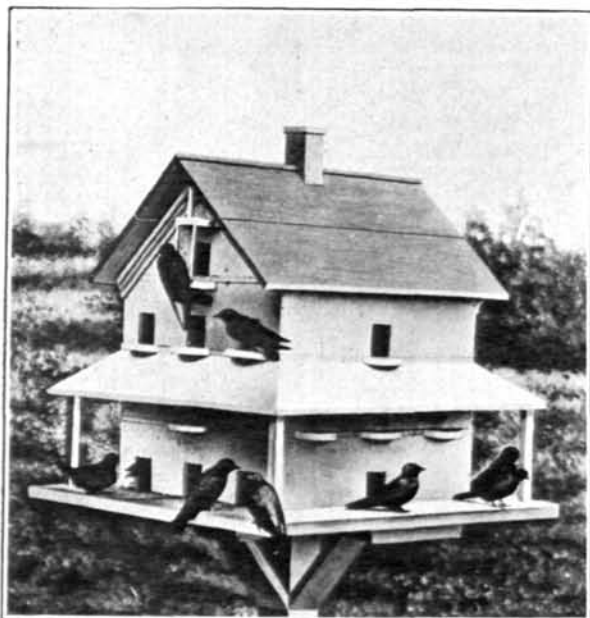


## Golf Courses as Bird Havens, and Their Improvement for This Purpose

By W. L. McAtee

United States Biological Survey

There are many community golf courses, and most of those established by clubs are so surrounded by residences of members as to become virtually community institutions. Golfers as a class are broadly interested in the out-of-doors, including its animal inhabitants, and most of them no doubt will be glad to cooperate in the preservation, encouragement, and increase of useful birds. In fact, considering the well-known utility of birds in destroying insect and other pests, golf clubs will only be consulting their own interests in preserving and propagating these natural enemies of the foes of their greens and fairways.



These beautiful and beneficial purple martins are quite at home in their new house

Golf courses, without special modification, present several features that are attractive to birds. The broad expanses of short grass on the fairways furnish excellent feeding grounds for robins, meadowlarks, starlings, flickers, and killdeers. The longer grasses and weeds of the rough, and scattered clumps of trees and shrubbery open to full light, support an abundant insect population, an important source of food for our feathered friends. Many birds find nesting sites also in the arborescent growths present and sally forth for food

over the grassed areas, where they are often joined by numbers of those aerial feeders, the swallows and swifts, which find on these unobstructed reaches happy hunting grounds.

Such are the impressions recalled of a season's observations on a golf course well situated for birds. There are courses not so fortunate, but all have the fundamentals of valuable bird refuges. Protected to a considerable extent from trespass, and relatively free from the natural enemies of birds, golf courses already have much of the safety required for sanctuaries. Birds promptly respond to protection; but it should be as complete as possible. So far as food is concerned, insects are plentiful on most golf courses, but it would help the birds and ornament the courses if shrubbery on the grounds were selected chiefly from species producing fruits fed upon by birds.

Most golf courses, again, have water hazards at which birds can drink and bathe; but where these are absent or are far apart, bird fountains could easily be attached to hydrant supply pipes. These not only would be a boon to birds on hot summer days, but if placed in view of rest benches would be a source of interest and entertainment to members and visitors.

Protection, food, water—these are the things that usually are present in some degree and which may very easily be supplemented; but nesting sites, especially for some of the most useful birds, are scarce or lacking on most golf courses. Trees and shrubbery (the latter best if in tangled masses) will accommodate many birds; but the birds that nest in cavities can hardly find a home on improved lands, especially where tree-surgeons have been employed. Fortunately these birds will occupy artificial cavities or nest boxes.

In most cases nest boxes must be supplied if we would enliven and benefit our golf courses with such beautiful and useful birds as the purple martin, bluebird, house wren, tree swallow, flicker, whitebreasted nuthatch, and chickadee. At least twice as many other kinds of small birds have been known to occupy nest boxes. Placing nest boxes is work which can well be done in winter, a season during which, at least on northern courses, employees are but little occupied, and when members may welcome something to do out of doors. Names of dealers in bird boxes, bird baths, and the like, and bulletins treating all phases of bird attraction methods, as well as advice in special cases, may be obtained by application to the Biological Survey, United States Department of Agriculture, Washington, D. C.

