CHROMOSOME NUMBERS OF CERTAIN HUNGARIAN PLANTS.

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With 1 Table and 23 figures in the text.

(Received for publication 6th August 1946.)

Cyto-geographical work began in Hungary during the war years. We have at first to make the chromosome-analysis of the Hungarian flora as a basis for further investigations. A study of the literature of this subject is not enough, as investigations along this line have not been sufficient. A complete study of the Hungarian flora from this standpoint is necessary.

I have made studies in the chromosome-numbers of certain plants living in different plant-societies on the peninsula of Tihany, Lake Balaton.

In determining the chromosome numbers I applied the technique which follows: I grew plants in greenhouses, in pots, and fixed the root-tips with NAVASIN's solution *(Navasin* 1934), and stained them with gentian violet according to CLAUSEN-JOHANNSEN-OEHLKERS *(Oehlkers* 1940). In certain cases, especially the buds, I fixed with CARNOY fixative and stained with aceto-carmine *(Geitler* 1940). The degree of magnification is shown by the scale in Figure 1.

In the accompanying Table I give the name and the habitat of the plant, data of literature, and the results of my own investigations.

Grateful acknowledgment is made to Mrs. J. Thompson Vass for the English translation.

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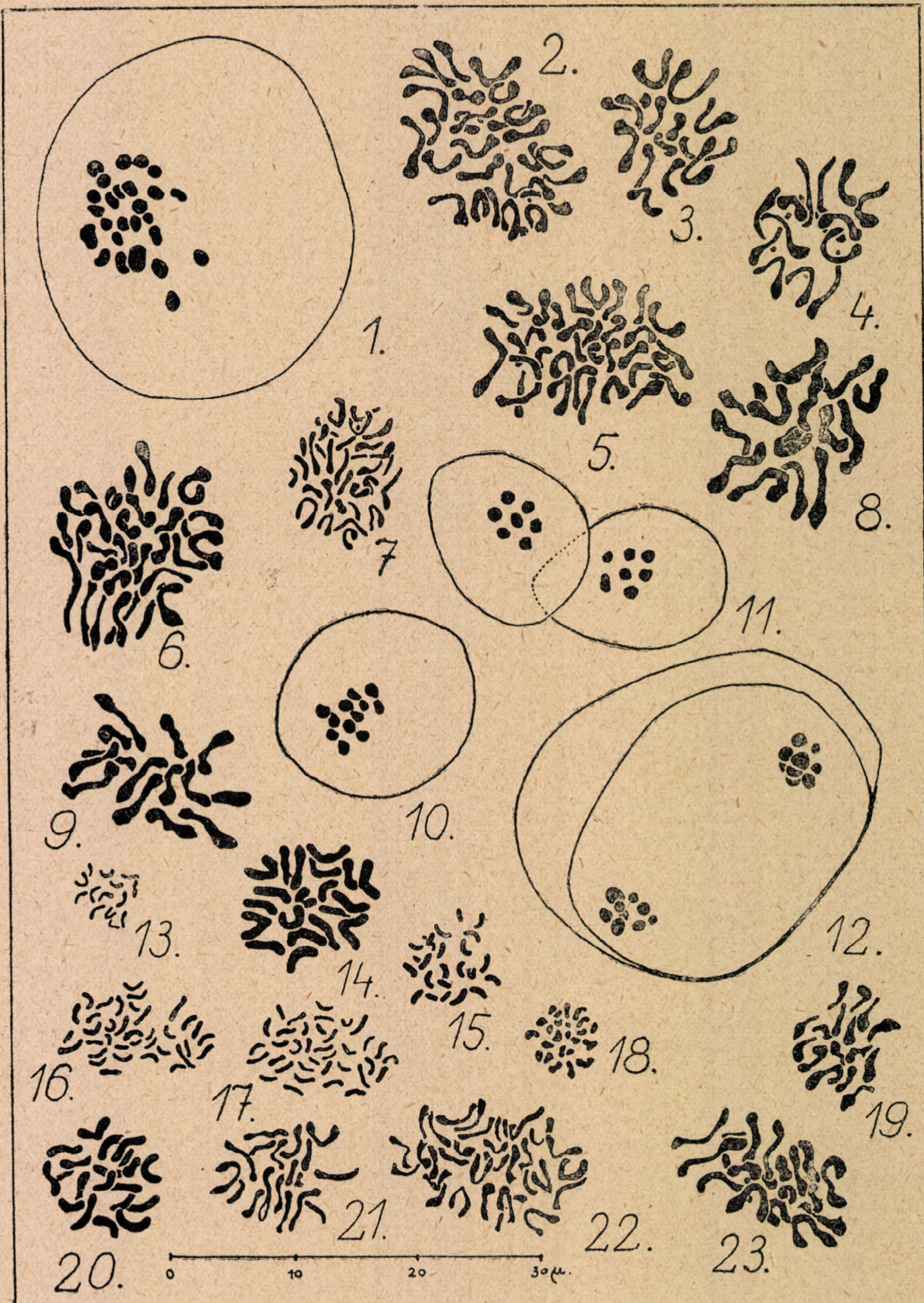

(Fig. 1.)

TABLE I.

