THE LAW'S DELAY.

Hix—What's the best way to never settle a question?

Dix—Go to law about it.

Couldn't Blame the Boy.

"Young man," said the stern parent, "when I was your age I had to work for a living."

"Well, sir," answered the frivolously inclined youth, "I'm not to blame for that. I have always disapproved of my grandfather's attitude in the matter."

Faith.

Faith makes us, and not we it; and faith makes its own forms.—Emerson.

Too often when the heart is willing the purse is weak.

Mysteries of Nature

By G. Frederick Wright, A. M. LL. D.

ICE DRIVEN PLANTS AND ANIMALS.

Before the glacial period the plants which now flourish in the latitude of Virginia and North Carolina were growing in a happy family in Spitzbergen, northern Greenland, and on the Arctic shores of North America. Arctic expeditions have repeatedly brought back from the middle tertiary deposits north of Disco island the embedded leaves and fruit of magnolias, sassafras, hickories, maples, poplars, birches, lindens, southern cypress and several species of sequoias, including the gigantic forms now found only in California, and three kinds of ginko trees now peculiar to Japan. The evidence of these fossil plants is conclusive that just before the glacial period there was a warm climate all around the north pole.

Until the theory of the origin of species by natural selection was accepted, and the facts about the glacial period brought to light this distribution of trees and plants was a profound mystery. For the solution of the problem we are largely indebted to the late Prof. Asa Gray, who in 1859 read a paper before the American Academy of Arts and Sciences on the flora of Japan, which attracted the attention of the scientific world and opened the way to the full exposition of his theory, which was set forth in an address before the American Association for the Advancement of Science at Dubuque, Ia., in 1872. The way had been prepared for this work by the fact that the large collection of Japanese plants gathered by Commodore Perry's expedition in 1857, which opened Japan to the world, was placed in his hands for examination. The result was that it appeared that there was a striking similarity between the plants of Japan and those of the Altai mountains, of the Himalayas and the eastern portion of North America, and a striking dissimilarity between the plants of these regions and those of the Pacific slope of North America, while the most remarkable resemblance was between the plants of Japan and those of eastern United States.

The Pacific coast of the United States is rich in coniferous trees like cedars, sequoias and redwoods, but is conspicuously lacking in most of the trees familiar on the Atlantic slope. For example, there are not half as many maples, or ashes, or poplars, or walnuts, or birches, or oaks on the Pacific slope, and they are of such inferior quality that it is said "a passable wagon wheel can not be made of California wood, nor a really good one in Oregon." The Atlantic slope has four times as many species of nonconiferous trees as the Pacific slope, but only a little more than half as many coniferous species.

The first step in the solution of this problem is found in the relation of the land continents in the northern hemisphere to each other. Whereas, the southern ends of the continents project far out into deep seas so that they are widely separated from each other at the north they approached each other and are separated by shallow seas. The water in Behring strait is only 150 feet deep, and that in the sea only a few hundred feet deep, so that a slight elevation of the bottom of the ocean there would join Asia to America, and permit the migration of plants and animals from one continent to another. That these continents have been recently joined by such a change in land level is proved by the fact that bones of the mammoth have been found on both sides of Behring strait, and even on the Pribyloff islands, far out in Behring sea. A similar belt of shoal water extends from Greenland by way of Iceland to Norway. It is therefore easy to suppose a continuous land connection clear around the north pole enabling plants and animals to migrate freely. On the other hand, the general resemblance of species both of plants and animals in the lands surrounding the north pole is proof that there has been such opportunity for migration. Whereas, there is this great similarity in species in the northern hemisphere, there is a total dissimilarity between the species occupying the southern extremities of the continents in the southern hemisphere.

But with the coming on of the glacial period this happy family of species around the north pole was rudely disturbed by the new conditions. The lowering of temperature and the slow accumulation of glacial ice made it impossible for trees of a temperate climate to maintain their existence on those inhospitable shores. If they were to exist any longer they must emigrate to milder climes. But how shall a tree which is fixed in the soil remove to better its fortune? Of course, a single tree is helpless in such a situation. But, as Prof. Gray wittily says, when a tree is driven to an extremity it can "take to the woods," and the forest can begin a majestic movement toward better climes.

As the conditions favoring the forest became severe along its northern belt they would become favorable over a corresponding belt stretching to the south. Over this belt the seeds would be gradually scattered by various agencies. Some seeds would be blown by the wind, some carried by streams of water, some by birds and squirrels and other animals. Whereas formerly such stray seeds had failed to find favorable conditions in these new fields, now they would be the favored ones, and thus the species which they represented would slowly spread southward until the glacial period had exhausted itself and the extreme limit of favorable conditions had been reached.

Thus it would result that the same species would be driven down to corresponding latitudes on both sides of the Pacific and Atlantic oceans, and we should have what now appears—namely, the same species of plants in Japan, the middle United States and Europe and northern Asia.

But it still would seem to be a puzzle why the plants were not the same in corresponding latitudes on both sides of the American continent. Why should the species of plants in California be so different from those in Pennsylvania and Virginia? This is answered by considering the different conditions which prevail on the east and west sides of a continent. Because the world turns from west to east the prevailing winds in the northern hemisphere are from the southwest. The breezes of the Pacific coast are therefore sea breezes, laden with moisture, while those in the eastern Atlantic states are land breezes, which have been largely bereft of their moisture and are subject to greater alternations of temperature. The constant action of these diverse conditions would have a direct effect to favor some species on the Atlantic coast that would not be favored on the Pacific, and vice versa. Thus we have everything accounted for in a most natural way.

