BACĂU COUNTY COUNCIL
"ION BORCEA" NATURAL SCIENCE
MUSEUM COMPLEX OF BACĂU

in partnership with:
"VASILE ALECSANDRI" UNIVERSITY OF BACĂU
FACULTY OF SCIENCE, BIOLOGY DEPARTMENT

The Programme and Abstracts of

The Scientific Symposium

Biology and Sustainable Development

the 9th edition

November 10-11, 2011

THE SCIENTIFIC SYMPOSIUM
BIOLOGY AND SUSTAINABLE DEVELOPMENT
9TH EDITION

November 10 -11, 2011

Bacău, Romania

PROGRAMME AND ABSTRACTS

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SCHEDULE
THE SCIENTIFIC SYMPOSIUM "BIOLOGY AND SUSTAINABLE DEVELOPMENT" THE 9TH EDITION

NOVEMBER, 10 – 11, 2011
Bacău, ROMANIA

Location: "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU

WEDNESDAY – November 9, 2011

14^{00} – 20^{00} – Welcoming the guests – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, 7th floor

THURSDAY – November 10, 2011

8^{30} – 9^{30} – Welcoming the guests – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, 7th floor

10^{00} – 10^{30} – The official opening – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Conference Hall

10^{30} – 12^{30} – Plenum – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Conference Hall

13^{00} – 15^{00} – Lunch break

15^{30} – 18^{00} – Papers presentation on sections – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU

18^{00} – 19^{00} – Posters presentation – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Greenhouse (second floor)

20^{00} – Gala Dinner

Friday – November 11, 2011

10^{00} – 14^{00} – Research field trip to Tescani, Bacău County
14^{00} – 16^{00} – Tour visit to cultural sites from Bacău City
16^{00} – 18^{00} – Final conclusions

THURSDAY – November 10, 2011

8^{30} – 9^{30} – Welcoming the guests – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, 7th floor

10^{00} – 10^{30} – The official opening – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Conference Hall

PLENUM

10^{30} – 12^{30} - "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Conference Hall (second floor)

1. MOGLAN Ioan - **PROFESSOR DR. CONSTATIN PISICĂ-DONOSE – *IN MEMORIAM***

2. TOMA Constantin, IVĂNESCU Lăcrămioara - **THE DIVERSITY OF SECRETORY STRUCTURES IN THE VEGETAL WORLD**

3. MUSTAȚĂ Gheorghe - **ON THE TRACES OF EVOLUTION - THE EVOLUTION DOESN'T WIPE OUT ITS TRACES, IT KEEPS THEM WORKING**

13^{00} – 15^{00} – Lunch break

15^{30} – 18^{00} – Papers presentation on sections – "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU

Section I – Plants, Vertebrates, Genetics & Biotehnologies

PAPERS

15^{30} – 18^{00} - "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Conference Hall (second floor)

Moderators
Dr. TOMA CONSTANTIN
Dr. RANG CĂTĂLIN

1. PAVEL Otilia Carmen - **THE DIVERSITY OF MACROMYCETES SPECIES FROM CAŞIN RIVER BASIN (BACĂU COUNTY)**

2. ARDEI Irina-Mădălina - **CONTRIBUTIONS TO THE KNOWLEDGE OF THE MAIN MEADOW TYPES IN THE AREA OF BERZUNȚI MOUNTAINS, BACĂU COUNTY**

3. BARABAŞ Neculai – **FAMOUS ROMANIAN BOTANIST – PROF. UNIV. DR. DOC. TRAIAN ŞTEFUREAC**

4. PAPADOPOL C. Nicolae, CURLIŞCĂ Angelica – **OBSERVATIONS ON THE FORMATION AND MAINTENANCE OF TEMPORARY FLOCKS OF ICHTHYOPHAGOUS BIRDS AROUND FISHING VESSELS, SOUTH EAST ATLANTIC (1980-1990)**

POSTERS

18^{00} – 19^{00} - "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU,
Greenhouse (second floor)

1. ARCAN Viorica, GACHE Carmen - **PRELIMINARY DATA ON BIRDFAUNA OF THE LOZOVA MARSH – GALATI COUNTY**

2. BOLBOACĂ Lucian Eugen - **THE PRESENCE OF URAL OWL (*STRIX URALENSIS*) IN DECIDUOUS FORESTS OF IAŞI COUNTY**

3. STRATULAT Ana-Maria, ŞTEFAN Andrei, IONESCU Mihaela, LUCA Monica, GORGAN Lucian - ***CARASSIUS* INTERSPECIFIC VARIABILITY IDENTIFICATION USING COX I DNA BARCODING GENE**

20^{00} – Gala Dinner

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15^{30} – 18^{00} - "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX OF BACĂU, Conference Hall (second floor)

Moderators

Dr. MOGLAN IOAN
Dr. Hab. DERJANSCHI VALERIU

1. VĂCĂREANU Raluca Ionela, SURUGIU Victor - **THE STRUCTURE OF *IDOTEA BALTHICA* POPULATION FROM AGIGEA AREA**

2. STAHI NADEJDA - **COMMUNITIES OF ORTHOPTERA INSECTS FROM THE LANDSCAPE RESERVES „LA CASTEL" AND „ZABRICENI" (REPUBLIC OF MOLDOVA)**

3. MIHAILOV Irina, DERJANSCHI Valeriu - **FAUNA OF ROVE-BEETLES (*COLEOPTERA, STAPHYLINIDAE*) IN THE OAK FORESTS MIXED WITH ASH AND MAPLE, "ZĂBRICENI"**

