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# A pheasantry as the habitat of small terrestrial mammals (*Rodentia, Insectivora*) in southern Moravia (Czech Republic)

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**ABSTRACT**: Communities of small terrestrial mammals were studied in the specific environment of two pheasantries in southern Moravia with different intensity of pheasant management and different diversity of biotopes (RB – intensive pheasantry, HJ – extensive pheasantry). In total, ten species from the order *Rodentia* and *Insectivora* were found there in 2002–2005. The rodents *Apodemus flavicollis*, *A. sylvaticus* and *Clethrionomys glareolus* dominated in these habitats. On the other hand, the populations of insectivores were very low, *Crocidura leucodon* and *C. suaveolens* being interesting species. RB with the higher variety of biotopes showed significantly higher diversity ($P < 0.05$) of small mammals ($H´ = 1.284$, ten species determined) than HJ ($H´ = 1.112$, five species determined). The higher intensity of management (the amount of chickens released per unit area and the amount of served food) in RB compared to HJ was not reflected in the relative abundance of the community of small terrestrial mammals (*rA* in RB = 11.82, in HJ = 11.85) nor in their evenness (*E*). The probability of difference was $P > 0.05$. A difference in the diversity of compared communities was conditioned by different diversity of biotopes.

**Keywords**: pheasantry; diversity; small terrestrial mammals

Pheasantries represent a specific biotope for free-living higher vertebrates characterized by the high diversity of sites, high concentration of pheasants and high amount of supplementary food in the form of feeding for pheasants. Moreover, in the region of southern Moravia, pheasantries represent isolated areas of woody vegetation in the middle of intensively managed landscape. In addition to intensive game keeping, they can serve as refuges for a number of animals. Without these specific properties the areas would be other isolated forest units in the cultivated landscape, the fauna of which has already been studied intensively and described (Dudich, Štollman 1983; Májsky 1985; Pelikán 1986, 1989; Trnka et al. 1990; Ylonen et al. 1991; Stanko 1994; Stanko, Miklisová 1995; Stanko et al. 1996; Suchomel, Heroldová 2004, etc.). However, pheasantries as specific habitats of small mammals have not been studied yet. Nevertheless, some papers dealt with other vertebrates, e.g. birds (Kalivodová et al. 1992). The presented study of the synusiae of small terrestrial mammals of pheasantries in southern Moravia is therefore aimed at monitoring the effect of specific properties of these habitats (high diversity of biotopes, high concentration of pheasants, feeding supply – form of feed) on the diversity of the community of small terrestrial mammals and on the abundance and viability of their populations.

## Area of study

Two pheasantries were selected for the study, the one intensive and the other extensive, both of them with similar environmental conditions.

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The locality Rumunská – RB (280 ha) – (49°02.41´N, 16°42.8´E) situated near the town of Židlochovice at an altitude of 190 to 200 m above sea level is used as an intensive pheasantry. The intensive management of *Phasianus colchicus* and *Syrmaticus reevesi* is carried out there. With regard to microhabitats, the Rumunská locality is the most variable area of them. It includes a number of miscellaneous woody species of various age categories as well as small open areas, such as meadows, small fields, and wetlands. Pedunculate oak (*Quercus robur*), sessile oak (*Q. petraea*), Scots pine (*Pinus sylvestris*), Norway spruce (*Picea abies*), and black poplar (*Populus nigra*) are dominant woody species in this locality. The following groups of forest types were identified there: *Ulmeto-Fraxinetum carpineum*, *Saliceto-Alnetum* and *Carpineto-Quercetum acerosum*. As to the shrub and herb stratum, a great variety of species occurs there. In *Ulmeto-Fraxinetum carpineum*, *Sambucus nigra* and *Crategus laevigata* are dominant and also some young specimen of trees occurred. In the herb stratum, *Urtica dioica*, *Galium aparine*, *Symphytum officinale*, *Carex acutiformis*, *Carex riparia*, *Glechoma hederacea*, *Rubus caesius* and *Deschampsia caespitose* are dominant. In *Saliceto-Alnetum*, there is a rich shrub layer dominated by *Salix caprea* and *Sambucus nigra* with a herb layer of *Aegopodium podagraria, Galium aparine, Stachys sylvatica, Urtica dioica, Impatiens noli-tangere, Equisetum sylvaticum, Deschampsia cespitosa, Cardamine amara*. In *Carpineto-Quercetum acerosum*, the highest dominance of *Acer campestre* and young specimens of the tree stratum was recorded with *Alliaria officinalis, Veronica hederifolia, Lapsana communis, Urtica dioica* and *Aristolochia clematis* as dominant species in the herb stratum. There were two lines of traps led in a trees cropping mast oak forest, one line in a young oak stand, one in a spruce forest, one in a pine forest and one at a forest edge. As to sample the particular forests, trapping lines were led in all characteristic types of stands. The number of pheasants released every year amounts to 72 birds/ha (Forejtek, personal communication 2002).

