

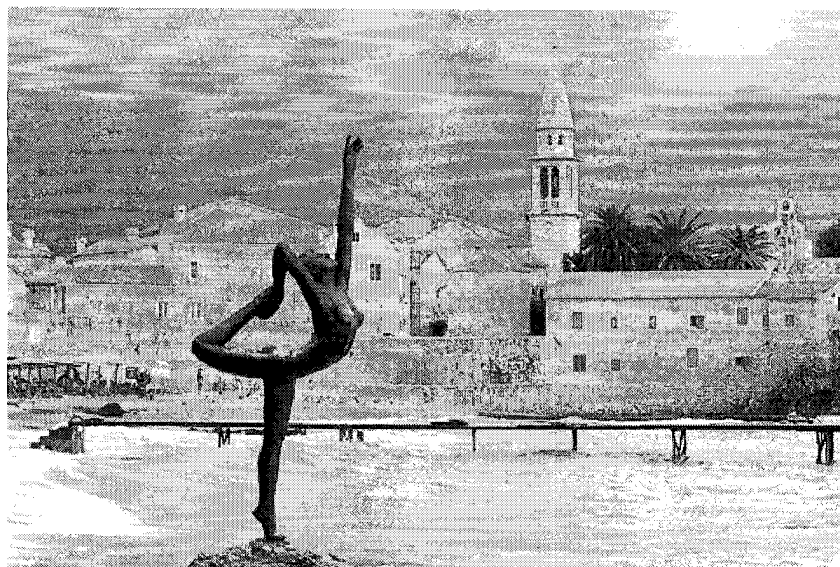
IV INTERNATIONAL SYMPOSIUM
OF ECOLOGISTS
OF THE REPUBLIC OF MONTENEGRO

**THE BOOK OF ABSTRACTS
AND PROGRAMME**

*IV INTERNATIONAL SYMPOSIUM OF ECOLOGISTS OF THE
REPUBLIC OF MONTENEGRO*

ISEM4

**THE BOOK OF ABSTRACTS AND
PROGRAMME**



Hotel Slovenska Plaža, Budva, 06-10. 10.2010

16⁰⁰-16¹⁰: Miriam Ndini & Eglantina Demiraj: IMPACT OF EXPECTED CHANGES ON THE RIVER RUNOFF

Saturday, October 9

Plenary lectures:

09³⁰-10¹⁰: Dragana Cvetković: PREDICTING PATTERNS OF PHENOTYPIC VARIATION ALONG ENVIRONMENTAL GRADIENTS AND MODERN CONCEPT OF ECOGEOGRAPHICAL RULES

(Chairman: *Thibault Datry*)

Ecology of Populations

10³⁰-11⁰⁰ : Oral presentations

(Chairman: *Carmen Gache* and *Bani Aida*)

10³⁰-10⁴⁰ : Naxhije Hila, Klementina Puto, Sotir Mali, Ariola Devolli: TRENDS IN *SALMONELLA TYPHIMURIUM* REPORTING IN ELBASAN, ALBANIA. TWENTY YEARS OF *SALMONELLA* INFECTIONS REVIEW

10⁴⁰-10⁵⁰ : Bani Aida, Echevarria Guillaume, Topi Teuta, Sulce Sulejman, Morel Jean Louis: ECOLOGY OF PLANT ADAPTATION TO SERPENTINE SOILS IN ALBANIA

10⁵⁰-11⁰⁰ : Carmen Gache & Johanna Walie Müller: PRELIMINARY BIRD FAUNA'S MONITORING IN THE FUTURE WIND FARM IVESTI – VASLUI COUNTY (ROMANIA)

12⁰⁰ – 14⁰⁰ : poster presentations

1. Pešić Ana, Mandić Milica, Đurović Mirko, Joksimović Aleksandar: LENGTH-WEIGHT RELATIONSHIP OF FIVE PELAGIC AND SEMIPELAGIC SPECIES FROM MONTENEGRIN WATERS

2. Nenad Đ. Labus, Tatjana Babović-Jakšić and Predrag S. Vasić: SEXUAL AND AGE DIFFERENCES IN CRANIOMETRIC CHARACTERISTICS OF ROE DEER (*Capreolus capreolus* L.) FROM THE AREA OF MOUNTAIN PROKLETIJE

3. Dušica Čalić-Dragosavac, Snežana Zdravković-Korać, Jelena Milojević and Ljiljana Radojević: EFFECT OF DIFFERENT GENOTYPE ON PRODUCTION OF HORSE CHESTNUT ANDROGENIC EMBRYOS

5. Laknori Odeta, Rexha Tefta, Leka (Sulaj) Fatmira, Mitre Anila, Hamzaraj Etleva, Paparisto Anila: THE ECOLOGICAL DISTRIBUTION OF BOVINE RACES AND ITS CORRELATION WITH LOW DENSITY LIPOPROTEIN OXIDATION IN ALBANIAN POPULATIONS

6. Milan S. Stanković: ANTIOXIDANT ACTIVITY, TOTAL PHENOL AND FLAVONOID CONTENTS OF *Teucrium polium* L. FROM MONTENEGRO

7. Roganovic-Zafirova, D., Velickova, N.: COMPARATIVE MICROSCOPY ANALYSIS OF LIVER AND GONADS OF THE PRESPA ROACH (*RUTILUS RUBILIO PRESPENSIS* KARAMAN) AND THE PRESPA BARBELL (*BARBUS PLEBEJUS PRESPENSIS* KARAMAN) IN CONDITIONS OF POLLUTED WATER IN PRESPA LAKE

