



**"VASILE ALECSANDRI"
UNIVERSITY OF BACĂU, ROMANIA
FACULTY OF SCIENCE
BIOLOGY DEPARTMENT**

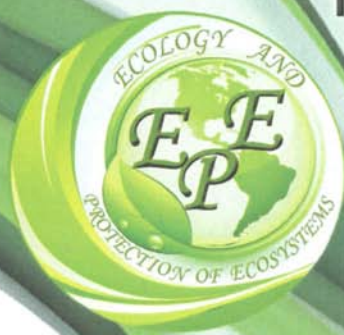


**BACĂU COUNTY COUNCIL
"ION BORCEA" NATURAL SCIENCE
MUSEUM COMPLEX
BACĂU, ROMANIA**

PROGRAMME

**ECOLOGY AND
PROTECTION OF ECOSYSTEMS**

THE 9TH EDITION



**BIOLOGY AND
SUSTAINABLE DEVELOPMENT**

**INTERNATIONAL
SYMPOSIUM**

**BACĂU - ROMÂNIA
18th-20th OF NOVEMBER 2010**

**INTERNATIONAL SYMPOSIUM
ECOLOGY AND
PROTECTION OF ECOSYSTEMS
9TH EDITION**

18th-20th of November 2010

Bacău, Romania

PROGRAMME

2010

EPE 2010 HONORARY COMMITTEE

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Reader Dr. FERDINAND PRICOPE, "Vasile Alecsandri" University of Bacău

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Faculty of Science
Department of Biology

"Ion Borcea" Natural Science Museum
Complex of Bacău

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Dr. Ortansa Jigău – deputy director
Dr. Bogdan Tomozii – curator
Dr. Mihaela Arinton – curator
PhD Student Dalia Paraschiv – curator

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Editorial assistance: Bogdan Tomozii, Ionuț Stoica
Technical assistance: Bogdan Barabaș

SCHEDULE

International Symposium
“ECOLOGY AND PROTECTION OF ECOSYSTEMS”
THE 9TH EDITION

18TH-20TH OF NOVEMBER, 2010
BACĂU, ROMANIA

Location: “VASILE ALECSANDRI” UNIVERSITY OF BACĂU,
FACULTY OF SCIENCE, BIOLOGY DEPARTMENT

Thursday 18th November 2010

14⁰⁰ - 20⁰⁰ – Welcoming the guests – **Building A**, 2nd floor, A II – 14 Hall

Friday 19th November 2010

8³⁰-9⁰⁰ – Welcoming the guests – **Building D**, 2nd floor

9⁰⁰-10⁰⁰ – The official opening – **Building D**, first floor, “Vasile
Alecsandri” Amphitheatre

10⁰⁰-12⁰⁰ – Plenum – **Building D**, first floor, “Vasile Alecsandri”
Amphitheatre

12⁰⁰-13⁰⁰ – Posters Presentation – **Building D**, 2nd floor

13⁰⁰-15⁰⁰ – Lunch

15⁰⁰-19⁰⁰ – Paper Presentation – **Building D**, 2nd floor

20⁰⁰ – Gala Dinner

Saturday 20th November 2010

9⁰⁰ - 11⁰⁰ – Annual meeting of the Romanian Society of Limnology -
Building A, 2nd floor

9⁰⁰-15⁰⁰ – Research field trip to Târgu Ocna Salina and Slănic
Moldova Resort, Bacău County

16⁰⁰-18⁰⁰ – Final conclusions

PROGRAMME

Friday 19th November 2010

9⁰⁰-12⁰⁰

Building D, first floor, "Vasile Alecsandri" Amphitheatre

Plenum:

1. BRĂNEANU Dumitru – **SUSTAINABLE DEVELOPMENT STRATEGY OF BACĂU COUNTY FROM THEORY TO PRACTICE**
2. NEDEFF Valentin, LAZĂR Gabriel - **POLICY ON SCIENTIFIC RESEARCH AT „VASILE ALECSANDRI”UNIVERSITY OF BACAU**
3. GOMOIU Marian-Traian - **CHALLENGE OF CHANGE, WHERE TO?**
4. MUSTAȚĂ Gheorghe, MUSTAȚĂ Mariana - **BUILDING-UP THE INDIVIDUAL ENVIRONMENT BETWEEN UMWELT AND INNENWELT**
5. BATTES Klaus Werner - **THE USE OF THE EUROPEAN FISH INDEX (EFI+) IN ASSESSING THE ECOLOGICAL STATUS OF RIVERS IN EUROPE**
6. RAȚI Ioan Viorel – **PLANTS OF THE FUTURE WITH MAJOR IMPACT ON ECOLOGICAL AND SUSTAINABLE DEVELOPMENT IN AGRICULTURE**

12⁰⁰-13⁰⁰

Posters Presentation – **Building D, 2nd floor**

15⁰⁰-19⁰⁰

Paper Presentation – **Building D, 2nd floor**

Works on sections:

I. BIODIVERSITY AND ECOLOGY OF AQUATIC ORGANISMS

Building D, 2nd floor, 224 Hall

Oral presentations

Moderators

Dr. KLAUS WERNER BATTES

Dr. CURTEAN-BĂNĂDUC ANGELA

1. MOMEU Laura, BATTES Karina Paula - **THE USE OF PLANKTON COMMUNITY FOR THE ECOLOGICAL STATUS ASSESSMENT IN LAKE ȘTIUCII, NATURE RESERVE, CLUJ COUNTY, ROMANIA**
2. TUDOR Andrei Anca - **QUALITATIVE AND QUANTITATIVE DETERMINATION OF ALGAL FLORA'S GALBENI LAKE, BACĂU COUNTY**
3. SÎRBU Rodica, ZAHARIA Tania, NICOLAEV Simion, SCHRÖDER Verginica, NEGREANU - PIRJOL Tincuța, NEGREANU PÎRJOL Bogdan Ștefan, PSEGALINSCHI Iuliana - **CHARACTERISATION OF SOME SPECIFIC ALGAE AND THEIR COASTAL SECTOR, FROM THE ROMANIAN MARINE ECOSYSTEM – IMPORTANT SOURCE FOR THE PHARMACEUTICAL INDUSTRY**

4. GÜLLE İskender, KEBAPÇI Ümit, YILDIRIM Mehmet Zeki - **A LIMNOECOLOGICAL OVERVIEW OF SEASONALLY DRYING LAKES IN BURDUR, TURKEY**
5. MARIN Anca-Andreea, DUMBRAVĂ-DODOACĂ Mălina, PETROVICI Milca, HERLO Gabriel - **THE HUMAN IMPACT ON BENTHIC COMMUNITY STRUCTURE AND DISTRIBUTION, FROM DIFFERENT AQUATIC ECOSYSTEMS IN LUNCA MURESULUI NATURAL PARK (WEST OF ROMANIA)**
6. RĂESCU Cosmina - Simona, DUMBRAVĂ-DODOACĂ Mălina, PETROVICI Milca - **DINAMICS AND STRUCTURE OF THE MACROZOOBENTHICS COMMUNITIES IN CERNA RIVER (SW OF ROMANIA)**
7. SAMARGIU Manuela Diana, PARASCHIV Gabriela Mihaela, SABIE Dorina - **RECENT DATA REGARDING DIVERSITY OF SOME BENTHAL INVERTEBRATES FROM BISTRIȚA AND DORNA RIVERS**
8. ANTOFICA Andrei, POIRAȘ Nadejda, POIRAȘ Larisa - **SPECIES DIVERSITY AND ECOLOGY OF NEMATODE COMMUNITIES OF URBAN LOTIC HABITATS**
9. SURUGIU Victor, GILLET Patrick, VASILE Roxana - **POPULATION DYNAMICS OF *ALITTA SUCCINEA* (POLYCHAETA: NEREDIDAE) FROM THE DANUBE-BLACK SEA CANAL**
10. VUIA Daniel-Gheorghe, PÂRVULESCU Lucian - **AN OVERVIEW OF THE ACTUAL STATUS IN *ORCONECTES LIMOSUS* (DECAPODA: CAMBARIDAE) INVASION IN ROMANIA**
11. PÂRVULESCU Lucian - **CURRENT THREATS OF INDIGENOUS CRAYFISH SPECIES IN ROMANIA**
12. BERCHI Marius, PETROVICI Milca, ILIE Daniela - **AQUATIC AND SEMI-AQUATIC TRUE BUGS (HETEROPTERA) OF CEFA NATURE PARK (NW OF ROMANIA)**

13. DAVIDEANU Grigore, DAVIDEANU Ana, POPESCU Irinel –
DATA CONCERNING SOME FISH COMMUNITIES FROM THE SOUTH PART OF ROMANIA
14. BĂNĂDUC Doru - A "NEW" POPULATION OF *COBITIS ELONGATA* HECKEL AND KNER, 1858 IN A "NEW" WATERSHED IN THE ROMANIAN CARPATHIAN AND SUBCARPATHIAN AREA
15. CURTEAN-BĂNĂDUC Angela, BĂNĂDUC Doru - **THE MAIN LOTIC SYSTEMS OF IZA WATERSHED BIODIVERSITY**
16. DUMITRU Gabriela, MISĂILĂ Costică, CIORNEA Elena - **A COMPARATIVE STUDY OF SOME BODILY INDICES AND COEFFICIENTS IN *ARISTICHTHYS NOBILIS* AND *HYPOPTHALMICHTHYS MOLITRIX* OF VARIOUS AGES**
17. ROȘCA Irina - **FEEDING ECOLOGY OF ROUND GOBY (*NEOGOBIOUS MELANOSTOMUS PALLAS*, 1818) FROM THE BLACK SEA (AGIGEA-EFORIE NORD AREA)**
18. BATTES KLAUS Werner, STOICA Ionuț, PRICOPE Ferdinand, URECHE Dorel, BATTES Karina - **THE ECOLOGICAL STATE OF SIRET RIVER IDENTIFIED BY USING THE EUROPEAN FISH INDEX (EFI+)**
19. PRICOPE Ferdinand, STOICA Ionuț, VORNICU Bogdan, BATTES Karina, BATTES Klaus Werner - **THE ECOLOGICAL STATE OF MOLDOVA RIVER IDENTIFIED BY USING THE EUROPEAN FISH INDEX (EFI+)**
20. STOICA Ionuț, BATTES Klaus Werner, PRICOPE Ferdinand, BATTES Karina - **THE ECOLOGICAL STATE OF BISTRIȚA RIVER IDENTIFIED BY USING THE EUROPEAN FISH INDEX (EFI+)**

Posters

1. **PLĂVAN Gabriel, NICOARĂ Mircea - STUDIES ON DISTRIBUTION AND BIOMASS OF OLIGOCHETS FROM IZVORU MUNTELUI – BICAZ REZERVOIR**
2. **PLĂVAN Gabriel, NICOARĂ Mircea, PĂSTOREL Grigore - STUDIES ON DISTRIBUTION AND BIOMASS OF CHIRONOMIDS LARVAE IN CHIRIȚA DAM LAKE**
3. **PLĂVAN Gabriel, NICOARĂ Mircea, APETROAIEI Nicolae - SOME ASPECTS OF THE INFLUENCE OF INTENSIVE AQUACULTURE IN FLOATING CAGES, ON SOME CHEMICAL PARAMETERS OF THE ACTUALLY SEDIMENTS IN IZVORU MUNTELUI-BICAZ RESERVOIR**
4. **VLĂDUȚU Alina Mihaela - CONSIDERATION ON THE BENTHIC INVERTEBRATE FAUNA FROM THE DOAMNEI RIVER**
5. **SCHRÖDER Verginica - EVOLUTIONARY ASPECTS OF THE PONTO-CASPIAN PERACARIDS FROM PARAMARINE WATERS**
6. **VASILE Mihaela Aida - INFLUENCE OF THE PARASITOSIS OF CULTURE FISH ON THE BIOPRODUCTION FROM THE ANTHROPIC AQUATIC ECOSYSTEMS OF GALATI COUNTY**
7. **SAMARGIU Manuela Diana, PARASCHIV Gabriela Mihaela, SAVA Daciana, PAIU Marian Romulus - ECOLOGICAL DATA ON BENTHAL COMMUNITIES FROM SHALLOW ZONE OF MANGALIA LAKE - MILITARY PORT**
8. **PARASCHIV Gabriela Mihaela, SAMARGIU Manuela Diana - THE BIODIVERSITY STUDY OF MEIOBENTHAL COMMUNITIES FROM SHALLOW ZONE OF THE SOUTH SECTOR OF THE ROMANIAN BLACK SEA LITTORAL**

9. STOICA Ionuț, BATTES Klaus Werner, ION Iordache, TELCEAN Ilie, PRICOPE Ferdinand - **PRELIMINARY DATA ON THE FISH COMMUNITIES STATUS FROM THE BASIN OF TISA RIVER – MARAMUREȘ**
10. URECHE Dorel, URECHE Camelia, PINTILIEASA Teodora Ramona - **RESEARCHES REGARDING THE ICHTHYOFAUNA FROM THE UPPER BASIN OF THE RIVER SIRET**
11. URECHE Dorel, BATTES Klaus Werner, URECHE Camelia, PRICOPE Ferdinand, BATTES Karina Paula - **THE ASSESSMENT OF THE ECOLOGICAL STATUS OF THE PUTNA RIVER USING THE EUROPEAN FISH INDEX (EFI +)**
12. FLOREA Luiza, DIACONU Dragoș - **PRELIMINARY STUDIES ON THE DISTRIBUTION AND NUTRITION OF THE *PHOXINUS PHOXINUS* (LINNAEUS, 1758) IN THE PROTECTED AREA ROSCI0229 SIRIU**

**II. BIODIVERSITY AND ECOLOGY
OF TERRESTRIAL ORGANISMS**
***Section - Plants, Vertebrates, Museology,
Museography***

Building D, 2nd floor, 216 Hall

Oral presentations

Moderators

Dr. BARABAŞ NICOLAE

Dr. NALBANT TEODOR

1. JIGĂU Ortansa - **THE STUDY OF BIOMASS OF SOME SPECIES OF EDIBLE MACROMYCETES**
2. PAVEL Otilia Carmen - **PRELIMINARY RESEARCH CONCERNING THE DIVERSITY OF MACROMYCETES IN PRALEA BROOK BASIN (BACĂU COUNTY)**
3. CRAINIC Ghiță Cristian, DAMIAN Laura Vasilica - ***PRUNUS SEROTINA* EHRH. - AN INVASIVE SPECIES VEGETATING IN THE FOREST STANDS OF THE FORESTRY MANAGEMENT UNIT SINOBOB, SACUIENI FORESTRY DISTRICT, BIHOR COUNTY FOREST ADMINISTRATION**
4. CRAINIC Ghiță Cristian, MARTIN Nicolae - **SEVERAL ASPECTS WITH REGARD TO *ILEX AQUIFOLIUM* L. IN THE NATURAL RESERVE DOSUL LAURULUI, ARAD COUNTY, WESTERN ROMANIA**
5. LIȚESCU Sanda, PASCALE Gabriela - **FLORA AND VEGETATION FROM BUCHAREST SURROUNDINGS UNDER URBAN EXPANSION IMPACT – MOGOȘOAIA – BUFTEA –**
6. GURĂU Milian, IRIMIA Romeo - **CONTRIBUTIONS TO FLORA STUDIES FROM OITUZUL ARDELENESC AREA**

7. GURĂU Milian - **CONTRIBUTIONS TO FLORA STUDIES FROM UPPER BASIN OF TROTUŞ RIVER**
8. DUMITRAŞCU Oliver, MITREA Ion - **FISH FAUNA FROM THE UPPER BASIN OF JIU RIVER**
9. PATRICHE Tanți, PATRICHE Neculai, BOCIOC Elena - **DETERMINATION OF SOME NORMAL SERUM PARAMETERS IN JUVENILE STAGES THE OSSETRA STURGEON *ACIPENSER GÜLDENSTAEDTI* (BRANDT, 1833)**
10. MIHĂLCESCU Ana-Maria, NALBANT T. Teodor - **ON THE EVOLUTION AND SYSTEMATIC OF PONTO-CASPIAN GOBIES (PISCES: PERCIFORMES: GOBIIDAE)**
11. ARCAN Viorica, GACHE Carmen - **PRELIMINARY DATA ON AVIFAUNA OF THE LOZOVA MARSH – GALATI COUNTY**
12. MOROZOV Alexandr, CIOCÎRLAN Victor - **DISTRIBUTION OF *NANNOSPALAX LEUCODON* (MAMMALIA: RODENTIA) IN NORTH PART OF R. MOLDOVA AND THEIR POPULATION DYNAMICS**
13. DAVID Anatolie, PASCARU Viorica – **PECULIARITIES OF THERIOFAUNA FROM PALAEOLITHIC PLURISTRATIGRAPHIC SITE COSĂUȚI I (REPUBLIC OF MOLDOVA)**
14. ZAHARIA Lăcrămioara Gabriela, TUDOR - ANDREI Anca, TOFAN Florin Cătălin- **ENVIRONMENTAL EDUCATION THROUGH ITINERANT EXHIBITION “POLLUTION, WHERE IT GOES...?”**
15. NEGOIȚĂ Gheorghe Teodor, MAGDALIN Andreia - **ROMANIAN POLAR RESEARCH MUSEUM**
16. BUCȘA Corneliu, BUCȘA Livia - **BIODIVERSITY IN THE CULTURAL HERITAGE BIODEGRADATION PROCESSES**

II. BIODIVERSITY AND ECOLOGY OF TERRESTRIAL ORGANISMS

Section – Invertebrates

Building D, 2nd floor, 215 Hall

Oral presentations

Moderators

Dr. MUSTAȚĂ GHEORGHE

Dr. ANDRIESCU IONEL

1. YILDIRIM Mehmet Zeki - **GASTROPOD FAUNAS OF DRIED LAKES AND SPRINGS IN BURDUR AND ISPARTA, TURKEY: A RE-APPRAISAL**
2. KEBAPÇI Ümit - **MIOCENE LAND SNAIL ASSEMBLAGES FROM TURKEY: A ZOOGEOGRAPHICAL EVALUATION**
3. GÜLLE Pınar, BOYACI Yunus Ömer, KEBAPÇI Ümit - **A NEW ATTRACTIDES (PARASITENGONA: HYGROBATIDAE) RECORD FOR TURKEY: *ATTRACTIDES LACUSTRIS***
4. EFTENOIU Cristina-Constantina, PETROVICI Milca, PÂRVULESCU Lucian - **STUDIES ON EPHEMEROPTERA FAUNA (INSECTA: EPHEMEROPTERA) FROM AQUATIC ECOSYSTEMS IN ANINA MOUNTAINS (SW OF ROMANIA)**
5. STAHI Nadejda - **THE DIVERSITY AND ECOLOGY OF INSECTS FROM ORTOPTERA ORDER (INSECTA) FROM SCIENTIFIC REZERVATION "PRUTUL DE JOS" OF THE REPUBLIC OF MOLDOVA**
6. BERCHI Marius - **FIRST RECORD OF *ANISOPS SARDEUS* (HEMIPTERA: HETEROPTERA: NOTONECTIDAE) IN ROMANIA**
7. VARVARA Mircea - **RELATIVE ABUNDANCE AND THE DISTRIBUTION OF THE SPECIES *POECILUS CUPREUS* L. (COLEOPTERA, CARABIDAE) IN WHEAT AND POTATO CROPS FROM ROMANIA**

