EUROPE SHRINKS AS EARTH COOLS

Geologist Finds That Nordic Lands, Except Scandinavia, Are Sinking—Alps Move, and Bavaria May One Day Become a Lake.

By HERMAN G. SCHEFFAUER.

lifted from the sea, the Baltic Coast is dropping, Britain is being eroded away, France and Germany are sinking in places and the Alps are marching northward. Dr. William Schutte, German geologist, using most delicate instruments and precise observations and calculations, has completed an inquiry into how rapidly these changes in the surface of Europe are occurring. The process is not slow—to a geologist.

Dr. Schutte points out that the surface of our globe as we know it today is the result of a struggle between two colossal forces. One of these forces arises from the shrinking of the interior core of the earth in the gradual cooling of the planet, and from the consequent contraction of the crust globe, which heaves up the ranges and the mountain chains. The second of these tremendous forces is the gravity of our planet. This is a force that levels and makes smooth. And gravity has many auxiliaries. It makes use of water, wind, frost and the erosive power of glaciers, and these cause the mountain ranges and the peaks to be dismantled, disintegrated and brought low again.

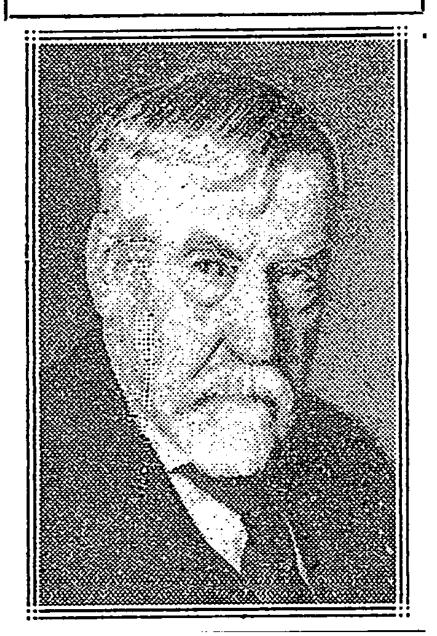
Gravity and its helpers fill the surrounding seas and oceans with sediment, and by a process of a gradual sinkage this sediment is converted into layers and strata thousands of yards thick, which are converted by heat and pressure into slate and limestone. All this takes millions of years, but we have records and registers that enable us to compute even these expanses of time.

The strata, subjected to pressure from the sides, a kind of vaulting pressure, as when boards are jammed between the two jaws of a wooden vise, are forced upward. This process does not occur eruptively or suddenly, but only in the slow procession of the ages.

Bavarian Alps Once Sea Bottom.

The emergence and the folding together of the mountains at the same time reduce the circumference of the earth. A famous Swiss geologist. Professor Heim, has computed that the crumpling together of the Alps has reduced the circumference of the earth by 900 kilometers. The mountain giants that thrust up their heads, crowned with never-melting snows,

DR. W. W. PEET



once lay flat and prostrate in the earth.

The crests of the Bavarian Alps tell us that these were once ocean bottoms. In Central Germany the drill that goes boring into the depths in search of phosphate and oil brings up from strata 1,200 yards under the surface cores of vari-colored sandstone. This sandstone must once have laid upon the surface, loose and disintegrate in form, subject to the burning rays of the sun upon some desert or sandy vaste. And coal, once on the surface, lies dead and dark in the depths of the earth—latent energy, compressed sunshine and power.

England, the European knows, is gradually being eaten up by the sea, and restless and primitive regions such as the Aleutian Islands have an evil habit of throwing up new islands and also of causing old islands to vanish. The beach terraces and the shore erosions in the deep, precipitous fjords of Norway and along the isletstrewn coast of Sweden show that the whole of Scandinavia has been lifted 330 yards higher since the end of the Glacial Age, a very recent period, so far as geological estimates go. This upward movement still continues and amounts to a total increase in some places of eighteen inches, in others of three feet, in the course of a century. Conditions along the coast of the Here the sinkages proceed steadily, and are to be regarded as a continuation of those movements that have given the Baltic sea-bottoms and coasts their present forms. The drop that has taken place in relatively recent times is estimated at 110 yards. A number of prehistoric settlements, apparently those of fisherfolk, at Greifswald and in the River Trave, were evidently swallowed up by such an inroad of the sea.

