

ANNALES



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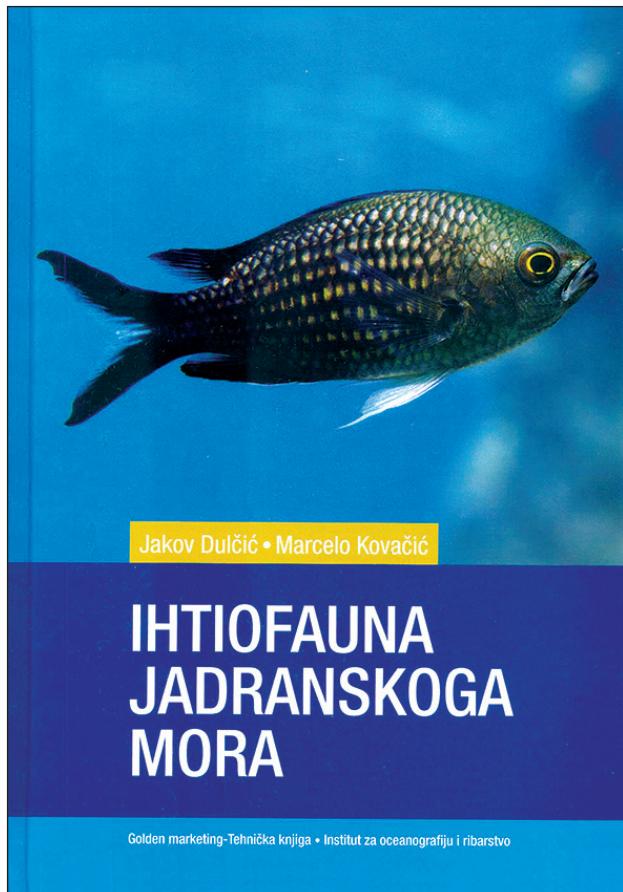
Book review:

ICHTHYOFAUNA OF THE ADRIATIC SEA
Authors: Jakov Dulčić & Marcelo Kovačić
Editor: Golden marketing, Tehnička knjiga,
Institut za oceanografiju i ribarstvo Split.
680 pp.

The Adriatic Sea is the cradle of marine biological and oceanographic sciences. The first research dealing with marine biodiversity was carried out in the 16th century, and continuous research of the Adriatic has been ongoing for the last two hundred years. This is also true for fish fauna, which in the Adriatic Sea has a longer research tradition than in other seas. Nevertheless, knowledge of fish fauna is far from being complete, as many species previously unknown to the Adriatic Sea are commonly recorded, while others are rapidly disappearing. In addition, modern methods, including those involving the aid of SCUBA diving equipment, have confirmed the existence of rare and little-known species of fish that standard ichthyological methods failed to detect. Despite the relatively enviable tradition of exploring life in the Adriatic, there have been surprisingly few monographs devoted to the richness of fish species in this sea. Among the most famous is the monograph by Dr. Tonko Šoljan *Fish of the Adriatic Sea*, an outstanding work in Croatian that was first printed in 1948 and has since appeared in many new editions and been translated into the Italian language as well. The second basic monograph on fish species entitled *Adriatic Ichthyofauna* (1996), again in Croatian, was written by Dr. Ivo Jardas.

This year, a new monograph was published by two renowned Croatian ichthyologists, Dr. Jakov Dulčić and Dr. Marcelo Kovačić. The former outstanding ichthyologist, like Šoljan and Jardas, comes from the Split Institute of Fisheries and Oceanography. Marcelo Kovačić is a curator at the Rijeka Museum of Natural History and a world-renowned expert on the fishes of the family Gobiidae. The book is entitled *Ichthyofauna of the Adriatic Sea* and was written in Croatian. Presenting an updated overview of the fish fauna of the Adriatic Sea, it is, unlike the first two monographs, richly adorned with photographs and drawings making it more suitable for a wider circle of readers. After a short introduction, the authors undertake a historical overview of fish research in the Adriatic and the Mediterranean and a review of biodiversity with special emphasis on fish fauna. They also provide basic information on how to use the book. This chapter is very important, as it presents the basic concepts and highlights the most important criteria for fish