8. ARINTON Mihaela, TOMOZII Bogdan - **FAUNISTICAL AND ECOLOGICAL ASPECTS CONCERNING THE CARABIDS (INSECTA: COLEOPTERA: CARABIDAE) FROM VÂNĂTORI-NEAMȚ NATURAL PARK (NEAMȚ COUNTY, ROMANIA)**
9. ZAHARIA Lăcrămioara Gabriela - **THE ELATERIDS COLLECTION CATALOGUE (COLEOPTERA: ELATERIDAE) FROM THE PATRIMONY OF „ION BORCEA” NATURAL SCIENCES MUSEUM COMPLEX OF BACĂU**
10. ZAHARIA Lăcrămioara Gabriela, PATRICHI Gabriela - **ELATERIDS (COLEOPTERA: ELATERIDAE) FROM THE COLLECTIONS OF NATURAL SCIENCE MUSEUM GALAȚI**
11. MIHAILOV Irina, DERJANSCHI Valeriu - **THE ECOLOGICAL ASPECTS OF ROVE BEETLES (COLEOPTERA, STAPHYLINIDAE) FROM THE REPUBLIC OF MOLDOVA**
12. GURĂU Gabriela - **CONTRIBUTIONS TO THE KNOWLEDGE OF THE DIVERSITY OF CERAMBYCIDS (INSECTA, COLEOPTERA, CERAMBYCIDAE) FROM SLĂNIC MOLDOVA, BACĂU COUNTY (II).**
13. CHIMIȘLIU Cornelia - **NEW DATA REGARDING THE DIVERSITY OF NYMPHALIDAE FAMILY (INSECTA: LEPIDOPTERA) IN ROMANIAN FAUNA**
14. CRISTESCU Mihaela - **THE EXOTICAL LEPIDOPTERA COLLECTION OF THE NATURAL SCIENCES MUSEUM COMPLEX FROM GALAȚI**
15. ANDRIESCU Ionel, VOICU Roxana Elena - **CONTRIBUTIONS TO THE STUDY OF THE PARASITOID HYMENOPTERS AND INQUILINE COMPLEX WHICH ADJUSTS THE POPULATIONS OF SPECIES *CYNIPS QUERCUSFOLII* (LINNAEUS 1758) ♀♀ ♀♂ (HYMENOPTERA, CYNIPIDAE) IN THE REGION OF MOLDAVIA – ROMANIA**
16. DEHELEAN Bogdan Ștefan, PETROVICI Milca, BURNECI Octavian - **DIVERSITY AND DINAMICS OF EPIGEAL FAUNA FROM DIFFERENT ECOSYSTEMS IN CEFA NATURE PARK (NW OF ROMANIA)**

Posters

1. ARDEI Irina-Mădălina - **FLORISTIC DIVERSITY OF CORMOPHYTAE IN BERZUNȚI MOUNTAINS, BACĂU COUNTY**
2. TĂUȘAN Ioan, BUCȘA Corneliu - **XYLOPHAGOUS COLEOPTERANS (INSECTA, COLEOPTERA) OF EUROPEAN INTEREST, IN THE NATURAL HISTORY MUSEUM COLLECTIONS FROM SIBIU (ROMANIA)**
3. PRICOP Emilian - **FAIRY FLIES DIVERSITY (HYM.: CHALCIDOIDEA, FAM. MYMARIDAE) IN SOME *MALUS PUMILA* (COMMON APPLE) ORCHARDS, FROM MOLDOVA (ROMANIA)**
4. PARASCHIV Gabriela – Mihaela, NEGREANU-PIRJOL Ticuța, NEGREANU-PÎRJOL Bogdan - **CHEMICAL STUDY OF THE INTERSTITIAL ENVIRONMENT AND THE CORRELATION WITH STRUCTURAL PARAMETERS OF THE INVERTEBRATE PSAMMIC POPULATIONS FROM VAMA VECHE, BLACK SEA COAST**
5. URECHE Camelia, VOICU Roxana Elena, MIHU Ionela Roxana - **COMPARATIVE STUDIES OF THE EPIGEAN INVERTEBRATE COMMUNITIES OF SOME NATURAL AND ANTHROPOGENIC HABITATS IN SULINA (TULCEA COUNTY)**
6. GHIURCĂ Daniel, ROȘU Sorin - **DATA REGARDING THE PHOLIDOSIS OF SOME POPULATION OF *LACERTA AGILIS* FROM ROMANIA**
7. CONETE Denisa, MESTECĂNEANU Adrian, GAVA Radu - **ECOLOGICAL RESEARCHES REGARDING THE AVIFAUNA FROM THE AREA OF THE RESERVOIRS FROM THE ARGEȘ RIVER, OBSERVED DURING THE WINTER WATERBIRDS CENSUS (2000 – 2010 PERIOD)**

8. **CONETE Maria Denisa - THE BREEDING BIRDS SPECIES FROM THE MIDDLE HYDROGRAPHICAL BASIN OF THE ARGES RIVER AND THEIR PROTECTION STATUS**
9. **POCORA Viorel, ION Constantin, BALTAG Emanuel Ștefan, IGNAT Alina, BOLBOACĂ Lucian, PETRENCU Laurențiu - BIRDS POPULATIONS SUCCESSION FROM THE HUMID ZONES OF EAST OF ROMANIA**
10. **GUȘĂ Delia, GHIURCĂ Daniel, MAFTEI Daniel, RANG Cătălin - RESEARCH ON BREEDING BIRD'S COMMUNITY OF THE VRANIU BROOK MIDDLE BASIN, BETWEEN CIUCHICI AND RĂCĂȘDIA LOCALITIES (CARAȘ-SEVERIN COUNTY)**
11. **GHIURCĂ Daniel, GUȘĂ Delia, MAFTEI Daniel, RANG Cătălin - RESEARCH ON BIRD COMMUNITIES FROM CĂLMĂȚUI VALLEY, BETWEEN SPĂTARU AND LUCIU LOCALITIES (BUZĂU COUNTY)**
12. **PARASCHIV Dalia - CONTRIBUTIONS TO THE KNOWLEDGE OF SMALL MAMMAL FAUNA IN HEMEIUS DENDROLOGICAL PARK, BACAU COUNTY**
13. **POCORA Irina - THE DIVERSITY AND SPECIFICITY OF ECTOPARASITES COLLECTED FROM BATS IN EASTERN ROMANIA**
14. **CĂTĂNOIU Sebastian - THE ASSESSEMENT FOR SUITABILITY OF HABITATS FOR EUROPEAN BISON REINTRODUCTION IN THE VÂNĂTORI NEAMȚ NATURE PARK**
15. **DEJU Răzvan, CĂTĂNOIU Sebastian - THE ASSESSMENT OF DAMAGES DONE BY THE EUROPEAN BISON TO FOREST TREE SPECIES WITHIN THE ACCLIMATIZATION ENCLOSURE, THE VÂNĂTORI NEAMȚ NATURE PARK**
16. **DEJU Răzvan - THE SPATIAL - TEMPORAL DYNAMICS OF EUROPEAN BISON HERDS IN ROMANIA**

III. BIOTECHNOLOGY, RESOURCES RECOVERY, ENVIRONMENT PROTECTION

Building D, 2nd floor, 225 Hall

Oral presentations

Moderators

Dr. GOGU GHIORGHÎĂ

Dr. COSTICĂ MISĂILĂ

1. CIOBOIU Olivia - **SPECIFIC FEATURES OF THE BIODIVERSITY WITHIN A HYDROGRAPHICAL BASIN FROM THE ROMANIAN PLAIN**
2. COSOR Georgia, CAZACU Constantin, POSTOLACHE Carmen - **SPATIAL AND TEMPORAL DISTRIBUTION OF THE ECOLOGICAL SYSTEMS FROM THE NEAJLOV CATCHMENT**
3. COGĂLNICEANU Dan, RUȘTI Dorel, COGĂLNICEANU Gina-Carmen - **THE NEED FOR SETTING SOUND NATIONAL PRIORITIES IN CONSERVATION WITHIN THE EUROPEAN UNION**
4. DĂSCĂLIȚA Dan - **WATER RESSOURCES FROM HYDROGRAPHICAL BASIN SIRET**
5. DĂSCĂLIȚA Dan - **THE MONITORING OF WATER RESOURCES IN THE SIRET HYDROGRAPHICAL BASIN**
6. DĂSCĂLIȚA Raluca - **ARCHITECTURAL INSERTS ADAPTED TO THE DEMANDS OF A PROTECTED AREA**
7. ARDELEANU Greta, DĂSCĂLIȚA Dan - **THE MANAGEMENT OF DISASTERS RISKS, PRODUCED BY HYDROMETEOROLOGICAL DANGEROUS FENOMENA**
8. BUNGEANU Alis, DĂSCĂLIȚA Dan - **THE ROLE OF INFORMATIONAL DECISIONAL SYSTEM FOR PROCESS SUSTAINABLE DEVELOPMENT OF WATER BODIES**

9. DAMIAN Vasilica Laura, CRAINIC Ghiță Cristian - **ASPECTS CONCERNING THE ACHIEVEMENT OF A GEOGRAPHICAL INFORMATIONAL SYSTEM (GIS) RELATED TO THE UNIT OF PRODUCTION (U.P.) II ZÎMBRU, FORESTRY DISTRICT GURAHONȚ, FORESTRY ADMINISTRATION ARAD BY USING THE PROGRAMME MAPSYS 8.0**
10. DAMIAN Vasilica Laura, CRAINIC Ghiță Cristian - **ASPECTS RELATED TO THE OPTIMUM VALORIZATION OF FOREST POTENTIAL RELATED TO RAMMELS WITHIN THE UNIT OF PRODUCTION (U.P.) II ZÎMBRU, FORESTRY DISTRICT GURAHONȚ, FORESTRY ADMINISTRATION ARAD**
11. DOROFTEI Mihai, LUPU Gabriel, NICHIFOR Cristina - **IMPLEMENTATION OF ADAPTIVE MANAGEMENT REGARDING CLIMATE - INDUCED CHANGES OF HABITAT DIVERSITY IN ROMANIA'S PROTECTED AREAS (HABIT-CHANGE PROJECT)**
12. DUMITRAȘCU Mioara, ANDREI Marin, PREDA Elena, TIBIRNAC Marcel, VĂDINEANU Angheluța - **THE IMPACT OF HUMAN TRAMPLING ON GRASSLANDS VEGETATION**
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INVITED SPEAKERS

SUSTAINABLE DEVELOPMENT STRATEGY OF BACĂU COUNTY FROM THEORY TO PRACTICE

BRĂNEANU DUMITRU

Vice-President of Bacău County Council

Till 2021, the Bacău County will become one of the main engines of economical development for the North-Eastern Region, a regional logistical node and sustainable development pattern. Its economical growth will be based on its own industrial tradition. The sustainable development strategy of Bacău County will act on fixing the errors of the past, leading to social convergence and cohesion. Taking into account the impressive reservoir of talents and the knowledge of human resources it will lead to equitable harmonious and environment friendly development of our county.

POLICY ON SCIENTIFIC RESEARCH AT “VASILE ALECSANDRI” UNIVERSITY OF BACĂU

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The policy on scientific research at “Vasile Alecsandri” University of Bacău is based on a four-year management program. The program has two major directions: the organization of the activity in the scientific research field, and the valorization of research and development results.

The main aspects of the management program and the results obtained until now are presented.

CHALLENGE OF CHANGE, WHERE TO?

GOMOIU MARIAN-TRAIAN

C. M. of Romanian Academy

GeoEcoMar, Constanța

The paper brings forward one of the most important problems facing mankind - climate change, which is a real global process, continuously growing and affecting both natural and socio-economic systems. It is an opinion generally accepted nowadays by the majority of the scientific community in Europe and the world, including Romania.

The Reports of the International Panel on Climate Change (IPCC) are more than eloquent:

- Since 1850, eleven of the twelve warmest years have occurred from 1995 to 2006;
- The ocean is becoming more acidic, due to increasing atmospheric carbon dioxide;
- As a result of emissions from human activities, carbon dioxide concentrations are now 387ppm, far exceeding the natural range in the last 650,000 years (of about 180 to 300 ppm).

In the next 50 years, climate change could have an impact on key economic sectors - notably agriculture, energy, transport, tourism and health. Certain ecosystems and biodiversity loss will accelerate. Climate change impacts will be stronger in certain regions, particularly in coastal and mountain areas or on flood plains.

Assessment of vulnerability to climate change is of great importance, because it provides information about the nature and extent of expected impacts and influences decision makers about the shape and urgency of the activities and adaptation strategies.

The author mentions that a special approach is necessary for social vulnerability assessment, based on the frame **exposure – sensitivity - adaptive capacity**; this special approach is the practical basis for building resilience to climate change in people and industries that depend on the reference ecosystems.

Based on a rich literature and personal experience in the EU FP7 Project “*Climate Water - Bridging the Gap between Adaptation Strategies of Climate Change Impacts and European Water Policies*”, the author summarizes the projected impact on aquatic ecosystems, the possible adjustments and the researches needed to limit the negative effects induced by climate change. Tackling climate change requires the application of two types of measures: mitigation (reducing emissions of greenhouse gases) and adaptation (to cope with inevitable consequences). The author makes some references to the White Paper document prepared by the European Commission aimed at improving the EU's capacity to adapt to climate change, a document that establishes a framework for action aimed at: 1. formation of a solid knowledge base regarding the risks and effects of climate change, 2. integrating climate change impacts in key European policy, 3. combining various policy measures in order to obtain an optimal result: innovative financing mechanisms (including those based on the market) would be needed to facilitate adaptation, 4. supporting international efforts to adapt, and 5. collaborating with national, regional and local authorities in partnership.

Urgent action is needed to avoid major irreversible impacts on society and ecosystems, and achieve the EU target of a maximum 2°C increase above pre-industrial levels.

Drawing the attention of the scientific community to the problem of climate change, the author recommends the researchers to tackle to a greater extent future researches designed to monitor change, to identify their effects and find solutions for adaptation and limitation.

BUILDING-UP THE INDIVIDUAL ENVIRONMENT BETWEEN UMWELT AND INNENWELT

MUSTAȚĂ GHEORGHE, MUSTAȚĂ MARIANA

"Al. I. Cuza" University of Iasi, Faculty of Biology

Life appeared in the aquatic environment, but not before being prepared for the emergence of the first living beings. Since the emergence of life the whole Planet Terra has been modified in the relationship between biotic and abiotic. Biosphere represents life as a planetary phenomenon, and the life has as environment the Ecosphere. Both the vital phenomenon and Ecosphere had a coevolution during the geological time. Biocoenosis together with its biotope form an ecosystem. Ecosystem is the most beautiful and compelling example of what it means the unity of life and its environment, whether we think of **bioskene, biochorion or biome**. The species occupies a certain area, which represents its life environment (the entire complex of abiotic factors). Also, the individual has its life environment. We should call it **habitat**, but this term is often used differently in different comprising spheres. However, every living being, every individual, regardless of what species, Phylum or Kingdom is part of has its life environment, a proper environment, achieved by selection in a much more comprehensive environment. This environment has two parts harmoniously combined, forming a unitary whole: the **Umwelt** and the **Innenwelt**.

So in one and the same environment (broad) each species realizes its own living environment as each individual realizes its life environment in a broader environment in which it lives.

THE USE OF THE EUROPEAN FISH INDEX (EFI+) IN ASSESSING THE ECOLOGICAL STATUS OF RIVERS IN EUROPE

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EFI+ represents a multimetric index based on a predictive model that consider the abiotic parameters of individual sites, assessing the structural deviations of fish communities compared to ichthyofauna unaffected by human impacts. The index assesses the ecological status of investigated sites on a scale with five integrity levels (high, good, moderate, poor and bad). The main objective of the index was to define a calibration dataset and to model and select metrics in a way that the index could be correctly calibrated for all or most ecoregions and environmental situations across Europe. Based on the proportion of fish species intolerant to oxygen depletion, habitat alteration, temperature variations and considering the reproduction habitat (lithophilic and rheophilic species), two indices were developed for the EFI+: salmonid and cyprinid dominated fish assemblage indices. One metric is expressed in terms of richness, two in density of individuals and one in density per size class.

The elaboration of EFI+ included several phases, beginning with data gathering, determining the environmental conditions, spatial coordinations of the sites, standardization and calibration of all considered data depending on river typology and European ecoregions. The two indices (salmonid and cyprinid) were then developed and their applicability was determined.

PLANTS OF THE FUTURE WITH MAJOR IMPACT ON ECOLOGICAL AND SUSTAINABLE DEVELOPMENT IN AGRICULTURE

RAȚI IOAN VIOREL

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The studied species: *Hippophae rhamnoides*, *Cornus mass*, *Rosa* sp., *Aronia melanocarpa*, *Lonicera caerulea* are presented as a possible solution for actual problems as global warming and the climate change. These species can be valuable in cultivated areas by establishing a breed with biochemical features known in “ecological pomiculture farms”. The plants of the future have a key position in the sustainable crop strategy, because they give many solutions to the economical, social and environmental problems of our days. These kind of studies make possible for us to use a small part of the genetic diversity of the nature. In order to achieve these goals, it is important to build multidisciplinary teams (research, development, teaching, culture and economy).

The accomplished researches contribute to creating a concrete pattern easy to be multiplied to regional and national level, as an innovative method for spreading the results and the development of these species both as pomiculture farms, forestry and for the environmental protection. Based on results, this complex study is part of the EUROPEAN RESEARCH AREA – ERA.

BIODIVERSITY AND ECOLOGY OF AQUATIC ORGANISMS

ORAL PRESENTATIONS

THE USE OF PLANKTON COMMUNITY FOR THE ECOLOGICAL STATUS ASSESSMENT IN LAKE ȘTIUCII, NATURE RESERVE, CLUJ COUNTY, ROMANIA

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Water quality assessment using biotic communities represents an important and actual issue, according to the Water Framework Directive 2000/60/EC of the European Parliament. Phytoplankton community is recognised as a powerful tool in the assessment of lake ecological status, while zooplankton community is only considered in isolated cases of eutrophication or accidental pollution. The present paper aims to attain a complete and comprehensive characterization of the ecological status of Lake Știucii, using both phytoplankton and zooplankton communities. Several trophicity and organic pollution indices were calculated based on the number of phytoplankton species present in the water column. These results were compared to the values of zooplankton biotic indices. In case of phytoplankton, previous data existed from 1943, 1958, 1998, 2000 and 2005. Thus, trophicity and organic pollution indices were calculated and their values from different periods of time were compared. An evolution was observed, from an oligo-mesotrophic state and the lack of organic pollution in 1943 and 1958, to meso-eutrophic conditions and moderate organic pollution in 1998-2005.

QUALITATIVE AND QUANTITATIVE DETERMINATION OF ALGAL FLORA'S GALBENI LAKE, BACĂU COUNTY

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This paper is part of a wider study which aimed to assess the biotic and abiotic characteristics of Siret River, which supplies water to Galbeni Lake, Bacău County, surrounding areas of the lake and its barrier basin. At the time of this study the lake was completely drained. Because the lake is part of Natura 2000 Network, the algal flora study was performed to identify potential ecosystem recovery after refilling the basin with water.

CHARACTERISATION OF SOME SPECIFIC ALGAE AND THEIR COASTAL SECTOR, FROM THE ROMANIAN MARINE ECOSYSTEM – IMPORTANT SOURCE FOR THE PHARMACEUTICAL INDUSTRY

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The importance of the macrobenthic flora – algae and phanerogames – for the general productivity of the marine environment, especially in shallow waters, is becoming more and more obvious from the biological, as well as from the economical point of view. The macrophytes also represent a particular life form. During the past years, it became obvious that the ecosystem presents a marine algae excedent, which should be turned valuable in one way or another. The phytochemical studies on the algae [1,2,3] (inferior marine plants belonging to the Thallophyta systemic category) presents the possibility of their usage as raw material. The diversity and productivity of marine ecosystems are extremely important in preserving the health of the marine and terrestrial environment, and provides important sources of food for humans and animals, for the pharmaceutical industry, medicine, as well as for additives in the food industry and cosmetics, etc.