4. VARVARA Mircea - **THE TAXONOMIC STRUCTURE AND OF SOME ECOLOGICAL INDEXA REFERRING TO THE COENOSIS OF CARABIDAE (COLEOPTERA, CARABIDAE) IN A LUCERNE CROP, SUCEAVA (SUCEAVA COUNTY), 1977, 1978.**

5. MUSTAȚĂ Gheorghe, MUSTAȚĂ Mariana - **THE COMPLEX OF PARASITOIDSWHICH ACT IN *APHIS CRACCIVORA* (KOCH) COLONIES (HOMOPTERA, APIDIDAE) ON SOME PLANT FROM THE RESERVE OF DUNE FROM AGIGEA**

6. CONSTANTINEANU Raoul, CONSTANTINEANU Irinel, CIORNEI Constantin, LUNGU – CONSTANTINEANU Camil Ştefan, CARDAŞ Gabriel, OPARIUC Daniel - **PARASITOIDS OF SOME INSECT INVASIVE POPULATIONS IN SOME DECIDUOUS FORESTS IN MOLDOVA**

7. GÎRNEȚ Mariana - **THE SCELIONIDS (HYMENOPTERA, *SCELIONIDAE*) FROM THE FORESTS ECOSYSTEMS OF THE REPUBLIC OF MOLDOVA**

8. TOMOZII Bogdan - **ADDITIONAL DATA ON DISTRIBUTION OF MEGACHILIDAE BEES (HYMENOPTERA: APOIDEA: APIFORMES) OF ROMANIA**

9. PAVEL Valeria - **CATALOGUE OF THE PAPILIONOIDEA SUPERFAMILY FROM THE COLLECTIONS OF THE "ION BORCEA" MUSEUM OF NATURAL SCIENCE, BACĂU**

10. DERJANSCHI Valeriu, TIMUŞ Asea - **SPECIES OF CHEWING LEAVES INSECTS FROM THE *ANCYLIS* GENUS IN THE REPUBLIC OF MOLDOVA: REVISION AND FORECASTING**

11. CHIMIŞLIU Cornelia - **DATA REGARDING THE ALIEN/INVASIVE SPECIES OF INSECTS PRESERVED IN THE HERITAGE OF THE OLTENIA MUSEUM CRAIOVA (II)**

12. TUDOR-ANDREI Anca, TOFAN Florin Cătălin, ZAHARIA LĂCRĂMIOARA Gabriela - **THE CONNOTATIONS OF MODERN EDUCATION AND INTERDISCIPLINARY ACTIVITIES OF MUSEUMS**

13. ARINTON Mihaela, GURĂU Gabriela – **"SURVIVAL STRATEGIES IN INSECTS WORLD" – TEMPORARY AND ITINERARY EXHIBITION**

14. GURĂU Gabriela, ARINTON Mihaela – **"THE FASCINATING WORLD OF SHELLS" – TEMPORARY EXHIBITION**

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1. CRISTESCU Mihaela - **DATA CONCERNING THE BUTTERFLIES (LEPIDOPTERA, RHOPALOCERA) FROM THE FOREST NATURE RESERVE BREANA ROŞCANI, GALAȚI (ROMANIA)**

2. GHIURCĂ Daniel, TOFAN Florin-Cătălin - **REFLECTIONS THROUGH TIME: NATURAL SCIENCE MUSEUM OF BACĂU**

3. JIGĂU Ortansa, PARASCHIV Dalia, BURGHELEA Costel, TUDOR-GĂLESCU Genovița – **"FRUITS AND SEEDS FROM THE SPONTANEOUS AND CULTIVATED FLORA" – TEMPORARY EXHIBITION**

20^{00} – Gala Dinner

ABSTRACTS

PLENUM

PROFESSOR DR. CONSTATIN PISICĂ-DONOSE – *IN MEMORIAM*

MOGLAN IOAN

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In the full lucidity of spirit, with lots of ongoing projects, our beloved teacher and colleague, Professor Dr. Constatin Pisică-Donose sudenlly left us in his characteristic discretion.

Professor Dr. Constatin Pisică-Donose was born on March 1, 1932 in the village of Merişani, Teleorman County, in a respected family.

He attended primary school in his native village, secondary studies at the high school „Anastasescu" in Roşiorii de Vede and the higher education was achieved at the „Alexandru Ioan Cuza" University of Iaşi, Faculty of Natural Sciences, Biology-Zoology Department.

After graduation in 1957 until the end of its life, he worked as a member of the teaching staff at the Faculty of Biology.

Professor Dr. Constatin Pisică-Donose has carried out an extensive teaching activity, a prodigious scientific research, journalistic and administrative.

His research results are cited in the Romanian and foreign scientific literature. He is the author and co-author of 8 monographs, 6 textbooks and over 150 scientific articles.

During 1990-1996, he was the Dean of the Faculty of Biology, during which the institution was fundamentally reorganized.

Graduates, students and academic community of the Faculty of Biology deplore his death and will keep its memory alive.

Key words: Dr. Constatin Pisică-Donose, In memoriam

THE DIVERSITY OF SECRETORY STRUCTURES IN THE VEGETAL WORLD

TOMA CONSTANTIN, IVĂNESCU LĂCRĂMIOARA[1]

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In a certain way, all the vegetal cells are secretory (for example, the production of the cell wall); some of them are specialized and are forming structures different by form, function and secreted products.

