

GENETIC TRANSFORMATION OF RASPBERRIES BY MEANS OF AGROBACTERIUM TUMEFACIENS

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KEY WORDS: raspberry (Rubus idaeus); transformation; regeneration; npt II; Agrobacterium tumefaciens

ABSTRACT

Genetic transformation of red raspberry (Rubus idaeus) was achieved using Agrobacterium tumefaciens. Leaf petioles and leaf segments of cv. Samodiva and cv. Elit-1 were infected with Agrobacterium strains EHA 101, LBA 4404 and LBA 4404 carrying 35 S and 2x35 S promoters. The regenerants were obtained on MS nutrient medium enriched with 0.3 mg/l IBA, 0.01 mg/l 2,4-D and 2 mg/l TDZ. The Agrobacterium growth was inhibited with cefotaxime. Kanamycin was used as a selective agent for the transformants. The transformation efficiency was within the range of 0.54-2.08 % for Elit-1 transformed with Sac B and cod A gene. The integration of the marker genes npt and Hygromycin in putative transgenic plants was confirmed by PCR analysis using primers, the nucleotide sequence of which was complementary to these genes.

**LICHEN MYCOTA ALONG ULUDAĞ FIR
(*ABIES BORNMUELLERIANA* MATTF.)**

Gülşah Çobanođlu, Ece Sevgi, Orhan Sevgi

KEY WORDS: lichen mycota of tree, epiphytic, corticolous, fir, research forests of Turkey

ABSTRACT

For the purpose of investigating distribution of epiphytic lichen taxa along a tree, mycota of 5 cut-fir trees was studied in Şerif Yüksel Research Forest in the province of Bolu, for the first time in Turkey.

POLLUTION INDICATORS SPECIES. THE QUANTITATIVE DETERMINATION OF Hg AND Pb BY AAS SPECTROMETRY FROM *Achillea millefolium* L., *Centaurea cyanus* L. AND *Plantago major* L.

Merca Vasilica, Tomulescu Ioana Mihaela, Radoviciu Edith Mihaela

KEY WORDS: atomic absorption spectrometry, toxic metals, polluted zone

ABSTRACT

An atomic absorption spectrometric method is described for the determination of lead and mercury in plant tissues.

The procedure described in this paper, highlight the degree of exposure of plants to certain toxic metals : Hg and Pb, the plants being harvested from a polluted industrial zone (Sinteză Oradea) and from a non polluted zone (Beius - Bihor).

*Samples used are formed from vegetal tissues, obtained from the following species: *Achillea millefolium*, *Centaurea cyanus* L. and *Plantago major* L..*

**XX INTERNATIONAL CONGRESS OF GENETICS
GENETICS – UNDERSTANDING LIVING SYSTEMS
BERLIN, GERMANY, JULY 12-17, 2008**

Corneanu C.G., Corneanu Mihaela

KEY WORDS: XX International Congress of Genetics, Berlin

ABSTRACT

*The XX International Congress of Genetics, with device **Genetics-Understanding Living Systems**, took place in Berlin in the period 12-17 July 2008. At this remarkable scientific event, attended over 2500 scientist from all over the world, 6 Nobel laureate, and over 280 of the world's most prominent genetics. In one Keynote Symposium, 9 Plenary Lecture, 54 Concurrent Symposia, 2 Poster Sessions and 2 Workshops, were presented over 2000 papers, which illustrate the genetics development at the level of 2008 year. From Romania, attended 10 specialists with 26 papers.*

**RESEARCHES CONCERNING SOME FACTORS INFLUENCE ON CALLUS
INDUCTION OF BLUEBERRY BUSH (*Vaccinium myrtilus*)**

Danci M., Botău Dorica, Danci Oana

KEY WORDS: callus, phitohormons, culture medium, explants

SUMMARY

Results regarding callus proliferation potential derived from two types of blueberry bush explants, using two culture media and two hormonal balances are presented in the following paper. The two culture media used in this study were Anderson and WPM, each type of culture having two hormonal balances variants. Foliar tissue fragments and stalk tissue fragments constituted the explants used in this experiment.

This study results proved that a great variability exists between the two types of explants regarding callus genesis depending on both the culture media and hormonal variants. The highest callus percentage was obtained on the hormonal variant containing 2 mg/l 2,4D and 1,5 mg/l KIN.

**THE LEAF BLADE TRICHOMES COMPARATIVE STUDY OF SOME
DATURA AND NICOTIANA SPECIES (SOLANACEAE)**

Rodica Bercu

KEY WORDS: Datura, glandular hairs, histology, protective hairs, Nicotiana

ABSTRACT

The article comprises histological aspects of the protective and glandular hairs from the leaf blade of two species belonging to Datura and Nicotiana genus (Solanaceae) - Datura stramonium L. Datura suaveolens Humb. & Bonpl. ex Willd., Nicotiana alata Link. et Otto. and Nicotiana tabacum L. Some cytological elements are discussed. The paper reveals the main histological trichomes patterns concerning their type, structure, shape, size, the cells arrangement on the blade surface etc. as well. In literature an exclusively study concerning the blade hairs mostly of the ornamental plants almost lack, that is why we consider that any study of the foliar hairs is in need.

**ANATOMY OF THE AQUARIUM PLANT
APONOGETUM CRISPUS THUNB. (APONOGETONACEAE)**

Rodica Bercu

KEY WORDS: anatomy, Aponogeton crispus, leaf, root

ABSTRACT

The article comprises investigation of the vegetative organs anatomy of an aquatic plant Aponogeton crispus Thunb. This species belongs to Aponogetonaceae family, living submerged. In our country it is frequent known and cultivated as an aquarium plant. Our purposes were to show some features of anatomical interest concerning the vegetative organs of this submerged plant, in accordance with its hydrophytic habit. The anatomical aspects of Aponogeton crispus's adventitious root and leaf have been described and discussed.

