Froggatt, W. W.

The Starling.

1912

A-F [Froggatt]
1912

HARVARD UNIVERSITY.

LIBRARY

OF THE

MUSEUM OF COMPARATIVE ZOÖLOGY

72.547

GIFT OF

Nathan Banks

July 15, 1929.

JUL 15 1929

Q-5

72,547

FROM AGRICULTURAL GAZETTE OF N. S. WALES.

July, 1912.

Miscellaneous Publication, No. 1,554.

The Starling.

A STUDY IN AGRICULTURAL ZOOLOGY.

27859

The Starling.

A STUDY IN AGRICULTURAL ZOOLOGY.

WALTER W. FROGGATT, F.L.S., Government Entomologist.

VARIOUS European birds were introduced into Australia many years ago, when the Englishman, in sentimental mood, wished to see the birds of his boyhood days around him; and some well meaning but misguided persons introduced the sparrows, blackbirds, and most of the song-birds. Among these birds was the common starling. It landed somewhere on the shores of Hobson's Bay, and soon made its way into the city and suburbs of Melbourne, where it was firmly established over thirty years ago. There may have been a special importation from England, but I think that the ancestors of the present Sydney starlings were brought from Victoria.

In the days when acclimatisation was in the air, Australian birds were not considered in any way interesting. Even as far back as 1843, Assistant Surgeon Bartlett ("New Holland, 1843") wrote:—

At night no more he hears the delightful warblings of the queen of songsters—the charming nightingale. The hoarse croaking of the offensive bull-frog, and the incessant buzzing of the hideous mosquito, he takes in exchange for the gladdening tones of England's fairy songsters.

Mr. R. H. Horn voiced this un-Australian feeling in "Australian Facts and Prospects," published in 1859, wherein he bewails the fact that the ugly gum-trees spoil the beautiful park-like land near Melbourne, and says "if they could all be cleared away, and replaced with oaks, elms, &c., the landscape would be greatly improved."

The starling was known in old England as the "stare" or "starred," "starling" being the modern name of this bird. The members of the starling family belong to the genus *Sturnus*, of which the common starling (*Sturnus vulgaris*) is a typical form, breeding throughout the greater part of temperate Europe.

It is one of the most adaptive of what we might call domestic birds, and not only has it extended its range across Asia to Japan, but it has travelled downward, over the Mediterranean, to the southern parts of Africa, while it has also found its way to the Canary Islands, the Azores and Madeira.

Artificially it has been introduced into Tasmania and New Zealand, as well as Australia, and wherever it comes it remains a settled resident.

The common starling is not found in North America, but its place is taken by a closely allied form that was once known under the scientific name of *Sturnus prædicatorius*, and has many popular names which denote its destructive habits, such as the "Corn-thief" or "Rice Bird," though another popular name, the "Red-winged Blackbird," defines it much better. This is the Bob-o'-Link of the popular natural history books of the United States

which, as the Rice Bird, plays such havoc with the rice and grain fields of the north in summer, migrating in millions to South America at the approach of winter.

We have one native representative of the family, the Glossy Starling (*Calornis calybeius*), which ranges from south-eastern Asia through New Guinea into Northern Australia. Its coat is jet black, with an intense metallic green gloss that gives it a very distinctive character.

The Starling in Great Britain.

In olden days in England, the starling was looked upon as a friendly domestic bird that did much good and comparatively little harm. In Knight's "Cyclopædia of Natural History," published in 1856, the editor says:—

Common starling or stare, one of the handsomest of our birds, and a general favourite. It is intelligent, sprightly, and has a retentive memory, and when kept in confinement the male learns to whistle tunes and imitate the human voice.

In Morris' "British Birds," there is no mention of the starling doing any serious damage to fruit or crops, though it is stated, when noting its food, that it includes grain, fruit, and seeds.

Theodore Wood, in his "Farmers' Friends and Foes," 1888, in reference to the starling says:—

Save that it is a little too fond of ripe cherries, indeed, and will sometimes make free with a little fruit of other kinds as well, I know of no accusation that can justly be brought against it, and this fruit is a very trifling price to pay for the services of the bird in the way of insect destruction. The starling, in fact, is one of the greatest of all the farmer's friends, the counterbalancing mischief which occasionally mars its services being in most cases so small as scarcely to be worthy of mention.

However, in the latest work dealing with the starling in England, "Harmsworth's Natural History," 1911, we find that conditions at the present time, for some reason or other, are quite altered. The authors say:—

The starling is one of the most adaptive of birds, in consequence of which its range is steadily increasing, especially in the British Isles, in which its numbers have augmented of late years to an extraordinary extent.

