

Chromosome Numbers in
Nabis Lt. (Heteroptera, Nabidae)

The chromosome numbers in *Nabis* Lt. have been described at least in several species of this genus. They have a type $2n = 16A + X + Y$. LESTON¹, says, however, that the species pair *N. rugosus* (L.) and *N. ericetorum* Sch. are characterized by a deviation from the basic karyotype and that their chromosome number is $2n = 18A + X + Y$.

In the present communication the author gives chromosome numbers for 9 species of *Nabis* Lt. Aceto-orcein testes squashes were made from fresh material dissected in 0.6% NaCl solution. Observations listed in the following Table are based on examination of specimens collected in Poland in the environs of Olsztyn, Lublin and Torun.

| Species | Number of elements | | | Sex chromosomes |
|-------------------------------------|--------------------------|--------------|----------------------------|-------------------------------|
| | Spermatogonial metaphase | Meta-phase I | Meta-phase II ^a | |
| <i>N. limbatus</i> Db. | – | 10 | 10 | <i>X-Y</i> |
| <i>N. lineatus</i> Db. ^b | – | 11 | – | <i>X-Y</i> 1 supernumerary |
| <i>N. flavo-marginatus</i> Sch. | 18 | 10 | 10 | <i>X-Y</i> |
| <i>N. ferus</i> (L.) | 18 19? | 10 11? | 10 11? | <i>X-Y</i> |
| <i>N. pseudo-ferus</i> Rm. | 18 | 10 | 10 | <i>X-Y</i> |
| <i>N. feroides</i> Rm. | – | 10 | 10 | <i>X-Y</i> |
| <i>N. rugosus</i> (L.) | – | 10 | 10 | <i>X-Y</i> |
| | – | – | 11 | <i>X-Y</i> 1 supernumerary |
| <i>N. erice-torum</i> Sch. | – | 10 | 10 | <i>X-Y</i> |
| | – | 11 | 11 | <i>X-Y</i> 1 supernumerary |
| <i>N. brevis</i> Sch. | 18 | 10 | 10 | <i>X-Y</i> |
| | – | 11 | 11 | <i>X-Y</i> 1 supernumerary |

^a After a transient pairing, the sex-chromosomes are in this stage already shown as separate elements.
^b Only a single male was examined.

Spermatogonial metaphases in which the chromosome number could be determined with all certainty were found only in *N. flavomarginatus* Sch., *N. ferus* (L.), *N. pseudo-ferus* Rm. and in *N. brevis* Sch.: there were 18 chromosomes. In some individuals of *N. ferus* (L.) spermatogonia were noted in which one of the chromosomes – twice as large as the others – seemed to be in the process of fragmentation into two independent elements. Spermatogonial metaphases with 19 chromosomes were extremely rare.

The males of *Nabis* Lt. have as a rule sex-chromosomes of *X-Y* type. However, the author found in *N. lineatus* Db., *N. rugosus* (L.), *N. ericetorum* Sch. and *N. brevis* Sch. individuals with a third supernumerary sex-chromosome.

The chromosomal elements number in both the meiotic division metaphases is 10 in *X-Y* type (Figures 1, 2), on the other hand it is 11 in *X + Y + 1* supernumerary (Figures 3, 4). Spermatocytes had always 8 autosomal elements. They could easily be distinguished from the sex-plasm, especially in the second meiotic division prometaphase.

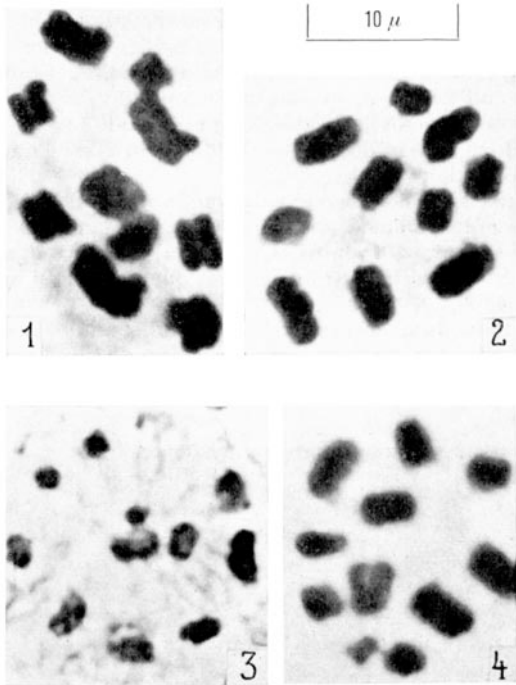


Fig. 1. *N. rugosus* (L.) – metaphase I showing 10 chromosomal elements.
Fig. 2. *N. ericetorum* Sch. – metaphase I showing 10 chromosomal elements.
Fig. 3. *N. rugosus* (L.) – metaphase II showing 11 chromosomal elements.
Fig. 4. *N. ericetorum* Sch. – metaphase I showing 11 chromosoma elements.

Zusammenfassung. 9 Arten der Gattung *Nabis* Lt. wurden während der Spermatogenese in den Teilungsstadien karyologisch geprüft und ihre Chromosomenzahl bestimmt. Die charakteristische Grundzahl der Chromosomengarnitur wurde mit $16A + X + Y$ gefunden, wobei wenige Individuen mit überzähligem Geschlechtschromosom festgestellt werden konnten.

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¹ D. LESTON, *Chromosoma* 8, 609 (1957).