

ORNITHOLOGY

**Study California Condor,
Nearly Extinct Giant Bird**

THE California condor, most gigantic bird that flies, is nearly extinct, but there are probably more specimens of the bird still living than recent estimates have stated. This is the opinion of Ernest I. Dyer, ornithologist of Piedmont, Calif., who recently went with a party of observers into the "condor country" of the south-central California Coast Range to check up on the surviving numbers of the birds. (*The Condor*, Jan.-Feb.)

Ten, was a recent estimate of the number of California condors still living. On at least three occasions Mr. Dyer and other members of his party saw seven condors in the air at one time; and he regards it as quite unlikely that 70 per cent. of the California condor population of the world would be thus concentrated at a given moment.

One of the aides of the party, a "hoss wrangler" who knows the country thoroughly and has the reputation of reliability, declared on one occasion that there were eighteen condors in sight, seven in the air and eleven on the ground, feeding. Two of the birds observed were young.

Dr. Dyer stresses the danger of early extermination that threatens the California condor, especially since there are un-sportsmanlike hunters who are apt to shoot at the birds for nothing more than the fun of shooting.

Science News Letter, August 10, 1935

PSYCHOLOGY

**Workers in Movies
To Improve Efficiency**

UP-to-the-minute factories now are putting their workers in the movies. The films are not of the Hollywood variety and may never show in your neighborhood theater, however. They are used by efficiency experts to study the movements of workers on the job. And incidentally they serve to convince workers of the importance of eliminating waste movements.

Use of the new technique for reducing factory fatigue and increasing output was described in a report to the International Congress for Scientific Management, meeting at London. The report was presented by a subcommittee of the American Society of Mechanical Engineers.

"Before and after" films—films showing the methods employed in other industries before and after the introduc-

tion of motion study—are used to break down the resistance usually encountered in any organization when suggesting new and improved methods. A film is then taken of the operation in that particular plant, and very quickly the operatives begin to offer suggestions for improvement. When the new method is in operation, another film is taken to act as a spur to continued effort and to stimulate others in attacking their own problems.

Of the improvements which have been brought about by this method, one was better seating arrangement—special chairs and foot rests being introduced in one instance. Better lighting was also studied. The inspectors experimented with different colored work-places to reduce eye fatigue. In one unit a pale blue color provided the best contrast to the black articles handled by the workers.

Suggestion books were kept in which the employees were encouraged to set down their suggestions, many of which were ultimately adopted. In one small plant over 500 motion-study suggestions were received in less than a year, and an unusually high percentage are already in operation.

Science News Letter, August 10, 1935

EDUCATION-PSYCHOLOGY

**Figures "Survival" Chance
For High School Students**

MATHEMATICIANS of life insurance companies compute life tables which can show you your chances of survival at any age.

Now an educator has computed such a table showing the chances of a boy or girl for survival of high school studies, based on mental age.

Tell me the boy's intelligence quotient (mental age compared with chronological age), says Dr. Claude Mitchell, superintendent of schools at West Newton, Pa., and I can tell you what are his chances for flunking in English or algebra. Here is his table:

IQ over 100—Chances for passing in English, 12 out of 14; chances for passing in algebra, 19 out of 20.

IQ 80 to 100—Chances 1 out of 2 on English; 1 out of 3 on algebra.

IQ 75 or lower—Chances zero on both subjects.

Similar tables could be set up showing chances for high school graduation, Prof. Mitchell indicates. Of the students with IQ's above 98.8, only 9 per cent. drop out before graduation, but of those below this average grade 55 per cent. do not complete the course.

Science News Letter, August 10, 1935

IN SCIENCE

COMMUNICATION

**Radio Stations Will Link
Afghanistan to World**

THE MOST powerful of five new wireless stations for communication within Afghanistan and with the capitals of the world will be erected at Kabul shortly. The other four will be situated in important positions throughout that inland country between India and Persia.

Outfitted with a short-wave transmitter suitable for telegraphy and telephony, and two receivers, the Kabul station will reach all the capitals of Western Europe with ease. Regular communication with New York, Shanghai, Tokyo and Moscow will be established, as well as with Rio de Janeiro, Cape Town and Melbourne.

A central telegraph office for control of the wireless stations will be set up ten miles from Kabul, where the transmitting and receiving sites will be located. The latter will be separated, for more efficient operation, and equipment to reduce atmospheric interference will be used in the receiving station.

Science News Letter, August 10, 1935

GEOLOGY

**Gold Found in Petrified
Forest Area in Nevada**

GOLD HAS been discovered in Churchill County, Nev., but not in sufficient quantities to cause a gold rush, according to a report by Prof. W. S. Palmer of the Mackay School of Mines, Reno, Nev. (*Engineering and Mining Journal*, July.)

Unfortunately for would-be prospectors, the gold is found in logs of petrified wood, now changed by time and Nature into crystalline and chalcedonic silicia, carbon, and calcite. The petrified forest area is 500 yards square, surrounded by rocks of volcanic origin, and gold has been found in only a part of the logs, which differ widely in gold content.

Spaces between the quartz crystals contain the irregular and crystalline gold grains, most commonly occurring in individual crystals shaped like cubes, octahedrons, and dodecahedrons. The largest gold crystal found so far is 0.16 inches in diameter.

