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Chromosome numbers of Polish brambles (*Rubus* L., *Rosaceae*). VI

Abstract

Boratyńska K. 1997. Chromosome numbers of Polish brambles (*Rubus* L., *Rosaceae*). VI. Arbor. Kórnickie 43: 31-35.

The chromosome numbers of eleven *Rubus* species from Poland are reported. Ten brambles are tetraploids with $2n = 4x = 28$, and only *R. opacus* is triploid with $2n = 3x = 21$. New data are given for *R. czarnunensis* and *R. lasquiensis*.

Additional key words: chromosome numbers, *Rubus* L., brambles, Poland.

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INTRODUCTION

The present article is the next in a series concerning chromosome numbers of Polish brambles (Boratyńska 1994, 1995a, 1995b, 1996, 1997).

MATERIAL AND METHODS

The chromosome numbers have been counted in root-tip mitoses. The root was fixed in Carnoy's solution, stained in aceto-carmin and squashed (Boratyńska 1994, 1995a).

RESULTS

R. bavaricus (Focke) Hruby

$2n = 4x = 28$

Rare taxon, close to *R. koehlerii* Weihe (series *Hystrices* Focke) recently found in the southern Wielkopolska Lowland. It is a tetraploid with $2n = 4x = 28$. The same

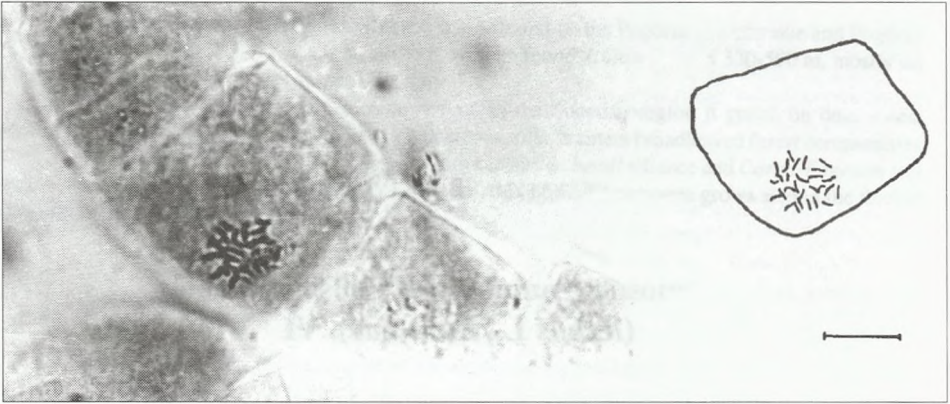


Fig. 1. *Rubus bavaricus* – micrograph and drawing of mitotic metaphase of root-tip cell. Scale bar – 10 μ m

number of chromosomes has been found lately by Krahulcová and Holub (1997b) in the Czech Republic (Fig. 1).

Material studied: Prov. Leszno: Chojniak, 7.08.1997, J. Zieliński.

R. czarnunensis (Sprib.) Sprib.

$2n = 4x = 28$

This is a regional species endemic to Poland. It belongs to the section *Corylifolii* Lindley series *Subthyrsoides* (Focke) Focke. The tetraploid number $2n = 4x = 28$ was found in one studied plant.

Material studied: Prov. Bydgoszcz: Forest of Wolność, 7 km NW of Chojnice, 4.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński.

R. lasquiensis Sprib.

$2n = 4x = 28$

Local taxon transitional between series *Hystrices* Focke and *Glandulosi* (Wimmer et Grab.) Focke. It is known from the province of Kalisz only. Its number of chromosomes has not been reported till now. Material from two closely situated localities studied appears to be tetraploid with $2n = 28$.

Material studied: 1. Prov. Kalisz: Laski, 7.08.1992, J. Zieliński; 2. Prov. Kalisz: ibid.

R. lusaticus Rostock

$2n = 4x = 28$

This rare, regional bramble belongs to the section *Glandulosi* (Wimmer et Grab.) Focke. It is known from the Lower Silesia and south Wielkopolska of Leszno. The chromosome number of this species is here reported for the first time. It is the tetraploid with $2n = 4x = 28$ (fig. 2).

