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FOOD PREFERENCES OF *GLIS GLIS* (L.), *DRYOMYS NITEDULA* (PALLAS) AND *GRAPHIURUS MURINUS* (SMUTS) KEPT IN CAPTIVITY

ABSTRACT: We investigated food preferences of three species of dormice, testing consumption by captive animals. One type of food was provided to an animal and its "suitability" scored for each species, according to whether it was or was not consumed. If it was eaten, the time when it was consumed was recorded (after 24, 48 or 72 hours). In total, 17 types of animal food and 46 of plant food were tested. Animal foods offered included different arthropods, eggs, snails and chicken meat. Plant food consisted of fruits, seeds, nuts and green parts. *Glis glis* consumed – 24% of animal material offered and 100% of plant food types, *Dryomys nitedula* consumed – 77% of animal and 54% of plant food types. *Graphiurus murinus* consumed – 94% of animal and 63% of plant food types. *G. glis* showed a significantly higher preference for plant foods rather than animal material, and preferred plant food much more than the other two species. Both *D. nitedula* and *G. murinus* preferred animal more than plant food and did not differ in preferences and diversity of both kinds of food they consumed. Thus, *G. glis* can be considered as principally a herbivore, while *D. nitedula* and *G. murinus* are rather meat-eaters. It can be concluded that food niches, especially of the two European dormice, are separate and thus in natural conditions they do not compete strongly for food resources.

KEY WORDS: diet, *Glis glis*, *Dryomys nitedula*, *Graphiurus murinus*, captivity

1. INTRODUCTION

The geographical ranges of the forest dormouse (*Dryomys nitedula* Pallas, 1779) and the edible dormouse (*Glis glis* L., 1766) overlap to a great extent (Storch 1978, Mitchell-Jones *et al.* 1999), at least in Europe, and these species live in similar (often the same) habitats (Pucek 1984, Nowakowski and Boratyński 1997, Nowakowski and Manowiec 2000). This might cause strong competitive interactions and replacement of one species by the other (Lozan *et al.* 1990). Thus, a shift in their ecological niches would be necessary to limit their competition. One of the most important resources is the food and it is why an ecological separation might be expected. Comparison of the diets of these two species with the food preferences of a relatively closely related species, the African woodland dormouse (*Graphiurus murinus* Smuts, 1832), seems interesting although the latter is not their competitor due to its different geographical range (Ajrapietjanc 1983, Stuart and Stuart 1992).

The diet of dormice (Gliridae, Rodentia), including the forest dormouse, edible dormouse and woodland dormouse, has not so far been very well described. Only a few

original studies investigated this issue in detail (e.g. Holišová 1968, Lozan *et al.* 1990, Franco 1990, Gigirey and Rey 1999), based on analysis of the content of stomachs of these rodents. Some authors state that the forest dormouse feeds mainly on plant food, but it also uses some animal food (Serafiński 1972, Głazaczow 1994). Other studies, however, show that at least in spring and summer arthropods and eggs, nestlings and even adult birds play an important role in their diet (Golodushko and Padutov 1961, Angermann 1963, Holišová 1968, Lozan *et al.* 1990, Nowakowski 1995, Nowakowski and Boratyński 2000). Angermann (1963) stated that the forest dormouse probably used mainly the type of food most abundant in its habitat, and was thus a feeding opportunist. The food of the edible dormouse is thought to be buds, fruits and seeds of trees, bark and twigs, while animal food is only of supplementary importance (Serafiński 1972, Holišová 1968, Pucek 1984, Lozan *et al.* 1990, Rossolimo *et al.* 2001). Food of the woodland dormice is even less well known. It is described as composed of fruits, seeds, green parts of plants, arthropods and other invertebrates, also even small vertebrates such as tiny lizards (Stuart and Stuart 1992).

The present paper is aimed at a comparison of diets of the forest dormouse, edible dormouse and woodland dormouse, particularly their preferences for different types of food.

2. MATERIAL AND METHODS

Food preferences of the forest dormouse, edible dormouse and woodland dormouse were studied based on the analysis of results of feeding tests performed in captivity. Experiments were conducted with 8 forest dormice (4 males, 4 females), 5 edible dormice (3 males, 2 females) kept in separate cages, and 8 woodland dormice (3 males, 5 females) all kept in one cage. The studies were conducted in 1995–1999 in the case of the forest and the edible dormice and in 2000–2002 for woodland dormice.