The secretory formations can be classified according to various criteria: structure, the type of secreted product, the position in the plant, the place where are deposited or eliminated the secreted substances.

During the *evolution*, it seems that the secretory tissues developed, starting from idioblasts scattered between the cells of the regular tissues; subsequently there are developing channels, pockets and laticiferous and finally secretory hairs and different types of glands (saliferous, digestive, hydathodes and nectarigenes).

For *human*, the substances secreted by different structures, (principally *volatile oils*), are used in medicine (for homeopathy, aromatherapy) and different industries: alimentary (aromatic plants), cosmetics (perfumery, creams) and pharmaceutical (medicinal plants).

Key words: diversity, secretory structures, vegetal world

ON THE TRACES OF EVOLUTION - THE EVOLUTION DOESN'T WIPE OUT ITS TRACES, IT KEEPS THEM WORKING

MUSTAȚĂ GHEORGHE

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In the present report, we intend to present, briefly, the content of the book „**On the traces of evolution**", published in the year 2011, by AOSR publishing House.

At the beginning of the 21 century, we no longer question the validity of Charles Darwin's theory of evolution. Although there is a strong uncontrolled opposition of anti-evolutionists or so-called creationists, today even a high-school pupil knows that the evolution process is a cosmic reality. Our real concern is the fact that the evolution characterises life, but also the whole matter, the whole cosmos.

The evolutionism demonstrated that the evolutionary process, takes place on different levels: atoms structure and functionality, chemical elements, stars and also at the entire cosmos. The evolutionary process can be revealed thru a morphological and physiological progress of the living things. Then we have to accept that a process like this is specific for all the evolutionary levels.

According to Lima de Faria's "Theory of the auto evolution", experimental or with mind's eye we cannot ignore that along with the so-called "the large chain of beings", we can also take in count the large chain of the atoms, of the chemical elements, of the stars, etc. This demonstrates that the evolution passes through certain stages, which are not wiped out, but they are maintained in functional status. In the evolution of matter, there are not rejects; in a certain moment, each stage of evolution is on its highest level of progress.

Following this issues, we discover that the nature is governed by a general law, which postulates that "The evolution doesn't wipe out its traces, it keeps them working". This is exactly what the author tries to demonstrate in his book.

Key words: traces of evolution, evolutionism

Section I - Plants, Vertebrates, Genetics & Biotehnologies

PAPERS

THE DIVERSITY OF MACROMYCETES SPECIES FROM CAŞIN RIVER BASIN (BACĂU COUNTY)

PAVEL OTILIA CARMEN

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The mycological research was conducted during 2009 – 2011 in 9 forests situated in the Basin of Caşin River. There have been identified 350 taxa from Fungi kingdom out of which 32 species belong to the Ascomycota phylum and 318 species to the Basidiomycota phylum.

The author found the following rare species: *Leccinum holopus* (Rostk.) Watling, *Pisolithus arhizus* (Scop.) Rauschert, *Cantharellus amethysteus* (Quél.) Sacc., *Strobilomyces strobilaceus* (Scop.) Berk., *Pluteus aurantiorugosus* (Trog) Sacc. and *Mutinus caninus* (Huds.) Fr.

Key words: diversity, macromycetes, Caşin River basin

CONTRIBUTIONS TO THE KNOWLEDGE OF THE MAIN MEADOW TYPES IN THE AREA OF BERZUNȚI MOUNTAINS, BACĂU COUNTY

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In this paper we present three of the meadow vegetal associations investigated in the area of Berzunți Mountains. One of the three vegetal associations i.e. *Festuco rubrae-Agrostietum capillaris* Horvat 1951 belongs to the MOLINIO-ARRHENATHERETEA R. Tx. 1937 class and it belongs to the mesophile meadow type. The vegetation of the xerophile can be found in the phytocenoses of the other two associations researched i.e. *Taraxaco serotinae-Festucetum valesiacae* (Burduja et al. 1956, Răvăruț et al. 1956) Sârbu, Coldea et Chifu 1999 and *Taraxaco serotinae-Bothriochloetum ischaemi* (Burduja et al. 1956) Sârbu, Coldea et Chifu, which belong to the FESTUCO-BROMETEA Br.-Bl. et R. Tx. in Br.-Br. 1949 class.

Key words: meadow types, Berzunți Mountains, Bacău County

FAMOUS ROMANIAN BOTANISTS – PROF. UNIV. DR. DOC. TRAIAN ŞTEFUREAC

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Moldavian biologist, Prof dr. doc. Traian Ştefureac was a faithfull servant to its noble occupation related to the field of "friendly science ", with significant achievements for the progress of Botanics in Romania and its affirmation on international ground.

Key words: *in memoriam*, Traian Ştefureac, botanist

OBSERVATIONS ON THE FORMATION AND MAINTENANCE OF TEMPORARY FLOCKS OF ICHTHYOPHAGOUS BIRDS AROUND FISHING VESSELS, SOUTH EAST ATLANTIC (1980-1990)

PAPADOPOL C. NICOLAE, CURLIŞCĂ ANGELICA[1]

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The paper presents the results of biooceanografical expeditions carried out on ships board, under national and foreign flag, in the South East Atlantic (FAO_{47}) in the Namibian, South African, in the open ocean and subantartic areas.

The research was conducted during 1980-1990, in eight expeditionary missions, and enjoyed the support from the University of Cape Town / South African Republic experts.

