular diameter</td>
<td>15.9</td>
</tr>
<tr>
<td>Preorbital length</td>
<td>90.4</td>
</tr>
<tr>
<td>Postorbital length</td>
<td>11.0</td>
</tr>
<tr>
<td>First dorsal fin rays (D1)</td>
<td>II</td>
</tr>
<tr>
<td>Second dorsal fin rays (D2)</td>
<td>27</td>
</tr>
<tr>
<td>Anal fin rays (A)</td>
<td>25</td>
</tr>
<tr>
<td>Pectoral fin rays (P)</td>
<td>14</td>
</tr>
<tr>
<td>Scales</td>
<td>54</td>
</tr>
</tbody>
</table>
Previously, the maximum reported total length in this distribution area was 600.0 mm (HARMELIN-VIVIEN & QUÉRO, 1990). ŠOLJAN (1975) & MILIŠIĆ (1994) suggest TL=40.0 cm, while JARDAS (1996) suggests TL=45.0 cm as the possible maximum total length for B. capriscus in the Adriatic Sea. According to this data, we are able to state that observed total length from this study is a new maximal length for the grey triggerfish in the Adriatic Sea. Observed fork length in this study is FL=451 mm, while BERNARDES (2002) reported maximum observed fork length FL=410 mm for the southeastern Brazilian coast (Sao Paulo). JOHNSON & SALOMAN (1984) observed maximum fork length FL=561 mm for the Gulf of Mexico. Standard length SL=400 mm from this study is identical to those reported for the whole distribution area of this species (TORTONESE, 1986). This specimen proves that this species can grow above the maximum lengths considered previously.

The weight of the specimen from this study is 2057 g. Maximal published weight, for the whole distribution area, was 6150 g (IGFA, 2001), while for the Adriatic Sea was 1000 g (MILIŠIĆ, 1994).
REFERENCES


IGFA, 2001. Database of IGFA angling records until 2001. IGFA, Fort Lauderdale, USA.


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Nova maksimalna duljina kostoroga, *Balistes capriscus* Gmelin, 1789 (Pisces: Balistidae) ulovljenog u jadranskom moru

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SAŽETAK

U blizini Prigradice, otok Korčula u istočnom dijelu Jadrana, na hrvatskoj obali ulovljen je jedan primjerak kostoroga, *Balistes capriscus* Gmelin, 1789. Ukupna duljina kostoroga iznosila je 525.0 mm, što je maksimalna zabilježena duljina u Jadranskom moru.

**Ključne riječi:** maksimalna duljina, *Balistes capriscus*, Jadransko more
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