During experiments animals were provided with the following types of food, grouped in categories (for details – see Appendix):

- animal food (17 types in total) – arthropods: different species and development stages; other: bird eggs (of different sizes, fresh or boiled), snails (with and without shells), chicken meat;
- plant food (46 types in total) – soft: fruits (different types), green parts of plants (leaves, flowers, leaf and flower buds, twigs with bark of different trees), seeds; hard: stones of fruits, nuts (different kinds, including acorns, with and without shells).

For each rodent, the composition of tested food was the same and included 63 types in total.

In the case of animals kept separately, every individual was given each type of food, so that for forest dormice a total of 504 tests were performed, for edible dormice there were 315 tests, and for the group of woodland dormice there were 63 tests. A test consisted of providing an animal with a certain type of food, in a cage previously cleaned from all materials that could be consumed. In a cage there was only a wooden nestbox lined with soft paper shavings, pine twigs without bark, ball-drinker with water and a metal bowl with the food being offered. Food was provided at noon (dormice are not active during the day) in a strictly determined amount e.g. 20 seeds of oats, a quarter of an apple or 10 larvae of mealworm. After 24, 48 and 72 hours the cage was checked if food had been consumed. The test ceased after the first sign that the given food had been eaten, or after 72 hours to avoid the animals dying from starvation. Suitability of a given food type for a species was defined by the "preference score" on a four-point scale (scores 0–3), depending on the period in which the food was eaten – during the first 24 hours (immediately) scored 3, during the second 24 hours = 2, during the third 24 hours = 1. Food that was not taken during 72 hours was assumed not to have been eaten, and recorded as "unsuitable for the species". This was scored as 0. In cases where animals kept singly did not eat certain foods but the same was willingly consumed by another individual, the food was given the highest obtained score. For example, two edible dormice ate crickets during the first 24 hours, two others in 48 hours and one did not eat them at all; the score given was 3. For at least two

days between successive tests, each animal was provided with full nutritive quality food *ad libitum* – a standard mix of pellets for rodents enriched with protein grain food and fruits.

To compare the diversity of animal and plant food consumed by the species studied, one-tailed test of differences between percent indices was applied (Stanisz 1998). The level of the animals' preferences for different food categories were compared between species of dormice and food types by testing the distributions of their preference scores using a Mann-Whitney U-test or Kruskall-Wallis (K-W) test, with *post-hoc* Dunn test. Normally, a level of significance of $P < 0.05$ was applied, however due to small sample sizes in some of the comparisons a reduced level of significance $0.05 < P < 0.1$ was accepted (Zar 1999).

3. RESULTS

The forest dormouse consumed 77% of all the types of animal food offered and 54% of types of plant food. The edible dormouse ate 24% of animal foods offered and 100% of plant food types. The woodland dormouse consumed 94% and 63% of offered food types, respectively.

Comparison of the diversity of food eaten showed that the forest dormouse consumed significantly more different types of animal food that the edible dormouse ($P < 0.01$) but the plant food of the edible dormouse was more diverse ($P < 0.0001$). Similarly, the woodland dormouse consumed significantly more diverse animal food than the edible dormouse ($P < 0.0001$) but the edible dormouse ate more types of plant food ($P < 0.0001$). The forest dormouse and woodland dormouse did not differ significantly in the variety of animal and plant food consumed (in both cases $P > 0.05$). Analysis of preference scores for a given type of food revealed that the forest dormouse significantly preferred animal food (median score 3) over plant food (median score 1.5; U test: $U = 259.5$; $P < 0.05$). The woodland dormouse showed a similar result (median scores respectively 3 and 2; U test: $U = 214.0$; $P < 0.01$). The edible dormouse distinctly preferred plant food (median score 3) over animal food (median score 0; U test: $U = 55.0$; $P < 0.0001$). The forest dormouse and the woodland dormouse did not differ significantly in their preferences for both plant food (U test: $U = 909.5$, ns) and animal food (U test: $U = 111.0$, ns).