No. *Name of plant*	*Habitat*	*Data of literature.*	*Own data.*	*Methodics.*
1. *Potamogeton perfoliatum* L.	Tihany: in lacu Balaton.	n = cca. 24 Wisniewska 1931. n = 26 Palmgren 1939.	n = 26. Fig. 1.	Bud of flower Acetocarmin.
2. *Festuca pseudovina* (Hack.) *Beck.*	Tihany: Akasztódomb.		2n = 28. Fig. 2.	Root-tips. Gentiana.
3. *Bromus commutatus* Schrad.	Tihany: sub monte Ovár.		2n = 14. Fig. 3.	—„—
4. *Bromus tectorum* L.	Tihany: in horto Inst. Biologici.	n = 7 Avdulov 1928, 1931. Stählin 1929. Cugnac-Simonet 1941, -a.	2n = 14. Fig. 4.	—„—
5. *Iris pseudacorus* L.	Tihany: in pratis paludosis Külsőtó.	n = 12 Longley 1928. n = 17 Simonet 1928, 1932. n = 15 Heppel ap. Löve-Löve 1942b.	2n = 34. Fig. 5.	—„—
6. *Caltha palustris* L.	„ „	2n = 58—59 Langlet 1927a. n = 16 Langlet 1927a. n = 16 Levitsky 1931b.	2n = 32. Fig. 6.	—„—
7. *Ranunculus sceleratus* L.	Tihany: in palude Belsőtó.	n = 16 Langlet 1936. Coonen 1939.	2n = 32. Fig. 7.	—„—
8. *R. polyanthemos* L. *f. latifolius* Wallr.	Tihany: in horto Inst. Biologici.	n = 8 Langlet 1932. Larter 1932.	2n = 14. Fig. 8.	—„—
f. villosus Beck.	„ „		2n = 14. Fig. 9.	—„—
9. *Chelidonium majus* L.	Tihany: Templomdomb.	n = 6 Sugiura 1936. Turesson 1938. n = 5 Nagav-Sakai 1939. n = 6 Bowden 1940.	2n = 12. Fig. 10.	Bud of flower Acetocarmin
10. *Papaver rhoeas* L.	Tihany: Kiserdőcsúcs.	n = 7 Ljungdahl 1922. Wilcins et Abele 1927. Lawrence 1930. Jamasaki 1936. Sugiura 1940.	n = 7. Fig. 11.	Bud of flower Gentiana
11. *Sinapis arvensis* L.	Tihany: Templomdomb.	n = 9 Nagai-Sasaoka 1930. Turesson: Löve-Löve 1942. Chopinet 1942.	n = 9. Fig. 12.	Bud of flower Acetocarmin
12. *Fragaria collina* Ehrh. *(Fr. viridis* Duchesne.)	Tihany: sub mt. Akasztódomb.	n = 7 Yarnell 1929a. Rudloff 1930. Schiemann 1937.	2n = 14. Fig. 13.	Root-tips. Gentiana.
13. *Helianthemum ovatum* (Viv.) Dun. *f. typicum* Beck.	Tihany: Óvár.	n = 10 Bowden 1940.	2n = 20. Fig. 14.	—„—
14. *Calystegia sepium* (L.) R. Br.	Tihany: ad ripam lacus Balaton.	n = 11 Kano 1929. n = 12 Percy 1936. Wolcott 1937.	2n = 24. Fig. 15.	—„—
15. *Clechoma hederacea* L. *f. micrantha* (Bönn.) Rouy.	Tihany: sub mt. Akasztódomb.	n = 9 Scheerer (Tischler in litt.) — n = 12 Löve-Löve 1942.	2n = 36. Fig. 16—17.	—„—
16. *Salvia aethiopis* L.	Ad viam versus Tihanyrév.	n = 11 Yakovleva 1933. n = 12 Hruby 1934.	2n = 24. Fig. 18.	—„—
17. *Valeriana dioica* L.	Tihany: Külsőtó.	n = 8 Meurman 1925a., b.	2n = 16. Fig. 19.	—„—
18. *Eupatorium cannabinum* L.	Tihany: ad ripam lacus Balaton.	n = 10 Löve-Löve 1942.	2n = 20. Fig. 20.	—„—
19. *Bellis perennis* L. *f. denticulata* Beck.	Aszófő: ad rivum Aszófői patak.	n = 9 Winge 1917. Blackburn 1934. Negodi 1935, 1937.	2n = 18. Fig. 21.	—„—
20. *Inula conyza* DC.	Tihany: Óvár.	n = 16 Tongiorgi 1935.	2n = 32. Fig. 22.	—„—
21. *Achillea millefolium* L. *var. collina* Becker.	Tihany: Külsőtó.	n = 24 Clausen-Keck-Hiesey 1940; Turesson 1938.	2n = 18. Fig. 23.	—„—

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Fig. 1. Potamogeton perfoliatum $n = 26$; 2. Festuca pseudovina $2n = 28$; 3. Bromus commutatus $2n = 14$; 4. B. tectorum $2n = 14$; 5. Iris pseudacorus $2n = 34$; 6. Caltha palustris $2n = 32$; 7. Ranunculus sceleratus $2n = 32$; 8. R. polyanthemos f. latifolius $2n = 14$; 9. R. polyanthemos f. villosus $2n = 14$; 10. Chelidonium majus $2n = 12$; 11. Papaver rhoeas $n = 7$; 12. Sinapis arvensis $n = 9$; 13. Fragaria collina $2n = 14$; 14. Helianthemum ovatum $2n = 20$; 15. Calystegia sepium $2n = 24$; 16—17. Glechoma hederacea f. micrantha $2n = 36$; 18. Salvia aethiopis $2n = 24$; 19. Valeriana dioica $2n = 16$; 20. Eupatorium cannabinum $2n = 20$; 21. Bellis perennis $2n = 18$; 22. Inula conyza $2n = 32$; 23. Achillea millefolium var. collina $2n = 18$.