The locality Hájek – HJ(60 ha) – (48°57.4´N, 016°35.62´E) is a typical production forest and extensive pheasantry, characterized by the group of forest types *Carpineto-Quercetum acerosum*. It is situated near Vranovice at an altitude of 190 m above sea level. Pedunculate oak (*Quercus robur*), sessile oak (*Q. petraea*), and black locust (*Robinia pseudoacacia*) are dominant woody species. In the shrub layer, *Sambucus nigra* and some young specimens of trees such as black locust (*Robinia pseudoacacia*) and pedunculate oak (*Quercus robur*) occur. The most frequent species of the herb stratum are grasses (*Poales)* and some species such as *Viola* sp., *Geum urbanum, Alliaria officinalis*, *Pulmonaria officinalis, Galium* sp., *Lamium* sp., *Stachys sylvatica, Stelaria nemorum, Ranunculus* sp., *Ficaria verna, Rumex* sp. There were two lines of traps led in a trees cropping mast oak forest, one line in a mixed forest (*Quercus* sp., *Tilia* sp., *Carpinus* sp., *Acer* sp.), one in a locust stand and one at an oak forest edge. Each line consisted of 20 snap traps, the line being about 100 m long. The number of pheasants released every year amounts to 15 birds/ha (Forejtek, personal communication 2002).

## MATERIAL AND METHODS

The study was carried out in 2002 to 2005. Small mammals were sampled using the standard method of line trapping by means of snap traps (Pelikán 1975) and combinations of snap and fall traps laid in the shape of *Y* (Řehák et al. 1998). Traps in lines were laid by twenty, 5 m apart, the line length was 100 m. A kerosene lamp wick parched in oil and flour or smeared with peanut butter was used as a bait. Trap systems of the *Y* shape consisted of 10 fall traps buried into the soil about 5 m apart, always three in each of the arms and one trap at the place where the arms meet. Two-litre plastic bottles with cut-off necks were used as fall traps. In addition, one snap trap was laid to each of them. Along the traps, a firm foil was stretched to direct small mammals to traps. Trapping was carried out five times a year in the interval of about two months, from the end of February to the beginning of November. One trapping operation took three nights.

Caught small mammals were then identified in a laboratory to determine the species, sex, sex activity, and basic body dimensions were measured. These data provided information on the character of the studied community.

The following basic ecological characteristics were monitored:

Shannon-Weaver index of species diversity (Shannon, Weaver 1963)

$$H' = \sum\left(\frac{n_i}{n}\right) \times \log_2\left(\frac{n_i}{n}\right)$$

equitability (Sheldon 1969)

$$E = \frac{H'}{H'_{\max}} = \frac{H'}{\log_2 S}$$

and relative abundance (*rA*) and dominance (*D*) calculated according to Losos et al. (1985).

Table 1. Values of dominance (*D*), relative abundance (*rA*), diversity (*H´*) and equitability (*E*) of particular species of small mammals determined on studied plots (Σ, *n* – total number of caught mammals, *PN* – number of trapping nights)

