*Annals of West University of Timişoara, ser. Biology, vol. V-VI, pp.131-134*

# *A PRELIMINARY NOTE REGARDING SMALL MAMMAL FAUNA FROM THE WEST PLAINS OF ROMANIA*

**I. DUMA, D. STĂNESCU**
West University of Timişoara, Chemistry, Biology & Geography Faculty
Department of Biology

**ABSTRACT** (online version)
*This study reveals the results obtained from the researches made in the autumn and winter of 2003 and 2004 on small mammals fauna from the wetlands of Satchinez. The presentation is the first of this kind in the autochthon literature. The research was made within the "Life Natura" project.*

**KEY WORDS:** *Neomys fodiens, Apodemus, Mus*

In our country the investigations made till the present day in this field are poor and have a lack of data from the field. The majority of studies are based more on data from the literature than from direct field research (according to Murariu D., 2000). The lack of faunistical studies in this domain; also of data regarding the spreading of some groups of small mammals in western part of the country was the motivation of the present paper. The study is also important because the area partially maintains the original biotopes found 100 years ago in the almost all-western part of Romania.

The purpose of this research is therefore to fill the lack of knowledge in this field and to try to make an evaluation of small mammals' fauna from this part of Romania. The research is a part of the "Life Natura " project supervised by the A.P.M. Timisoara.

Also the research aims to establish the structure of micro fauna from the mushy area of Satchinez. In this area we have identified three types of ecotypes: pound, everglade and man influenced area (cultivated fields).

The everglade has large areas covered with reed (*Phragmites australis*), rush (*Typha latifolia*), and from the trees predominant is willow (Salix sp.) (fig. 1).

## THE PLACE OF OBSERVATIONS. MATERIALS AND METHODS

The Satchinez wetlands are located in the western part of Romania at an altitude of cca. 90m.The area is protected due to the numerous species of birds that are found here during the all yearlong.

The observations were made from October to March of 2003 and 2004, period that corresponds to autumnal, hyemal, and prevernal seasons. For data gathering in the field were placed pitfall traps field with formaldehyde 10% and a thin layer of oil. Seven surveys were conducted. During each survey traps were opened for 14 days.

In total were placed 10 pitfall traps in two identified ecotypes. Three were in a field of wheat and the rest of them were located in everglade ecotype.

Every specimen was carefully noted and a great attention was given to where it was captured. The study shoved that even in the same ecotype different species have preferences for diverse microhabitats.

The individuals captured were examined further more in the laboratory where they were measured and based on these data and on other morphological characteristics was established the species they were belonging too.

All voucher specimens used in this study are deposited at the Zoology Department from the Faculty of Chemistry-Biology-Geography, West University from Timisoara.

**RESULTS AND DISCUSSIONS**

In the period corresponding to the seasons: autumnal, hyemal and prevernal, the traps captured small mammals belonging to Rodentia and Insectivora groups. Order Rodentia had 92% of total captured individuals and order Insectivora had only 8% with a single species.

The rodents captured were determined as belonging to Apdemus and Mus genera. In the traps placed in the agricultural area (cultivated fields) witch is more homogenous from the conditions points of view, 87.5% of the specimens were belonging to one species: *Mus musculus*, species adapted to open field conditions. The rest of individuals captured were belonging to the *Apodemus sylvaticus*.

On the other hand the traps placed in the everglade ecotype where the habitat is more heterogenic, were captured three species of small mammals:

- *Apodemus sylvaticus* with 52.94%
- *Apodemus agrarius* with 35.30%
- *Neomys fodiens* with 11.76% (fig. 2).

In the following table is shown the morphometrical data of the rodents captured.

| Morphometrical data | Species | Mus musculus | | Apodemus sylvaticus | | Apodemus agrarius | |
|---|---|---|---|---|---|---|---|
| | Limits | Min. | Max. | Min. | Max. | Min. | Max. |
| Lcc. | | 42,9 | 69,58 | 47,9 | 81,2 | 53,9 | 75,9 |
| Lc. | | 54,6 | 66,54 | 52,3 | 85,4 | 67,5 | 71,8 |
| Nr . i. C. | | | | 120 | 165 | 120 | 135 |
| Tars | | 13,7 | 18,22 | 13,0 | 19,64 | 18,4 | 19,8 |
| Ear | | 10,7 | 12,9 | 8,8 | 12,74 | 10,1 | 12,2 |
| L craniu | | 19,8 | 24,21 | 17,42 | 25,48 | 24,1 | 25,88 |
| L zigomatic | | 10,21 | 11,83 | 9,28 | 12,21 | 12,17 | 12,71 |
| L cranian | | 9,67 | 10,68 | 8,93 | 11,66 | 10,04 | 11,25 |
| L teeth | | 3,21 | 3,97 | 2,83 | 3,64 | 3,45 | 3,99 |
| D. i. | | 3,58 | 4,21 | 3,29 | 4,11 | 4,37 | 4,61 |
| H | | 7,13 | 8,49 | 6,47 | 8,82 | 8,21 | 8,98 |