France Sinks Ten Feet.

Measurements and calculations have proved that during the thirty years from 1860 to 1890 only the southern regions at the base of the Pyrenees and the Alps have maintained their proper altitudes. On the other hand, the sinkage toward and along the north coast of France grows steadily more marked and attains a height of 31 to 39 inches—that is to say, some 10 feet in a century. This would amount to about 200 feet since Julius Caesar conquered Gaul.

Detailed observations have been made in parts of Southern Germany. Constance, on Lake Constance, has been proved to have sunk four inches in the course of ten years. Bregenz, in Austria, which lies on the same lake, has sunk almost three times as far. The same tendencies are visible further east.

Upper Bavaria is in constant motion. The entire Bavarian Alps, with all their beautiful and romantic towns and villages, are slowly wandering toward the north. The mountains of the Bavarian Alps have advanced closer to Munich at the rate of a foot or a yard in the course of a hundred years. In other parts of Germany church

steeples which were formerly not visible from certain points are beginning to rise above the horizon.

Nordic Submergence.....

The layman will at once protest, Dr. Schutte warns, that these changes are imperceptible and of no importance in view of their slowness. This may be granted—so far as one or two generations are concerned. But can we still consider them as unimportant when we are confronted with the fact that in the course of a few thousand years our descendants may see the eastern part of Upper Bavaria converted into a great lake?

If we combine all these separate phenomena into one Continental picture, we are confronted by the startling fact that all land masses lying north of the line of the Pryenees and the Alps are in a condition of slow but steady subsidence, which attains its maximum along the coasts of the North and the Baltic seas.

The explanation advanced by Dr. Schutte is that the Alpine system, which was "folded up" from the south, is still pushing steadily toward the north. But this movement is resisted in the north by the rigid blocks or massifs that extend from Scandinavia to Scotland. This explains the happenings in the lowlands—the jaws of the tremendous vise are slowly drawing closer together.

Between these implacable jaws we experience the liftings of the earth surface in the south and the north and the subsidence in the centre. A great fold or hollow is being prepared. And the deepest, most distinctly sinking parts of the Continent are those which lie along the northern coast of France, Holland, Belgium and Germany.

REMEDY IS FOUND BY ACCIDENT FOR TROUBLESOME APPLE BLIGHT

causing no end of trouble in England for at least a century. A tiny female beetle bores into a bud and there lays a weevil egg, secure against the attacks of poison sprays. When the egg hatches the larva feeds on the bud, which turns brown and produces no fruit. Great harm has been done in this way and many scientists have vainly tried to discover an effective remedy.

Recently, however, a successful means of combating the apple tree's enemy has been stumbled upon. Like many scientific triumphs, it was accidental. Bands of grease about the trunks of the trees had proved of little avail. But around some old trees in a certain orchard bands of sackcloth had been wound to prevent the rubbing of stakes. These were being removed and it was found that great numbers of the apple-tree weevils had hidden themselves in the folds of the sacking.

Since it was plain that this devouring pest likes to make its home, out
of laying season, in such soft warm
nests many trees were promptly encased in sackcloth. The weevils
proved grateful and took up such residences with alacrity. It was ascertained by experimenting that the

weevils crawl into these bands in July,
August and September, not emerging
until March to begin raising their
families of predatory young.

Removal of these sacking bands in the early Autumn nips the pests in the bud or, rather, some months before they reach the bud. A cure so simple and inexpensive is being generally adopted and improved apple crops are now expected.

INCOME FROM FORESTS.

PECEIPTS from National Forest resources last year totaled \$5.-000,137. This amount is \$251,766 less than the receipts for the previous fiscal year, but is \$409,204 larger than the average annual receipts of the preceding five years.

Under authority of acts of Congress, twenty-eight States and Alaska received more than a million dollars for school and roads funds to be used in the counties in which National Forest land is situated.

POLISH MILITARY TAX

According to a recent decree, a military tax is imposed on all male citizens of Poland who do not serve in the active military service. Men in the reserve force as well as those unfit for service are to be liable.

