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

Abstract

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The present report gives chromosome numbers of somatic cells of eight Polish brambles: *R. armeniacus* Focke, *R. lamprocaulos* G. Braun, *R. marssonianus* H.E. Weber, *R. pyramidalis* Kaltenb., *R. schleicheri* Weihe ex Tratt., *R. senticosus* Koehler ex Weihe, *R. silesiacus* Weihe and *R. fabrimontanus* (Sprib.) Sprib. The seven first brambles are tetraploids with $2n=4x=28$ and the last *R. fabrimontanus* is pentaploid with $2n=5x=35$. The data for *R. marssonianus*, *R. fabrimontanus* and *R. senticosus* are published for the first time.

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

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INTRODUCTION

This article is the third one of the series concerning the karyology of Polish brambles (Boratyńska 1994, 1995).

MATERIAL AND METHODS

The chromosome numbers have been established in root-tip cells. The roots were fixed in Carnoy's solution, stained in aceto-carmine and squashed in a drop of 45% acetic-acid (details in Boratyńska 1994).

R. armeniacus Focke [Sectio *Rubus*, series *Discolores* (P.J. Müller) Focke]

The $2n=4x=28$ number was found in all studied plants from four localities. The same results have been reported earlier by Crane, who studied cultivated specimens from Sweden (Gustafsson 1943).

Material studied: 1. Prov. Kalisz, Odolanów, on the road to Sulmierzyce, 21.09.1988, J. Zieliński; 2. Prov. Kalisz, 3 km E of Górzno, 23.09.1988, J. Zieliński; 3. Prov. Szczecin, Resko, on the road to Świdwin, 3.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński; 4. Prov. Wałbrzych, Dobrocin, between Dzierżoniów and Niemcza, 8.08.1991, J. Zieliński.

R. lamprocaulos G. Braun [Sectio *Corylifolii* Lindley, series *Subrectigeni* H.E. Weber] syn. *R. serrulatus* Lindb.

All studied specimens of *R. lamprocaulos* are tetraploids ($2n=4x=28$). The first information on chromosome number for this species was published by Gustafsson in 1939 and 1943 (as *Rubus serrulatus* Lindeb.). He established the number at $2n=28$.

Material studied: 1. Prov. Poznań, Borówiec near Kórnik, 23.07.1993, K. Boratyńska, A. Dolatowska, J. Zieliński; 2. Prov. Poznań, Kórnik-Zwierzyniec, 23.07.1993, K. Boratyńska, A. Dolatowska, J. Zieliński; 3. Prov. Wrocław, Milicz, 7.08.1992, J. Zieliński.

R. marssonianus H.E. Weber [Sectio *Rubus*, series *Rhamnifolii* (Bab.) Focke]

No chromosome numbers have been reported till now for *R. marssonianus*. All plants from 4 localities in N-W Poland proved to be tetraploids with $2n=4x=28$ (Fig. 1).

Material studied: 1. Prov. Szczecin, Island Wolin, Kołczewo, 2.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński; 2. Prov. Szczecin, Island Wolin, between Kołczewo and Międzywodzie, 2.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński; 3. Prov. Szczecin, Szczecin-Zdunowo near Wielgowa, 2.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński; 4. Prov. Szczecin, Stare Czarnowo, 2.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński.

R. pyramidalis Kaltenb. [Sectio *Rubus*, series *Vestiti* (Focke) Focke]

All investigated plants of *R. pyramidalis* are tetraploids with $2n=4x=28$. The same chromosome number has been published before by Gustafsson (1939, 1943). He reported two numbers $2n=28$ and $2n=26-28$ from Scandinavia. Heslop-Harrison (1952) published for the typical variety $2n=28$ chromosomes and two numbers $2n=28$ and $2n=42$ for *R. pyramidalis* var. *parvifolius* Frid. & Gel. from England. The taxonomical value of the mentioned above variety is, however, problematic.

