

out the hope that it may soon be possible for the archaeologist to discern the long awaited Arthurian archaeology of Britain. Though Vortigern, Aurelius Ambrosianus, and King Arthur mean much to the historian, archaeologically they and their subjects are almost unknown. The lost archaeology of the Briton has to be reconstructed from material found in the

graves of his conquerors. Investigation of the chronological position of such material as the famous 'Kingston' brooch shows that it is more likely to be British than Jutish, as it has been regarded. There is a definite probability of some progress in the task of sorting out minor Arthurian antiquities from the 'Anglo-Saxon' cases of the museums.

Rimu or New Zealand Red-Pine

IN view of the fact that the possibility of obtaining supplies of soft woods from the Empire is so much in the forefront at the present day, a leaflet by W. C. Ward on the "Properties and Uses of Rimu" (N.Z. For. Service, *Leaflet*, No. 17, Nov. 1931) merits consideration. The author states that rimu (*Dacrydium cupressinum*) supplies rank as the most important soft wood in New Zealand. It is milled and marketed in every timber-producing district in the country, and is the principal building timber in the Dominion. It is employed in almost every local wood-using industry, and in many is the chief timber used. At the present time, practically the whole of the rimu produced is consumed locally, less than 3 per cent being exported. The quantity milled annually exceeds that of all other species combined, and during the year ending March 31, 1930, totalled 159,000,000 ft. Board Measure (B.M.), or 58 per cent of the total timber production of the Dominion. In 1920-1930 the annual cut of the species exceeded 140,000,000 ft. B.M., the peak production of 195,000,000 ft. B.M. in 1926 representing 55 per cent of the total timber produced that year. That the fellings are exceeding the annual increment or possibility is exemplified by the statement that a few years ago Auckland supplied a far larger proportion of the total cut than any of the other districts, but its accessible supplies have now dwindled, and Westland has taken the lead and is said to be likely to supply an increasing percentage in future years.

The first detailed statistics on the export of rimu were collected in 1913, when 8,500,000 ft. B.M. were exported. In the War years the trade increased, and by 1918 the total exports had reached 30,000,000 ft. B.M. This was due to the difficulty in obtaining supplies of North American and Scandinavian timber during the War years. With the drop in price of the foreign species at the end of the War, and low ocean freights, it was possible to land the foreign material cheaper in Australia than rimu. The exports of the latter to Australia had fallen to 4,000,000 ft. B.M. in

1925, and have remained at that figure ever since. Recent customs duties on foreign timber in Australia now permit rimu to compete successfully once more, and a recent survey has shown that 20,000,000 ft. B.M. of rimu could be used in Australia annually.

The leaflet is written from the marketing and manufacturing point of view. It is to be hoped that the Forest Department will bear in mind the great value to the country of this fine timber, and will take steps to see that its regeneration is undertaken, in order to perpetuate supplies.

The rimu is a fine forest tree, the height in the average commercial stand varying from 60 ft. to 120 ft. When mature, its trunk is long, straight, unbranched, and with little taper, carrying a comparatively open and irregular crown. From the remarkably weeping habit of its foliage it is the most easily recognised and best known of all New Zealand trees. The commercial bole usually varies from 40 ft. to 80 ft. in length. Its diameter, breast height, in mature stands varies from 2 ft. to 4 ft., although it is said that many of the trees at present converted range below the lower limit. In other words, as is invariably the case when primeval forests are lumbered, immature trees are being felled along with the mature ones. Occasionally trees up to 8 ft. diameter are encountered and milled. It might be suggested that a few stands of these fine old trees should be selected by Government and reserved to show future generations what the New Zealand soil is capable of producing.

Although the tree grows on flat, but not marshy, land, it favours undulating localities and hillsides, being found at all altitudes from sea-level up to 2500 ft. With the exception of the pure beech (*Nothofagus*) stands, rimu occurs in every major type of forest growth, and in the North Island it is an occasional associate of the kauri.

Mr. Ward gives interesting details on manufacture, seasoning, grading, the properties of the wood and durability, and adds notes on its utilisation by various industries.

Winter Climate of Greenland

IN a paper read to the Royal Geographical Society on April 18, by Mr. S. T. A. Mirrlees, new light is thrown on the winter climate of the interior of southern Greenland. Mr. Mirrlees pointed out that nearly all our knowledge of the climate of this region is based upon observations made on summer sledge journeys, supplemented by the observations made throughout the year at the various coast stations of the Danish Meteorological Service. Greenland lies to the north of the region of the world's most persistent cyclonic activity, but—if we accept as accurate the distribution of high and low pressures shown on the daily charts of the British Meteorological Office and similar older publications, such as those of the Danish Admiralty—is at all seasons liable to be invaded by the cyclonic depressions of the North Atlantic.

In a series of observations made every three hours between Sept. 8, 1930, and April 26, 1931, at about lat. 67° N., long. 42° W., at a height of about

8250 ft., by the British Arctic Air Route Expedition, his hypothesis is confirmed. The direct influence of the Atlantic depressions on the weather was found normally to be small, as is shown by the low figures for the monthly mean proportion of the sky covered by cloud, which varied from five-tenths in September to three-tenths in February. The mean for the whole period must therefore have been roughly comparable with the normal for the French Riviera. But there were some stormy periods and even gales, and the strongest winds showed no tendency to be more prevalent from the prevailing northerly direction of the wind than from other quarters; moreover, the characteristic changes of wind, pressure, and weather caused by the passage of the centre of a depression directly over or to the north of the place of observation were observed.

