

Do You Know?

Chlordane is a fast-acting insecticide for Japanese beetle grubs.

America will need more *vegetables* this year to make up for a smaller supply of other foods.

Fire loss in the United States during the past year was greater than in any previous year.

Two *tree* varieties in Florida, that grow wild nowhere else in the world, are Florida yew and Torreya or savin.

Sheep, unless otherwise well-fed, will severely damage longleaf pine seedlings up to four feet in height if pastured among them.

By adding a pinch of metallic *cadmium* to the mercury in the quartz inner bulb of a new lamp, red and other new colors are added to the light.

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LAKE CHAD, slowly suffocating in the Sahara Desert . . .

LOP NOR, the lake that disappears every fifteen hundred years . . .

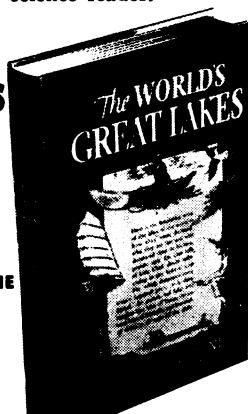
BAIKAL, the lake that fills a mile-deep abyss in the earth's crust . . .

••• and others all over the world, whose "life cycles" are among the most important and curious of natural phenomena. Their story is told with a thousand believe-it-or-not facts for every science reader.

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MEDICINE

Check Bleeding Agent

➤ A CHEMICAL extracted from logwood trees and another which is a blood constituent might prove helpful in treating atomic radiation sickness and certain blood disorders, it appears from studies reported by Drs. E. J. Mackowiak and R. D. Barnard in the *Journal of the American Pharmaceutical Association* (Dec., 1947).

The studies were reported from the Veterans Administration Hospital, Baitavia, N. Y., and the Terrace Heights Hospital, Hollis, Long Island.

The chemicals were studied in a search for substances to counteract the effects of heparin. Heparin is an anti-blood clotting agent used in treating some disorders, but too much heparin may result in uncontrollable bleeding. Increased production of heparin in the body has recently been considered a cause of the bleeding tendency in certain blood dis-

orders and also in radiation injury, such as that following atomic bomb explosions.

A dye, toluidine blue, had previously been reported by other investigators to be an effective anti-heparin agent, and the pharmacologists confirmed this.

The blood constituent, modified human globin, which they studied was good too, but was slow in its action, taking about 12 hours. This might be offset, the scientists pointed out, by its relatively low toxicity and future ready availability through the national blood program established by the American Red Cross.

The logwood tree extract, hematoxylin, is as effective as the dye for concentrations of heparin up to 2%. For higher concentrations of heparin, the action of hematoxylin becomes complicated by a marked precipitation of plasma proteins.

Science News Letter, January 31, 1948

MEDICINE

Rh Danger in Transfusions

➤ A WARNING of Rh danger in blood transfusions to women and even to very little girls who some day may be mothers is given by Drs. L. M. Hellman and G. J. Vosburgh of the Johns Hopkins Medical School and Hospital in the *Journal of the American Medical Association* (Jan. 10).

The danger is that Rh negative women and little girls may be sensitized through transfusions with Rh positive blood. Then, if they marry Rh positive men, their babies will be born with the severest form of erythroblastosis and usually will not survive.

Rh negative women who have babies by Rh positive fathers become sensitized by the Rh positive blood of their own babies. But this sensitization proceeds rather slowly and the first and often the second child born under such circumstances will be spared.

Transfusion with Rh positive blood is much more powerful in sensitizing the Rh negative woman than repeated bearing of Rh positive children, the Hopkins doctors declare. Even a small amount of blood at an early age may be dangerous. As an example of this they cite the case of a 22-year-old woman whose first baby was jaundiced five hours after birth because of anti-Rh positive substances in

his mother's blood. The anti-Rh substances developed as a result of transfusion of about five ounces of blood when the young mother was herself a two-months-old baby with dysentery.

The danger can be averted, the doctors point out, by testing for Rh factor every time a woman of childbearing age or a female child is given a blood transfusion. In their opinion, a "high degree of negligence may be charged" if such tests are not made. In cases of dire emergency when there is not time to test the patient's blood, only Rh negative blood should be given.

Cases of erythroblastosis have been increasing in recent years and blood transfusions have also become more frequent in the same period. At Johns Hopkins Hospital 1,100 transfusions were given in 1939 compared with 5,585 in 1946. This is a five-fold increase. In 1937 there was one case of erythroblastosis for every 1,732 childbirths, while in 1946 the ratio had risen to one case in every 348 childbirths. Since the percentage of Rh negativity in the population is fixed, the increase must be due to an increase in the number of women sensitized to Rh positive blood. The increase in transfusions, the doctors believe, accounts for this.

Science News Letter, January 31, 1948