All species and forms of arthropods (treated as 100%) were consumed only by the woodland dormouse, while the edible dormouse ate only moths and crickets, which comprised only 18% of the types of arthropods available (Table 1). No significant preferences for arthropods or "other" categories of animal food were revealed in the forest dormouse (U test: $U = 21.0$, ns) or the woodland dormouse (U test: $U = 27.0$, ns). It was the opposite with the diversity of plant food types eaten. Only the edible dormouse consumed 100% of types of both soft (e.g. fruits, leaves) and hard (e.g. nuts in shells) plant

Table 1. Per cent of different types of food consumed within specified food categories (see Appendix) for three species of dormice.

Food category	Forest dormouse (*D. nitedula*)	Edible dormouse (*G. glis*)	Woodland dormouse (*G. murinus*)
Animal food – arthropods	91	18	100
Animal food – other (eggs, snails, meat)	50	33	83
Plant food – hard (nuts in shells, fruit stones, acorns, hornbeam nuts)	43	100	14
Plant food – soft (nuts without shells, fruits, seeds, green parts)	56	100	72

foods, while the woodland dormouse consumed only 14% of types of hard plant food (Table 1). The food of the forest dormouse and the woodland dormouse was significantly richer in species and forms of arthropods than in the edible dormouse, but their plant food was significantly less diverse in both hard and soft food types (Table 2).

Only the edible dormouse ate all kinds of plant food (100%) offered, as shown in Table 3. Among the categories of plant food distinguished (see Appendix), the edible dormouse did not show any clear preferences (K-W test: $H_{3,46} = 7.02$; $P < 0.1$): all the plant parts offered were very "suitable" and reached preference scores 3 or sometimes 2. This species did not show any preferences for soft or hard plant foods (U test: U = 115.5, ns). The edible dormouse showed a much greater preference for green parts of plants that the other two species of dormice (K-W test: $H_{2,60} = 30.56$; $P < 0.001$; both pairwise comparisons by *post-hoc* Dunn test: $P < 0.01$). No such differences among the three species of dormice were found in respect of the remaining three categories of plant food (in all cases K-W test: P – ns). However, the edible dormouse consumed a greater diversity of seeds than the other two species (differences nearly significant – see Table 4).

The forest dormouse and the woodland dormouse consumed all or a majority (respectively) of fruit types offered, but with seeds they were more selective. Neverthe-

Table 2. Pairwise comparisons of preference score among the species of dormice studied, for four categories of food (as presented in Table 1). *P* – significance level of differences, ns – differences non-significant ($P > 0.1$).

Food category	*P*
Animal food – arthropods	
forest dormouse – edible dormouse	<0.01
edible dormouse – woodland dormouse	<0.001
forest dormouse – woodland dormouse	ns
Animal food – other	
forest dormouse – edible dormouse	ns
edible dormouse – woodland dormouse	<0.1
forest dormouse – woodland dormouse	ns
Plant food – hard	
forest dormouse – edible dormouse	<0.05
edible dormouse – woodland dormouse	<0.01
forest dormouse – woodland dormouse	ns
Plant food – soft	
forest dormouse – edible dormouse	<0.0001
edible dormouse – woodland dormouse	<0.001
forest dormouse – woodland dormouse	<0.1

Table 3. Per cent of different types of plant food consumed within specified food categories (see Appendix) for three species of dormice.

Category of plant food	Forest dormouse (*D. nitedula*)	Edible dormouse (*G. glis*)	Woodland dormouse (*G. murinus*)
Fruits	100	100	90
Seeds	71	100	71
Nuts	60	100	50
Green parts	25	100	50

