LETTERS

ON THE EFFECTS OF EXTREME COLD ON BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—May I add a few words to my comments on the effects of extreme cold on birds in a previous issue of *British Birds* (Vol. XVIII., pp. 296–9, April, 1925). The first half of the present winter (to the end of December, 1926) has been the severest on record since a meteorological station was established here in 1914. Although the temperature has never exceeded 35° below zero (Fahr.) we have had long spells of below zero weather, while on December 11th we experienced what is reputed to have been the worst blizzard in twenty years. In addition to my old aviaries I now have a considerably larger one (about 170 square feet in area) built on the same general principle but with various improvements. A slight alteration to the old ones has proved beneficial, for during the great blizzard only three or four birds in these got frozen feet, none at all in the new. This has been the only case of frozen feet this winter. Since it occurred again during a blizzard, it may be assumed that the condition is due to a blending of gale, snowfall and low temperature. (I had nearly 200 birds in the combined aviaries.)

As to the icing of the head and back, this has been very frequent and has been practically confined to the birds in the new aviary. In the sheltered portion of the roof there runs a ledge lengthwise, on to which the Juncos (*Junco hyemalis*) have developed a habit of crowding at nights, no doubt for warmth. Whenever the thermometer drops to about 15° below zero or worse, a large percentage of the birds are ice-covered in the morning. All vestiges of it disappear during the day, so that this is no doubt due, as previously surmised, to sleeping in confined quarters during intense cold.

In addition to Juncos, the following species have demonstrated their ability to withstand extreme temperatures—Gambel's Sparrow (*Zonotrichia l. gambeli*), White-throated Sparrow (*Z. albicollis*), Savannah Sparrow (*Passerculus s. alaudinus*), Tree-Sparrow (*Spizella m. ochracea*) and the domestic Canary!

There are several points that call for special mention. My experimental cage is lit up for some hours at night, the birds thus getting an advantage over the controls, which have to go daily without food during the sixteen hours of darkness that we get here in December. I have been prepared each day to rescue at least the control Canaries. But I have had to do no rescuing. The control cocks have never missed singing a single day through the winter and have enjoyed the best of health. Even at the height of the now notorious blizzard, responsible for numerous deaths amongst humans, at least two were sitting against the wires, barely able to retain their seats in the forty mile-an-hour gale, periodically lost to view in a cloud of swirling, driving snow with the thermometer at zero, singing as though it were spring. The Canaries in the experimental aviary, although most of them have been fit throughout, have done but little singing. A noticeable thing about the Canaries killed for examination has been the complete absence of fat, both in controls and experimentals.

More remarkable than the Canaries, perhaps, have been the Juncos in the experimental aviary. The moult of these birds has been very protracted, and although many of them were only half feathered, they showed no signs of distress at 35° below zero. Even more astounding was a single Savannah Sparrow from the control aviary. This bird alone among the wild species showed unhappiness every time the thermometer took a serious drop below zero. At 35° below he looked so wretched that I brought him in for a couple of days and then killed him for examination. As soon as he got into the house he was perfectly cheerful again and full of "pep." Although he was obviously suffering in the cold he had evidently taken no harm. On being killed it was ascertained that after his October moult he had completely failed to grow new feathers on his back. He was poorly feathered all over, but his back was *actually bare* and yet he survived 35° below zero. In addition he was heavily parasitized with nematodes. Surely amongst such birds as these seed-eaters, cold *quâ* cold can hardly be considered a factor in the history of migration.

If cold has any direct detrimental effect on such species, it must surely be in the listlessness and inactivity that it induces. My experimental birds, whose aviary is lit with artificial light for so long each night, show a distinct tendency to go to roost earlier when the weather gets colder. At temperatures far below zero they can hardly be induced to move after they have gone to roost. This year I have kept a rough check on the amount of food consumed, and the increase during cold spells is very considerable. An inclination to decreased activity when the reverse is demanded may be the factor that is responsible for the absence of the migratory Sparrows from their northern range during the winter months. For Juncos and Tree-Sparrows *can* find enough food in ordinary winter weather to keep themselves fit. Some of my released birds have successfully spent two weeks out and returned so well fed that they have not even bothered to go to the food box on their return to the aviary. Moreover, occasional individuals of both species winter here of their own accord. On the other hand, of ten control Juncos released two days before the great blizzard, one had not entered the traps by the night that the blizzard broke loose. He was found a few days later frozen to death by the aviary. He no doubt perished in the storm as he was not noticed around the garden subsequently.

Apart from the question of actual cold, it is remarkable that the extreme changes of temperature to which we are liable here during the winter months have no detrimental effects on at least the Canaries. The night preceding the blizzard, when I was out at the aviaries at about 3 a.m. in pyjamas to salvage a curtain on the control aviary and to see how the birds were faring in a gale that nearly lifted me off my legs, the temperature was 45° *above* zero. Within twenty-four hours the thermometer had dropped some 55 degrees to 10° below. It continued to drop till it reached 35° below. And even greater and more rapid changes than this are on record. WM. ROWAN.

