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THE STARLING IN ONTARIO

WINTER PLUMAGE

SUMMER PLUMAGE

The starling, which is now so abundant in southern Ontario, is not native to North America, but was introduced from Europe in 1890 and 1891. On March 6, 1890, eighty starlings were liberated in Central Park, New York City, and on April 25, 1891, forty more were released at the same place. From these 120 birds originated all of the millions of European starlings now found throughout eastern North America. For six years these starlings and their progeny remained about the point of introduction. Gradually, however, they spread farther and farther from New York and in 1919, twenty-nine years after its liberation in New York, the starling reached Ontario. The first starling was seen in Ontario in July, 1919, five miles west of Brockville. During the following winter (1919-20), it was observed at St. Catharines and in the summer of 1920 at Toronto. Their dissemination over a wide range in Canada has progressed rapidly, so that at the present time they are a numerous and important element of the bird fauna of the southern parts of the Maritime provinces, southern Quebec and southern Ontario. Starlings are now apparently permanently established as far northwest as Port Arthur, Ontario, and birds have been seen as far north as Moosonee and York Factory. Occasional records from Manitoba and a single report from as far west as Alberta seem to presage the general occupation of suitable territory throughout the more southerly portions of the Dominion.

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The native home of the common starling (*Sturnus vulgaris*) is the temperate region of Europe and corresponding latitudes in western Siberia. In the old world, the starling is migratory, most of its population travelling south in autumn to the countries bordering the Mediterranean and eastward as far as India. From its native range this species has been successfully introduced into Australia, Tasmania, New Zealand, and South Africa as well as North America.

The starling is a bird of cultivated areas, apparently equally at home about cities, towns or farms. Although it is sometimes seen in wilderness areas, it is never common in such places. Starlings frequently select their nesting territory as early as March and their first nesting occurs, as a rule, in April. Most pairs probably nest twice in the year. The eggs are pale blue and usually four to six in number. The young are cared for in the nest until they are nearly full grown. Young starlings, just out of the nest, wear a rather uniform grey-brown plumage.

Starlings feed on a wide variety of food materials. Both animal and vegetable matter is taken, the proportions varying according to availability which in turn is dependent on the season. In spring and summer, a large proportion of their food consists of insects, both adults and larvae. Cultivated fruits are taken in season, particularly the smaller kinds. In autumn, plant foods bulk large, including rose hips, wild cherries, wild grapes, elderberries and sumac seeds. In winter, they forage about habitations; in cities they resort to garbage dumps, where a great variety of animal and vegetable refuse is consumed.

In late summer, when the last broods of young can look after themselves, family groups congregate into flocks which in turn merge into still larger flocks for roosting. The size of these roosting flocks increases as autumn approaches, finally attaining prodigious proportions, greater than those of any native bird. They are joined, however, by certain native species such as cowbirds, grackles and robins. These large flocks resort for roosting to such widely different situations as small groves in the country, shade trees or wooded plots in cities, or to the ledges and architectural irregularities on the faces of city buildings. These flocks may be seen coming into their roosting places in the early evening. Their settling down for the night is accompanied by considerable shifting about and chattering, which may continue throughout the night. In the early morning, they fly to their outlying feeding grounds. Birds from city roosts travel to country districts, covering many square miles of territory. The fall roosts usually break up in early October. Many of the birds migrate southward to return

in the spring but a plentiful population remains throughout the winter along the southern border of Canada.

The song of the starling is a more or less extended and continuous series of chatters and squeaks, but one usually hears a variety of notes, phrases and songs of other birds interspersed with its native repertoire. Among North American birds whose songs the starling imitates exceedingly well are the bluebird, killdeer, wood pewee and meadowlark, but thirty or more species are imitated more or less successfully.

Whatever attitude we may adopt towards the starling as a new bird in our midst, it is certain that it adds seasonal interest to our environment. During March, before most of our native birds have returned, the starling fills in the bird calendar with its song and other prenuptial activities.

One of the most characteristic attributes of the starling is its wariness. Although it prefers the proximity of man, it avoids complete familiarity with him, suspicion and alertness characterizing its every movement. Even where they are invited to accept food and nesting boxes about dwellings, their circumspect manners are never completely overcome.

The starling is a serious competitor of many of our native birds. This competition does not usually take the form of direct struggle, although occasionally they do dispute with other species for particular nesting sites. Since the starling selects its territory early, several native species which habitually occupy situations identical to those selected by starlings are, in effect, crowded out by this newcomer. Birds which nest in cavities and crevices suffer most severely. Such species include bluebirds, flickers, crested flycatchers, house wrens, tree swallows, martins, nuthatches, chickadees, screech owls, sparrow hawks and downy woodpeckers. The starling is also a competitor of many native birds in the matter of food. The seeds and fruits of many trees and plants are consumed by the fall and winter population of starlings. This food would formerly have served as food for native species.

There is increasing evidence that the starling is becoming a menace in fruit-growing districts. Small fruit crops are attacked, more particularly grapes in September, but also cherries in season. By far the most serious nuisance which has arisen as a result of the increase of this bird to date is the city starling roost. The night congregations of starlings in restricted urban areas, often in mid-summer, offer a problem to civic officials. In such places, the countless hosts of starlings soon create unsanitary conditions. The accumulation of their excreta defoliates trees, kills ground vegetation and results in a very objection-

able stench over extensive districts. The effect is not only unwholesome but unpleasant in appearance. Buildings where roosts are established are defaced in an unsightly manner. In addition, the noise from these roosts during the evening and often throughout the night is a serious disturbance to residential sections of a city.

Control

It is impossible now to exterminate the starling in North America although some reduction of numbers could undoubtedly be brought about by the continuous use of some efficient large-scale trap during the flocking season. Efforts to reduce the population in particular sections, unless continued year after year, will merely offer opportunities for birds from neighbouring areas to move into territories where competition would be less keen. It is highly improbable that every community in the province could be induced to wage a continuous war on starlings. Any effort short of this will give only partial and temporary relief.

Only time will tell whether starlings will continue to increase in southern Ontario although the number of resident birds must be nearing the maximum that can find a living in that part of the province. Their numbers may also fluctuate to some extent from year to year and it is even possible that they may ultimately come to be less numerous than they are at present. This depends entirely on the action of natural forces destructive to them. The chief forces which tend to keep all kinds of birds and other animals from expanding their numbers are the absence of sufficient food of the particular kind they require and the prevalence of diseases and enemies. It is probable that the starlings introduced from Europe did not bring diseases with them. Whether diseases will develop and spread among them as a result of the crowding effect of their immense numbers remains to be seen.

The natural enemies of starlings are the bird-eating hawks. In this country, Cooper's hawk and the sharp-shinned hawk are known to turn to the starling flocks as a convenient food supply. These bird-eating hawks take the prey which they can catch most easily, and when starlings are more abundant than other birds more of these are eaten than of other species. Of 40 Cooper's hawks killed in 1931 and 1932, 17 had eaten starlings, 8 English sparrows, 4 song birds, 3 grackles, 2 domestic pigeons and 1 game birds. (The crops of some were empty when killed.) On account of the prejudice which exists against all kinds of hawks and owls, it is unlikely that these natural agencies of control will be allowed to exercise their natural influence on starling numbers.—L. L. S.