

appeal is made for contributions towards the capital cost of the Institute and the endowment of the Trust to enable admirers of Livingstone and Rhodes to give material expression of their interest in them and the future of the country with which they were connected. Contributions may be directed to any branch of Barclay's Bank or the Standard Bank of South Africa.

British School of Archæology at Athens, 1935-36

IN accordance with the new arrangement for the publication of the "Annual of the British School of Archæology at Athens", the formal matter, which includes the report of the director covering the activities of members of the School during the year, the accounts, and the summary of archæological operations in the Greek area of the eastern Mediterranean in the preceding year, will in future be issued separately to subscribers, the report for the session 1935-36 being the first occasion on which the decision of the Committee takes effect. In the chronicle of the session precedence is taken by a reference to the lamented and untimely death of the director, Mr. Humfrey Payne, on May 9, 1936. Mr. A. H. G. Megaw, who took charge of the School as acting director, left in the following July to take up his duties on appointment as director of antiquities in Cyprus. Owing to the temporary closing of the British School of Archæology at Rome, a number of its students worked in the School at Athens. Excavations by members of the School were carried on at Monasteri in the Perachora, at Siphnos and at Trapeza in eastern Crete. Miss W. Lamb excavated at Kusura in Anatolia. Supplementary excavations in the Heræum of Perachora, which had been planned by Mr. Payne, were postponed until the following season. The manuscript of the account of the excavation of this important site was left in an advanced state by the late director, and it is anticipated that publication of the first volume will not be long delayed. In the chief descriptive notes of the activities of the School reference is made to some interesting discoveries in Crete. Although no further investigation of the Roman villa was possible, surface finds east of the basilica indicate that this was an important residential quarter of the Roman town in the first and second century A.D.

Speleological Conference at Bristol

FURTHER particulars of the second annual conference of the British Speleological Association to be held at Bristol on July 23-26 next (see NATURE, May 29, p. 919) are now available in the advance programme which has been issued. Through the hospitality of the University of Bristol the conference and exhibition will be held in the Great Hall of the University. The exhibition will include contributions from nearly all the important caves in the world, as well as some unique illuminated transparent photographs. Probably the largest and most valuable collection of 'Blue John' will be exhibited. On the evening of July 24 an illustrated public lecture will be delivered by the Abbé Breuil on some aspects of the

French and Spanish caves. Among the lectures announced is a brief account by Mr. C. R. Hewer of some of the caves to be visited on the Continental tour on July 27-August 7 when members will have the opportunity of visiting caves not as a rule accessible to the public. At Nurnberg, after a visit to the Museum for Prehistory, the party will proceed to Teufelshöhle, Maximiliansgrotte, and other caves of archæological, geological and palæontological importance at Pottenstein, where also a mesolithic cave shelter has been especially excavated for the visit by the "Gaukulturamt". At Brno, Czechoslovakia, Prof. C. Absolon will conduct the party over the Museum, with its unique collection of archæological finds from the Moravian caves, which include remarkable examples of palæolithic plastic art; and in the afternoon of the same day the caves, which are the centre of the great mammoth hunters' culture of Moravia, will be visited. Passing through Vienna the party will proceed to the famous 'Drachenhöhle' from Mixnitz, the Lower Lurhöhle from Peggau and the Eisriesenwelt—ice cave from Werfen, the last place of call being Salzburg.

The Swiss Society of Natural Sciences

THE recent issue of the *Verhandlungen der Schweizerischen Naturforschenden Gesellschaft* contains an account of the annual meeting of the Society held at Solothurn in August 1936 and also reports of the work of the previous year. The object of the Society is to promote the study of all branches of natural science in Switzerland. Between the annual meetings for the presentation and discussion of papers, the work of the Society is carried on by a number of commissions. Some of these are concerned with the administration of endowments, while others undertake field work in various sciences. The latter are financed partly from members' subscriptions, but mainly from Government grants. Among the commissions performing work of national importance is the Geological Commission, which is engaged in the publication of a geological survey of Switzerland on scales of 1 : 25,000 and 1 : 200,000. In addition to the purely scientific commissions, there is a Commission for the Preservation of Nature, which is doing valuable work in preserving sites of scientific interest or scenic beauty, as well as in promoting legislation for the protection of forms of wild life which are in danger of extermination. Besides administering Government research grants, the Society also acts as the official representative of Switzerland on international scientific unions, and the volume under notice contains the reports of the Swiss delegations to a number of such unions.

