

JONKER, F. P.: *Hypericum canadense* in Europe

In 1935 the present author reported the occurrence of this N. American species in the eastern part of Holland, province of Overijssel, in the vicinity of Almelo (JONKER, 1935). He found the species near the hamlet of Harbrinkhoek on a wet heath. The locality was also the only station of *Wahlenbergia hederacea* in the Netherlands, discovered a year before. Notwithstanding the extensive reclamations in that part of the country the species now still occurs in a number of localities around Almelo. The plants cannot be considered adventitious as they were found in places that are comparatively little influenced by human culture, judging from the occurrence, on the first-discovered locality, of e.g. *Wahlenbergia hederacea*, *Gentiana pneumonanthe*, *Viola palustris*, *Radiola linoides*, *Linum catharticum*, *Scutellaria minor*. The late Dr. Wachter discovered, in the herbarium of the Royal Botanical Society of the Netherlands, unidentified specimens of *Hypericum canadense* collected by Lako as early as 1909 in the same environment, perhaps even in the same station; and Dr. van Soest identified two specimens collected in 1918 by the late naturalist Bernink near Denekamp, about 20 km E of the above mentioned localities.

BOUCHARD (1953, 1954, 1955) reported the discovery of the species in France, dept. Haute-Saône. The plants were found in large quantities, at the stony beach of oligotrophous lakes, together with *Littorella uniflora*. In his detailed publication of 1954 he discussed the possibilities of introduction. He concluded that the plants are not adventitious. They may be autochthonous or naturalized and then, when the latter is the fact, probably by U.S. army units that stayed in that area during world war I. He did not preclude, however, the possibility of a glacial relic. Bouchard overlooked the previous publication reporting the occurrence in Holland.

WEBB (1957), who reported the finding of the species in Ireland overlooked both Bouchard's and Jonker's publication, mentioning only the former in a note added during the printing. He discovered a single, poorly developed specimen in 1954 and tried to grow it in his garden. When visiting the locality again, in 1956, he discovered large quantities and consequently was in a position to identify the species. The locality had been visited in 1932 without the species being discovered. Webb is inclined to consider the species a new representative of the American element in the Irish flora. In a later publication he also considered the occurrence in Holland and France (WEBB, 1958). In that paper he discussed three possibilities: 1. recent introduction by human agency; 2. a recent arrival by natural means, 3. it is an old-established native. In his opinion the balance of evidence is in favour of supposing that the species is relic in Ireland and on the European continent. McCLINTOCK (1958), in the same periodical, added a report of his visit to the locality in August, 1956, and stated that he found the plant in abundance.

MERKMÜLLER and VOLLRATH (1956) reported the finding, in 1949, of the related N. American *Hypericum majus* (Gray) Britt., formerly considered a variety of *H. canadense*, near Weiden in Germany, in a sand pit where it had been introduced, in all likelihood, by U.S. military units during world war II. They wondered whether Bouchard's plants also belong to that species. But as Bouchard compared his material with specimens from Canada, we should perhaps leave the finding of this related species in Germany out of consideration.

The first-known occurrence in Europe is consequently Holland, 1909, followed by the rediscovery in that country and by discoveries in France and Ireland. The three localities are remote and little influenced by human activities. Moreover, they had not been investigated very thoroughly before.

The present author has discovered the species from 1935 onwards in several localities around Almelo, and thinks it very peculiar that it had been overlooked before, both by him and by other botanists and amateurs. The French locality is not well known. But also in Ireland the species was discovered in a locality in which it was not found in 1932. In 1954, a single specimen was found and in 1956 it occurred in plenty. These facts do not give the impression that the species has

recently been introduced into Europe. Possibly it is a relic that had been able to maintain itself in only a few localities in Europe, in contrast to North America where it is rather common. But there are indications that the species has spread intensively around the few European stations during the last 20 years. Reclamations, however, limited this almost explosive expansion, at least in the Netherlands.

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