

CERASTIUM PUMILUM CURT. IN THE NETHERLANDS

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SUMMARY

The author gives a discussion on the occurrence and distribution of *Cerastium pumilum* in the Netherlands. Two subspecies have been collected in this country, viz. subsp. *pallens* (F. W. Schultz) Schinz & Thell., and subsp. *pumilum*. Often the plants grow on sea-dikes, though both subspecies have also been found further inland.

1. INTRODUCTION

There has been much confusion about the occurrence of *Cerastium pumilum* in the Netherlands. In the nineteenth century, a number of records has been given in the literature, usually under other names (*C. glutinosum* Fr.; *C. semidecandrum* L. β *glutinosum* Fr.), but after an examination of the voucher specimens in the herbaria in the Netherlands, it turned out that most of these had to be referred to other species, most frequently to *C. diffusum* Pers. (= *C. atrovirens* Bab.; *C. tetrandrum* Curt.), sometimes also to the far more common *C. semidecandrum* L. This throws a severe doubt on all reports in the older literature, that cannot be checked with dried specimens.

In *Flora Europaea* (SELL & WHITEHEAD 1964, p. 145), three subspecies of *C. pumilum* are mentioned. Subspecies *litigiosum* (De Lens) P.D. Sell & Whitehead, with petals at least 1 mm longer than the sepals is reported from C. Europe, N. Italy and Kriti; indeed, no specimens could be found in the material from the Netherlands, that answered the description of this subspecies. On the other hand, both other subspecific taxa could be clearly identified. The most trustworthy character appears to be the presence of a narrow scarious margin along the bracts of the inflorescence, with a width less than 1/8th of the length of the bracts. In the subsp. *pallens* this scarious margin is present along all bracts, in the subsp. *pumilum* it is lacking along the (lowest) first-order bracts. In this character a major difference can also be found which separates *C. pumilum* from its other relatives in The Netherlands; in *C. diffusum* all bracts lack scarious margins, while in *C. semidecandrum* they are very wide, and often decurrent almost to the base of even the lowest bracts.

Due to the scarce collections of *C. pumilum* from The Netherlands, the value of the other given characters could not be extensively checked, but no great deviations were found. Only the length: width ratio of the petals (given in *Flora Europaea* as c. 3:1 in subsp. *pumilum*, and c. 2.5:1 in subsp. *pallens*) was sometimes found at variance with the given data, in that material otherwise well



Fig. 1. *Cerastium pumilum* Curt. subsp. *pumilum*: habit.

recognizable as subsp. *pumilum* had too wide petals. In *fig. 1* the habit of *C. pumilum* subsp. *pumilum* is shown, drawn from material collected near Mook (prov. of Limburg, square Q6.22) in 1937.

2. DISTRIBUTION AND SYNTAXONOMIC PLACE OF *C. PUMILUM* IN THE NETHERLANDS

When the localities at which *C. pumilum* has been found so far, are plotted on a map of the Netherlands, a somewhat erratic distribution pattern results (*fig. 2*). Obviously, however, most of the localities are concentrated in the coastal area. The annotations on the herbarium sheets often mention the habitat as being a sea-dike. This is hardly in agreement with the placing of *C. pumilum* as a character species in the *Festuco-Sedetalia (acris)*, as is done by WESTHOFF & DEN HELD (1969).