| Species | Hájek | | | Rumunská | | |
|---|---|---|---|---|---|---|
| | *n* | *D* (%) | *rA* (%) | *n* | *D* (%) | *rA* (%) |
| *Apodemus flavicollis* | 379 | 58.9 | 7.02 | 545 | 49.1 | 5.8 |
| *Apodemus sylvaticus* | 122 | 19 | 2.3 | 220 | 19.8 | 2.35 |
| *Apodemus microps* | 0 | 0 | 0 | 5 | 0.45 | 0.05 |
| *Mus musculus* | 0 | 0 | 0 | 2 | 0.18 | 0.02 |
| *Clethrionomys glareolus* | 89 | 13.8 | 1.65 | 239 | 21.5 | 2.56 |
| *Microtus arvalis* | 48 | 7.47 | 0.89 | 84 | 7.56 | 0.9 |
| *Microtus subterraneus* | 2 | 0.31 | 0.04 | 3 | 0.27 | 0.03 |
| *Sorex araneus* | 0 | 0 | 0 | 3 | 0.27 | 0.03 |
| *Crocidura leucodon* | 0 | 0 | 0 | 3 | 0.27 | 0.03 |
| *Crocidura suaveolens* | 0 | 0 | 0 | 1 | 0.09 | 0.01 |
| Σ | | 640 | | | 1.105 | |
| *PN* | | 5.400 | | | 9.350 | |
| *H´* | | 1.112 | | | 1.284 | |
| *E* | | 0.691 | | | 0.558 | |

Results were statistically evaluated by a *t*-test for separate samples in Statistica Cz 6.1. Program.

## RESULTS

In the course of the study, in total 1,745 small mammals of ten species were caught. Of them, seven species of the order *Rodentia* and three species of *Insectivora*.

*Apodemus flavicollis* (*n* = 924; *D* = 53%), *A. sylvaticus* (*n* = 342; *D* = 19.6%) and *Clethrionomys glareolus* (*n* = 328; *D* = 18.8%) ranked among the most numerous (eudominant) species being followed by dominant *Microtus arvalis* (*n* = 132; *D* = 7.6%) and sub-recedent *M. subterraneus* (*n* = 5; *D* = 0.3%), *Apodemus microps* (*n* = 5; *D* = 0.3%), *Sorex araneus* (*n* = 3; *D* = 0.2%), *Crocidura leucodon* (*n* = 3; *D* = 0.2%), *Mus musculus* (*n* = 2; *D* = 0.11%) and *Crocidura suaveolens* (*n* = 1; *D* = 0.06%).

On both plots, species of the genus *Apodemus* and *C. glareolus* markedly predominated. In RB, all species of the community of small terrestrial mammals were found thanks to the local variety of microsites. In HJ, all species of insectivores are missing. The absence of *Crocidura* spp. and *M. musculus* and *A. microps* shows obviously proves the absence of suitable open and synanthropic sites (Table 1).

Differences in the relative abundance of small mammals in both localities were small (RB, *rA* = 11.82%; HJ, *rA* = 11.85%; see Fig. 1) and the difference

