



<b>WRL reference</b>	M02 D02
<b>Module</b>	M02 Survey Techniques
<b>Data set</b>	D03 Comparison of bird survey techniques

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### **Research questions:**

1. Which of the two methods (mist nets or point counts) do you think is the most efficient for surveying birds in Mesoamerican cloud forest?
2. Comparing the methods:
  - a. At any particular point, which method detected the most species?
  - b. Do the two methods detect the same kinds of birds?
  - c. Can you give examples of the kinds of birds which mist-nets are better at surveying than point counts, and vice versa?
3. Recommendationa:
  - a. Which survey technique should be the main methodology for the planned large-scale survey of Honduras's cloud forest?
  - b. If the time is available, would you recommend the other method as an important secondary technique? If so, why?

### **Answer and discussion to the research question:**

1. Point counts are much more efficient than mist-nets, detecting far more species in a much shorter period of time. This is because point counts are capable of detecting a much greater number of birds as the observer is only required to see or hear them, even if they are over 100m away or more. Mist-nets, however, require a bird to fly directly into the net, which only covers a relatively small area. Mist nets are also only capable of capturing birds up to 3m off the ground, while point counts are capable of detecting birds at any height. Point counts can also survey many sites in a single morning (as surveying a point only takes 10 minutes), while at least 3 hours are usually needed to survey a single point with mist-netting.
2. Point counts detect more species per point than mist-nets, for the reasons described above. However the two methods detect different kinds of birds. Mist-nets tend to be better at detecting quiet undergrowth species; in the sample many kinds of Hummingbird were detected in the nets, while none were detected by the point counts. Point counts, while capable of detecting species at any vegetation level, are particularly good at detecting large canopy-level species which are usually out-of-range of mist nets. Raptors, Parrots and Toucans are all examples which are apparent in the data sample.
3. Point counts should be the main methodology as they are so much more efficient than mist-nets, and are capable of detecting a wider range of species. However, if time were available it would still be worth using mist-netting as a secondary methodology as it is capable of detecting certain species which are usually missed by point counts (like Hummingbirds).

