forming an irregular line in which the trees vary very much in size. In the sheltered part of the valley, where the soil and situation are very favourable, they average 70–80 ft. high, the best I measured being 80 ft. by 10 ft. and 86 ft. by 9 ft. But lower down the stream, where the valley is more exposed to the wind, they are stunted, and not more than half the height of those above. There are knees on some of the trees overgrown with moss and meadowsweet, but not so large as those at Syon."

I saw these trees in the autumn of 1943 and found them generally in good health, but some damaged by tempest.

In the courtyard of Dartington Hall, near Totnes, a very fine tree flourishes, and this was shown to me by Mr. Elmhurst a few years before the War. When I expressed surprise that this great tree stood alone in good health in an exposed position on the hill, he explained that its roots were in a large disused well. A similar tree is in good health to-day at the Grand Hotel, Lyndhurst, perhaps 70–80 ft. high, where it also is said to have its roots in a disused well. A fine tree about 70–80 ft. high and more than 2 ft. 6 in. in diameter grew by the side of the stream a little north of Hunton Bridge, near Watford, Herts. This may have been the tree which Elwes figures as being, when he measured it, 85 ft. by 14 ft. in 1884. At the request of the owner, about twenty years ago, I had it cut down: reference to the wood will be made later, but I heard a few years after that my brother had known the tree and had landed many good trout under its branches. The two dates of fashionable planting appear to be during 1720–62 and in 1843, and choosing between these without further information, I think this tree must have belonged to the earlier date. Inquiries over twenty years gave disappointing results, as few trees could be found of later planting. Some good specimens can be seen at the Pinetum at Bedgebury. Mr. W. Dallimore writes me under date of October 11, 1944, as follows:

"The *Taxodiums* at Kew are, I imagine, from 75 to 80 years old, although I cannot be certain on the point. The *Taxodiums* at Bedgebury are all quite young. Some were planted in 1926, others in 1927, and they were 3 to 4 years old when planted."

The varying habit of growth is characteristic of the tree in the United States, and it is the same in Great Britain. This feature is noticeable when the limbs are bare, and this ghostly appearance, previously referred to, stands out against the winter sky.

The wood is of great value, and so far much too little appreciated in Britain. Quoting from "Timbers of the World":

"It is imported in the form of planks and boards of various qualities, but only of late years in any considerable quantity. It is yellowish-red, often nearly salmon coloured. In the United States it is used so extensively that Gibson writes 'the uses are so nearly universal that a list is impossible'. Another American authority, Hough, says: 'Its great durability, immunity from the attack of parasites, and non-liability to great shrinking or warping makes it one of our most valuable woods for all woodwork exposed to weather, for tank construction, cooperage, etc.'. These qualities combined with a sharp segregation of the hard and soft grain, and with a scantiness of resin, should bring this wood into more general use. It is especially satisfactory for out-houses and green-houses, and where so used will probably outlast any other kind of softwood, even when unpainted. One such unpainted building in this country has survived for six years (1920), and the wood, though subject to continual heat and moisture, is quite sound throughout. [Inquiry to-day (1944) shows

that the woodwork in the orchid-houses referred to is in perfect condition, without showing any sign of decay.] The English grown wood appears to possess equally good qualities, and where available should be used for exposed woodwork. It differs from the American grown timber that reaches this country in colour, which is light yellow, and in appearance it recalls Lebanon cedar. . . ."

Gibson has made a statement which suggests that the remarkable durability of this wood is somewhat doubtful, but there is reason to question his opinion. Prof. C. S. Sargent, in a private letter (March 3, 1915) on this subject, says:

"The wood (*Taxodium distichum*) is considered to be exceedingly durable, and I do not know on what authority Gibson has made his statement. It is not impossible, of course, that the wood of a diseased tree, or one that had grown under abnormal conditions, might be of poor quality."

A very large quantity was purchased by the British Government during the War for aeronautical construction, but it was found to be unsuitable, and led to deplorable results.

Its great durability renders it most valuable, but the foregoing is an illustration of the undesirability of accepting a timber based upon mechanical experiments, and lends a strong argument in favour of following the advice of the unprejudiced craftsman.

This tree, not indigenous to Great Britain, should be planted wherever possible, for its great beauty and utility: it must be borne in mind, however, that in its native habitat it grows in close proximity to streams or abundant water supply.

NORTH AMERICAN ARCHÆOLOGY AND CULTURES

BULLETIN 133 of the Bureau of American Ethnology (Washington, D.C.: Gov. Printing Office. 1 dollar) includes seven Anthropological Papers (Nos. 19–26) of varying importance, dealing with the American Indians and their cultures.

