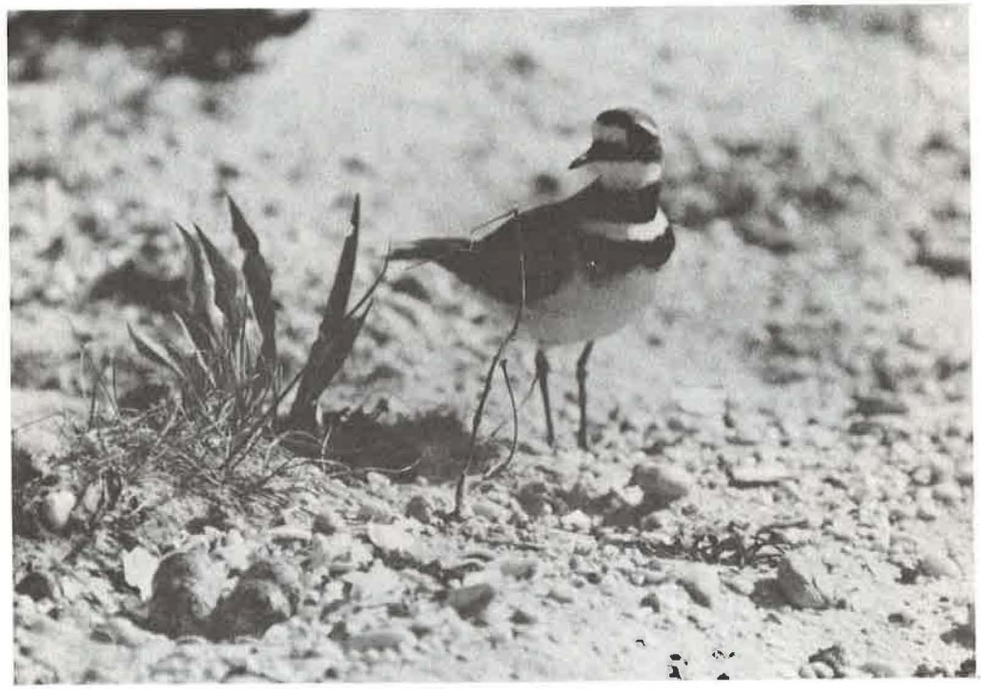

Copies of ANNUAL or COUNCIL Meeting Minutes are still needed to complete our files, from 1957 through 1965 and prior to 1957. Anyone holding such documents, please make them available to us. If you so request, we will make copies and return the originals to you. Please contact: Mrs. Roger W. Foy, P.O. Box 164, Ship Bottom, New Jersey 08008. *(Editor)*

HIGHLIGHTS OF TWENTY YEARS BANDING ON BELL HILL

By John H. Kennard

In the summer of 1952 we built a house in Bedford, N.H., and later that fall I received my banding permit. The house is situated on the east end of a hill overlooking the Merrimac Valley, about five miles south of the city of Manchester; it is nearly in the middle of a thirty acre woodlot, with mixed areas of white pine and hardwood. It has a driveway, parking area and turnaround on the west, and a rather steep cleared slope dropping off to the east beyond a small lawn, garden and swimming pool area.

Early in the game I decided to concentrate on our local residents, the birds we knew best. Being a surgeon, and frequently on call for the emergency room of our local hospital, I found that netting was impractical; I've chiefly used "pull-traps", boxes of hardware cloth approximately 30"x18"x8", with three doors that can be closed by a string led through a small hole in a window frame. These are used by the birds as feeding stations all year around, and I can catch selected birds whenever I wish. I have used nets occasionally for special purposes, and some automatic traps, notably during the past year two dove traps kindly loaned by the Massachusetts Audubon Society.

During these twenty years, I have recorded about 30,000 catches; most of these data are confusing, and probably much is useless. I have been fortunate in being able to study certain species in the same location for twenty years, and certain highlights stand out which I believe are of value and worth reporting. I hope to publish studies of certain species, the first two of which appear below.

BLUE JAYS

During the twenty years we have banded 787 Blue Jays *(Cyanocitta cristata)*. Of these we have listed 162 returns. A return is defined as a bird recorded more than 90 days after banding. A Blue Jay is an exceptionally intelligent bird, and learns about traps fast and how to avoid traps after being captured. Many birds have been missed for one or more years. These data are summarized in Table 1. In this table, the upper line represents years known to be alive; a bird banded in 1962, and retrapped in 1963, 1965 and 1967, would be included in the totals for 1964 and 1966 as well. This allowed us to make a graph on logarithmic paper, indicating the mortality rate by age (Figure 1). By this method, if the mortality was the same percentage, regardless of age, the line would be straight. We are all aware of the tremendous mortality of first year

birds, but this graph shows a definite curve (which will be later shown to be also true of chickadees) with a maximum at age 6 to 9, and a much steeper gradient after age 10. The oldest bird, #563-22804, was banded May 18, 1956, as an adult, and was last retrapped November 21, 1968. Presuming it was fledged in June 1955, or before, it was at least 13 years and 5 months old when last retrapped. I am hoping that some of my 11 year olds, and 5 ten year olds will return to break that record.

