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ACTUAL PROBLEMS OF PROTECTION AND SUSTAINABLE USE OF THE ANIMAL WORLD DIVERSITY

“Common borders. Common solutions.”

The Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013 is financed by the European Union through the European Neighborhood and Partnership Instrument and co-financed by the participating countries in the programme.
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Project:
Resources pilot centre for cross-border preservation of the aquatic biodiversity of Prut River COD MIS ETC 1150
implemented by University “Al.I. Cuza” Iasi, Romania and Institute of Zoology of Academy of Sciences of Moldova

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10-12 OCTOBER 2013

Book of Abstract

Chisinau – 2013
VIII-th International Conference of Zoologists

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The materials of VIII-th International Conference of Zoologists „Actual problems of protection and sustainable use of animal world diversity” organized by the Institute of Zoology of the Academy of Sciences of Moldova are a generalization of the latest scientific researches in the country and abroad concerning the diversity of aquatic and terrestrial animal communities, molecular-genetic methods in systematics, phylogeny, phylogeography and ecology of animals, taxonomy and evolution of animals, structure and dynamics of animal populations from natural and anthropized ecosystems, population functioning and animal role in ecological equilibrium maintenance, monitoring, evaluation of threats, assessment of risks of aquatic ecosystems, biological control in regulation of pests number, invasive animal species, their ecological and socio-economic impact, protection of rare, endangered and vulnerable animal species under conditions of anthropogenic pressing intensification.

The proceedings are destined for zoologists, ecologists, ethologists and for professionals in the field of protection and sustainable use of natural patrimony.

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sible. Thus questions of economical, fine dispersed and pervasive applying of preparations into the infected zones of plants are very important. For full liquidation of the pest it is necessary to use total destructive actions especially after cold winters significantly decreased pest population.

DATA REGARDING THE TROPHIC SPECTRUM OF THE POPULATIONS OF *ADALIA BIPUNCTATA* AND *COCCINELLA SEPTEMPUNCTATA* IN THE REPUBLIC OF MOLDOVA

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*Adalia bipunctata* and *Coccinella septempunctata* are predatory beetles which are best known for feeding on aphids. They are specialist at exploiting the rapid growth of aphid colonies, arriving when the colony is large and plenty of food is available and moving on to the next colony as the food supply diminishes. The adults and larvae of these species are predatory and eat many types of small insects, not only aphids. If food is not available, they are strongly cannibalistic: adult beetles will eat eggs, and larvae will eat eggs and other larvae. So, for biological protection these species present a huge importance, therefore we had studded their trophic spectre in the Republic of Moldova.

Eight cultures from different localities of country were studies (7 – from North and by 5 from Centre and South) in the second decade of June and in the first decade of July. In these points 198 specimens of ladybirds were collected by hand, of which 65 belong to *Adalia bipunctata* and 133 specimens to *Coccinella septempunctata* species. In the North of our country were collected 43 specimens (33 of *A. bipunctata* and 10 of *C. septempunctata*), in the centre – 50 specimens (by 25 of each species) and finally, in the south of the Republic of Moldova were collected 105 specimens (98 of *C. septempunctata* and just 7 of *A. bipunctata*). Most specimens – 48 were collected in plums orchards (*Prunus domestica*) where they devour *Hyalopterus pruni* aphids and most interesting fact is that the *Coccinella septempunctata* were prevalent (47 specimens). Also, 47 specimens were collected in feeding aphids of sunflower crop, and all specimens belong to the sevenspotted lady beetle. The fewest ladybugs were collected on cherry trees where they devour aphids of *Brachycaudus helichrzsii* species.

The general conclusion is that the dominant species is *C. septempunctata* which consume *Aphis malus* aphids from *Malus domestica; Hyalopterus pruni* and *Myzus cerasai* aphids from *Prunus domestica* and *P. cerasifera*, also, aphids from sunflower and oak trees (*Quercus pubescens*). The *A. bipunctata* prevailed on colonies of aphids of *Chromaphis juglandicola* species from *Juglans regia; Brachycaudus helichrzsii* from the *Cerasus avium* and aphids from *Zea mays* and wild plants.
The work was performed within the Project funded by NEF: 2/3056-4373 from 05.02.2013

**Primary research of species *Adalia bipunctata* and *Coccinella septempunctata* in different cultures of the Republic of Moldova, 2013**

| Locality                  | Date | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs | Ab | Cs |
|---------------------------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| North                     |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Edineţ (Brânzeni)         | 16.06| –  | 5  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Naslavcea (Ocniţa)       | 16.06| –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | 5  | –  | 15 | –  | –  | –  | –  | –  | –  | –  |
| Parcova                   | 16.06| 1  | 3  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Viişoara                  | 16.06| 2  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Răşcani (Mihai-lovscio)   | 16.06| 1  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Bălţi (Izvoraş)          | 16.06| 7  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Făleşti (Glinjeni)        | 16.06| 2  | 2  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| **TOTAL**                 |      | 13 | 5  | 5  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 5  | 15 | 0  |
| Centre                    |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Chişinău                  | 03.07| 8  | 1  | –  | –  | 1  | 2  | –  | –  | –  | –  | –  | –  | –  | –  | 17 | –  | –  | –  | –  | –  | –  | –  |
| Criuleni (Oniţcani)      | 04.06| 4  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Teleneşti (Bogzeşti)     | 19.06| 3  | –  | 1  | –  | 7  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Teleneşti (Cucoaia)      | 19.06| –  | 1  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Călăraşi (Meleşeni)      | 19.06| –  | 1  | 2  | –  | –  | –  | 1  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| **TOTAL**                 |      | 15 | 1  | 4  | 1  | 2  | 7  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 17 | 0  | 1  |
| South                     |      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Bugeac                   | 22.06| –  | –  | –  | –  | –  | –  | 3  | –  | –  | –  | –  | –  | –  | –  | 20 | 4  | –  | –  | –  | –  | –  | –  |
| Cimişlia                 | 22.06| 2  | 1  | –  | –  | 31 | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | 5  | –  | –  | –  | –  |
| Cucoaara, Cahul          | 23.06| 1  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |
| Pelinei, Cahul           | 23.06| –  | –  | –  | –  | 12 | –  | –  | 1  | –  | 7  | –  | –  | –  | 7  | –  | –  | –  | –  | –  | –  | –  |
| Vinogradovca, Taraclia   | 23.06| –  | 3  | –  | 2  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  | 6  | –  | –  |
| **TOTAL**                 |      | 2  | 2  | 0  | 3  | 45 | 0  | 3  | 1  | 0  | 0  | 0  | 7  | 0  | 25 | 4  | 13 |
| **TOTAL**                 | 30   | 8  | 6  | 7  | 1  | 47 | 7  | 3  | 2  | 0  | 0  | 7  | 0  | 47 | 19 | 14 |

**Legend:** *Ab* – *Adalia bipunctata*; *Cs* – *Coccinella septempunctata*
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