Dr. P. Drucker contributes a useful survey of northern North-West Coast archæology, which, in contrast to the ethnology of the region, has been much neglected. The paper is based on his own field-work on a number of middens in the country occupied by the coast Tsimshian and Kwakiutl in historic times, supplemented by a summary of previous publications and museum collections. No marked difference is apparent between the cultures excavated and those of the recent tribes, but Dr. Drucker believes that some kind of culture sequence will yet be found, on the analogy of neighbouring areas. Finally, it is suggested that both archæological and recent cultures of the northern North-West Coast fall into three main geographical divisions, described as the northern (Tlingit-Haida-Tsimshian), the Milbanke-Queen Charlotte Sound (Kwakiutl), and the Straits of Georgia-Puget Sound aspects.

A large part of the volume is occupied by a study of the Eastern Cherokees of North Carolina by W. H. Gilbert, jun., based on two years of research which included a four-months sojourn among them. A survey of the culture of this remnant is followed by a description of the state of the tribe in former times, culled very largely from MS. data collected by J. H. Payne in the first half of the nineteenth century. Comparison between the two periods shows not only

the inevitable impoverishment of culture caused by contact with the white man, but also certain fundamental changes. The social organization of the older society, with its white and red officials for peace and war, conforms in general with that of other south-eastern tribes. The surviving remnant has lost this dual division, and has developed other features of which the most striking is a system of preferential mating; this has become linked with the matrilineal clans to which most members of the tribe still belong. The essence of this is that a person is expected to marry into one of his grandfathers' clans, but not into those of his parents, a state of affairs which was happily expressed by an Indian informant who said, "The Cherokees marry their grandmothers!" This system is unparalleled anywhere outside Australia, and its appearance is used to point the moral that a study of the historical antecedents of a tribe will not necessarily throw light on its present-day organization. A feature of this paper is a series of elaborate family-tree diagrams.

Another paper on the social and religious life of a dying Indian society deals with the Carrier Indians of the Bulkley River basin in British Columbia. It is contributed by D. Jenness, who spent about four months among them. A good account is given of the political organization, including the part played by clan and personal crests, and there is a brief summary of the life-cycle. The section on religion includes an interesting account of some hybrids formed by the impact of Christianity on the old beliefs, and the importance of dreams in the religious life of the people is stressed. The remarkable lack of historical sense among these people is shown in the impossible stories which they weave around events scarcely a generation old. The paper ends with an account of the medicine men, which includes a remarkable first-hand description of a ceremony for the cure of 'kyan sickness', a kind of hysteria involving cannibalistic cravings, to which these Indians seem particularly susceptible.

A paper by Robert F. Heizer on "Aconite Poison Whaling in Asia and America" gives a survey of whaling along the North Pacific coasts from Japan to Vancouver Island, which shows that three basic methods were practised. Netting is found mainly in Japan, the harpoon-line-float method is practised by the Eskimo and Chukchee in the Far North and is also found in the Vancouver - West Washington area, and spearing with a lance dipped in aconite poison predominates in the intermediate regions of both Asia and America. It is concluded that the poisoning method was used first by the Ainu and by the Kamchadal of Kamchatka, whence it is conjectured that it spread to the Aleutian Islands and the neighbouring part of the mainland of Alaska. It is probable that the movement was in this direction, but a word of caution is necessary since the link between the two areas is weak at its western end, because evidence for the ancient occupation of the Commander Islands is lacking.

In "The Quipu and Peruvian Civilization", John R. Swanton, arguing from quotations from the chroniclers, concludes that the quipu was used as a more extensive method of expression than the mere recording of numbers. From analogy with other high civilizations, he considers that Andean culture must have had such a mode of expression—a singularly unconvincing argument. It is suggested that the most highly developed quipus are likely to have been in public repositories which the Spaniards destroyed.

G. H. S. BUSHNELL.

FORTHCOMING EVENTS

Saturday, December 16

PATHOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (joint meeting with the **BIOCHEMICAL SOCIETY**) (at the Royal Society of Medicine, 1 Wimpole Street, London, W.1), at 11 a.m.—Discussion on "Cancer".

NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS (at Neville Hall, Newcastle-upon-Tyne), at 2.30 p.m.—Mr. D. MacFarlane: "Mine Ventilation with reference to Fan Types and their Application".

QUEKETT MICROSCOPICAL SOCIETY (at the Royal Society, Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Dr. W. S. Bristowe: "In Quest of Spiders".

