

Do You Know?

An up-to-date tannery is being erected in Western Australia to make leather of *sheep pelts*, a product formerly wasted.

Copper ammonium fluoride is used to *mildew-proof* such textiles as cotton, linen, jute, sisal and hemp.

The snows of Mexico's "*Sleeping Woman*" 17,338-foot volcano, are being harnessed by scientists for hydroelectric energy and irrigation.

Two varieties of California *lichens*, a tree trunk and rock encrusting plant, are now in demand by perfume manufacturers.

Mastitis, a disease of cows, annually renders 3,500,000,000 pounds of milk unfit for use, or 3% of total normal U. S. milk production.

Brazil's present wartime *mining boom* is producing principally iron ore, coal, manganese, quartz crystals, industrial diamonds, mica, nickel, and bauxite for aluminum.

Storage batteries in Army motorized equipment used on the Alaska Highway and in the Aleutians are protected against freezing in 40-below-zero temperatures by *mineral wool* insulation.

The milk of the *water buffalo* found in India is slightly bluish but is exceptionally rich and high in butterfat content; millions of these animals are used in India for milk, meat and work.

White Niagara grapes, introduced into Brazil from the United States, are reported to be yielding in that country attractive red grapes which in size, taste and shape are the same as the white.

New soap ingredient, a sulfonated product developed from *petroleum*, mixed with other constituents of soap, gives a material that can be used in any kind of water to remove dirt, oil or grease; it leaves no ring on the bathtub.

Hydrochloric acid, or anhydrous hydrogen chloride, of greater than 99% purity, is produced without explosion hazard by the use of *chlorosulfonic acid*; in the process where hydrogen and chlorine are burned together, explosions sometimes occur.

MEDICINE

Psychiatry Training

Medical schools throughout the country should give every physician a grasp of this valuable science. 50% of patients have psychiatric difficulties.

➤ REORIENTATION of training in medical schools throughout the nation to give every physician a grasp of psychiatry and put more emphasis on the person who lives inside the body was recommended as a measure to be included in any national civilian health program by Col. William C. Menninger, director of the neuro-psychiatry division, U. S. Army Medical Corps. His recommendation came in response to a question as he was testifying at a hearing of the U. S. Senate Subcommittee on Wartime Health and Education.

"Every physician should have an adequate grasp of psychiatry," Col. Menninger said, "because 50% of the patients going to a doctor have psychiatric difficulties."

There is a severe shortage of psychiatrists both in and out of the military services, he told the Committee.

"There are approximately 3,000 qualified psychiatrists in a total of 140,000 physicians in the United States," he said.

Other measures advocated by Col. Menninger to build mental health in the nation were a program of public education on mental health to remove the many bugaboos and misconceptions about mental illness that are widespread and a plan to make psychiatric advice available in general health clinics. Psy-

chiatric treatment should be available in general hospitals just as skin specialists are, he said. Most communities do not have this sort of all-round treatment available.

Men who are discharged from the military services for neuropsychiatric reasons should have treatment and not a life pension, Col. Menninger advised, emphasizing, however, that he was expressing his own opinion as a physician and not voicing any policy of the Army.

The neuropsychiatric type of personality maladjustment, where symptoms are developed unconsciously to gain relief, aid or escape from an intolerable situation, is not helped by looking forward to an indefinite period of pension. The only way such a man will get well is to face the situation in an adult way and not by becoming a dependent.

Col. Menninger declared that he believes the neuropsychiatric to be just as genuinely disabled as the man who has a bullet through his leg. He is just as worthy of a pension. But it should be paid to him in a lump sum or some other way than as a pension coming to him month after month and year after year as long as his neurosis shall last.

"These men need treatment," Col. Menninger said, "and many of them can get well."

Science News Letter, July 22, 1944

ORNITHOLOGY

Birds Are Composers

➤ BIRDS ARE composers as well as musicians. Their songs have musical form and are therefore true music. These are the conclusions of Dr. Wallace Craig of the New York State Museum, as a result of a comprehensive statistical study of the song of the wood pewee.