The observations regard the forming and maintenance of temporary agglomerations of ichthyophagous oceanic birds, formed around fishing vessels. The are, also, reference about the migration of *Morus capensis* (Cape Gannet), the dominant species, which was monitored by means of relations of cooperation between Romanian and South African experts.

Key words: *Morus capensis*, South East Atlantic (FAO_{47}), University of Cape Town.

RESEARCHES CONCERNING THE POPULATIONS OF BIRDS (VERTEBRATA: AVES) FROM SHRUBS LOCATED IN THE DECIDUOUS FORESTS FROM THE JIJIEI MIDDLE BASIN (MOLDAVIA PLATEAU)

CARDAŞ GABRIEL[1], CIORNEI CONSTANTIN[2], RANG CĂTĂLIN[3]

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The results of diversity and biomass assessments of breeding bird communities in deciduous forest habitats in the past 15 years are presented.

Fundătura, Şoldăneşti and Ionăşeni forests located on western slope of the river Jijia in northern part of Moldavian Plateau were investigated.

Total number of identified breeding species was 27. Different aspects regarding infestation with various defoliators and treatments applied to control them are highlighted.

Key words: forest, birds, defoliators

TROPHIC SPECTRUM OF LONG-EARED OWL (*ASIO OTUS OTUS* L.) IN NESTING PERIOD

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The trophic spectrum of a family of long-eared owl in the northern part of the Republic of Moldova was analyzed. The pellets were collected at the end of reproductive period from the nest and under it. A total of 59 pellets were analyzed. The mean number of individuals per pellets was 2.05, minimum – 1, maximum – 5, the size of pellets varied between 1cm and 5,5 cm. The main prey of *Asio otus* individuals was *Microtus* genus species (*M. arvalis* and *M. rossiaemeridionalis*), which constituted 75%, followed by species of genera *Mus* (*M. spicilegus* and *M. musculus*) and *Apodemus* (*A. sylvaticus* and *A. uralensis*). There was found one individual of *Muscardinus avellanarius*, which constituted less than 1%. Thus, the trophic spectrum of long eared owl in breeding period consists mostly of field vole, which is the most abundant in agroecosystems and is considered pest species.

Key words: *Asio otus*, trophic spectrum, *Microtus*, pellets

SPREADING OF SHREWS FROM GENUS *CROCIDURA* ON THE TERRITORY OF REPUBLIC OF MOLDOVA

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The studies were accomplished between 2003-2009 in various natural and anthropogenic ecosystem types from different parts of Republic of Moldova. Both species (*Crocidura leucodon* and C. *suaveolens*) were recorded in many of studied natural and anthropogenic biotopes. In the southern zone of Moldova the species were registered in natural reserves, in swampy sectors, in humid ditches with hygrophilous vegetation, in woods, at forest edges and in forest shelter belts, in reed vegetation and in agroecosystems mostly near water basins. In the center of the republic the species are wide spread in Codri and Plaiul Fagului reserves in various types of biotopes. The species were also recorded on river and lake banks, in woods, in humid ditches with hydrophilous vegetation, as well as in more arid biotopes, including urban ones. In the northern zone both species are wide spread on the territory of Pădurea Domnească reserve in majority of studied ecosystems. They were also registered in woods, forest edges, acacia stands, insular forests, near aquatic basins (ponds, lakes, fish farms, rivers), as well as in various types of agroecosystems. We have to mention the high abundance of bicolour white-toothed shrew in the last several years. It was recorded not only in natural and wet biotopes, but also in more arid ones, in agocenoses and in urban ecosystems. In abandoned lands the species was even more abundant than other common shrew species and its trappability index constituted 10% from all the small mammals.

Key words: white-toothed shrew, lesser shrew, distribution, spreading

ASPECTS CONCERNING THE DIVERSITY OF RODENTS (MAMMALIA: RODENTIA) FROM AN ALFALFA CROP (BÂRSĂNEŞTI COMMUNE, BACĂU COUNTY, ROMANIA) (II)

PARASCHIV DALIA[1]

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The diversity of rodents in the alfalfa crop from the Bârsăneşti commune, Bacău County, was studied during April – October 2008, 2009 and 2010. In the researched alfalfa crop, we captured 133 individuals belonging to Rodentia Order: 56 individuals in 2008, 41 in 2009 and 36 in 2010.

Systematically, the individuals belong to 2 families, 6 genera and 9 species. Among these only one species is euconstant – *Microtus arvalis*. The species *Apodemus flavicollis, Mus spicilegus, Microtus arvalis, Apodemus* were identified as eudominant and specific to this type of ecosystem. The most obvious cenotic affinity is between the *Microtus arvalis* şi *Apodemus flavicollis* species (70%).

Key words: rodents, alfalfa crop, Bârsăneşti Commune

MORPHO-PHYSIOLOGICAL INVESTIGATIONS OF THE *IN VITRO* REGENERANTS OF *RHODIOLA ROSEA* L. AND *STACHYS SIEBOLDII* MIQ.

