

ing an army, while all the world wondered." He brandishes his saber. A shell bursts beside him, filling the air with flying scraps of iron. He must have got back alive from this personally conducted charge of the Indian Light Brigade, for the picture is his own handiwork. But it is the last we see of Little Bear.

The next Indian who owned the book, inheriting it possibly by personally arranging the demise of Little Bear, was a Crow named Crane. Crane seems to have been a riotous, reckless, hellroaring fellow, always hunting trouble and having no difficulty in finding it. Yet he seems to have been able to get the better of all of his arguments (except of course the last one), for he filled many pages of the book with records of his "coups."

His record is markedly different from that of the two preceding owners of the book, in that white men never figure in his "coups"; only other Indians. Either he was on friendly terms with the whites or (much more likely) there weren't any in his neighborhood to pick a fight with. His style of drawing also was cruder and more hasty than that of either Yellow Horse or Little Bear.

The last possessor of this compositely-

edited picture-record was a warrior named Howling Wolf; it is not certain what tribe claimed him. His most striking contribution is the last picture. Howling Wolf stands before an inter-tribal conference. Before him, on the ground, are a peace-pipe and a scalp. If he picks up the one, it means peace, if the other, war.

Did he pick up the peace-pipe and spend his last days quietly at home, until his time came to be taken out to the burial ground, with his precious historical picture-book laid in a blanket beside him? Or did he take the war-path, returning "upon his shield" to take his book the sooner to his last bed? No one knows.

It is in keeping, though, with the drama that strides through the whole book, that even in his last sleep he could not remain undisturbed; and that his rude resurrection should have taken the form it did. Against the railroad as against the plow, symbols of the white man's dominance, the old Indians always cherished an especial hostility. And the railroad won the fight, so ruthless that it would not even let him lie in his grave. The white man, mounted on the iron horse, at last "counted coup."

*Science News Letter, June 1, 1935*



Poison Ivy, Poison Sumac

VACATIONISTS as a rule dread nothing more than "getting a dose of poison ivy." The unsightly blisters, the unendurable itching, the frequently prostrating allergic "shock effect," can combine to ruin a holiday as hardly any other woodland plague is able to do.

Yet it is not necessary to spend one's vacation in a constant state of "ivy jitters." For everybody except the most extremely sensitive, ivy poisoning can be both prevented and cured.

The best prevention is to keep away from it. To do so, you must know it when you see it. That is not difficult. Poison ivy is either a slender low shrub or a vine that clings tight to trees and stone walls with thousands of little roots. Its distinguishing mark is the triple leaf: "Leaflets three, let it be!" states the old rule-of-thumb rime. Its flowers are a loose cluster of inconspicuous greenish bloom; its fruits (frequently persistent from the previous winter) are pallid waxy berries. Don't touch it, and you won't get "bit." The notion that ivy can poison at a distance is simply superstition.

If you find you have touched it, wash your hands at once, and very thoroughly. Strong laundry soap is best; the alkali helps to kill the poison. A more thorough remedy, for cases that actually develop, is a 5 per cent. solution of potassium permanganate. This stains the skin brown but the stain can be removed later with a weak solution of oxalic acid, or just by thorough washing.

To prevent ivy poisoning, wet exposed parts of the skin with a five per cent. solution of ferric chloride in a half-and-half mixture of water and alcohol. Don't wipe off the solution; let it dry on the skin. This will neutralize the poison.

SEISMOLOGY

# Severe Earthquake in July If Apparent Rule Operates

LATE July should see, somewhere in the world, a severe earthquake with its focus, or center of motion, relatively close to the surface of the earth.

That is the indication which may be inferred from a report presented before the meeting of the American Geophysical Union, by Prof. H. Landsberg of Pennsylvania State College. Prof. Lands-

berg did not himself venture an earthquake forecast, but he did show a remarkably close hookup between deep-focus earthquakes and shallow-focus quakes following three months later, as a rule in some remote part of the world.

The Formosa quake of the Easter week-end was a deep-focus disturbance, its center being some 35 kilometers, or 22 miles, beneath the surface of the earth. On the basis of Prof. Landsberg's correlations, a destructive shallow-focus earthquake may be expected to occur about a week before the end of July.

Prof. Landsberg also discovered a correlation between deep and shallow-focus earthquakes with a much smaller time lag—some three days before and three days after the deep-focus quake.

How the deep quakes set off the shallow ones is not understood. It is conjectured that the deep-focus disturbances set up strains which the shallow ones relieve.

*Science News Letter, June 1, 1935*

● RADIO

Tuesday, June 4, 3:30 p. m., E.S.T.  
**THE MEANING OF MATHEMATICS,**  
 by Dr. E. R. Hedrick, Professor of  
 Mathematics, University of California at  
 Los Angeles.

Tuesday, June 11, 3:30 p. m., E.S.T.  
**ASTRONOMY AS A HOBBY,** by Dr.  
 Oliver J. Lee, Director, Dearborn Ob-  
 servatory, Northwestern University.

In the Science Service series of radio ad-  
 dresses given by eminent scientists over  
 the Columbia Broadcasting System.



Some persons are apparently quite immune to poison ivy, and can handle it with no more harm than if it were lettuce. But such immunity is not a certain thing. It can be lost without warning, and once lost seemingly never returns.

Poison ivy is found in all moderately moist open woodlands in the East, and its Pacific Coast twin, poison oak, grows in similar habitats. Even more virulent than these two, though affecting fewer people, is poison sumac, a close botani-

cal relative. This grows only in acid-water bogs or on their margins, so the average person who likes to keep his feet dry is not likely to get into it.

