

are applicable to motorists, whose movements are dependent on rapid and accurate co-ordination between the eyes, hands and feet. The committee also emphasises that the elimination of alcohol from the body is a slow process: 10–12 c.c., or the equivalent of one ounce of whisky, can be oxidised each hour, and the rate is not increased when the concentration in the blood is raised by drinking larger quantities. The committee concludes that the driving capacity of a driver, who has taken even small amounts of alcohol, must frequently be adversely affected, even when it has been consumed some hours before driving, and especially if taken in the absence of food.

Production of Oil in Great Britain

ONE of the most striking characteristics of the times is the tendency of man to make himself less dependent on the circumstances imposed by geographical conditions. Formerly it was necessary to settle, and for industries to develop, where sources of food and raw materials were readily accessible. Now the tendency is for these things to be done just where man chooses—but at a certain price. Modern civilisation demands oil and oil products, and our need is being in part met by the treatment of coal. In the House of Commons on July 24, the Secretary for Mines (Captain Crookshank) reported that the plant at Billingham for coal-hydrogenation is now working and will, when at full output, produce 45,000,000 gallons of motor spirit yearly—3½ per cent of our annual consumption. By August, the total production—including that from distillation of oil shale and coal—will reach 60,000,000 gallons, increasing to 90,000,000 gallons when the Billingham plant attains full output. Although petroleum can be got from the earth for relatively slight efforts, one of the chief merits claimed for coal-hydrogenation is the magnitude of the labour it requires and the employment it gives. This, however, is small in comparison with the size of the coal industry. The present Billingham output employs 1,900 miners and 1,000 plant employees, and it does not seem probable that the process can restore the former prosperity of the mining industry. Capt. Crookshank also stated that 43 applications had been received to prospect and work for oil in Great Britain.

Mr. Lloyd George's Scheme of National Reconstruction

MR. LLOYD GEORGE'S scheme of national reconstruction is outlined in a pamphlet entitled "Organizing Prosperity" (Ivor Nicholson and Watson, 6d.). His main thesis is that our economic system can be amended without being scrapped, and that the immense advantages of individual enterprise, energy and initiative which our present economic system fosters are not to be lightly sacrificed. They must rather be controlled and cultivated so that they may yield an ordered harvest for the nation. He gives first place to the land as a means of finding not only temporary employment during a period of exceptional trade depression, but also permanent employment for our surplus population. Other projects advocated include

housing and slum clearance, electrification of suburban railways, improvement of ports and docks, extension and improvement of electrical supply, road developments, water supply, telephone extensions and financial assistance for development of overseas markets. These various schemes would be financed by a 'prosperity loan', while the carrying out of the programme would be entrusted to a National Development Board consisting of a small body of persons of distinguished competence drawn from industry, commerce, finance, workers and consumers who would be appointed for a definite term and would be responsible to the Cabinet. But since a Cabinet of about a score of Departmental Ministers is an unsuitable body to give full and dispassionate consideration to bold schemes of national reconstruction, Mr. Lloyd George advocates a reversion to the War-time arrangement of an executive consisting of the Prime Minister and four or five Ministers without departmental duties.

Science and Vocational Advice

IN a Friday evening discourse delivered at the Royal Institution on May 10, and now available as a pamphlet, Dr. C. S. Myers discussed the "Scientific Approach to Vocational Guidance". He compared the giving of vocational advice with the giving of medical advice. Each is an art, yet each depends on the use of scientific knowledge and methods. The individual must be studied with regard to every relevant aspect of himself and his environment. In vocational guidance, the part played by psychological tests is essential, although relatively small. It is now possible to estimate intelligence fairly accurately, by means of 'verbal' and 'practical' tests, and as the degree of intelligence required varies in different groups of occupations, this is one very important deciding factor. But tests for character and temperamental qualities are not yet sufficiently reliable; and the chief contribution of the psychologist in this direction has been in the introduction of improved and systematic methods of assessment. Other qualities necessary for success in certain occupations are mechanical ability and manual ability. Tests for these abilities and others, based on a detailed study of some one occupation, can be applied in vocational *selection* where the problem is one of selecting the best person for a particular job. The co-operation of parents, teachers, school authorities and juvenile employment officers provides a necessary contribution to the data on which the vocational adviser's advice is based. The follow up of advised cases, and comparison with the results obtained from a control-group are now recognised parts of the experimental procedure. During the past nine years, the number of cases dealt with in Great Britain by the two bodies responsible for most of such research was 6,751; in 1925 the number of vocational guidance cases was less than 100.

T. A. Coward Memorial Sanctuaries

ON July 22, the Earl of Crawford and Balcarres opened the Nature sanctuary at Cotterill Clough.

