Hostetter, my son Jimmy, and I again visited the nest, this time to find six eggs. Since it would have taken several days after our first visit for the completion of the nest and since there had been unusually cold weather up until four days before our second visit, the likelihood is that the eggs were fairly fresh on March 16. However, the fact that one of the birds left the nest as we approached and returned as soon as we started down the mountain would indicate that incubation was under way. The eggs were decidedly elongate. The nest was thickly lined with sheep's wool, probably with other animal hair also, as we found tufts of opossum fur at the base of the cliff. This nesting is probably somewhat late. Last year another nest had feathered young on March 28, although in most years it is mid-April before the birds are large enough to stand up in the nest.—J. J. MURRAY, *6 White Street, Lexington, Virginia.*

Wherein lies the economic value of birds?—In the latest installment of Bent's Life Histories (U. S. Nat. Mus., Bull. 179: 330, 1942), I find the following statement relative to one of my papers.

"W. L. McAtee (1905), in his paper on the relation of horned larks to agriculture, publishes a long list of the vegetable food, mainly seeds, and the animal food, mainly insects, eaten by these birds, most of which does not apply to the northern horned lark. He has much to say about the injurious effect of weeds on agriculture and the cost to farmers in their control. Horned larks feed largely on seeds, perhaps mainly weed seeds, and so do many other birds, but I have always felt that the good that birds do in destroying weed seeds is a myth. Nature is so prolific in the production and so effective in the distribution of the seeds of plants, that only an infinitesimal percentage of those distributed can possibly find room to germinate; and no matter how many the birds pick up, there are always many times more than enough to cover the ground with verdure in a remarkably short time. Has anyone ever known of a case where birds have kept even one square yard of ground free from weeds by eating the seeds? I certainly have not. Therefore, it seems to me that the eating of weed seeds is a neutral rather than a beneficial factor in the economic status of birds."

This seems rather belated comment on a statement made nearly forty years ago. In fact, the economic status of a bird is almost certain to change in that length of time. In this instance, of the Horned Lark, it has decidedly changed, particularly in California, so that a publication of the year 1905 is no longer pertinent for quotation. More cogent references are:

McAtee, W. L. The need for studies in bird control in California. Calif. Dept. of Agriculture, Monthly Bull., 21: 273–275, 1932.

Piper, S. E., and Neff, Johnson A. Procedure and methods in controlling birds injurious to crops in California. Biological Survey and California State Dept. of Agriculture, 3 pts., 1935–1937 (mimeographed).

However, let us see what I said that started Bent's train of thought about the value of weed-seed eating by birds. My strongest statement seems to be:

"To limit the loss caused by them [*i. e.* weeds] an unending warfare must be waged by the farmer. Any allies in this defensive warfare should be welcomed, and of such allies the seed-eating birds are the most important. The farmer, by the expenditure of time and labor, can destroy the weeds when they have sprouted, or later before they have ripened seed. But the seeds which are on and in the ground and which remain there for an indefinite period awaiting favorable opportunity for germination, it is not practicable for man to destroy. This portion of

the work the birds attend to, and among the birds most actively engaged in consuming weed seeds the horned larks are conspicuous."

Bent's challenge is: "Has anyone ever known of a case where birds have kept even one square yard of ground free from weeds by eating the seeds?" Sylvester D. Judd in 'Birds of a Maryland farm' (U. S. Biol. Survey, Bull. 17: 79, 1902), answered this question forty years before it was put, in the following language:

"In the last week of April an attempt was made to ascertain what proportion of the weed seeds ripening on the farm had been consumed during the previous half year. In the wheat field of lot 4, where at the beginning of October there had been scores of seeds on every ragweed plant, it was difficult to find in a fifteen-minute search half a dozen remaining. In the truck plot of lot 3, which had borne a thick growth of pigeon-grass, examination of an area where there had been hundreds of seeds the autumn before would sometimes fail to disclose one, and in a mat of crab-grass in the same field frequently not one was left out of a thousand present in October."

E. H. Forbush, not much later, gave supporting testimony ('Two years with the birds on a farm': 12–14, 1908):

"In our garden we attempted to keep the weeds in subjection. This in 1900 was almost an impossibility. In 1901 it was a serious task and necessitated frequent weeding or hoeing all summer and into the fall. In 1902 the labor was much lightened, and this was in part due to the birds. All farmers know that while hoed crops in the main may be kept nearly free from weeds it is impossible to weed a squash or melon patch without injuring the plants. Such crops invariably foul the land. It is also very difficult to keep all fences and borders of fields clear of weeds. We depended mainly on the birds to take care of such weed seeds as were left in the squash or melon patch or along the borders, and they did their work well.