The reason why these plants have not returned to Greenland and Spitzbergen is that the glacial period is not yet over. It still prevails in those northern regions. But they have started on their northern journey and have partially recovered the ground lost. Some have already attained their original homes, leaving, however, many stragglers on the way. The main body of arctic vegetation is the same with that which covered the country of the middle Atlantic states during the climax of the glacial period. Of the straggling remnants still left in favoring situations one of the most interesting is Scotch heather, which is found not only in Labrador, but in a few places in Massachusetts, like Andover and Cape Cod. In all the rock gorges opening into Lake Erie remnants of the glacial vegetation are preserved in the sequestered and cool shady nooks. Some such are also preserved in similar narrow, cool gorges opening into the Ohio river below Cincinnati.

But the mountains formed the best retreats for the arctic plants, which were following up the receding ice sheet. Alpine plants are found on the high elevations of the White mountains, and on the high peaks of the Rocky and Sierra Nevada mountains as far south as New Mexico, but are absent over all the intervening areas.

In some respects the effect of the glacial period upon animal life and distribution was even more peculiar than that on plants. During that period a large number of arctic species were crowded down into central Europe and into the middle and northern states of the Atlantic coast and Mississippi valley. In company with man's remains there are found those of the grizzly bear, the Irish elk, the reindeer, the musk ox and the arctic fox, while the ibex and the chamois, which now occupy the high mountain crags, descended to the valleys. Several of these northern species now extinct were also present in these temperate regions.

The indirect effect of this incursion of arctic animals into the temperate zone was to cause the destruction of many animal forms which already occupied the region. Just before the glacial period there were living in America two extinct species of the cat family as large as lions, four species of the dog family as large as wolves, while the walrus was found in Virginia, the sea cow in South Carolina. There were also living six species of horses, the South American tapir and llama, a camel, two species of elephant and two of mastodons, a species of megatherium, three of megalonyx and one of mylodon—huge terrestrial sloths as large as the rhinoceros or even as the elephant.

Insects also, as well as plants and the larger animals, were compelled to reckon with the glacial period. Among the most interesting illustrations of this occurs in the White mountains, where various Alpine species of butterflies are found near the summit. In ascending Mount Washington one suddenly encounters near the top whole swarms of butterflies (Oeneis Semidea); so that, as Prof. Samuel Scudder has said, so far as insect species are concerned, "in ascending Mount Washington we pass, as it were, from New Hampshire to northern Labrador and the southern extremity of Greenland." Similar species occur also on the summit of the Rocky mountains. The story is the same. Dispersed far and wide during the glacial period, these insects have at last been compelled to take refuge on the summits of the high mountains, where alone glacial conditions perpetually prevail.

LUCKY MAN.

She—Two men whom I refused to marry, sir, have become millionaires!

He—Is that the reason why?

Valuable Knowledge Spreading.

Every day sees hundreds of new recruits in the war against tuberculosis, and every day brings new methods for the fighting of the plague. The National association predicts that if the present degree of interest is maintained, within five years everybody in the United States will have been informed on the way to prevent and cure tuberculosis, and concerning the infectious nature of the disease. Two things in particular are needed, and for these the National association is working in every way. They are, a more complete registration of tuberculosis cases, and the further isolation of dangerous advanced cases of consumption.

A Sunday Sermon.

One must accept life as it is. It gives us great happiness if we are wise enough to see it, and it balances the scales by sending great sorrows, too.

But that is life.

If you would make the world brighter try to forget your hurts, dry your eyes and turn to help those who need the pressure of a friendly hand, the encouragement of a smiling look.

Sorrows and troubles of all kinds should teach one a great lesson—the lesson of universal kindness.—New York Times.

Like an Earthquake.

Former High Sheriff Chesterfield C. Middlebrooks, whose bungalow at Highland lake stands partly over the lake on stone and cement foundations, was awakened at four o'clock the other morning by loud noises which he says shook his bungalow like an earth tremor.

He says that after the household had been shaken out of a sound sleep, he, not waiting to dress, went outside to ascertain the cause of the noise. He found, he says, that a monster frog had its bed directly under the bungalow. The frog weighed fully six pounds, he says, and every time it croaked the bungalow cracked and shook.

Mr. Middlebrooks bought an anchor, strong rope and enough red flannel to bait 100 hooks, and will try to save his property by capturing the bullfrog.—Winsted (Conn.) dispatch to New York World.

A Trying Time.

Judge—Why did you strike this man?

Prisoner—What would you do, judge, if you kept a grocery store and a man came in and asked if he could take a moving picture of your cheese?—Harper's Weekly.

Reprehensible to Allow It.

Husband (reading from his paper)—Here, they say, is a comet coming towards the earth, traveling at the rate of a million miles a minute.

Wife (awaking from a doze)—Why don't they enforce the speed laws better?

Occasionally women try to reform a man by roasting him.

A malicious truth may do more harm than an innocent lie.

An easy beginning doesn't always justify the finish.

W. N. U., OMAHA, NO. 33-1909.