

# BIOSYSTEMATICS OF THE GENUS *DACTYLIS* (POACEAE)

by

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## Aim.

1. Determination of the taxa of the genus *Dactylis* occurring in Poland.
2. Determination of the features on the basis of which these taxa can be distinguished.
3. Determination of relationships between these taxa.

**Methods.** The study deals with systematics and cytology as well as cultures. Systematic studies are based on the analysis of live material and herbarium specimens. The studies of morphological characters are based on population samples, collected either in the wild or originating from experimental cultures. Results were studied statistically by PCA (Principal Component Analysis). Every plant collected in nature was transplanted to an experimental culture. For the statistical studies a special accessory experimental culture (random blocks in three replicas) was established.

Cytological studies were carried out on the root-tips of cultivated plants. The standard cytological methods were used.

A systematic revision of the genus *Dactylis* was carried out on the herbarium specimens from ten to twenty of the greatest Polish herbaria.

**Results.** The occurrence of 3 subspecies of *D. glomerata* L. in Poland was established. These are: subsp. *glomerata*, subsp. *aschersoniana* (Graebn.) Thell. and subsp. *slovenica* (Dom.) Dom. The key for determination of these taxa is presented.

The point maps of distribution of subsp. *aschersoniana* and subsp. *slovenica* were made.

The chromosome numbers of *D. glomerata* from 73 localities in Poland were counted. Subsp. *glomerata* and subsp. *slovenica* are tetraploids with  $2n=28$ . On the other hand subsp. *aschersoniana* is diploid with  $2n=14$ , but in one locality a pentaploid ( $2n=35$ ) was found.

One to four accessory chromosomes were found in subsp. *glomerata*.

The karyotype of subsp. *aschersoniana* and subsp. *glomerata* was determined.

Future studies will focus upon the comparison of the karyotype of subsp. *slovenica* with the karyotypes of these two subspecies.

## References

- Mizianty, M. 1986. Biosystematic studies on *Dactylis* L.
1. Review of previous studies. 1. 1. Systematics, variability, ecology, biology and cultivation problems. Acta Soc. Bot. Pol. 55(3): 467-479.
  - Mizianty, M (in press). Biosystematic studies on *Dactylis* L.
  2. Original research.
  2. 1. Morphological differentiation and occurrence of representatives of the genus *Dactylis* in Poland.

2. 1. 1. Field studies and experimental cultures. Acta Soc. Bot. Pol. 57(4).  
2. 1. 2. Distribution of *Dactylis glomerata* subsp. *slovenica* (Dom.) Dom. in Poland and adjacent regions. Acta Soc. Bot. Pol. 57(4).  
2. 1. 3. Distribution of *D. glomerata* subsp. *aschersoniana* (Graebn.) Thell. in Poland. Acta Soc. Bot. Pol. 58(1).