

The first part of the book tells the pathetic tale of the causes and factors of extermination, mainly of birds and mammals, in process all over the world, from the song-birds of Europe and the Southern States of America, to the pheasants of the east and the big game of Africa. In the second part he deals with the economic and other reasons for the preservation of species, with the laws that should be passed to achieve that end, with game reserves, &c. The book is well illustrated with figures of many of the interesting species threatened with extermination, and with maps showing their past and present distribution.

"Trees in Winter" (3) is essentially a work on arboriculture. By the term winter the authors mean that period when the tree is in its resting condition, a period which may be considered to extend from the shedding of the leaves in the fall to the bursting of the buds in the spring, which varies for different trees in different localities. In the north-eastern United States, for instance, it may begin as early as the latter part of September, and may extend even into the middle of May.

The subject-matter is divided into two parts. Part i. deals with the buying, planting, and care of trees mainly during their dormant condition, but it also contains much valuable information, and many important hints on spraying and the treatment of fungus growths and insect pests during the growing season. It was written primarily for the use of those who possess trees of their own in gardens or parks, and not for a municipal tree-planting commission. Nevertheless, it will be of inestimable service to those responsible for the well-being and upkeep of trees in the streets and public squares within city precincts. This part was specially written at the request of the publishers as an economically useful addition to part ii., the material of which first appeared in pamphlet form as a bulletin of the Storrs Agricultural Experiment Station, and proved in such demand, especially for use in schools, that it seemed desirable to issue it in book form, and thus render it more widely available than would be the case if its circulation were restricted to the limitation of a State publication. This part deals with the identification of trees. It leads off with an analytical key to the genera and species; and this is followed by detailed descriptions of the species, systematically arranged, every species being illustrated by photographs showing its mode of growth, its twigs, fruit, and other structural details.

Although the trivial names employed are not always the same as those used in England—what we commonly know as the plane tree, for instance, is called the sycamore—this fact will in no way detract from the value of the book to arboriculturists in this country, because the admirable descriptions and pictures make confusion of the species impossible.

R. I. P.

THE MINERAL RESOURCES OF THE UNITED STATES.¹

THE record of the annual mineral production of the United States has now increased in size until it occupies two large volumes of 2242 pages in all. These form a storehouse of information concerning a number of matters connected directly or indirectly with the mineral industry of America, whilst statistics of, and information about, the production of minerals in other parts of the world are given for the purpose of comparison. The methods are the same as those employed in previous years, one of the two volumes being devoted to the metalliferous minerals and the other to the non-metals. From the economic point of view the latter are the more important, the value of the coal production of the United States being nearly one-third of the total value of the whole of the mineral products, this latter amounting to the huge sum of close upon 400,000,000*l.* As the population of the United States is just about 92 millions, the annual mineral production amounts to well over 4*l.* per head of the population.

The above total shows a small decrease, equal to 2.65 per cent., on the value of the production in 1910, in which latter year the record value attained in 1907 had again been nearly reached. Practically the whole of the above drop was due to a decline in the value of the pig-iron production, the statistics for the metalliferous minerals being based, as in previous years, upon the metals produced from the ores, and not upon the ores themselves. The production of pig-iron in 1911 was 23,649,547 tons, as against 27,303,567 tons in 1910, a decrease of 13.3 per cent., whilst the output of iron-ore declined simultaneously from 51,155,437 tons to 40,989,808 tons, equal to a decrease of 23.4 per cent. The only cause that can be assigned for this decrease was over-production in 1910, which necessarily caused a decreased demand in 1911. It is quite certain that this decrease was in no way due to natural causes, the capacity of the mines to produce the requisite supply of iron-ore being in no way diminished.

The output of gold was practically unchanged, whilst that of silver showed a moderate increase; in the same way there was but little difference in the copper production, whilst in the production of lead and zinc increases were shown, though in no case of any great importance.

The coal output in 1911 was but little less than in 1910, namely, just over 496 millions of tons, as against about 501½ millions of tons in 1910. In 1911 the production of petroleum, on the other hand, showed an increase, namely, 220½ millions, as against 209½ millions of barrels.

In a similar way fluctuations, though not to any marked extent, occur in the less important mineral products, but the net result left by the perusal of these statistics is the distinct impression

¹ "The Mineral Resources of the United States, Calendar Year 1911. Part i. Metals. Pp. 1015. Part ii. Non-metals. Pp. 1224+maps. (Washington: United States Geological Survey, Government Printing Office, 1912.)

that the mineral industry of the United States is in a sound and flourishing condition, and that the vast mineral resources of that great country are being steadily and profitably developed.