Most, if not all of our resident Blue Jays do not migrate, as I catch the same birds in December and January that I have recorded in June and July. Until recently I felt that birds hatched here migrated and dispersed, and seldom returned to their birthplace. However, in 1971, I banded 28 hatching year birds, of which 8 had returned by July 1, 1972.

We seem to have a slightly fluctuating population of resident Blue Jays, of which I band 15-30 per year, which is augmented by sudden much wider variations. 1971 was an exceptionally successful year, not only for Blue Jays, but also for Rufous Sided Towhees *(Pipilo erythrophthalmus)*, and other birds, as we were aware of unusual numbers of juveniles in this area.

Our largest numbers of new birds have been in May and June, when we get returning migrants, and in October and November, when the birds start coming to the feeders. However, in two years we had apparent inundations. In May 1962, we banded 81 Blue Jays, and in May 1964, 60 were banded. In December 1964, we banded 60, many of which were HY birds. Except at these three times we do not believe we have trapped many migrants, as we think they do not come down to our traps, and we have such a high proportion of repeats.(A repeat is a bird recorded two or more times within 90 days and is not included in the table).

We have had nine "Foreign retraps", six of which have been from this general area, three are worth reporting:

503-95727 banded as a nestling, in the nest 06-08-55, shot 11-01-57 by a game warden in York, South Carolina.

563-22809 banded 05-26-56, AHY found injured, West Springfield, Massachusetts 02-23-57.

823-54534 banded 05-14-66, retrapped 07-23-66 Portage Lake, Maine (coord: 464-0682).

In May 1966, I only banded 3 Blue Jays, but obviously 823-54534 was on his way north to his home in Maine and stopped in at my feeders.

503-95727 was one of five nestlings banded in the nest in my dooryard, was apparently quite a traveler, and seems to have migrated south for a second year when the game warden got him, a long distance from home.

As a member of Manomet Bird Observatory, I have worked there in October, and have seen large numbers of Blue Jays migrating overhear. The vast majority of birds banded there in October are HY birds. On returning home I find our same resident Blue Jays at the feeders. Therefore, I conclude that most HY Blue Jays migrate south in the fall, that at least some do in their second winter. Most Blue Jays, however, once they have established territory, establish permanent homes, and migrate only locally.

563-22809 banded here in May 1956, apparently did not become established here and was wintering in West Springfield, Massachusetts.

MOURNING DOVES

Mourning Doves*(Zenaida macroura)* may be taken as an example of the variation in numbers and distribution of a single species of bird.

Glover Allen, in Birds of New Hampshire (Allen, 1903), states that the Mourning Dove is "a not uncommon summer resident...along the seacoast and especially in the bottomlands of the Merrimac Valley".

Forbush, in Birds of Massachusetts (Forbush, 1927) stated that the distribution in New Hampshire was "Rare migrant and summer resident, chiefly in the southern part, may winter rarely".

Bent in Life Histories of North American Gallinaceous Birds (Bent, 1932) gives "breeding range" as "north to New Hampshire (Concord and Hampton Falls)" and winter range as "North to Pennsylvania and New Jersey".

Peterson in Field Guide to the Birds (Peterson, 1947 ed.) states "breeds from Nova Scotia s.....winters from Massachusetts s..." and in Birds of North America (Robbins *et al*, 1966) this is reflected on the distribution map.

In the Merrimac Valley, just south of Manchester, where I have lived for the past 30 years, Mourning Doves have been occasional summer residents, but did not become common until about 15 years ago. They did not come into my yard to feed until 1961, when five walked into my traps and were banded. They have come in generally increasing numbers and up to July 1, 1972, I have banded 294, of these 40 have been "returns". These data are summarized in Table 2. The columns headed 2, 3, etc., represent the number of individuals retrapped two or

more and three or more years, etc.

In winter, when the snow is deep, I place my traps on tables and the doves do not enter them. East of the house I have plowed parking area where I scatter seed, and occasionally have set automatic traps. In the winter of 1970, the doves found this and almost daily we watched numbers of doves, at times as many as 35 at once, feeding in this area. We had no suitable traps, and were not successful in banding any. During the winter of 1971, we had an even larger number, with a maximum count of 55 at once.