**ABOUT SOME LOW ALTITUDE POPULATIONS OF SALAMANDRA
SALAMANDRA AND RANA TEMPORARIA FROM THE PRUNISOR-IGNEȘTI
AREA, ARAD COUNTY, ROMANIA**

Covaciu-Marcov Severus-Daniel, Cicort-Lucaciu Alfred-Ștefan,
Balint (Szeibel) Noemi, Szabo Attila-Levente, Lazăr Olivia

KEY WORDS: Salamandra salamandra, Rana temporaria, low altitude

ABSTRACT

Salamandra salamandra and Rana temporaria are two amphibian species found in Romania in hilly and mountain regions, at altitudes of more than 200 m asl. We have identified populations of these two species to as little as 135 m asl. in the Prunisor-Ignessi area from Arad County. The two species occur in wet habitats, being present near the streams that cross the forests in the region. These results increase the particularities of the herpetofauna from this area, where many species come down to lower altitudes than in other areas from the country.

**NEW CONTRIBUTIONS TO THE STUDY OF THE GEOGRAPHIC
DISTRIBUTION OF THE HERPETOFAUNA OF THE SOUTH-WEST
DOBRUDJA, ROMANIA**

Covaciu-Marcov Severus-Daniel, Cicort-Lucaciu Alfred-Ştefan,
Bogdan Horia-Vlad, Ferenţi Sara, Filimon Aniela

KEY WORDS: Herpetofauna, geographic distribution, Dobrudja

ABSTRACT

This present paper comes as an addition to the paper we published by us in 2006 (Covaciu-Marcov et al 2006) and intends to indicate new localities for the geographic distribution of the herpetofauna from the south-west Dobrudja. The research was carried out during 2007 and 2008 and this paper contains only the new data from that period. Thus, we analyzed 14 localities in which we found 6 amphibian species: Bombina bombina, Hyla arborea, Pelobates fuscus, Bufo viridis, Rana ridibunda, Rana dalmatina and 11 reptile species: : Emys orbicularis, Testudo graeca, Ablepharus kitaibelli, Lacerta viridis, Podarcis taurica, Podarcis muralis, Darevskia praticola, Natrrix natrrix, Natrrix tessellata, Dolichophis caspius, Vipera ammodytes. The most important signalation is that of the new locality for Darevskia praticola, the rarest lizard species from the south-west Dobrudja.

**CONTRIBUTIONS TO THE STUDY OF THE MACROZOOBENTHIC
INVERTEBRATE COMMUNITY IN PRUNIȘOR AREA (ARAD COUNTY,
ROMANIA)**

Cupșa Diana, Andru Valentina, Covaciu-Marcov Severus Daniel, Gajgo Zita

KEY WORDS: macrozoobenthos, semi temporary pond, aquatic invertebrate community, anthropic area

ABSTRACT

This paper deals with the study of the structure and dynamics of the macrozoobenthic invertebrate community from a semi temporary pond from Prunișor village area (Arad County). The study was made in the spring period (March-May), period in which the pond persists. The study consists from the determination of the structure and dynamics of the macrozoobenthic invertebrate community depending on the variations of the environmental conditions and the characteristics of the life cycle of each species. The pond is important for the conservation of biodiversity because it is situated in an anthropic area with agricultural fields around it. Because of this reason it is a refuge for a number of aquatic invertebrate species and also amphibians which lays their eggs here. Maintaining these kinds of ponds ensure the survival of different species in anthropic areas, where they have an insular distribution and their habitat is endangered.

**THE TROPHIC SPECTRUM OF A *BUFO VIRIDIS* POPULATION FROM
VODIȚA VALLEY, MEHEDIȚI COUNTY, ROMANIA**

David Anamaria, Ancău Maria, Dimancea Nicoleta,
Toth Gabriela, Aszalós Ágnes

KEY WORDS: Bufo viridis, Mehediți, trophic spectrum

ABSTRACT

We analyzed the diet of 98 individuals of Bufo viridis, captured on the 12th and 14th July 2006 and 12th, 14th and 15th September 2007, in order to observe the evolution of the feeding spectrum. The most important categories of prey taxa were consumed in the highest quantities and have the highest frequency are represented by Hymenoptera-Formicida and Crustacean-Izopoda. During our study, the examined individuals presented a high feeding intensity, which reveals good feeding conditions.

**FEEDING OF SOME HYBRID POPULATIONS BETWEEN *BOMBINA BOMBINA*
AND *BOMBINA VARIEGATA* FROM ARAD COUNTY, ROMANIA**

Nicoleta Dimancea, Maria Ancău, Reka Zefer,
Cristina Pinteă, Olimpia Lezău

KEY WORDS: feeding, Bombina bombina, Bombina variegata, hybrids

ABSTRACT

This study deals with the analysis of the trophic spectrum of three hybrid populations between Bombina bombina and Bombina variegata, totalizing 92 individuals. We identified four categories of stomach contents, animal prey, plant remains, shed-skin fragments and in an extremely low proportion minerals. The most substantial values in the food composition are held by Coleoptera, Lepidoptera larvae, aquatic Isopoda and Araneida. In connection with this situation, almost all of the prey originates from terrestrial environment. As well as presenting quantitative and qualitative facts, this paper underlines the differences that the sexes and habitats have on the feeding process.

**NOTE ON THE TROPHIC SPECTRUM OF A *TRITURUS CRISTATUS*
POPULATION FROM LIVADA FOREST, SATU MARE DISTRICT, ROMANIA**

Ferenti Sára, Cupşa Diana, Lazăr Viorel,
Dimancea Nicoleta, Ancău Maria

KEY WORDS: Triturus cristatus, trophic spectrum, sexes, ontogenetic development

ABSTRACT

We have analyzed the trophic spectrum of 31 species of crested newts, caught in May 2007 in Livada forest. In order to get the samples, we have used the method called stomach lavage. In the stomach contents we have identified plants, skin remainders, eggs and minerals, and animal preys, among which the most important are the Cladoceras, the Ephemeroptera larvae, Nematocera larvae and aquatic Isopodas. We have also identified one Triturus vulgaris type in the newts' stomach. Most of the preys live in water.

