The Relationship between Roads and Frog Calling Intensity

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This study explored the relationship between a pond's distance from the nearest paved road and the health of the frog populations inside. It was hypothesized that ponds greater than 100 meters from the nearest paved road would have a greater average calling intensity than ponds less than 100 meters from the nearest paved road. Six ponds, categorized as either less than 100 meters from the nearest paved road or greater than 100 meters from the nearest paved road, were visited 10 times and were given average calling intensity scores of 1 to 3 based on the breeding calls of the frogs inside. This was recorded and compared to reflect the general health and size of the frog population. The means of the two groups were 1.35 and 2.29 respectively, with the data in the second group heavily skewed to the right. A statistical t-test showed no statistical significance, however, this is attributed to the fact that all of the requirements for the test were not met due to the data being skewed. The data showed a strong trend of the ponds farther from roads having better average calling intensity scores even though this cannot be supported with statistical significance.

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