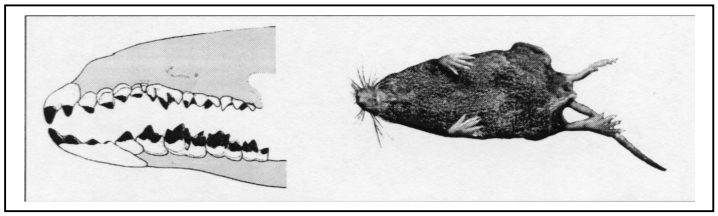

**FIG.1**

Beside these species it is worth to mention the presence of other two species: *Mus (Micromys) minutus*, whose presence was determined by the founding of an empty nest between the reeds, and one individual of *Mustella nivalis* belonging to the *Mustellidae* family that was photographed in the same ecotype.

From these data it is obvious that the everglade ecotype has greater fanistical diversity and a superior mammal's density compared to the agricultural area.

**CONCLUSIONS**

The surrounding agricultural fields show a dramatic decrease in species number and also in the density of small mammals. On the other side the everglade ecotype with its heterogeneous conditions has a greater

number of species and also superior density. This concentration of small mammals in the autumnal and hyemal seasons is just temporary as shown by our studies and also by other researchers (Viorica Simionescu). The most frequently encountered species is *Apodemus sylvaticus.* The rarest species seems to be insectivorous water shrew (*Neomys fodiens*, the only species of shrew found in this area). Later in the spring the number of rodent's and insectivorous mammals decreased significantly in bought stations.

For *Neomys fodiens* (*Ord. Insectivora*) this study mentions a new station of distribution for our country.

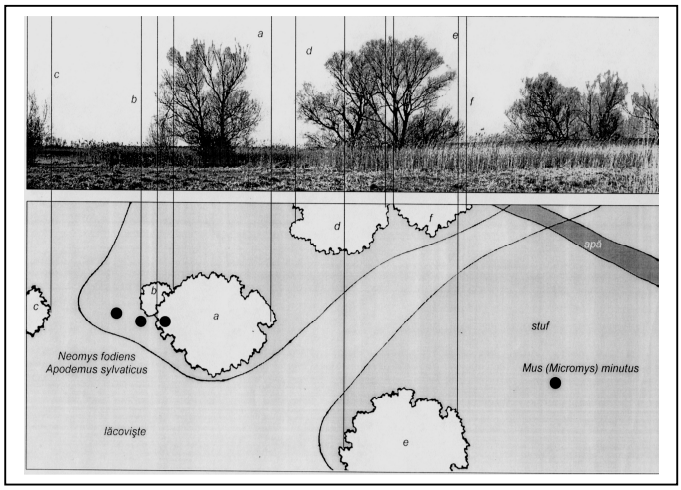


**FIG.2**

**BIBLIOGRAPHY**


- **Murariu D**., (2002) Fauna Romaniei Ordinul Insectivora, Editura Academiei.
- **Brohmer P., Ehrmann P. Ulmer G**., Die Tierwelt Mitteleuropas, Verlag von Quelle&Meyer in Leipzig
- **Hamar M**. (1957), Din viata Rozatoarelor, Editura Stiintifica, Bucuresti.
- **Kiss A**. (2002), Rezervatia ornitologica Satchinez, Edit. Excelsior Timisoara
- **Viorica Simionescu, Vasile Tudosă**, 1981, „Cercetări privind structura şi dinamica populațiilor de mamifere mici în unele tipuri de agrosisteme", Analele Ştiințifice ale Universității „ Al. I. Cuza" din Iaşi, secțiunea II, tomul XXVII;
- **Papadopol A., Gabriela Ghizelea**, 1965, „Contributions a la connaissance de quelques mammiferes de la region de Jassy", Travaux du Museum d'Histoire Naturelle „Grigore Antipa", Vol. V, Bucuresti;