A LIMNOECOLOGICAL OVERVIEW OF SEASONALLY DRYING LAKES IN BURDUR, TURKEY

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Water volume of the shallow lakes Yarışlı, Çorak and Çanaklı show extensive variations throughout the year and may remain dry for the summer season. The survey of the lakes, involving the sampling of the zooplankton and study of the inflowing waters, was carried out throughout the year 2009. The lakes, having ornithological importance during winter period, showed unique zooplanktonic compositions. Main ecological problems observed in the lakes were the high pollution and overfishing in the inflowing waters.

THE HUMAN IMPACT ON BENTHIC COMMUNITY STRUCTURE AND DISTRIBUTION, FROM DIFFERENT AQUATIC ECOSYSTEMS IN LUNCA MURESULUI NATURAL PARK (WEST OF ROMANIA)

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This study aims to investigate the effect of Arad city as an industrial and urban center, over the water quality of the Mureş River. Samples were collected from November 2009 to October 2010, using seasonal quantitative benthos collection, from 4 different working stations situated upstream and downstream from the river's major pollution sources. Three quantitative samples were taken at each working station using the Ekman-sampler and a benthos net, with a mesh size of 250 µm. After detailed analysis at the stereoscopic microscope, important changes were noticed, induced by the city's major pollution sources, over the structure and dynamics of the macrozoobenthonic communities. Thus, the more sensitive to pollution caddisflies and the Lamellibranchiata are replaced downstream the major pollution sources, by less sensitive to pollution species like worms, non-biting midges, biting midges and roundworms. This groups are found in grate density in places where the substrate is rich in organic substances resulted from human activities.

DINAMICS AND STRUCTURE OF THE MACROZOOBENTHICS COMMUNITIES IN CERNA RIVER (SW OF ROMANIA)

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This present study aims to investigate the Cerna River water quality. Along this river are situated a storage dam and the Baile Herculane City. Quantitative samples were collected using the Surber Sampler (1072 cm² surface; mesh size of 250 µm), at a 3 months interval (one sampling campaign / season). 4 sampling stations were establish, one at the spring, ant the rest, before and after the rivers main sources of pollution. At each sampling station, three collections were made (one at each shore, and one from the middle of the river bed). In addition to the biological sampling, several general physico-chemical indicators were also measured in each of the sampling stations: pH, conductivity, fixed residue, CBO₅, CCO-Mn, chloride, sulfate, calcium, magnesium, sodium, potassium, ammonium, nitrites, nitrates, cyanides, phenols, detergents, iron, total phosphorus, chromium, lead, zinc, bicarbonate, permanent hardness, temporal hardness and total hardness. The structure of the zoobenthonic communities differs from one sampling station to another. This reflects the change in water quality due to pollution and changes in hydrological regimes. Also, the caddisflies, mayflies and stoneflies are gradually replaced by less demanding groups (worms, flies larva, nematocera diptera, etc).

RECENT DATA REGARDING DIVERSITY OF SOME BENTHAL INVERTEBRATES FROM BISTRIȚA AND DORNA RIVERS

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The paper presents aspects regarding qualitative and quantitative composition of benthic fauna from Bistrița and Dorna Rivers, upstream and downstream of Vatra Dornei, Romania. The researches were done during summer – autumn of 2009, sampling being done from hard and mobile substrates, in each studied sites.

A list with main identified invertebrates groups and taxa will be presented.

Data regarding alpha diversity and percent composition in the studied rivers are done.

Frequency, relative abundance, Dzuba indices (W %) and other synecological indices will be analyze for main representants of Acarina, Ephemeroptera, Plecoptera, Trichoptera, Heteroptera and Diptera, founded in the samples.

SPECIES DIVERSITY AND ECOLOGY OF NEMATODE COMMUNITIES OF URBAN LOTIC HABITATS

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The taxonomy and ecology of freshwater and terrestrial nematodes in the lotic habitats (three lakes) of the urbancenose Chisinau (R.Moldova) have been studied. As a result of taxonomic study 54 species of nematodes from 39 genera, 26 families and 9 orders of phylum *Nematoda* were revealed in the benthic zone of lakes situated in three recreation areas of city. Species diversity of nematodes for the studied lakes varied 31–39 species, their abundance from 15 to 250 ind. $\times 10^3 \text{m}^{-2}$ depends from the sampling places. The fauna of nematodes were formed by species-hydrobionts (38–41% from common species number), amphibionds (35–44%) and edaphobionts (18–26 %) (ecological groups by Gagarin, 2001). Between the trophic groups (by Yeats, 1993) the nematode-bacteriovores were prevalence by quantity-quality parameters (40–60 % from common number of nematodes) in comparison with algivores, plant parasites and omnivores. Species diversity index (Shannon-Weaver) was estimated between 3.04–3.74. Maturity Index (MI) (Bongers, 1990) for nematode communities is determined on the basis of faunal composition and the differences of the life strategy from colonizers (r-strategists) to persisters (K-strategists); the MI was varied 1.72–2.26. The MI is a sensitive instrument for measuring disturbance in ecosystems and decreases of MI in benthic of the studied lakes have been shown to correspond to a gradient of pollution.

POPULATION DYNAMICS OF *ALITTA SUCCINEA* (POLYCHAETA: NEREDIDAE) FROM THE DANUBE-BLACK SEA CANAL

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The polychaete *Alitta succinea* (Frey et Leuckart, 1847), commonly called "pile-worm", is characterized by a wide geographical distribution and occurs especially in brackish-water lagoons and estuaries from tropical and equatorial regions. This species represent an important link in the marine food-webs and is often used as bait by recreational fishermen. *Alitta succinea* is extremely eurythermal and euryhalyne, being capable to support salinities ranging between 0.14 and 80 and temperatures comprised between 0.9 and 36°C. As well, this worm is very tolerant to hypoxia and to the presence of the hydrogen sulphide in the water column. It is known as an opportunistic species, reaching very high densities in areas subjected to severe disturbance and organic enrichment (Surugiu, 2009).

A survey was carried out from March 2007 to May 2008 (15 months) to study the population structure and the dynamics of *Alitta succinea* in the Danube-Black Sea Canal. Samples were collected monthly by scrapping off the epibiosis from an area of 400 cm². The mean annual density was 679 ind.m⁻², presenting two peaks, the first in June with 950 ind.m⁻² and the second in November with 1633 ind.m⁻². The smallest density was observed in April (166 ind.m⁻²). The mean annual biomass was 24.70 g.m⁻², with a minimum of 3.90 g.m⁻² in September and a maximum of 63.77 g.m⁻² in June. The analysis of the size frequency histograms indicated the existence of two recruitment periods: the first in Mai-June and the second in October-November.

AN OVERVIEW OF THE ACTUAL STATUS IN *ORCONECTES LIMOSUS* (DECAPODA: CAMBARIDAE) INVASION IN ROMANIA

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The invasive crayfish species *O. limosus* is in a continuous expansion towards Eastern Europe through the Danube. It colonises new territory with an average speed of 13 km/year, negatively affecting the indigenous populations of crayfish. The process being underway needs a continuous monitorisation. The paper presents the results of a year and a half of monitorization since the first semnalation. The indigenous crayfish species *Astacus leptodactylus* has a significant CPUE numerical decline, the protected species *Austropotamobius torrentium* may also be in danger in the near future because it lives in the first order tributaries. There are no other records of *O. limosus* infested rivers in Romania.

CURRENT THREATS OF INDIGENOUS CRAYFISH SPECIES IN ROMANIA

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Three native species of crayfish live in Romania, ie noble crayfish (*Astacus astacus*), narrow-clawed crayfish (*Astacus leptodactylus*) and stone crayfish (*Austropotamobius torrentium*). The Narrow-clawed crayfish is living in slow flowing waters and ponds, stone crayfish and noble crayfish live in mountain and sub-mountain waters, both are protected in Romania. Where crayfish are living, they confirm the habitat stability. In the present situation all the three species are profoundly threatened with extinction in the long term. Natural habitat degradation overlaps with the invasion of the North American species. These species led to the complete replacement of the european native species. The spiny-cheek crayfish (*Orconectes limosus*) has already penetrated in Romania through the Danube and competes with the narrow-clawed crayfish. It also carries crayfish plague (*Aphanomyces astaci*) that is deadly to all native species of crayfish in Europe. So far, a solution has not been found in eradicating the disease or the non-indigenous crayfish species, the only viable solution is the conservation of the natural barriers known as "arc sites" .

AQUATIC AND SEMI-AQUATIC TRUE BUGS (HETEROPTERA) OF CEFA NATURE PARK (NW OF ROMANIA)

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This study aims to complete the aquatic and semi-aquatic Heteroptera (Hemiptera: Heteroptera: Nepomorpha) list of species. Specimens were collected by monitoring monthly, throughout a year, different types of habitats from the Cefa Nature Park wetlands. Samples were collected using the entomological net, and preserved in ethanol (70%). This present study reveals an addition of 13 species, along with the 9 species previously described for this protected area. Was noted the presence of *Aphelocheirus aestivalis* Fabricius, 1794 and *Cymatia rogenhoferi* Fieber, 1864 species that have a sporadic presence in the romanian fauna, being registered only few times. This data completes the information collected about this group on the other side of the border, in Körös-Maros Natural Park, where a number of 28 species were identified. Because the goal is to create a protected area on both sides of the border, it is imperative to know this group on both of the protected areas, in order to create a common monitoring plan and common management measures.

DATA CONCERNING SOME FISH COMMUNITIES FROM THE SOUTH PART OF ROMANIA

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The paper presents the results of an ecological study on the: Călmățui, Ialomița and Mostiștea rivers, fish community.

Using an electrofisher FEG 500 they were captured, in 39 sample sites, a number of 1929 fish specimens belonging to 32 species. They were calculated a series of ecological metrics and indexes in order to assess the fish community structure. Based on this data we were able to conclude that fish community is still in good state, having a balanced ecological structure, even they are some negative human impacts on the aquatic habitats. In the area they are present a some fish species that are protected at European or national level.

A "NEW" POPULATION OF *COBITIS ELONGATA* HECKEL AND KNER, 1858 IN A "NEW" WATERSHED IN THE ROMANIAN CARPATHIAN AND SUBCARPATHIAN AREA

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The *Cobitis elongata* Heckel and Kner, 1858 fish species terra typica is the upper Sava River basin (Danube Watershed) and it is spread in lotic systems on the Romanian, Bulgarian and Serbian territories. In Romania is well known in the Nera River basin and is considered extinct after the Second World War in the Jiu River basin due to the local mining related activities pollution. Its very small range in the Romanian territory make this species to be considered as vulnerable here.

As a result of the Natura 2000 proposed sites for the conservation of the Spotted Big Loach fish species on the Romanian territory analyse, at the Biogeographical Seminars for Romania and Bulgaria (which was hosted in June 2008 by the "Lucian Blaga" University of Sibiu), the decision was „insufficient moderate” and it was stressed the fact that in the Continental Biogeographic Region new sites should be designated.

For this EU requirements fulfillment and the proposal of new sites in Romania for this species, new assessment studies were realized in the Banat area (south-west Romania). Following to these studies realized in 2008, 2009 and 2010, which included the Caraș River basin too (Caraș-Severin County), this fish species individuals valuable from the conservative point of view, were found each year in different lotic sectors between Carașova and Goruia localities, consisting a "new" very important population in an unknown watershed from this perspective till now.

THE MAIN LOTIC SYSTEMS OF IZA WATERSHED BIODIVERSITY

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The paper presents the macro invertebrates and fish communities' diversity assessment of the rivers Iza and Mara, and analyze the biotope factors - biodiversity relations.

The data are based on quantitative and qualitative samples of benthos and fish, sampled in 2007 - 2008 period from 11 sampling stations situated on the Iza River and 5 on the Mara River. For the biotope conditions description there were considered the following parameters: slope, average liquid flow, type of substratum, microhabitats diversity, banks stability, riparian vegetation type, the shadow degree of the minor riverbed, the modification degree of the banks in comparison with the natural conditions, the riverine land types of utilization. Based on the correlation type of analyze there were selected biotope parameters which influence the macronevertebrates and fish communities diversity.

The obtained data stay on the basis of some management recommendations for the sustainable management of the analyzed lotic systems.

A COMPARATIVE STUDY OF SOME BODILY INDICES AND COEFFICIENTS IN *ARISTICHTHYS NOBILIS* AND *HYPOPHTHALMICHTHYS MOLITRIX* OF VARIOUS AGES

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The study analyzes comparatively some bodily indices and coefficients (profile index, Kiselev index, index of fleshy and the Fulton coefficients) in *Aristichthys nobilis* (bighead carp) and *Hypophthalmichthys molitrix* (silver carp), from the first up to the fourth growth summer. The main objective of the investigation referred to the evaluation of the health condition of the piscicultural populations under analysis, evidenced by the most representative bodily indices and coefficients expressing the fish-breeding maintenance, followed by the statistical processing of the results obtained. Thus, for each parameter in part, were calculated mean error and standard deviation, median, mode, sample variance, range, mean confidence level (95%), as well as mean variation and precision coefficient.

The analysis performed evidenced a harmonious development of the investigated populations, which showed good maintenance condition, in close correlation with the main physico-chemical parameters of the growing media: water temperature, amount of oxygen dissolved in the water and water pH. On the basis of investigated parameters values we may conclude that individuals of *Aristichthys nobilis* species evidences the most pronounced corpulence, comparatively with the ones of *Hypophthalmichthys molitrix* in the first two stages of development and, in the same time, the best physiological condition starting with the second summer of growth up to the last stage of development under investigation.

**FEEDING ECOLOGY OF ROUND GOBY
(*NEOGOBIUS MELANOSTOMUS PALLAS*, 1818)
FROM THE BLACK SEA (AGIGEA-EFORIE
NORD AREA)**

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This study is designed to improve knowledge in feeding ecology of the round goby from Agigea-Eforie Nord area of the Black Sea. During 2008 and 2009 there were analyzed 226 stomachs and their diet consisted of: bivalves, decapods, amphipods, isopods, gastropods, chironomid larvae, fish fragments and algae. Round goby feed mainly upon *Mytilus* sp. (%IRI = 24.01) during spring, amphipods during summer (%IRI = 28.48) and *Mytilaster* sp. during winter (%IRI = 30.25). Also, during the reproductive season, females prefer *Mytilus* sp. (%IRI = 27.99) and males prefer amphipods (%IRI = 27.03). During the first and second year of life fishes rely on *Mytilus* sp. (%IRI = 73.32, %IRI = 53.31), while beginning with the third year *Lentidium* sp. constitutes the main prey of their diet (%IRI = 34.38). The trophic niche of the round goby is broader during the spring (0.69) and summer (0.51) than in autumn (0.27). Dietary overlap was very high between round goby and other benthic fishes such as knout goby, black goby, black scorpionfish and greater weever (>0.6), but also very small between it and fishes like stripped mullet and sand sole (< 0.3). Our preliminary results suggested a potential competition between round goby and other benthic fishes.

THE ECOLOGICAL STATE OF SIRET RIVER IDENTIFIED BY USING THE EUROPEAN FISH INDEX (EFI+)

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The general ecological state of a river flow can be identified by using certain indexes based on different taxonomical groups of indicator organisms (algae, aquatic macro invertebrates, macrophytes). Studying the fish as indicator organisms has advantages related with: the reduced number of species from an ecosystem; there are easy to identify; large life span (years); the inclusion of all changes from the ecosystem in the structure of the trophic chains of the ihtioecosystem. These changes are well reflected by the integrity biological index (IBI). The European Fish Index EFI+ includes all these changes in a general and complex manner by knowing some parameters that are related with abiotic factors, linked with the habitat, the knowledge of anthropic influence on the ihtioecosystem by using a multifactorial methodology. It includes the knowledge of tens of parameters and variables related with the location (the names and the locations of collecting areas), the description of the collecting methods (electrofishing, the fishing area, the size of the water flow); the description of medial parameters (the type of the river, the flow regime, the geomorphology of the river, the type of the water source, the temperature of the water and air, the drain slope, the type of sediment); the presentation of variables concerning the data about fish (the taxonomy, the number of

specimens, size – length under 150 mm, length over 150 mm). The interpretation of the data obtained by processing these parameters links to a score that indicates the integrity class of the ecosystem on a 1 to 5 scale. The advantages of using this index are multiple: the possibility of comparing the data for all water flows from Europe; the unifying and the standardisation of the methodologies used for studying the water flows from Europe; the usage of numerous parameters that characterised the ecosystem as a whole, (changes in biocoenosis, changes of the habitat, the knowledge of nature and the intensity of the disruptive impact).

Therefore, the most precise and complete knowledge of the general ecological state of the water flows makes possible an adequate management concerning the sustainable preserve of these water flows.

THE ECOLOGICAL STATE OF MOLDOVA RIVER IDENTIFIED BY USING THE EUROPEAN FISH INDEX (EFI+)

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The general ecological state of a river flow can be identified by using certain indexes based on different taxonomical groups of indicator organisms (algae, aquatic macro invertebrates, macrophytes). Studying the fish as indicator organisms has advantages related with: the reduced number of species from an ecosystem; there are easy to identify; large life span (years); the inclusion of all changes from the ecosystem in the structure of the trophic chains of the ihtiocoenosis. These changes are well reflected by the integrity biological index (IBI). The European Fish Index EFI+ includes all these changes in a general and complex manner by knowing some parameters that are related with abiotical factors, linked with the habitat, the knowledge of antropic influence on the ihtiocoenosises by using a multifactorial methodology. It includes the knowledge of tens of parameters and variables related with the location (the names and the locations of collecting areas), the description of the collecting methods (electrofishing, the fishing area, the size of the water flow); the description of medial parameters (the

type of the river, the flow regime, the geomorphology of the river, the type of the water source, the temperature of the water and air, the drain slope, the type of sediment); the presentation of variables concerning the data about fish (the taxonomy, the number of specimens, size – length under 150 mm, length over 150 mm). The interpretation of the data obtained by processing these parameters links to a score that indicates the integrity class of the ecosystem on a 1 to 5 scale. The advantages of using this index are multiple: the possibility of comparing the data for all water flows from Europe; the unifying and the standardisation of the methodologies used for studying the water flows from Europe; the usage of numerous parameters that characterised the ecosystem as a whole, (changes in biocoenosis, changes of the habitat, the knowledge of nature and the intensity of the disruptive impact).

Therefore, the most precise and complete knowledge of the general ecological state of the water flows makes possible an adequate management concerning the sustainable preserve of these water flows.