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E FIELDS

PSYCHOLOGY

Alcohol and Auto Driving Do Not Mix, British Find

ALCOHOL and automobile driving do not mix, is the verdict of the committee of the British Medical Association formed at the recent request of the Minister of Transport, Leslie Hore-Belisha.

The fifteen members of the alcohol study group found the three principal objections to even moderate use of alcoholic beverages before or during driving were: (1) Too many risks taken. (2) Traffic decisions made more rapidly. (3) Such decisions made less judiciously than normally.

The committee's verdict was based on a study of previous researches, including American and British tests indicating that there was a slowing down of eye, leg and hand movements and lack of coordination between the three after small doses of alcohol.

Hand coordination and motion were checked by measuring the increase in the number of errors in typewriting after the test alcoholic dose.

Science News Letter, August 10, 1935

PHYSICS-MEDICINE

"Radium Hen" Finds Lost Cancer Therapy Needles

THE HEN that finds lost radium is a more valued possession than the goose that lays the golden egg—to a modern hospital, at least.

For golden eggs come cheaper than radium, a modest price for which is \$50,000 for a single gram.

The "radium hen" (*Journal of the American Medical Association*, Aug. 3) is really an instrument developed in the National Physical Laboratory in England. It gets its name from the clucking sound it makes when placed near radium. The nearer it approaches the valuable element, the more rapidly and excitedly it clucks.

Hospitals occasionally, in spite of extreme care, lose or mislay radium "seeds," the tiny gold needle-like containers inserted in the body in cancer therapy.

Every now and then one gets washed down the sink. Now the "radium hen" leads quickly to the point in the pipe where the needle is lodged.

The instrument looks somewhat like a garden syringe, but behind its brass-cased head are a neon lamp and a trail of flexible cable leading to a box of high tension batteries.

The neon glows when the electric pressure is sufficient to cause a discharge through it. The pressure is adjusted so that the lamp just misses lighting. The radium radiation pulls the trigger, so to speak.

As it is sensitive to daylight, the lamp has to be covered, and therefore cannot be used as an indicator. An electric current flows through the lamp when it is lighted and the current is converted into sound either by use of head phones or a loud speaker, which clucks in correspondence to the flashing of the hidden lamp.

Science News Letter, August 10, 1935

AERONAUTICS

Airships in Gusty Air Flung Downward Violently

THE BATTLE between cold polar air masses and the warm air from tropical regions can create violent disturbances in the earth's atmosphere which may make objects fall one-third faster than the drop due to the normal attractions of gravity, it was revealed to aeronautical scientists gathered for the first American lighter-than-air craft forum at the Daniel Guggenheim Airship Institute at Akron, Ohio.

The increased acceleration due to weather forces applies to all falling objects, but what interested the airship experts was the application to lighter-than-air craft and the problem of the airship's future in America.

Dr. A. M. Kuethé, of the Airship Institute, described the weather forces in explaining a six months' study of what happens when cold air moving down from Arctic Canada mixes with warmer air coming north from the tropics and makes the weather of the temperate zones.

In the ideal case, Dr. Kuethé said, a cold air mass overrides a warm air mass and there is a consequent overturning which regenerates strong gusts.

Using recording instruments on a broadcasting tower nearly 300 feet high and small balloons for higher altitudes, the airship institute scientist found accelerations as much as one-third that of gravity frequently occur in these cold front zones.

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BOTANY

Almost Invisible Light Can Retard Plant Growth

A NEW and unsuspected link in the relationship between light and biological activity has been discovered by Dr. Lewis H. Flint, of the Department of Agriculture, and Dr. E. D. McAlister, of the Smithsonian Institution. Discovery that a band of light waves at the red edge of the invisible in the spectrum has a powerful retarding effect on plant growth was announced as the result of their studies.

Lying at just about the point where light can no longer be seen by the human eye, the band's growth-retarding action had not been suspected or looked for, although previous studies by Dr. Flint had disclosed the effects of certain light waves on plant growth. Red, orange, and yellow light caused lettuce seeds used in the test to germinate, while green, blue, and violet light caused germination to lag. The effect of this inhibitory invisible light band seems to be more powerful than the entire green-blue-violet end of the spectrum, although not tested as yet on other plants beside lettuce seeds.

Fortunately for trees and plants on the earth, solar radiation of these growth-retarding light rays is reduced by its absorption in oxygen of the sun's atmosphere, and in water vapor of the earth's atmosphere.

Phototropism, or the well-known bending toward the light of plants, is now explained by scientists as being the result of unequal growth on different sides of the plant shoot, due to effects of different bands of light waves.

Science News Letter, August 10, 1935

ENTOMOLOGY

Guatemalan Wasps Fight Cane Grubs in Hawaii

DESTRUCTIVE grubs that eat the roots of Hawaii's sugarcane crop have gained a new enemy in a species of small wasp which has been imported from Guatemala, by way of California, to fight them. The wasps lay their eggs on the undersides of the grubs, and the larvae that hatch out feed parasitically on the grubs, destroying the destroyers.

The original stock of wasplets was transported to Los Angeles from Central America by airplane, bred for a season on carefully nurtured cane grubs, and the second generation thus obtained shipped to Hawaii by fast steamer.

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