**So You Think You Can Count (Birds)**

(A basic primer using eBird suggestions on how to count birds by Mike Brady)

**Of course, you can count. But...**

The CBC is special: it's not "birding," it's "census taking," and a certain care in counting is needed to provide good, valid scientific data. Here are just a few thoughts to keep in mind as you do this valuable work:

- Try not to double-count: for example, a male cardinal here, and another 5 minutes later in the same vicinity is, well, 1, not 2.

- For large numbers, count in reasonable "chunks." For example, if there are a lot of coots, count by 10s or 20s (or more!), and be very systematic about including the entire population. Counting in chunks also works well for an overhead kettle of vultures.

 -- One good way to do this with stationary groups (again, coots on a water body) is break the area up into an imaginary grid, count the birds (again, by 1s, or 10s, or 20s, whatever is reasonable) in one typical "grid square," then multiply by the number of squares in the area. The grid method also works for a mixed flock if you keep track of the proportions of the various species in your initial grid square.

 -- For a large flying flock (American Robins, for example), you can keep your view on one spot, count as specifically as you can for, say, 3 seconds, and then keep track of the time it takes for the flock to pass. Multiply your 3-second count accordingly for the total.

- Perhaps most importantly--and perhaps the least understood--is the need to avoid "false precision." To be scientifically valid, we should only report in multiples of the largest "chunk" we used at any time for that particular species. We keep track, counting as we go, in whatever size chunks are useful in that instance, but our FINAL tally on any checklist should be reported using the largest chunk. An example, counting robins on one checklist:

 80 (large overhead flock, counted by 10s)

 20 (a dense group in a tree, counted by 5s)

 14 (singletons, all counted individually)

 Total: 114

 Reporting Total: 110 (rounded to the nearest 10)

 \*\*\* We don't worry about this while we're actually running the checklist, but when we're done, BEFORE submitting the checklist, we change the 114 to 110. \*\*\*

 -- Why do we do this? To prevent the "illusion" that we know we have exactly 114 robins. We don't. There was uncertainty in the counting by 5s and even more uncertainty in counting by 10s, and our final tally has to reflect the greatest uncertainty in our counting process. -- Why not just report our "exact" number and let the Compiler do the rounding in the final grand number? Because the Compiler has no way of knowing what our largest counting "chunk" was. Only we can do that.

To read more about this (especially for more tips on counting large flocks), check out the eBird article on the topic:

 <https://support.ebird.org/en/support/solutions/articles/48000838845-how-to-count-birds>