POLLUTION INDICATORS SPECIES. THE QUANTITATIVE DETERMINATION OF Cu, Cd AND Zn BY AAS SPECTROMETRY FROM *Achilea millefolium* L., *Pastinaca sativa* ssp. *pratensis* L. AND *Matricaria inodora* L.

Merca Vasilica, Radoviciu Edith Mihaela, Tomulescu Ioana Mihaela

KEY WORDS: atomic absorption spectrometry, toxic metals, polluted zone

ABSTRACT

The procedure described in this paper, highlight the degree of exposure of plants to certain toxic metals: Cu, Cd, and Zn, the plants being harvested from a polluted industrial zone (Sinteza Oradea) and from a non pollute zone (Suncuius Bihor). An atomic absorption spectrometric method is described for the determination of copper, zinc and cadmium in biological materials. Copper, zinc and cadmium are determined directly by aspirating the solution into an air- acetylene flame.

*Samples used are formed from vegetal tissues, obtained from the following species: *Achilea millefolium*, *Pastinaca sativa* ssp. *Pratensis* and *Matricaria inodora* L.*

THE DETERMINATION OF THE SANOGENETIC POTENTIAL THROUGH THE AAS METHOD AT SOME DECORATIVE PLANTS

Ildikó Szábó, Cristian-Felix Blidar, Anamaria Pallag

KEY WORDS: atmospheric pollutants, decorative plants, atomic absorption spectrophotometric

ABSTRACT

A series of decorative plant species, especially in the urban area, fulfills along with an esthetic role a sanogenesis role by fixing different pollutants in the air. This characteristic is influenced by the species, the type of pollutant, the atmospheric air, etc. From the qualitative point of view, the atomic absorption spectrophotometric method has proved to be faster, precise and reproducible.

Applied in the ingathered pollen's analysis form 6 species, it has been determined that the measured values for heavy metals are far more beyond the recommended limit by the Romanian Pharmacopeia edition X (FR.X.). Toxic elements as: Pb, Ni, Cd are under the detection limit of the analyzing method. Some heavy metals as: Pb, Cd, Cr, Ni, Mn, can emanate from the soil or they can come from the atmospheric pollutants, burned gases respectively outlet gases.

PRELIMINARY PHARMACOBOTANICAL STUDY ON CULTURED PLEUROTUS SPECIES

Szabo Ildiko, Pallag Annamaria, Horvath Tunde

KEY WORDS: Pleurotus ostreatus L., cultured, qualitative and quantitative determination

ABSTRACT

Pleurotus ostreatus– the oyster mushroom, grows worldwide in the wild on deciduous trees in shelf-like clusters. The most important quantity of this mushroom comes from controlled cultures, grown on farms, from mycelia cultivated on liquid or solid substrates.

Taking into consideration its highly appraised nutritional value as well as the therapeutical properties of Pleurotus species, the aim of the present study is a preliminary analysis to establish the morphological and qualitative parameters and the content in protein and polysaccharides for the basidiocarp as a whole, and separately for the stipes.

COMPARATIVE STUDY ABOUT DIGIT RATIO IN TWO FEMININE POPULATIONS OF BIHOR COUNTY

Tomulescu Ioana Mihaela, Radoviciu Edith Mihaela, Merca Vasilica

KEY WORDS: digit ratio, feminine populations, Oradea, Beius

ABSTRACT

This paper is about the differences of digit ratio in two human populations from two localities. These localities are: Oradea and Beius, from Bihor county. Oradea is a locality with over two hundred thousands of inhabitants, which means the variability of some phenotypical features must be a large one. Beius is a smaller locality (has under fifty thousands inhabitants), which means the variability of some phenotypical features is lower than in Oradea. This fact is showed in our study. We investigated 100 females in each locality. It were measured the lenghts of the digits 2, 3 and 4, and then we made the digit ratio. The results are important: the digit lenghts are very different in the two localities; the 2D:4D digit ratio, too.

CONTRIBUTIONS ABOUT THE COMPARATIVE DIGITAL MEASUREMENTS IN TWO MASCULINE POPULATIONS OF BIHOR COUNTY

Tomulescu Ioana Mihaela, Merca Vasilica, Radoviciu Edith Mihaela

KEY WORDS: digit ratio, masculine populations, Oradea, Bulz

ABSTRACT

This paper is about the differences of digit ratio in two human populations of localities. These localities are: Oradea and Bulz, in Bihor county. Oradea is a locality with over two hundred thousands of inhabitants, which means the variability of some phenotypical features must be a large one. Bulz is a smaller locality (has under ten thousands inhabitants), which means the variability of some phenotypical features is lower than in Oradea.

This fact is showed in our study. We investigated 100 males from each locality. It were measured the lenghts of the digits 2, 3 and 4, and then we made the digit ratio. The results are important: the digit lenghts are very different in the two localities.

**AEROMYCOLOGICAL STUDY ON *STEMPHYLIUM* CONIDIA IN FOUR
ROMANIAN CITIES FOR 2005**

Ianovici Nicoleta, Dumbravă Mălina

KEY WORDS: airborne spores, Stemphylium conidia

ABSTRACT

Airborne spores have been widely recognized as allergens, and were mostly linked with the etiology of asthma. Stemphylium conidia are typical airborne spores. The aim of the study was to analyse the Stemphylium conidia concentrations in București, Brașov, Craiova și Timișoara in the year 2005. Airborne spores sampling was carried out in this cities by employing volumetric sampling. Spores were identified at the genus level only. The greatest total concentrations were observed in Craiova and Bucuresti.