As to the volumes in which the results of these operations are chronicled, it is impossible to do more than express admiration for the care and attention bestowed upon them, and we can only wish that we had in this country a department capable of doing anything like similar justice to our own British mineral industry. H. L.

SIR TREVOR LAWRENCE, BART.

SIR TREVOR LAWRENCE, late President of the Royal Horticultural Society, and sometime Treasurer of St. Bartholomew's Hospital, died at his seat at Burford, Dorking, in his eighty-second year, on Monday night, December 22. Born on December 30, 1831, Sir Trevor was educated at Winchester, and afterwards at St. Bartholomew's Hospital, where his father was one of the staff and one of the teachers. After qualifying as a medical man, Trevor Lawrence joined the Indian Medical Service in 1853, seeing much active service during the Mutiny. In 1863 he retired from India, and in 1867 succeeded his father as second baronet. In 1869 he married Elizabeth, daughter of the late Mr. J. Matthew, of Burford, Dorking. From 1875 till 1892 he sat in Parliament.

Always interested in plants, Trevor Lawrence became during his Indian service a keen and successful gardener. This taste and talent he exercised and developed on his return to England, and although he was doubtless best known in gardening circles as an orchid grower, there was no particular branch of horticulture in which he was not keenly interested and in which he was not highly successful. Even in that especial branch of the craft in which he was deservedly famous—the cultivation of orchids—his innate love of plants for their own sake, which he appears to have inherited from his mother, was very conspicuous. In addition to one of the finest private collections of showy sorts, Sir Trevor had at Dorking probably the largest private collection of the less conspicuous, but very often more scientifically interesting genera and species from both hemispheres.

There was therefore everything that was appropriate in the election of Sir Trevor, in 1885, to the presidency of the Royal Horticultural Society. But on Sir Trevor's part there was also a strong strain of chivalry and gallantry in his acceptance of this, at that time, thankless post. The Society was at a miserably low ebb, with an inadequate membership and still more inadequate finances. Supported in the struggle which ensued by a number of far-seeing and courageous colleagues, both against adverse external circumstances and against opposition from within the Society, the difficulties were overcome, and the assured financial position in which the Royal Horticultural Society stands to-day

has been largely due to the steadfastness of purpose, tact and wisdom of Sir Trevor Lawrence during the presidency of twenty-eight years, which ended with his retirement from that position on April 1 last.

Almost as great as the services he was able to render to gardening were those which Sir Trevor rendered to his own old hospital, the treasurer-ship of which he was invited to undertake when he retired from Parliament. This post he held during twelve years of financial and other difficulties. The qualities which had stood him in such good stead in the Royal Horticultural Society enabled him here again to inaugurate much that was useful in the matter of extending the scientific equipment of the hospital, of securing for the staff some share in its management, and of establishing a sounder administrative policy with regard to its property. As a member of the council of King Edward's Hospital Fund, Sir Trevor was able to do much for the cause of hospitals generally.

A well-known and skilled collector of Chinese and European porcelain and the possessor of one of the finest collections of Japanese lacquer in Britain, Sir Trevor placed students of the latter under much obligation by printing for private circulation in 1895 a finely illustrated catalogue of his collection. A host of exquisite courtesy, and a counsellor of great sagacity, Sir Trevor's death will be greatly mourned by a wide circle of friends.

A NEW BRITISH ANTARCTIC EXPEDITION.

THE science of geography will enlarge its bounds if the expedition to the South Pole, planned by Sir Ernest Shackleton, ends successfully. A start is to be made next October from Buenos Aires, and the plan proposed is to cross the south polar continent from the Weddell Sea, on the Atlantic side, to the Ross Sea, touching at the South Pole *en route*—a distance of some 1700 miles. Altogether the party will number forty-two, twelve being actual explorers, and the remainder the crews of the two ships that are to support the venture, one on each side of the Antarctic continent. Of the explorers, six expect to cover the whole ground from the point of landing on the Weddell Sea to the point of embarkation on the Ross Sea. The other six will be divided into two groups: one, composed of a biologist, a geologist, and a physicist, will probably remain at an experimental station on the Weddell Sea side; the other party of three will be told off to explore the land to the east, which is at present entirely unknown. These two wings of the expedition will eventually be taken back to South America, while the party which will accompany Sir Ernest across the continent is to be met at the Ross Sea base by the second ship from New Zealand, whither it will take them.

For the outward journey the *Aurora* has been chosen. Both this and the sister vessel will depend