GHIORGHIȚĂ GOGU[1], MAFTEI I.DAN [2], NICUȚĂ DANIELA[3], MAFTEI DIANA ELENA[3], BĂDĂLUȚĂ NICOLETA[3]

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In view of acknowledging the efficiency of several combinations of growth regulators for the *in vitro* micropropagation of *Rhodiola rosea* L. and *Stachys sieboldii* Miq., the next parameters were analyzed: the length of the roots and of the shoots, the number of shoots/explant, the number of nodes/stem, the fresh and the dry biomass of the plants regenerated on some variants of the Murashige-Skoog medium (1962) enriched with growth regulators. The results of those experiments proved that the most appropriate medium variants for the *in vitro* regeneration of new shoots (using some shoot tips and uninodal shoot segments) were: Kin+2.4-D, BAP+IAA, Zeatin + IAA, Kin + NAA, BAP + IBA (the ratio between citokinins and auxins was 2:1), and the hormone-free MS for *R. rosea*, and for *S. sieboldii*: BAP + IAA, BAP + IBA, and BAP + NAA (the ratio was also 2:1). All these medium variants were characterized by a high number of shoots/explant and by a high number of nodes/shoot, as well.

Key words: *Rhodiola rosea*, *Stachys sieboldii*, *in vitro* regenerants, physiological parameters

PRELIMINARY DATA ON THE *IN VITRO* REACTION OF THE SPECIES *VACCINIUM CORYMBOSUM* L.

DANIELA NICUȚĂ, ȘTEFAN CIOBANU, DIANA-ELENA MAFTEI, NICOLETA BĂDĂLUȚĂ, GOGU GHIORGHIȚĂ[1]

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Vaccinium corymbosum is a species of large-bush blueberry that is cultivated for the large-size fruit that are rich in vitamins. The rapid multiplication of this species is required due to its beneficient influence, known for centuries. The *in vitro* cultures were initiated with shoots from the county of Maramureş. The disinfestation of the explants (represented by apices, nodes and leaf fragments) was accomplished using a chloramine-T solution 5% for 7 to 10 minutes. There were used 8 nutritive medium variants of the basal WPM (enriched with various combinations and amounts of auxins and cytokinins) to test the morphogenetic reaction. Each medium variant provided callus surrounding the inoculated explants. The caulogenesis was evinced from the apices and nodes placed on the medium variant A_1 supplemented with 3 mg/l^{-1} zeatin. The leaf explants inoculated on the same medium variant provided callus (that was highly-proliferative, organogenetic and light-green). Secondary offshoots grew from the basal nodes of the *in vitro* regenerated plants. The rhyzogenesis was not evinced on any of the tested medium variants.

Key words: *Vaccinium corymbosum, in vitro* multiplication

Section I - Plants, Vertebrates, Genetics & Biotehnologies

POSTERS

PRELIMINARY DATA ON BIRDFAUNA OF THE LOZOVA MARSH – GALATI COUNTY

ARCAN VIORICA[1], GACHE CARMEN[2]

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The present paper is the result of two years of obervations, during 2008 and 2010, in the Lozova Marsh. From 2007 this area was included in the Romanian Natura 2000 Nework 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 importants 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.

Key words: bird fauna, conservation, Lozova Marsh

THE PRESENCE OF URAL OWL (*STRIX URALENSIS*) IN DECIDUOUS FORESTS OF IAŞI COUNTY

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Owls are some of the least studied bird species in the world because of their nocturnal habits. Ural owl is a species that plays an important role in ecosystem functionality, being at the end of the food chain. It ss an indicator species for the quality of forest habitats, as it prefer to nest in large tree hollows. Ural owl (*Strix uralensis*) population in Romania is not well known. During a period of one year we surveyed monthly 52 stationary points situated in forests across Iaşi County. Using playback method we have recorded the presence of Ural Owl in 22 observation points. Thus, in 3 large forests in Iaşi County, the presence of the Ural Owl was not mentioned in scientific literature so far as we know but we have found a nesting population. Also, we have confirmed the presence of the species in Natura 2000 area Bârnova Forest.

Key words: *Strix uralensis*, Forests, playback

CARASSIUS INTERSPECIFIC VARIABILITY IDENTIFICATION USING COX I DNA BARCODING GENE

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The aim of the paper is to identify the interspecific variability in *Carassius* genus, by cytochrome oxidase's first subunit DNA sequencing.

The sampling process for both species involved (*C. carassius* and *C. gibelio*) and individuals were identified as hybrids on morphological aspects. Tissue samples (dorsal muscle and fin-clippings) were stored in 98% ethanol for DNA isolation and purification, performed by the phenol: chloroform: isoamyl alcohol (25:24:1) protocol. The total DNA was resuspended in 50 µl Tris-EDTA and was quantitatively and qualitatively determined by spectrophotometry and electrophoresis in 1% agarose gel stained with ethidium bromide and visualised under UV light.

PCR was performed in a 25 µl reaction volume containing GoTaq Green Master Mix (Promega), direct and reverse primers, DNA and nuclease free water to 25 µl. The sequencing reaction was performed using the Beckman Coulter CEQ 8000 Genetic Analysis System. Sequence analysis revealed 14 haplotypes, which indicate 45.16% variability.

Key words: *Carassius carassius*, C. gibelio, COXI

Section II

Invertebrates & Museography

PAPERS

THE STRUCTURE OF *IDOTEA BALTHICA* POPULATION FROM AGIGEA AREA

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In this paper we present the results of a research that focused on the *Idotea balthica* (Ord. Isopoda, Fam. Idoteidae) population's structure from the Agigea area. The other two species of isopods cited for Romanian Black Sea coast, *Idotea metallica* and *Synisoma capito*, were not found among individuals collected.

The results indicate that the highest value of biomass was recorded in May (20,4936g/m2); in the coming month's biomass decreases because of male mortality and recruitment of juvenile in this period. August is characterized by the lowest biomass (1,9467g/m2) and a density of 341 individuals/m2.