identification as well as anatomical and morphological features to pay attention to when trying to determine the identity of a specimen under investigation. The most extensive chapter, the third, supplies a key for determining the fish families of the Adriatic Sea, simplified and equipped with pictorial material that makes it easier to identify key characters. This chapter presents all the species so far confirmed in the Adriatic Sea. For each species a Croatian, Latin, and English name is provided, as well as its Latin synonyms. The authors then state the total size and in some cases the body weight, describe the species in terms of coloration, ecological and biological characteristics, distribution, importance to humans, status (regarding endangerment), protection measures, and lists key literature related to the species in the Adriatic. Each fish species is presented with a colour photograph – the vast majority stored in formalin or alcohol samples. The order of presentation of the species follows the modern systematics of fish, with the authors providing the key to identifying species within a family (if it consists of more than one species). This is followed by



a glossary of technical terms and abbreviations, and source materials. The book concludes with a factual index of Latin and Croatian names and terms and a brief description of both authors. The book was co-financed by the Croatian Ministry of Science and Education.

This monograph is a modern overview of the Adriatic fish fauna, which takes into account all the new records on the emergence of alien species and those associated with the northward spread of thermophilic species, which have been discovered and described in recent years. In his monograph, Šoljan presented 365 species, Jardas almost fifty years later 407 species; Dulčić and Kovačić describe as many as 444 species of fish in the Adriatic Sea. The key for the determination of fish species is much clearer and more understandable than in the earlier two monographs, which in most cases promises a correct identification to every reader. The book is a 680-page hard cover.

The cost of the book is 320 Croatian kunas (just over 40 euros), making it accessible to the general public as well as experts, all who are interested in exploring the richness of the Adriatic fish fauna, offering good prospects that readers will be able to recognise every species they find in their hands.

Lovrenc Lipej

Marine Biology Station Piran,
National Institute of Biology

Book review:

**KNIGHTS, BALLERINAS AND INVISIBLES:
THE DECAPOD CRUSTACEANS OF THE
BRIJUNI MARINE PROTECTED AREA**

Authors: Roland Melzer, Felica Ceseña, Moira Buršić, Tobias Lehmann, Roland Mayer, Borut Mavrič, Tihomir Makovec, Martin Pfannkuchen, Jessica McHenry & Martin Heß

Editor: Javna ustanova Nacionalni park Brijuni, Schwarzprint, 123 pp., 2019.

The book can be purchased for 20 euros by sending mail to: infombp@nib.si

At the end of last year, a monographic work with the poetic title *Knights, Ballerinas and Invisibles – The Decapod Crustaceans of the Brijuni Marine Protected Area* was published by ten researchers: from Germany, Croatia, Austria, Slovenia, and the USA, led by Prof. Roland Melzer. The international research group had been conducting studies on va-

KNIGHTS, BALLERINAS AND INVISIBLES

*The Decapod Crustaceans
of the Brijuni Marine Protected Area*

VITEZOVI, BALERINE I NEVIDLJIVI

*Rakovi deseteronošci zaštićenog morskog područja
Nacionalnog parka Brijuni*



Roland R. Melzer, Felica Ceseña, Moira Buršić, Tobias Lehmann, Roland Meyer, Borut Mavrič, Tihomir Makovec, Martin Pfannkuchen, Jessica McHenry, Martin Heß

rious aspects of marine biodiversity of the Brijuni National Park (NW Croatia) for many years. The book, which dedicates particular interest to decapods (Crustacea: Decapoda), has 123 pages and is enriched with quality photographs of shrimps, crabs, and other members of this taxonomic group. The way in which the authors present individual groups of decapod crabs is also interesting: we read about knights with strong armours, ballerinas, and ghosts - masters of disguise. The ballerinas are the shrimps, which the authors saw as dancing on the seabed, lobsters are squires, and crabs are dark knights.