8. Lidija Polović and Katarina Ljubisavljević: FEMALE REPRODUCTIVE CHARACTERISTICS OF THE DALMATIAN ALGYROIDES (*ALGYROIDES NIGROPUNCTATUS*) FROM MONTENEGRO

FEMALE REPRODUCTIVE CHARACTERISTICS OF THE DALMATIAN ALGYROIDES (*ALGYROIDES NIGROPUNCTATUS*) FROM MONTENEGRO

Lidija Polović¹ & Katarina Ljubisavljević²

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Algyroides nigropunctatus (Dalmatian Algyroides) is a Balkan subendemic small lacertid lizard with to some extent flattened morphology which usually occupies degraded scrub and rocky cliff areas in places associated with the Mediterranean climate along the coastal region of the Adriatic and Ionian seas. Here, we present data on the female reproductive traits of *Algyroides nigropunctatus* from island Bisage of the Lake Skadar in Montenegro. The clutch and egg characteristics of the population were investigated on the basis of clutches laid in laboratory conditions by gravid females. Oviposition period occurs during May and June, and hatching takes place in July. Females mature at body sizes of 49 - 52 mm of snout-vent length. Dalmatian Algyroides produces two clutches in a breeding season. Individual females lay clutches of commonly three (range 2 - 5) eggs. The relative clutch mass is 0.40 and is not correlated with female size. The female body size has no effect on clutch and egg size. There is no evidence of the predicted trade-off between egg size and clutch size. The incubation period is 48 to 51 days.

COMPARATIVE MICROSCOPY ANALYSIS OF LIVER AND GONADS OF THE PRESPA ROACH (*RUTILUS RUBILIO PRESPENSIS* KARAMAN) AND THE PRESPA BARBELL (*BARBUS PLEBEJUS PRESPENSIS* KARAMAN) IN CONDITIONS OF POLLUTED WATER IN PRESPA LAKE

Roganovic-Zafirova, D. & Velickova, N.

Institut of biology, Faculty of Natural Sciences and Mathematics, University "St. Kiril and Metodij" - Skopje, Republic of Macedonia

The aim of this study was to make microscopy analysis of the liver tissue, specially with an accent to liver's parenchyma. Stereological analysis to the nucleus of the hepatocytes and semiquantitative analysis to the presence of iron of the hepatocytes was carried out.

Material and methods: In this study a microscopy analysis of liver was carried out at two fish species from Prespa lake: the Prespa roach (*Rutilus rubilio prespensis* Karaman) and the Prespa barbell (*Barbus plebejus prespensis* Karaman), with an aim to define the dynamics of the liver parenchyma during the reproductive cycle and eventually the inter-species difference in this process, and to confine normal physiological changes in the liver during the reproductive cycle from the liver lesions caused by the toxic effects of the polluted area. 91 fishes of two species were selected and grouped by their sex and the stage of the reproductive cycle according to the state of the gonads.

Results: The results indicated that the hepatocytes undergo a sequence of changes which are synchronized with the reproductive cycle, of the both of fish species. During the pre-vitellogenesis hepatocytes are higher, and they are marked by massive glycogen accumulation, since the end of endogene vitellogenesis and during exogene vitellogenesis

they go through a phase of intensive protein synthesis, at the end of vitellogenesis and before spawning they get into a phase of involution and massive autophagocytosis of their cytoplasmic organelles. Impressive and clearly expressed is the polarity in hepatocytes during their differentiation.

Conclusion: Considering the dynamics of liver's parenchyma during the reproductive cycle, we observed interspecies difference between multi-spawning of Prespa barbell, and uni-spawning Prespa roach. The stereological analysis indicated significant culmination of all nucleus parameters, of vitellogenesis of females of both species, and in the beginning of spermatogeneze of the male Prespa roach. Perl's prussian blue staining revealed the presence of iron in hepatocyte cytoplasm, during the certain stages of reproductive cycle, or in association of liver lesions in both fish species, Prespa barbell and Prespa roach. In the liver of several fish, we detected intraparenchymal infiltration with macrophages and leukocytes, fibrosis around the blood vessels and biliary ducts, fungal and *Capilaria*'s infection associated with necrosis.

ENVIRONMENT AND DISEASE: ENVIRONMENTAL COMPONENTS OF THE ETIOLOGY OF BALKAN ENDEMIC NEPHROPATHY - DATA FROM THE ENDEMIC REGION IN KOLUBARA DISTRICT

Dragana Cvetković¹, Ivana Novaković², Danica Bukvić³, Zorica Krcunović^{1,2}, Slavenka Janković⁴, Uroš Živković¹ & Ljubica Đukanović⁵

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Balkan endemic nephropathy (BEN) is a chronic kidney disease, frequently associated with urinary tract carcinoma. The characteristic feature of the disease is spatial distribution – it is found in certain rural areas of Balkan peninsula, situated at low altitudes along the tributaries of the Danube. The etiology of BEN has been subject of numerous studies, but exact environmental and genetic causes remain elusive. Several lines of evidence confirmed the concept of BEN as the environmentally induced disease, i.e. that at least one environmental factor with nephrotoxic and/or cancerogenic effects plays a key role in its development. Various hypotheses included: chronic dietary exposure to aristolochic acid or mycotoxins, exposure to metals and metalloids, and the presence of toxic organic compounds in drinking water, leached from lignite deposits. The aim of this study was to examine the available data on environmental factors that can be related to significant risk for the development of BEN, collected from the specific endemic region in Kolubara district, Serbia. The obtained results are discussed with respect to current hypothesis concerning environmental component of etiology; additionally, having in mind the role of various genes involved in xenobiotic detoxification mechanisms, we discuss whether the obtained results can help elucidating the genetic component of BEN as well.