

low material state, and this she probably cannot do except by Western methods, thus making herself a copier and not a contributor.

"The old sites of civilization—Asia Minor and the south shore of the Mediterranean—are rather stale peanuts as far as being world's leaders are concerned. The paucity of their mineral and agricultural resources precludes the possibility of their ever raising much dust in the world again. If these quarters could turn out a good second-edition Arabian Nights we might feel differently about the matter.

"The north shore of the Mediterranean has had its little ancient dance and is now buying Westernisms with every boat that comes. South America, South Africa, Australia, New Zealand! All living the ways of the West."

*Science News Letter, March 25, 1933*

Despite their names, Iceland has only 5,500 square miles of glacier; whereas Greenland is green only along a narrow fringe during a few months of the year.

A volcano museum is being established on the island of Martinique, in sight of the great volcano Mont Pelée.

## Let's Go Book Shopping in Science News Letter

•

**M**AKE your choices from the "First Glances at New Books" page of this or other SCIENCE NEWS LETTERS. Order directly from our Book Dept. as directed in the black type note. This is the convenient, wise and economical way to buy.

### GENETICS

# Ridding Beard of Roughness Saved Wisconsin Barley Crop

"OUT OF ROUGH and black, get smooth and white."

This problem, reminiscent of one of the ancient riddles of the Sphinx, confronted Prof. B. D. Leith of the University of Wisconsin, at one stage of his endeavor to produce a new strain of barley that could be grown with profit by farmers in Wisconsin and other Grain Belt states.

It was not so impossible a task as it might sound, for he had already put the smooth and the white qualities into the genetic mixture where they were covered over by the rough and the black. All he had to do was plant his cross-bred grain and let the old reliable Mendelian mode of segregation work.

To go back to the beginning: Wisconsin farmers used to raise a strain of barley known as Oderbrucker. It was good barley, good for stock feed and good for the once-great Milwaukee brewing industry. But it had one fatal drawback: the beard on its heads was armed with innumerable little back-pointing barbs that would cause these bristly hairs to work their way through the threshermen's overalls, and made life so miserable for them that they finally rebelled at working with it at all. Also, it was subject to a destructive fungus disease known as stripe.

### Seed From Russia

Prof. Leith set to work to produce a hybrid barley that would have a smooth beard, and if possible be stripe-resistant, yet preserve the virtues of Oderbrucker barley—good white grain, high yield and stiff straw. His first crosses, with other strains of domestic barley, were not very successful. But in 1917 a new smooth-bearded barley from Southeast Russia was brought in. It was black-grained, but that did not bother Prof. Leith, for he was sure he could juggle the undesired color character out of the hybrid strains he would produce.

When he crossed Oderbrucker with the new Russian barley the first generation offspring were as undesirable as could be imagined, for the beard was as rough as in Oderbrucker and the grain was black as in the Russian barley.

Here, then, was his Sphinx-riddle; out of black and rough to get smooth and white.

Prof. Leith, like all good students of Mendelian behavior in heredity, knew that the blackness and roughness were "dominant" characters, in any mixed strain hiding but not destroying their "recessive" opposites, whiteness and smoothness. He knew also that such recessive characters segregate out when the hybrid first generation is inbred.

### One in Sixteen

This he did, and the second generation barleys came out in approximately the following ratio: 9 rough and black, 3 rough and white, 3 smooth and black, 1 smooth and white. The last, a hybrid containing only recessives in its pairs of characters, was what he was hunting for; and he knew also that so long as it was inbred neither roughness nor blackness could reappear.

This smooth-white strain forms the basis of the barley strain now known as Wisconsin Barbless, Pedigree 38. In several years of practical crop growing by a large number of farmers, some of them outside the state, it has out-yielded Oderbrucker, resisted drought, and proved highly resistant to stripe, though not to other diseases. Most important of all, its smooth beard makes it possible to harvest and thresh the new barley without making life a burden for the farmer or the threshermen.

With an eye to the eventual return of beer, the owner of one of the most famous of the old-time Milwaukee breweries has made large-scale tests of the malting qualities of the new barley at his own expense, and reports that so far as its chemical makeup is concerned it is at least the equal of the best of the old barleys.

*Science News Letter, March 25, 1933*

Girls of ancient Greece jumped rope, it is believed, judging from a somewhat damaged figure on a broken tablet.

Diamond-back rattlesnakes grow as long as eight and one-half feet; larger specimens have been described, but science waits to be "shown."