**THE ASSOCIATION SCIRPO – PHRAGMITETUM W. KOCH 1926
IN BANAT**

Alina Neacșu, Gabriel Arsene, Alina Arsene, Florin Faur

KEY WORDS: Scirpo – Phragmitetum, Banat

ABSTRACT

If in the past, Banat was considered to be a swampy area, today the naturally moist regions practically do not exist anymore, their place being taken by artificial accumulations. The hydro-improving works performed here in order to control the waters, have lead to the disappearance of these regions, along with which the characteristic vegetation having changed. The association under discussion, Scirpo – Phragmitetum W. Koch 1926, used to occupy significant surfaces. Although it is still frequent in the area, it appears more isolated and in greatly changed ecologic conditions. Between out phytocoenoses and the ones described by GRIGORE (1971) there are obvious differences regarding the floristic composition, the specters of the bioforms, the geoelements and the ecologic behaviour of the species.

THE INFLUENCE OF WATER QUALITY ON THE FLORA IN SANANDREI ACCUMULATION (TIMIS COUNTY)

Alina Neacșu, Gabriel Arsene, Alina Arsene, Florin Faur

KEY WORDS: water quality, diversity of the flora

ABSTRACT

The chemical analysis performed on water samples collected from the accumulation Sânanndrei, emphasized the fact that the water is of a bad quality, due to the high nutrient level. This influences in a negative manner the diversity of aquatic and paludicolous flora. Out of the 112 species of cormophytes registered in the lake vicinity, only 36 are aquatic and paludicolous. The aquatic species mainly belong to the genus Lemna, Spirodella and Polygonum. The best represented genus among the species is Potamogeton, well being known that it develops well in waters rich in nutrients.

HEAVY METALS AND OTHERS TOXIC METALS CONTENT OF *MNIUM UNDULATUM* WHICH ARE GROWING NEAR TARGOVISTE TOWN

Busuioc Gabriela, Stihl Claudia, Gheboianu Anca, Popescu I.V.

KEY WORDS: heavy, toxic metals, Mniium undulatum

ABSTRACT

It is well known that generally, mosses are very good hyperaccumulators for heavy and others toxic metals. That's why is necessary to be well analysed their chemical content. This papers is about preliminary data obtained as part of a large research project about the monitoring of environmental pollution in Dambovita county using vegetation. The biological samples consist in some moss species which are growing in the sphere of influence of industrial objectives from Targoviste. The samples were analysed by PIXE (Particle Induced X-Ray Emission) method at IFIN – Horia Hulubei Bucuresti. In this work we presented the chemical content in heavy and others toxic metals in a very common moss species, Mniium undulatum. Inspite of the small size of this species, it is a very good accumulator for heavy and others toxic metals as manganese, chromium, magnesium, zinc, aluminium, strontium, and others metal species in trace.

**STUDIES REGARDING THE BIOLOGY AND ECOLOGY OF *TRITURUS*
DOBROGICUS AND *TRITURUS VULGARIS* SPECIES FROM CAMPIA
CERMEIULUI, ARAD COUNTY, ROMANIA**

Cicort-Lucaciu Alfred-Ştefan, Covaciu-Marcov Severus-Daniel,
Paina Cristiana, Radu Nicoleta-Reka, Toth Anamaria

KEY WORDS: biology and ecology, Triturus dobrogicus, Triturus cristatus

ABSTRACT

*In this research we have focused on the variation of the numbers of specimens during the aquatic period, in two cohabitant populations of *Lissotriton vulgaris* and *Triturus dobrogicus*. We have determined the size of populations, sex-ratio and age-ratio. The population of *Lissotriton vulgaris* is about three times larger than the population of *Triturus dobrogicus*. The value for sex-ratio for both populations is one male to three females, while age-ratio is one juvenile specimen to three/four adults. Although there was no noticeable difference recorded in the length of the reproductive activity of either of the two populations, we can definitely mention that *Lissotriton vulgaris* is repopulating the puddle later and depopulating it earlier than the other species. The juvenile species of *Triturus dobrogicus* are populating the aquatic habitat faster than the adults.*

**VARIABILITY OF THE MAIN ANATOMICAL CHARACTERISTICS OF
LEAVES AND FRUITS FOR SOME PEAR TREE VARIETIES AND HYBRID**

Elena Săvulescu, Mihaela Ioana Georgescu, Elena Delian, Valeria Petre

KEY WORDS: pear tree, epidermis, mesophyll, epicarp, collenchyma

SUMMARY

This study shows the comparative anatomical study for leaves and fruits of some pear tree varieties and hybrids, making evident the possible anatomical characters used in plant breeding to improve the passive resistance of the plant for field diseases attack.

The transversal section was provided in the median leaves blade to establish the epidermis and mesophyll thickness and in the fruit epicarp. The upper epidermis is thicker at the hybrids than to the Ervina variety. The mesophyll leaf thickness varies among varieties and hybrids studied, with average values between 174.5 μm and 234.5 μm .

Protective zone of the fruit done by the epicarp and wax layer exceeds 20 μm thickness in June and 25 μm in September.

**THE ASTERACEAE FAMILY FROM THE LOWER BASIN OF
THE MOTRU RIVER (I)**

I. Costache, D. Răduțoiu

KEY WORDS: Asteraceae, Basin, flora, Motru

ABSTRACT

The paper presents the taxa from Asteraceae Family, which were identified in the Lower Basin of the Motru River. The Asteraceae Family has numerous taxa, being the most important family among the vascular plants from this zone.

**THE ASTERACEAE FAMILY FROM THE LOWER BASIN OF
THE MOTRU RIVER (II)**

I. Costache, D. Răduțoiu

KEY WORDS: Asteraceae, Basin, flora, Motru

ABSTRACT

The paper presents in continuation the taxa from Asteraceae Family, which were identified in the Lower Basin of the Motru River.

