

## Planes Beat Birds

*Aviation—Ornithology*

Announcement by the National Aeronautical Association that it has accepted as the official non-stop record for airplanes the 4,736.7 mile hop of the late Italian aviator, Arturo Ferrarin, from Rome to Brazil, means that another record, hitherto held by birds, has been smashed.

Previously the record stood at 2,895.97 and was held by Edzard of Germany. According to records which ornithologists consider indisputable, he had been outdistanced more than 1,000 miles by a giant albatross that flew 4,000 miles from the Crozet Islands to Rottneest Island, off the coast of Australia, carrying about its neck a frantic message from thirteen shipwrecked sailors.

Proof that the bird had not alighted on the sea to seek food was established by the fact that a wire, holding the message about its neck, was too tight to permit it to swallow. When found, it had choked to death on a herring.

Comparison of other figures, submitted by the Aeronautical Association and by Dr. T. S. Palmer, of the U. S. Biological Survey, shows that the speed and altitude records of birds have been smashed too. Lieut. C. C. Champion, United States Navy, holds the altitude record, 38,418 feet, while the highest a bird is known to have flown is 20,000 feet. The speed record for airplanes is 278.48 miles an hour, held by Warrant Officer Bonnet, of France. Dr. Palmer is of the opinion that birds never go more than 60 miles an hour except in a terrific gale.

He points out, however, that birds are not trying to break records and do not go in for stunts. Their flights are "strictly business". When it comes to precision flying, he adds, birds can fly circles around any aviator; they never lose their bearings and do not require instruments.

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## Tree Holds Seed 16 Years

*Botany*

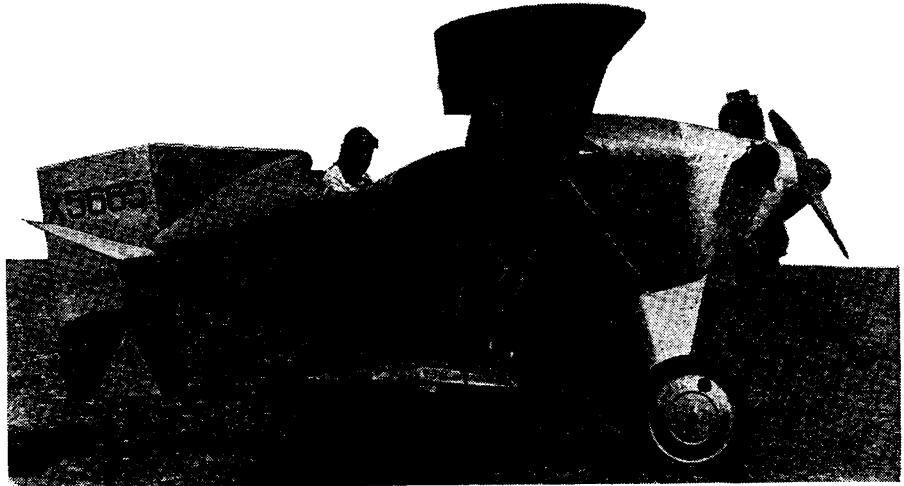
Experiments made at Giant Forest, Sequoia National Park, have shown that the California Big Tree, or *Sequoia gigantea*, sometimes retains its cones for sixteen years before they drop and discharge their seed contents.

The seeds are preserved from weather and fungi by a powdery pigment, which gives them a waterproof and germproof gloss. This pigment when dissolved in water makes a good writing fluid or furniture stain of a rich maroon color.

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## Fully Foolproof At Last

*Aviation*



*THE MERRILL AIRPLANE, invention of scientists at the California Institute of Technology, Pasadena, as it was shown at the recent Los Angeles air meet. Unlike ordinary airplanes, the two wings, though rigidly fastened to each other, may be moved by the pilot in relation to the fuselage, around the upper spar of the wing. They are shown here at their lowest angle. The wings being stable in themselves, no stabilizer is needed. Another unique feature is that the wings are not parallel, but the upper slants forward and upward at an angle of four degrees with the lower. These features make the plane virtually foolproof. The danger of stalling is minimized, and it can be landed in a space much shorter than with the ordinary plane*

## Wire Fence Stops Insects

*Entomology*

That an ordinary barbed-wire fence may be almost as effective in excluding grasshoppers and other insects as it is in excluding cattle is one of the curious results obtained by Prof. A. O. Weese of the University of Oklahoma in his recent studies of buffalo pastures in the Wichita National Forest. However, it should be added, the insects respect the fence primarily because it is cattleproof.

The fence in question serves to separate an area of moderately grazed typical virgin prairie from an area of grassland which has been seriously overgrazed. Botanists have known for some time that overgrazing of native pastures tends to throw the balance of vegetation towards a drier type than normal. That is, a pasture in the moist region of tall-grass prairie near the Mississippi will be converted by excessive grazing into a pasture

composed of plants usually found much farther west, in the region known as the short-grass plains. Thus a straight fence-line will often be found separating groups of plants which ordinarily would be found separated by long distances in nature.

Prof. Weese and his students have been sweeping two such adjacent types of grassland with their nets and identifying the insects caught. In doing this they have discovered that the associations of insects are quite as rigidly distinct on the two sides of the fence as are the associations of plants. What is more, they find that very rarely indeed do the insects characteristic of the drier short-grass group of plants stray over into the more luscious, if unfamiliar, vegetation of the normal prairie.

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## Quake Off Oregon Coast

*Seismology*

A sharp earthquake, severe enough to be recorded on seismographs throughout North America, occurred at 7:36 a. m., eastern standard time, on Tuesday, September 11, in the Pacific Ocean about 370 miles off the coast of southern Oregon. This announce-

ment was made by the U. S. Coast and Geodetic Survey as a result of the study of data gathered by Science Service. The exact location of the quake, said the experts of the survey, was at 42.0 degrees north latitude and 131.9 degrees west longitude.

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