Sous-famille	Espèce	2 *N*	Hétérochromosomes
Gerbillinae	*Meriones (Parameriones) persicus* Heptner	44	*X* et *Y* grands et métacentriques
	M. (Pallasiomys) shawi Duvernoy	44	*X* et *Y* grands et métacentriques
	M. (Pallasiomys) crassus Sundevall	60	*X* et *Y* grands et métacentriques
	Rhombomys opimus Licht.	40	*X* et *Y* grands et métacentriques
	Gerbillus pyramidum Geoffroy	40	*X* et *Y*, grands et métacentriques, sont associés à une paire d'autosomes.
Cricetinae	*Mesocricetus brandti* Nehring	42	*X* et *Y* grands et métacentriques
Microtinae	*Microtus socialis irani* Th.	62	*X* acrocentrique, *Y* très petit
Murinae	*Pitymys fatioi* Mottaz	50	*X* acrocentrique, *Y* très petit
	Nesokia indica Gray et Hard.	40	*X* et *Y* très grands et métacentr.

Summary

The chromosomal sets of nine *Muridae* belonging to 4 underfamilies are described in this paper. The *Cricetinae*, *Mesocricetus brandti* has only 42 chromosomes and doesn't represent a subspecies of *M. auratus*, but a true species. By *Gerbillus pyramidum*, there is multiple sex-chromosomes resulting of the union of the heterochromosomes *X-Y* with a pair of autosomes. *Nesokia indica* shows striking differences from *Bandicota* (MAKINO, 1944), although the two genera are considered as very akin by the systematists.

Scent Glands in the Bank Vole

During my sojourn at the Experiment Station at Pol'ana, Slovakia, in July 1952, a number of specimens of the Bank Vole (*Clethrionomys glareolus* Schreb.) were kept and investigated for the presence of scent glands. Earlier observations which I have made on material from various localities at different seasons during the last three years led to the discovery that the Bank Voles, especially the males, disseminate a striking musk-like odour during the breeding season, a fact which has not yet been reported in the literature.

In order to find out from which organs the odour comes, both the genital and anal areas were examined. A number of specimens of *Microtus arvalis* Pall. and *Apodemus sylvaticus* L. were used for comparison. Now I have determined that only *Microtus arvalis* possesses large glands in the space between the two anal sphincters, while paraproctodeal glands are completely absent in *Clethrionomys glareolus* and *Apodemus sylvaticus*. The paraproctodeal glands occurring in *Microtus arvalis* are described in detail by VRTIŠ[1], and the description is reproduced, accompanied by some critical remarks, by SCHAFFER[2], so that this need not be repeated here.

The only type of odorous glands which were found on our material of *Clethrionomys glareolus* was that of the preputium. Although these glandular organs have been described[3], their function as osmeteria had not been noted. The same preputial glands may also be observed in *Microtus arvalis*.

The product of secretion of the preputial glands of *Clethrionomys glareolus* has been isolated; it is an oily odorous liquid, the chemical properties of which have to be determined. Considering the facts known about the sexual life of other animals, especially Rodentia, and comparing these with the present observations, we may assume that the preputial glands of the Bank Vole are of considerable importance as a stimulant for one sex becoming intimate with the other sex during the breeding season.

It seems probable that further investigation regarding the development of paraproctodeal glands in other members of the genus *Microtus* and allied genera would show the possibility of using that anatomical character as a taxonomic criterion among the *Microtinae*.

J. PACLT

Biological Laboratory, Forest Products Research Institute, Bratislava, August 28, 1952.

Zusammenfassung

Der in der Brunstzeit auftretende Sexualduft der Rötelmaus geht aus dem Sekret ihrer Präputialdrüsen hervor. Paraproktodäaldrüsen kommen bei diesem Tiere keine vor.

The Lyophilization of Bacterian Antigens for the Sero-Diagnosis of Brucellosis

From various experiments with bacterian antigens, we have succeeded in establishing a method of lyophilization which provides a final material which conserves its agglutinability perfectly, resists physical agents especially well and can be stored, without any alteration, for a long time.

The bacterian emulsions, of whatever origin they may be (e.g. strain 99 Weybridge, regional strains, strain 1119-3 of the Animal Industry Bureau, U.S. Department of Agriculture), are prepared in concentrated form and centrifuged. The bacterian centrifugate is dissolved in rabbits serum which is completely free of any brucellic antibody. The material thus obtained is then distributed in ampules of exact quantities of the bacterian centrifugate. Those quantities may vary: e.g. the ampulles used for only one serodiagnosis should contain a material which, reconstituted, gives 5 cm^3 of antigen and for 10 sero-diagnosis 10 times more bacterian centrifugate, etc.

[1] V. VRTIŠ, Biol. Spisy Acad. Veter. Brno *8*, no. 11, 1 (1929).

[2] J. SCHAFFER, *Die Hautdrüsenorgane der Säugetiere* (Urban & Schwarzenberg, Berlin and Wien, 1940), p. 112.

[3] I. W. ROWLANDS, Phil. Trans. roy. Soc. London [B] *226*, 99 (1936). – F. W. R. BRAMBELL and I. W. ROWLANDS, *ibid.* 71.