The following list contains the names of plants producing fleshy fruits which provide attractive food for desirable wild birds. Barberries (*Berberis*) and currants (*Ribes*), although providing fruits which are highly attractive to certain kinds of birds, are omitted from the list, since certain species of these two plants occasion great damage to agriculture and forestry in serving as alternate hosts of rusts which attack and destroy wheat and white pine. An extensive campaign is, in fact, being carried on by the United States Department of Agriculture to destroy these dangerous plants in certain sections of the country, and to plant them might therefore be a hazardous procedure. The list is taken from Farmers' Bulletin 1239 of the United States Department of Agriculture.



A bird bath, half screened by a clump of evergreens or shrubs, is a thing of beauty. Here the birds find a choice rendezvous

Plants bearing fleshy fruits eaten by birds Common name	Scientific name	Number of species of birds known to eat the fruit	Kinds of birds among those desirable to attract, that are most fond of the fruit
Juniper; red cedar....	Juniperus .....	39	Yellow-shafted flicker, starling, evening grosbeak, pine grosbeak, purple finch, cedar waxwing, myrtle warbler, mockingbird, robin, eastern bluebird.
Greenbrier .....	Smilax .....	39	Cardinal, mockingbird, brown thrasher, catbird, hermit thrush, robin.
Bayberry .....	Myrica .....	73	Bob-white, downy woodpecker, yellow-shafted flicker, eastern phoebe, starling, meadowlark, chewink, tree swallow, white-eyed vireo, myrtle warbler, brown thrasher, catbird, Carolina wren, black-capped chickadee, hermit thrush, eastern bluebird.
Hackberry .....	Celtis .....	40	Yellow-bellied sapsucker, yellow-shafted flicker, starling, cardinal, cedar waxwing, mockingbird, brown thrasher, robin, eastern bluebird.
Mulberry .....	Morus .....	52	Yellow-billed cuckoo, red-headed woodpecker, red-bellied woodpecker, downy woodpecker, kingbird, starling, Baltimore oriole, orchard oriole, cardinal, purple finch, scarlet tanager, cedar waxwing, red-eyed vireo, yellow warbler, mockingbird, catbird, wood thrush, robin.
Pokeberry .....	Phytolacca .....	49	Mourning dove, yellow-shafted flicker, kingbird, starling, cardinal, mockingbird, catbird, hermit thrush, gray-cheeked thrush, olive-backed thrush, robin, eastern bluebird.
Spicebush .....	Benzoin .....	17	Kingbird, red-eyed vireo, wood thrush, veery.
Sassafras .....	Sassafras .....	18	Bob-white, kingbird, red-eyed vireo, catbird, veery, robin.
Strawberry .....	Fragaria .....	46	Chewink, catbird, brown thrasher, wood thrush, robin.
Raspberry; blackberry..	Rubus .....	118	Ruffed grouse, bob-white, red-headed woodpecker, yellow-shafted flicker, kingbird, starling, Baltimore oriole, orchard oriole, pine grosbeak, song sparrow, fox sparrow, white-throated sparrow, chewink, California towhee, spurred towhee, cardinal, rose-breasted grosbeak, black-headed grosbeak, cedar waxwing, red-eyed vireo, mockingbird, catbird, brown thrasher, tufted titmouse, wren-tit, olive-backed thrush, wood thrush, robin, eastern bluebird.
Rose .....	Rosa .....	25	Ruffed grouse, sharp-tailed grouse, prairie chicken, bob-white.
Mountain ash.....	Sorbus .....	14	Red-headed woodpecker, Baltimore oriole, evening grosbeak, pine grosbeak, cedar waxwing, Bohemian waxwing, catbird, brown thrasher, robin.
Chokeberry .....	Aronia .....	13	Meadowlark, brown thrasher.
Red haw .....	Crataegus .....	33	Ruffed grouse, pine grosbeak, purple finch, robin.
Dwarf apples.....	Malus .....		Ruffed grouse, ringneck pheasant, red crossbill, pine grosbeak, purple finch, cedar waxwing, mockingbird, robin.
Juneberry .....	Amelanchier .....	40	Yellow-shafted flicker, Baltimore oriole, cedar waxwing, catbird, hermit thrush, veery, robin.
Wild cherry.....	Prunus .....	74	Ruffed grouse, bob-white, mourning dove, red-headed woodpecker, yellow-shafted flicker, kingbird, starling, Bullock oriole, Baltimore oriole, orchard oriole, evening grosbeak, purple finch, rose-breasted grosbeak, black-headed grosbeak, Louisiana tanager, red-eyed vireo, cedar waxwing, mockingbird, catbird, brown thrasher, olive-backed thrush, wood thrush, robin, eastern bluebird.
Sumac .....	Rhus .....	93	Ruffed grouse, bob-white, valley quail, downy woodpecker, red-bellied woodpecker, red-shafted flicker, yellow-shafted flicker, phoebe, starling, goldfinch, golden-crowned sparrow, chewink, white-eyed vireo, Audubon warbler, mockingbird, catbird, California thrasher, brown thrasher, Carolina wren, black-capped chickadee, Carolina chickadee, wren-tit, hermit thrush, robin, eastern bluebird.

