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Plant Composition of Coney Rat's (Reithrodon auritus) Diet

SKŁAD DIETY ROŚLINNEJ U *REITHRODON AURITUS*

O. A. SCAGLIA, C. A. VELAZQUEZ & M. A. CAUHEPE

Scaglia O. A., Velazquez C. A. & Cauhepe M. A., 1982: Plant composition of coney rat's (*Reithrodon auritus*) diet. Acta theriol., 27, 24: 350—353 [With 1 Table]

Study of the seasonal variation in the stomach contents of coney rats, *Reithrodon auritus* (Fischer, 1914), collected in a native grassland of the southeast of Buenos Aires Province, shows that diet of this small rodent is exclusively constitued of plant materials, mostly grasses. *Lolium multiflorum* and *Poa* spp. were two dominant species which composed a 74% of the stomach contents dry weight. The number of items found in the diets were dramatically lower than the number of species in the pasture.

[Laboratoria de Mamiferos, Museo Municipal de Ciencias Naturales "Lorenzo Scaglia" C.C. 1207, Correo Central, 7600, Mar del Plata, Argentina (OAS, CAV); Departamento de Produccion Animal E.E.R.A. Balcarce. INTA. C.C. 276-7620, Balcarce, Argentina (MAC)]

1. INTRODUCTION

The coney rat, "rata orejuda", *Reithrodon auritus* (Fisher) 1914 is widely distributed in the southern part of South America (Hershkovitz, 1955). According to Williamson (1940), coney rat causes serious losses in annual and perennial crops near General Pico, in the Central Province of La Pampa.

The ecology of this rodent is poorly known, specially in their food habits. We present in this paper, the first results obtained by microhistological analysis of stomach contents of this small herbivore.

2. STUDY AREA AND METHODS

The study was carried out at the Balcarce Experiment Station, INTA, in south-eastern Buenos Aires Province (37° 45'S, 58° 18'W) at 15 km west of the city of Balcarce. The pasture was typical of the *B* community of León (1975), with *Lolium multiflorum, Poa lanigera. Distichlis spicata, Paspalum dilatatum* and *Stipa* spp as dominants.

This community is representative of the native grassland which cover most of the El Salado basin (Depresión del Salado), vast lowland area of about 5,800,000 ha in the central part of the humid pampa region. This area is mostly dedicated to cattle breeding. The climate is humid with an yearly rainfall of 835 mm.

Five collection periods: March, May, July, September and October were designed through. 1978. Thirteen animals were captured by snap traps and live-capture traps. The rodents were sexed, weighed, measured and dissected. The stomach contents were treated by a modification of the technique described by Strittmater (1973) as described in Scaglia *et al.* (1981). From one to ten slides were prepared from each stomach content depending on the amount collected, and forty microscopic fields were read on each slide. Relative frequency data were transformed to relative diversity following Sparks & Malechek (1968). Trophic diversity was calculated using the Herrera index (Herrera, 1976).

3. RESULTS AND DISCUSSION

The stomach contents were obtained from six animals captured in the autumn (March and May), five in the winter (July and September) and two in the spring (October).

Table 1

Seasonal variation in the plant composition of coney rat diets in the south east of the Buenos Aires Province of Argentina.

Species	Fall	Winter	Spring
Lolium multiflorum	39	86	35
Poa spp.	46	1[1]	39
Ambrosia tenuifolia	v[1]	6	1[1]
Hordeum pussillum	10		
Piptochaetium spp.	3[1]	2[1]	
Trifolium spp.		2[1]	8
Dichondra sericia		1[1]	
Distichlis spp.	2[1]		
Stipa neesiana		v[1]	
Bromus spp.		1[1]	2[1]
Medicago spp.		1[1]	
Agropyron spp.	v[1]		
Vulpia spp.			2[1]
Phyla canescens		v[1]	
Stellaria media			13
Diversity index	5.59	12.33	3

[1] Values under 5% should be considered cautiously because the errors of the technique increase abruptly with a decrease in the percentages values of the species.