The histograms show changes in population size classes for the six month study. Notice the difference between May, where individuals are large, sexually mature and June, July, August, September and October characterized by small to medium sized individuals.

The analysis of co-variation of biomass and density values shows that these individuals have two breeding periods represented by the May-June and October. The number of eggs, embryos or young found is also much lower in July-September period.

Key words: *Idotea balthica*, population, Black Sea

COMMUNITIES OF ORTHOPTERA INSECTS FROM THE LANDSCAPE RESERVES „LA CASTEL" AND „ZABRICENI" (REPUBLIC OF MOLDOVA)

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The present paper includes 50 species from the Orthoptera order which were collected in the „La Castel" and „Zabriceni" Landscape Reserves. In the first reserve were collected about 2300 specimens who belong to 41 species, 27 genera, 4 families and 2 suborder – Ensifera (with 22 species) and Caelifera (respectively 27). In the „Zabriceni" reserve were collected about 1100 specimens who belong to 32 species, 18 genera, 4 families and 2 suborder – Ensifera (with 12 species) and Caelifera (respectively 20). From these 50 species 29 are commonly for both Landscape Reserves.

In article is given the ecological and life forms of Orthoptera species collected in these reserves. Also, are given the similarity, diversity, Simpson, Shannon and Equitability indexes.

Key words: Orthoptera, „La Castel" and „Zabriceni" Landscape Reserves, ecological indexes.

FAUNA OF ROVE-BEETLES (*COLEOPTERA, STAPHYLINIDAE*) IN THE OAK FORESTS MIXED WITH ASH AND MAPLE, "ZĂBRICENI"

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In the literature it is known importance of the rove-beetles distribution in natural and agricultural ecosystems. It was found that forest complexes in the Republic of Moldova this group of insects involved in rotting vegetation, animals and eat carrion biological stages of insect pests. In the paper is presented the list of stafylinides species collected from the oak forest mixed with ash and maple, "Zăbriceni". Entomological material shown in this paper was collected during the growing season of 2010. Type traps were used in total of 20 samples Barber. Every ten days to make the control jars. The list of the stafylinides of work includes 25 species, representatives from six subfamilies (*Ornaliinae*, *Tachyporinae*, *Aleocharinae*, *Oxytelinae*, *Paederinea*, *Staphylininae*), 16 genera and 131 individuals. The largest is subfamily Staphylininae with numerical 14 species, representatives of 8 genera. The number and specific composition is modest in subfamilies *Tachyporinae* and *Paederinae*. The stafylinides species determined were subjected to the mathematical analysis. They calculated the ecological indicators: abundance (A), dominance (D), constancy (C) and index of ecological significance (W). As a result of statistical analysis has determined that the most abundant species is *Othius punctulatus* (Goeze, 1777) with 24 specimens, the dominance - 18,3% included in the category D_5, constancy - 100% (C_4), index of ecological significance – 18,3% (W_5).

Key words: *Staphylinidae* family, ecological indices, landscape reserve, barber traps, natural and agricultural ecosystems

THE TAXONOMIC STRUCTURE AND OF SOME ECOLOGICAL INDEXA REFERRING TO THE COENOSIS OF CARABIDAE (COLEOPTERA, CARABIDAE) IN A LUCERNE CROP, SUCEAVA (SUCEAVA COUNTY), 1977, 1978

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The paper is based on the quantitative collectings of the coenosis of Carabidae from a lucerne crop, Suceava, 1977, 1978, using 12 Barber pitfalls each year. In 1977, 16 collectings were made (April - September) and 1978, 15 collectings (April - August).

There were analyzed 192 samples (16 x 12 pitfalls), 1977 and 180 samples, 1978.

In those two years, 8593 individuals were collected belonging to the family Carabidae: 1977, 2721 (46.34%), 1978, 5872 (68.33%).

Those 2721 specimens of Carabidae belong to 5 subfamilies, seven genera and 17 species. The individuals collected in 1978 belong to 9 subfamilies, 14 genera and 25 species.

The subfamilies Pterostichinae and Harpalinae are eudominant; they include 7 genera, 11 species and 96% of the individuals collected (1977), 14 genera, 25 species and 97% of the specimens collected in 1978.

Pterostichus melanarius Illiger 1798, *Poecilus cupreus* L.1758 and *Pseudophonus rufipes* De Geer 1774 are euconstant, eudominant species, their total individuals represent 96% of the specimens collected (1977), in 1978, the same species are euconstant, eudominant , except the species *Pseudophonus rufipes* which is dominant, their total individuals represent 97% of the specimens collected.

Key words: lucerne, carabids, taxonomic structure, ecological indexa

THE COMPLEX OF PARASITOIDSWHICH ACT IN *APHIS CRACCIVORA* (KOCH) COLONIES (HOMOPTERA, APIDIDAE) ON SOME PLANT FROM THE RESERVE OF DUNE FROM AGIGEA

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During 2005-2007 we investigated the complex of parasitoids controlling *Aphis craccivora* (Koch) populations installed on some plants (*Medicago sativa* L., *Onobrychis sativa* Lam. and *Vicia cracca* L.) from the Reserve of Dune from Agigea; most of plants are in buffer area.

There were identified 18 parasitoid species which are included in 10 genera and 4 families.

To elucidate all trophic relationships amongparasitoid species we have designed a trophic network very relevant in this concern. To appreciate the role of each species within this biocoenotic complex in limiting the *Aphis craccivora* populations; we realized a synecological analyses where we investigatedafew indexes (abundance, constancy, dominance and the ecological significance index).