The introductory chapter with the definition of decapod crustaceans, description of their body structure, and an evolutionary and systematic review, is followed by an extensive presentation of the species found in Brijuni, which covers the largest part of the publication. In addition to the lavish photographic material (213 colour images), the book is furnished with elegant and extremely elaborate illustrations of the external anatomical features of decapod crustaceans (28 BW and colour images). Higher taxonomical groups are presented in subchapters, each opening with a presentation

of the typical characteristic of the higher taxon, and continuing with a basic description of each species, stating the morphological features useful for its distinction from similar species, and providing information on its habitat preferences and typical biological and ecological characteristics. The photographs of the species in their typical natural environments are also very helpful.

The monograph is an excellent identification tool for many decapod crustaceans. Although dealing with the decapod fauna present in the Brijuni archipelago, it will also be handy in identifying shrimps and crabs in the Slovenian coastal sea and broader northern Adriatic. I am confident that it will be of great use to researchers, biology students, underwater photographers, divers, and amateur naturalists alike.

I congratulate the authors on publishing the monograph, and the administration of the Brijuni National Park on their valuable support in the publishing process. Two Slovenian researchers from the Marine Biology Station of the National Institute of Biology (Piran), Borut Mavrič and Tihomir Makovec, both skilled divers, also contributed.

This scientific monograph includes all the information expected by students in the field, but also uses imagination to perhaps retrieve the wonder that humans who first came upon various aquatic (and terrestrial) animals surely were suffused with.

Lovrenc Lipej

Marine Biology Station Piran,
National Institute of Biology

Book review:

BIODIVERZITETA BIOGENIH FORMACIJ. ZAKLADNICA NARAVE SLOVENSKEGA MORJA

Authors: Lovrenc Lipej, Martina Orlando-Bonaca,
Valentina Pitacco, Borut Mavrič

Založnik: Nacionalni inštitut za biologijo,
Morska biološka postaja Piran, 2020,
230 str.

Pred nami je knjiga, ki bo razveselila vse, ki bi radi izvedeli več o življenju v našem morju. Slovenci smo veliki ljubitelji morja, v hladnem in deževnem vremenu pogosto sanjamo o počitnicah na morskih obalah. Nekateri radi pokukajo pod morsko gladino in želijo bolje spoznati pestrost živih bitij, a pogosto podcenjujejo bogastvo ži-

vljenja v našem delu Jadranskega morja. Nekatere značilnosti in posebnosti tega najsevernejšega dela Sredozemskega morja nam razkrivajo raziskovalci Morske biološke postaje Nacionalnega inštituta za biologijo v pričujoči knjigi. Razveseljivo je, da se s tem množijo spoznanja o biotski pestrosti našega morja, nove vsebine pa bogatijo tudi slovenski jezik.

Avtorji nam najprej predstavijo različne biogene formacije in opozarjajo na pomen teh skalnatih osamelcev (v sicer prevladujoče muljastem in peščenem življenjskem okolju severnega Jadrana) za biotsko raznovrstnost. Osnovne podatke o biogenih formacijah v slovenskem morju so podali v zelo informativni preglednici, nato pa kratko opisali okolja, v katerih se pojavljajo. Zatem se posvetijo podrobнемu opisu posameznih vrst biogenih formacij. Tako spoznamo gruče, grebene cevkarjev, "trezze" in "tegnùe", slednje so posebnost tudi v Sredozemskem morju. Posebna pozornost avtorjev je namenjena grebenom sredozemske kamene korale (*Cladocora caespitosa*) in koraligenim algam, ki so ključni biogradniki sekundarnega trdnega dna v našem morju. Podrobno so predstavili predele s kameno koralo in z njimi povezane organizme. Zanimiv je prikaz odnosa med številom vrst nevretenčarjev in rib ter velikostjo kolonij kamene korale. V slovenskem morju sta dve večji biogeni formaciji, in sicer pred rtom Ronek in pred Debelim rtičem. Obe sta povezani s kameno koralo, saj ju v veliki meri tvorijo njeni odmrlji koraliti; pomemben gradnik so tudi koraligene alge, med njimi predvsem rdeče alge (*Rhodophyta*).