THE ECOLOGICAL STATE OF BISTRIȚA RIVER IDENTIFIED BY USING THE EUROPEAN FISH INDEX (EFI+)

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The general ecological state of a river flow can be identified by using certain indexes based on different taxonomical groups of indicator organisms (algae, aquatic macro invertebrates, macrophytes). Studying the fish as indicator organisms has advantages related with: the reduced number of species from an ecosystem; there are easy to identify; large life span (years); the inclusion of all changes from the ecosystem in the structure of the trophic chains of the ihtioecoenosis. These changes are well reflected by the integrity biological index (IBI). The European Fish Index EFI+ includes all these changes in a general and complex manner by knowing some parameters that are related with abiotical factors, linked with the habitat, the knowledge of antropic influence on the ihtioecoenosises by using a multifactorial methodology. It includes the knowledge of tens of parameters and variables related with the location (the names and the locations of collecting areas), the description of the collecting methods (electrofishing, the fishing area, the size of the water flow); the description of medial parameters (the type of the river, the flow regime, the geomorphology of the river, the type of the water source, the temperature of the water and air, the drain slope, the type of sediment); the presentation of variables concerning the data about fish (the taxonomy, the number of specimens, size – length under 150 mm, length over 150 mm). The interpretation of the data obtained by processing these parameters

links to a score that indicates the integrity class of the ecosystem on a 1 to 5 scale. The advantages of using this index are multiple: the possibility of comparing the data for all water flows from Europe; the unifying and the standardisation of the methodologies used for studying the water flows from Europe; the usage of numerous parameters that characterised the ecosystem as a whole, (changes in biocoenosis, changes of the habitat, the knowledge of nature and the intensity of the disruptive impact).

Therefore, the most precise and complete knowledge of the general ecological state of the water flows makes possible an adequate management concerning the sustainable preserve of these water flows.

POSTERS PRESENTATIONS

STUDIES ON DISTRIBUTION AND BIOMASS OF OLIGOCHETS FROM IZVORU MUNTELUI – BICAZ REZERVOIR

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During the period 2006 – 2007 in Izvoru Muntelui – Bicaz reservoir has been studied the community structure, distribution and biomass of oligochets.

From the total number of benthonic macroinvertebrates identified in this period (28 species), 12 species are oligochets. Along with increasing of the depth, from the upstream to the downstream, we observed a decreasing of specific diversity as well as a increasing of the oligochets individual number and biomass.

From the total amount of identified taxa from the whole area of the lake, *Tubifex tubifex* and *Limnodrilus hoffmeisteri* are dominants in the deep area, like numerical and biomass abundance.

STUDIES ON DISTRIBUTION AND BIOMASS OF CHIRONOMIDS LARVAE IN CHIRIȚA DAM LAKE

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Consequent to the research run in 2006-2007 period in Chirița dam lake, have been identified 15 genera of Chironomidae Family.

Among the identified genera, high numerical and biomass abundances had: *Bezzia* sp. (Linnaeus, 1758), *Chironomus plumosus* (Golubeva, 1987), *Dicrotendipes nervosus* (Staeger, 1839), *Polypedilum nubeculosum* (Meigen, 1804), *Procladius choreus* (Meigen, 1804) and *Tanytarsus* sp. (Linnaeus, 1758).

**SOME ASPECTS OF THE INFLUENCE OF
INTENSIVE AQUACULTURE IN FLOATING
CAGES, ON SOME CHEMICAL PARAMETERS OF
THE ACTUALLY SEDIMENTS IN IZVORU
MUNTELUI-BICAZ RESERVOIR**

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The previous investigations focused on the influence on the mineral and organic matter resulted from the aquaculture activity represented by unconsumed feeds, faeces and excreta on the sediment composition from the floating cages area, have been made in 1979 – 1983 period, while the trout production was between 3 and 10 tons per year and the quantity of feeds administrated to the fishes was between 8.7 and 27 tons per year. In 2007 we take again the researches on the chemical parameters of the actually sediments in the aquaculture floating farm area and in other areas, uninfluenced by this activity.

CONSIDERATION ON THE BENTHIC INVERTEBRATE FAUNA FROM THE DOAMNEI RIVER

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Situated in the Meridional Carpathians, in Argeș County, the Doamnei River has its springs in the Fagaras Mountains, being formed by the union of two mountain streams, Valea Rea and Zârna, and flows into the Arges River, near Pitesti. A left tributary of the Argeș River, with a length of 109.1 km, this is a typical mountain river especially for its morphodynamic characteristics. The paper presents data referring to the comparative structure of the benthic invertebrate fauna of the Doamnei River in four sampling site, in the sector Cernat – Dârmănești. In the period August 2008 – April 2009, zoobenthic samples were taken periodically in August, October and April. On each sampling site, the benthos samples were taken using a Surber–sampler, which covered a surface of 0.16 m² (mesh-size: 200 μm). The stones were washed in the stream and brushed. On the basis of relative abundancy, the dominancy of the invertebrate groups is highlighted. In particular, is analyzed the community structure of the mayflies larvae being presented the list of the taxa, ecological spectrum, relative abundance, frequency and other ecological characteristics of the mayflies fauna.

EVOLUTIONARY ASPECTS OF THE PONTO-CASPIAN PERACARIDS FROM PARAMARINE WATERS

SCHRÖDER VERGINICA

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Morphological and genetic study is performed on several types of amphipods and mysids from coastal waters compared to species outside the Romanian Black Sea basin. Evaluation and interpretation of morphological characters highlighted that the group of Romanian amphipod species (*Euxinus Pontogammarus*, *Compactogammarus*, *Obesogammarus*) are probably evolving. Also, separation of more primitive forms such *Echinogammarus* and *Dikerogammarus* is obvious, confirmed by some aspects of molecular genetics analysis. At mysids analyzed is a lack of genetic polymorphism in the species examined. This appears to be a consequence of a differentiation of older species, confirmed by the stability of morphological characters.

INFLUENCE OF THE PARASITOSIS OF CULTURE FISH ON THE BIOPRODUCTION FROM THE ANTHROPIC AQUATIC ECOSYSTEMS OF GALATI COUNTY

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In what regards the intensive and super intensive aquaculture, parasites are often the cause of severe illness manifestations. The presence of some dense fish populations, maintained in specific medial conditions, can be favorable for the growth of some parasites species and also can trigger the development of severe illnesses which can lead to a high mortality ratio, with negative aspects on the aquaculture production. The present paper reveals the evaluation of the culture fish parasitological conditions, from the anthropic ecosystems in the Galati County, from the point of view of the illness degree caused by the various parasitosis. Thus, the researches were oriented as to underline the parasitosis which affects fishes in anthropic aquatic ecosystems such as Brates, Vladesti and Malina the spreading area and their influence on the fishing production.

ECOLOGICAL DATA ON BENTHAL COMMUNITIES FROM SHALLOW ZONE OF MANGALIA LAKE - MILITARY PORT

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The current study presents data from research conducted in Mangalia military port, in the period November 2008 - February, March, and April 2009.

An analysis of percentage composition of the invertebrates' populations is done in the paper. Taxa belonging at least major groups were found, either on mobile substrata, either on rocky one, sometimes covered with macrophytes algae. The data were used in the evaluation of some synecological indices, as frequency (F %), average abundance (A, ind. • m⁻²), average density (Davg ind. • m⁻²), for each of the studied stations. Correlation between variation of the number of taxa and density depending on type of substrata was done.

The ecological significance index WD and its correlation with the rank was also calculated, showing that in the studied area oligochaetes, nematodes and harpacticoids are considered as characteristic groups, holding, in order, the first three ranks.

THE BIODIVERSITY STUDY OF MEIOBENTHAL COMMUNITIES FROM SHALLOW ZONE OF THE SOUTH SECTOR OF THE ROMANIAN BLACK SEA LITTORAL

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In the shallow water of the south Black Sea Romanian littoral sector, the meiofauna group is represented by three invertebrates fauna categories from two different biotopes: the typically endopsammic invertebrates, the so called interstitial fauna with body size under 1 mm, from psammic biotopes (sand and shells materials with different granulometry) and second category include all benthic organisms which are the body size under 1 mm but which prefers a phytal/hard substratum; in added, we had included in meiofaunal group all juvenile and larval forms of the macrobenthic invertebrates; we had considered that the last category is an important group of meiobental communities by trophic and spatial niches. The aims of this study were the identification of species and the evaluation of the biodiversity of those two major communities from shallow waters biotopes of Romanian littoral.

PRELIMINARY DATA ON THE FISH COMMUNITIES STATUS FROM THE BASIN OF TISA RIVER – MARAMUREȘ

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The research made aims the knowing of the current status of the aquatic ecosystems from the basin of Tisa river - Maramures through the study of fish communities of these watercourses and their degree of damage caused by the pollution from mining, flooding and logging.

In this respect, there were made a series of investigations, during the year 2008, on the course of Tisa river and on the adjacent ponds from the Romanian territory and the hydrographic basin of Viseu, Iza and Săpânța.

RESEARCHES REGARDING THE ICHTHYOFAUNA FROM THE UPPER BASIN OF THE RIVER SIRET

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The aim of the research studies on the ichthyofauna in the upper basin of the Siret River conducted during the year 2008 is to assess the current state of the ichthyofauna in this reservoir.

The samples were collected by electronarcosis in 19 sampling sites in the upper basin of the Siret River. An amount of 22 fish species was collected, including two non-native species.

Qualitative and quantitative methods were used to characterize the fish communities. The structure and the composition of the fish communities in the sampling sites were established by using the analytical and synthetic ecological indices. Based on the ecological significance index, which provides information on the status of each species of the fish communities, the fish zones were established.

We also have calculated the biodiversity index and the biological integrity index (IBI) to assess the quality of these aquatic ecosystems.

THE ASSESSMENT OF THE ECOLOGICAL STATUS OF THE PUTNA RIVER USING THE EUROPEAN FISH INDEX (EFI +)

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Overall ecological status of a watercourse may be assessed by establishing indicators based on different taxonomic groups of indicator organisms. The assessment of the ecological status of a watercourse requires the determining of a large number of environmental parameters, different methods of sampling, different data about the fish species etc.

The sampling was carried out in 19 sampling sites from the main course of Putna River and from its main tributaries. An amount of 24 samples were processed and 17 fish species were identified, including 2 non-indigenous species.

**PRELIMINARY STUDIES ON THE DISTRIBUTION
AND NUTRITION OF THE *PHOXINUS PHOXINUS*
(LINNAEUS, 1758) IN THE PROTECTED AREA
ROSCI0229 SIRIU**

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During the research activity of mapping the state of conservation for the community conservative fish species from the Siriu site, situated in the Buzau drainage basin, was identified also the *Phoxinus phoxinus* specie in two types of aquatic habitat: an alpine lake located at 1460 m altitude and in the tributary streams of the Buzau River. The two aquatic habitats were described from the perspective of the morphological features (altitude, ground slope, river width, river depth, dominates substrate types, riparian and aquatic vegetation) and hydrologic features (water speed, river flow). The collection of fish was made by electronarcosis, according to the Operational Standard Procedure (Davideanu G., 2005), in the summer of 2010. In those 15 sampling sites were collected a total number of 95 fish individuals belonging to the *Phoxinus phoxinus* specie. The analysis of the intestinal contents highlighted the differences between the types of alimentation of the representatives of the two habitat types in study.

BIODIVERSITY AND ECOLOGY OF TERRESTRIAL ORGANISMS

Oral presentations

***Section - Plants, Vertebrates, Museology,
Museography***

THE STUDY OF BIOMASS OF SOME SPECIES OF EDIBLE MACROMYCETES

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The paper presents the results of the biomass studies made in 1999, 2000 and 2003. There have been studied edible macromycetes like *Cantharellus cibarius var. cibarius* and edible species of *Boletus* sp. The mycological material was collected from coniferous, deciduous and mixed forests. The method used in order to determine the biomass was the gravimetric determination of organic mass.

PRELIMINARY RESEARCH CONCERNING THE DIVERSITY OF MACROMYCETES IN PRALEA BROOK BASIN (BACĂU COUNTY)

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In this paper are presented preliminary data concerning the diversity of macromycetes in the hydrographic basin of Pralea brook.

The research began in June 2009, will be further conducted in the next years within a complex study which focuses on the diversity, taxonomy, chorology and ecology of fungi in Bacău County.

There have been identified 202 taxa from Fungi kingdom out of which 20 species belong to the Ascomycota phylum and 182 species to the Basidiomycota phylum.

PRUNUS SEROTINA EHRH. - AN INVASIVE SPECIES VEGETATING IN THE FOREST STANDS OF THE FORESTRY MANAGEMENT UNIT SINOBOB, SACUIENI FORESTRY DISTRICT, BIHOR COUNTY FOREST ADMINISTRATION

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The introduction of highly productive exotic species in the national forestry fund, have been an important goal for the Romanian forestry during a long time.

The realization of special forest crops requested the acclimatization and the naturalization of the introduced species, several of these species becoming real competitors for the native species and in some cases eliminating the main species from the forest regeneration compositions.

Prunus serotina Ehrh. (black cherry, late sweet cherry) was introduced in the framing forest stands at Sacuieni Forest District, Bihor County Forest Administration more than three decades ago.

As a consequence, after acclimatization and naturalization, the species managed to vegetate and thrived due to good local conditions: it is producing annual fructification, is easily dispersed becoming invasive in natural regenerations of the local *Quercus* species, also in black locust coppices, colonizing even the agricultural lands.

In the present case study are presented several aspects regarding *Prunus serotina*, namely, the required interventions and silvicultural operations which are necessary in order to control this species in the invaded forest stands.

SEVERAL ASPECTS WITH REGARD TO *ILEX AQUIFOLIUM* L. IN THE NATURAL RESERVE DOSUL LAURULUI, ARAD COUNTY, WESTERN ROMANIA

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Ilex aquifolium L. was officially reported in 1930, in beech stands vegetating in the Lustilor valley, Forestry Production Unit Zimbru, Forestry Management Unit Gurahont, Arad County Forest Administration.

Same species was reported from another area in the Forestry Production Unit VII Virciorova, Forestry District Caransebes, meanwhile the population died off.

In the context of the natural vegetation and wildlife biodiversity conservation, a series of studies and researches were developed by the Forestry Department of Faculty of the Environmental Protection from Oradea, the population of *Ilex aquifolium* from the Dosul Laurului reserve being included.

Consequently, the population of *Ilex aquifolium* was inventoried at several time lags in order to catch its evolution and dynamics and also the correlated quantitative and qualitative changes.

In the present case study several observational aspects are presented together with modeling possibilities and spatial-temporal representations of the population of *Ilex aquifolium*.

FLORA AND VEGETATION FROM BUCHAREST SURROUNDINGS UNDER URBAN EXPANSION IMPACT – MOGOȘOAIA – BUFTEA –

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In our days the land from the limits of Mogoșoaia and Buftea towns, such as whole Bucharest surroundings area, is under the pressure of strong anthropization process. Spontaneous vegetation that is characteristic for these areas now is gradually replaced by industrial and residences constructions, agricultural lands, or by non-productive agricultural surfaces. The most parts of existing grasslands and forests in this area are now totally replaced by residential areas, commercial areas, warehouses, industrial units, agricultural lands etc.

Even the remaining spontaneous vegetation is now strong modified by the infiltration of the sinanthropic species. The main modifications from this area are less known because of the non-existing of recent floras and vegetation studies.

Our main objective is a comparative putting up-to-date of these studies with the aim to distinguish human impact, with all unfolding human activities, in the past and in the present time for this area.

CONTRIBUTIONS TO FLORA STUDIES FROM OITUZUL ARDELENESC AREA

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Oituzul Ardelenesc is a mountain area, isolated, of forestry interest, without plots of lands with destroyed vegetation, covered with fir and beech forests and small unpolluted plains.

Flora diversity is reduced due to the small number of ecosystems types and it is dominated by mountain species among are present: *Trollius europaeus*, *Gymnadenia conopsea*, *Rosa pendulina*, *Gentiana cruciata*, *Petasites hybridus*, *Janiperus communis*, *Vaccinium vitis-idaea*.

Bioforms spectrum has following plant categories: hemicryptophytes 60%; terophytes 11%; geophytes 8.2%; chamephytes 2.7%; hidro- halophytes 1%; phanerophytes 8.2% nano- phanerophytes 8.2%;

Geological elements spectrum is formed by following group of plants: adventiv 1.6%, atlantic 0.5%, balcanic 1.6%, cosmopolitan 10.4%, circumpolar 14.2%, enedemic 1%, European 23.6%, euro- asian 43.9%, Mediterranean 2.5%, pontic 1%.

CONTRIBUTIONS TO FLORA STUDIES FROM UPPER BASIN OF TROTUȘ RIVER

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Study was conducted on two locations from Harghita County:
Lunca de Sus and Lunca de Jos.

There is a territory with specific vegetation for middle
mountain floor with accessible slopes, numerous springs, forests
and hay field which accommodate multifarious flora in which is
included a big number of taxa found on the red lists. We quote:
Angelica archangelica, *Trollius europaeus*, *Salix daplinoides* Vill,
Achillea ptarmica L., *Pedicularis exaltata*, *Ligularia sibirica* (L.) Cass,
etc.

These floristic elements can be protected on the future
because the area is rationally exploited, hay lands are private
property, forests are maintained and it has beautiful landscapes.
There are some touristic ranges which are delimitating the river basin
at the main water divid.

FISH FAUNA FROM THE UPPER BASIN OF JIU RIVER

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Jiu River basin is located in the south - west of Romania, between 43° 45'- 45° 30' north latitude and 22° 34'- 24° 10' east longitude. Carpathian Mountains divide the basin into two parts: first which include Jiu springs, is situated on the north side of the Carpathians, and the second, more highly developed, is on the southern slopes of the Carpathians chain. Besides the typical species area like *Salmo trutta fario*, *Phoxinus phoxinus*, *Orthrias barbatulus*, it is also observed the presence of one alien species called *Pseudorasbora parva* (stone moroko). For the reversible electric fishing method was calculated EFI+ index (European Fish Index).

**DETERMINATION OF SOME NORMAL SERUM
PARAMETERS IN JUVENILE STAGES THE
OSSETRA STURGEON *ACIPENSER
GÜLDENSTAEDTI* (BRANDT, 1833)**

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To be aware of the health condition of the biological material in a fish farm allows us to establish the preventive measures required to prevent spreading of a disease and the treatment to be applied in case that a mass disease occurs. That is why to know the normal value of the serical glycemia, the total protein and the protein fractions in serum enables us to differentiate the normal physiological condition of the fish material under research from the eventual pathological modifications having occurred due to the defence reaction of the organism. The level of the serical glycemia representing a high value marker indicator of the stress condition, while the level of total protein in serum is, first of all, a synthetical indicator of the nutritional condition of the organism. The most part of diseases have but a little influence on the concentration of the total protein in the blood, but some influence on certain protein fractions, and they alter the ratio between albumins and globulins. A decrease below 0.3 in value of the ratio albumins/globulins in serum is significant for the health condition of fish.

ON THE EVOLUTION AND SYSTEMATIC OF PONTO-CASPIAN GOBIES (PISCES: PERCIFORMES: GOBIIDAE)

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The separation of eastern part from the rest of Paratethys during the Mid-Miocene had, as a result, an apart evolution of two families of fishes: the alosine clupeids and also the gobiids. The ponto-caspian gobiids are consisted by three main lineages i.e. Pomatoschistin group, Gobiin group and Benthophilin group. In Pomatoschistin lineage there are three genera (*Hyrcanogobius*, *Economidichthys* and *Knipowitschia*). The Gobiin lineage is composed by the following genera: *Ponticola*, *Muellerigobius*, *Neogobius*, *Babka*, *Apollonia*, *Mesogobius*, *Proterorhinus* and *Chasar*. Finally, the Benthophilini group is composed by the genera *Caspiosoma*, *Benthophiloides*, *Benthophilus*, *Anatirostrum* and *Asra*.

PRELIMINARY DATA ON AVIFAUNA OF THE LOZOVA MARSH – GALAȚI COUNTY

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The present paper is the result of two years of observations, during 2008 and 2009, in the Lozova Marsh. From 2007 this area was included in the Romanian Natura 2000 Network like part of Special Protected Area „Lower Meadow of Siret”. There was done only one ornithological study (Gache, 1994).