Poison sumac looks like ordinary sumac, except that its bark is a rather pale gray, and its fruits are in loose, drooping bunches of white berries instead of erect, stiff clusters of red-brown fuzzy "seeds." The remedies for poison ivy are good also against poison sumac.

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large amounts of sugar and starches reduced the fat of the liver so quickly that within one week it was normal.

*Science News Letter, June 1, 1935*

#### ENGINEERING

### Los Angeles Transmission Line Has Fast Breakers

See Front Cover

**A** LONG the 287,500-volt, 270-mile transmission line from Boulder Dam to Los Angeles will be placed eight circuit breakers, each incorporating three single-pole units. Seven of the single poles are shown in the illustration on the front cover of this week's SCIENCE NEWS LETTER. Notice how small the man appears beside them.

The breakers will operate at a higher voltage than any others commercially installed; they are rated to interrupt the circuit in slightly more than one-third the time of the fastest breakers heretofore available for high voltages; and they will require less than five per cent. as much oil as would usual breakers for such voltage—1,000 instead of 23,000 gallons.

*Science News Letter, June 1, 1935*

#### MEDICINE

## Reducing Fatty Livers May Make Operations Safer

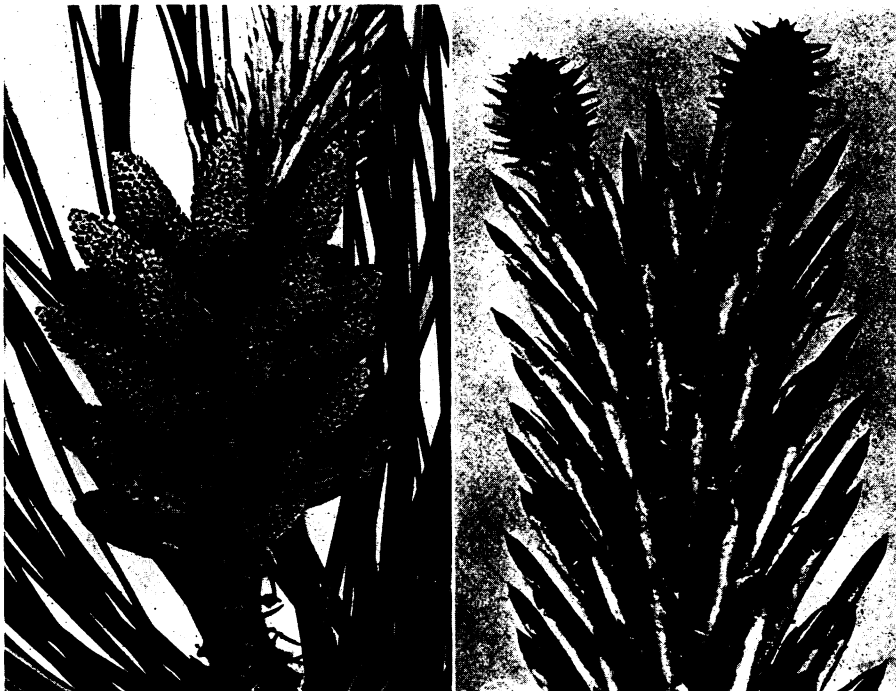
**A** DIET containing large amounts of starches and sugars may become an important part of the treatment of liver disease, particularly when the patients must undergo surgical operations. Experiments suggesting this were reported by Drs. J. L. Bollman and F. C. Mann of the Mayo Clinic at the meeting of the American Physiological Society.

A fatty liver, they found, cannot properly do its important job of protecting the body from poisons but the fat in the liver can be rapidly decreased by adding generous amounts of starches and sugar to the diet. The composition of the liver can be varied within wide limits by diet, they reported. Eating excessive amounts of fat increases the fat in the liver from a normal value of about four per cent. to twenty or thirty per cent. within three weeks. In extreme cases almost half the liver may be fat. At the same time there is a decrease in the amount of water and glycogen, which is the form in which the liver stores sugar.

Ordinarily these changes in the composition of the liver do not affect its functioning, but when dogs with fatty livers are subjected to unusual stress it becomes apparent that they are definitely handicapped. Men are probably similarly affected. Ether anesthesia and surgical operations which a normal animal stands very well are poorly tolerated by animals with fatty livers and recovery is prolonged. Liver poisons such as carbon tetrachloride, chloroform and tetrachlorethane are rapidly fatal to animals with fatty livers, although the same amounts of these substances have little noticeable effect on normal animals. The greatest damage to the liver is done when the organ's glyco-

gen content is lowest, generally at a time furthest removed from the last meal.

Dogs with fatty livers became much more intoxicated by a given amount of alcohol than dogs with normal livers. Within three weeks the amount of alcohol had to be reduced for the dogs with fatty livers because the normal harmless dose by that time was fatal. But feeding



#### THE WIND IS THEIR MESSENGER

*Pines are among the many tree genera that have no need of insects to act as auxiliaries in the important business of pollen transfer. The wind is their messenger; it carries the myriad yellow grains, each with a pair of hollow sustaining floats, away from the male or staminate cones (left), and a few of them suffice to fertilize the flowers in the female or pistillate cones (right). Lowland pines attended to this important step in the continuation of their respective species weeks ago; on the mountains and high plateaus the pollen still yellows the air. The photographs shown here are of the floral structures of the Ponderosa pine of the West, and were taken by Dr. William M. Harlow of the New York State College of Forestry.*