V naslednjih treh sklopih vsebin so se avtorji posvetili ključnim biološkim procesom, ki vplivajo na dinamiko biogenih formacij. Opisali so zaraščanje trdnih struktur, naseljevanje planktonskih ličink in privabljanje drugih organizmov; ti procesi prispevajo k nastajanju novih bivalnih niš. Z biogenimi formacijami so povezani različni rastljinojedi in plenilski organizmi. Avtorji ob tem zgoščeno razložijo tudi različne življenjske strategije od prikrivanja do sobivanja. Opozorili so tudi na kriptobentoške habitate in zaenkrat še ne dovolj znane kriptobentoške organizme, med katerimi so posebej predstavljene ribe.

Osrednji in najobširnejši del knjige zavzemajo predstavitev rastlinskih in živalskih vrst, ki so na različne načine povezane z biogenimi formacijami. Predstavljeni organizmi so združeni po širših taksonomskih skupinah, opisane so njihove značilnosti in življenjska okolja, ki jih ti organizmi naseljujejo. Dodani so tudi podatki o pogostosti pojavljanja in o ogroženosti vrst. Med 130 opisanimi vrstami je 18 vrst alg, med njimi največ rdečih, po 14 vrst spužev, mnogoščetincev

in rakov, po 10 vrst polžev, školjk, iglokožcev in plaščarjev. Z manj vrstami so zastopani ožigalkarji (6), mahovnjaki (6), sipunkulidi (1) in podkovnjaki (1); največ (22) pa je opisanih vrst rib. Vsaka vrsta je predstavljena z latinskim in slovenskim imenom, barvno fotografijo, ki jasno kaže opisane značilnosti, in ličnim grafičnim simbolom biogenega habitata. Iskanje podatkov olajšajo zelo uporabna seznama slovenskih in latinskih imen vrst ter popis literature, ki knjigo zaključujejo.

Z veseljem lahko zapišem, da smo dobili zanimivo, bogato opremljeno in v iskrivem jeziku napisano knjigo, ki širi znanje o našem delu Jadranskega morja. Knjiga bo pritegnila tako laike, ki želijo izvedeti več o življenju v morju, kot tudi strokovnjake, ki se ukvarjajo z različnimi vidiki biotske pestrosti. Njena odlika so gotovo tudi številne barvne fotografije, ki nazorno prikažejo pestrost biogenih tvorb in z njimi povezanih organizmov v najsevernejšem delu Jadranskega morja. Omenim naj tudi preglednice in lične slike oz. sheme, ki olajšajo razumevanje teksta. Zaradi nazornih in jasnih opisov organizmov in bioloških procesov bo knjiga dragocen in priročen učbenik, ki ga lahko s pridom uporabljam na vseh ravneh izobraževanja.

Človeštvo se sooča z velikimi izzivi, povezanimi s spremembami na našem planetu, za katere smo v marsičem odgovorni sami. Intenzivnejši vremenski pojavi, višanje temperature v ozračju in vodah ter zmanjševanje biotske pestrosti so le nekateri zelo očitni opozorilni znaki. Priobalno morje in odprti oceani so izpostavljeni mnogim pritiskom zaradi dejavnosti ljudi. Spoznanje o ogroženosti velikega dela našega planeta in o nujnosti sprememb je vodilo Združene narode pri tem, da so prihodnje desetletje (2021–2030) razglasili za desetletje oceanografije za trajnostni razvoj. Med cilji tega velikega svetovnega programa je tudi "navdihajoče morje" – z željo, da bi ljudje bolje spoznali, razumeli in cenili pomen



morja za dobrobit človeštva. Knjiga *Biodiverziteta biogenih formacij*. Zakladnica narave slovenskega morja predstavlja kamenček v mozaiku dejavnosti za doseganje tega cilja.

Alenka Malej
nekdanja vodja Morske biološke postaje Piran
(NIB)