CHOROLOGY OF SOLITARY FLOWERS VERONICA SPECIES IN ROMANIA (I)

Amira Răduțoiu

KEY WORDS: chorology, Veronica, Romania

ABSTRACT

The present paper is part of a synthesis representing the doctorate thesis of the present work's author, titled: Morphology, anatomy, chorology and economic importance of solitary flowers Veronica species in Romania. Of the total of Veronica species of Romanian Flora, the following species have been considered for the study: Veronica acinifolia L., V. agrestis L., V. arvensis L., V. dillenii Cr., V. filiformis Sm., V. hederifolia L., V. opaca Fries, V. praecox All., V. peregrina L., V. persica Poiret, V. polita Fries, V. triphyllus L. and V. verna L.

The majority is formed of annual species, whose biological cycle take place during one single vegetation period, sometimes even shorter, only Veronica filiformis being perennial. Among these species are also found adventive taxons (Veronica persica, V. peregrina, V. filiformis), some of them being rarely found in the Romanian Florai (Veronica peregrina, V. filiformis).

CHOROLOGY OF SOLITARY FLOWERS VERONICA SPECIES IN ROMANIA (II)

Amira Răduțoiu

KEY WORDS: chorology, Veronica, Romania

ABSTRACT

The present paper is part of a synthesis representing the doctorate thesis of the present work's author, titled: Morphology, anatomy, chorology and economic importance of solitary flowers Veronica species in Romania. Of the total of Veronica species of Romanian Flora, the following species is considered for the study: Veronica hederifolia L. It is an annual plant, whose biological cycle takes place during a single vegetation period, and sometimes even shorter than that.

NEW CHOROLOGIC DATA IN THE REGION OF OLTENIA

D. Răduțoiu, I. Costache

KEY WORDS: chorology, rare species, Oltenia

ABSTRACT

The paper presents new chorological data of 9 taxons identified in the Oltenia region, a part of them being put down on the Red National List.

*The new dates want to complete the zoologic table of the taxons. Also, the emphasis of the dynamics of the populations of those in time and space gives us precious signs in the zoologic evaluation. Interesting is the expansiveness of the populations of the following taxons: *Achillea roseo-alba*, *Cirsium creticum*, *Sedum cepaea*, inclusive the presence, in premiere for Oltenia, of the endemic taxon *Dactylorhiza cordigera* subsp. *siculorum* (in the Ranca Mountain, Parang Masiv) and of the species *Veronica peregrina* (in the Rast).*

SPONTANEOUS PLANTS WITH POTENTIAL IN THE OBTAINMENT OF PHYTOGENICAL ADDITIVES

D. Răduțoiu, I. Costache

KEY WORDS: phytogenical additives, microelements, spontaneous plants

ABSTRACT

Because it has been found that through the utilization of the chemical premixes in the porcines' food a considerable part of the microelements is removed together with the animal dejection, it is tried the replacement of these premixes with phytogenical additives obtained from spontaneous plants. In this way it is reduced the pollutant impact, especially with heavy metals, against the soil quality and the surface water.

The researches belong to the research contract CEEEX – Programe 4 – Partnerships in priority domains: “ The reduction of the mineral microelements level from the pig dejections through the replacement of the chemical premixes with phytogenical additives and enzymatic preparations, way of promotion of the sustainable agriculture”.

**COMPARATIVE MORPHO-ANATOMICAL STUDIES TO LEAVES OF
PHOENIX DACTYLIFERA ATTACKED AND UNATTACKED
BY GRAPHIOLA PHOENICIS (MOUG.) POITEAU**

Simeanu C. G., Simeanu Camelia – Ecaterina

KEY-WORDS: parasite, leaves, epidermis, mesophile

SUMMARY

In this paper are presented comparative data regarding the morphology and anatomy of Phoenix Dactylifera leave unattacked and attacked by Graphiola Phoenicis. The leaves attacked by the parasite present on both sides black pustules which turn later into red-brown. In transversal section the unattacked leaves and those with initial attack have an homogenous mesophil. As the attack advances, the abaxial epidermis and the mesophile situated above it are destroyed. In tangent sections the unattacked leaves have cells longed of adaxial epidermis, with lateral walls slightly greasy, a parasitic type stomata, and those attacked by the parasite have cells of the adaxial epidermis destroyed and looking like a macerate surface.

**MORPHO-ANATOMIC MODIFICATION CAUSED BY THE VENTURIA
INEQUALIS (COOKE) WINT. MASHROOM ON THE MALUS DOMESTICA
BORKH. LEAVES.**

Simeanu C. G., Simeanu Camelia – Ecaterina

KEY WORDS: parasite, leaf, epidermis, mesophil

SUMMARY

The paper presents the comparative results regarding the morphology and the anatomy of the leaf limb of Malus domestica, the fonathan type both attacked and anattacked by the Venturia inequalis mashroom. The leaves attacked by the mashroom present spots more or less circular, being more obviovs on the inferior side of the leaf. In cross section the leaf presents bifacial structure. The limb of the leaf attacked by the parasite loses it`s bifacial structure as the attacked goes on. It is the abaxal epidermis which is destroyed first and then the gapped parenchyma, the palisade one and the adaxle epidermis. The tangent section made through the limb of the leaf attacked by the parasite point out that the cells of the abaxale epidermis deform first, thing which goes on as far as the mesophil level, which makes the limb of the leaf thinner at the level of the attacked zones.

**PHYSIOLOGICAL RESEARCH REGARDING THE TOMATO PLANTS
ATTACKED BY PATHOGENIC FUNGUSES**

I. Nicolae

KEY WORDS: pathogen, healthy plants, attacked plants, tomato

ABSTRACT

At the tomato plants attacked by the pathogens one can observe the diurnal dynamics of the photosynthesis and of transpiration presents a minimum in the morning, a maximum after lunch and a minimum toward the evening, is similar to that in healthy plants but presents specific variations of the pathogen actions. One can also observe the decrease of the total water contents determines the withering and premature drying of the plants and the decrease of the contents in chlorophyllian pigments because of the intensification of the chlorophylases and the deterioration of the chloroplasts. The plants attacked present an increase of the concentration of the cellular juice which is manifested by the increase of the osmotic pressure of the cells.