The species list includes 80 species belonging to 12 orders and 33 families. In this area have been observed important species, such as: *Tachybaptus ruficollis*, *Pelecanus onocrotalus*, *Phalacrocorax pygmaeus* and *Aythya nyroca*.

The abundant trophic resources and the favorable habitat for nesting are the main reasons that explain the presence of such a large number of breeding species.

The avifauna of the Lozova Marsh includes 11 species of birds that are mentioned in the Red Book of Vertebrates, with different degrees of vulnerability.

In this area the anthropic impact is represented by the fishing activities, that are done throughout the year.

DISTRIBUTION OF *NANNOSPALAX LEUCODON* (MAMMALIA: RODENTIA) IN NORTH PART OF R. MOLDOVA AND THEIR POPULATION DYNAMICS

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The distributions of lesser mole rat (*Nannospalax leucodon* Norm.) were studied in north part of R.Moldova in the interriver zone Prut – Dniester. Their population density and spatial distribuion in the different habitats of naturale and antropizate ecosystems were revealed. The analysis of their population dynamics were compared with data received for the long term.

PECULIARITIES OF THERIOFAUNA FROM PALAEOLITHIC PLURISTRATIGRAPHIC SITE COSĂUȚI I (REPUBLIC OF MOLDOVA)

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Palaeolithic site Cosauti I is located on the second terrace of the Dniester River in the north – western part of Cosauti locality, Soroca district (Borziac, Covalenco, 1989; Borziac, 1994; David Nadachovski, Pascaru et al., 2003). In the 8 (of 21) layers of human culture the late Gravetian (age -2.113 million years according to ¹⁴C analysis) a considerable amount of bones were collected (over 34,000 determinable and about as many indeterminate) from 15 species of large and small mammals, caught by site hunters, and 9 species of micromammals, accidentally found in the deposition layers. About 93 % from the total number of determinable skeletal remains belong to tundra reindeer *Rangifer tarandus* cf. *guettardi* Desmarest, 1822 of various individual ages. The presence of insignificant remains of the species *Ochotona spelaea*, *Spermophilus suslicus*, *Spalax leucodon*, *Lagurus lagurus*, on one side, and of *Capreolus capreolus*, *Cervus elaphus*, *Alces alces*, *Ursus arctos*, on the other side, prove that in the studied zone favourable conditions (large steppe areas and woods) for the existence of mentioned animals were missing. The abundance of skeletal remains of reindeer, the presence of *Lepus tanaiticus*, *Alopex lagopus*, *Stenocranius gregalis*, *Dicrostonyx guillelmi* and *Rupicapra rupicapra* bones suggest the existence of a landscape of tundra type with subarctic and alpine elements.

ENVIRONMENTAL EDUCATION THROUGH ITINERANT EXHIBITION “POLLUTION, WHERE IT GOES...?”

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The environmental educational events which involve pupils and students became traditions in the activity of „Ion Borcea” Natural Sciences Museum Complex of Bacău. In the years 2009-2010 in the educational offer of the museum was included an itinerant exhibition named “Pollution, where it goes...?”. The aim of this exhibition was to presents the dangers of human activities over the environment. The exhibition was conceived along with additional multimedia materials and presented in a number of 6 schools and high schools from Bacău. At every school were created events in the period when the exhibition was there and pupils answered to a questionnaire. The exhibition and its impact along with conclusions resulted from the statistic interpretation of the questionnaires are presented in this paper.

ROMANIAN POLAR RESEARCH MUSEUM

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The future Romanian Polar Research Museum holds a unique collection of photographs, videos, journals, clothing equipments, devices, books, maps models, minerals, old soils, vegetals, and other materials illustrating polar exploration, history of the polar expeditions organized in the last twenty years by the scientist and explorer Teodor Gheorghe Negoita (the first romanian who touched the North Pole, Leader of the romanian polar recherche station – “Law-Racovita” – from Larsemann Hills (Est Antarctica). The purpose of the Romanian Polar Research Institute and Romanian Antarctic Foundation is to open this museum for pupils, students, master and doctoral students as well as for members of the public. The exhibition of the museum represents an incursion in time through which the visitor is invited to follow eighteen Romanian polar expeditions, in the Greenland, Spitsbergen, Siberian North, extreme North of Canada, Siberian North, North Pole, East and West Antarctica.

Our aim is to to enhance the role of the first Romanian Polar Research Museum into the national conservation system of the Romanian scientific and historical values. Arctic and Antarctic are both important for the history of their exploration and also for the recherche potential. Romania it is renowned and continuing the tradition with results to date.

BIODIVERSITY IN THE CULTURAL HERITAGE BIODEGRADATION PROCESSES

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The investigations were made between 1972-2009 at over 300 historical monuments and 11 open air museums, in Romania

The study is focused on the specific diversity in biodegradation processes, mainly regarding insects and fungi.

BIODIVERSITY AND ECOLOGY OF TERRESTRIAL ORGANISMS

Oral presentations

Section – Invertebrates

GASTROPOD FAUNAS OF DRIED LAKES AND SPRINGS IN BURDUR AND ISPARTA, TURKEY: A RE-APPRAISAL

YILDIRIM MEHMET ZEKI

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After examination of the collections of freshwater gastropod shells made between 1993 and 2009, from some of the dried lakes and springs of Burdur and Isparta provinces, previous faunal lists were updated. Accordingly, Gastropoda fauna includes 18 species: 10 from Prosobranchia and 8 from Basommatophora.

An account of listed species has been given. Zoogeographical implications, endemism, and problems regarding the drying of the lakes have also been discussed.

MIOCENE LAND SNAIL ASSEMBLAGES FROM TURKEY:A ZOOGEOGRAPHICAL EVALUATION

KEBAPÇI ÜMIT

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In Eastern Mediterranean, the Middle and Late Miocene can be characterized by rapid faunal changes in terrestrial ecosystems due to major geological and climatic changes. In the present study, the land snail assemblages belonging to these periods have been overviewed according to the zoogeographical point of view. A gradual separation from Eastern European fauna with the opening Aegean Sea can be observed. Probably due to microclimatic effects, it is seen that Ponto-Caucasian elements survived till Late Miocene in western and central Anatolia, while Mediterranean elements have been restricted to Outer Anatolia till Pliocene. Recent southern Anatolian land snail taxa allied to Ponto-Caucasian taxa should have derived from relicts of Miocene fauna disappeared elsewhere during the Messinian.

**A NEW ATRACTIDES (PARASITENGONA:
HYGROBATIDAE) RECORD FOR TURKEY:
ATRACTIDES LACUSTRIS**

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In this study, the morphological characteristics, measurements, habitat and distribution information for *Atractides lacustris* (Lundblad, 1925) a new record for the Turkish fauna from Antalya, are presented.

STUDIES ON EPHEMEROPTERA FAUNA (INSECTA: EPHEMEROPTERA) FROM AQUATIC ECOSYSTEMS IN ANINA MOUNTAINS (SW OF ROMANIA)

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This study aims to create the first faunistic list of mayflies from the Anina Mountains aquatic ecosystems. A number of 47 sampling stations were established on Caraș, Nera and Bârzava Basins. The specimens were collected using a benthos net, with a mesh size of 350 μm . Several general physico-chemical indicators were also measured in each of the sampling stations: conductivity, oxygen saturation, redox potential, pH, hardness, Ca, Mg, sulf, tannins, cyanide, CCO-Cr, nitrates, nitrites, phosphates and ammonia. *Ecdyonurus venosus*, *Ecdyonurus torrentis* and *Baetis rhodani* were the most frequent collected species. A number of 15 mayflies' species were identified in the three studied basins. Those species, together with the values of the measured physical and chemical indicators, show a good quality of the Caraș, Nera and Bârzava Rivers, along with their tributaries.

THE DIVERSITY AND ECOLOGY OF INSECTS FROM ORTHOPTERA ORDER (INSECTA) FROM SCIENTIFIC REZERVATION "PRUTUL DE JOS" OF THE REPUBLIC OF MOLDOVA

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The composition of the nature reserve "Prutul de Jos" – "Lower Prut" between Lake Beleu and a network of lakes which, together, form a unique ecosystem also present and meadows and grasslands with herbaceous plants for wet places. Almost two thirds of the reserve area is occupied by lake waters Beleu.

In the result of investigations during three years, were collected 48 species of Orthoptera order. Collections were made in different biotopes. In the immediate vicinity of the Lake Beleu were collected *Gryllomorpha dalmatina*, *Gryllotalpa gryllotalpa*, *Xya variegata*, *Pteronemobius heydeni*, *Tetrix subulata*, *T. bipunctata* species. On the emergent vegetation near wetlands and moist meadows were collected representatives of species *Conocephalus fuscus*, *Ruspolia nitidula*, *Metrioptera roeselii*, *M. bicolor*, *Paracinema tricolor*, *Mecostethus alliaceus*, *Omocestus viridulus*. In areas with shrubs and mesophilic vegetation the Orthoptera fauna is richer, and were meted: *Phaneroptera falcata*, *Leptophyes punctatissima*, *Tettigonia viridisima*, *Pterolepis nitidula*, *Metrioptera bracyptera*, *Oecanthus pellucens*, *Gryllus campestris*, *Melanogryllus desertus*, *Tetrix bipunctata*, *Calliptamus italicus*, *Pezotettix giornae*, *Stauroderus scalaris*, *Stenobothrus lineatus*, *Omocestus viridulus*, *Chorthippus albomarginatus*, *Ch. apicarius*, *Ch. loratus*, *Ch. dorsatus*, *Ch. parallelus*, *Ch. dichorus*, *Ch. biguttulus*, *Ch. brunneus* species.

**FIRST RECORD OF *ANISOPS SARDEUS*
(HEMIPTERA: HETEROPTERA: NOTONECTIDAE)
IN ROMANIA**

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Two adult specimens of *Anisops sardeus sardeus* Herich-Schaeffer, 1849 were collected in a small pond, in an inventory campaign of aquatic and semi-aquatic Heteroptera in North West of Romania. The species is widespread in tropical and subtropical Africa and south-west Asia but in Europe it is limited only to Mediterranean zone. The species is here record for Romania for the first time as well as it is the first European record at north of Danube River.

RELATIVE ABUNDANCE AND THE DISTRIBUTION OF THE SPECIES *POECILUS CUPREUS* L. (COLEOPTERA, CARABIDAE) IN WHEAT AND POTATO CROPS FROM ROMANIA

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The paper is a synthesis of the collecting of the population of species *Poecilus cupreus* L. from wheat crops, nine counties, 25 sites (1977-2002) and potato crops, eight counties, 38 sites (1984-1999), in Romania. For the collecting of the entomological material of epigeic carabids, 6-12 Barber pitfalls were used in each locality (stationary) for wheat crops and potato crops, respectively. The pitfalls were operated continuously in crops, between 35 and 138 days (average, 79 days), (April 10 to August 1 in wheat crops) and between 21 and 154 days (average, 100 days), (April 16 to 30 September 30 in potato crops).

In the wheat crops, relative abundance varied between two individuals (0.78%, Brăila, terrace, 1982 and 3210 individuals (89.66%), Brăila, Lacul Sărat, in 1983, in the context of the carabid coenosis, collected from the respective localities in the respective years.

In the potato crops, relative abundance varied between one individual (2.44%), Târgul Jiu, 1994 and 742 (63.58%), Zvoriștea, 1993, Suceava County.

Poecilus cupreus is eudominant in 72% of localities (percentages ranging from 10.42% Căbești, 1983, Bacau County and 89.66%, Lacul Sărat, 1983, Brăila County) (wheat crop) and in 42% of localities, percentages ranging between 12.04%, Brașov, 1985, and 63.58%, Zvoriștea, 1993, Suceava County, potato crop.

Poecilus cupreus L. is a species of spring, mesophilous, distributed in crops, pantophagous, and eurosiberian.

**FAUNISTICAL AND ECOLOGICAL ASPECTS
CONCERNING THE CARABIDS
(INSECTA: COLEOPTERA: CARABIDAE)
FROM VÂNĂTORI-NEAMŢ NATURAL PARK
(NEAMŢ COUNTY, ROMANIA)**

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The paper presents different aspects concerning the coenosis of Carabidae from Vânători-Neamţ Natural Park (Neamţ County, Romania). The researches were made in 2000 and 2002 and the material was collected by the method of Barber pitfalls placed in 4 different locations. Systematically, the fauna analysed for this area (573 carabids) belongs to 11 subfamilies 22 genera and 45 species. *Platynus assimilis* (22.16 %), *Abax ater* (17.1%), *Carabus (Megodontus) violaceus* Linne 1758 (8.55%) and *Pterostichus oblongopunctata* (8.2%) were represented by the larger number of specimens. The coenosis of Carabidae is formed by 29 (64.44%) mesophilous, forest species, 12 species (26.67%) of open places and 4 (8.89%) common species.

**THE ELATERIDS COLLECTION CATALOGUE
(COLEOPTERA: ELATERIDAE) FROM THE
PATRIMONY OF „ION BORCEA” NATURAL
SCIENCE MUSEUM COMPLEX OF BACĂU**

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The paper presents the catalogue of the elaterids collections from the patrimony of „Ion Borcea” Natural Sciences Museum Complex of Bacău. The collection contains a number of 2897 specimens belonging to 91 species.

ELATERIDS (COLEOPTERA: ELATERIDAE) FROM THE COLLECTIONS OF NATURAL SCIENCE MUSEUM GALAȚI

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In this paper is presented a part of the elaterids species from the collections of Natural Sciences Complex Museum from Galați. Most of the elaterids specimens were published in the „Catalogue of Elateridae species (Coleoptera: Elateridae) from the collection of Natural Sciences Complex Museum from Galați” in 2005. Since then the collections was enriched with a number of 222 elaterids specimens which belong to 35 species presented in this study.

THE ECOLOGICAL ASPECTS OF ROVE BEETLES (COLEOPTERA, STAPHYLINIDAE) FROM THE REPUBLIC OF MOLDOVA

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In this work are highlighted ecological aspects of life of rove beetles) from the Republic of Moldova. Because of their present ecological values, this group of insects has important position in natural ecosystems, forests and agricultural habitats. Staphylinides are scattered in different habitats: plains, hills, meadows, forests. They leads a life hidden, live in the shady and humid places.

In present paper are given ecology of 226 species of rove beetles, also, are done the environmental groups that they are included. From all these species 106 are coprobiontes, 45 – mycetobiontes, 117 – pedobiontes, 13 – necrobiontes and 159 – saprobiontes.

CONTRIBUTIONS TO THE KNOWLEDGE OF THE DIVERSITY OF CERAMBYCIDS (INSECTA, COLEOPTERA, CERAMBYCIDAE) FROM SLĂNIC MOLDOVA, BACĂU COUNTY (II)

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The paper presents the results of researches concerning the cerambycids fauna from Slănic Moldova – Bacău County (2008-2009). Thus, it has been identified nineteen species (762 specimens), twelve genera and respectively three subfamilies of Cerambycidae: Lepturinae, Cerambycinae and Lamiinae. This study presents new data about the ecology of the species of cerambycids from the studied area. In order to find out more about the ecology and the connections between the species from Slănic Moldova, the author calculated ecology indexes abundance, dominance, constancy and significance index. The nomenclature and systematic used in this paper are those published by M. L. Danilevsky (Danilevsky, 2003).

NEW DATA REGARDING THE DIVERSITY OF NYMPHALIDAE FAMILY (INSECTA: LEPIDOPTERA) IN ROMANIAN FAUNA

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The paper introduces into the scientific circle data about the species of Nymphalidae family preserved in the entomological heritage of the Natural Sciences Department of the Museum of Oltenia, Craiova. The data comes to complete the knowledge about the diversity of this group of insects in the fauna of Romania. The species have been collected by the department specialists during 1992 – 2007 in 10 counties of Romania. The collections preserve 37 of the 56 species and subspecies present in the Romanian fauna. The identified species have varying degrees of endangerment: EN (4 species), VU (9 species), NT (2 species), LC (23 species). Four species are protected by Romanian and EU legislation: *Apatura metis* Freyer 1829, *Limenitis reducta* Staudinger 1901, *Euphydryas aurinia aurinia* (Rottemburg 1775), *Melitaea britomartis* Assmann 1847. The presence of such species with different degrees of endangerment in the museum's heritage along with other rare species, increase its scientific value.

THE EXOTICAL LEPIDOPTERA COLLECTION OF THE NATURAL SCIENCES MUSEUM COMPLEX FROM GALAȚI

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The paper presents the exotical Lepidoptera collection preserved in the patrimony of the Natural Sciences Museum Complex Galați. The collection includes 244 species that belongs to 9 families: Papilionidae, Pieridae, Riodinidae, Nymphalidae, Lycaenidae, Saturniidae, Sphingidae, Uraniidae și Lymantriidae. The best represented is Nymphalidae family with 303 individuals that belong to 144 species. The preservation state of the butterflies is very good. The collection is valuable from a scientific point of view, but also regarding the cultural and educational activities of the museum.

**CONTRIBUTIONS TO THE STUDY OF THE
PARASITOID HYMENOPTERS AND INQUILINE
COMPLEX WHICH ADJUSTS THE POPULATIONS
OF SPECIES CYNIPS QUERCUSFOLII
(LINNAEUS 1758) ♀♀ ♀♂ (HYMENOPTERA,
CYNIPIDAE) IN THE REGION
OF MOLDAVIA – ROMANIA**

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The work on the study of the parasitoid hymenopters and inquiline complex which adjusts the populations of species *Cynips quercusfolii* (Linnaeus 1758) ♀♀ ♀♂ (Hymenoptera, Cynipidae) in Moldavia region – Romania was performed during 2004 – 2009 period. For the asexuate generation of *Cynips quercusfolii* (Linnaeus 1758) ♀♀, there were identified 15 species of parasitoid chalcidoids which realised a global coefficient of parasitation of 12.7% and 2 inquiline species, that were involved in the natural adjustment of the gall species population with a host reducing coefficient of 2,27%. For the sexuate generation of *Cynips quercusfolii* (Linnaeus 1758) ♀♂, there were identified 3 parasitoid species that produced a global parasitation coefficient of 13,74%.

DIVERSITY AND DINAMICS OF EPIGEAL FAUNA FROM DIFFERENT ECOSYSTEMS IN CEFA NATURE PARK (NW OF ROMANIA)

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The pitfalls were put in five different ecosystems inside the Cefa Nature Park. This park is located in the west site of the country and it has common border with Koros-Moros National Park from Hungary. The ecosystems are: pasture with full activity from the sheeps, edge of the forest, a breakwater between two lakes and with stony soil, inside the forest and pasture with low activity on it. Each pitfalls have ten traps which have preserving liquid and protection from rainfall. The pitfalls were collected every mounts for a year. The following orders have been found: Coleoptera, Heteroptera, Formicidae, Araneae, Acarieni, Lepidoptera, Miriapoda, Izopoda, Orthoptera, Collembola, Gasteropoda, Blattaridae. Depending of the mouth in the epigeic invertebrates there were one order that had been more present in the pitfalls. An interesting result is that the pitfall showed that the orders: Coleoptera, Izopoda, Araneae and Lomax are active in the winter season between December and February.