The botanical composition of the stomach samples is showed in Table 1. In the autumn contents, grasses were almost the only component, since only one animal contained a non-grass constituent : *Ambrosia tenuifolia* (*Compositae*). The more important grass species were: *Poa* spp. (46%) and *L. multiflorum* (39%). The remaining of the diet (15%) was made by *Hordeum pussillum, Piptochaetium* spp. and *Distichlis* spp. The diversity value for the autumn diets was 5.6.

The winter samples showed a wider food habit, as *D* increased to 12.3. In these samples, fragments of other species besides grasses were found belongings to the *Leguminosae, Compositae, Verbenaceae.* The more important constituents were *L. multiflorum* (86%) and *A. tenuifolia* (6%).

The spring stomach contents also showed a large variety of items though the diversity index decreased to 3. *Stellaria media* (*Caryophillaceae*) represented a 13%. *Poa* spp. (39%) and *L. multiflorum* (35%) were again the dominant species in the diet.

Even when it was found a relatively wide spectrum of species in the stomach contents, only two of them made the 74% of thie diet (*L. multiflorum* : 52% and *Poa* spp. : 22%). *A. tenuifolia* (9%), *H. pussillum* (4%) and *Piptochaetium* spp. (4%), made a second important group. Finally, ten other species completed th remaining, 9% of the diet.

If the total number of species identified in the diets (15) is compared with the numbers of species identified in the pasture (87) only a 17% of this last amount was found in the diets. Also significant was the fact that just two species constitued the major portion of the diets. These findings are in accordance with the conclussion of Harris & Paur (1972), who analysed the food habits of 36 consumers of a grassland ecosystems. They found that although these consumers could select among 112 different items, most of the energy flow was channelled through a few species. They found also, that most of the food items responsible of only minor energy flows from pasture to consumers.

The dominance of *L. multiflorum* and *Poa* spp. was found to occur in the three seasons samples and reached their peak values in winter with a 87% of the diets.

These data agree with the results obtained by Cauhépé & Fernández Grecco (1981) working with beef cattle. These authors have that *L. multiflorum* and *Poa* spp. among other, are species with high values of occurrence in cattle diets. Also *D. spicata* which composed about a 25% of the cattle diets from January to March, was found to compose a 48% of the stomach contents of a coney rat individual captured in March. Two of the other individual captured in March, contained only traces of *D. spicata* in their stomach. *Agropyron elongatum* which showed a high annual frequency value of occurrence in the Cauthépe & Fernandez Grecco's paper was represented just in vestigial amounts in coney rat diets.

Barlow (1969) found roots and tubercules of *Digitaria* spp. and bulbs of *Oxalis* spp. in coney rats stomachs. The different result obtained in our work may be explained by the probably different pastures sampled in the two experiments and different technique used to identify botanical constituents. They may also be a consequence of the development of a

"local tradition" in the different populations of *R. auritus* as reported by Ellis, Wiens & Rodell (1976).

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Cranial and Dental Abnormalities in Sika Deer

ANOMALIE KOŚCI CZASZKI I ZĘBÓW U JELENIA SIKA

George A. FELDHAMER

Feldhamer G. A., 1982: Cranial and dental abnormalities in sika deer. Acta theriol., 27, 24: 353—357 [With 1 Table & Plates VIII—IX]

Cranial and dental abnormalities are described from sika deer, *Cervus nippon* (Temminck, 1836). Congenital (intrinsic) abnormalities occurred in only 4 of 191 specimens (2.1%). Abnormalities that resulted from extrinsic factors included alveolar thinning, noted in 33 (18.3%) of the specimens, and periodontal disease, found in 2 (1.0%) specimens.

[Appalachian Environmental Laboratory, Center for Environmental and Estuarine Studies, University of Maryland, Frostburg State College Campus, Gunter Hall, Frostburg, Maryland 21532, USA]