PHYSIOLOGICAL RESEARCH REGARDING SOME PLANTS FROM THE POLLUTED AREAS

I. Nicolae, Mariana Nicolae

KEY WORDS: polluting agents, atmospheric pollution, plants, physiological processes

ABSTRACT

The research regarding several physiological modifications caused by the atmospheric pollution has been done for the ligneous plants living in the area of the chemical factory Işalniţa, Dolj.

As a consequence of the atmospheric pollution the organs of the plants suffer physiological and biochemical modifications which have repercussions on the growth and the development of the plants. The physiological processes that are mostly affected, that also influence the productivity of the plants are photosynthesis, respiration and transpiration.

In connection with the climatic conditions, as a result of the action polluting agents one can observe the diminution of the photosynthesis, of the total water content. One can also observe the rise of the respiration and the transpiration with specific variations according to the analysed plants.

PRELIMINARY DATA ABOUT THE ICHTHYOFAUNA OF THE AMARADIA RIVER

Bălescu Carmen

KEY WORDS: ichthyofauna, the Amaradia River, protection

ABSTRACT

The present paper renders the results of the ichthyologic observation for the Amaradia River during 2006-2007. The almost complete lack of data in the area made us gather ichthyologic information. Thus, on their base, we elaborated a preliminary list of 19 fish species (2 acclimatized) grouped into 3 orders: Cypriniformes (16 species), Siluriformes (one species), Perciformes (2 species) and 5 families (Cyprinidae, Cobitidae, Siluridae, Percidae, Centrarchidae). Among these, 9 species can be found on different national and international lists, the purpose of this action being the protection of the species, as well as of their geographical area (Gobio kessleri, Leuciscus leuciscus, Rhodeus sericeus amarus, Alburnoides bipunctatus, Chondrostoma nasus, Barbus barbus, Cobitis taenia, Misgurnus fossilis, Silurus glanis).

THE INCIDENCE OF THE STAPHYLOCOCCUS AUREUS INFECTION IN A NEWBORN SECTION

Daniela Ciupeanu

KEY WORDS: Staphylococcus aureus, infection, newborn

ABSTRACT

In our days the nosocomial infections have an universal character, these being considered to be one of the major problem of populational health for all the medical-sanitary or medical-social services.

Staphylococcus aureus it is the most encountered germ, being impled in a percentage of 80% in the human festering infection. Due to the tropism marked for the dermic tissue, the pathogen Staphylococcus produce especially infection at the tegument level and skin annexes, but they can invade any other tissue or organ.

The study focused on the isolation of the Staphylococcus strains incriminated as possible ethyologic agent of some infections develop at the hospitalized patients. For this there has been made a case selection, collection of the pathological products, their processing and incubation in order to isolate the germs in pure culture.

The second stage consist in the identification of the isolated germs and their differentiated dyagnostication with the related species, and in the third stage there has been made the differentiation, from the epidemiological point of view of the identified strains.

SONOGRAPHIC AND HISTOLOGIC CORRELATIONS OF THE HYPERPLASTIC ENDOMETRIUM

Diana Olimid, D. A. Olimid

KEY WORDS: endometrium, hyperplasia, ultrasonography, biopsy

ABSTRACT

Transvaginal ultrasonography has a significant role in the assessment of the endometrium and it can help in the differentiation between benign and malignant conditions. The main indication for transvaginal US evaluation of the endometrium is abnormal premenopausal or postmenopausal bleeding. A correlative sonographic and histopathologic analysis was performed in 64 women with a histologic diagnosis of endometrial hyperplasia.

**ANALYSIS OF PROLIFERATING CELL NUCLEAR ANTIGEN EXPRESSION IN
HYPERPLASTIC AND MALIGNANT ENDOMETRIUM**

Diana Olimid, D.A. Olimid

KEY WORDS: endometrium, immunochemistry, PCNA

ABSTRACT

Cell proliferation is a fundamental biological activity, which plays an important role in both physiologic and pathologic processes. Quantification of the PCNA protein with immunohistochemical techniques is thought to provide a measure of cell proliferation. We studied the proliferative activity of normal, hyperplastic and neoplastic endometrium in an attempt to understand the mechanism of endometrial progression to malignancy.

A CLINICAL-STATISTICAL STUDY OF SCUAMOUS CARCINOMAS OF THE ORAL MUCOSA

D. A. Olimid, Diana Olimid

KEY WORDS: oral cancer, ulcerous, vegetative, infiltrative

ABSTRACT

In this study entitled "A clinical-statistical study of squamous carcinomas of the oral mucosa" for the interval of 4 years between 2003-2006, we noticed an alarming increase of the frequency of oral squamous carcinomas, with a maximum incidence in the 6th and 7th decades of life, affecting especially males (88,62%). One of the macroscopic parameters studied was the shape of malignant neoplasias. In relation to this criterion, we classified the tumours analyzed in one of the following four categories: ulcerous, vegetative, ulcerous – vegetative and infiltrated. The majority of patients were diagnosed in advanced stages of carcinomatous disease, the metastatic adenopathies being present at the first clinical examination in 62,88 % of the patients. We notice the fact that a percentage of 37,72 % of malignant tumours were ulcerous.

A HISTOPATHOLOGICAL STUDY OF SQUAMOUS CARCINOMAS OF THE ORAL MUCOSA

D. A. Olimid, Diana Olimid

KEY WORDS: pre-cancer lesions, dysplasia, basal layer

ABSTRACT

In this study we analyzed from a histopathological and histochemical point of view the common and particular aspects of oral squamous carcinoma researching the histopathological type and the degree of differentiation, the stage of tumour progression, the analysis of the surgical safety margins, the presence of pre-cancerous lesions (dysplasias of different degrees) at the level of epithelium adjacent to areas of carcinoma, coilocytotic modifications associated to neoplasias. The various hytopathological aspects analyzed are subsequently compared to the results from literature, obtained in other studies; in the final of this study, we underlined the results with relevant aspects.