EDMONTON, ALTA., CANADA, 25*th December*, 1926.

WASPS DESTROYING YOUNG BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—In his note (*antea*, p. 198), Dr. T. G. Longstaff mentions the difficulty of obtaining records of insects preying upon nestlings in Britain. The following case may be of interest. In July, 1917,

in the vicinity of Cheltenham, I found the nest of a Blackcap (*Sylvia a. atricapilla*) containing three newly hatched young. Wishing to identify the parents, I hid near the nest. I noticed a large worker wasp flying round the brood at close quarters and occasionally alighting on the head of a nestling. The hen Blackcap was about five yards away from the nest and was "churring." Presently, I counted three worker wasps, which seemed to be engaged in stinging the nestlings. I killed one and drove the others away. The species was *Vespa sylvestris*. Thinking that if left undisturbed the parents would return, and defend their young, I left the spot for about an hour. On returning, I found several wasps engaged in gnawing the corpses of the young. I could see no sign of the parent birds. I have no reason for thinking that I had disturbed the nest of the wasps, thus causing them to attack the young birds. OLIVER H. WILD.

BIRD'S-NESTING MICE AND VOLES.

To the Editors of BRITISH BIRDS.

SIRS,—In 1924, two nests of the Long-tailed Tit (*Ægithalos c. roseus*), both with full clutches, were subsequently found deserted, with the linings of the nests disarranged and several eggs missing. In the bottom of each nest was a small hole. The eggs mysteriously disappeared from a nest of the Linnet (*Carduelis c. cannabina*) and a small hole was noticed in the nest-bottom. These nests were situated in gorse-bushes and were presumably raided by field-mice.

R. H. BROWN.

TITS EATING NUTS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Pearson's note on Great Tits eating nuts (*antea*, p. 177), it may be worth recording that monkey-nuts, which I fix in crevices in a tree trunk for Nuthatches (*Sitta europæa*), are taken quite as frequently by Great Tits (*Parus major*), and these birds hammer at the nuts as vigorously as the Nuthatches. Both species, when they can extract the whole nut from the crevice, fly away with it to some favourite place and pull it to pieces at their leisure. Coal-Tits (*P. ater*), Marsh-Tits (*P. palustris*) and Blue Tits (*P. cœruleus*) also feed on the nuts, but none of these seem to have sufficient strength to open them up by themselves. The Coal-Tits sit on a tree nearby watching the Nuthatches, and when one of the latter is ready to take the kernel out of the shell, a Coal-Tit will fly down suddenly, frighten the Nuthatch away, seize the kernel, and fly away with it, before the Nuthatch has had time to recover from its surprise. The Blue Tits and Marsh-Tits will wait until the Nuthatch has taken one of the kernels out of a double nut and flown away with it, and will then fly up to the nut, and get hold of the edges of the jagged hole and wrench pieces off, until they can get hold of the second kernel, when they immediately fly off with it.

Great Spotted Woodpeckers also come for the nuts, and when they can remove the nut bodily they will fly away and fix it in one of the clefts that they use for fir cones. When the nut is too firmly fixed they will make a hole in it and cut it up into tiny pieces, and eat it straight from the shell.

On one occasion I saw a Lesser Spotted Woodpecker try to get a nut, but it was frightened away before it succeeded. N. TRACY.

SOUTH WOOTTON, KING'S LYNN.

COMMON BUZZARD HOVERING.

To the Editors of BRITISH BIRDS.

SIRS,—Though I have never seen a Common Buzzard hover, the following from my note book, relating to an observation of the Rough-legged species, may be of interest :—"November 7th, 1903, on the top of Stepney Hill, near Scarborough, a friend and I saw the bird fly across the road and it commenced hovering, somewhat Kestrel-like, over a field. We watched it with our glasses for some minutes."

W. GYNGELL.

[Sufficient evidence has now been published to show that Buzzards not infrequently hover.—EDS.]

SWIMMING POWERS OF YOUNG LAPWINGS.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. R. H. Brown in his recent article on Lapwings states that "Nestlings are expert swimmers" (*antea* p. 167). To what extent are they swimmers ? Would they swim a fairly fast flowing stream, fifteen yards wide, in order to get to water-meadows on the far side ?

I ask because I have a twelve-acre field between woods, wired round with 1¼-inch wire netting, sunk in the ground. Four pairs of Lapwings nest yearly in the field and three usually hatch off safely. Within a week of hatching, young Lapwings and parents are in a water-meadow half a mile off. To get there they must cross a stream nine feet wide, a meadow, a small river ten to twelve yards wide, and get through 1¼-inch mesh netting. The only alternative is that they are carried by the parent birds.

M. PORTAL.