Example: Calculating Lakewide Plant Density Ratings

Melissa collected Coontail at 19 of the 45 sampling sites on her lake. The Density Rating of Coontail at the 19 sites varied from "Found" to "Dense". She wants to determine the Lakewide Density Rating of Coontail in her lake.

Her calculations are shown in the chart below.

First, she calculates the "Total Density Points" for Coontail:

1. She tallies the number of observations (sites) of Coontail for each Density Rating.
   - In her survey, Coontail was "Found" at 2 sites, "Sparse" at 10 sites, and so on.

2. She then multiplies the number of observations by the multiplication factor for each Density Rating.
   - The multiplication factor for "Found" is 1, "Sparse" is 2, and so on. Coontail was listed as "Found" at 2 sites. The Multiplication Factor for "Found" is 1, so multiply 2 x 1 = 2 density points.

3. She adds the Density Points for each Density Rating to find the Total Density Points for Coontail. In this example, the Total Density Points = 50.

There were 15 sampling transects in the lake, giving 45 sampling sites. Coontail was present at **19** sites in the densities identified below.

Density	Number of observations **x**	Multiplication factor **=**	Total density points
Found	2	1	2
Sparse	10	2	20
Moderate	2	3	6
Heavy	3	4	12
Dense	2	5	10
TOTAL	19		50

50 (total density points) / 45 (sampling sites) = 1.1 (lakewide density rating)

An average lakewide density rating of 1.1 is slightly above the "found" level.

Record observations **(19)** and average lakewide density rating (1.1) on the data sheet.

The final step is to calculate the Lakewide Density Rating for Coontail: She divides the Total Density Points for Coontail by the total number of sampling sites on her lake. *In this example, the Total Density Points for Coontail is 50, and there were 45 sites sampled, so the Lakewide Density Rating is 50 ÷ 45 = 1.1.*

Note that a Lakewide Density Rating of 1.1 is just slightly above "Found", from a lakewide perspective. That is, even though Coontail was Heavy or even Dense at a few sites around her lake, overall, it was not very abundant.

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