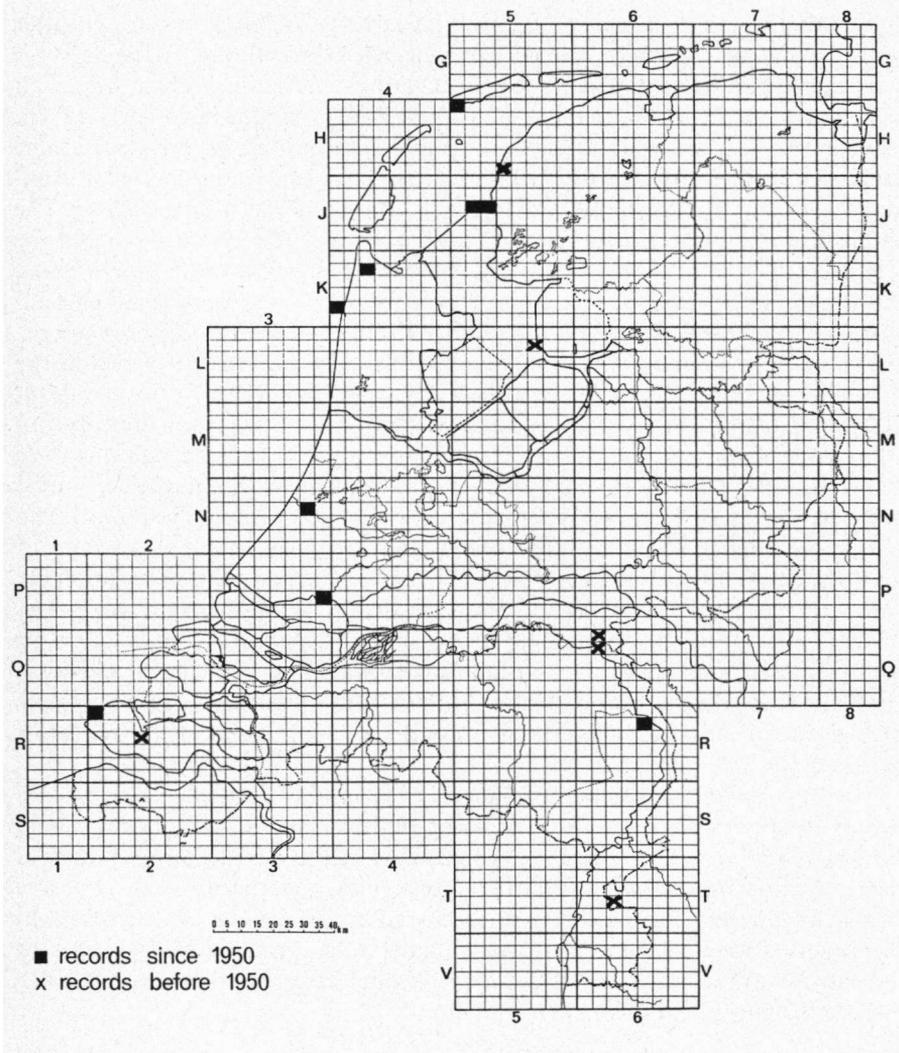


Fig. 2. Distribution map of *Cerastium pumilum* Curt. in The Netherlands.

Unfortunately none of the collectors of *C. pumilum* in The Netherlands has given much further information on its habitat or the accompanying species. At present the syntaxonomic position of the species at the dike localities cannot be judged properly. As to the inland populations some more information can be found in literature from neighbouring countries. For instance, GARCKE-VON WEIHE (1972) mentions for *C. pumilum* as a whole: "Wege, Böschungen, Trockenrasen; nährstoff- u. kalkhaltige, meist sandige Böden", and for both subsp. *pallens* and subsp. *pumilum*: "Selten, Verbreitung ungenügend bekannt", the latter remark indicates that, indeed, the species is also rare

in Germany and adjacent parts. ROTHMALER (1976) gives for *C. pumilum* subsp. *pumilum*: "Lückige Xerothermrassen, Ephemerennfluren, trockene Wegränder, Äcker", for *C. pumilum* subsp. *pallens* the same habitats save "Äcker". It is unknown whether the habitat of *C. pumilum* in the easterly parts of The Netherlands can be compared with these circumscriptions, or not. Only at one locality near Geijsteren (prov. of Limburg, square R6.25), the species was undoubtedly found in an arable field, together with *Cerastium semidecandrum*. The latter species, however, is differential for the *Koelerio-Corynephoretea* and the *Festuco-Brometea* in The Netherlands, both belonging to a formation of grassland communities. Maybe, therefore, the record of *C. pumilum* in an arable field is not characteristic of its typical habitat. Within the *Koelerio-Corynephoretea*, the inland populations of *C. pumilum* might indeed have to be placed in the *Festuco-Sedetalia*, as do WESTHOFF & DEN HELD (1969), or in the *Sedo-Scleranthetalia*, more precisely in the alliance *Alysso-Sedion*, as is done by ELLENBERG (1978) for *C. pumilum* in Central Europe. According to WESTHOFF & DEN HELD (1969, p. 160), the *Alysso-Sedion* is only very fragmentarily developed in the Netherlands, however. When a place for *C. pumilum* should be found in the *Festuco-Brometea*, the association *Medicagini-Avenetum pubescentis* would likely offer it; WESTHOFF & DEN HELD (1969, p. 163) mention this association for warm, dry places rich in bases and often in calcium, along the big rivers in The Netherlands, especially on the river-facing slopes of natural levees, but also on south-exposed river dikes. It is optimally developed along the river Gelderse IJssel and along the Limburgian part of the river Maas; indeed, the growing-places of *C. pumilum* in the Netherlands' interior are more or less confined to the latter surroundings.