Cheshire, formed by public subscription in memory of the late T. A. Coward, sometime lecturer in the University of Manchester and author of "The Birds of Cheshire", "The Fauna of Cheshire", etc. The deeds were handed over to the Society for the Promotion of Nature Reserves. The Earl of Stamford, chairman of the memorial committee, said 1,570 people from all parts of the world had subscribed £925 to save this well-known haunt of fauna and flora, and also a second memorial sanctuary at Marbury Mere, and subscriptions coming from so far apart as Canada and Hong-Kong showed the wide appreciation of Mr. Coward's work. The sanctuaries were chosen not only for their own particular appropriateness and value for study, but also because Coward himself studied in them so often. One part of the sanctuary will be permanently closed as a true Nature sanctuary for wild life, but a public right of way will exist at another part where visitors can see down the sanctuary and hear the bird songs. A bronze memorial plaque on a glacial boulder brought from the Bollin Valley is inscribed: "In Memory of Thomas Alfred Coward, M.Sc.,—1867—1933—Cotterill Clough and Marbury Reed Bed were purchased by public subscription to remain for ever undisturbed Nature reserves as a memorial to his great services to natural science". Already studies have been made in the sanctuary by the Manchester branch of the British Empire Naturalists' Association and the Altrincham Natural History Society. The opening ceremony in the Clough was attended by delegates from natural history, scientific, rambles, and other bodies chiefly from the north of England.

Recent Archæological Discoveries in Crete

OPPORTUNITY for further study of the archæological material found in a cave at Arkalokhori in Crete (see NATURE, July 6, p. 15) has led to some modification of opinion as to its character, though not as to its importance. Sir Arthur Evans, in a communication to *The Times* of July 29, states that as a result of comparative study of the hieroglyphic inscription in three vertical lines on the votive bronze double axe, he has arrived at the conclusion that it does not, as at first supposed, represent an exotic script. He finds that while one or two new forms appear, nearly all the signs have close parallels in the Cretan series, while two recur in the same collocation on a faceted hieroglyphic cylinder in his possession. He is, therefore, of the opinion that the language is identical, though the new inscription, from its associations with material belonging to Late Middle Minoan, must be regarded as late in its class, dating from about 1600 B.C. From one of the lairs of a badger, from which animal the locality takes its name, a fairly complete series of potsherds, covering most of the Minoan periods, was recovered. Sir Arthur, passing on in the same communication to recent work at Knossos, chronicles an exploration of Minoan deposits, in which the most remarkable discovery was a small limestone head. This was of a markedly dolichocephalic early Egyptian type, though associated with relics of the closing Middle

Minoan age. Mosaics of Hadrianic age from a villa recently found in the vineyard of the Villa Ariadne, in which the heads of Dionysiac figures in medallions are the recurring subject, have been pronounced to excel any Roman specimens of the kind yet found in Greece.

Origins of Man in America

SEARCH for evidence bearing on the problem of early man in America, which has been carried on in New Mexico during the past five years by Mr. Edgar B. Howard under the auspices of the Academy of Natural Sciences and the University Museum, Philadelphia, is now to be extended farther afield. When it was announced a few years ago that the stone implements of a type hitherto unknown in America, but now known as 'Folsom points', had been discovered near Folsom, New Mexico, by Prof. E. B. Renaud, of the University of Denver, a new orientation was given to the study of American archæology, more especially in the attitude towards alleged associations of artefacts with the bones of extinct or presumed early fauna. An antiquity for man in America greater than that generally admitted seemed a possibility. Mr. Howard's explorations in New Mexico, of which an account is to appear in the *Museum Journal* (Philadelphia), and especially his discoveries in a cave west of Carlsbad and in old lake beds near Clovis, New Mexico, at a depth of eight feet, of artefacts and traces of camp fires in association with the remains of extinct fauna—camels, wild horse, elephants—indicate that Folsom man had penetrated to the south-west in Pleistocene times, when the Wisconsin ice-sheet was waning, a period of climatic change tentatively fixed at 10,000 years ago. No contemporary human remains have been found. Mr. Howard is of the opinion that further evidence must be sought in Asia, and is now on his way, with the assistance of the Philadelphia Academy of Natural Sciences, to Russia, where he proposes to study the archæology of Siberia and hopes to enlist the co-operation of the Soviet authorities in further exploration. In the meantime, Dr. F. de Laguna, also on behalf of the Philadelphia Academy of Natural Sciences, has resumed her researches in Alaska—on this occasion in the Yukon Valley and with the object of tracking Folsom man on his way to the south-west.

Marriage Hygiene

A NEW quarterly journal, *Marriage Hygiene*, with a strong editorial board consisting, for the time being, of a number of prominent Indian medical men, has recently appeared from the *Times of India* Press, Bombay. Its objects are to secure for the science of conjugal hygiene a proper place in preventive medicine, to publish contributions which are believed to be necessary for scientific, sane sex teaching, and to bind its readers together into a brotherhood of clean thinkers and bold fighters against prejudice and taboos; and it is intended, by additions to the editorial board, that the journal should become an international one. The first number consists of