less, they consumed more than 70% of all types of seeds available (Table 3). It is interesting that fewer types of nuts and green parts of plants were consumed by the forest dormouse and the woodland dormouse than by the edible dormouse (Table 4). This was confirmed by the analysis of suitability of different types to the first two species. In the forest dormouse the preference scores differed between the categories of plant food (K-W test: $H_{3,46} = 16.77$; $P < 0.001$). Pairwise comparisons of the four categories of plant did not confirm these differences (*post-hoc* Dunn test: in all cases– ns). However, comparison of only the most and the least preferred categories – respectively fruits and green parts – showed significant differences in their "suitability" for this animal (U test: U=10.0; $P < 0.0001$). Similarly as with the edible dormouse, the forest dormouse did not show any preferences for soft or hard types of plant food (U test: U = 119.5, ns). Preferences of the woodland dormouse for different categories of plant food varied, as in the previous species (K-W test: $H_{3,46} = 8.41$; $P < 0.05$). The plant foods most willingly consumed were fruits (preference scores always 2–3) and the difference from seeds in terms of median score was nearly significant (*post-hoc* Dunn test: $P < 0.1$). The second most preferred types of plant food were seeds, which were more favoured than green parts of plants (*post-hoc* Dunn test: $P < 0.05$). The least willingly consumed plant foods were nuts (comparison with green parts by *post-hoc* Dunn test: $P < 0.1$). The woodland dormouse clearly preferred soft types of fruit food to hard ones (U test: U = 41.0; $P < 0.01$).

It is worth noting the differences in consumption of green parts of plants between the forest and the woodland dormouse. The latter selected twice as many types of plants than the former species, but this difference was not quite statistically significant, probably due to small sample size (Table 4). This corresponds with the fact that in the woodland dormouse green parts seemed to be an intermediately preferred category of plant food (median score 1.5), while in the forest dormouse it was the least "suitable" plant food (median score 1), and this difference between the species was significant (U-test: U = 133.0, $P < 0.05$).

Table 4. Pairwise comparisons of preference score among the species of dormice studied, for four categories of food (as presented in Table 3). *P* – significance level of differences, ns – differences non-significant ($P > 0.1$).

Food category	*P*
Fruits	
forest dormouse – edible dormouse	ns
edible dormouse – woodland dormouse	ns
forest dormouse – woodland dormouse	ns
Seeds	
forest dormouse – edible dormouse	<0.1
edible dormouse – woodland dormouse	<0.1
forest dormouse – woodland dormouse	ns
Nuts	
forest dormouse – edible dormouse	<0.05
edible dormouse – woodland dormouse	<0.05
forest dormouse – woodland dormouse	ns
Green parts	
forest dormouse – edible dormouse	<0.0001
edible dormouse – woodland dormouse	<0.001
forest dormouse – woodland dormouse	<0.1

4. DISCUSSION

Comprehensive information on the food of dormice is scarce in the literature, particularly in respect of the woodland dormouse. In monographs or handbooks (e.g. Angermann 1963, Ajrapetjanc 1983, Pucek 1984, Lozan *et al.* 1990, Rossolimo *et al.* 2001) a general description of the animals' food can be found among other aspects described. However, it is usually difficult to compare actual food preferences of these species due to small samples or lack of comparable conditions.

One of the following methods is usually applied when describing food composition: examination of stomach contents (e.g. Holišova 1968, Lozan *et al.* 1990), analysis of faeces (e.g. Abt and Bock 1998) and results of experimental feeding (e.g. Ajrapetjanc 1983, Lozan *et al.* 1990, Gigirey and Rey 1999). The most reliable seems to be the analysis of stomach contents, however in the case of rare and protected animals (in Poland the forest dormouse and the edible dormouse are legally protected and listed in the Polish Red Data Book of Animals, 2001) non-invasive methods that do not require killing animals seem much more appropriate. The method used in this study allowed for direct comparison of food preferences among the three rodent species described, despite that the geographical range of one is not overlapped with the ranges of the other two species. Nevertheless, the results obtained should be treated cautiously, as in natural conditions animals are never confronted with only a single type of food (they have always some choice of food available and diet supplementation). In addition, under experimental conditions the animals were provided with types of food they might never normally find in the wild (e.g. hen egg or banana in the case of two European dormice). The results presented also do not show directly the real proportion of specified types of food in the diet of dormice. For example, the forest dormouse consumed in captivity the flowers of *Oxalis acetosella* as willingly as moths (both reached the highest preference score), but in nature these food types will play different roles in the diet due to their differing availability.

