

HOW MANY SPECIES OF VASCULAR PLANTS GROW WITHOUT CULTIVATION IN MASSACHUSETTS?—Such a question is not easy to answer. The principal reason is that, in all its long history, the State of Massachusetts has never had a book produced to reveal to the interested person the composition of the flora covered within its exact boundaries.

In order to arrive at an estimate of the number of species present, I have used several sources each covering the flora of only a part of the State. The results of my tabulations are here given so that interested persons will not have to repeat the chore. The primary source is the series of "Reports on the Flora of the Boston District" begun in *Rhodora* in 1907 and continued until 1924. These "Reports" were prepared by the Committee on Local Flora of the New England Botanical Club. The composition of the Committee changed some over the years but two members, C. H. Knowlton and Walter Deane, were conspicuous in its activities throughout, and for most of the period of the "Reports" they alone made up the Committee.

The "Boston District" was liberally interpreted and, for the purposes of the "Reports," was considered to include eastern Massachusetts excluding Cape Cod. The area covered extended east from a north-south line along the eastern edge of Worcester County from the New Hampshire line to the Rhode Island boundary at Bellingham and north of a line from there east to the coast at Duxbury. In this area are found 2098 species of which 786 are introduced from outside the area, most of them from the old World.

THE FLORA OF BERKSHIRE COUNTY, MASSACHUSETTS, by Ralph Hoffman¹ was used to determine the species that occur in western Massachusetts not found in the flora of the "Boston District." There are 300 such species. THE FERNS AND FLOWERING PLANTS OF NANTUCKET, by Eugene P. Bicknell, appeared in a series in the *Bulletin of the Torrey Botanical Club* beginning in 1908 and ending in 1917. These reports were checked against the "Flora of Berkshire County" and the "Flora of the Boston District" to determine how many species from Nantucket did not occur in the other two areas. There are 83 additional species. THE FLORA OF THE ELIZABETH ISLANDS, by John M.

¹ *Proc. Bost. Soc. Nat. Hist.* 36: 173-382. 1922.

Fogg, Jr.² was checked against the other three works but no species were found that were not included in at least one of them. A further check, using a list from Cape Cod, would have been advisable but a flora for that area comparable to the others could not be found.

From the above procedure, an estimate of 2481 species of plants growing within the boundaries of Massachusetts was arrived at. In a series of cross checks, the introduced plants, when they did occur in western Massachusetts or on Nantucket, also appeared in the "Flora," so that the figure of 786 obtained from the "Flora of the Boston District" may be safely used to estimate the number of indigenous species within the State. There are approximately 1675 indigenous species. In other words, about 70% of the species now in our flora are native and about 30% are introduced from elsewhere.—R. C. ROLLINS.

CIRSIUM FLODMANI (Rydb.) Arth., f. **albiflorum**, forma nova.—In July 1952, when the author was collecting on the dry prairie about 10 miles WSW of Langruth, Manitoba, her attention was caught by a stand of snowy white thistles. It proved to be a white-flowered form of *Cirsium Flodmani* (Rydb.) Arth., which has not yet been named in botanical literature. No normal purple-flowered nor any intermediate-colored thistles were found in the vicinity, but aside from the white flowers the plants were typical for the species (cf. Ownbey, 1952).

Cirsium Flodmani (Rydb.) Arth. f. **albiflorum** f. nova: A typo differt in floribus albis. Specimen typicum in Herbario Univ. Manitobensis (Á. & D. Löve, no. 5672, 1952) conservatum.

The distribution of the form is not thoroughly known. Inside Manitoba it had previously been collected by Dr. H. A. Senn (coll. no. 6185) 6 miles west of Letellier in Manitoba (Frankton in lit.). There is also a collection from Tyvan, Saskatchewan (Coupland & Hubbard, 29-7-45), which has been reported as *C. plattense* by Tisdale & Budd (1948), but has later been revised to *C. Flodmani* at Ottawa (Frankton, in lit.; cf. also Budd, 1953). In the herbarium of the University of Wisconsin at Madison another so-called *C. plattense* (coll. Dr. H. Hapeman, June 10,

² RHODORA, 1930. [Contrib. Gray Herb. XCI].



Rollins, Reed C. 1954. "How many species of vascular plants grow without cultivation in Mass.?" *Rhodora* 55, 361–362.

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