Noting its insectivorous qualities, they go on to say:—

At the same time, account should be taken of the heavy loss which fruitgrowers sustain from the inroad of hordes of hungry starlings, the extraordinary numbers of these birds which visit orchards of ripe fruit almost defying description. Recently the starling has developed a special fondness for ripe pears and apples, and does not altogether disdain wild fruit, even the berries of the rowan or mountain ash being much to its taste. When feeding on grass lands, in company with thrushes, the starling is apt to play the part of a bully, robbing gentler neighbours of their fairly earned subsistence.

The Starling's Voice.

The starling is remarkable for its wonderful flow of bird language, and though the usual note when feeding on the lawn, or foraging in the fowl-yard, is a somewhat harsh chuckle, they cultivate a great variety of notes. Hall and Gillies, in their "Nature Studies in Victoria," describe them well as follows:—

One bird called plaintively as if in trouble. The call of another suggested the not unpleasant sound of a good violinist tuning his instrument. In a third call we heard the slight crack of a child's whip, and in still another the harsher sound of a boy's rattle.

Then we were startled to hear a spirited imitation of the blue wren's notes. But the leading note, the note most characteristic of the starling, was one which suggested the breath drawn in with a musical sound.

Dr. Bowdler Sharp, in the "Royal Natural History," tells how the starling mimics other birds. He says:—

We have heard individual starlings reproduce the call note of the skylark, goldfinch, wagtail, and other small birds. Sometimes we have been startled on a winter's day to recognise the cry of the common sandpiper, or the grating call-note of a fern owl, in the middle of a crowded city, and have discovered the author of our astonishment in the person of a starling that is pouring forth his rhapsodies from some neighbouring chimney.

It was, and perhaps may still be, a common practice on the Continent to keep the starling as a talking cage bird. Years ago it was a cruel custom to sear their eyes with a red hot wire, under the impression that blinded birds always talked best.

Readers will remember the pathetic chapter on the starling, in Lawrence Sterne's "Sentimental Journey in France," where he says:—

On my return through the passage I heard the same words repeated twice over, and, looking up, I saw it was a starling hung in a little cage. "I can't get out, I can't get out" said the starling. The bird flew to the place where I was attempting his deliverance, and thrusting his head through the trellis, pressed his breast against it as if impatient. "I fear, poor creature," said I, "I cannot set thee at liberty." "No," said the starling, "I can't get out; I can't get out."

Pliny says that the two Cæsars, Germanicus and Drusifus, had a stare and sundry nightingales taught to speak Greek and Latin. "Moreover, they would study on their lessons, and meditate all day long, and from day to day come out with new words—yea, and were able to continue a long speech and discourse."

The question of the value or otherwise of the starling from an economic standpoint is such a vexed one that it is well worth considering, and the writer proposes to place both sides of the question before the readers of these notes.

A Domestic Pest.

In the suburbs of our large cities, and some of our country towns, the starling has become such a domestic bird, that it often tumbles down the chimney and startles the inmates of the house. It is domestic, or rather too familiar, in its nesting arrangements, for it carries a mass of sticks, grass, and other material into the roofs of houses, wherever it can find an opening large enough to squeeze through; consequently, where starlings are numerous, as in the neighbourhood of Melbourne and Sydney, they soon form large accumulations of these nesting materials. These heaps then become infested with a minute semi-transparent mite, which lives upon the birds themselves; and under favourable conditions the mites increase in such numbers that they often spread throughout the house, and getting into the beds and clothes of the occupants, cause a great deal of annoyance and pain by biting and sucking blood. From its minute size and colourless body (until it has sucked some blood), this mite is very difficult to detect, and it is not an uncommon thing in Sydney for a doctor to be called in to examine the suspicious red rash caused on delicate skins by the objectionable starling mite.

The only way to cleanse the house thus infected is to get rid of all the rubbish in the roof, close up all openings through which the birds can enter the eaves, and thoroughly disinfect the whole place.

In the suburbs they also, with their friends the sparrows, eat a lot of food and scraps in the fowl-yards, and thus are, to a certain extent, depredators on the poultry-keeper.

An Orchard Pest.

It is in orchards, however, that they do so much damage; but around Sydney they have not become such notable pests as in Victoria, probably because the class of fruit grown in the area around Sydney consists chiefly of apples and citrus fruits. It is also a well-known fact that they have hitherto been more numerous, and were established at a much earlier date in Victoria than in New South Wales.

Within the last few years there has been a very marked increase in their numbers about Sydney, and they are spreading in all directions into the country districts, so that they will be a great factor either for good or for ill in the near future.

