

## THE BENEFITS AND DANGERS OF OUR NATURAL HERITAGE

EDSON S. BASTIN

*Department of Geology and Paleontology, The University of Chicago*

At a time when so many of our natural resources are strictly controlled by rationing and other restrictive measures it is of interest to consider some of the causes that make such control necessary and to inquire whether all restriction can safely be abandoned when the war is over.

From the human standpoint the plant and animal resources are the most important, for on them man is dependent for the most fundamental necessities of life—food and clothing. Throughout most of human history they have been man's only resources. Because resources of this sort are renewable year after year or generation after generation, because they can be moved from one part of the world and made to flourish in another, and because they can be improved by plant and animal breeding, they present on the whole less serious economic problems than the mineral resources.

Our mineral resources are **not** renewable. The few that are increasing today are forming at a rate so slow as to be of no consequence in terms of human needs. They cannot be transplanted to grow in new environments. They are exhaustible—in fact, many of them have already been exhausted—the gold and silver of Mark Twain's Virginia City in Nevada, and most of the silver and the oil of Old Mexico. Yet it is the mineral resources that peculiarly give character to modern life and stamp it as radically different from life in the days of Washington or even Lincoln. Eighty-four percent of the freight carried on our railroads in 1940 was a product either crude or fabricated of our mines and quarries, and this freight was carried mainly in steel and hauled by steel locomotives powered by mineral fuels.

With the comforts and other benefits that mineral resources have brought us have come also perplexing and often dangerous difficulties for nature has distributed the mineral resources very unevenly over the globe, and man has drawn his political boundaries with little regard to that distribution.

Mineral resources have played an important rôle during the past seventy years in wars and less serious international disputes, and in the present war the many and varied methods applied for the control of mineral resources serve to etch into relief their great significance in world affairs. Domestic adjustments have included the feverish search for new deposits and the accelerated development of old ones, restriction of consumption to uses that are essential, the use of substitute mineral resources, and the development by the chemist of synthetic products to take the place of natural resources. Foreign arrangements with a view to insuring adequate mineral supplies have included military conquest—the favorite method of the Axis powers, military alliances, economic pressure, purchase of unneeded supplies to prevent them from falling into enemy hands, the accumulation of stock piles, exploration and development of foreign deposits to augment domestic supplies, lend-lease aid and the removal of tariff and other trade barriers between friendly nations.

What philosophy shall we build up with respect to natural resources in anticipation of the return of peace? Certainly a better philosophy must be found than the Axis philosophy of self-sufficiency through conquest, if we are to pull up by the roots the causes of this war and the potential causes of future wars. Our philosophy

must not be for ourselves alone for the problems of natural resources are global in extent and they must be met by policies global in their scope.

A philosophy for the peaceful development of the world's resources for the benefit, not of a few countries but of all, must face in exactly the opposite direction from the Axis policy of self-sufficiency by conquest. It must recognize in the natural haphazard distribution of resources and particularly of mineral resources, nature's solemn mandate that this wealth is for the world—not merely for the stronger nations. It must recognize that not even the country in which these resources occur, has exclusive rights to them but instead is their trustee, obligated to share with other countries either the resources themselves or the products made with their aid.

If for the future we must erect guiding principles to combat and to replace those that have wrought so much harm, it is equally essential that these principles be translated into action through procedures planned with the utmost care. There will be no simple formulae for such procedures because different problems will have to be met in different ways. The principle of trusteeship implies easy access to raw materials, and this means open doors and lowered trade barriers. Between the two World Wars restrictive measures rather than the removal of barriers was the rule, with disastrous results. The war powers granted to our President to lower trade barriers between allied countries is perhaps illustrative of what may be necessary on a wider scale

after the war, though such adjustments probably should not be inflexibly applied.

In such political units as the United States and the British Empire, which possess abundant raw materials and highly developed industries, great pressure may be expected to restore old trade barriers or to erect new ones after the war. It is these very countries, however, that will have to take the initiative, if a new economy of natural resources is to be established. From us and from our British allies will have to come the will to fight reactionary policies with fearless courage, the vision to initiate equitable methods for the distribution of natural resources and the cooperative spirit that will draw all other nations as promptly as possible into such efforts for the common welfare. The rewards of such efforts will be inestimably great in terms of international good will and world security.

The problems of raw materials will be particularly urgent and difficult when the war controls under which most of the world's commerce is now conducted, are suddenly removed and the needs of rehabilitation and relief become acute. Some international agency for economic control should be ready to function constructively in that emergency and to forestall a return either to dangerous restrictive measures or to the equally dangerous policy of *laissez faire*. The functions of such a body should, however, be permanent and should be continuously applied to the great and ever-changing task of adjusting world resources to world requirements.