

Intermediate Disturbance Hypothesis Lab Report

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Table 1: *Morphospecies*_{A,B,C}

M_A : No disturbance	M_B : Mid disturbance	M_C : High disturbance
7	13	3
7	9	4
2	4	4
4	4	2
11	14	10
13	14	8
4	10	8
10	7	8
4	7	6
4	7	4
6	5	5
7	6	5
7	3	5
1	5	8
11	15	9
4	9	8
21	15	14
19	14	15
9	13	10
7	14	20
8	11	17
6	10	14
15	12	18
7	11	5
12	15	10
11	14	9
23	30	13
12	7	8
13	20	12

$$n = 29$$

$$\bar{x} = \frac{x_1 + x_2 + \cdots + x_n}{n}$$

$$\sigma_x = \sqrt{\frac{|x_1 - \bar{x}|^2 + |x_2 - \bar{x}|^2 + \cdots + |x_n - \bar{x}|^2}{n - 1}}$$

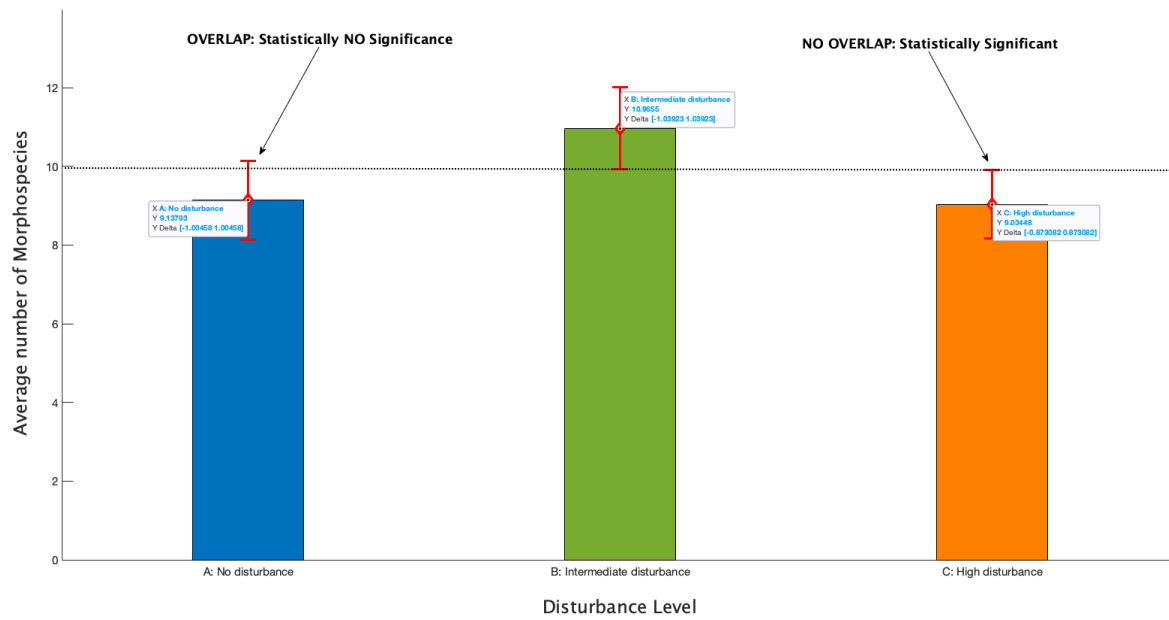
$$\epsilon_x = \frac{\sigma_x}{\sqrt{n}}$$

$$\bar{A}, \bar{B}, \bar{C} = 9.1379, 10.9655, 9.0345$$

$$\sigma_A, \sigma_B, \sigma_C = 5.4098, 5.5964, 4.7017$$

$$\epsilon_A, \epsilon_B, \epsilon_C = 1.0046, 1.0392, 0.8731$$

(1)



In the bar chart above, are the averages of morphospecies with no disturbance M_A , intermediate disturbance M_B and high disturbance M_C . As you can see from all three error bars and the dashed line across, M_A has a overlap with both M_B and M_C . This means there is no statistical significant difference compared to M_B and M_C . However, M_B and M_C error bars do not overlap, therefore we can conclude that there is a statistical significant difference with M_B and M_C .