"The first year birds were not numerous enough to destroy all the weed seed; the second year there was hardly enough seed to gather an increased number of birds."

Even though concrete examples of the extirpation of weed seeds could not be cited, the assertion that "the eating of weed seeds is a neutral rather than a beneficial factor in the economic status of birds" is conservation defeatism. Weed seeds are upon the same basis as other potentially harmful organisms eaten by birds and the same conclusions apply to them. As a rule, despite predation by birds (and other enemies), insects, like weeds, are present in about the same numbers this year as last; so are mice or any other natural food item one may care to mention. Except locally and unusually, birds do not extirpate populations of any of their food species. If we had to base our arguments for the value of birds upon such instances alone, we would be in a very poor position.

However, as Professor F. E. L. Beal remarked long ago (Yearbook, U. S. Dept. of Agriculture for 1908: 347, 1909): "It would appear that the true function of insectivorous birds is not so much to destroy this or that insect pest as it is to lessen the numbers of the insect tribe as a whole—to reduce to a lower level the great flood tide of insect life." The same is true of weed seeds. In similar vein, I have stated (Wilson Bull., 43: 29, 1931): "What needs to be kept in mind at all times is that in assigning economic values to natural enemies, it is best to speak in terms of tendencies rather than of achievements. Good economic tendencies are as satisfactory as any grounds for advocating the protection of natural enemies."

Whatever difficulty there may be in seeing directly beneficial results from the consumption of weed seeds by birds, the economic tendency of this activity is certainly in a beneficial direction. It may not be great but it is good. It can not properly be called neutral for that term can be correctly applied only to the relationships of birds to neutral things.—W. L. McAtee.

Vesper Sparrows mated two successive summers.—On June 12, 1943, in Pennfield Township, Calhoun County, Michigan, I found the nest of a Vesper Sparrow, *Pooecetes gramineus gramineus* (Gmelin), containing four fresh eggs, weighing 11.5 grams. These eggs measured 22.5 x 16, 22 x 15.5, 22.5 x 15.5, and 22.3 x 16 mm. Three of them hatched on June 24, the fourth on June 25. On June 30, both parents were captured at the nest with a funnel trap and marked with colored bands as well as aluminum ones. On July 2, the three remaining young also were banded. The birds were observed periodically during July but no other nest was found.

The first male Vesper Sparrow returned to the area on April 7, 1944, and on April 20, 1944, the male of 1943, marked with the colored bands, was battling for territory with two neighboring males. He settled on the same side hill for the second successive year, but a nest was not found until May 25, 1944. On that date it contained two young about three days old and one unhatched egg (the egg measured 22.5 x 16.7 mm.). One young died from an undetermined cause. The female was almost immediately observed and was found to be the bird banded the previous year and thus mated for the second season to male 41-120096. She was observed periodically during the summer but no other nests of the pair were found. The one young left the 1944 nest on May 31.—Lawrence H. Walkinshaw, *Battle Creek, Michigan.*

Sitka Crossbills in Massachusetts.—Examination of the Red Crossbills in the F. Seymour Hersey bird collection, recently donated by Mr. Hersey to the Cleveland Museum of Natural History, reveals eight specimens of the Sitka Crossbill (*Loxia curvirostra sitkensis*) from Massachusetts. Four males and two females were taken at Chatham, Mass., on December 27, 1919. The other two, both females, were secured on January 22, 1920, at the same place. These specimens were compared with a large series of *Loxia c. sitkensis* from coastal Oregon and the identifications were later corroborated by Dr. Harry C. Oberholser.

Griscom (Proc. Boston Soc. Nat. Hist., 41, No. 5: 123–124, January, 1937) has recorded in his excellent *A Monographic Study of the Red Crossbill* a single Sitka Crossbill collected in Massachusetts during the winter of 1887–1888, and two others taken in that state in the winter of 1899–1900. He lists a fourth Massachusetts-taken specimen (tom. cit., p. 158) which apparently is without date.

The Hersey collection, then, adds eight instances of the occurrence of the Sitka Crossbill in Massachusetts and demonstrates a third winter, that of 1919–1920, as one in which this small crossbill is known to have visited that state.—W. Earl Godfrey, *Cleveland Museum of Natural History, Cleveland, Ohio.*