The forest dormouse feeds mainly on animal food, as described by many authors, although some discrepancies occur between the published results and results presented here (Angermann 1963, Holišova 1968, Lozan *et al.* 1990, Rossolimo *et al.* 2001). The preference of this species for animal food was fully confirmed by the results obtained in the present study. The results presented here are closer to those from Moldova (Lozan *et al.* 1990) than from Russia (Rossolimo *et al.* 2001), but they allow the addition of diplopods as willingly eaten food to the diet of the species. Feeding tests showed that the forest dormouse avoided the very hairy caterpillars of *Callimorpha*, which is in accordance with Angermann (1963). Some studies show that the forest dormouse will also eat snails, but they do not specify which species (Angermann 1963, Holišova 1968, Rossolimo *et al.* 2001). In the present study we did not confirm these observations and nor did other authors mention them as components of the forest dormouse diet (Lozan *et al.* 1990). Thus a question arises as to whether snails offered in the present experiments were unsuitable (e.g. too large) or whether they are a marginal component of the forest dormouse diet, consumed only accidentally or in cases of extreme need. It is interesting that eggs and birds (small passerines) are consumed by this rodent in high numbers (Nowakowski 1995, Nowakowski and Boratyński 2000), but have not been noted in its diet by some other authors (Holišova 1967, Lozan *et al.* 1990). The results presented here prove the ability of the forest dormouse to destroy broods of small passerines, but not those of larger birds (e.g. of quail size).

Although these experiments support existing evidence for a limited role of plant food for the forest dormouse (Angermann 1963, Holišova 1968, Lozan *et al.* 1990, Rossolimo *et al.* 2001), some discrepancies can be found. It seems unimportant that this species did not consume oats during the tests, although Lozan *et al.* (1990) included this type of food to its diet. However, it is striking that despite observations made by other authors (Lozan *et al.* 1990), during the present study forest dormice did not

eat hazelnuts, walnuts in shells or hornbeam nuts. Perhaps forest dormice eat only unripe nuts with relatively soft shells –in nestboxes inhabited by forest dormice we sometimes found shells of unripe hazelnuts (authors' unpubl. data). In the relevant literature it was suggested that the forest dormouse was unable to open such nuts due to the size and structure of its teeth (Angermann 1963). Another inconsistency in descriptions of the diet of forest dormice concerns eating bark. This was sometimes recorded (Rossolimo *et al.* 2001), but in other studies including the present one, consumption of bark was not observed (Holišova 1968).

In contrast to the forest dormouse, the edible dormouse feeds mainly on plant food. This has been demonstrated by the results here as well as in the literature (Holišova 1968, Lozan *et al.* 1990, Franco 1990, Gigirey and Rey 1999). This rodent eats all types of plant food and does not avoid flowers, buds or bark. The present study did not show any clear preferences by this species for a single type or a category of plant food. However, the study of Gigirey and Rey (1999) clearly defined preferences of the edible dormouse in this respect. Among the invertebrates provided, the edible dormouse consumed moths and crickets, but did not eat beetles (imagines) or any caterpillars or snails. This could be expected based on information in the literature (Holišova 1968, Lozan *et al.* 1990).

Knowledge of the woodland dormouse is even more limited, except for very general statements. It is said to be omnivorous and can eat lizards, arthropods and other invertebrates, but also it consumes commonly fruits, seeds and other parts of plants (Ajrapetjanc 1983, Stuart and Stuart 1992). Data on food preferences of this species are lacking. The results presented here confirm omnivory in this species, but have a comparative rather than descriptive nature. It is shown that they avoid hard types of food such as nuts, despite their high nutritional value. This is may be due to having smaller and weaker teeth and jaws than in the two other species studied.

The most interesting aspect of the present study is the comparison of diets, in particular of the forest and edible dormice which are potential competitors (Storch 1978, Lozan *et al.* 1990, Nowakowski and Boratyński 1997, Nowakowski and Manowiec 2000). It appears that the glirid species studied are omnivorous, but they use certain categories of food to a different extent. The forest dormouse and the woodland dormouse are predators to a much greater extent that the edible dormouse, and the woodland dormouse appeared to be the most omnivorous species of those compared. In the light of the present results it can be stated that the forest dormouse and the edible dormouse probably do not compete for food resources in natural conditions.