POSTER PRESENTATIONS

FLORISTIC DIVERSITY OF CORMOPHYTAE IN BERZUNȚI MOUNTAINS, BACĂU COUNTY

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This study presents the research done in the territory of Berzunți Mountains which are situated in the central area of Bacău County. The conspectus of cormoflora in the researched area during 2007-2010 comprises 825 taxa (618 species, 197 subspecies, 9 varieties and 1 form) which belong to 403 genera, 99 botanical families included in 58 orders, 6 classes and 2 fila. Besides, the paper presents: an analysis of bioforms, floristic elements and ecological indexes of Cormophytæ and a short analysis of species included in the “Red List” of superior plants in Romania.

**XYLOPHAGOUS COLEOPTERANS (INSECTA,
COLEOPTERA) OF EUROPEAN INTEREST,
IN THE NATURAL HISTORY MUSEUM
COLLECTIONS FROM SIBIU (ROMANIA)**

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The valuable collections of the Natural History Museum from Sibiu preserve several xylophagous coleopterans of European interest, namely *Rosalia alpina* (Linnaeus, 1758), *Lucanus cervus* (Linnaeus, 1758), *Morimus funereus* Mulsant, 1863 and *Cerambyx cerdo* Linnaeus, 1758. The preserved material is part of Dr. K. Petri's collection. For this species, distribution maps of the sampling points are given. Nomenclature and systematical order are according to those used by Sama and Bartolozzi (2010) in "Fauna Europaea".

**FAIRY FLIES DIVERSITY (HYM.: CHALCIDOIDEA,
FAM. MYMARIDAE) IN SOME *MALUS PUMILA*
(COMMON APPLE) ORCHARDS,
FROM MOLDOVA (ROMANIA)**

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In this paper we present the species of fairy flies (*Fam. Mymaridae*), which had been collected between 2008-2010, with the entomological sweep net, yellow and blue pan traps and from rearings, from some orchards of Neamt and Iasi county's (Moldova). All the material was identified with the help of the scientific literature. The species belong to the genera: *Alaptus*, *Anagrus*, *Anaphes*, *Gonatocerus*, *Ooctonus* and *Polynema*.

**CHEMICAL STUDY OF THE INTERSTITIAL
ENVIRONMENT AND THE CORRELATION WITH
STRUCTURAL PARAMETERS OF THE
INVERTEBRATE PSAMMIC POPULATIONS FROM
VAMA VECHÉ, BLACK SEA COAST**

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Chemical parameters of interstitial water may take different values in comparison with the values from bottom water (superficial substratum) or marine water mass; in this study we have proposed to identify the chemical parameters variations and how there variations influences the structure of invertebrate psammic communities. The psammic habitats which are studied by us are dominated by sand and shells material (medium, coarse granulometry and very well sorted) from the supralittoral and mediolittoral zone of Vama Veche; habitats which.

COMPARATIVE STUDIES OF THE EPIGEAN INVERTEBRATE COMMUNITIES OF SOME NATURAL AND ANTHROPOGENIC HABITATS IN SULINA (TULCEA COUNTY)

URECHE CAMELIA, VOICU ROXANA ELENA, MIHU
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The aim of this study which was conducted during 2009 was to determine the structure of the epigeal invertebrate communities in six sampling sites from Sulina, Tulcea County.

Three of the sampling sites belong to the anthropogenic ecosystems (land fallow, maize culture and tomato culture) and three of them belong to the natural ecosystem. The biological material was collected using Barber traps and it has been processed in the laboratory. The taxonomic groups and the trophic categories, also their relative abundance in each of the sampling sites were established.

Our studies have shown that in the epigeal invertebrate communities in most of the sampling sites the best represented are insects.

In terms of the food regime, it was found that in most of the cases there is a balance between the predators groups and the phytophagous groups.

DATA REGARDING THE PHOLIDOSIS OF SOME POPULATION OF *LACERTA AGILIS* FROM ROMANIA

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Lacerta agilis is a very common species in Romania. However, pholidosis of the two subspecies (*Lacerta a. agilis*, *Lacerta a. chersonensis*) has not been investigated in detail. We studied various pholidotic characters, often used for taxonomic purposes in the Lacertidae, in order to analyse scalation patterns in the two subspecies and detect characters that could be useful for their diagnosis. The results show that both subspecies present significant differences in various pholidotic characters. The close phylogenetic relationships between the two subspecies, along with their high intraspecific morphological variability, complicate the use of pholidotic characters as diagnostic tools in the field.

ECOLOGICAL RESEARCHES REGARDING THE AVIFAUNA FROM THE AREA OF THE RESERVOIRS FROM THE ARGEȘ RIVER, OBSERVED DURING THE WINTER WATERBIRDS CENSUS (2000 – 2010 PERIOD)

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In this paper, the authors make a synthesis of the observations of monitoring type about the bird species that were identified in the area of the reservoirs Vâlcele, Budeasa, Bascov, Pitești and Golești from the middle hydrographical basin of the Argeș River during 2000 – 2010 period at the Winter Waterbirds Census, organised in our country by the Roumanian Ornithological Society and in Europe by the Wetlands International Society. They observed 93 bird species that belong to 14 orders. The most numerous were the Anseriforms (80224 ex.); they were followed by the Charadriiforms (16770 ex.), Gruiforms (16554 ex.), and Passeriforms (4876 ex.). Among the Anseriforms, *Anas platyrhynchos* was the most abundant species. Regarding the constancy, the most numerous were the constant species (65.59%), regarding the dominancy, the most numerous were the subprecedent species (90.32%) and, regarding the Dzuba ecological index, the most numerous were the subprecedent species (73.12%), too.

THE BREEDING BIRDS SPECIES FROM THE MIDDLE HYDROGRAPHICAL BASIN OF THE ARGEȘ RIVER AND THEIR PROTECTION STATUS

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In this paper, the author presents the species of breeding birds from the middle hydrographical basin of the Argeș River. The observations were made during 2002 – 2009 period on the artificial lakes and in their neighborhood from the middle basin of the Argeș River (Vâlcele, Budeasa, Bascov, Pitești, and Golești Basins). 121 breeding species were identified. Compared to the Atlas of the Romanian Breeding Birds, 30 new breeding species were counted in the research area, 17 of them being confirmed as breeding species and 13 probably breeding species.

BIRDS POPULATIONS SUCCESSION FROM THE HUMID ZONES OF EAST OF ROMANIA

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The authors have analyzed the populations of birds from the east of Romania (Galați, Vaslui, Bacău, Iași, Neamț and Botoșani counties) during 2008- 2010. The humid zones were monitored to overtake the succession of birds populations during nesting period, but mostly during the spring and autumn migrations. The observations were made in 91 humid zones, represented by artificial accumulations, piscicultural farms, natural lakes, ponds and temporary flooded humid zones. Over 225000 of birds exemplars from 195 species were observed. The largest number of birds was identified during the autumn migration period and the most visited lakes were those located on large rivers (Siret, Bistrița and Prut).

RESEARCH ON BREEDING BIRD'S COMMUNITY OF THE VRANIU BROOK MIDDLE BASIN, BETWEEN CIUCHICI AND RĂCĂȘDIA LOCALITIES (CARAȘ-SEVERIN COUNTY)

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The research territory is located in southwestern Semenic Mountain, in a low hilly area between Ciuchici and Răcășdia localities (Caraș-Severin County). We identified 35 species of breeding birds. The studied habitat is influenced by anthropogenic activities and includes areas of flowing and standing water, crops, pastures and unproductive land.

RESEARCH ON BIRD COMMUNITIES FROM CĂLMĂȚUI VALLEY, BETWEEN SPĂTARU AND LUCIU LOCALITIES (BUZĂU COUNTY)

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Our surveys were conducted during the entire year 2010. In the following avifaunal observations were identified 84 species of birds in habitat areas that are affected in terms of anthropogenic activities: the reed marsh, Călmățui river valley, crops, pastures, unproductive land and localities.

CONTRIBUTIONS TO THE KNOWLEDGE OF SMALL MAMMAL FAUNA IN HEMEIUS DENDROLOGICAL PARK, BACAU COUNTY

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This study follows the knowledge of small mammal fauna in Hemeius Dendrological Park, Bacau County. It is situated in Hemeius commune, along the Bacau-Piatra Neamt highway, 10 Km from Bacau and it was created through the modification of a waterside mixed foliage forest situated on the right bank of Bistrita river. The material collected in 2008 and 2009 (June, July, August and September) is composed of 42 specimens of small mammals which systematically belong to 2 Orders (*Rodentia* and *Insectivora*), 4 families (*Arvicolidae*, *Muridae*, *Myoxidae* and *Soricidae*), 5 genera and 6 species. During the whole period of study we noticed a numerical dominance of the species *Apodemus sylvaticus* (Linnaeus, 1758), followed by *Apodemus flavicollis* (Melchior, 1834).

THE DIVERSITY AND SPECIFICITY OF ECTOPARASITES COLLECTED FROM BATS IN EASTERN ROMANIA

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The parasite fauna of bats represents a considerable scientific interest, concerning a high degree of ecological isolation of the parasites, because of the high specificity of those for certain species of bats and the way of life of numerous orders of bats. Starting with 2004, ectoparasites were collected from 219 chiropters, which belong to 12 species. The bats were captured in 13 shelters from the east of the country. Entirely there were identified 1148 ectoparasites from 27 species, 9 genus, 5 families and 2 classes: *Chiroptella* (*Oudemansidium*) *komáreki*, *Chiroptella* (*Oudemansidium*) *muscae*, *Leptotrombidium myoticulum*, *Spinturnix myoti*, *Spinturnix andegavinus*, *Spinturnix mystacinus*, *Spinturnix emarginatus*, *Spinturnix bechsteini*(?), *Spinturnix acuminatus*, *Spinturnix psi*, *Spinturnix kolenatii*, *Spinturnix plecotinus*, *Spinturnix barbastelli*, *Steatonyssus noctulus*, *Macronyssus flavus*, *Macronyssus cyclaspis*, *Macronyssus granulosus*, *Macronyssus ellipticus*, *Ichoronyssus scutatus*, *Ixodes* (*Eschatocephalus*) *simplex simplex*, *Ixodes* (*Eschatocephalus*) *vespertilionis*, *Penicillidia dufourii dufourii*, *Penicillidia conspicua*, *Nycteribia latreillii latreillii*, *Nycteribia kolenatii*, *Nycteribia vexata*, *Nycteribia schmidlii schmidlii*. From these, 3 species of parasites weren't signaled in Romania before: *Spinturnix emarginatus*, *Seatonyssus noctulus* and *Chiroptella* (*Oudemansidium*) *komáreki*.

THE ASSESSEMENT FOR SUITABILITY OF HABITATS FOR EUROPEAN BISON REINTRODUCTION IN THE VANATORI NEAMT NATURE PARK

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Based on previous studies (ICAS, the Zoological Society of London), in 2000, the Vanatori Neamt Nature Park (VNNP) was chosen as the place for the first reintroduction in freedom of the European bison, in the Romanian Carpathians (Deju, 2005). Even the above mentioned studies reveal that VNNP, in general, is a suitable place for the reintroduction of European bison and the future development of a free herd, the decision about the first releasing place inside VNNP requires a detailed analysis. Usually the methodology to find the suitable habitats used GIS, high resolution satellite images and special software's, involving high skilled professionals support, time and financial resources. This kind of modeling is appropriate when large areas are studied and the quality of different options unclear. In cases where smaller areas are assessed and landscape and socioeconomic factors indicate few options, a simpler modeling for the location of suitable habitat is desired.

THE ASSESSMENT OF DAMAGES DONE BY THE EUROPEAN BISON TO FOREST TREE SPECIES WITHIN THE ACCLIMATIZATION ENCLOSURE, THE VÂNĂTORI NEAMȚ NATURE PARK

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The future bison release in freedom in the VNNP's area, estimated for 2011, represented the reason and the main object for this scientific research. It is well known the fact that the damages produced by free European bison to forest ecosystems, especially for the forest tree species, represent one of the main 'threat' for the reintroduction program. For this research, in two consecutive years (2009 - 2010), we performed a complete assessment of the damaged trees for a surface of 45 ha inside the acclimatization enclosure.

THE SPATIAL - TEMPORAL DYNAMICS OF EUROPEAN BISON HERDS IN ROMANIA

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Currently, in Romania, the number of European bison counts 82 animals, all of the being recorded in the European Bison Pedigree Book. The animals are Lowland – Caucasian line and are from Romania, Switzerland, Germany, Italy, Austria and France. In the winter of 2010- 2011, it is expected first releasing of animals in the wild by Vânători Neamt Nature Park Administration within in a Structural Operational Program's project.

**BIOTECHNOLOGY, RESOURCES
RECOVERY, ENVIRONMENT
PROTECTION**

Oral presentations

SPECIFIC FEATURES OF THE BIODIVERSITY WITHIN A HYDROGRAPHICAL BASIN FROM THE ROMANIAN PLAIN

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The respective hydrographical basin, which was the subject of some vast ecological research, is characterized by a great diversity of ecosystems: springs, rivulets, streams, marshes, small reservoirs, limited by hills covered by pastures, hayfields, and agricultural plots. This ecosystemic structure represents the factor that triggered such a vast biodiversity.

In the springs, rivulets, streams, marshes, and reservoirs, there have been identified 36 paludous and aquatic macrophytes species, 78 species of periphytic and planktonic algae, 13 large groups of benthonic invertebrates, 10 species of fish.

In the case of the terrestrial ecosystems (hills, pastures, hayfields, agricultural plots), there have been determined 27 species of herbaceous and woody plants. In the area, there can be found 3 species of amphibians, 5 species of reptiles, 20 species of birds, and 8 species of mammals.

The climate is continental, characterized by extremely hot summers and cold winters, the precipitation amounts oscillating between 350 and 500 mm.

SPATIAL AND TEMPORAL DISTRIBUTION OF THE ECOLOGICAL SYSTEMS FROM THE NEAJLOV CATCHMENT

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One of the leading causes of biodiversity loss is the destruction, deterioration and fragmentation of ecological systems, especially by agricultural and water management policies and practices. In the last years numerous monitoring and research programs focusing on ecosystems changes at global, regional and local level were implemented. Studies regarding ecosystem dynamics provide extra information on the status of integrated organizational levels of biodiversity. The aim of this paper is to describe the temporal dynamics of the spatial distribution of the ecological systems from the Neajlov Catchment Long Term Socio-Ecological Research site. The analysis is focused on changes of ecosystems spatial configuration occurred from the beginning of the XXth century up to present within the area based on cartographic information and statistical data. Identification of ecological systems distribution was done using GIS and by analyzing the dynamics of different structural parameters.

The spatial and temporal analysis of ecosystem distribution in Neajlov Catchment site showed that in the last century the forest surface decreased, wetlands and aquatic ecosystems shrink to less than half as result of spatial extension of agro- and socio-economic ecosystems. Over the last decade the number and surface of protected areas increases, in an effort to reduce the rate of the biodiversity loss.

THE NEED FOR SETTING SOUND NATIONAL PRIORITIES IN CONSERVATION WITHIN THE EUROPEAN UNION

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With human pressure increasing and protected areas established more quickly than our capacity to manage them has grown, the task of sound priority settings is crucial for conservationists. Within the European Union there is an overlap in priority settings, with different species included in the annexes of the Birds and Habitat Directives, the Bern Convention and the various local, national and regional Red Lists. There is a strong bias in taxonomic coverage of the priority species within EU caused by (i) the differences in the number of specialists for each group (taxonomist effect), and (ii) larger animals and superior plants attracting more attention (size and attractiveness effect). A very small proportion of invertebrates are protected and a lesser proportion of inferior plants compared to superior plants. The present operational criteria based on large size, attractiveness, ignoring understudied groups etc. are not based on sound ecological grounds. We argue for the need of establishing sound national priorities, based on the specific conditions in each country and not on the uncritical taking over of regional priorities.

WATER RESSOURCES FROM HYDROGRAPHICAL BASIN SIRET

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The Siret River Basin is located in Eastern Romania, occupying most of the Moldovian Provence. It springs from the Carpathian Forests in Ukraine and flows into the Danube after a route of 726 km. The total area of the Siret River Basin is 47610 km² and the multiannual average flow at the confluence with the Danube is 240 m³/s. On the Romanian territory, the length of the Siret River is 590 km and the catchment area is 42890 km². The basic characteristics of the hydrological regime are determined by the large share of mountain affluents, located on the right side : Suceava River (L = 173 km, S = 2643 km²), Moldova River (L = 213 km, S = 4299 km²), Bistrita River (L = 283 km, S = 7039 km²), Trotuș River (L = 162 km, S = 4456 km²), Putna River (L = 153 km, S = 2480 km²), Ramnicu Sarat River (L = 137 km, S = 1063 km²) and Buzău River (L = 302 km, S = 5264 km²). The only important affluent on the left side of the Siret River is Barlad River (L = 207 km, S = 7220 km²), which drains the plateau areas. In this paper I presented aspects regarding water reSSources from Hydrographical Basin Siret, comparing hydrographical subbasin of main branches of Siret river. i also included some considerations regarding the evolution of this reSSources in today's context of climatic changes and antropic activities.

THE MONITORING OF WATER RESOURCES IN THE SIRET HYDROGRAPHICAL BASIN

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The current status of Romania, European Community membership gives, in addition to a number of rights, many obligations concerning especially the implementation and compliance with relevant EU regulations.

In Romania the water's monitoring system has been working since the early twentieth century, but since 1976 when the Water Directorate at basinal level were established this system has been developing into a scientific and defining structure. Water monitoring network has continuously suffered additions and improvements, but since 2002 the question of the modernization and the development of water integrated monitoring system was raised so it could meet the European standards and the monitoring requirements and it could run in a dynamic, complex process and with spiral development. Nowadays water's quality state in Romania is systematically watched according to the structure and the methodological principles of water integrated monitoring system in Romania (SMIAR), restructured in accordance with the requirements of European directives in the water sector. In this paper we presented some aspects concerning the synthesis of integrated water monitoring system, important mechanism for water resources management, applied to the Siret Basin by Siret River Basin Administration (ABAS).

ARCHITECTURAL INSERTS ADAPTED TO THE DEMANDS OF A PROTECTED AREA

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Protected areas are land or aquatic areas earmarked for protection and maintenance of both for biodiversity and for natural resources and associated cultural heritage. A protected area is a special form of land use. Its needs, be determined in its development plans, which plays an essential role for respect the protected areas. The planning of land use, the control of buildings, projects, industrial activities, agriculture, forestry, etc., must ensure the protect to protected areas, natural and cultural resources. This planning targeting the sustainable development of protected areas, default compliance with the traditional architecture values from area. Sustainable development of protected areas, involves both combining of architectural inserts with true natural values, harmonizing nature with human activity, the nature with traditional and historical values of the area. This paper proposes to present some architectural inserts designed so that to ensure a sustainable development of areas and protected area status.

THE MANAGEMENT OF DISASTERS RISKS, PRODUCED BY HYDROMETEOROLOGICAL DANGEROUS FENOMENA

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A disaster involves vulnerable communities, risks and hazards. The hydrometeorological phenomena, generates disasters in case occur both, torrential and prolonged rainfall situations, when occur floods, and in longtime without case of rainfall, when occur droughts. These phenomena creates and torrent phenomenon in winter, on some rivers, especially the mountain, but triggers and landslides. To avoid (reduce) the occurrence of such disasters, is required actions with regarding:

- Prevention and early intervention training;
- Operative interventions after onset of dangerous hydrometeorological phenomena;
- Post intervention, assessment, recovery and rehabilitation.

All these phases must be approach together in a complex and profoundly concept, called disasters risk management.

In this paper we present some aspects concerning the management of hazards created of hazardous hydrometeorological phenomena, with brief references on the Siret River Basin.

