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A COMPARATIVE STUDY OF THE RED-SEEDED AND COMMON DANDELION

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To the casual observer the dandelions which prove so serious a pest in lawns and elsewhere, appear to be of only one species. Upon closer investigation, it is found that there are two common species, the Common Dandelion, *Taraxacum taraxacum* (L) and the Red-seeded Dandelion, *Taraxacum erythrospermum* (Andrz). These two species are the most easily distinguished by their seeds which are an olive brown and dark red color respectively.

In making this study most of the observations were taken within a mile of the campus of Iowa Wesleyan College although comparisons were made over a much wider territory. Seven location types were recognized and well scattered plots from these varying habitats were studied.

The first problem was to determine, if possible, the relative number of plants of the two species in each area. Counts of one hundred plants, taken at random, were made with the following results.

Location of Count	No. of Common Dandelion Plants	No. of Red-Seeded Dandelion Plants	Percentage of Common Dandelion Plants	Percentage of Red-Seeded Dandelion Plants	Ratio
1. Old tennis court	83	17	83	17	.204
2. Orchard	83	17	83	17	.204
3. Campus	86-46	14-54	66	34	.515
4. Neglected lawns	99-74-100-63	1-26-0-37	84	16	.190
5. Pastures	98-68-85-88-74	2-32-15-12-26	82⅘	17⅕	.210
6. Along R. R. track	94-96-97-95	6-4-3-5	95½	4½	.047
7. Well kept lawns	100-100-80	0-0-20	93⅓	6⅔	.071
Total	1709	291	85.45	14.55	.170

It was next undertaken to determine the relative prolificacy of each of these species. The number of flower heads on ninety-five Common Dandelion plants, taken at random throughout the different areas studied, were counted. The smallest was one head; the largest number 258. The total was 1236 heads or an average of twelve heads per plant.

The same number of Red-seeded plants were counted. The

number of heads per plant ranged from one to ninety, with an average of nine heads per plant.

Next, the number of seeds produced by a head on the Common Dandelion was compared with those produced by a head on the Red-seeded Dandelion with results as follows: The seeds were counted on 23 heads of each species. The number of seeds on the Common Dandelion heads ranged from 84 to 282 with an average of 190 per head. With the Red-seeded species the number ran from 71 to 182 with an average of 107.

These averages multiplied by the average heads per plant give a comparative ratio of 1900:969 or about 2:1 in favor of the Common Dandelion. It is noticeable that the Common Dandelion makes a much ranker growth than the Red-seeded species and that it seems to stand competition of tall growing grasses much better than its relative. The Red-seeded one seems to prefer shady places where there is scarcity of grass, also a sandy soil. As is well known, the Common Dandelion will grow anywhere. The Red-seeded variety seems to appear earlier than the common variety as on the former plants scarcely any flowering buds or flowers were present at the time of examination but an abundance of seed heads was found. The color of the flowering heads of the two varieties differs somewhat in that the head of the Common Dandelion is a brighter golden yellow while that of the Red-seeded species is a darker orange yellow. But this difference is not marked unless flowers of each are held together and examined.

No difference in the root system could be found except that the roots of the Common Dandelion seemed more brittle and less easy to dig out of the ground than the roots of the Red-seeded Dandelion. This, however, does not appear to be a constant difference.

Upon investigation of the bracts of the involucre of both species it appears that the Common Dandelion bears more bracts to the head. They are tinged with a dark green and curled downwards while the bracts of the Red-seeded species stand straight out prominently, are tinged with red and the involucre, on the whole, is glaucous.

Effort was made to find some constant difference in the leaves but no conclusion could be reached in this respect. Large numbers of leaves of the two species were collected, pressed and compared. It was found that the leaves of the Red-seeded Dandelion average more deeply cut while those of the Common species are more nearly

entire. However, several red-seeded plants were found which had leaves comparatively entire as were plants of the Common species having leaves extremely notched.

In general, the Common Dandelion was found to be more numerous although on one part of the campus the Red-seeded ones were more abundant. For a distance of two blocks east of the campus not a single Red-seeded plant could be found but for the same distance north of the campus the Red-seeded plants were very numerous. The question thus arises as to whether there are special seed beds of these plants and, if so, what conditions favor them.

A definite conclusion, however, has been reached as to the color and shape of the seeds. The seeds of the Red-seeded Dandelion are of reddish brown color and in cross section are oval shaped while the seeds of the Common Dandelion are a greenish brown color and quite sharply notched, bearing tiny hairy filaments.

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