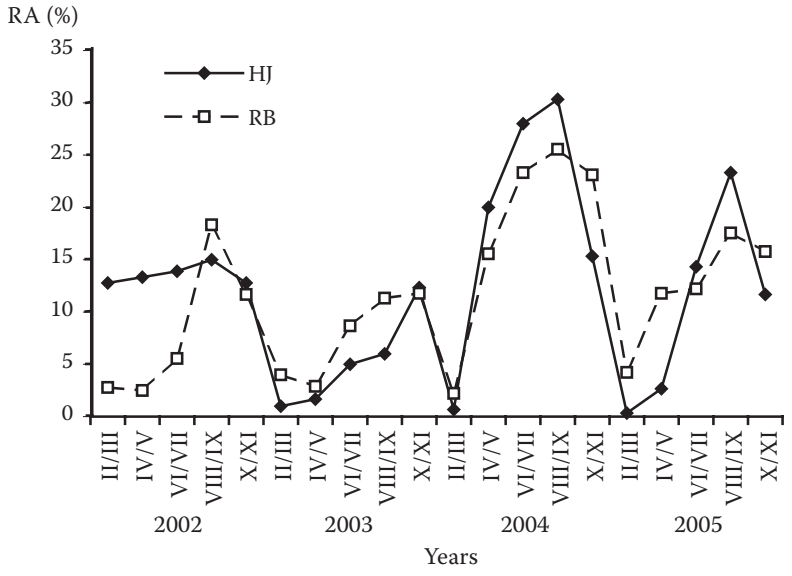


Fig. 1. Relative abundance of small mammals in studied pheasantries

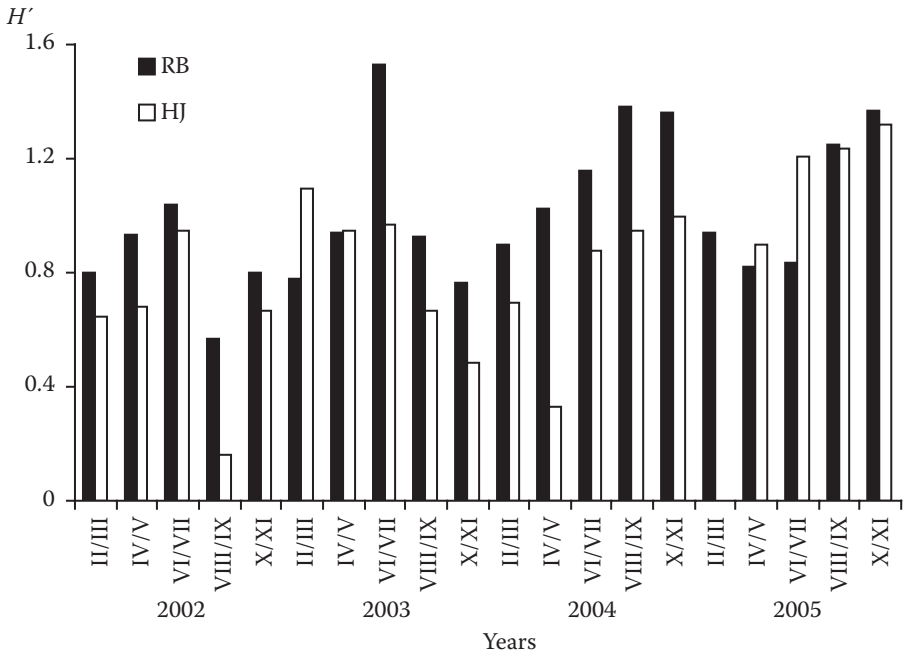


Fig. 2. Diversity of small terrestrial mammals in two differently managed pheasantries (RB, HJ) in the rural landscape of southern Moravia

between both pheasantries was not significant ($P > 0.05$). During the four years of study *rA* in both populations markedly fluctuated (Fig. 1).

In addition to total diversity (Table 1), diversity was also calculated for the particular trapping periods during the four years of observation and within the period it fluctuated considerably (from 0.16 to 1.53, see also Fig. 2). However, its mean values were significantly higher in RB ($H´ = 1.0054 \pm 0.254773$) than in HJ ($H´ = 0.788850 \pm 0.349211$). Generally, diversity in RB was significantly higher than in HJ ($t = 2.240878$; $P = 0.030957$).

The equitability of communities of small mammals of both pheasantries does not differ significantly ($P > 0.05$; $\alpha = 0.05$) and its mean values are virtually identical both in RB ($E = 0.760900 \pm 0.123530$) and HJ ($E = 0.756070 \pm 0.282048$).

In addition to common species of rodents occurring as important pests of forest and agricultural production, RB provided also conditions for the existence of threatened species, particularly of *Crocidura leucodon* (according to the Regulation No. 395/1992 Acts).

## DISCUSSION

Intensive pheasantries (in our case RB) are very suitable habitats for a number of forest and steppe species of small terrestrial mammals with respect to the high diversity of biotopes. This mosaic character is purposeful there, exactly corresponding to site requirements of pheasants *Phasianus colchicus* and *Syrmaticus reevesi* as forest-steppe species of birds (Hudec, Šťastný 2005). The local diversity of small mammals is therefore relatively high approaching the sites that are relatively rich in small mammal species in agrocoenoses. It applies e.g. to small groves and windbreaks where diversity can be even a little higher than that found in the pheasantry (e.g. $H´ = 1.5$; Suchomel, Heroldová 2004) or to small forest tracts where diversity is similar (e.g. $H´ = 1.14$; Stanko et al. 1996). On the contrary, pheasantries of the character of a commercial forest (here HJ) are substantially poorer in habitats, which is also reflected in the lower diversity of small terrestrial mammals (HJ = 1.112, RB = 1.284) resembling other woody formations in the cultural landscape (Pelikán 1989; Zejda 1976, 1991). Lower diversity of small terrestrial mammals in forest ecosystems of southern Moravia was found only in floodplain forests where it was gradually reduced owing to changes in the water regime in the landscape after 1972 (from $H´ = 1.04$ to $H´ = 0.97$; Zejda 1991) and after the repeated introduction of artificial floods it did not increase yet ($H´ = 0.87$; Suchomel, Heroldová 2004).