Thus, I decided to make a study of Mourning Doves, and made two traps from a design given me by Mrs. Cynthia Youngquist, of Manomet Bird Observatory. I was later loaned two more (and better) traps by the Massachusetts Audubon Society. In 1971, after the flock had broken up and the birds paired, and the arrival of spring migrants, I banded 80 from these traps and in the spring of 1972 (up to July 1) I have banded 47.

In 1971, I had been working on the theory that, like Blue Jays, after they had established territory, Mourning Doves do not migrate. This was supported by the fact that many of the wintering birds were seen to be banded, presumably by me during the previous summers. Also, in the spring, many of the birds had gangrenous or missing distal segments of their toes, which I interpreted as evidence that their soft fleshy toes had been frozen in our cold and rigorous winters.

In the fall of 1971, I could hardly wait until winter, when I could prove my point by trapping the same birds I knew to be local breeders! I was prepared, and had my traps ready, and the doves disappeared. During the winter of 1972, we only had an occasional dove (maximum 3) and were able to trap none. My sister who lives about 100 yards away, fed similar numbers of doves on her porch in 1970 and 1971, also had almost none in 1972. So, it was not the traps that scared the doves away.

Comparing the table of returns for Doves with that for Blue Jays, apparently the life span of the Mourning Dove is much shorter than that of the Blue Jay. I have only 6 birds four or more years old, my oldest #703-54009, was banded AHY 10-05-64 and retrapped 05-01-69. As he was probably hatched June 1, 1963, or before, he must have been at least six years old.

I have had only two distant foreign retraps, as follows:

513-70826 banded 04-29-62 AHY retrapped 08-21-62, shot 11-19-62, Charlotte, North Carolina.

883-74015 banded 05-13-70 AHY,
trapped and released 08-14-70, Newbury, Massachusetts.

These data seem to confirm the theories that Mourning Doves, along with Cardinals *(Richmondena cardinalis)*, Mockingbirds *(Mimus polyglottos)* and Tufted Titmice *(Parus bicolor)*, are extending both their breeding and winter ranges northward; and that once they have established territory, breeding birds usually do not migrate. I believe that most first year birds, and many second year, migrate south for the winter but that provided there is adequate food supply (and maybe other unknown factors), once they have established territory, they will usually remain in that area for the rest of their lives. If this is true, the establishment of an open season in the fall in any of the New England states, would kill off the breeding birds and rapidly diminish the population in that area.

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Route 5, Box 150, Bedford, New Hampshire 03102

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Dr. and Mrs. John H. Kennard are interested in collecting data on longevity of North American birds. If you have a record of unusual long life, please send complete data to:

Dr. John H. Kennard
Route 5, Box 150
Bedford, N.H. 03102

(Tables follow on p. 268-9. Ed.)

TABLE ONE - BLUE JAYS

DATE	N	1	2	3	4	5	6	7	8	9	10	11	12	13
1953	12	5	5	5	4	4	3	3	3	3	1			
1954	5													
1955	21	1	1	1										
1956	16	6	5	3	2	2	2	1	1	1	1	1	1	1
1957	20	5	5	4	4	4	4							
1958	26	9	7	5	4	4	3	3	2					
1959	26	11	11	11	10	7	6	3	3	2	1			
1960	23	2	2	1	1	1								
1961	29	7	7	4	3	2	2	2	1	1	1	1		
1962	103	22	21	17	9	8	5	3	3	2	1			
1963	52	8	7	6	5	4	4	3						
1964	135	22	17	11	10	7	6	4	3	2				
1965	24	7	7	7	5	4	2	1						
1966	19	6	6	4	1	1	1	1						
1967	36	14	8	8	4	3	2							
1968	63	11	9	4	3									
1969	58	8	6	2	2									
1970	37	5	2											
1971	61	11	11											
1972	21*													
TOTAL	787	160	137	93	67	51	40	24	16	11	5	2	1	1

* * *

TABLE TWO - MOURNING DOVE RETURNS

DATE	N	N-RETURN	2	3	4	5	6	7	8	9	10	11
1961	5	4	3									
1962	7	1										
1963	4	2	2									
1964	17	4	4	3	1	1	1					
1965	4											
1966	17	77	6	2	2	1						
1967	30	3	1	1	1	1						
1968	12	2	2	1	1							
1969	26	6	5	3	1							
1970	33	7	5									
1971	92	4	3									
1972	47*											
TOTAL	294	40	31	10	6	3	1					

(* To July 1 only)

FIGURE ONE - BLUE JAY: MORTALITY RATE BY AGE