

Sample CSE Reference List, Botany

Distribution Pattern of Dandelion 5

golf course was not random. The mean number of dandelion plants per quadrat was 1.05 (SD = 2.50), and the coefficient of dispersion was 5.95. A *t*-test showed that this value is significantly greater than 1.0 ($t = 36.7$, $df = 110$, $P < 0.001$), which strongly supports an aggregated distribution of the dandelion plants.

DISCUSSION

An aggregated (clumped) distribution is the most commonly observed distribution type in natural populations ⁴. Among plants, aggregated distributions often arise in species that have poorly dispersed seeds or vegetative reproduction ². In the dandelion, the seeds are contained in light, parachute-bearing fruits that are widely dispersed by the wind. This method of seed dispersal would tend to produce a random distribution. However, dandelion plants also reproduce vegetatively by producing new shoots from existing taproots, and what we considered as groups of closely spaced separate individuals probably represented shoots originating from the same plant. Thus, vegetative reproduction probably accounted for the observed aggregated distribution in this species.

REFERENCES

1. Ketchum J. Lab manual for Botany 100; 2005.
2. Kershaw KA, Looney JHH. Quantitative and dynamic plant ecology. 3rd ed. London: Edward Arnold; 1985.
3. Zar JH. Biostatistical analysis. 5th ed. Englewood Cliffs (NJ): Prentice Hall; 2005.
4. Begon M, Harper JL, Townsend CR. Ecology: individuals, populations and communities. Oxford: Blackwell Science Limited; 1996.

Writers interpret their results and compare them with results of other researchers.

Sources are listed and numbered in the order in which they appear in the text.