In spite of the importance of pheasantries as refuges for small mammals including threatened species these are disturbed or anthropically influenced sites (from the aspect of ecosystem stability), which is demonstrated by the occurrence of several eudominant and a number of subrecedent species (Losos et al. 1985). As for dominant species, pheasantries are suitable particularly for forest species, e.g. field mice of *Apodemus* spp. which are highly adaptable and even relatively small areas of woody vegetation, e.g. windbreaks, are enough for their survival (Pelikán 1986; Stanko 1994; Stanko, Miklisová 1995). These sites are however unsuitable for a number of

steppe species such as voles *M. arvalis* (Zapletal et al. 2001). Therefore, the dominance of voles in windbreaks is low (*D* = 6%) (Pelikán 1986) and considering similar values from pheasantries (about 7%, see Table 1) both types of sites are obviously unsuitable for voles. Extensive isolated forest tracts are even less suitable biotopes for voles of the genus *Microtus* than windbreaks and pheasantries (*D* = 2.4%; Suchomel, Heroldová 2004) and large closed forest units, e.g. floodplain forests (Zejda 1991).

These pheasantries were also characterized by their very low abundance of insectivores from the family *Soricidae*, which was evidently related to their general decrease in Moravia during the studied period (Zejda, personal communication). It became particularly evident in the genus *Sorex*, in the sporadic trapping of *S. araneus* and surprising absence of *S. minutes*, which is otherwise distributed throughout the region (Anděra 2000). At this time, the abundance of shrews was very low even in floodplain forests (*D* = 2.6%) (Suchomel, Heroldová 2004). The higher dominance of *Soricidae* (14.7%) was mentioned by Zejda (1976) in flooded forests at the end of the 60s, however, in the 80s their considerable fall to 1.08% occurred (*S. a.*) in this biotope. This fall was probably caused by changes in the water regime in floodplain forests after 1972 (Zejda 1991). The general decrease of *Soricidae* in southern Moravia during the last 40 years was obviously caused by changes in the agricultural landscape (Zejda 1996).

The study of small mammals of pheasantries also brought supplementary information on the occurrence and distribution of *Crocidura suaveolens*, the find of which in this region (maping square 6,966) has not been published yet (Anděra 2000). The locality corresponds to its occurrence in warmer regions of southern Moravia with the forest-steppe vegetation of secondary character (Gaisler et al. 1996), however, the specimen found occurred in an atypical wetland biotope in the growth of reed at a water reservoir (Reiter et al. 1997). This occurrence supports an opinion that although it is mainly a synanthropic species (Pelikán et al. 1983) it is able to colonize isolated buildings (which occur e.g. in RB) by natural migration and not only through importation with feed as supposed earlier (Anděra 2000).

High concentrations of pheasants are an important factor that could potentially affect populations of small terrestrial mammals in pheasantries. However, pheasants are only marginal predators of small terrestrial mammals (Balát et al. 1959; Hudec, Šťastný 2005), and under conditions of this country only domestic fowl can markedly contribute to the local reduction of rodents. However, with respect to their high concentrations in pheasantries pheasants could have a marked effect at least theoretically because they resemble populations of domestic fowl by their high abundance and independence from natural conditions. Balát et al. (1959) stated that unlike free-living birds just poultry breeding could affect populations of small mammals (e.g. field mice) thanks to high concentrations of birds per unit area. However, based on our results, this was not the case, evidently on the ground of minor preference of small mammals in food than in domestic fowl (Balát et al. 1959) and also thanks to intensive additional feeding and perhaps also due to changes in the ethology of artificially reared animals. Pheasants could also cause some losses in trapped animals due to the picking of traps (however, it was never possible to prove the trap was picked just by a pheasant). Nevertheless, populations of rodents were not significantly affected.