Admitting that the starling does destroy insect pests in Australia, as it is still credited with doing in Europe in the winter months—it is not of much advantage to the orchardist if the starlings destroy his fruit crops in the summer, for as a general thing the insect pests would have left him something.

The Dutch Naturalist, Dr. J. Retzema Bos, in his "Agricultural Zoology," says :—

Very serviceable. Devours, especially in autumn, many field snails; also cockchafer grubs, wire worms, grass caterpillars, grasshoppers, leaf lice, and many insects destructive to fruit trees. The starling, however, is able to do considerable damage to garden fruit, since it eats cherries, currants, and sometimes even peas.

Last year it was reported in the British agricultural papers that the starlings were more numerous in the eastern counties than they have ever been in modern history. Millions of starlings and thousands of birds of other species have ruined many wheat crops. Here also there is no advantage to the farmer, if the starling eats both insect pests and his crops.

Prior to 1904, the starling, with other introduced birds, had been protected in Victoria, but owing to the reports of the increase of these birds in the suburban areas, and their spread into the fruit orchards beyond, the Minister of Agriculture (Mr. Swinburne) sent a circular round to the various councils, fruit-growers, and horticultural associations, asking for their advice as to whether they considered the starling a pest or otherwise. This led to a large amount of correspondence, in which all the people interested in fruit were emphatic in their condemnation of the starling. Several pointed out that while the starling was insectivorous during the winter months, it was a most destructive pest in fruit orchards, not only eating up all the smaller fruits, but pecking holes in the larger fruits, and spoiling them for market. In such districts as Doncaster, Somerville, Pakenham, Ringwood, and Yarra Glen, they were said to eat nearly every kind of fruit in the orchards, and cherries

had to be watched from the time they first began to colour until they were ready to market. A few associations in Gippsland and other farming districts claimed that the starlings were their best friends, and killed many insects, particularly caterpillars, cut-worms, and grasshoppers.

Mr. C. French, jun., writing upon fruit-eating birds in the *Victorian Journal of Agriculture*, 1905, gives a brief account of the starling. He says :—

There can be no doubt about the starling being a most pernicious enemy to the fruit-grower and viticulturist in this State. The starlings are increasing a thousand times faster than their natural food ; hence they must avail themselves of such as is obtainable.

From the evidence placed before him, the Minister offered to place £500 on the Estimates to aid in the destruction of the starlings, if the Councils would pay half the bonus of 6d. per dozen for starlings' heads ; but difficulties cropped up, and this form of bonus was dropped. The Victorian fruit-growers in starling-infested areas are just as positive at the present time that the starling, as far as they are concerned, is one of their most serious foes.

In the March number of the *Agricultural Gazette* of Tasmania are published the results of the discussion raised at the meetings of the country Boards of Agriculture, "Should starlings be protected?" We find that eight of the associations declared that the starling was more beneficial than otherwise, and several Boards reported in favour of their being protected. Colonel Legge, hon. secretary of the Agricultural Board of St. Mary's, went so far as to say that starlings were purely insectivorous ; that they had acquired the habit of eating fruit in Tasmania, and also the objectionable habit of nesting in the chimney-spouts and roofs, because they had been liberated in the towns and not in the country. Such statements are certainly not borne out by the investigations of their habits at the present time in England. In one report—that of the Tamar Farmers and Fruitgrower's Association—the starling was recorded doing much harm by attacking fruit and sprouting grain ; but this was qualified by the following statement :—

But they rendered yeoman service in other ways, as grub exterminators, being especially helpful in mitigating the grass grub pest.

This is a remarkable example of the same bird under different conditions developing different habits, for while a bonus is being paid for starlings' heads in Victoria, just across the Straits in Tasmania the farmers are advising their protection.

The Starling and the Sheep-Maggot Fly.

Within the last few years the increase in the starling population of our towns has led to a striking migration of these birds in large flocks from the town into the country. In the southern and south-western districts these flocks have been observed among the sheep on the plains and have been seen upon their backs picking off the ticks. This is a common habit in Europe. Retzema Bos, previously quoted, says :—

Starlings often settle on the backs of sheep and cows to pick off the vermin.

It has been noticed also in Victoria. The secretary of the Casterton Pastoral and Agricultural Society, writing in 1904 to Mr. French, said :—

Nor is the damage confined to fruit-trees, but in flocks of sheep, they alight on the sheep's back, and hurt the evenness of the wool to a great extent. It has been noticed that so terrified are the sheep when a flight of starlings approach that they run away as though rounded up by dogs.