A bird student from boyhood, a comparative psychologist, and an accomplished musician, Dr. Craig combines these attributes in his study of the wood pewee to produce, in the words of Dr. Charles C. Adams, emeritus director of the New York State Museum, "one of the most outstanding contributions to

the study of bird songs in recent years in America."

Dr. Craig believes that the singing of birds is not entirely unconscious and unintelligent. "While the wood pewee is singing one phrase, he anticipates the next one; this is the beginning of musical composition. Birds give attention to sound as such and sometimes choose one sound in preference to another; this is a beginning of musical taste."

The wood pewee, a dull-colored, inconspicuous bird of the woods, is often to many people only a plaintive voice of an unseen singer. It has three songs:

an early morning twilight song of great beauty and of musical interest because it can be "described definitely and analyzed mathematically," a leisurely daytime song, and an evening twilight song.

Composed of three different phrases repeated hundreds of times in varying order, the twilight song is a continuous musical composition. Because the three phrases are easily identified, it was possible for 22 observers, working independently, to cooperate with Dr. Craig in a statistical study to determine the order of the succession of the phrases.

The wood pewee is the only wild bird, anywhere in the world, whose song has been observed cooperatively and analyzed statistically to determine the order of succession of the phrases and hence the musical structure of the song.

Science News Letter, July 22, 1944

MEDICINE

Growth Hormone May Be Tested by New Method

► AN ACCURATE, sensitive method for testing the potency of the pituitary growth hormone has been worked out by Dr. Herbert Evans, Dr. Miriam E. Simpson and Dr. Walter Marx, of the University of California.

The test is based on the fact that a cartilage disk on the end of one of the leg bones, the epiphyseal cartilage of the tibia, changes its width in proportion to the increase of weight of the young rat as it grows. The solution of the growth hormone to be tested is injected for four days in succession into an immature female rat from which the pituitary gland has been removed. At the end of the fifth day the tibia is dissected, split, and hardened with formalin. It is then treated with a silver solution, exposed to light, fixed, and washed, somewhat in the manner of a photographic film. The epiphyseal cartilage shows up as a white band which may be measured under the low-power microscope. Width of this band is proportional to amount and strength of the hormone, the scientists found.

Trial of the growth hormone is as yet limited to work with animals but standardization of a test for potency is one of the necessary steps before any hormone can be used clinically on humans, Dr. Evans pointed out.

The cartilage test is 11 times as sensitive as measuring the growth-promoting qualities by means of increase in body weight of the animals.

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BOMB RACK IN WINGS—The 13th Air Force Service Command in the South Pacific has produced a more versatile and powerful P-38 Lightning plane by designing the external wing bomb rack seen in this official U. S. Air Forces photograph.

PUBLIC HEALTH

Polio Cases Increase

► INFANTILE paralysis cases increased in five states during the week ending July 8, reports received by the U. S. Public Health Service in Washington show. For the nation as a whole, excluding Rhode Island from which no report was received, there were 289 cases, compared with 222 the previous week and 244 for the corresponding week of last year.

Dr. Charles Armstrong, one of the U. S. Public Health Service's experts on infantile paralysis, has returned from North Carolina, where he went at the request of the state health officer. North Carolina is having the worst of the current epidemic and is suffering from a shortage of physicians. This state reported 94 cases for the week ending July 8, 84 the previous week, and a total of 269 so far this season.

All infantile paralysis patients in the state are being hospitalized. At Hickory, center of the outbreak, a nearby boys' camp was rapidly converted into a hospital. Red Cross nurses are on the job, there are plenty of respirators, and the children are getting the Kenny treat-

ment. Dr. Armstrong praised the way in which state and local health authorities, assisted by the Red Cross, the Army and the National Foundation for Infantile Paralysis, have been handling the

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