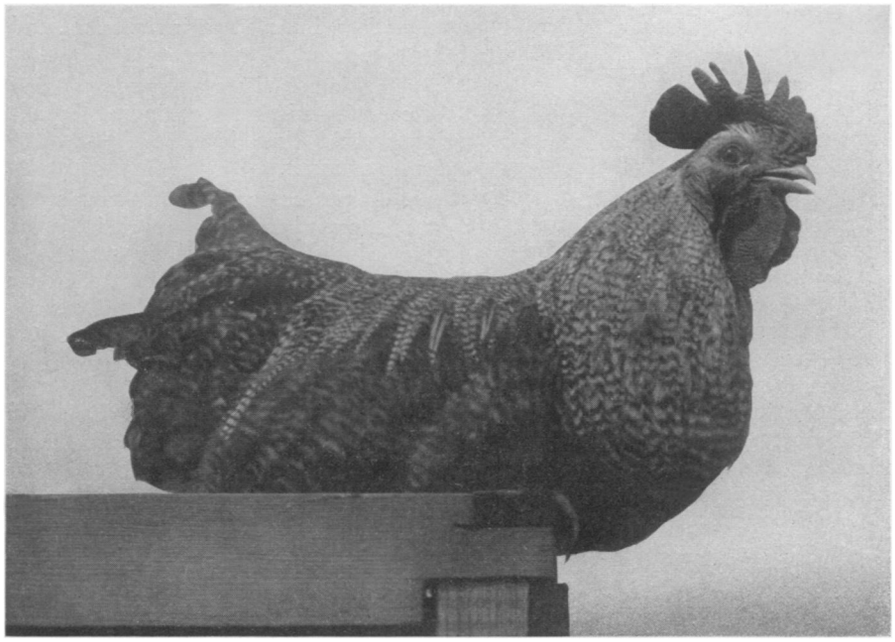
ORNITHOLOGY

Scientists Study a Wingless Rooster

Barnyard Counterpart of the Human "Armless Wonder" Examined in Princeton's Psychology Laboratory

By DR. FRANK THONE



DARES NOT JUMP

Perched on a low coop, the wingless rooster squats in terror, with staring eyes and open beak, afraid to jump down.

See Front Cover

OCCASIONALLY, a human infant is so unlucky as to be born without arms. Surviving in spite of this handicap (for the human breed is remarkably tough and adaptable) these under-equipped children grow up into "armless wonders," who compensate for their lack of the normal grasping organs by training their toes to such stunts as threading needles and pulling corks. A number of these "armless wonders" have made good livings out of their congenital misfortune by going on the vaudeville stage to exhibit their skill.

Now these human "armless wonders" have been joined by a "wingless wonder" of the barnyard—a rooster hatched without wings, which nevertheless has managed to grow to a lusty crowing adulthood. And just as the armlessness of the human specimens provides them with a career, so the winglessness of this bird has carried him into the most distinguished circles, far from the quiet Kentucky hillside where he first pipped his shell.

It is not mere curiosity-seekers in a vaudeville house who have sought this unique wingless rooster. Noted scientists in several great research laboratories, at the Smithsonian Institution, at Princeton University and elsewhere, have been glad to make his acquaintance. They have examined his anatomy, they have taken intimate interior views of him with X-rays, they have made careful studies of the effects of his winglessness on his behavior. And finally, they have provided him with a suitable harem, so that they might see whether his peculiarity will be transmitted to his progeny.

Bred in Old Kentucky

"Wingless" was hatched something over a year ago, by a hen belonging to Mrs. Olia Deering of Rose Hill, Kentucky. Realizing his potential scientific interest, Mrs. Deering sent him, when he was about six months old, to Dr. Herbert Friedmann, curator of birds at the Smithsonian Institution in Washington. While much interested in certain questions relating to the bird's anatomy, Dr. Friedmann felt that it would be a pity to sacrifice such a rare specimen on the dissecting table, without first making a study of the general behavior and giving him an opportunity to breed and propagate his kind.

First Recorded Survivor

Not being in a position to carry out these studies himself, Dr. Friedmann generously loaned "Wingless" to the psychological laboratory of Princeton University. Here for several months he was kept under the close scrutiny of Dr. O. H. Mowrer, a young scientist who has made a specialty of the behavior of birds, and Prof. H. S. Langfeld, director of the laboratory.

From the outset, the scientists both at the Smithsonian Institution and at the Princeton laboratories realized what a real biological prize they had. Wingless roosters are rarer than armless men. In fact, "Wingless" is the first of his kind ever to grow to adult roosterhood, at least so far as scientific records go. Chickens are sometimes hatched wingless, but hitherto such specimens have all died before they even shed their pinfeathers. Therefore, because of his very uniqueness, the university career of "Wingless" has been fairly strenuous.

With trained observers, "still" cameras and movie machines recording his every reaction, "Wingless" has been confronted with the kind of simple life-problems an ordinary chicken is expected to solve. He has been placed on a perch, with grain strewn on the ground to tempt him to hop off. He has been set on a rod free to roll under him if he moved. He has been permitted to hear other roosters crowing their challenges to all within earshot. When he reached a suitable age, he was given several pullets for mates. A careful scientific record has been kept of everything he did under all these circumstances.

Hypsophobiac

One of the first things noted about "Wingless," even before he entered Princeton, was his apparent fear of heights. Placed on top of an ordinary table, or other perch of the same height, he could hardly be induced to jump off,

even though he was hungry and plenty of food was in sight on the floor. Instead of jumping, he would squat down on the edge of his perch, his beak open, with every expression of alarm that can be written on a rooster's countenance. And when he finally screwed his courage to the sticking place and made the leap, he was apt to make an extraordinarily long jump, just as a scary human being, who finally forces himself to do something he is really afraid to try, will often do it at last with a convulsive super-effort.