Potential food supply in the form of feed for pheasants (e.g. cereals) is a characteristic feature of pheasantries. Cereals can serve as food mainly in winter, contributing to the successful survival of small mammals (Suchomel et al. 2005). In the course of the growing season when there is a sufficient amount of natural food, feed for pheasants is not the main food source for small animals and, their populations can develop quite independently of it. This idea also appears to be supported by the development of studied populations in both pheasantries. The relative abundance of the populations was roughly the same both in RB with intensive additional feeding (*RA* = 11.82) and in HJ (*RA* = 11.85) where, owing to the much lower number of pheasants, it is possible to suppose a considerably smaller amount of served feed.

## References


ANDĚRA M., 2000. Atlas rozšíření savců v České republice. Předběžná verze. III. Hmyzožravci (*Insectivora*). Praha, Národní muzeum: 108.

BALÁT F., FOLK Č., HAVLÍN J., HUDEC K., 1959. Myšilovní ptáci, hubící hraboše polního v Československu. In.: KRATOCHVÍL J. et al., 1959. Hraboš polní (*Microtus arvalis*). Praha, ČSAV: 250–275.

BRYJA J., ZUKAL J., 2000. Small mammal communities in newly planted biocorridors and their surroundings in southern Moravia (Czech Republic). Folia Zoologica, *49*: 191–198.

DUDICH A., ŠTOLLMAN A., 1983. Micro-mammal communities in the tree species formation of the East Slovakian Lowlands. Ekológia (Bratislava), *2*: 353–373.

GAISLER J., ZUKAL J., NESVADBOVÁ J., CHYTIL J., OBUCH J., 1996. Species diversity and relative abundance of small mammals (*Insectivora, Chiroptera, Rodentia*) in the Pálava Biosphere Reserve of UNESCO. Acta Societatis Zoologicae Bohemicae, *60*: 13–23.

HUDEC K., ŠŤASTNÝ K. (eds.), 2005. Fauna ČR. Ptáci 2/I. Praha, Academia: 572.

KALIVODOVÁ E., ŠTEFUNKOVÁ D., DAROLOVÁ A., 1992. Ecological evaluation of the pheasantry in Jahodna (Danube region – Zitny Ostrov Island). Ecology (CSFR), *11*: 395–408.

LOSOS B., GULIČKA J., LELLÁK J., PELIKÁN J., 1985. Ekologie živočichů. Praha, SPN: 320.

MÁJSKY J., 1985. Drobné zemné cicavce lužných lesov a vetrolomov hornej časti Žitného ostrova. Biologické práce, *31*: 1–116.

PELIKÁN J., 1975. K ujednocení odchytového kvadrátu a linie pro zjišťování populační hustoty savců v lesích. Lynx (Praha), *17*: 58–71.

PELIKÁN J., 1986. Small mammals in windbreaks and adjacent fields. Acta Scientarium Naturalium Brno, *20* (4): 1–38.

PELIKÁN J., 1989. Small mammals in fragments of *Robinia pseudoacacia* stands. Folia Zoologica, *38*: 199–212.

PELIKÁN J., ZEJDA J., HOMOLKA M., 1983. Mammals in the urban agglomeration of Brno. Acta Scientarium Naturalium Brno, *17* (9): 1–49.

REITER A., HANÁK V., BENDA P., OBUCH J., 1997. Savci Národního parku Podyjí. Lynx (Praha), n. s., *28*: 5–141.

ŘEHÁK Z., ZUKAL J., GAISLER J., BRYJA J., 1998. Comparison of some modifications of a Y sampling of small mammal communities in the Czech Republic. Abstracts. Euro-American Mammal Congress, 19.–24. 7. 1998, Santiago de Compostela, Spain: 237–238.

SHANNON C.E., WEAVER W., 1963. The Mathematical Theory of Communication. Urbana, University Illinois Press. Cited LOSOS B., GULIČKA J., LELLÁK J., PELIKÁN J., 1985. Ekologie živočichů. Praha, SPN: 320.

SHELDON A.L., 1969. Equitability indices: Dependence on the species count. Ecology, *50*: 466–467.

STANKO M., 1994. Small mammal communities of windbreaks and adjacent fields in Eastern Slovakian Lowlands. Folia Zoologica, *43*: 135–143.