5. REFERENCES

Abt K.F., Bock W.F. 1998 – Seasonal variations of diet composition in farmland field mice *Apodemus* spp. and bank voles *Clethrionomys glareolus* – Acta Theriol. 43: 379–389.

Ajrapetjanc A.E. 1983 – Soni [Dormice] – Izd. Len. Univ., Leningrad (in Russian).

Angermann R. 1963 – Zur Ökologie und Biologie des Baumschläfers, *Dryomys nitedula* (Pallas, 1779) in der Waldsteppenzone – Acta Theriol. 7: 333–367.

Franco D. 1990 – Feeding habits of a dormouse population (*Myoxus glis*) of the Asiago Plateau (Venetian Prealps) – Hystrix (n.s.) 2: 11–22.

Gigirey A., Rey J.M. 1999 – Faecal analysis of the edible dormouse (*Glis glis*) in the northwest Iberian Peninsula – Z. Säugetierkunde 64: 376–379.

Głazaczow A. 1994 – Ssaki [Mammals]. (In: Zwierzęta chronione w Polsce [Animals protected in Poland] Eds. A. Winiecki, A. Nowosad, A. Głazaczow) – FBE, Poznań, pp. 211–233 (in Polish).

Golodushko B.Z., Padutov E.E. 1961 – Materialy po ekologii lesnoj soni Bieloviezskoj Pushchy. (In: Fauna i ekologija nazemnyh pozvonochnyh Belorussii) – Minsk, pp. 49–70 (in Russian).

Holišová V. 1968 – Notes on the food of dormice (*Gliridae*) – Zoologické Listy, 17: 109–114.

Lozan M., Belik L., Samarskij S. 1990 – Soni (Gliridae) jugo-zapada SSSR [Dormice (*Gliridae*) of south-west USSR] – Kishinev. (in Russian).

Mitchell-Jones A., Amori G., Bogdanowicz W., Kryštufek B., Reijnders P.J.D., Spitzenberger F., Stubbe M., Thissen

J.B.M., Vorhalík V., Zima J. 1999 – The atlas of European mammals – Academic Press T & A D Poyser Ltd.

Nowakowski W.K. 1995 – Koszatka – drapieżny gryzoń [The forest dormouse – a predator rodent] – Ptaki (Biuletyn OTOP) 3: 5 (in Polish).

Nowakowski W.K., Boratyński P. 1997 – Habitat preferences of the forest dormouse (*Dryomys nitedula*) in lowland forests – Pol. ecol. Stud. 23: 199–207.

Nowakowski W.K., Boratyński P. 2000 – O identyfikacji śladów drapieżnictwa w skrzynkach lęgowych [Notes on identificantion of signs of predation] – Not. Orn. 41: 55–69 (in Polish with English summary).

Nowakowski W.K., Manowiec E. 2000 – Preferencje środowiskowe popielicy w Puszczy Białowieskiej [Habitat preferences of the edible dormouse in Białowieża Forest] – Kulon 5: 81–89 (in Polish).

Pucek Z. (ed.) 1984 – Klucz do oznaczania ssaków Polski [Key to identification of Polish mammals] – PWN – Polish Scientific Publishers, Warszawa (in Polish).

Rossolimo O.L., Popov E.G., Pavlinov I.J., Kruskop S.W., Voltzit O.W. 2001 – Soni (Myoxidae) mirovoj fauny [Dormice (Myoxidae) of the world] – Russian Academy of Sciences, Moscow (in Russian).

Serafiński W. 1972 – Ssaki Polski [Mammals of Poland] – PZWS, Warszawa (in Polish).

Stanisz A. 1998 – Przystępny kurs statystyki [Approachable course of statistica] – Statsoft, Kraków (in Polish).

Storch von G. 1978 – Familie Gliridae Thomas, 1897 – Schläfer. (In: Handbuch der Säugetiere Europas, Eds. J. Niethammer, F. Krapp) – Akademi Verlagsgesellschaft, Wiesbaden, 1, pp. 202–280.

Stuart C., Stuart T. 1992 – Mammals of Southern Africa – Struik Publishers, Cape Town.

Zar J.H. 1999 – Biostatistical Analyses – Prentice-Hall, Inc., Upper Saddle River, New Jersey.

