## DETECTING SONG SPARROWS

by Leif J. Robinson, Wellesley

Try answering these questions.

1. Over an entire year, what percent of your encounters with Song Sparrow are initially by sight, by chip note, or by song?

2. Do these percentages change during the year? If so, by how much?

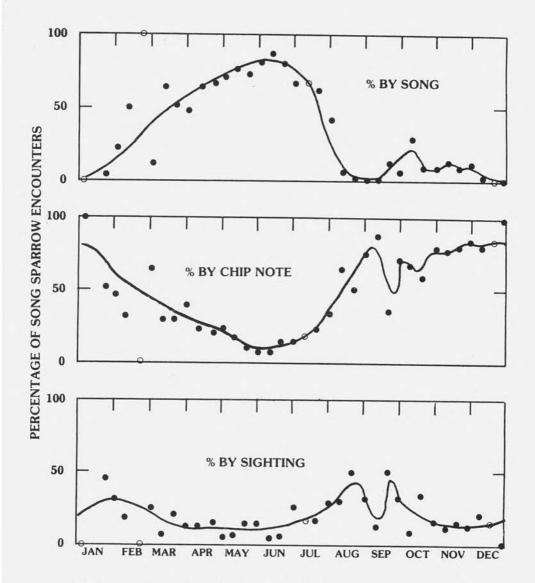
3. Which of the three cues is the most effective?

For the past couple of years, during my frequent surveys of Acorn Park on the Cambridge-Belmont line, I've recorded how I first recognize each bird encountered, by the three criteria in the first question. Although the results are still somewhat uncertain, I share an annual cycle for Song Sparrow in the hope that others might also try this experiment. Song Sparrow was chosen for this demonstration because it is relatively common all year long, has a loud familiar song, and a rather weak yet distinctive chip note (though care must be taken to avoid misidentification during Whitethroated Sparrow migration).

Not surprisingly, as the year opened, Song Sparrows were without aria, and 80 percent of my encounters occurred through chip-note recognition. By mid-February, however, warm days sparked males to begin their summer serenades. The percentage of birds recognized by their call note diminished correspondingly, while visual sightings remained at about 20 percent, which is roughly the year-long average. Detection by song peaked at about 80 percent during the first week of June and then fell off dramatically. By the beginning of August only 40 percent of the birds were first recognized by song, and none at all by the last week of that month.

The interval from the beginning of August to mid-November was most interesting, and the manner in which birds were identified changed rapidly and in a complex fashion. First, visual and chip-note recognition increased simultaneously, concomitant with the decrease in post-breeding song. But note in the accompanying graph the subsequent, curious, and quick changes in the former two cues, followed by a smooth and protracted increase in autumn song (the latter being a well-known phenomenon).

The overall character of the observed annual variation in how birds reveal themselves can be understood in a straightforward manner, from changes in hormones to the injection of juvenile birds into the study population. To me, at least,



Percentages of Song Sparrows Detected by Three Cues. The three curves show the percentage of Song Sparrows initially detected through song, chip note, and visually. With the exception of open circles, all points are ten-day averages of at least three field trips at Acorn Park on the Cambridge-Belmont line. Data collecting began in the spring of 1981.

the cause of the more subtle details (if real) is less clear. However, I do feel confident in predicting that during the next twelve months I shall first encounter 20 percent of all Song Sparrows by seeing them; 40 percent will be given away by song; and another 40 percent by their chip note. For this species, at least, eyes are rather inefficient tools for bird-finding.

LEIF J. ROBINSON is editor of <u>Sky and Telescope</u>, an international popular magazine of astronomy and space science. He has been a bird student for fifteen years with a principal interest in resident populations and the statistical means for assessing them. Mr. Robinson is also active in studying the migration of birds of prey.

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