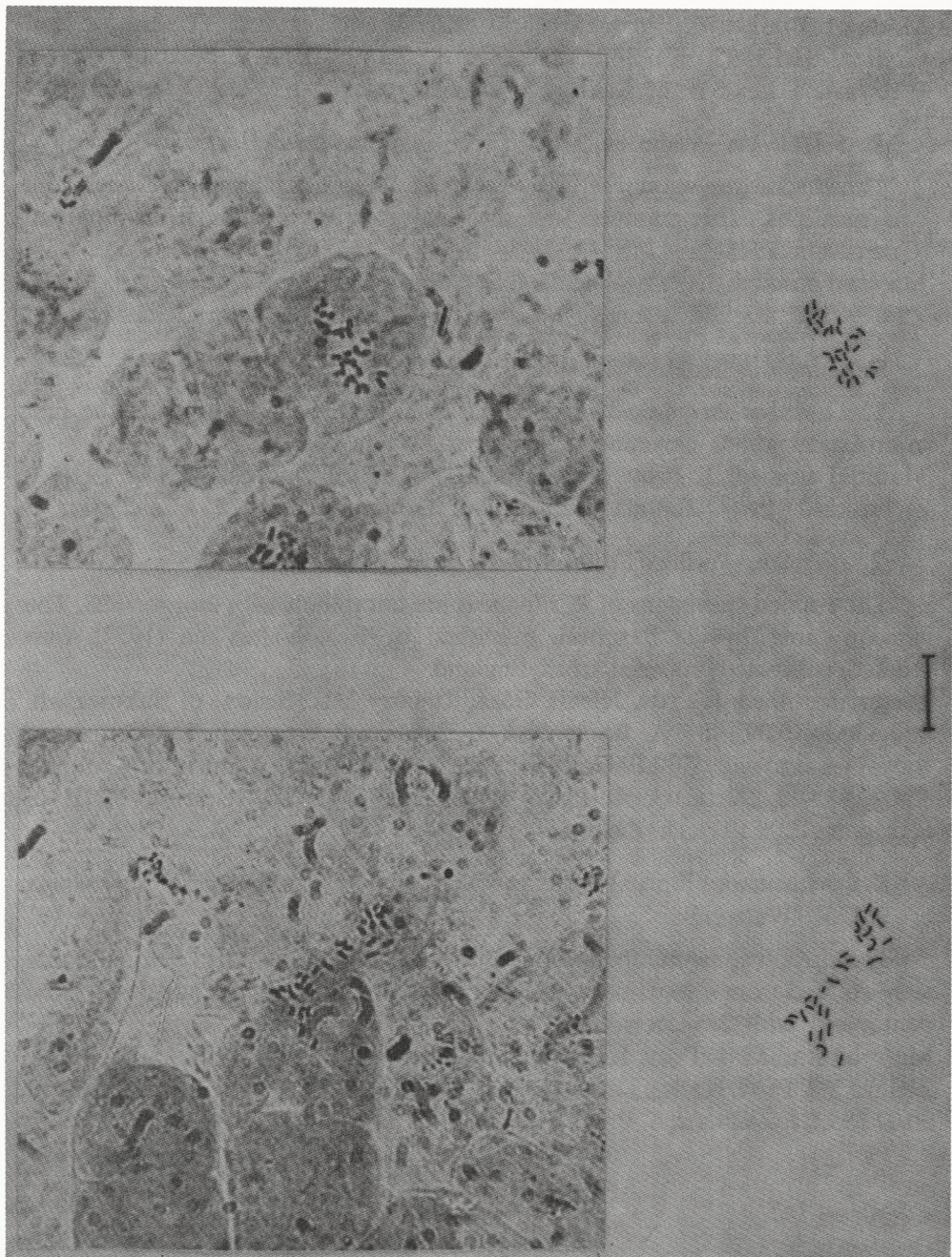


Fig. 1. *Rubus marssonianus* H. E. Weber – micrograph and drawing of metaphase of a root-tip cell.
Scale bar 10 μ .

Material studied: 1. Prov. Szczecin, Kłodkowo between Trzebiatów and Gryfice, 3.07.1992, K. Boratyńska, A. Dolatowska, J. Zieliński; 2. Prov. Wrocław, 1 km SW of Rakłowice near Milicz, 6.08.1992, J. Zieliński.

R. Schleicheri Weihe ex Tratt. [Sectio *Rubus*, serie *Hystrices* Focke]

The chromosome number $2n=4x=28$ has been established on plants from two localities. This number was also reported by Maude from England (Gustafsson 1943).

Material studied: 1. Prov. Jelenia Góra, Siodło Hill near Kowary, alt. 610m, 9.09.1987, J. Zieliński; 2. Prov. Kalisz, Laski, 30.07.1992, J. Zieliński.

R. senticosus Koehler ex Weihe [Sectio *Rubus*, series *Rubus*]

The number $2n=4x=28$ was found in two studied plants. It is the first information about chromosome number for the species.

Material studied: 1. Prov. Wałbrzych, 1 km SE of Dobroszów, 8.08.1991, J. Zieliński; 2. Prov. Zielona Góra, SE of Lubrza, 28.08.1992, J. Zieliński.

R. silesiacus Weihe [Sectio *Rubus*, series *Micantes* Sudre]

The studied specimens of *R. silesiacus* are tetraploids with $2n=4x=28$. The same number $2n=28$ has been published by Heslop-Harrison (1952), who studied cultivated material from England.

Material studied: 1. Prov. Jelenia Góra, Rudawy Mts., S slope of Bukowa, alt. 520-550 m, 9.09.1987, A. Boratyński, J. Zieliński; 2. Prov. Jelenia Góra, 2 km S of Wieściszowice, 9.09.1987, J. Zieliński; 3. Prov. Opole, 2 km W of Królowe, 15.07.1988, J. Zieliński; 4. Prov. Wałbrzych, Góra Zwycięstwa, NNE of Strzegom, 8.08.1991, J. Zieliński.

R. fabrimontanus (Sprib.) Sprib. [Sectio *Corylifolii* Lindley, series *Subradulae* W.C.R. Watson]

The chromosome number of this species has not been studied before. Plants were studied from 4 localities and in all cases *R. fabrimontanus* appeared to be pentaploid with $2n=5x=35$.

Material studied: 1. Prov. Kalisz, Łęka Opatowska SE of Kępno, 25.07.1991, J. Zieliński; 2. Prov. Kalisz, Laski, 30.07.1992, J. Zieliński; 3. Prov. Kalisz, ibidem, 30.07.1992, J. Zieliński; 4. Prov. Kalisz, NE of Brzeziny, 22.09.1988, J. Zieliński.

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Liczby chromosomów jeżyn rosnących w Polsce

Streszczenie

W pracy podane są wyniki kolejnych badań mających na celu ustalenie liczby chromosomów gatunków z rodzaju *Rubus* występujących w Polsce. Policzone chromosomy 8 gatunków, z których siedem: *R. armeniacus*, *R. lamprocaulos*, *R. marssonianus*, *R. pyramidalis*, *R. schleicheri*, *R. senticosus* i *R. silesiacus* to tetraploidy z $2n=4x=28$. Natomiast *R. fabrimontanus* jest pentaploidem z $2n=5x=35$.