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Appendix. Scores of preference 0–3 (food eating during the first 24 hours = 3, during the second 24 hours = 2, during the third 24 hours = 1; food not taken during 72 hours =0) of the three species of dormice studied, for different types of food, with the classification of food into categories: A – arthropods, O – other animal food, N – nuts, S – seeds, F – fruits, G – green parts, H – hard, T – soft.

Food type	Food category	Forest dormouse (*D. nitedula*)	Edible dormouse (*G. glis*)	Woodland dormouse (*G. murinus*)
Larva *Tenebrio* sp.	A	3	0	3
Coleopteran (imago) *Tenebrio* sp.	A	3	0	3
Coleopteran (imago) *Geotrupes* sp.	A	1	0	3
Maggot *Musca domestica*	A	3	0	3
Imago *Musca domestica*	A	3	0	3
Imago *Gryllus campestris*	A	3	3	3
Imago *Hemiptera* sp.	A	3	0	3
Diplopoda	A	3	0	3
Lepidoptera (moths)	A	3	3	3
Caterpillar *Piersi* sp.	A	3	0	3
Caterpillar *Callimorpha* sp.	A	0	0	3
Egg of hen boiled – without shell	O	3	2	3
Egg Paridae – in shell	O	3	0	3
Egg *Coturnix coturnix* – in shell	O	0	0	0
Cepaea sp.	O	0	1	3
Arion sp.	O	0	0	3
Fresh chicken meet – strips	O	3	0	3
Avena sp. – grains	ST	1	2	2
Triticum sp. – grains	ST	0	2	1
Zea sp. – grains	ST	2	3	3
Helianthus sp. – inflorescence	ST	3	3	3
Cucurbita sp. – stones	ST	3	3	3
Prunus cerasus – stones	SH	2	3	0
Acer platanoides – seeds	ST	0	2	0
Corylus avellana – nut without shells	NT	3	3	3
Juglans regia – nut without shells	NT	3	3	3
Pistacja sp. – nut without shells	NT	3	3	3
Arachid hypogaea – fruit without shells	NT	3	3	3
Corylus avellana – nut in shell	NH	0	3	0
Juglans regia – nut in shell	NH	0	3	0
Pistacja sp. – nut in shell	NH	0	3	0
Arachid hypogaea – fruit in shell	NH	3	3	1
Carpinus betulus – nut	NH	0	3	0
Quercus sp. – acorns	NH	3	3	0
Tilia cordata – fruit	FT	3	3	3
Malus domestica – fruit	FT	3	3	3
Pyrus communis – fruit	FT	3	3	3
Prunus domestica – fruit	FT	3	3	3
Prunus cerasus – fruit without shell	FT	3	3	3

Food type	Food category	Forest dormouse (*D. nitedula*)	Edible dormouse (*G. glis*)	Woodland dormouse (*G. murinus*)
Rubus sp. – fruit	FT	3	3	3
Sorbus aucuparia – fruit	FT	2	3	3
Sambucus nigra – fruit	FT	2	3	2
Musa paradisiaca – fruit without skin	FT	2	2	3
Tilia cordata – leaf buds	GT	0	3	3
Corylus avellana – leaf buds	GT	2	3	3
Syringa vulgaris – leaf buds	GT	0	3	3
Prunus cerasus – leaf buds	GT	2	3	3
Oxalis acetosella – leaves	GT	0	3	0
Fragaria sp.– leaves	GT	0	3	0
Mycelis muralis – leaves	GT	1	3	0
Viola sp. – leaves	GT	0	3	0
Anemone nemorosa – leaves	GT	0	3	0
Lactuca sp. – leaves	GT	0	3	0
Spinacia oleracea – leaves	GT	1	3	1
Brassica oleracea – leaves	GT	0	2	0
Brassica pekinensis – leaves	GT	0	3	3
Aloe vera – leaves	GT	0	2	3
Anemone nemorosa – flowers	GT	0	3	0
Fragaria sp. – flowers	GT	2	3	0
Oxalis acetosella – flowers	GT	3	3	3
Tilia cordata – bark, twigs	GT	0	3	2
Corylus avellana– bark, twigs	GT	0	3	2
Syringa vulgaris – bark, twigs	GT	0	3	2