THE ROLE OF INFORMATIONAL DECISIONAL SYSTEM FOR PROCESS SUSTAINABLE DEVELOPMENT OF WATER BODIES

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The Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000 establishing a framework for Community water policy, published in the Official Journal of the European Communities (OJEC) No. L series. 327 of 22 December 2000, introduced the modern concept of sustainable development of surface water bodies and groundwater. This concept involves a complex ongoing process, but and in the situation the development of human activities and natural processes wich producing destructive effect. Sustainable development of surface water bodies and groundwater has the role to ensure future generations, good status of water resources on bodies of water, delineated on typologies resulting from common features, distinct and complex of areas belonging to different districts, river basins or subbasins. To know and protect a body against depletion and degradation, we need a huge set of information wich to bee provide in time real and to work in a informational decisional system, mostly automatic adjustable. This paper aims to present a informational decisional system, use in process for sustainable development of water bodies, with brief references on some aspects from Trotuș river basin.

**ASPECTS CONCERNING THE ACHIEVEMENT OF
A GEOGRAPHICAL INFORMATIONAL SYSTEM
(GIS) RELATED TO THE UNIT OF PRODUCTION
(U.P.) II ZÎMBRU, FORESTRY DISTRICT
GURAHONȚ, FORESTRY ADMINISTRATION
ARAD BY USING THE PROGRAMME MAPSYS 8.0**

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Achievement of spatial informational systems represents an issue of present interest for a series of sectors of activity where spatial data is used related to activities developed. As such, in the forest sector the implementation of spatial informational system is imperative taking into account the specific of activities developed.

Modern technologies of positioning of various characteristic points, as well as cartographical products in digital format offers the possibility of complex and differentiate exploitation of data thus obtained. The use of orthophotoplan in the forest sector represents a possibility of gathering very important data (raster type data), related to the specific activities developed. Also, the arrangements and forest maps may offer important data related to the specific of rammels (forests), which are necessary within the process of administration and management of forest fund.

The accomplishment of a complex data base requires that the field data is accurate and reflects the objective reality from the field. The achievement of this objective imposes the verification of entry data into the informational system, on the field, and the possible deficiencies will be adjusted accordingly.

The processing of data for obtaining the informational systems claims the use of specialty softs which will achieve the spatial location and the report of characteristic points, as well as the achievement of data base.

The study case was done within U.P. Il Zîmbu, Gurahonț Forest Department, Forest Department Arad. For the study case the MapSys 8.0 programme was used. The data was purchased from the orthophotoplan, achieving some completions of these data on the lots of land where forest works were carried out during the elaboration of orthophotoplan until now.

The particular aspects were identified with the occasion of establishment of the limits of forest fund, especially on the portions where there is vegetation outside the forest fund, and the separation of the respective lots of land present some uncertainties. Solving those issues involves the travelling at the site and, respectively, the corresponding separation of said rammels, in this situation establishing the characteristic delimitation points, which were determined using the combined technology.

Following the corresponding processing of data, products in digital format are obtained, respectively the thematic maps and alphanumeric data which can be found in chart format, from where they may be exported as necessary in various working formats.

The spatial informational systems are products of a special utility for the forest sector, characterized by a high technical flexibility, supplying useful data for various managerial, technical solutions, etc., which are necessary to be adopted.

**ASPECTS RELATED TO THE OPTIMUM
VALORIZATION OF FOREST POTENTIAL
RELATED TO RAMMELS WITHIN THE UNIT OF
PRODUCTION (U.P.) II ZÎMBRU, FORESTRY
DISTRICT GURAHONȚ, FORESTRY
ADMINISTRATION ARAD**

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The rational and optimum valorization of forest resources in the context of preservation of biodiversity of fauna and flora represent priority objectives for the forest household. The wooden forest products, non-wooden forest products and services rendered by the wood represent forest potential.

For an optimum and rational valorization of forest resources, it is necessary to know the forest potential and, respectively its valorization modalities, which have to respect the technical norms in force.

The valorization of wooden products supposes the use of wooden material from the application of care and management techniques for rammels, application of regeneration cuts and not the least the application of special ecological preservation and reconstruction works of the wood.

The non-wood products and respectively the services rendered by the wood represent a considerable source of income, being valorized as such. The non-wood products are represented by the forest fruits, medicinal plants, mushrooms, oleoresin substances,

charcoal, hunting, fish from mountain waters, related to the forest fund in general.

The wood, in general, has, among productive functions and obviously protective functions, the products offered in this sense being irreplaceable to the society, despite the fact that the modality in which the measurement of these products is done within the national forest fund presents a series of technical and respectively legislative deficiencies at the present moment.

In the present study case aspects related to the optimum valorization of wooden products will be analyzed related to the rammels within the units of production II Zîmbbru, Forest Circuit Gurahonț, Forest Department Arad.

IMPLEMENTATION OF ADAPTIVE MANAGEMENT REGARDING CLIMATE-INDUCED CHANGES OF HABITAT DIVERSITY IN ROMANIA'S PROTECTED AREAS (HABIT- CHANGE PROJECT)

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The project "Adaptive Management of Climate-induced Changes of Habitat Diversity in Protected Areas" (HABIT-CHANGE) is implemented within the INTERREG IV B CENTRAL EUROPE programme. The acronym of the project not only stands for the expected habitat changes caused by climate change but also for the necessary adaptation of our own habits in close connection to this.

Investigation regions of HABIT-CHANGE cover protected areas from all over Central and Eastern Europe with a focus on wetlands, forests, grasslands and alpine areas. The habitat types of these regions and their composition seem to be very vulnerable regarding climate change.

Main aims of the project are to evaluate, enhance and adapt existing management and conservation strategies in protected areas to pro-actively respond on likely influences of climate change as a threat to habitat integrity and diversity.

In Romania there are two distinct protected areas that are included in this project Danube Delta and Bucegi Mountains. Our study case is Danube Delta Biosphere Reserve as wetland area.

THE IMPACT OF HUMAN TRAMPLING ON GRASSLANDS VEGETATION

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Human trampling has a direct short-time effect on vegetation expressed as reduction in species cover, height and living biomass, changes of species composition but also an indirect effect on other components, like physical characteristics of soil.

Vulnerability of vegetation to mechanical pressure depends on morphological characteristics of plants communities and is strong dependent on environmental conditions.

The experimental activity was implemented in selected grassland ecosystems from three different Long Term Socio-Ecological Research (LTSER) sites of national network between 2007 and 2009.

After two weeks significant differences of vegetation cover have been identified for high trampling intensities, 250 respectively 500 passes. Vegetation cover decreased with 20% respectively 30%. Resistance, resilience and tolerance indices have high values. The most resistant species to trampling are caespitose hemicryptophytes (e.g. *Festuca rubra*, *Lolium perenne*, *Agrostis capillaris*).

The research was a part of Alternet- EU Network of Excellence project.

EFFICIENCY OF CONTEMPORANEITY FEEDING OF VEGETABLES IN GREENHOUSE

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The purpose of the study to be presented, is defining in Albanian climate conditions, the rates and portions of feeding by crystalline fertilizer in greenhouse produced cucumber for fresh use.

INFLUENCE OF METABOLITES OF SOME *STREPTOMYCES* SP. (R. MOLDOVA) ON THE GERMINATING SEEDS AND NEMATODES OF GREENHOUSE

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Tomato is the most important vegetable cultured under greenhouses growing usually in monoculture or as part of a narrow crop rotation. An important aspect of this intensive cropping system is control of pest and diseases. Nematode *Meloidogyne* sp. is the main cause of yield losses in the glasshouse crops as their populations can build up very quickly under the ideal conditions of temperature and humidity. Many soil microorganisms including the actinomycetes have the capacity to produce the various biological active substances with antibacterial and antifungal activities which negatively influence on growth and development of some dangerous plant parasites including nematodes. The purpose of this research is to study the biological activity of some new stains of *Streptomyces* sp. isolated from the soils of R.Moldova. The metabolites of 27 strains of streptomycetes were studied on their phyto stimulating and nematicide activities. The influence of *Streptomyces* sp. metabolites

on the germination of tomato seeds (grades Leana and Novelty) has been studied. It has been revealed, that seeds of grade Leana possess higher germination. Such stains as *Streptomyces* sp. 11, *Streptomyces* sp. 22, *Streptomyces* sp. 182 increased the rootlets and their weight on 15 - 20 % in comparison with the control. In laboratory conditions the influence of metabolites of these stains on the plant parasite nematodes (order *Tylenchida*, phylum *Nematoda*) has been checked. The greatest negative influence on nematodes has rendered the metabolites of stains *Streptomyces* sp. 11 and *Streptomyces* sp. 182, causing the wrinkle of nematode cuticle and the decrease of their activity.

THE INFLUENCE OF SOME THYAZYNIC AND PHENAZYNIC COMPOUNDS ON THE ACTIVITY OF SOME ENZYMES AT *PHASEOLUS VULGARIS* AND *TRITICUM AESTIVUM* IN THE GERMINATION PERIOD

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The researches aimed at the analysis of the degree influence of two dyestuffs, namely neutral red and blue-methylen - like derivates with phenazynical and respectively thyazynical structure, on to some physiological aspects of plants (the increasing degree of seedlings and the germination degree of the seeds) and on the activity of some enzymes with major role in the germination process of the wheat (*Triticum aestivum*) and, respectively, of the bean (*Phaseolus vulgaris*).

Thus, was determined the enzymatic activity along 72 hours of germination, appreciating the influence of the chemical analyzed compounds, used in different concentrations (10^{-1} M, 10^{-3} M, 10^{-5} M), on the mobilization degree of specifically substratum of the enzymes taken into the study.

The analysis of the obtained results underlines the fact that the two dyestuffs used evince a striking action so as from physiological point of view, as in what concerns the enzymatic activity, with variations more or less ample depending on the used concentration.

FUNCTIONAL CORRELATIONS BETWEEN CELLULAR RESPIRATION AND SANGUINE PARAMETERS IN SOME CULTURE CYPRINIDS UNDER HYPOTHERMIC CONDITIONS

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The study presents a series of data regarding the correlations between cellular respiration and sanguine parameters under the wintering hypothermic conditions in three species of some one summer-old culture cyprinids: common carp (*Cyprinus carpio*), silver carp (*Hypophthalmichthys molitrix*) and bighead carp (*Aristichthys nobilis*). Cellular respiration in both gills and muscles, as well as hematological parameters - hemoglobin (Hb), hematocyte (Ht), erythrocytes number and the derived erythrocytary constants - MCV, MCH and MCHC - were determined, before and after the wintering of fishes.

It was observed that, generally, the hypothermic conditions in the winter period, determine a diminution of oxygen cellular consumption (more pronounced in common carp and especially in muscles), correlated with an increase of the sanguine parameters values, especially of Hb, Ht, erythrocyte number and MCHC (more accentuated in common carp and weaker in bighead carp), as an adaptation compensatory process.

BIONIC ARCHITECTURE IN POLAR REGIONS

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Bionics is the understanding of techniques and strategies that use Nature as inspiration for the study and design of engineering, technology, architecture, etc. It is the balance between Technology and Nature. The term *bionics* was coined by Jack E. Steele in 1958 while working at the *Aeronautics Division House* at Wright-Patterson Air Force Base in Dayton, Ohio.

Under the current rapid changes of polar environment from the climate, social and economic points of view, implementation of bionic principles can generate new suggestions for polar architecture.

The aim is to synthesize knowledge derived from the biotechnological analysis of natural forms and vital systems. Implementation of bionic architecture principles in the location, design, and building of new structures in polar areas, such as research stations, cultural or residential buildings, irrespective to the area or country, can minimize the impact on the extremely sensitive environment and the influence on the wonderful polar landscape.

In this regard, as a particular case, we conceive the improvement of the conditions in the Law-Racovita Station from East Antarctica (Larsemann Hills).

CHARACTERIZATION OF NATURAL FOREST SPATIAL STRUCTURE RUNCU GROȘI WITH RIPLEY K FUNCTION

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The old growth structure and nature interrelation is an example of stability and sustainable development, in harmony with environmental factors. European studies of how to structure the natural forest ecosystems represent a different part of researches on the forest ecology, being carried out extensive studies, integrated and complex. The purpose of this article is scientific knowledge of the spatial structure in natural mixed beech and sessile oak stands from Runcu-Grosi Scientific Reserve. For accomplishing these objects was necessary to place five permanent sample plots of 1,0 ha size each on whole natural reserve area. It was necessary to establish three punctual processes as follows: punctual process 1 - (sessile oak), punctual process 2 - beech and punctual process 3 - total stand for determining spatial patterns of natural mixed forest quantified by means of Ripley function. These spatial processes allow us to surprise how specific spatial organization of mixed ecosystems at Runcu-Grosi Scientific Reserve evolves. Graphical analysis of each spatial process allows the identification of spatial patterns for each species. These models permit establishing measures in sustainable development of (sessile oak) from natural mixed stands which is replaced naturally by beech in the last decades.

POSTER PRESENTATIONS

THE DISTRIBUTION OF THE CONSERVATIVE FISH SPECIES IN THE NATURA 2000 NETWORK FROM ROMANIA

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The purpose of this paper is to realize a bibliographical study on the way where protection of the community conservative fish species is made in Romania. The fish species that are threatened due to different natural and anthropical activities are protected according to laws in force, that are the Law 13/1993 for the adhesion of Romania to the Convention on the Conservation of European Wildlife and Natural Habitats, (Berne Convention, 19 September 1979) and the Law 462/2001 regarding the Management of Protected areas and the Conservation of Natural Habitats, Wild flora and fauna (The Habitats Directive 92/43/EEC and the Birds Directive 79/409/CEE). From the 273 SCIs (Site of Community Interest) that came into existence in Romania in 81 SCIs can be found community conservative fish species. In this study are presented and analyzed the distribution of these species, the number of species that are protected in different sites, the whole number of community conservative fish species that are stated in the Romanian SCIs.

DENDROMETRICAL AND AUXOLOGICAL STUDIES IN THE OAK STANDS OF THE NATURAL RESERVE "FRUMUSICA FOREST", IASI, ROMANIA

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The paper points out the stability of the natural forest due to its structural complexity, reached through millennia of evolution. "Frumusica Forest" situated between 190-260 meters altitude in the Moldavian Plateau is a clear example of a natural structure with a continuous transformation given by the passage through a series of stages (phases) with individual characteristics. Biometric characteristics are indicated, and the general structural profile, as well. This paper is a dendrometrical and auxological study in a site of the "Frumusica Forest" part of a quercinean formation with linden tree (*Tilia cordata* Mill.), ash-tree (*Fraxinus excelsior* L.), hornbeam *Carpinus betulus* L., and common-maple *Acer campestre* L.), on the *faeziom* type soils.

Natural rezerve "Frumusica Forest" is a "A Site of Community Importance" (SCI) part of the European Network "Nature 2000", as the Order 1964/13.02.2007 confirms. The plot is in the functional type T I, with a total surface of 106.1 hectares. The forest is a source of seeds (with genofond conservation role) 94.4 hectares of old-growth forest of quercinee (pedunculate-oak *Quercus robur* L. and sessile-oak *Quercus sessiliflora*).

A NEW ERA IN POLAR RESEARCH - ERICON AURORA BOREALIS ICEBREAKER FP7 PROJECT

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The European Research Icebreaker would provide Europe with a capacity to launch autonomous scientific investigations into the central Arctic Ocean during all seasons of the year. The ERICON facility would also be utilized in a targeted way to carry out research investigations around the Antarctic continental shelf areas in support of the Integrated Ocean Drilling Programme and multinational scientific investigations. AB will be the most advanced Polar Research Vessel in the world with a multi-functional role of deep-sea drilling and supporting climate/environmental research and decision support for stakeholder governments for the next 35-40 years. The new technological features will include dynamic positioning in closed sea-ice cover, advanced ice-forecasting and management with autonomous, multiple helicopter support and the deployment and operation of Remotely Operated Vehicles and Autonomous Underwater Vehicles from the twin moon-pools. The most unique feature of the vessel is the deep drilling rig, which will enable sampling of the ocean floor and sub-sea up to 5000 m water and 1000 m penetration at the most inhospitable places on earth. Romanian future scientific activities on AB Icebreaker: climate processes of ocean, ice and atmosphere, deep biosphere.

THE STRUCTURE AND DYNAMICS OF POLAR ECOSYSTEMS

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Antarctic and Arctic ecosystems contain a variety of key organisms that can be used to monitor the functioning of ecosystems and the effects of climate changes. Our research are developed within the INTER_HEMISPHERE project, with European and International evaluation, gained within PolarCLIMATE competition, organized by the European Science Foundation. The project is coordinated by Eng. PhD. CSI Negoita T. Gh., in a Consortium of 13 partners from 12 countries-<http://www.esf.org/research-areas/polar-sciences/developing-polar-programmes-in-europe/inter-hemisphere-aims-and-objectives.html>.

The research is focused on obtaining data regarding physico-chemical and biological characterization of soils in Arctica and Antarctica, evolution of terrestrial crust, the nutrients and micro-population levels, the comparison with previous our researches and biotechnological application. From the soil samples picked up by Negoita in East Antarctica were isolated: *Bacillus sp.*, producers of α & β -amylase with biosynthesis potential clearly superior to the most performed strain of the MIUG collection, *Streptomyces sp.*, producers of superior activity tyrosinases and catalases, *Candida sp.*, high protein yielding strains capable of growing at low temperature on plant waste hydrolysates (Bahrim G., Negoita T., 2010).

THE INFLUENCE OF LEAD ON THE GERMINATION PROCESS IN *HYSSOPUS OFFICINALIS* L.

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The concentration of heavy metals, such as lead, naturally present in the environment has gradually been increasing with the increase of industrialization. Aromatic and medicinal plants have a demonstrated ability to accumulate heavy metals, being thus a good choice for phytoremediation since they are mainly grown for their secondary products (volatile oils). The aim of this study is to investigate the tolerance of lead (the critical concentration of lead in the soil being 100mg/l) in *Hyssopus officinalis* L. using seed germination and seedling growth bioassays. In the investigated species, seed germination and seedling development were affected by the tested concentrations of lead solutions (100 mg/l, 300 mg/l and 500 mg/l). The tested lead solutions influenced the seedling root and hypocotyl elongation in *Hyssopus officinalis* as compared to control.

THE FRACTAL ANALYSIS OF THE LEAVES IN AMPELOGRAPHIC CHARACTERIZATION OF GRAPEVINE VARIETIES FROM SORTO GROUP GALBENA DE ODOBEȘTI

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The fractal analysis is a modern research tool which can be added to ampelometric method in morphological characterization of grapevine leaf, specific morphologic part of plant used in characterization of grapevine varieties. In this paper is present a morphologic evaluations of grapevine varieties from sorto-group Galbena de Odobești by determination of fractal dimension or degree of leaves shape irregularity and section of blade. The results obtained, showed that the fractal dimension of the leaves and the section of blade, represent descriptive morphologic parameters which could be used with classical ampelographic descriptors in characterization and establish the deferent's of the grapevine varieties from sorto-group Galbena de Odobesti.

**COMPARATIVE RESEARCHES ON THE
HYDROLYSIS DEGREE OF THE RESERVE
SUBSTANCES UNDER THE
GLUCANPHOSPHORYLASE ACTION AT
CULTIVATED AND SPONTANEOUS
GRAMINACEAE**

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The biological material was represented by germinated caryopses of graminaceae derived from the cultivated and spontaneous flora, namely millet (*Panicum miliaceum*), sorghum (*Sorghum vulgare*), Sudan grass (*Sorghum sudanense*), hair grass (*Festuca pratensis*), bristle grass (*Setaria pumila*) and brome grass (*Bromus sterilis*), determining the starch mobilization rate, as the main reserve substance, under the phosphorolytical action of α -glucanphosphorylase, in parallel with the concentration of the total soluble proteins.

