

# **\*\*ATTENTION\*\***

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**B**and-tailed pigeons have been declining in numbers since 1972. Biologists are baffled, but they hope continuing research on the species will yield some answers to the problem.

Game department researchers, headed by wildlife project leader Bob Jeffrey, have developed techniques to help game managers monitor the species. But since the band-tailed pigeon is a migratory bird, the effectiveness of these methods will depend largely on the cooperation of the game departments of Washington, Oregon and California.

Wet weather hampered live-trapping of band-tails last summer in what is probably the final year of 100 per cent federal funding for Washington's research on the bird. Wildlife biologist Carl Swanson started trapping and

## *The case of the band*

banding these relatives of the domestic pigeon in 1960 to learn more about their breeding and migrational habits for use in managing the species.

Since 1968 the federal Accelerated Research Program has funded most of Washington's work on the band-tailed pigeon. The Accelerated Research Program was established to fund studies on upland migratory game birds, which, except for the mourning dove, have historically been neglected as subjects of research and management. The program's funding is managed by the U.S. Fish and Wildlife Service, which distributes money to the states for research.

Washington has received up to \$17,000 a year for its research on the band-tailed pigeon; in 1976 the amount was \$10,450. Washington's pigeons are only part of the species' coastal race, so research was expanded three years ago to include work on pigeons in Oregon and California, too.

The work has included the summer

leg-banding of adults and young. This is done on their breeding grounds, on the west side of the Cascades and the Sierra Nevada Mountains. Game department workers capture pigeons for banding through the use of cannon net traps and wedge traps. In both cases, traps are set where pigeons gather. With a cannon net trap, electrically triggered cannons fire projectiles that are attached to one edge of a net. Triggering the cannons throws the net over the birds, trapping them.

With a wedge trap, a tubular frame-work is set up over a baited area. When the trap is sprung, weights are released, quickly drawing a net over the frame. This trap is especially useful in muddy areas where the weight of a net dropped directly on the birds could smother them in mud.

Another phase of band-tailed pigeon research is a pilot project in Washington using call counts as an index of how many birds are breeding each summer. The call count was first used for ring-necked pheasants and mourning doves and later adapted for band-tailed pigeons. Random routes are set up throughout the pigeon's habitat. Workers making the surveys drive along the routes early in the morning before civilization's noises can drown out the pigeons' calls. They stop every three-tenths of a mile, get out of their vehicles, listen for three minutes and record any pigeon calls they hear. Each route includes 20 stops. Fifty routes were set up this summer, and most of these were completed in June and July. Persons who made the counts included employees of the Department of Game,

and in California. From this, biologists know that these particular pigeons by-pass Oregon in their migrational patterns. Banding also shows population turnover rates and the percentages of the population harvested by hunters each year. From field interviews, they have learned that crippling losses may be as high as 35 to 40 per cent in the brushy areas around mineral sites (mineral springs and seashores).

Last year the Washington State Game Commission reduced the bag limit on band-tailed pigeons from eight to five, and it was set at five again this year. The reduced limit was recommended by Jeffrey and his co-workers because all sources of information, including call counts, showed that the pigeon population had been declining since about 1972. This was reflected not

Researchers are piecing together a picture of the comings and goings of this popular migratory game bird.

by Jay Stockbridge

## tailed pigeon

All three states also use a hunter wing survey to gain information about the species' productivity. Hunters are given envelopes at the beginning of the hunting season. They are asked to take a wing from each pigeon they bag in a day's hunting, put the wings in an envelope and mail them to the game department.

Wing surveys and returned leg bands give game managers an indication of hunting pressure — that is, how much of the population's mortality is due to hunting and how much to other factors — and of breeding success.

Because band-tailed pigeons migrate along the Pacific Coast without regard to political boundaries, data from wing surveys and summer bandings are most useful when they are combined for all three states. This information is supplemented by field interviews in which hunters selected at random are asked about their hunting success and crippling losses. If they have bagged any pigeons, these are checked.

the Fish and Wildlife Service and the U.S. Army.

Comparing the number of calls counted along these routes from year to year, game managers hope to be able to get an idea of pigeon population trends. As with wing surveys and leg banding, cooperation between states is necessary to make the call-count useful. Band-tailed pigeon calls are much less frequently heard than mourning dove calls counted on similar surveys. So more routes must be run, at a greater cost, to come up with dependable statistics. Oregon and California are reluctant to commit themselves to the call count, so it may not prove to be an acceptable management tool.

Although the effectiveness of management techniques depends on cooperation between states, the research into these techniques has already produced much useful information about the bird. For instance, banding studies have shown that most pigeons banded in Washington are shot here

only by data from banding, wing surveys and field interviews, but also by call counts and counts of pigeons at mineral sites in Oregon.

Confirming these observations, the number of pigeons harvested in the three Pacific states has dropped in recent years. Washington experienced a 10 per cent harvest decline in 1975 — the lowest since 1958 — but this was at least partly due to the lowered bag limit. The decline may be a normal population fluctuation — a phenomenon that occurs in many species of wildlife — or it may reflect breeding habitat deterioration or some other lasting factor. Further research and monitoring of the population may provide the answer.

Meanwhile, research on the band-tail continues, and years of work are repaying game department biologists with a better understanding of Washington's pigeons and a basis for their future management.

