

WILDLIFE

Whooping Cranes Found

Although only four nestlings and an unhatched egg were discovered at the birds' breeding ground, scientists see only a slim chance that the cranes can make a comeback.

► NATURALISTS are waiting for the solitary flock of whooping cranes to arrive at their winter quarters on the Texas coast before they exult over the apparent increase in their numbers.

Four nestlings and an unhatched egg were found when the cranes' hidden breeding ground was located in the wilds of Canada's Northwest Territory May 18.

The reluctance of bird lovers to prophesy a boom in the whooping crane census due to the young ones comes from hard experience.

Since 1938, when a count on the cranes was begun, 59 young have been hatched in the North and made it safely to Texas. But in this same period, 56 old-timers died off. The count in 1938 was 18 whooping cranes. The current flock, not counting the young, is 21 cranes.

Last summer a Canadian Wildlife Service scientist spotted several whooping cranes in what is now known to be the breeding area, including one pair with one young bird. However, this fledgling never made it to Texas, and presumably died.

The winter of 1954-55 was the first in 10 years that young whooping cranes were not present in the Texas wintering ground.

The whooping crane population hit a low point in the winter of 1941-42, when only 15 birds showed up in Texas. By 1949-50, however, their number was up to 34.

What is the chance that the once numerous whooping cranes can make a comeback? It seems a slim one, but the chance is there.

Fortunately, whooping cranes do not seem to need the stimulation of a large flock in order to breed. Thus, they have a continued chance to keep reproducing in spite of diminished numbers.

Some birds can breed only when surrounded by large numbers of their kind, Herbert G. Deignan, assistant curator of birds at the U. S. National Museum, told SCIENCE SERVICE. Some sea gulls, for instance, must be actually touched by others milling around it before they will mate.

The now-extinct passenger pigeons may have reacted like this, Mr. Deignan suggested.

Whooping cranes lay an average of two eggs a season, although as many as four have been counted. In view of the small number of adults, this makes a dangerous picture, because of the natural hazards from egg to adult.

For instance, normal accidents probably kill off three out of five baby robins, Mr. Deignan estimated. This is not a risky figure, with as many robins as there are

to replace their kind. But with the limited number of whooping cranes, such a mortality rate could spell the difference between survival and extinction.

Adult whooping cranes seem to be able to take care of themselves against their natural enemies. Old age and man are the greatest menaces to the survivors now.

Two of six birds lost in 1952 were found wounded by gunshots, one in Kansas and one in Saskatchewan. In spite of efforts to save them, both died.

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MEDICINE

First Study of Blood Usage Made

► BLOOD DISTRIBUTION agencies will soon be able to estimate, with far greater accuracy than at present, a region's future demand for human blood for therapeutic use. This is one of the results of the first large-scale study ever made relating blood usage to hospital size.

The study should greatly aid the distribution of an estimated 4,000,000 pints of blood to 8,000 hospitals every year.

Large general hospitals not only use more blood than small hospitals, they use more blood per bed, the new study, made by Dr. George W. Hervey, director of statistics of the American Red Cross blood program, showed.

Average blood use, per bed, rises in general hospitals as the number of beds rise, until the hospital reaches the size of 400 or more beds. The rise is probably due to the larger facilities for complicated and blood-consuming surgery in larger hospitals.

Blood use, per bed, does not continue to rise with hospital size in hospitals over 400 beds because the very large hospitals usually have many convalescent, psychiatric and tuberculous patients who need little therapeutic blood.

The 1,837 general hospitals studied used an average of 5.39 pints of blood per bed per year. Relatively few non-general hospitals were studied. Their blood use was rather unpredictable and seemed to depend more on the nature of the hospital than on its size. A huge 6,920-bed mental hospital used only 384 pints of blood in the year studied, while a hospital specializing in childbirth had only 126 beds but used 1,349 pints of blood.

Dr. Hervey's statistics will appear in the *American Journal of the Medical Sciences*.

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ELECTRICITY FROM WIND—The 80-foot rotor of an electric windmill, built by de Havilland Propellers Ltd. of Hatfield, Hertfordshire, England, is shown here. Blades are hollow and air is drawn up through a turbine at the bottom of a 100-foot tower to their open tips. (See SNL, July 2, p. 8.)

PHYSICS

Denver Sun Research Aids L. A. Smog Study

► RECORDS of how much and what kind of infrared light from the sun is absorbed in the Denver atmosphere have been kept by the Denver Research Institute for many years, to aid astronomers seeking uncontaminated air for telescope viewing.

Now a man on a roof in Los Angeles, with a similar instrument, checks that city's smog against the corresponding record of Denver's clear air to determine how much and what kind of chemicals float in the air over California's smoggy southern city.

James Brooks, staff engineer of the Denver institute, applied to Los Angeles this method of analyzing the air without collecting samples from air filters.

Absorption of infrared light, as measured by the spectrometer, reveals the kind of, and to some extent the quantity of, atoms in the atmosphere through which the light waves have passed. Different atoms absorb different wave lengths in the invisible infrared. This absorption is shown on the spectrometer record.

The difference between Los Angeles' record and the corresponding one for the same day in Denver reveals the smog particles, when allowance is made for absorption by atmospheric particles present between the earth and the sun.

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