Helpless When Down

The reason for this height-fear on the part of "Wingless" was not at first understood. It was assumed that since most fowls give a flop of their wings when they jump downward, or even fly a few feet, that the poor flightless rooster was at a loss for the other half of his jumping apparatus.

Then, after one or two unsuccessful jumps, the truth became evident. "Wingless" did not need his wings to help him get down, but to balance himself when he landed. After some of his desperate long leaps he fell sprawling on the floor, which a normal chicken does not do.

Furthermore, he could not get up again. Once on his back or side, he was as helpless as an overturned turtle. He would kick and wriggle and "hump" himself generally, but could not get his long legs under him without assistance. A normal winged fowl apparently helps itself up with a push from its wing, as a fallen man does with his arm.

Another thing that may increase the helplessness of poor "Wingless" when he is on the ground is his general "bottle-shouldered" architecture. Seen from the side, he does not look greatly different from the ordinary average run-of-the-coop Plymouth Rock rooster. But a face-on view shows him quite shoulderless, sloping inward from hips to neck with the general contour of a narrow Gothic arch—just the kind of shoulderline which caricaturists like to put on their drawings of the Timid Taxpayer. A Rhine wine bottle trying to get up and stand on its bottom might have the same difficulty which the prostrate "Wingless" encounters.

"Wingless" is not only without wings and shoulders; he hasn't any white meat, either. The breast muscles of birds, which are the white meat of chickens and other fowls that fly but little, are their wing-pullers. Since he has no wings, he needs no wing muscles; hence "Wingless" has no breast. "Wingless" would be a disappointment in the pot: nothing but drumsticks, back and neck! Mrs. Deering spared herself a Sunday-dinner disappointment when she sent her wingless young rooster forth for a career in science.

Bottle-Neck Anatomy

X-ray pictures of "Wingless" carry out the general impression you get of his anatomy when you run your fingers over his bottle-neck anatomy and feel the ribs right under his skin, in the place where the white meat ought to be. The X-ray pictures show no wing-bones, no shoulder-blades. There is on one side a spike-shaped nubbin of bone where the wingjoint might be, but until his career is ended and Dr. Friedmann finally takes his remains apart with his scalpel it will not be possible to make a guess just what that fragment is supposed to represent. Besides being without the bones that go with flying, "Wingless" is generally a bit lopsided, his X-ray pictures show.

But for all his freak anatomy and his helplessness about jumping from a height and getting up off his back. "Wingless" is by no means a biological failure. On a second test, with an uneasy perch that rolled under his feet, he was able to keep his balance by teetering up and down. Motion pictures show how successful he was at this kind of thing.

Sleeps on Floor

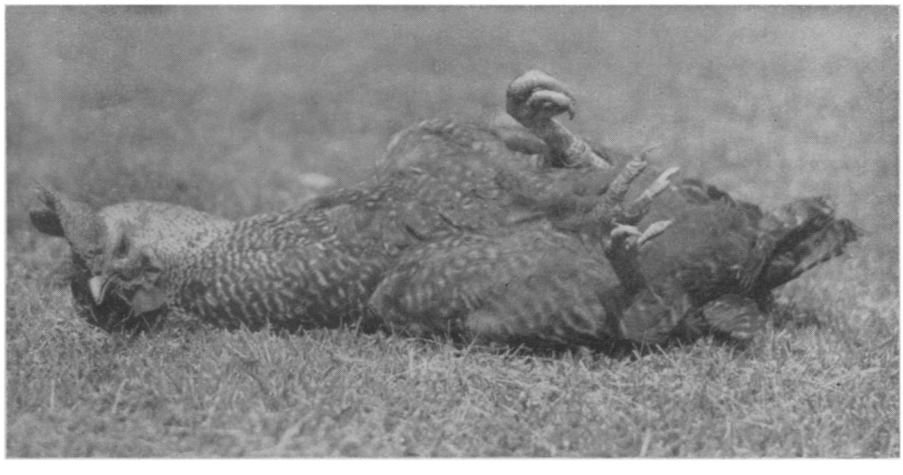
Nevertheless, in spite of his ability to maintain himself on even an uncertain perch, "Wingless" never uses one to sleep on at night. In the coop where he now lives with his hens, the perch is only three feet or some such matter above the floor. But "Wingless" always crouches in a corner to sleep, leaving his wives up there all by themselves.

And it isn't as though he could not get up there. The scientists who have charge of him say that he is capable of surprisingly high jumps. This ability is partly due, perhaps, to his light weight, partly to his powerfully developed legs. It is quite likely that if "Wingless" did try to jump to a perch he might hit it all right, but topple right on over and fall back to the floor. So he discreetly refrains from trying.

The scientists were much interested to see what "Wingless" would do when he became old enough to crow. All normal roosters of course flap their wings a few times before telling the sun that it's time to get up. But the lack of any wings to flap didn't embarrass "Wingless" a bit. He just stretches his neck out and crows when he feels like crowing.

Psychology Course Finished

"Wingless" has now finished his course in psychology at Princeton. In fact, he is not at the University at all any more. He has retired to a secluded place in the country, married several wives, and is raising families of chicks. But even in his retirement he is still the servant of science. For one of the things they want to know about him is whether his winglessness is just a chance freak of nature peculiar only to himself or whether there is a "gene" for it that will cause it to crop out in his grand-chicks.



HELPLESS

If the wingless rooster jumps from even a low perch, he is very apt to land sprawling, and then finds it impossible to get up on his feet again.

This article was edited from manuscript prepared by Science Service for use in illustrated newspaper magazines.