Finally, *C. pumilum* has been found in the vicinity of Leiden (square N3.37) where the species has been observed along railways, and at Apeldoorn (square N6.13), where it was collected on the grounds of a pharmaceutical industrial plant. At least in the latter case, the species may have occurred merely as a casual, and therefore this record is not included in the map (fig. 2). Near Leiden, the reported massive number of individuals at the growing-places seems to indicate a naturalized status (if not a native one), for which reason I prefer to include this locality in the map.

3. LIST OF INCLUDED RECORDS

Until now, twenty collections or reliable reports in the literature of *C. pumilum* have become known from The Netherlands; they are listed below. For a survey of the proved misidentifications in the past, as well of the doubtful records in literature, the reader is referred to the earlier publication on *C. pumilum* in the Atlas of the Netherlands Flora (VAN DER MEIJDEN & HEUKELS 1980).

1. Isle of Terschelling (square H5.11); VAN DER PLOEG (1977, p. 18); subspecies unknown.
2. Harlingen, outer harbour (square H5.64); leg. D. Koopmans-Forstmann & A. N. Koopmans, 1926 (Herb. L); subsp. *pallens* as well as subsp. *pumilum*.

3. Afsluitdijk (Enclosure dike of the former Zuiderzee; square J5.32); VAN DER PLOEG (1977, p. 18); subspecies unknown.
4. Kornwerderzand, outer harbour (square J5.33); leg. G. de Jong & D. T. E. van der Ploeg, 1960 (Herb. L.); subsp. *pumilum*.
5. Kornwerderzand (square J5.33); leg. D. T. E. van der Ploeg, 1961 (Herb. L.); subsp. *pumilum*.
6. Afsluitdijk between Kornwerderzand and De Kop (square J5.33); leg. D. T. E. van der Ploeg, 1969 (Herb. L.); subsp. *pumilum*.
7. Urk, De Top (square L6.26); leg. J. Swart, 1928 (Herb. L.); subsp. *pallens*.
8. Apeldoorn, on the grounds of a pharmaceutical industrial plant (square N6.13); leg. F. Adema, Joh. Bolman, H. P. van Heel & S. J. van Ooststroom, 1974 (Herb. L.); subsp. *pumilum*. Probably adventitious, hence not included in the map.
9. Groesbeek (square Q6.12); leg. Joh. Jansen, 1937 (Herb. L.); subsp. *pallens*.
10. Square K4.23 (inventory list in the IVON-files, Rijksherbarium, Leiden); 1973; subspecies unknown.
11. Hondsbossche Zeewering (square K4.51); leg. M. & G. Kruseman, 1967 (Herb. L.); subsp. *pallens*.
12. Leiden, railroad N. of the town, in great number (square N3.37); leg. R. van der Meijden & F. Adema, 1975 (Herb. L.); subsp. *pumilum*.
13. Leiden or immediate surroundings, square N3.37 (inventory list in the IVON-files, Rijksherbarium, Leiden); between 1955 and 1960; subspecies unknown.
14. Leiden, close to the N.W. part of the city, square N3.37 (inventory list in the IVON-files, Rijksherbarium, Leiden); 1973; subspecies unknown.
15. Stormpolder near Rotterdam (square P3.48); W. G. Beeftink, written communication (regional distribution map for S.W. Netherlands), since 1950; subspecies unknown.
16. Between Domburg and Westkapelle, square R2.11 (inventory list in the IVON-files, Rijksherbarium, Leiden); 1961 or later; subspecies unknown.
17. Nieuw- en St. Joosland (square R2.34); leg. D. Lako, 1877 (Herb. L.); subsp. *pallens*.
18. Mook (square Q6.22); Joh. Jansen, 1937 (Herb. L.); subsp. *pumilum*.
19. Geijsteren (square R6.25); leg. R. van der Meijden, 1975 (Herb. L.); subsp. *pumilum*.
20. Square T6.43 (S.E. of Sittard); leg. n.n., before 1950 (Herb. L.); subsp. *pallens*.

4. FINAL COMMENT

Cerastium pumilum is a dwarfish plant, often not exceeding 5 cm in height; the small dimensions, the inconspicuous flowers and maybe also the rather early flowering-time (May-June) make it difficult to detect the plants, and the species may have been overlooked at several occasions; one might be inclined to suppose that *C. pumilum* may be found more often in the future, if our botanists will pay adequate attention to this species. This would be very desirable, in order to get a better knowledge of its ecology in The Netherlands.

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