STANKO M., MIKLISOVÁ D., 1995. Interactions of small mammal communities of windbreaks and adjacent fields with respect to epidemiological aspects. Ekológia (Bratislava), *14*: 3–16.

STANKO M., MOSANSKY L., FRICOVA J., 1996. Small mammals in fragments of *Robinia pseudoacacia* stands in the east Slovakian lowlands. Folia Zoologica, *45*: 145–152.

SUCHOMEL J., HEROLDOVÁ M., 2004. Small terrestrial mammals in two types of forest complexes in intensively managed landscape of South Moravia (the Czech Republic). Ekológia (Bratislava), *23*: 377–384.

SUCHOMEL J., HEROLDOVÁ M., MLČEK J., ŠUSTOVÁ K., RŮŽIČKOVÁ J., REMEŠ M., 2005. Winter diet preferences of *Apodemus flavicollis* under influence of supplementary food in pheasantry. In: IX. International Mammalogical Congress (Abstracts), Mammalogical Society of Japan, Sapporo, Hokkaido, July 31–August 5, 2005: 301.

TRNKA P., ROZKOŠNÝ R., GAISLER J., HOUŠKOVÁ L., 1990. Importance of windbreaks for ecological diversity in agricultural landscape. Ekológia (ČSFR), *9*: 241–258.

YLONEN H., ALTNER H.J., STUBBE M., 1991. Seasonal dynamics of small mammals in an isolated woodlot and its agricultural surroundings. Annales Zoologici Fennici, *28*: 7–14.

ZAPLETAL M., OBDRŽÁLKOVÁ D., PIKULA J., ZEJDA J., PIKULA J., BEKLOVÁ M., HEROLDOVÁ M., 2001. Hraboš polní *Microtus arvalis* (Pallas, 1778) v České republice. Brno, Akademické nakladatelství CERM: 128.

ZEJDA J., 1976. The small mammal community of a lowland forest. Acta Scientarium Naturalium Brno, *10*: 1–39.

ZEJDA J., 1991. A community of small terrestrial mammals. In: PENKA M., VYSKOT M., KLIMO E., VAŠÍČEK F. (eds.), Floodplain Forest Ecosystem 2. Amsterdam, Prague, Elsevier, Academia: 505–521.

ZEJDA J., 1996. Transformation of agricultural landscape and its influence on small terrestrial mammal communities. In: MATHIAS M. L. et al. (eds.), Proceedings of the I. European Congress of Mammalogy, 18.–23. March, 1991. Lisboa, Museu Bocage: 133–139.

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## Bažantnice jako stanoviště drobných zemních savců (*Rodentia, Insectivora*) na jižní Moravě

**ABSTRAKT**: Byla studována společenstva drobných zemních savců ve specifickém prostředí dvou bažantnic jižní Moravy – s odlišnou intenzitou chovu bažantů a s různou diverzitou biotopů (RB – intenzivní bažantnice, HJ – extenzivní bažantnice). Celkem zde bylo v letech 2002 až 2005 zjištěno deset druhů z řádů *Rodentia* a *Insectivo-*

*ra*. Nejvíce dominovali hlodavci *A. flavicollis*, *A. sylvaticus* a *C. glareolus*. Velmi nízké stavy naopak vykazovali hmyzožravci, z nichž zajímavými zjištěnými druhy byly *Crocidura leucodon* a *C. suaveolens*. RB s vyšší rozmanitostí biotopů měla průkazně vyšší diverzitu ($P < 0,05$) drobných savců ($H´ = 1,284$, zjištěno deset druhů), než HJ ($H´ = 1,112$, zjištěno pět druhů). Vyšší intenzita chovu (množství vypouštěných kuřat na jednotku plochy a množství předkládaného krmiva) v RB se proti HJ neprojevila v relativní početnosti STM (*rA* v RB = 11,82, v HJ = 11,85) ani v jejich vyrovnanosti (*E*). Pravděpodobnost rozdílu byla $P > 0,05$. Rozdíl v diverzitě srovnávaných společenstev byl podmíněn rozdílnou diverzitou biotopů.

**Klíčová slova**: bažantnice; diverzita; drobní zemní savci

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