**THE PHYTOCOENOLOGICAL AFFILIATION OF *ALCHEMILLA* SPECIES
FROM PARÂNG MOUNTAIN UNIT (1)**

Violeta Boruz

KEY WORDS: Alchemilla, the phytocoenologyc conspectus, Parâng Mountain Unit

ABSTRACT

The research concerning the Alchemilla genre focus on the detailed knowledge of Alchemilla species from the Meridional Carpathians, especially those in the Parâng Mountain Unit. From 20 species of Alchemilla of the Romanian Flora, quoted by V. Ciocârlan (2000) in the Parâng Massif, 11 species were found (T. Pócs 1962) and some of them were refound and others reviewed. The paper presents phytocoenotaxons, vegetation floors and the massif mountains, where species of Alchemilla were registered. For the vegetal associations, well outlined from the floristic and ecological point of view their names were adopted after the Roumanian authors, also according with the latest synthesis at the European level.

**THE PHYTOCOENOLOGICAL AFFILIATION OF *ALCHEMILLA* SPECIES
FROM PARÂNG MOUNTAIN UNIT (2)**

Violeta Boruz

KEY WORDS: Alchemilla, the phytocoenologyc conspectus, Parâng Mountain Unit

ABSTRACT

The research concerning the Alchemilla genre focus on the detailed knowledge of Alchemilla species from the Meridional Carpathians, especially those in the Parâng Mountain Unit. From 20 species of Alchemilla of the Romanian Flora, quoted by V. Ciocârlan (2000) in the Parâng Massif, 11 species were found (T. Pócs 1962) and some of them were refound and others reviewed. The paper presents phytocoenotaxons, vegetation floors and the massif mountains, where species of Alchemilla were registered. For the vegetal associations, well outlined from the floristic and ecological point of view their names were adopted after the Roumanian authors, also according with the latest synthesis at the European level.

**MACROMYCETES FROM THE AS. ALNETUM INCANAE
(OLTEȚ RIVER HALLOW - CĂPĂȚĂNI MOUNTAINS)**

Ciortan Ioana

KEY WORDS: macromycetes, phytocoenoses, association, saprotroph

ABSTRACT

The paper presents a number of 33 species of macromycetes from phytocoenoses belonging to the association Alnetum incanae Aich. et Siegr. 1930. Phytocoenoses are situated along Olteț River, where mycological researches were made in June 2008.

**DATA CONCERNING THE HISTO-ANATOMICAL KNOWLEDGE OF THE
SPECIES *OCIMUM BASILICUM* L. (LAMIACEAE)**

Bejenaru Cornelia, Bejenaru Ludovic Everard

KEY WORDS: Ocimum basilicum, structures, root, stem

ABSTRACT

*Objective: To characterize the histo-anatomical structure of the root and the stem of the species *Ocimum basilicum* L.*

Material and methods: The vegetal material was harvested from the Craiova University Botanical Garden and was preserved using a 70° ethanol solution. The sections through the root were coloured with Congo red and chrisoidine, and the sections through the stem were coloured with green methyl and fucsine and after that there were photographed with binocular microscope type Krüss (objectives x4, x10, x40) with a system Soligor SR 350 .

Results and discussions: The structure of the root and the stem is a secondary type. The root has the primary bast situated to the outline making some insular zones. The primary wood from the centre is less developed than the secondary wood situated above this. The secondary bast, situated above the bast-ligneous cambiu, is well developed. The stem has from place to place stomats, secretory peri, tector peri bi- and threecells on epiderma. The pith is a cellulosic-parenchima type.

Conclusions: The root has a secondary structure. The stem has secondary conducting tissues.

THE PRELIMINARY PHYTO-CHEMICAL ANALYSIS OF THE AERIAL PARTS HARVESTED FROM MEDICINAL SPECIES FROM DOLJ

Bejenaru Cornelia, Bejenaru Ludovic Everard, Neamțu Johny

KEY WORDS: active principles, preliminary analysis, extract

ABSTRACT

Material and methods: the vegetal produce was harvested from species such as: (aerial bloomy parts), (branches with leaves).

To extract the active principles there have been used three solutions with different polarity: etilic ether, methanol and water. The identification was achieved through specific features to each group of active principles.

Results and discussions: the active elements found in the etheric extract were: essential oil, sterols, triterpenes, fatty and resinic acids, saponozides, carotenoids, alkaloids, flavonic aglycones, coumarinas. The methanolic extract contained: cathetic tannin, reducing compounds, alkaloids, amino acids, coumarinas, triterpenes, saponosides, flavonoides.. In the aqueous extract there were identified: polyuronides, reducing compounds, glucids, saponosides, cathetic tannin, alkaloids.

Conclusions: the preliminary phyto-chemical analysis of some medicinal species in Dolj will support the cromatographic analysis (CSS, HPLC, MS-GC). The nine analysed species' chemical composition is different and may be analysed in comparison, in the shown tables.

**THE PRELIMINARY PHYTO-CHEMICAL ANALYSIS OF THE BLOOMY
AERIAL PARTS HARVESTED FROM DIFFERENT SPECIES OF *EPILOBIUM***

Bejenaru Ludovic Everard, Bejenaru Cornelia, Neamțu Johny

KEY WORDS: Epilobium, active principles, preliminary analysis, extract

ABSTRACT

Material and methods: to accomplish the preliminary analysis I harvested the bloomy aerial parts of Epilobium hirsutum, E. collinum, E. parviflorum, E. montanum, E. angustifolium .

In order to separate different groups of active principles, the vegetal produces were successively and selectively extracted with different polarity solvents: ethylic ether, methanol and water. Results and discussions: the preliminary analysis results are presented in comparative tables, being identified the following active principles: essential oil, sterols, triterpenes, carotenoids, fatty acids, flavonic aglycones, coumarines (etheric extract); cathetic tannin, reducing compounds, coumarines, flavonozides (methanolic extract); polyuronides, reducing compounds, glucids, cathetic tannin (aqueous extract).

