

Case Study: Eagle wing flaps

Your client today is studying bald eagles at a local nature preserve, and are interested in how the patterns of their flight are related to weather patterns. They have recently completed some data collection and came to you for suggestions on how to analyze it.

They visited the preserve weekly for the last six months, and for one hour each week, recorded the temperature and the number of wing flaps for the first thirty seconds that they saw each bird for. That is, when they first saw the bird, they started a stopwatch and counted the number of times the bird flapped its wings in the next thirty seconds. They want to know if the number of flaps is associated with temperature.

They are particularly concerned because a significant number of the birds did not flap at all in those thirty seconds; they were just soaring through the air. They guess maybe 25% of the data looks like that. When birds were actively flapping, though, 10–40 flaps were generally observed.

1. What additional questions do you have for the client?

2. Is there anything that worries you about the design or data collection?

3. What methods might you use to analyze this data?

Name: _____

What method of analysis that we discussed today was your favorite? How might you decide between the various methods?