The germination of seeds was realized in laboratory conditions along ten days of germination, samples' taking over being performed from 24 to 24 hours.

The analysis of the obtained results underlined, of all analyzed species, the existence of an intensely correlation between the mobilization degree of the reserve substances and the enzymatic activity, noticing in this sense an intensification of the enzymatic activity as the decreasing of starch concentration.

PRELIMINARY DATA REGARDING THE ELECTROPHORETICAL SEPARATION OF PROTEINS AT SOME GRAMINACEAE SPECIES IN THE GERMINATION PERIOD

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The work presents the experimental results obtained after the electrophoretical separation on polyacrilamide gel in denaturated conditions with SDS of the proteins from raw enzymatic extracts obtained through the differentiated determination of the total amylase activity, α - and β - amylases', as much as from the hole seedlings, so as from various organs (root, embryonic grain and leaflet) with the aim to appreciate the molecular weight of those ones.

It was worked on caryopses of *Panicum milliaceum* (millet) and *Sorghum sudanese* (Sudan grass), for each enzyme in part being used extracts derived from different periods of germination.

The electrophoretic separation of soluble proteins put into evidence, for both analyzed species, the existence of a relatively diminishing number of proteic fractions as much as in the hole seedlings so as in the three analyzed organs (root, embryonic grain and leaflet), probably represented mainly of the entire reactivated enzymes or new synthesized in the inchoate stages of the germination process.

NEW METHOD FOR DNA ISOLATION AND PCR/RAPD CONTAMINANT REMOVING FROM *PRUNUS AVIUM*

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Dominant markers are also known as multi-locus markers because they simultaneously generate data from multiple loci. Because they use random primers to amplify fragments of DNA, no prior sequence knowledge is required and therefore the development time may be relatively short. Furthermore, because dominant markers each characterize multiple regions of the genome, they often show reasonably high levels of polymorphism that can be useful for inferring close genetic relationships the biggest drawback to these markers is that their dominant nature means that only one allele can be identified at each locus. A dominant marker for genetic analysis can be considered the RAPD (Random Amplified Polymorphic DNA) technique which is generated using short (10bp) random primers in a PCR reaction. The aim of this study is to identify a DNA isolation tool from *Prunus avium*, able to remove organic contaminants (polyphenolic and polysaccharide compounds) inhibitors for PCR reaction. Different protocols were tested and finally the DNA was isolated from 25 mg of leaf material using an automated Maxwell 16 (Promega) DNA/RNA Extractor with a standard elution volume and an additional step which includes a CTAB-phenol: chloroform extraction. The PCR was conducted using the GoTaq Flexi Buffer (Promega) in a 25 µl reaction volume and the amplicons were subjected to a 1,5% agarose gel electrophoresis.

IMMUNOLOGICAL ASPECTS OF INTERACTION BETWEEN LOW FREQUENCY ELECTROMAGNETIC FIELDS AND ANIMALS BEARING TUMORS

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Electromagnetic fields are nowadays considered pollutants, the presence in our environment being permanent (due to existence in houses or workplaces of computers, wireless devices or other appliances). The experimental informations about the consequences of interaction between electromagnetic fields and animal organism are still contradictory and full of gaps. In this paper, were included the results obtained by exposing rats bearing Walker 256 carcinosarcoma to the action of low frequency (100 Hz) and intensity (5,5 mT) electromagnetic field (applied continuously or discontinuously) and the consequences of this treatment upon the levels of circulating immune cells of rats with tumors. The most clear effects were obtained in the case of the electromagnetic field applied discontinuously, which has determined the diminution of the number of leukocytes (with 28.9%), lymphocytes (with 24.2%), monocytes (with 42.7%), neutrophils (with 50.4%), eosinofils (with 40.9%), without a visible alteration of the leukocytic formula. The electromagnetic field applied continuous had the same effects but the amplitude of those was much lower. The obtained data has revealed an immunosuppressor impact of the electromagnetic field upon animals bearing tumors. Is not excluded the possibility of manifestation of a mobilizing propriety of EMF because the tumoral development has diminished.

**ESTABLISHING THE VIRULENCE OF BACTERIA
BELONGING TO THE *BACILLUS SPP.* GENUS,
UNDER „IN VITRO” TESTING CONDITIONS, ON
THE PATHOGENIC AGENT
“*AGROBACTERIUM TUMEFSCIENS*”**

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A method of controlling the pathogenic agent *Agrobacterium tumefaciens* consists of the use of biological control means through preimmunization with avirulent or weakly virulent sources and the microbial antagonism, or with products of their metabolic activity.

The paper presents research conducted under laboratory conditions with the use of „in vitro” methods for establishing the virulence of bacteria belonging to the *Bacillus spp.* Genus, on the *Agrobacterium tumefaciens* pathogenic agent. During the attempts of limiting and preventing tumorigenesis triggered by the *Agrobacterium tumefaciens* pathogenic agent in vine plants, the effectiveness of certain biological products has been tested, thus following the administration of biological products based on *Bacillus subtilis* strands on fresh wounds, the chords have had different degrees of protection, in accordance to the strand used for preparing the biological product, and the pathogenic action of the *Agrobacterium tumefaciensbacterium*, in a 70-95% rate compared to the untreated witness.

BIOLOGICAL FIGHT SOLUTIONS OF PHYTOPATHOGEN AGENT *AGROBACTERIUM TUMEFACIENS* TO WINE GROWING CROPS

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Phytopathogen bacteria are a constant danger for health of plants, by producing diseases which lead to important decrease of yield production to wine crops. A new phytopathogen agent's fight way is represented by biological methods from pre-immunization with anti virulent or slow virulent sources and the microbial antagonism, or with products of their metabolic activity. Now, in present, a little number of dedicated products for biological fight with phytopathogens are being used, because the majority of them or/and methods for biological fight are still in the research phase.

In this paper we present some aspects of researches, conducted in order to establish the virulent potential of microbial bacteria from *Bacillus* species in field conditions, in order to establish their utilisation possibilities to develop new biological methods for fighting with phytopathogen bacteria *Agrobacterium tumefaciens* to wine growing crops.

HEPATIC ALTERATION IN THE FROG *RANA RIDIBUNDA* INTOXICATED WITH ACTARA 25WG INSECTICIDE

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This study has the aim of verifying the histological alterations in the hepatic tissue of *Rana ridibunda* when exposed to 0.4mg/g body weight of Actara 25WG at 4-6°C, respectively at 22-24°C. The toxic was administrated with intraperitoneal shots (one shot every two days, in a scheme of three weeks). A technique of light microscopy was used. At the end of experiment we observe the present of biliary pigment in the citosol. Some hepatocytes lost cellular contour. Karyomegalia and polyploidy together with accumulation of infiltrates was also observed. A large zone of fibrosis was present between hepatocytes and around blood vessels. The histological changes were more powerful at 22-24°C.

CORRELATIONS BETWEEN IONIC CONTENT OF MARINE WATER AND CELLULAR PERMEABILITY IN MUSSELS (*MYTILUS GALLOPROVINCIALIS* LMK) FROM AGIGEA HARBOUR ZONE

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The influence of ionic content and redox characteristics of marine water from Agigea Harbour and the end of Danube-Black Sea Channel zone upon cellular active and passive permeability processes in mussels was studied. In this aim, we determined rH parameter and Na⁺, K⁺ and Ca²⁺ ionic content and their ratios from water and different tissue (gills, adductor muscle and mantle) of mussels as well as the Na⁺-K⁺-ATP-ase cellular enzyme activity. The energetic consumption equivalent for ionic pump activity and active permeability was calculated, too.

Characteristic values of investigated parameters were observed depending on salinity, ionic content and pollution degree of marine water from harbour and channel, the stronger influence registering with gills. The results evidence the osmoregulating capacity of mussels, representing an indicator of aquatic pollution degree, as well.

RESEARCH ABOUT SEASONAL DYNAMICS OF HETEROTROPHIC BACTERIA FROM THE SIRET RIVER

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The ecological status of a river involves a complex analysis of all components of biotic and abiotic factors, therefore including the bacterioplankton with a special role in the mineralization to the organic matter and the self purification of the water.

The microflora is one of the ecological factors which react immediately of the modification happened in the environment as result of the pollution. That is the reason why, many authors evaluate the cleanliness state of water or the pollution degree according to the variations of the planktonic bacteria number, saprophytic bacteria and ecophysiological groups of bacteria (Romanenko, 1979; Ailiesei O. and all, 1998)

This paper aims is the quantitative determination of some ecophysiological groups of bacteria who participate in the circuit of nitrogen (the ammonifying germs, nitritbacteria nitratbacteria, denitrifying germs) of carbon (amilolithic germs, aerobic and anaerobic cellulosolitic germs) and the total number of aerobic and anaerobic heterotrophic germs in the middle sector of the Siret River

The samples for the microbiological analyses were collected from the five stations located upstream and downstream of Bacau city in different seasons of the year 2009.

The results have shown significant differences between the distributions of ecophysiological groups of bacteria analyzed, according with several environmental conditions (temperature, the quantity of organic matter, pH, the water flow velocity, etc).

The results of studies were quantified into the tables and graphics who reporting the seasonal distribution of each group analyzed.

**THE GENETIC ANALYSIS OF SEVERAL
NATURAL AND CULTIVATED *HIPPOPHAE
RHAMNOIDES L.* POPULATIONS FROM
ROMANIA – SPECIES WITH ECOLOGICAL AND
ECONOMICAL IMPORTANCE**

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The assessment of the genetic diversity of *Hippophaë rhamnoides* L. species became an important prerequisite for its conservation and marker assisted breeding. The number and structure of the mitotic chromosomes from eighteen populations (eleven in native state and seven cultivated varieties) were analyzed using classical staining methods and C-banding. Because the results of the cytogenetic studies are not conclusive regarding intra- and inter-population genetic variability, the most appropriate approach is DNA marker-based.

For that, the first step in this type of studies is represented by the optimization of genomic DNA extraction in order to get high quality DNA, suitable for generation of molecular markers, such as RAPD. Thus, a variety of extraction methods have been evaluated for their efficiency and it was noticed that the quantity and quality of

isolated DNA varied considerably among the various extraction protocols. SDS protocol and the commercial kit *Wizard Genomic DNA purification* represented the best DNA extraction methods for sea buckthorn leaf tissue, when an enzymatic digestion prior isolation using *CelluACETMXG System* kit was performed. For further RAPD and other PCR-based methods the most suitable DNA extraction is SDS + *CelluACETMXG System*, due to the quality of obtained band pattern.

STUDY ON THE *IN VITRO* GROWTH OF *VERONICA OFFICINALIS* L.

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Veronica officinalis (Heath Speedwell, Common Speedwell, Common Gypsyweed, Paul's Betony) is a valuable herb which has been used to relieve numerous health disorders since ancient times.

The *in vitro* culture of *Veronica officinalis* L. was initiated with shoot apices and nodes cultivated on hormone-free MS, and on MS enriched with either 1 or 2 mg/l⁻¹ BAP. The shoots were subsequently used as an explants source to evince the *in vitro* reaction of the various types of explants, grown on several variants of MS medium. The inoculated explants displayed an optimal growth (especially the apices and nodes) on the most medium variants. There were provided new shoots and roots. The shoots' aspect and number, and also the intensity of enrooting varied with the type and concentration of growth regulators within the nutritious medium. The most intense caulogenesis was evinced on the culture media supplemented with BAP 1mg l⁻¹ +0.1mg l⁻¹ IAA, Kin 1 mg l⁻¹ + NAA 0.5 mg l⁻¹, and BAP 1 mg l⁻¹+ IBA 0.1 mg l⁻¹.

The acclimatization to the *ex vitro* environment was an intricate process, as the vitroplants transferred in a hydroponic culture needed lots of water vapors.

BIOCHEMICAL ANALYSES ON REGENERANTS OF *MENTHA PIPERITA* L. PROVIDED *IN VITRO*

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This present paper is a part of a complex 4-year scientific project – a study on the *in vitro* reaction, cytogenetical, physiological, and biochemical observations on a series of Labiatae and Asteraceae. The biochemical investigations on peppermint aimed to evince some possible alterations of the quantity or the composition of volatile oils from *in vitro* regenerants provided on Murashige-Skoog culture medium, and on other variants of MS supplemented with growth regulators.

Phytochemical analyses were accomplished on first year regenerants of *Mentha piperita*. The amount of volatile oil was established by hydrodistillation of dry biomass (100 grams of dry biomass/variant). Volatile oils were submitted to gas-chromatographic analysis combined with mass spectrometry, in order to identify the chemical components within the volatile fractions. The specters were compared to the one from Wiley data system. All the results were related to control – plants provided *in vitro* on hormone-free MS, and also to the initial biological material, that was the source of explants.

The amount of volatile oil within the analysed samples varied between 0.2 and 7.5% of dry biomass, compared to 1.5-3.5%, and 0.5-4% (according to references), [1, 2]. The highest amount of volatile oil was registered within the regenerants provided on hormone-free MS (7% dry matter).

Volatile oil's major components were L-mentol, mentona, eucaliptol, and pulegone. Volatile oil spectrum varied with the medium variant on which the *in vitro* plants were regenerated. The chemical profile of the essential oils showed that the monoterpenes represent between 87.2 and 92.35% (mostly cetons and alcohols), and the sesquiterpenes represent between 1.82 and 4.10% (especially hydrocarbonates).

There were mostly quantitative differences within the analysed samples, which proves that the method we used to regenerate neoplantlets of *Mentha piperita* reproduced the initial genotype.

**STUDIES ON DYNAMICS OF EXTRACELLULAR
AND ENDOCELLULAR PEROXIDASE ACTIVITY
OF THE FUNGUS MONILINIA LAXA
(ADERH.&RUHL.)HONEY PARASITIC**

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The experimental research pointed to elucidate some aspects regarding the influence of carbohydrates on the dynamics of peroxidase activity, the enzyme which plays an most important role in the oxidoreduction cellular processes correlated with the respiration process, at the *Monilinia laxa* (Aderh.& Ruhl.) Honey species. Peroxidase activity was determined using by o-dianisidine method, for each sample were made 3 parallel determinations in both the fungus mycelium and in the liquid culture at 7 and 14 days after inoculation. Subsequently, the data obtained were statistically processed by calculating the average, error and standard deviation, variation and precision coefficient of the mean and confidence interval limits. The experimental results showed the existence of some significant differences from one sample to another, endocelulare and extracellular peroxidase activity being strongly influenced by the type of carbon source from the culture medium and culture age.

RESEARCH ON THE INFLUENCE OF CARBON SOURCES ON THE DYNAMICS OF CATALASE ACTIVITY IN FUNGUS *MONILINIA LAXA* (ADERH&RUHL.) HONEY PARASITIC

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It is well known that oxidoreductases constitute group of enzymes which are strictly necessary for the microorganisms being involved in the decomposition reactions of hydrogen peroxide formed during the oxidation processes catalyzed by flavin-enzyme. In addition to the detoxification function, the catalyses constitutes also an terminal electronic flow regulator from the chain respiratory processes, and it is also a „trap” for free radicals that appear from radiolysis. This paper systematizes a series of experimental results regarding the influence of different carbon sources on dinamic activity of catalase in *Monilinia laxa* (Aderh.&Ruhl.) Honey species - a parasite fungus on stone fruits from different species of *Rosaceae*. The activity of catalase- the bicomponent oxidoreductase involved in oxidative stress, was determined using the titration method both in the fungus mycelium and in liquid culture. For each sample, there were performed 3 parallel determinations and the results were statistically processed by calculating on the basis of the mean values and standard deviation, with a probability of 95%, the superior and the inferior limits of confidence intervals.

Experiment consisting of consecutive measurements made at 7 and 14 days after the inoculation of culture medium marked out the fact that the enzyme activity was significantly influenced both by the culture age and the type of carbohydrate present in the fungus culture medium.

IN VITRO MULTIPLICATION OF *ROSA CANINA L.*

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The studies are based on vegetative multiplication of *Rosa canina L.*, using meristematic explants. It were tested the axillary buds reactivity on different variants of MS medium, supplemented with growth regulators: two types of auxins (2,4 diclorphenoxiacetic acid and naphthalenacetic acid) and two cytokinins (kinetine and benzylaminopurine). The caulogenesis induction was based on the use of various combination of auxins and cytokinins (variants I- 0,02 mg/l 2,4 D- 2 mg/l K and variants II- 2 mg/l BAP- 0,02 mg/l NAA). The evaluation of explants reactivity was the number of developed shoots encountered on initial explant. After two month from the initiation of culture, the shoots were isolated and cultivated separately on the MS medium, for roots induction. The whole plant reconstruction protocol lasted 10-12 weeks.

A HISTO-ANATOMICAL COMPARATIVE STUDY ON *STACHYS SIEBOLDII* MIQ. IN CONVENTIONAL AND *IN VITRO* CULTURES

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Stachys sieboldii Miq. (the Chinese artichoke) is a herbaceous perennial plant of the family Lamiaceae used as an edible plant (its tuber can be grown as a root vegetable). This species is also used to cure high fever, diarrhea, sore throats, internal bleeding, heart or liver diseases.

This present paper comprises a comparative histo-anatomical study effected on individuals of *Stachys sieboldii* Miq. from conventional and *in vitro* cultures.

In cross section, the stem structure of the individuals grown in conventional cultures bears the colenchymatic tissue from the four corners more developed compared to the *in vitro* plants. The vascular tissues from the stem provide four main xylem and phloem bundles in both cases. The secondary bundles are less developed at the *in vitro* provided individuals. The leaf mesophyll bears a two-layer palisadic tissue (in conventional cultures) and one layer of palisadic tissue (*in vitro* cultures). The lacunar tissue has a similar structure in both types of the studied individuals.

COMPARATIVE STUDY OF THE GLUCOSE AMOUNT IN CONVENTIONAL AND *IN VITRO* CULTURES OF *STACHYS SIEBOLDII* MIQ.

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Stachys sieboldii Miq. sin. *S. affinis* Bunge (1833) is a species of the spontaneous flora from northern China known as the Chinese artichoke. This is a medicinal and also edible plant that is beneficial to humans due to its properties: antibacterial, antipyretic, antiseptic, antispastic, astringent, carminative, febrifuge, stomachical, hypotensive, tonic, vermifuge.

Our research was aimed to reveal the influence of the culture medium on the glucose amount in several shoots of *Stachys sieboldii* Miq. provided *in vitro*, compared to the plants harvested from conventional cultures.

From the analysis of our data, we may state that there are no major differences regarding the glucose amount within the shoots of *Stachys sieboldii* Miq. provided *in vitro* compared to the plants grown in conventional cultures.

THE DETERMINATION OF ALCOHOLIC CONTENT OF THE DISTILLATES BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY METHOD

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We have analyzed a total of 98 samples of natural alcoholic spirits, which are products of the distillation of mixtures of macerated fruit (apples, pears, plums, grapes), simple macerate of plums and grapes. The sampling was carried out in Moldavia (Romania) in 2007-2009.

Most of samples are from Bacau County (82 samples) and 16 samples are from other seven counties.

The highest alcohol content was found in plum distillates, respectively 3320.46 micrograms / mL distillate.

The lowest value of the methanol concentration in micrograms / mL was found in samples of distilled from pomace.