Very low temperatures had been expected, and were not wanting, for a reading of -59° F. was

obtained both in January and February. The nearest approach to a thaw was on an occasion in September when the temperature rose to 29° F. Mr. Mirrlees pointed out that the degree of cold observed was not nearly so great as that experienced in Siberia, at Verkhoiansk, where the mean temperature for January is -58° F., and where -80° F. occurs about once in two years. At both places the greatest cold is usually found with the calmest weather, and must evidently be associated overhead with a very large inversion of the usual fall of temperature with height.

University and Educational Intelligence

CAMBRIDGE.—Prof. J. E. Lennard-Jones, professor of theoretical physics in the University of Bristol, has been elected John Humphrey Plummer professor of inorganic chemistry as from Oct. 1.

PROF. E. F. BURTON, of the Department of Physics, University of Toronto, has been appointed head of the Department and director of the Physics Laboratory (McLennan Laboratory), to succeed Prof. J. C. McLennan, who retired on June 30.

THE Carnegie Foundation for the Advancement of Teaching, after a quarter of a century of sustained and successful effort devoted mainly to improving the economic status of the college and university teacher and, as a secondary activity, to elucidating current educational problems, has now entered upon a new era in which the work of its Division of Educational Enquiry becomes its dominant function. The change of policy is explicitly announced in the twenty-sixth annual report recently presented by the president, Dr. Henry Suzzallo, a part of which is devoted to a discussion of certain features of the very remarkable study now in progress of the relations of secondary and higher education in Pennsylvania. This study, undertaken in 1928 on behalf of the Educational Commission of the State, is not a 'survey' in the ordinary sense. It includes an attempt to trace contemporaneously through the secondary and collegiate periods of their education the intellectual fortunes of a representative group of some twelve thousand pupils who began the seventh school grade in 1928, and it might thus be designated a 'four-dimensional survey'. Year by year for the past four years the president of the Foundation has commented in his annual reports on the progress of this unique enterprise. In the present report he observes that the conspicuous lesson thus far emerging is the dependence of all successful education on adequate provision for proved differences in individual interests and capacities. Next, after a scheme of accurate comprehensive testing for each pupil, the organisers of the study have emphasised a thorough and continuing knowledge of the individual personality in all those phases of life that bear on his education. To provide for the gathering, selecting, and interpreting of the requisite information by a competent teacher-counsellor in continuous contact, and thus gradually maturing an assured knowledge and conviction of the pupil's needs, certain forms of 'home-room' organisation have been devised, some of the more promising of which are described at length.

"HOME-MAKING Education" is the title of a recent *Bulletin* (1931, No. 20) of the United States Office of Education, which describes some notable developments in the application of scientific research to problems of family life and to methods of instruction and training for handling them. The growth of interest in the subject is indicated by bibliographies of research studies in education for 1926-30, which

give the numbers of home-economics studies in successive years as 18, 27, 36, and 91, including many M.A. and Ph.D. theses. The White House Conference on child health and protection and 'home-making' conferences called by the Commissioner of Education and the National Education Association in 1929 and 1930 were both symptoms and stimulants of this growth. One of the White House Conference committees formulated a series of recommendations in favour of researches comparable with that recently inaugurated by the B.B.C., with its 'family' form, in changes in family life. Among numerous examples quoted in the *Bulletin* of successful ventures in the field of home-making education is one in which mothers attending classes in child-development were relieved meanwhile of the care of their children by high-school girls from child care and training courses in the home-economics departments of neighbouring high schools: the girls kept records of their observations for discussion the following day in the home-economics classes. The use of nursery-schools as laboratories for the girls in home-making classes is urged by Dr. Popenoe, director of the Los Angeles Institute of Family Relations, who insists that laboratory work is as essential in the learning of home economics as in learning physics or chemistry. In Pasadena Technical High School, all girls enrolled in the eleventh and twelfth years take a course in child-development, in connexion with which is maintained a demonstration laboratory of sixteen children aged two to four years. Home economics is destined, says Dr. Popenoe, soon to find a place in every institution that pretends to fit its students for life anywhere except in a classroom.

Calendar of Geographical Exploration

Aug. 14, 1642.—Tasmania and New Zealand

An expedition in charge of Abel Janszoon Tasman, with F. J. Visscher as pilot-major, sailed from Batavia in Java to explore the South Indian Ocean. Both men were experienced navigators and this certainly contributed to the success of the voyage. Passing through the Strait of Sunda, they reached 49° 4' S., and on Nov. 4 the south-west coast of Tasmania (named by Tasman 'Antony van Diemen's Land') was sighted. On Dec. 13, the west coast of the south island of New Zealand was discovered in 42° 10' S. Later the broad bight between the two islands was discovered and the voyage was continued along the west coast of North Island. By Jan. 21 the ships were anchored in the chief island of the Tonga group, afterwards named by Cook the Friendly Islands. Tasman became involved in the reefs off the north-east of the Fiji group, but found a passage among the islands off the north-west of Vanua Levu. The projecting capes of the latter were mistaken for islands, so that its size was not realised. The ships returned to Batavia on May 14, 1643. This great voyage finally demonstrated the absence of any connexion between Australia and a possible south polar continent. Between 40° and 50° south, the vessels covered 115° of longitude, altogether passing through 5000 miles of a hitherto unexplored ocean in latitudes never before reached in this portion of the globe, after which 2000 miles had still to be traversed before known regions were again entered. Visscher's skill resulted in the careful charting of the newly found areas. Tasman's earlier work included the charting of the north coast of Ceram in 1634, the correct charting of Luzon and other islands in that region, and the discovery of the Bonin Islands in 1639. His later voyage in 1644 verified the continuity of the land from the Gulf of Carpentaria to the north-west point of Australia.