BOOK OF ABSTRACTS
XII EUROPEAN CONGRESS OF ICHTHYOLOGY
ECI XII

9 – 13 September

ORGANIZED BY:
Croatian Ichthyological Society
Croatian Ecological Society
Department of Zoology, Faculty of Science, University of Zagreb
University of Dubrovnik
European Ichthyological Society

CONGRESS VENUE:
Hotel Croatia,
Cavtat, Croatia

ORGANIZING COMMITTEE:
Milorad Mrakovčić (Chairperson), Ivana Buj (Congress Manager), Linda Zanella (Congress Secretary), Jakov Dulčić, Branko Glamuzina & Perica Mustafić

Department of Zoology, Faculty of Science, University of Zagreb
Rooseveltov trg 6, 10 000 Zagreb, Croatia
Tel: + 385 1 4877 700; fax: + 385 1 4826 260
e-mail: ecixii@biol.pmf.hr
web: www.biol.pmf.hr/~ecixii

Book of abstracts

EDITORS: Ivana Buj, Linda Zanella & Milorad Mrakovicc

Printed by: TIPOMAT doo

Zagreb, September 2007.
Increasing southern invasion enhances congruence between endemic and exotic Mediterranean fish fauna

Lasram F.B.R., Mouillot D.

1Université Montpellier 2, cc 093, Place E. Bataillon, 34095 Montpellier Cedex 5, France
2Institut National Agronomique de Tunisie, 43 Avenue Charles Nicolle, 1082 Tunis, Tunisia

The Mediterranean Sea provides a critical case study for species conservation as it appears to be a receptacle for exotic species while being a hotspot for endemism. Here, we try to explore two fundamental issues: (i) the increasing pressure from southern exotic species of the Red Sea and the Atlantic Ocean that the biota of the Mediterranean Sea is experiencing and (ii) the spatial overlap between exotic and endemic Mediterranean fish fauna following the northward movement of exotic species within the Mediterranean. We reconstructed the historical dynamics of exotic fish species from the Red Sea and the Atlantic Ocean and the sea surface temperature series and we used a Geographical Information System tool to assess the overlap between the exotic and the endemic species geographical distributions. The results revealed an acceleration of successful Red Sea species invasions and entry of Atlantic species from lower latitudes, both highly correlated to the increasing temperature of the Mediterranean Sea. We also showed an increasing overlap between the spatial distributions of endemic and exotic species richness. Hence, our results suggest that endemic fish populations face an increasing pressure from an increasing number of exotic populations. Although a causal relationship between exotic invasion and extinction risk for endemic species has not been demonstrated, we expect that species replacement will be more likely to occur in the future. This process would contribute to global biotic homogenization.

(ORAL)

Signs of meridionalization in the Balearic Islands ichthyofauna (western Mediterranean), inferred from faunistic reports and fisheries data

Massuti E., Valls M. & Ordines F.

IEO- Centre Oceanografic de les Balears Moll de Ponent s/n, 07015 Palma de Mallorca, Spain

During recent decades, changes in the Balearic Islands ichthyofauna (western Mediterranean) have been observed, with rarefaction of some septentrional species, and new records, expansion and/or increment in the abundance of meridional species. In this communication we review and complete this information, by adding data from the monitoring of some fisheries developed in the area, targeted to temperate and tropical species. The results are discussed in relation to other ichthyological observations in the western Mediterranean and to the trends observed in the water temperature of the same area during the study period.

(ORAL)

On the occurrence of the tripletail, Lobotes surinamensis (Bloch, 1790) (Pisces: Lobotidae), in North Aegean Sea (Greece)

Minos G. & Economidis P.S.

1ATEI of Thessaloniki, Department of Aquaculture & Fisheries Technology, P.O. Box: 157, GR-63200, N. Moudania, Greece
2Karakasi 79, GR-54453, Thessaloniki, Greece

The tripletail, Lobotes surinamensis (Bloch, 1790) is a species with a large amphi-Atlantic distribution, frequent also in the Mediterranean, including Greek waters. Its life history, however, is poorly understood. The present occurrence was documented by the capture of three individual off the Thermaikos Gulf (NW Aegean Sea), one of which is considered here. This specimen had a total length of 45 cm, a maximum height of 17 cm and weighed 1908 g. It was found on August 10, 2005 at the fish
market of Nea Mihaniona, southeast of Thessaloniki. The specimen was captured by a long-line in the nearby area of Thessaloniki Bay (40°37'N-22°53'E) and is deposited in the ichthyological collection of the Thessaloniki Polytechnics (Department of Aquaculture and Fisheries, at the town Nea Moudania). It was estimated as a synchronous hermaphrodite as it has simultaneously both male and female sexual organs (ovaries and testis) in a clearly synchronous situation of maturity. Male gonads weighed 4.6 g and female gonads weighed 7.2 g, while the age was determined to be 4+ years. The species is considered as very rare in area, as the closest previous record in the wider NE Mediterranean region is dated since 1976. The recent first discovery in the Thermaikos Gulf represents a new and well-documented report for all the Greek waters, especially those of the Northern Aegean Sea. Other large Mediterranean specimen of *L. surinamensis*, over 45 cm in length and more than 4.5 kg in weight, are reported off Annaba on the coast of Algeria. The scarcity of the species may be attributed to the occasional movement in searching of food or by a rather passive transfer by sea waves and/or currents. In any case, there is a gap of fundamental research on the biology of the species, and not restricted in the commercial fishing.

(ORAL)

*Liza haematochilus* (Pisces, Mugilidae) in northern Aegean Sea: new records and gonad structure

Minos G.¹, Imsiridou A.¹ & Economidis P.²

¹ ATEI Thessalonikis, Department of Aquaculture & Fisheries Technology, P.O. Box: 157, GR-63200, N. Moudania, Greece
² Karakasi 79, GR-54453, Thessaloniki, Greece

The Mugilidae family consists around world of more than 60 species from 17 fish genera, eight species of which are found in the Mediterranean. The Redlip mullet, *Liza haematocheilus* (Temminck & Schlegel, 1845) which is often confused with Mugil so-iuy Basilewsky, 1855 and *Liza lauvergini* (Eydox & Souleyet, 1841) is natively distributed along northeastern Asian coasts, from Vladivostok to Macao. It is a highly euryhaline species inhabiting both freshwater and marine environments. It has been introduced as a suitable species for cage aquaculture in the Azov and the Black Seas. With their collapse in early 1990's, these installations released live fish into the open water, which crossing the Bosporus, Marmora Sea and Dardanelles, appeared soon after in the Mediterranean e.g. gulf of Smyrna in Turkey (1998) and Thracian Sea in Greece (2000). During last years it has been recorded in several other places in northern Aegean Sea, as in the estuaries of the Rivers Strymon and Nestos, showing a progressive westward spread. Among them, sixteen individuals were collected from 2003 to 2006 from May till October in the northern Aegean Sea. All were ripe (usually GSI <1) while in July of 2006 two ripe individuals (male and female) were caught (GSI 11.2 and 15.5 respectively), indicating a self-reproducing population. Age was found to be 4+ and 5+ years. It is worthy to note that no young individuals (age groups 1 and 2) were found. Consequently, there is no evidence that it is an established and self-sustaining population. The smallest male and female were 43 and 47 cm respectively. The calculated length-weight relationship was: \( W=0.002TL^{4.0266} \) (R: 0.9, SEb: 0.5), demonstrating isometric growth. Polymerase Chain Reaction (PCR) amplification of the 5S rDNA gene gave in *L. haematocheilus* a pattern of three bands in agarose gel, which is different from the one band for *L. saliens* and two bands for *Mugil cephalus*, *Chelon labrosus*, *L. aurata* and *L. ramada*.

(POSTER)

A review of length-weight relationships of lessepsian fishes from Turkish seas

Torcu-Koe H., Turker-Cakir D. & Basusta N.

University of Balikesir, Faculty of Science and Arts, Department of Biology, 10100, Balikesir, Turkey

Length-weight relationships are presented for Lessepsian fish species from Turkish Seas. The values of the slope b mostly remained within the range of 2.23 for *Scomber omorus commerson* and 3.386 for *Upeneus moluccensis*. The median b-value 3.0285, 0.039 (SE) was found.
And were there several Dubrovniks on this world, only one would be the true one: this one, original, genuine, the only Dubrovnik of stone and light. This open palm under the stars, stretched out before the world.

Dubrovnik is not only a work of art, but through the ages itself has been the artist. Exposed to influences and yet always true to itself. Turned to the winds, yet always steadfast. It is not victory by outstretched sword that has made it great, but the power of creative thought.

A city with a single face and countless mirrors in which it is reflected, in which it multiplies. Dubrovnik is a city of wonders. The Mediterranean connects it to the continents, civilizations and peoples. Incomparable Dubrovnik.

Dubrovnik is not only the past. It is the space and measure of new ventures. Dubrovnik is the authentic home of the human spirit. A city of stone and dreams.

Jure Kaštelan