



Bobwhite

➤ **BOBWHITE** is a bird that stays put. He likes it where he is and he doesn't squander a wing-beat on migration. Winter or summer, hot or cold, bobwhite rarely strays outside a ten-mile radius of his native hatch.

This speaks well for the hardiness of the bird, for like other quail and partridges of the *Perdidae* family bobwhites nest on the ground. They usually find a sheltered place like a depression in the grass or at

the base of a tree or bush to make their nests of grass and stems.

In these snug sanctuaries families of bobwhites huddle together with no apparent discomfort from the winter's worst weather. The greatest hazard of overwintering from the bobwhite's point of view is too much snow. Bobwhites feed on seeds and berries, and as long as the snow does not cover up the total available supply, they manage nicely.

Bobwhites are small birds, averaging about ten inches in length. Their bills are short and thick, their feet are strong and well adapted to scratching. Distinctive features are a white line over the eye, a white throat, and a white under-body barred with black. The overall coloring is reddish brown, with a gray tail.

If you were to ask whether the bobwhite is a quail or a partridge, the answer would depend on the part of the country you were in. In the East, the name quail is used interchangeably with bobwhite: bobwhite is quail and quail is bobwhite. In the South bobwhite is called partridge. To complicate matters further, the ruffed grouse which belongs to a distinct family is referred to as a partridge in New England.

The name bobwhite comes from the distinctive and easily imitated call, which is a musical phrase whistled cheerfully, usually from atop a post, bush, or rock. If you are willing to meet the bird halfway, you can distinctly hear him calling "bob-white, poor-bob-white," with the last note rising sharply.

That the precise meaning of the bird's call lies chiefly in the ear of the listener is borne out by the fact that in New England it is said that the bobwhite's call is a weather forecast. If the two-note call is sounded, he is issuing a warning, "more wet." If instead he utters the three-note whistle, he is predicting, "no more wet."

The small cheerful bird does man a valuable service as a weed-killer. Bobwhites have a great appetite for weed seeds. They consume great quantities of ragweed, pigweed, and foxtail grass seed and other unwanted weed varieties.

Science News Letter, March 25, 1950

AERONAUTICS

Self-Starter Eliminates Ground Power Aid Need

➤ A NEW self-starter system, for gas turbine propelled aircraft, makes possible an unlimited number of starts without aid from any ground power. This is one of the features of a pneumatic auxiliary power system, developed by AiResearch Manufacturing Company, Los Angeles.

Another feature is that it provides independent operation of necessary accessories when the main turbine power plants are idle. A plane equipped with it can maintain heat, light, radio communication and all necessary accessory activities without

operating the main engine. In flight, it will give constant power for accessories regardless of the varying power output of the main engines.

This auxiliary power system was developed by AiResearch under the sponsorship of the Navy Bureau of Aeronautics and Consolidated Vultee Aircraft Company. The primary purpose was to find an airborne self-starter for jet planes to free them from dependence on ground power. The use of this device will permit the sudden shifting of jet planes to strategic airfields where a source of ground power is not available.

The AiResearch pneumatic system consists basically of two small gas turbine compressors, two air turbine alternator drives and four air turbine starters. Reduced to the simplest terms, the operation of the system can be likened to a wind mill. The driving force, compressed air, is supplied by the gas turbine compressors. They are said to be the most powerful air suppliers for their size in the world.

The compressed air is carried by ducts to the air turbine alternators and air turbine starters. Striking the turbine blades in these units, it windmills them up to speeds above 30,000 revolutions per minute. The alternators provide the means of transferring power from the system to operate accessories. The starters crank up the gas turbine engine.

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ENGINEERING-AERONAUTICS

Match-Head Size Radio Tube Lightens Equipment

➤ A RADIO tube the size of a match head is in experimental development at the Wright-Patterson Air Force Base, in Dayton, Ohio, it was revealed recently. It would take 90 of them to equal in volume the well-known standard radio tube.

About 250 of them have been made and are under test. There are still "bugs" to be eliminated, and production methods will have to be developed. The present tubes are hand-made and, therefore, necessarily costly.

The name of the new sub-miniature tube is the "fieldistor." It offers important advantages from a weight and space standpoint. Possible adaptation of the small tube to civilian usage is seen in such items as radio, television, hearing aids, fire and burglar alarms and in thermostats.

Modern aircraft uses hundreds of radio tubes for various purposes. The space and weight saved by the use of these tiny tubes means longer aircraft range at reduced operating expense, officials state.

Another advantage of these tubes is that they withstand engine vibration, gunfire and landing shock which literally destroys many conventional tubes. Also, the new tube uses so little current that many of the batteries now necessary can be eliminated.

Science News Letter, March 25, 1950

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