Monday, December 18

ROYAL GEOGRAPHICAL SOCIETY (at Kensington Gore, South Kensington, London, S.W.7), at 8 p.m.—Mr. and Mrs. Harold Ingrams: "Hadhramaut in Time of War".

Tuesday, December 19

ROYAL ANTHROPOLOGICAL INSTITUTE (at 21 Bedford Square, London, W.C.1), at 1.30 p.m.—Dr. O. Samson: "The Place of China in an Ethnographical Museum".

ROYAL SOCIETY OF ARTS (DOMINIONS AND COLONIES SECTION) (at John Adam Street, Adelphi, London, W.C.2), at 1.45 p.m.—Dr. I. E. Coop and Mr. A. L. Poole: "Scientific Collaboration between the United Kingdom and New Zealand in War and Peace".

EUGENICS SOCIETY (at the Royal Society, Burlington House, Piccadilly, London, W.1), at 5 p.m.—Discussion on "Aspects of the Housing Problem" (to be opened by Mr. Alexander Block).

ROYAL INSTITUTION (at 21 Albemarle Street, Piccadilly, London, W.1), at 5.15 p.m.—Sir Henry Dale, O.M., G.B.E., Pres.R.S.: "Modern Developments in Chemical Therapeutics", (iii) "Penicillin and Antibiotics".

INSTITUTION OF ELECTRICAL ENGINEERS (RADIO SECTION) (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Discussion on "The Television-Receiver Sound Channel" (to be opened by Mr. D. C. Espley).

Wednesday, December 20

ROYAL SOCIETY OF MEDICINE (at 1 Wimpole Street, London, W.1) at 2 p.m.—Discussion on "The Principles and Relationships Involved in Medical and Veterinary Education" (to be opened by Sir Henry Dale, G.B.E., O.M., P.R.S., Prof. J. B. Buxton and Prof. G. W. Pickering); at 4.30 p.m.—Dr. J. D. Rolleston: "The Folk-lore of Toothache" (C. E. Wallis Lecture).

INSTITUTION OF ELECTRICAL ENGINEERS (LONDON STUDENTS' SECTION) (at Savoy Place, Victoria Embankment, London, W.C.2), at 7 p.m.—Mr. J. F. Stirling: "The Condensation of Atmospheric Moisture on Insulation Surfaces".

Friday, December 22

NORTH-EAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS (in the Lecture Theatre of the Literary and Philosophical Society, Newcastle-upon-Tyne), at 6 p.m.—Dr. H. Orenstein: "Methods and Motion Study Applied to the Shipbuilding Industry".

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

GRADUATE MASTER to teach GENERAL SCIENCE in the Junior School, mainly to Engineering and Building forms—The Clerk to the Governors, Mid-Essex Technical College and School of Art, Chelmsford (December 21).

SENIOR TECHNICIAN to take charge of Physics Workshop—The Secretary, Mount Vernon Hospital and the Radium Institute, Northwood, Middx. (December 22).

RESEARCH ASSISTANT with good constructional ability to assist in development of electro-optical apparatus—The Secretary, Mount Vernon Hospital and the Radium Institute, Northwood, Middx. (December 22).

PRINCIPAL OF THE SUNDERLAND TECHNICAL COLLEGE—The Director of Education, Education Offices, 15 John Street, Sunderland (endorsed Technical College—Appointment of Principal) (December 23).

ANIMAL HUSBANDRY OFFICER—The Secretary, Norfolk War Agricultural Executive Committee, Sprowston, Norwich (December 23).

IRRIGATION ENGINEER by the Government of Trinidad—The Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2 (quoting Reference No. E.1245A.) (December 27).

ASSISTANT ENGINEER by the City Council of Gibraltar—The Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2 (quoting Reference No. E.1244A.) (December 27).

PHYSICAL RESEARCH METALLURGIST for mechanical and physical investigations (Reference No. F.3202.XA), a **RESEARCH METALLURGIST** for investigations of foundry methods (Reference No. F.3201.XA), and a **PHYSICAL CHEMIST** for the investigation of corrosion problems, etc. (Reference No. F.3203.XA), in the Research Department of a South Wales Company—The Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2 (December 27).

RESEARCH MANAGER-PHYSICIST (with sufficient experience and theoretical knowledge of vacuum technique and associated equipment to take charge of development research for high-vacuum equipment) by a small but progressive and established concern located in S.E. London—The Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2 (quoting Reference No. A.735.XA) (December 27).