

E. KLIPHUIS, TH. W. J. GADELLA and E. P. DORRAT-HAAKSMA:
Chromosome numbers of *Parnassia palustris* L. in the Netherlands
 (Botanical Museum and Herbarium, Utrecht)

In Sweden ERLANDSSON (1942) showed that the species *Parnassia palustris* L. has two chromosome numbers, $2n = 18$ and $2n = 36$. ROZANOVA (1940) found the same numbers in plants collected in the U.S.S.R. Some morphological differences could be demonstrated in the Swedish material (ERLANDSSON, 1942). This was confirmed by LÖVE and LÖVE (1944) and, therefore, these authors (1950) distinguish 2 species: the diploid *Parnassia palustris* L. em. Löve and the tetraploid *Parnassia obtusiflora* Rupr. em. Löve, also separated by sterility barriers and by their geographical distribution.

In the Netherlands a tetraploid population was found by GADELLA and KLIPHUIS (1963). As the tetraploid population occurs in an area situated far south of the circumpolar distribution area of the tetraploid plants, it seemed worthwhile

TABLE

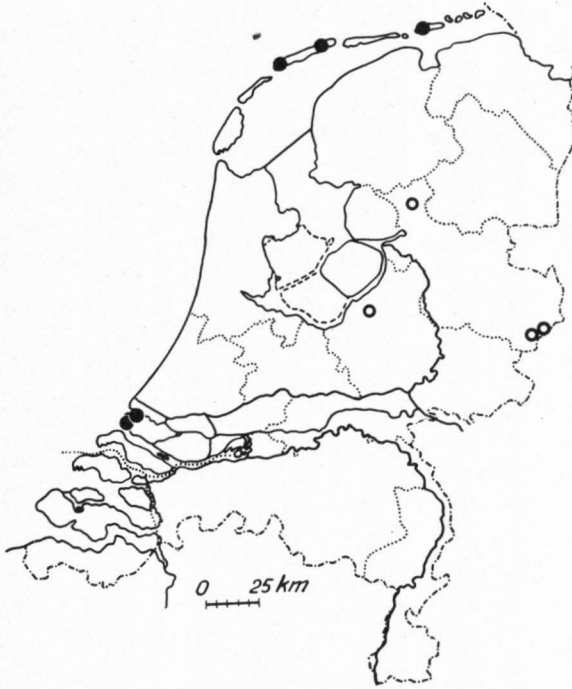
The number of chromosomes of the plants examined cytologically, with reference to the origin of the material.

Origin of the material	number of plants	2n
Bosplaat, Isle of Terschelling (Prov. Friesland)	10	18
Noordsvaarder, Isle of Terschelling (Prov. Friesland)	11	18
1½ km. N. of Oosterburen, Isle of Schiermonnikoog (Prov. Friesland)	6	18
Groene Punt, W. of Rockanje, Isle of Voorne (Prov. S. Holland)	10	18
Near Oost-Voorne, Isle of Voorne. (Prov. S. Holland)	6	18
Aamsveen, E. of Enschede (Prov. Overijssel)	3	36
Het Buurserzand, E. of Haaksbergen (Prov. Overijssel)	4	36
De Grote Otterskooi, near Tijssengracht, W. of Giethoorn (Prov. Overijssel)	7	36
Between Nieuw Milligen and Ermelo (Prov. Gelderland)	9	36

to determine the chromosome numbers of other plants of *Parnassia palustris* L. growing in the Netherlands.

Mrs. E. P. Dorrat-Haaksma collected 66 plants of 9 different localities in the Netherlands. The plants were dug out and reared in pots in the open. Roottips were fixed in Karpechenko, embedded in paraffin, sectioned at $15\ \mu$ and stained according to Heidenhain's haematoxylin method. Voucher specimens have been deposited in the herbarium of the State University of Utrecht (U).

The results with respect to the chromosome numbers, together with the place of origin of the material, are given in the table, the distribution of the cytotypes is shown on the map.



The distribution of the investigated diploid and tetraploid plants of *Parnassia palustris* L.; Solid circles: diploids; Open circles: tetraploids.

It appeared that in the dunes only diploid plants were found, whereas the plants collected elsewhere all showed the number $2n = 36$. A preliminary investigation of the diploid and tetraploid plants did not reveal the existence of significant morphological differences. However, more extensive investigations are necessary to corroborate this statement. Biometric investigations on a large scale of some diploid and tetraploid populations are in progress.

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