

dor, probably the world's most highly developed soaring bird, has the largest slots.

Mr. Storer showed slow-motion pictures of California condors taking off and in flight, showing in detail how they use their feather control surfaces. He also stated that he is at present carrying on wind-tunnel experiments with models based on these pictures.

Science News Letter, November 27, 1943

"Impossible" Hybrids

➤ REARING "impossible" hybrid plants on a synthetic diet including powdered malt extract was reported by Dr. Albert F. Blakeslee of Smith College. When some plant species are crossed, an embryo

plant will start to develop but will soon die, producing a sterile seed, because conditions within the parent plant are not favorable to its continued growth. By very carefully dissecting out these microscopic beginnings of the new plants and transferring them to a glass dish containing the necessary nutrient elements, the otherwise doomed embryos could be induced to grow.

Dr. Blakeslee and his associate in this research, Dr. Sophie Satin, used various kinds of hybrid jimsonweeds in their experiments; but the principles involved apply to other plants, to obtain desirable hybrids which have heretofore been regarded as impossible.

Science News Letter, November 27, 1943

MEDICINE

Jaundice Has Sequel

Group of officers and enlisted men are suffering from a psychoneurotic condition following 1942 epidemic. Exhaustion, indigestion and instability are symptoms.

➤ SINCE the epidemic of jaundice in the U. S. armed forces in 1942, (*See SNL*, Aug. 8, 1942) a "sizable group of officers and enlisted men" have, apparently as a sequel to the disease, been suffering from a psychoneurotic condition, Maj. C. M. Caravati, chief of medical service of Percy Jones General Hospital, told members of the Southern Medical Association at the meeting in Cincinnati.

Chronic and unexplained exhaustion, a mild but constant aching under the ribs on the right side, digestive disturbances especially after eating fats, loss of weight and emotional instability are the outstanding symptoms of the condition, Major Caravati reported.

Most of the patients complained of these symptoms before they had recovered from the jaundice, but others apparently recover before the condition he reported sets in.

Thorough, careful examination of the patients failed to show any evidence of disease of the liver or any other organ.

The disturbance, Major Caravati believes should be considered as a change of physiology caused by an unfavorable reaction to a mild infection. Or it may have been caused by long confinement by illness which made the patients feel frustrated and depressed and even convinced some that they would be permanently disabled. Such injury to the emotional and mental make-up may

have been sufficient to upset normal functioning of the body.

Science News Letter, November 27, 1943

Marihuana Won't Help

➤ HOPE that marihuana, often blamed for crime and insanity among its users who smoked it in "reefers" or "goof-butts," might help cure morphine addicts by relieving the withdrawal symptoms when they are taken off the narcotic drug proves false in the light of studies reported by Dr. C. K. Himmelsbach at the meeting of the Southern Medical Association. Dr. Himmelsbach is director of research at the Lexington, Ky., U. S. Public Health Service Hospital where alcohol and narcotic drug addicts are treated.

In the studies, "Pyrahexyl" compound, a synthetic drug reported to have considerable activity like that of marihuana or cannabis, was given by mouth and by injection into the muscles to bona fide morphine addicts in place of morphine. Even in amounts sufficient to produce marihuana effects, the compound did not appreciably relieve the morphine withdrawal symptoms.

Science News Letter, November 27, 1943

Blood Plasma Development

➤ THE DEVELOPMENT of blood plasma and the extended use of blood

and blood substitutes for treatment of shock in battle injuries rank in importance with the development of the liver treatment for pernicious anemia and insulin for diabetes, Comdr. Edward L. Bortz, of the Philadelphia Naval Hospital, declared at the meeting of the Southern Medical Association.

He listed the following as a few of the achievements of wartime medicine: plasma, chemotherapy, transport of the wounded, prophylaxis, balanced nutrition, new blood fractions, sea water made into drinking water and anesthesia.

The new blood fractions are serum albumin, serum globulin and serum fibrinogen which Dr. Edwin J. Cohn, of

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Harvard Medical School, has separated from whole blood. These give promise of effective uses, Commander Bortz stated. Serum albumin is being used now in concentrated form for treating shock, which he characterized as the "most serious battle emergency."

Science News Letter, November 27, 1943

Research Medal Awarded

► CONTINUING to search for the cause and methods of treating nutritional deficiency diseases "is a practical mat-

ter having dollars and cents value to every citizen," Dr. Tom D. Spies, of the University of Cincinnati Medical College and Hillman Hospital, Birmingham, Ala., declared in accepting the association's research medal.

"The number of malnourished persons, the great expense involved in caring for them, and the cost in loss of manpower leave no doubt," he continued, "of the imperative need for uninterrupted scientific research in the field of nutrition."

Science News Letter, November 27, 1943

CHEMISTRY

Salt Taken from Water

Navy approves new de-salting chemical that quickly makes sea water drinkable. Briquets of chemical are the size of a candy bar.

► A NEW chemical that takes the deadly salt out of sea water in 20 minutes and permits a flier to carry the makings of a 14-day supply of life-sustaining drinking water in his rubber life-raft has been recommended by the Naval Medical Research Institute, and is already in production, climaxing

more than a year of all-out research in which innumerable de-salting devices have been invented and demonstrated.

The new chemical de-salter, which weighs only 3½ pounds and converts more than 14 pints of sea water into drinking water, was designed to prevent death from thirst and tissue dehydration among fliers drifting on rubber life-rafts.

At least a dozen methods of distilling or chemically de-salting sea water for fliers have been tested by Naval Medical Research Institute chemists and physicians but were rejected because of awkwardness, poor yield, excess weight or harmful reactions. A small can is the only water supply which downed fliers have been taking aboard rafts.

The new chemical, which is carried in the form of briquets the size of a small candy bar, is the result of many months of research on the part of the Permutit Company of New York. When dropped into a plastic bag filled with sea water, the chemical quickly absorbs the dissolved salts, permitting them to be filtered out as the flier sucks the water through a plastic tube. Each briquet weighs only one-sixth as much as the drinking water it produces and takes up only one-tenth as much space, thus keeping within all-important plane-loading limits.

As a result of original tests made by the Navy Department and later corroborated by the American Airlines, officials of the American Airlines announced that they had adopted this sea water



JUST A HANDFUL—Packed in this water-tight plastic container the desalting materials weigh only 3½ pounds. The kit is rolled into the deflated life-raft pack during over-sea flights.

de-salting process for all over-water cargo and passenger flights and had recommended it to other airlines operating flights under the Air Transport Command.

At a "shipwreck demonstration" in the Atlantic Ocean off Long Island, sea water was scooped up in the transparent bag and a briquet was dropped in. The bag was sealed and shaken and the chemical absorbed. Salts were retained by a cloth filter as the water was sucked out.

Chemical methods of converting sea water to drinkable water have been sought by scientists for centuries. Since man first went to sea thousands of shipwrecked sailors and airmen have died from thirst and many thousands of others have lost their reason.

Attention has been focused on the problem of water-supply for life-rafts by the vast amount of over-water flying and fighting, especially in the Pacific war zones where two- and three-week raft "squattings" have become commonplace. The Rickenbacker and Doxon-Aldrich-Pastula sagas, describing the tortures of thirst aboard life rafts, showed that lucky catches of fish, birds and rain-water were all that prevented their deaths from thirst. Medical opinion holds that water is more important than food in sustaining life, for dehydration of tissues is usually fatal.

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LIFESAVER—This briquet is a secret chemical to take the salt out of sea water so that it can be used for drinking. The chemical was developed by the Permutit Company. It is wrapped with cardboard, foil and ployfilm to prevent damage from salt air, and water in case of submersion.