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The Use of Size 0A Bands as a Size Choice for Pine Siskins

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ABSTRACT

Regularly prescribed size 0 bands for Pine Siskins (PISI) are not the only size that one can use for banding this species; size 0A bands work just as well. Measurements were taken and assessed for size fit and there is sufficient play between the leg and the band to allow the 0A series to be used as a secondary band option.

INTRODUCTION

During the spring of 1997 I assessed the tarsal widths of a total of 110 individual Pine Siskins (*Carduelis pinus*) in the area of Nelson, British Columbia (Figure 1). During the months of April, May, and June, large numbers of Pine Siskin were grouping around my feeder. Ages consisted of SY, AHY, and ASY, both males and females. Age and sex evaluation was based on studies performed by Yunick (1995) and Pyle et al. (1987). After running out of size 0 bands during the influx, I was forced to discontinue banding this species. Due to this constant inflow, I began measuring the tarsal widths of the different age classes to see if an alternate band size could be used for this species.

METHODS

Tarsal widths of Pine Siskins were measured using digital calipers (Mitutoyo model 500-321). Measurements were taken in two ways: (1) anterior-posterior tarsal width (APTW), and (2) lateral tarsal width (LTW). APTW measurements are presented in Figure 1. Only the APTW measurements were used in the analysis because this measurement determined the size of band that the bird could wear; it was considerably larger than the LTW measurements, which did not influence the band size used.

RESULTS AND DISCUSSION

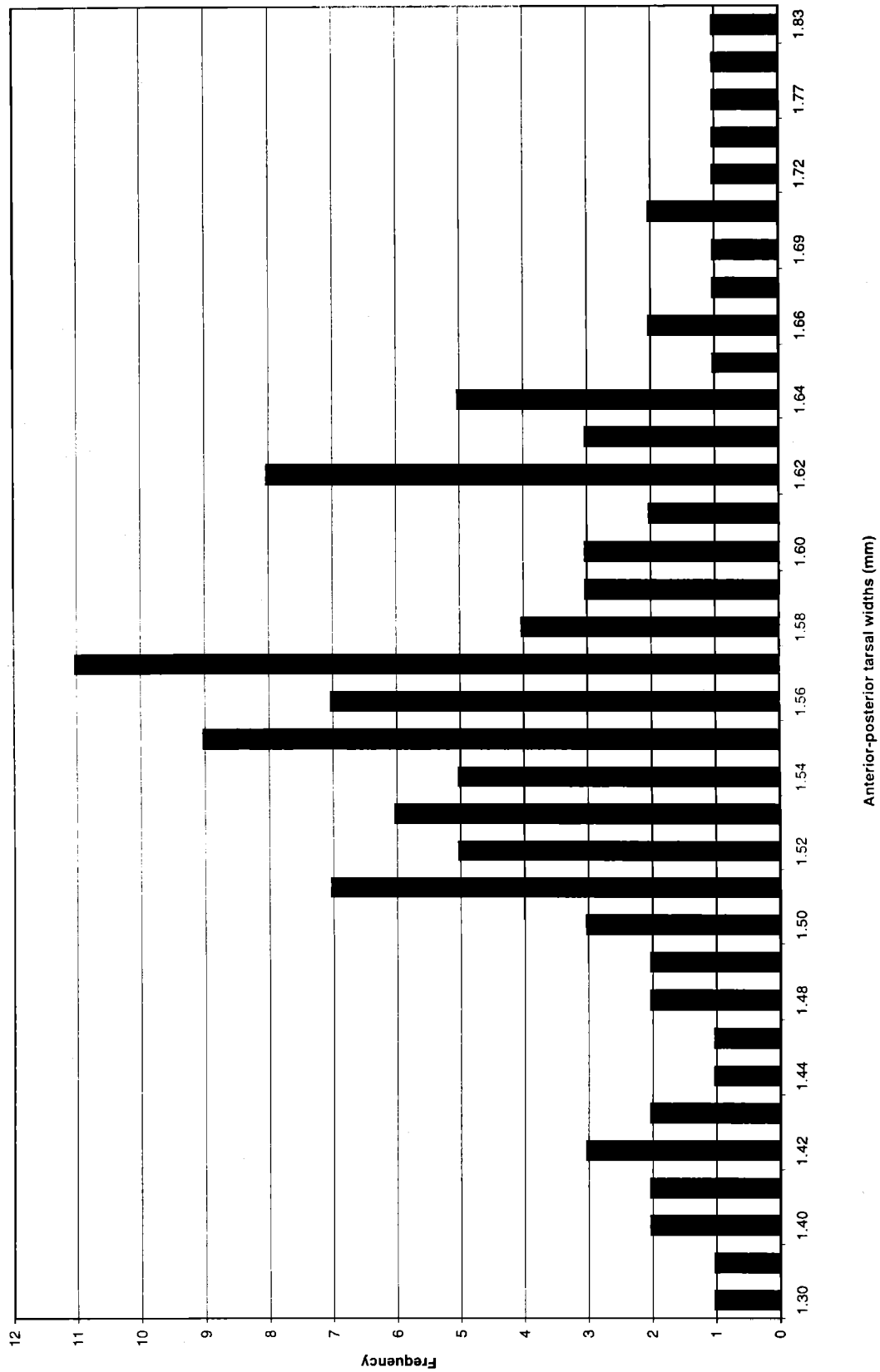
Data obtained are presented in Figure 1. The range in APTW from 1.30 mm to 1.83 mm, a difference of 0.53 mm from the smallest to the largest respectively. The LTW ranged from 0.94 to 1.23 mm, a mean of 1.095 mm and a standard deviation of ± 0.057 mm. Variation in both these sizes may be attributed to the various ages of the birds or simply sample error. The internal ring play (based on APTW) for size 0A band was calculated to be from 0.7 mm–0.17 mm.