Key words: parasitoids, hyperparasitoids, aphids, trophic relationships.

PARASITOIDS OF SOME INSECT INVASIVE POPULATIONS IN SOME DECIDUOUS FORESTS IN MOLDOVA

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In the present paper the authors present two phytophagous invasive species, which attack deciduous forests: *Aproceros leucopoda* Takeuki (Hym., Argidae), native from East Asia, in two elm forests (*Ulmus glabra* Huds. L.) in the Iaşi (Iaşi county) and Brodoc (Vaslui county) forest districts and *Apethymus cereus* (Klug.) (Hym., Tenthredinidae) from eight oak stands, in the Căiuți forest district, Bacău county. We present 6 native parasitoids adapted to those two Tenthredinoidea invasive species: *Pimpla turionellae* (L.) and *Itoplectis maculator* (F.) (Hym., Ichneumonidae) from immature stages of *Aproceros leucopoda* and *Charmon extensor* (L.) (Hym., Braconidae), *Gelis cinctus* (L.), *Phytodietus ornatus* Desv. *and Temelucha ophtalmica* (Holmgr.) (Hym., Ichneumonidae) from immature stages of *Apethymus cereus*. All 6 host – parasitoid relationships are new in science. For *Aproceros leucopoda* we present for the first time in science parasitoids belonging to the order Hymenoptera (two ichneumonid species).

Key words: invasive species, deciduous forests, parasitoids.

THE SCELIONIDS (HYMENOPTERA, *SCELIONIDAE*) FROM THE FORESTS ECOSYSTEMS OF THE REPUBLIC OF MOLDOVA

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The results of this study are based on the researches that were effectuated in the forests ecosystems from the north, center and the south of the Republic of Moldova. In the result of the researches performed in different types of ecosystems were identified 53 species from 17 genera. The biggest diversity was recorded in the central part - 40 species, followed by the north of the republic – 33 species and in the south of the Republic of Moldova – 32 species.

Key words: ecosystem, protected area, scelionids, invertebrate.

ADDITIONAL DATA ON DISTRIBUTION OF MEGACHILIDAE BEES (HYMENOPTERA: APOIDEA: APIFORMES) OF ROMANIA

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New data on the distribution in Romania of 60 specii of Megachilidae family are presented. Ten species of bee genus *Coelioxys* are for the first time reported for Moldavia region.

Megachile flabellipes is for the first time recorded from Romania.

Key words: Megachilidae, distribution, Romania.

CATALOGUE OF THE PAPILIONOIDEA SUPERFAMILY FROM THE COLLECTIONS OF THE "ION BORCEA" NATURAL SCIENCE MUSEUM COMPLEX, BACĂU

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The material belonging to Papilionoidea superfamily contains 3769 specimen from 54 genera and 127 species. Most of the material belongs to Prof. Alexei Alexinschi and Prof. dr. Victor Nadolschi collections and material collected by the specialists of the institution. The presence of some rare and protected species as *Maculinea arion* L., *Maculinea alcon* Denis&Schiff, *Boloria pales* Denis&Schiff, *Parnassius appolo* L., *Zerinthia polyxena* Denis&Schiff, etc. add a distinctive value to the musem patrimony.

Key words: catalogue, lepidoptera collection, Papilionoidea superfamily

SPECIES OF CHEWING LEAVES INSECTS FROM THE *ANCYLIS* GENUS IN THE REPUBLIC OF MOLDOVA: REVISION AND FORECASTING

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The *Ulmus* trees from Republic of Moldova are studied particularly, because in the last 11 years it registers species of chewing leaves insects that put in endangered the vitality of these trees. In 2010-2011, in parallel with species of autohton beetles (*Galerucella luteola*, *Rhynchaenus*) and invasive hymenopterans (*Aproceros leucopoda*) were recorded some species of butterflies (Tortricidae family, *Ancylis* genus). In the next years we estimate that the populations of species from genus *Ancylis* which is an important pest for Ulmus minor will be rise up. Research is directed to review 11 species of insects from the genus *Ancylis* which are knew in the Republic of Moldova, also, to establish which are autohton or invasive forms on elm trees.

Key words: chewing leaves insects, *Ancylis* genus, autohton and invasive forms

DATA REGARDING THE ALIEN/INVASIVE SPECIES OF INSECTS PRESERVED IN THE HERITAGE OF THE OLTENIA MUSEUM CRAIOVA (II)

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The purpose of this paper is to continue publishing the scientific data held by non-native/invasive insects from the museum heritage in order to complete information on their distribution in Romania.The material analyzed in this paper consists of insects preserved in new fund of the entomological heritage of the Oltenia Museum Craiova (established in the period 1980-2011). For each species we presented earlier mentions from the museum heritage, the analyzed material, the number of specimens and the origin of species. The collection sites are listed alphabetically, and collection dates in chronological order of years and months of collection.This paper contains data on 10 species non-native/invasive, preserved in the heritage of the Oltenia Museum Craiova: (*Calliptamus italicus* (Linnaeus 1758), *Pezotettix giornae* (Rossi 1794), *Oecanthus pellucens* (Scopoli 1763) – ord. Orthoptera; *Eurygaster integriceps* Puton 1881 – ord. Heteroptera; *Stictocephala bisonia* Kopp & Yonke 1977 – ord. Homoptera; *Leptinotarsa decemlineata* (Say 1824), *Anoxia (Protanoxia) orientalis* (Krynicky 1832), *Blitopertha lineata* (Fabricius 1798), *Acanthoscelides obtectus* Say 1831 – ord. Coleoptera; *Blatta orientalis* Linnaeus 1758 – ord. Dictyoptera.

Key words: alien/invasive insects, entomological collections, the Oltenia Museum Craiova.

IMPLICATIONS OF MODERN EDUCATION AND INTERDISCIPLINARY ACTIVITIES OF MUSEUMS

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In addition to the Museum's functions related to the compilation, preservation and exposure of parts of the collection, is important to pay attention to the relationship with the public.

In this context, the authors, curators at "Ion Borcea" Natural Science Museum Complex Bacău have experienced other forms of involvement of the museum in ecological education.

The purpose of this educational project was to motivate the young generation to appreciatethe value of the natural heritage and for its observance.

This paper describes the activities carried out with public school and preschool, through protocols of cooperation with educational institutions, in the period 2006-2010.

Key words: the Museum's activities, education for environment.

"SURVIVAL STRATEGIES IN INSECTS WORLD" – TEMPORARY AND ITINERARY EXHIBITION

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The exhibition "Survival Strategies in Insects World" represented a cultural project developed in 2010 and continued as an itinerary exhibition in 2011. The objective of this project was to present to the public a world less known – the world of insects. The exhibition presents a miniature world – it includes beings which we often ignore due to their small size.

Although human and insects share the same world, most of the times we don't notice their presence. However, these organisms appeared on Earth before us, they live with us and probably they will continue to populate the Planet also after man will disappear. How is this possible? How did they manage to resist for so long? How will they ensure their survival through time? This exhibition reveals to the public possible answers to these questions.

Key words: insects, temporary, itinerary exhibition.

"THE FASCINATING WORLD OF SHELLS" – TEMPORARY EXHIBITION

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The paper presents the temporary exhibition "The fascinating world of shells" that was opened to the public in December 12, 2008 (as part of The Annual Cultural Project of "Ion Borcea" Natural Science Museum Complex of Bacău). The exhibited material is part of Malacological Collection of our museum. The visitors had the opportunity to admire interesting pieces of collection that were exhibited for the first time after more than 30 years.

The exhibition presented some morphological, systematical, biological and ecological data regarding this group of organisms. The visitors could also found out about the use of mollusks in art, architecture, pharmacology, gastronomy, creating jewelry and accessories.

Key words: mollusks, shells, temporary, itinerary exhibition.

Section II

Invertebrates & Museography

POSTERS

DATA CONCERNING THE BUTTERFLIES (LEPIDOPTERA, RHOPALOCERA) FROM THE FOREST NATURE RESERVE BREANA ROŞCANI, GALAŢI (ROMANIA)

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This study brings new data about the diurnal Lepidoptera of a protected area: The Forest Nature Reserve Breana Roşcani Galati. There are no other available lists of butterflies from this protected area. *Euphrydias maturna partiensis* Varga, 1973 – is a rare and localized species, its presence is reconfirmed for south Moldova. *Carcharodus orientalis orientalis* Reverdin, 1913 that is a rare and poorly known species was also identified in the studied area. Other species are protected, being included on the lists of Habitat Directive *(Neptis hylas hylas* Linnaeus, 1758), Bern Convention and Red Data Book of European Butterflies (*Glaucopsyche alexis alexis* Poda, 1761; *Pseudophilotes schiffermüelleri schiffermüelleri* Hemming, 1929).

There were identified 40 species of butterflies belonging to 5 families: Hesperiidae, Papilionidae, Pieridae, Lycaenidae şi Nymphalidae.

Key words: Forest Nature Reserve, Breana Roşcani, Rhopalocera.

REFLECTIONS THROUGH TIME: NATURAL SCIENCE MUSEUM OF BACĂU

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In 1959 was founded a natural science department in the Regional Museum of Bacău. Since then there have been many pages of culture shown to the general public of Bacău and not only. Using modern multimedia technology, the authors, curators at the Natural Science Museum of Bacău, have made an electronic application installed on touchscreen. This application will offer to the visitors an image of some activities of the museum during this time period. The richness of images and video effects complete the aesthetic and technical innovation, offering to the visitors a consistent and attractive documentary material.

Key words: historical, natural science museum Bacău, interactive application, touchscreen

"FRUITS AND SEEDS FROM THE SPONTANEOUS AND CULTIVATED FLORA" – TEMPORARY EXHIBITION

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The temporary exhibition "Fruits and seeds from the spontaneous and cultivated flora" was realized by the specialists from the Vivarium subunit of the "Ion Borcea" Natural Science Museum Complex Bacău.

The biological material was collected during 2009-2011, from the spontaneous and cultivated flora of Bacău County. The fruits and seeds were identified by the specialists (over 120 species).

In the exhibition only 80 species were presented to the public, using scientifical and didactic criteria. Thus, the visitors can discover different types of fruits: dehiscent dry fruits (pod, siliqua, silicule, follicle, capsule), nondehiscent dry fruits (caryopsis, achene, nut, nucule, samara), fleshy and bacciform fruits (berry, drupe, pepo, false fruits, polyfollicle).

The project was realized in partnership with Forest Research and Management Institute (I.C.A.S. Bacău).

The collected fruits and seeds will be part of a new collection from our museum patrimony.

Key words: exhibition, fruits, seeds, spontaneous and cultivated flora, Bacău County