

to a single property owner rather than the birds owned by the people of the State. Rule that all cats entering the premises of the club do so at their own risk and use a gun on the felines that disregard the warning, and you will have an increased number of song and game birds and wild rabbits on your course. Shooting vermin may be done in the early morning before many members have reached the club. Thieving animals are especially active soon after dawn. Such early-rising members as the club possesses may be warned of the shooting.

Golf courses are of considerable benefit to the birds. The short grass of the fairways makes a safe promenade for the broods of your pheasants and quail when the taller grass is wet. Each bird is an almost insatiable consumer of obnoxious insects that live by destroying greens and grass. The more birds you have, the less money you will be compelled to spend for sprays and other means of exterminating the pests.

Water hazards may be made more attractive, and the mosquitoes that breed in them oftentimes will thus be put to practical use by waterfowl. Wood ducks and mandarin ducks, swans, mallards, a whole army of gloriously colorful specimens, may be maintained at little expense, and the sale of surplus stock can be turned to a profit. The wild water birds may be attracted to the larger ponds and lakes by judicious sowing of the foods they need—wild rice, wild celery, duck potato, and other plants.

All this is only a hint at the extensive subject, details of which differ with individual conditions. I am glad to place at the disposal of all country clubs the services of the game-breeding department of *Field and Stream* magazine. As editor of that department, I shall be delighted to answer any questions at any time. If personal inspection is desired, I shall be glad to visit clubs at no more charge than my expenses from Kittery Point, Maine, or New York City, and return. Such assistance should be arranged for somewhat in advance. Whenever I can combine several places in one trip I shall be glad to do so in order that the individual clubs may be placed at only the minimum of expense.

Much can be done for birds. They will return a thousandfold any effort made in their behalf. Without birds the country is a lonesome place.

Motion Pictures of Golf Course Birds

The golf club bird sanctuary committee of the National Association of Audubon Societies announces the preparation of a motion picture film on the subject of birds of golf courses, containing "beautiful golfing views and fascinating close-ups of birds at work gathering food on the green or feeding hungry youngsters." The picture is put out on 16 mm. film, which is used in the small projectors now readily available to nearly every golf club. The photographing was done by Dr. A. A. Allen, professor of ornithology at Cornell University. The picture will be loaned free to members of any golf club whose requests are endorsed by the president of their club. Requests for the use of this film should be addressed to Dr. T. Gilbert Pearson, President, National Association of Audubon Societies, 1974 Broadway, New York City.

The installation of bird houses in a chestnut orchard in Maryland increased the number of broods of birds from 7 to 25 broods to the acre during the period 1926 to 1929. At the end of this period the average infestation of weevil larvae to the nut was between 2 and 3 larvae in this Maryland orchard, while a count made in a Virginia orchard that had not been provided with bird houses showed an infestation of between 14 and 15 larvae to the nut. This is but a single instance of the control of destructive insects by birds.

Stray cats are a serious menace to song birds, insectivorous birds, game birds, rabbits, squirrels, poultry, and other desirable forms of small animal life. Being largely nocturnal in habit, the cats are seldom seen and thus are generally more numerous than is realized. More than 50 stray cats were caught in a single trap in the suburbs of an eastern city during the course of 18 months. A simple cat trap is a box with an end trap door released by a treadle inside the box. Directions for making such a trap are contained in Leaflet 50 of the United States Department of Agriculture, entitled "How to Make a Cat Trap." The leaflet also contains instructions for baiting the trap and killing the animal that is caught.

The graceful Arctic terns, some of which breed close to the North Pole and spend their winters not far from the South Pole, are without doubt the champion "globe trotters" and "daylight savers" of the bird world. Some individuals must make an annual round trip of about 22,000 miles from their breeding grounds to their winter quarters and return. They also probably enjoy more hours of daylight than any other creature living. Before they reach their breeding grounds in the Arctic the midnight sun has already appeared; during their sojourn in the Antarctic daylight is continuous.

Individual birds of this species, according to Frederick C. Lincoln, of the Biological Survey, make the longest flights known to science. An Arctic tern banded as a chick on the coast of Labrador was found about three months later near La Rochelle, France. Another fledgling banded at the same point was found on the beach at Margate, about 15 miles southwest of Port Shepstone, Natal, South Africa, about three months after being banded, during which time it had flown not less than 8,000 miles.

If the neighborhood is so full of English sparrows that the bird becomes a pest, it is comparatively a simple matter to trap them. Leaflet 61-L, just issued by the United States Department of Agriculture, gives simple plans for building several styles of sparrow traps. The Tesch nest-box trap is an ingenious contrivance designed to catch one bird after another. After a bird enters, the trap dumps the bird into a close-woven sack and sets itself for the next visitor. Other effective styles include a hand-operated nest trap, a sieve trap, and a funnel trap made from small-mesh poultry wire. The leaflet is free to anyone requesting a copy.

In the month ending December 15, 1928, about 80,000 foreign wild birds were brought into the United States at the ports of New York and Philadelphia.

Bird banding in the United States dates from the time of Audubon, who about 1803 marked a brood of phœbes with silver wire and was rewarded the following season when two of the banded birds returned to nest in the same vicinity. Since then more than 400,000 birds have been banded in the United States and Canada by co-operators of the Biological Survey. Under the migratory bird treaty act, anyone who bands birds must have a Federal permit.

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QUESTIONS AND ANSWERS

All questions sent to the Green Section will be answered in a letter to the writer as promptly as possible. The more interesting of these questions, with concise answers, will appear in this column. If your experience leads you to disagree with any answer given in this column, it is your privilege and duty to write to the Green Section.

While most of the answers are of general application, please bear in mind that each recommendation is intended specifically for the locality designated at the end of the question.

Adaptability of bent grass for Texas conditions.—Do you think Seaside creeping bent or any other of the bent grasses would be suitable for putting greens under our conditions? (Texas)

ANSWER.—There is a common opinion that Seaside creeping bent, some of which is sold under the name Cocos bent, is extremely drought-resistant and suitable throughout the South. Observations we have made to date would indicate that this grass is no more suitable for extreme southern conditions and no more drought-resistant than colonial bent, of which German mixed bent mostly consists, or some other strains of creeping bent, such as the Washington and Metropolitan strains. Seaside creeping bent seed is produced commercially in the Coos Bay region of Oregon, and has been extensively planted on California golf courses. The admirable results obtained there have led to the widespread opinion that it is more suitable than other bents for southern conditions. The other bents, however, grow equally as well in California as Seaside creeping bent; and although parts of California may be of a more southern latitude than the chief bent districts of the East, it is well known that other crops also can be grown in California which are not adapted to similar latitudes in the East. In Texas bent grass would, of course, have to be grown where water is available. Under your conditions it might be well to try out bent grass on lawns, tees, or parts of