The internal diameter of a size 0 band is 2.11 mm and the internal diameter of a 0A band is 2.00 mm. Both of these bands have the same height of 5.5 mm (North American Bird Banding Manual, 1991). This makes an internal diameter difference between the two, 0A and 0, bands 0.11 mm. From information collected and analyzed in this study, it appears that there is a sufficient amount of play on the 0A band for use on this species. I also examined the 1C band size but found that the play was at times excessive on certain individuals and may have the potential of causing discomfort on some birds. The difference from 0A to 1C is 0.3 mm.

Sample mean from the birds analyzed showed a very good representation of a natural population with a normal distribution curve presented in Figure 1. Mean equaled 1.56 mm and had a confidence limit of ± 0.021 mm at $P=0.01$ (1.54–1.58 mm). The APTW plus the standard deviation was well below the 0A band size of 2.00 mm at ± 0.086 mm with a high standard deviation of 1.64 mm and a low sample error of ± 0.008 mm. This information indicates a respectable natural population sample. A low leg size variation was indicated by the coefficient of variation, 5.52%. Thus, one may be able

Figure 1

Frequency Histogram of PISI Anterior-posterior Tarsal Widths



to conclude that the population falls within a range able to be fitted safely with a band size of 2.00 mm in diameter and still have enough play for comfort. The most frequently occurring APTW in the sample was at a value of 1.57 mm (Figure 1). This size seems to fall between the majority of the sample population indicating that it too may be the most common anterior-posterior tarsal size in natural populations. If so, then play on the legs of these birds may be around 0.46 mm, leaving almost half a millimeter of room so that no snow, dirt and debris can become affixed between the leg and the band. This is a concern with the Bird Banding Laboratory (Mary Gustafson pers. com.).

During the course of this project, there have been a total of 35 recaptures (~32% of the population banded) over a time period of 30 days (May 16 – June 14). Upon assessment of each of the recaptures, none of the Pine Siskins banded with size 0A bands showed wear on the foot or tarsal areas relative to the currently prescribed size 0 band. The only noticeable effect was common discoloration of the band and a small amount of dirt collection on the outside of the bands. Examination of the tarsi, thigh, and ankle joints showed no sign of abrasion, cuts, or any other physical characteristics that may accompany tight ring fit as compared to size 0 bands.

During some band applications, there may be an incomplete perfect circle formation around the bird's leg. This did not seem to pose a problem, as it does not appear to hinder movement of the size 0A ring for the bird anymore than the size 0 band would.

ACKNOWLEDGMENTS

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News, Notes, Comments

Forty-first Supplement to the AOU Check-list of North American Birds

The recent *Auk* (114:542-552, 1997) includes this last supplement to the sixth edition of the *AOU Check-list*. This supplement serves more to announce changes both in higher taxonomic groupings and in sequence listing. Many of the changes have been based on the DNA-DNA hybridization studies of Sibley and Ahlquist. Many changes deal with Neotropical species within the check-list area.

In summary:

- a) 7 species are added to the North American list because of new distributional information;
- b) 10 species are added to the main list because of splitting of species previously on the list;

- c) 12 species are changed because of splits from extralimital forms (with a net addition of 2 species);
- d) 2 species are removed from the list because of being merged with another species;
- e) 1 species moved to hypothetical list;
- f) 2 names are changed because of nomenclatural priority;
- g) 30 names are changed because of generic re-allocation;
- h) 2 species are changed because of merger with extralimital species; and
- i) 9 English names are changed.

Besides changes in the sequence of listing species in certain groups (e.g., ducks, emberizids), the following taxonomic changes affect species occurring in the U.S. or Canada: