course of production during the last decade is shown in the following table. The unit of measurement, it will be noted, is the metric ton, which will be most easily remembered by American readers as roughly equivalent to the gross ton of 2,240 pounds. The fluctuations in world coal supply, if expressed as index numbers, taking the output in the year 1913 as equal to 100, become as follows:

1910	86	1916	97
1911	89	1917	100
1912	93	1918	99
1913	100	1919	86
1914	90	1920	97
1915	89		

These figures are necessarily in part estimated, for official statistics are slow in coming in and for certain countries of eastern Europe—notably Russia—even unofficial data are lacking. The figures are presented as tentative and subject to revision. As official reports are available for 92 per cent. of the world's output, the margin of error in the total probably does not exceed 1 or 2 per cent.

In comparing the 1920 output with that of the years before the war it must be remembered that the world's consumption of coal normally increases by leaps and bounds. The average rate of increase in the 20-year period preceding August, 1914, was 38,000,000 tons. Of course the waste and disorganization of the war have reduced the consuming capacity of many countries, but in other countries, notably the United States, requirements have been increasing at a rate greater if anything than before the war.

The present rate of production in the world is the resultant of conflicting forces; the decline in the war-torn countries is being offset in part by an increase in regions remote from the battlefields. In the belligerent countries of Europe the war cut heavily into production. Sometimes the cause of the decline was physical destruction of the mines, as in France; sometimes it was the drain upon the manpower of the nation; sometimes it was merely the economic disorganization and disruption of normal trade which attended the war. In France the 1920 output (excluding the Saar and Alsace-Lorraine) was 46 per cent. less than that of 1913; in Great Britain the decline was 20 per cent.; in Germany (also excluding the Saar and Alsace-Lorraine) the output of bituminous coal decreased 24 per cent., a decrease which was in part, however, offset by the increased production of lignite. In eastern Europe the old Austro-Hungarian empire, Russia and the Balkans, the breakdown caused by the war was even greater than in western Europe, and the decline in output proportionately large. Of all the major European belligerents only Belgium had in 1920 practically reattained the pre-war rate of production.

While in 1913 Europe led all the continents as a producer of coal, contributing 54 per cent. of the world's output, in 1920 she had yielded first place to North America and her share of the world's total had shrunk to 46 per cent. The largest factor in filling the void caused by the war in Europe was, of course, the United States. Our production increased from 38.5 per cent. of the total for the world, in 1913, to 45.1 per cent. in 1920. In that year our seaborne exports of coal were 22,500 net tons, five times what they were in 1913.

TOP MINNOWS AS YELLOW FEVER ERADICATORS

ACCORDING to *The Fisheries Service Bulletin* the success which has attended the use of the top minnow (*Gambusia*) in eradicating malarial mosquitoes in various parts of the United States has led to the employment of the same fish in combating an incipient epidemic of yellow fever at Tampico, Mexico.

Dr. A. R. Stubbs, of the Standard Oil Co., who visited the Washington office in March, reported that cases of yellow fever appeared at Tampico during the past summer, and there was every indication of a serious epidemic, as the conditions for the spread of the disease among the natives were most favorable. In addition to numerous outlying ponds, pools, sloughs, and marshes in which mosquitoes breed, all of the native houses have open barrels or other receptacles con-

taining rain water that is used for domestic purposes and is the only supply of fresh water that the natives possess.

At the outset the oil interests organized an antimosquito campaign, conducted through a committee headed by Dr. Stubbs. About 600 men were constantly employed in oiling the ponds and other open waters, and also the receptacles in which the natives keep their water for domestic purposes. The use of crude oil on the water required by the natives for drinking and cooking naturally caused much dissatisfaction.

After some months, when an official of the U. S. Public Health Service visited Tampico, he mentioned the value of *Gambusia* in the antimosquito work of the Public Health Service and Bureau of Fisheries, and suggested that this fish might be available for the yellow-fever campaign at Tampico. A search was forthwith made and *Gambusia* was found in abundance in the vicinity. Since December 1 the top minnow has entirely replaced crude oil as an eradicator of mosquito larvæ, the natives are much pleased at the change, and the reduction in the expense has amounted to $3,000 weekly.

THE NATIONAL BOTANIC GARDEN[1]

FIVE years ago the commission of fine arts was requested to investigate and report as to the possibilities of relocating the existing Botanic Garden, at the foot of the Capitol, from its present restricted area to a more suitable site, and after surveying carefully several suggested sites in the District of Columbia decided upon Mount Hamilton and the land adjacent as the most suitable location for a National Botanic Garden. A year ago at a hearing before the joint congressional committee on the Library the plan was again thoroughly discussed. The highest scientific and botanical authorities in the country attended the hearings, and not only indorsed the site as being in location, area, variety of soil, elevation and accessibilty most adaptable for a National Botanic Garden, but asserted also the great need for such a garden as would be comparable with those of other great countries of the world.

Once the National Botanic Garden has been established and developed, it would be one of the great sightseeing places of Washington, which would be visited by thousands of persons annually. The Zoological park is 3.50 miles and Arlington National Cemetery 4.50 miles from the Capitol, yet each is visited by thousands of persons each week. The daily average attendance at the Zoological Park is 6,108, from 20,000 to 40,000 on Sundays and more than 2,000,000 for the year. The Mount Hamilton site is only two miles northeast of the Capitol, and is accessible by lines of street cars. In addition the National Botanic Garden would be a place where thousands of school children of the city could make a study of plant life and the garden would continually be a place of enjoyment for residents of the city. The Mount Hamilton site is on the main highway between Baltimore and Washington, one of the main approaches of the city. A boulevard would lead through the grounds along which a countless number of persons would travel each year in order to see the garden.

[1] From *The Washington Post*.

MEDICAL PRIZES

THE *Journal* of the American Medical Association announces the following prizes:

The Mörsel Foundation offers a prize of 10,000 marks for the best work on the etiology, diagnosis or treatment of cancer, representing important progress. A second prize of half the amount will be given for the second best work. Competition is open till October 1, 1922. Competing articles are to be sent to the director of the Institute for Experimental Cancer Research at Heidelberg. The competing works must be in German and must have been published between January 1, 1921, and October 1, 1922, or be ready for publication when presented.

The Royal College of Physicians of Edinburgh announces the Parkin Prize of £100, open to competitors of all nations, for the best essay "On the Effect of Volcanic Action in the Production of Epidemic Diseases in the