Conclusions: Epilobium species have the same active elements. The chemical composition of Epilobium sp. is complex, for a detailed analysis being necessary the preliminary analysis. Some of the new discovered active principles have never been mentioned in the reference materials: sterols, carotenoids, lipids, glucids. Romanian Epilobium sp. have never been chemically studied.

**CONTRIBUTIONS TO THE KNOWLEDGE OF THE MEDICINAL PRODUCE
CATHARANTHI HERBA**

Ludovic Everard Bejenaru, Cornelia Bejenaru

KEY WORDS: Catharanthus roseus, Catharanthi herba, stem, leaf

ABSTRACT

Objective: To characterize the histo-anatomical structure of the aerial part of the species Catharanthus roseus (L.) G. Don.

Materials and method: The vegetal produce harvested from the greenhouse of the Craiova University Botanical Garden was preserved using a 70° ethanol solution and sectioned with an anatomical razor through stem and leaf. Fucine and methyl green were used as dyestuff for the sections and then photographed with a system Soligor SR 350 adapted to the microscope type Krüss (objectives x 10, x 40).

Results and discussions: The structure of the stem is a secondary type. The cortical parenchyma contains cellulose fibres from place to place, the conducting tissues are disposed on two concentric rings separated from the basted-ligneous cambium. The medullary parenchyma is a meatic type. The leaf has a bifacial, amphistomatic structure with the mesophyll constituted of only one layer of palisadic tissue and 5-6 layers of lacunose tissue.

Conclusions: The stem has a secondary structure and the leaf presents bifacial, amphistomatic structure.

SOME ASPECTS CONCERNING SOIL EROSION CONTROL BY USING SLOPES' TERRACING IN CORRELATION WITH GULLY EROSION CONTROL

Sevastel Mircea, Ioan Alexandru Calin

KEY WORDS: soil erosion, terraces, orchards, alluvia, check dams

ABSTRACT

Soil erosion control on small torrential and agricultural watersheds represents – at least from theoretically point of view, the ideal solution for the sustainable soil resources conservation in the hilly areas. But, practically, as regard to what has been happening in our country, especially untill year 1990, not always in all Romania's territory has been paid a special attention to an adequate correlation between surface and gully erosion works. Thus, there are some situations where, unfortunately, gully erosion control did not always take into account the future soil erosion works on slopes, existing in this way some over designed works.

The paper presents a case study from the Curvature area of Sub-Carpathians, in Buzau County, this area being one of the most affected by water erosion region in the country, concerning the existence of such un-concordances related to surface and gully erosion control.

**STRUCTURAL PECULIARITIES OF THE VEGETATIVE APPARATUS OF
SPONTANEOUS AND CULTIVATED *ORIGANUM VULGARE* L. PLANTS**

Ramona Galeş, Constantin Toma, Ana Preotu, Elvira Gille

KEY WORDS: Origanum vulgare L., anatomo-ecological characters, vegetative organs, secretory hairs

ABSTRACT

*The authors investigate the structure of the subterranean and aerial vegetative organs in spontaneous (collected from different populations from Romania) and cultivated *Origanum vulgare* L. plants. The aim of this study is to determine the anatomo-ecological characters through which the analyzed individuals are distinguished from each other. Peculiar attention has been given to the distribution and structure of the secretory hairs, these characters being important in the estimation of the value of *Origanum vulgare* as aromatic plant.*

**ASPECTS OF DIGITO-PALMAR DERMATOGLYPHS APPLIED TO
CHILDREN OF AN APROPIATE AGE IN CRAIOVA**

Grădinaru Mihaela

KEY WORDS: dermatoglyphics, group of 40 students, simian line

ABSTRACT

The paper focus on the analysis of digito-palmar dermatoglyphs on a group of 40 children from the School no.30 in Craiova. In this study we followed some aspects of digito-palmar dermatoglyphs on the whole group of children and also a comparison between boys and girls from a digito-palmar dermatoglyphical point of view. It has been noticedt a slight resemblance of the appearance of dermatoglyphs but what is noteworthy is the fact that in this group of healthy children appears simian line which is correlated in literature with the presence of some genetic diseases such as heart diseases or deficiency intelligence although in this case this does not denote any kind of affection. This study of dermatoglyphics aspects on children of the same age can be useful for further researches in anthropology, genetics and medicine.

**STUDY UPON THE INFLUENCE EXERTED BY THE TYPE OF RECIPIENTS
USED FOR NUTRITIVE LAYERS IN CULTURE PLACE ON THE PRODUCTION
OF FUNGI AGARICUS BISPORUS**

Alexandra Becherescu, Horgoş A.

KEY WORDS: compost, culture system, mound, flat layer, recipient

ABSTRACT

*The introduction and layout of the nutritive layer in the culture place are performed with different methods, which have evolved along time and are in concordance with the culture system applied. For example, mound-type cultures are not a novelty anymore, and they are abandoned; on the contrary, flat-layer cultures or the ones in polyethylene sacks are used in all mushroom beds at the moment. This work presents the experimental results achieved in the study upon fungi *Agaricus bisporus*, where the layout of the incubated compost was made in parallelepiped recipients, in comparison with the polyethylene sacks.*

**STUDIES REGARDING THE APPLICATION OF PROTECTION COMPLEXES
WITH EFFECT OF INFLUENCE UPON YIELD IN ONION CROP**

Alexandra Becherescu

KEY WORDS: protection complexes, fighting against, yield

ABSTRACT

During the vegetation period, the attack caused by pathogens and pests may superpose, with synergic harming effects regarding yield decrease.

The information related to yield losses represents the best synthesis of the effects exerted by pathogens and pests on onion crop.

The information comprised within this work is taken from the notifications performed during 2003-2005 in the untreated control variant, compared to the variants in which we applied protection complexes and also from the comparisons between variants and the experimental mean ($\overline{M X}$) and the mean of protection complexes ($\overline{M X}_{cp}$), too.