MIGRATION LABOR PROBLEMS STIR A LONDON CONGRESS

Delegates Pass Resolutions on the International Regulation of Immigrants' Rights

solidarity was not strong enough to overcome racial and economic differences that came to the front at the world-wide congress on the problem of migration, held recently in London at the call of the International Federation of Trade Unions and the Socialist and Labor International.

While the 120 delegates from twenty-four countries and thirteen international labor trade federations, representing about 15,000,000 trade unionists and 25,000,000 voters, were agreed upon the proposition that once emigrant workers were admitted into a country they should receive a square deal and not be discriminated against, either by unions or governments, they could not unite upon a declaration for the principle of the absolute freedom of labor to seek work wherever it might be found.

This ideal principle was approximated in the following resolution presented by Robert Schmidt, a prominent German labor leader:

"The congress holds firmly to the principle of freedom of movement; there must be no restriction on such movement for political reasons. Economic influences may, however, temporarily restrict immigration."

Australian Delegate Protests.

Dr. Frederick Adler, Secretary of the Socialist and Labor International, made a plea for the Schmidt resolution, but the opposition, led by Delegate Evatt of Australia, was so insistent upon the right of each country to protect itself against wholesale immigration and the admission of the socalled non-assimilable races, that the proposition was dropped. Although the American Federation of Labor was not represented at the congress, its well-known stand against unlimited immigration and against the admission of Asiatics, played a part in the discussions, especially as the officials of the Amsterdam Bureau of the International Federation of Trade Unions were not anxious to do anything likely to hamper the negotiations for the affiliation of the A. F. of L. with the I. F. T. U., reported to be under way.

Demands by the representatives of the crowded European countries, such as Italy, Poland, Germany and Great Britain for almost unrestricted emigration, were opposed by delegates from Canada, Australia, New Zealand and other of the "newer" countries on the ground of the natural right of the workers of those lands to try to maintain their standards of wages and living. In the case of Australia, emphasis was also laid upon the slogan of keeping the country "white," regardless of its natural resources and great open spaces.

The resolutions, in their final form, were preceded by an introduction asserting that the present rush of workers from the countries where economic conditions are hard, to those

result of the failure of the demand in world markets to keep up with the increase in the rate of production, thus creating unemployment on the one hand and a huge surplus stock of goods on the other. Consequently the transfer of workers from one place to another is described as no real solution of the economic crisis and it is recognized as a potential menace to the labor and living standards of the more fortunate lands. The resolutions as adopted read, in part, as follows:

The Adopted Resolutions.

"This congress considers that every country should establish a State migration office, with adequate representation of the trade unions. In addition, an international migration office, also with adequate trade union representation, should be created within the framework of the International Labor Office to draw up international conventions and recommendations concerning migration and to provide ample and reliable information concerning migration.

"The congress demands the strict prohibition of all propaganda in favor of emigration by private transportation enterprises and the abolition of all private migration agencies.

"The Congress demands the abolition of passport and visa charges for emigrants in countries of emigration, transit and immigration.

"The legislation of every country must insure to all immigrant workers the same rights as national workers in respect to wages and working conditions.

"This congress recommends that all labor bodies cooperate to obtain for immigrant workers complete equality of treatment in respect to all forms of social insurance established by the country of immigration.

"This congress recommends that international regulations should be drawn up by the national centres affiliated with the I. F. T. U. and the International Trade Secretaries to insure the prompt and smooth transfer of emigrant workers from their unions in the old countries to the competent organizations in the new.

"The congress demands the abolition of all those restrictions on the right to work of certain categories of workers which tend to drive these workers out of their native lands.

"Emigrant workers who, for political

reasons cannot establish their nationality, should be provided with passports by some international body." It was observed by some of the delegates that while the Socialist and labor movements were powerful enough in the emigrant countries to have considerable effect upon legislation, their political strength in the other lands, with the exception of Australia and New Zealand, was not such as to warrant the assumption that they could do much toward : .aking the recommendations of the Lonf don congress effective. This observation is particularly applicable to con-

Attions in South America