Gleanings from the Northumberland Bird Database

THE ATLAS THEN AND NOW

By Clive E. Goodwin

The 2001-5 version of the Ontario Breeding Bird Atlas is due out this fall, so I thought it might be interesting to compare the results for Northumberland from the first atlas, in 1981-5, with those from 2005. The atlas publication itself will, of course, largely confine its discussion to the province as a whole. That promises to be really fascinating, but looking at the Northumberland results by themselves could well reveal things of interest to those of us in the county that would be lost in the broader picture.

To compare the two I had, as usual, to do some 'fiddling' to enable the comparisons to be as accurate as possible. For those readers unfamiliar with the atlas criteria, there are three levels of occurrence: possible, probable and confirmed breeding. For each square I took the record showing the highest level of breeding attained in that square over the course of the five years. Hence, one record is used for each square per atlas. The areas covered by the two atlases were not identical, and neither atlas confined our 'region' strictly to the county. So I have eliminated squares that lie all or mainly outside the county boundary, although I did include the old Murray Township, as records from this area are also incorporated in the database. But squares such as Spring Brook and Bonarlaw are not part of the county, so they are excluded. I also excluded one square where coverage in the 2005 atlas was so problematical that valid comparisons could not be made.

In spite of these efforts to make things as comparable as possible, it turns out that there are striking differences between the two atlases that do not seem to have been caused by changes in bird distribution. Simply put, coverage appears to have been far more thorough in 2001-5 than in 1981-5. I say 'seem' and 'appears' because it's very difficult to establish exactly why results are so much better in the latest atlas. It's true that better coverage from roughly 1992 on is a feature of our database, but I had not expected to encounter it in the atlas results. After all, in both atlases the 24 squares were each assigned to one or more persons, and all squares showed results. Obviously observer skills differ, but this was as true in 2005 as it was 20 years before. But second thoughts do offer some explanations. There may well be a larger number of skilled observers today, and there's an abundance of tools a birder can use that were just not as available in 1981. In particular, tapes and CD's of songs and calls, while they existed 20 years ago, were not as widely available as they are today, and the ability to identify birdsongs is a cornerstone of atlassing. Optics are also generally superior, and there are more and better aids to identification. Whatever the explanation, anyone trying to decide what the atlas means must wrestle first with the challenge of sorting out real increases from ones that are only apparent. And the rest of this article will try to do just that.

Let's look at some of the results. The two atlases combined yielded 189 species, of which three were seen only on the first atlas, while an amazing 22 were seen only on the latest one! This in itself seems questionable: is it really true that 22 species – almost 12% of our

summer birds - have expanded their ranges to the extent that we are only encountering them for the first time now? Well, no. Individual out-of-range birds have always tended to appear in summer, and when they do they sometimes hang around for a while. Our chances of finding such birds are directly related to how much time we spend in the field: hence, more atlas coverage, more chance of finding the unexpected bird. A look at the list yields several species which could fall into this category: Ring-necked Duck, Lesser Scaup, Bufflehead, Ruddy Duck, Swainson's Thrush, Northern Parula, Prairie Warbler, and Bay-breasted Warbler all do so. A couple of others – Yellow Rail and Philadelphia Vireo – are species that are very easy to overlook, as is Sedge Wren, although the latter was indeed recorded on the first atlas in squares I have not included here. These species together account for fully half of our 22, but that still leaves 11 species that really do appear to have increased.

Once one starts to look at the detail of the results the picture becomes even clearer. There has been no obvious change in the status of 53 species. These include many of our commonest birds, and indeed 38 were encountered in all 24 squares on both surveys, although only 7 were actually confirmed as nesting in all. While a bird may show clear evidence of breeding in an area, it can often be surprisingly difficult to find the nest or fledged young. Still, only 7 confirmed in all 24 squares on both atlases seems surprisingly low. The seven, incidentally, are Tree Swallow, robin, starling, Song Sparrow, Red-winged Blackbird, grackle and House Sparrow.

The status of 24 species seemed ambiguous, while another 22 had clearly declined. That leaves 90 species that appear to have increased, a figure that includes the greater bulk of the warblers and vireos, neotropical migrants which by most measures are reported to have declined. This would be very good if true, but it seems unlikely.

To arrive at the above figures I look first at the number of squares where a species was recorded in one atlas but not the other. Ravens, for example, were recorded from 15 squares in 2005 but none in 1985, so clearly ravens have increased. But things are rarely so clear-cut. Common Loons were also recorded in 15 squares in all, but this time there's a spread: five squares showed the identical status on both surveys [including two each where breeding was confirmed], and an additional four in '85 were confirmed. A further 3 showed probable breeding in '85, as compared to four in 2005; which also had 4 possible breeding records, the lowest category. I classed this [and 23 similar cases] as 'ambiguous', but in fact I think it really shows a decline. We had 6 nestings in 1985, but only two in 2005, while the '85 nesting birds are replaced by probables or possibles, which translates into birds, and sometimes pairs, hanging around; and, in a couple of squares, courting. The fact relatively conspicuous species like these loons were never actually found to be nesting in these squares over the course of 5 years suggests something was wrong.

These two examples illustrate the variability of the data, although they add little to the search for explanations for the large number of increases in 2005. But let's look at a species that seems to show some increase, the Northern Waterthrush. Here birds were recorded in 22 squares in 2005, but only 17 in '85. Look at the detail and the difference is

more striking, 7 confirmed versus only 4, and 12 probable vs. 6. 1985 makes up some difference in possibles, with 7 against 3; but as loitering birds can yield 'possible' records, it looks as though nesting waterthrushes have increased. However, split the table into two sections, the western ten squares and 13 on the east [I excluded Presqu'ile because it had exceptional coverage in both atlases], and a quite different picture emerges. The first atlas had 4 confirmed on the west with 4 probable, while the second managed only 2 confirmed while making up the difference with 6 probable. Both years had one possible record: in fact, there's probably little real difference between the two surveys. To the east, however, we have no confirmed breeding records in 1985, only 2 probable and 6 possible. The corresponding figures for 2005 were 5 confirmed, 6 and 2, and that is a quite striking difference. Now if this was an isolated case one might scramble around trying to figure out what had happened to the habitat in the east of the county to make it become more hospitable to waterthrushes. But it's not an isolated case, as the same pattern crops up in varying degrees across the entire list. In fact, it seems to be much of the explanation for our problem.

Northern Waterthrushes are elusive birds with loud songs. If you don't know the song you're likely to miss the bird, but that's true of many of the warblers in summer. Perhaps the number of squares to be covered exceeded the pool of skilled birders available in 1985, and the squares that suffered most were those furthest from the largest population centres, namely those to the north-east.

It seems unlikely that Northumberland is the only region to experience this problem. Of course, the atlas will have sophisticated statistical techniques for dealing with such things, but it will be interesting to see how results work out. However, the atlas work reveals many increases and decreases that are more than just illusive, and we'll explore those in our coming articles.