

Growth and Feeding of Juvenile Golden Grey Mullet, *Liza aurata* (Risso, 1810) in the Neretva River Mouth

Vlasta BARTULOVIĆ¹, Alexis CONIDES², Davor LUČIĆ³, Nenad JASPRICA³,
Branko GLAMUZINA¹

¹University of Dubrovnik, Department of Aquaculture, Ćira Carića 4, 20000 Dubrovnik, Croatia
(e-mail: vlasta@unidu.hr)

²Hellenic Centre for Marine Research, Agion Kosmas, 16604 Athens, Greece

³University of Dubrovnik, Institute for Marine and Coastal Research, Kneza Damjana Jude 12, 20000 Dubrovnik, Croatia

Abstract

Juveniles of golden grey mullet, *Liza aurata* were sampled from May 2003 until April 2004, at the mouth of the Neretva river using beach seine and „špurtilo“. Total of 642 individuals were collected, their standard, total length and weight were measured, while the stomach contents were analyzed. Recruitment of juveniles was from October to January, length-weight relationship shows negative allometric growth ($b=2,384$). Harpacticoida dominated as prey item, having been representative in 90% of all samples. The percentage of Insecta significantly increased in March (46%). Nematodes were present in percentages from 3 to 8% from January to March, and other groups were present only sporadically. The most frequent prey was Harpacticoida group, in the period from October to December with a value of 100%. In January they constituted 92,68% and in February 92,59% of stomach content. Insecta were the most frequent prey in March (75%). Empty stomachs were recorded in December and February. Gammaridae were frequent in December (70%) and Nematodes in January (39,02%). Frequency of other prey was less than 20%. Plant material was present in 13% of individual stomachs in January, 3% in February, 10% in March, although among the analyzed samples there were individuals larger than 25 mm. Amount of plant material in stomachs was higher in November and December, 40% and 45% respectively. Plant material, especially diatoms, appeared in fish measuring 22 mm in total length, in lesser amount and sporadically. In juveniles measuring more than 25 mm in standard length, plant material and sand dominated. Benthic diatoms dominated in plant material found in stomachs of juveniles golden grey mullet.

Key words: golden grey mullet, *Liza aurata*, growth, feeding, Neretva estuary

sa2008_a0603

Rast i prehrana mlađi cipla zlatca, *Liza aurata* (Risso, 1810) na području ušća rijeke Neretve

Vlasta BARTULOVIĆ¹, Alexis CONIDES², Davor LUČIĆ³, Nenad JASPRICA³,
Branko GLAMUZINA¹

¹Sveučilište u Dubrovniku, Odjel za akvakulturu, Ćira Carića 4, 20000 Dubrovnik, Hrvatska,
(e-mail: vlasta@unidu.hr)

²Hellenic Centre for Marine Research, Agion Kosmas, 16604 Athens, Greece

³Sveučilište u Dubrovniku, Institut za more i priobalje, Kneza Damjana Jude 12, 20000 Dubrovnik, Hrvatska

Sažetak

Mlađ cipla zlatca, *Liza aurata* je uzorkovana od svibnja 2003. godine do travnja 2004. godine na širem području ušća Neretve mrežom potegačom i „špurtilom“. Ukupno su prikupljene 642 jedinke, određene su im ukupna i standardna dužina, ukupna masa i analiziran je sadržaj probavila. Novačenje mlađi traje od listopada do siječnja, a analizom dužinsko-masenoga odnosa utvrđeno je da populacija pokazuje negativni alometrijski rast ($b=2,384$). U probavilima analiziranih jedinka dominiraju Harpacticoida, s udjelom većim od 90% u svim mjesecima novačenja. U ožujku je znatno povećan udio Insecta (46%). Skupina Nematodes je prisutna s udjelom 3-8% od siječnja do ožujka, a ostale su skupine zastupljene samo povremeno. Najučestaliji plijen su Harpacticoida, u razdoblju od listopada do prosinca s vrijednosti 100%, nešto je manji u siječnju (92,68%) i veljači (92,59%). U ožujku su najučestaliji Insecta (75%). Prazna probavila su zabilježena u prosincu i veljači. Od ostalih skupina u prosincu su učestali Gammaridae (70%) te Nematodes u siječnju (39,02%). Učestalost ostalih skupina plijena je neprestano manja od 20%. U probavilima tijekom zimskih mjeseci biljni plijen je zastupljen kod manjeg broja jedinka - u siječnju 13%, veljači 3%, ožujku 10%, iako su u uzorku bile i jedinke ukupne dužine veće od 25 mm. Udio biljnog plijena u probavilima mlađi cipla zlatca bio je veći u studenom i prosincu - 40% i 45%, kada je nađen i pijesak. Biljni plijen, posebice alge kremenjašice, počinje se pojavljivati kad su ribe ukupne dužine od 22 mm, u manjim količinama i povremeno. Kod mlađi veličina od 25 mm u prehrani počinju prevladavati biljni plijen i pijesak. Od biljnoga materijala u probavilima cipala na ušću Neretve dominirale su bentoske alge kremenjašice.

Ključne riječi: cipal zlatac, *Liza aurata*, rast, prehrana, ušće Neretve

sa2008_a0603