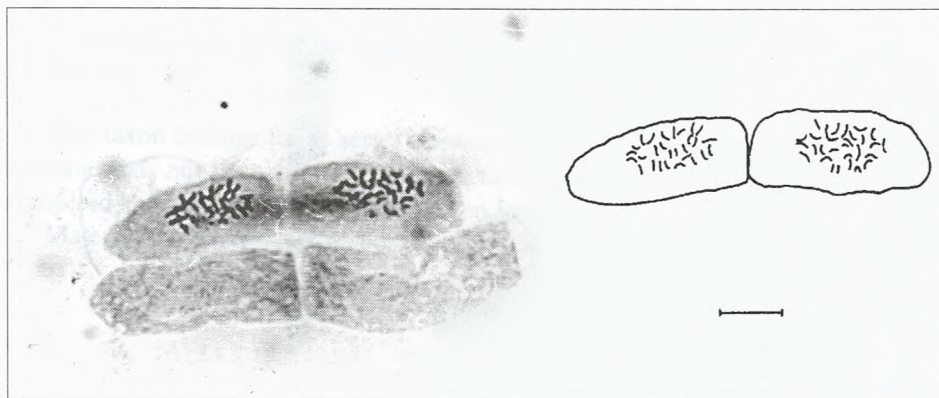


Fig. 2. *Rubus lusaticus* – micrograph and drawing of mitotic metaphase of root-tip cell. Scale bar – 10 μ m

Material studied: 1. Prov. Leszno: SW of Golinka, 7.08.1997, J. Zieliński; 2. Prov. Leszno: 1 km E of Rudna Wielka. 8.08.1997, J. Zieliński.

R. micans Godr.

$2n = 4x = 28$

This species represents series *Micantes* Sudre. In Poland it occurs in the Opawskie Mts. It is the tetraploid with $2n = 4x = 28$. Last year tetraploid of *R. micans* was confirmed on a material collected in Czech Republic (Krauhlová and Holub 1997b).

Material studied: Prov. Opole: Dębowiec Forest S of Prudnik, 10.11.1996, M. Filipiak.

R. opacus Focke

$2n = 3x = 21$

Rare taxon, close to *R. plicatus* found in the western Poland. It is the first piece of information about chromosome number for this species.

Material studied: Prov. Zielona Góra: Lubrza, between Pozrzadło and Łągów. 22.07.1995. J. Zieliński.

R. salisburgensis Focke ex Caflisch

$2n = 4x = 28$

This taxon is closely related to *R. radula*. It grows in south-western Poland. The tetraploid number $2n = 28$ (Fig. 3), found in samples investigated, confirms earlier reports by Krauhlová (Krauhlová and Holub 1997a).

Material studied: 1. Prov. Leszno: NE of Kawce 6.08.1997, J. Zieliński; 2. Prov. Wrocław: between Podgaj and Głównin, 11 km N of Strzelin, 9.08.1991, J. Zieliński.



Fig. 3. *Rubus salisburgensis* – micrograph and drawing of mitotic metaphase of root-tip cell. Scale bar – 10 μm

R. scaber Weihe

$$2n = 4x = 28$$

This species belongs to the series *Pallidi* W.C.R. Watson. The first piece of information concerning the tetraploid chromosome number of *R. scaber* from England has been given by Fabergé (in Maude 1939) and Heslop-Harrison (1953). The same number $2n = 28$ I have stated in a Polish material.

Material studied: Prov. Wrocław: SW of Rakłowice, 24.08.1995, J. Zieliński.

R. scissus W.C.R. Watson

$$2n = 4x = 28$$

This species represents subsection *Rubus*. The tetraploid number of $2n = 28$, found in the investigated specimen, agrees with an earlier report from England (Heslop-Harrison 1953).

Material studied: Prov. Słupsk: Słowiński National Park: N of Gardno Wlk. 24.06.1997. J. Zieliński.

R. sulcatus Vest

$$2n = 4x = 28$$

The tetraploid number of $2n = 28$ found in both origins investigated agrees with an earlier report by Gustafsson (1939, 1943).

Material studied: 1. Prov. Katowice: between Syrynia and Pszów, 25.08.1994. J. Zieliński; 2. Prov. Kielce: E of Tumlin, 11.08.1987, J. Zieliński.

R. wimmerianus (Sprib. ex Sudre) Sprib.

$2n = 4x = 28$

This taxon belongs to the series *Rhamnifolii* (Bab.) Focke. The number of chromosomes has not been reported till now. In the sample from the locality studied a tetraploid karyotype with $2n = 28$ has been found.

Material studied: Prov. Krosno: Dudyńce, SW of Sanok, 16.08.1988, J. Zieliński.

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Liczby chromosomowe jeżyn (*Rubus* L. *Rosaceae*) rosnących w Polsce. VI

Streszczenie

Autorka podaje liczby chromosomowe dla 11 gatunków z rodzaju *Rubus* L. występujących w Polsce. Prawie wszystkie przebadane gatunki to tetraploidy z $2n = 4x = 28$. Wyjątkiem jest *R. opacus*, który okazał się triploidem ($2n = 3x = 21$). Po raz pierwszy opublikowano liczby chromosomowe dla *R. czarnunensis* i *R. lasquiensis*.