This new migration into the farming and pastoral districts of this State has brought the starlings very prominently before the public, and a great many letters from residents in the country have been published in the newspapers, leading to further comment. Farmers have claimed that they were destroying the sheep-maggot flies, and have extolled the starlings as the solution of this serious insect pest. Thus far, little actual evidence has been brought forward to substantiate these general statements; though on the southern tablelands it is claimed by some landholders that they are an effective check upon the sheep-maggot fly, that for the last few years has been doing so much damage to the sheep and wool industry.

From an extended study of blow-flies and their maggots, in conjunction with careful observations upon the habits of the starlings, I am very doubtful whether these birds make any appreciable difference in the numbers of blow-flies and their maggots. Starlings, when hunting for insects and such animal food, find it upon the ground. Caterpillars, cut-worms, beetle grubs, grass-hoppers, and other ground-haunting insects are their natural food, together with seeds and fruits when obtainable. They do not catch flies, which even when resting on the ground are too alert to allow a bird like the starling to catch them. The more or less clumsy starling is not built like a fly-catcher, and would have considerable difficulty in snapping up a fly if it were resting on a sheep's back.

It is therefore only in the immature or maggot stage of these destructive flies' existence that we can count on the assistance of the starling. They will certainly pick up any exposed maggot dropping from the sheep on the ground; but the maggots that hatch from the eggs deposited on the surface of the fleece are soon out of their reach. These tiny maggots, too small when first hatched to be gathered into the starling's stout beak, waste no time, but work their way through the fibre of the wool right down to the skin, and are under the protection (in a full fleeced sheep) of the close wool before they are any size. Therefore, to obtain a supply of maggots of a reasonable size for food for a bird as large as a starling, the bird would have to delve into the wool for a considerable distance, or else tear out the wool above them. Now, as far as I have personally observed their actions, and from everything I have read, the starling does not fossick into the wool, but simply picks things off the surface.

So far there has been no positive proof given by anyone that the starling, when he becomes a bushman, destroys sheep maggot or other allied species of flies. The only way to obtain reliable evidence of its value or otherwise as an insectivorous bird in this particular line, would be to shoot half a dozen birds during their feeding hours among the sheep and cattle (we know quite

well what they find in the gardens and back yards). These birds, or their stomachs, the latter for preference, could be placed in a 5 per cent. solution of formalin in small bottles, and forwarded to the Entomological Laboratory, when their contents could be tabulated.

The Future of the Starling.

The most important question arising from the migration of the swarms of starlings into our bush lands is what the effect will be upon our many useful native insectivorous birds that, in spite of indiscriminate poisoning of rabbits and other dangers attendant on the advent of civilisation, still carry on their work in orchard, field, and forest. We have shown the wonderful adaptive power of the virile starling to invade new lands and multiply under all kinds of climatic conditions. It may happen that the invaders may become the sole feathered occupants of our bush lands, and the greater portion of our wonderful native bird fauna may be banished from the face of Australia. Hordes of hungry starlings competing for the food supplies, often circumscribed in winter months and times of drought, will soon clear up the local insects, seeds, and berries of our bush, and all native birds with similar food habits will have to go hungry, and finally give way to the aggressive intruders. Then, again, they will dispossess our birds of their nesting places; and, not counting our smaller birds, even the laughing jackass, magpie, shrike, &c., will run short of suitable nesting grounds. It is also stated on good authority that starlings do not turn up their beaks at the eggs of any other birds when they find them unprotected; and that they turn birds out of their nests to occupy them, if suitable in size and location.

In conclusion, it is not what the starling is doing at the present time that is open to question, but what he may do in the future, even allowing that he is only a pest in some districts, and that in others he pays for the damage he does to the fruit orchards by policing the gardens and fields. Given a free hand, a virile, adaptive, aggressive bird of this type, with no natural enemies, living in a land of almost perpetual summer like the greater part of Australia, where there is no necessity for an annual migration with its attendant dangers, there is no restriction on an excessive increase in their numbers. Where will they stop? When all the insects are gone, they will not starve, with the wheat-fields and cultivation paddocks at their mercy; and, as has been shown in Victoria, when once they acquire the habit of fruit-eating, these omnivorous birds do not trouble about insects. It may be the same with the wheat, and it will not surprise anyone who has given the matter close attention if the migration of the starling into the country does not in the near future mean another very serious and far-reaching pest to the great wheat-fields of Australia.

There is certainly no reason to extend any protection to the starling by Act of Parliament. If he proves himself a destroyer of the sheep-maggot flies, the sheep-owners will see to his protection far better than any law can do the work.

**Photomount
Pamphlet
Binder**

Gaylord Bros. Inc.

Makers

Syracuse, N. Y.

PAT. JAN 21, 1908