Plants bearing fleshy Common name	Scientific name	Number of species of birds known to eat the fruit	Kinds of birds among those desirable to attract, that are most fond of the fruit
Pepperberry .....	Schinus .....	11	Cedar waxwing, phainopepla, hermit thrush, varied thrush, robin.
Holly .....	Ilex .....	45	Ruffed grouse, bob-white, valley quail, yellow-bellied sapsucker, yellow-shafted flicker, cedar waxwing, mockingbird, catbird, brown thrasher, hermit thrush, robin, eastern bluebird.
Supple-jack .....	Berchemia .....	13	Mockingbird, robin.
Buckthorn .....	Rhamnus .....	16	Mockingbird, catbird, brown thrasher, robin.
Wild grape.....	Vitis .....	77	Ruffed grouse, bob-white, pileated woodpecker, red-bellied woodpecker, red-shafted flicker, yellow-shafted flicker, kingbird, starling, cardinal, cedar waxwing, mockingbird, catbird, brown thrasher, wood thrush, veery, robin, western bluebird, eastern bluebird.
Virginia creeper.....	Parthenocissus .....	39	Red-headed woodpecker, red-bellied woodpecker, yellow-bellied sapsucker, yellow-shafted flicker, starling, evening grosbeak, purple finch, scarlet tanager, red-eyed vireo, mockingbird, brown thrasher, tufted titmouse, hermit thrush, olive-backed thrush, gray-checked thrush, robin, eastern bluebird.
Buffaloberry .....	Shepherdia .....	16	Sharp-tailed grouse, pine grosbeak.
Silverberry, Russian olive, etc.	Elaeagnus .....		Sharp-tailed grouse, prairie chicken, cedar waxwing, catbird, robin.
Wild sarsaparilla.....	Aralia .....	14	Bob-white, robin.
Dogwood .....	Cornus .....	86	Ruffed grouse, bob-white, downy woodpecker, yellow-shafted flicker, red-shafted flicker, kingbird, starling, evening grosbeak, pine grosbeak, purple finch, white-throated sparrow, song sparrow, cardinal, cedar waxwing, warbling vireo, red-eyed vireo, catbird, brown thrasher, hermit thrush, olive-backed thrush, gray-checked thrush, wood thrush, robin, eastern bluebird.
Sour gum.....	Nyssa .....	36	Yellow-shafted flicker, starling, purple finch, cedar waxwing, gray-checked thrush, olive-backed thrush, robin.
Crowberry .....	Empetrum .....	16	Pine grosbeak, snowflake.
Bearberry .....	Arctostaphylos .....	16	Ruffed grouse, dusky grouse, valley quail, mountain quail, fox sparrow, wren-tit.
Huckleberry .....	Gaylussacia .....	35	Pine grosbeak, chewink, robin.
Blueberry .....	Vaccinium .....	67	Ruffed grouse, valley quail, kingbird, orchard oriole, pine grosbeak, chewink, cedar waxwing, catbird, brown thrasher, black-capped chickadee, tufted titmouse, hermit thrush, robin, eastern bluebird.
Mexican mulberry .....	Callicarpa .....	10	Mockingbird, brown thrasher.
Partridge berry .....	Mitchella .....	10	Ruffed grouse.
Elderberry .....	Sambucus .....	106	Valley quail, red-headed woodpecker, yellow-shafted flicker, eastern kingbird, Arkansas kingbird, black phoebe, starling, California towhee, white-crowned sparrow, rose-breasted grosbeak, black-headed grosbeak, phainopepla, red-eyed vireo, mockingbird, catbird, brown thrasher, California thrasher, wren-tit, olive-backed thrush, robin, western bluebird, eastern bluebird.
Snowberry .....	Symphoricarpos .....	25	Sharp-tailed grouse, evening grosbeak, pine grosbeak, varied thrush.
Black haw.....	Viburnum .....	28	Ruffed grouse, yellow-billed cuckoo, yellow-shafted flicker, starling, purple finch, rose-breasted grosbeak, cedar waxwing, catbird, brown thrasher, robin, eastern bluebird.
Honeysuckle .....	Lonicera .....	15	Bob-white, pine grosbeak, white-throated sparrow, catbird, brown thrasher, hermit thrush, robin.