THE presidential address at the annual meeting in 1936 was given by Dr. Karl Dändliker, who took as his subject, "Birth-Rate Decline and Surplus". He showed how, in spite of the excess of births over deaths, the population of many countries in Europe is bound to decrease before long. A paper was read by H. Brockmann on "Swiss Farm-Houses", in which two types of buildings were distinguished: one type

has evolved from the use, by primitive man, of caves as shelters, while the other has evolved from tree shelters. Other papers read before the general meeting were "Inheritance by Labile Genes", by A. Ernst; "The Sting of the Bee", by M. Roch; "Ontogenesis of the Bird as a Problem in Evolution", by A. Portmann. These papers are all printed in full. In addition, abstracts are given of some 150 more specialized papers, dealing with nearly all branches of science, which were presented to the sectional meetings of the Society.

Royal Cornwall Polytechnic Society

THE one hundred and third annual report of the Royal Cornwall Polytechnic Society, besides containing the usual list of members, financial statements and an account of the work of the Falmouth Observatory, has several contributions of general interest. One of these is by Miss R. Beckett, who, in a paper on "Public Library Service", traces the growth of public libraries due to the Library Acts of 1850, 1855 and 1919. The Act of 1850 limited the rate to be levied to $\frac{3}{4}d.$ in the £ and that of 1855 to $1d.$ These sums proved quite inadequate, but it was not until 1919 that the penny rate limitation was abolished. In practice to-day, the average expenditure is $1s. 4d.$ per head of population, though some authorities expend as much as $2s. 6d.$ In another contribution, Mr. S. Furze deals at length with the operations involved and the machinery used in tin dressing, while in a third, Mr. J. H. Rowe gives the early history of Hayle Foundry, which was founded by John Harvey (1730-1803) and developed by his son Henry Harvey (1775-1850). This foundry was the earliest in Cornwall, and became ultimately the most important engineering works in the west of England. The well-known engineer Arthur Woolf (1766-1837), the pioneer of the compound steam engine, was at one time superintendent of this works, and it was there that he built some of the finest Cornish pumping engines of the time. The history of the Royal Cornwall Polytechnic Society inevitably recalls the Fox family, and the report has a tribute to Mr. Wilson Lloyd Fox, who died on February 10, 1936. He gained one of the Society's prizes in 1860, became a member in 1865, served as president in 1922-24, and was secretary of the Committee of the Falmouth Observatory from 1877 until 1931.

Intelligence, Character-training and Civilization

A LUDWIG MOND LECTURE entitled "Intelligence and Civilization", delivered at the University of Manchester last October by Prof. G. H. Thomson, of the University of Edinburgh, has been published in the first issue of the new *Journal of the University of Manchester*. After a preliminary discussion of some aspects of recent researches in the field of intelligence measurements, Prof. Thomson proclaims his belief (which was also H. T. Buckle's) that the history of the advance of civilization has been the history of the conquest of the world by intelligence. He preaches the salvaging of civilization "through the cultivation by an education proper to each of

the intelligence of all". Of character-training he is profoundly distrustful. A clear vision of truth is, he assumes, to be attained solely through cultivation of the intelligence and "the schoolmaster's sole business is to lead his pupils to see truth clearly . . . and . . . that is the only character-training the school may lend itself to, if it is to refrain from serving party or class . . . but is to serve civilization". He does not think much of civilization's debt to the poets ("far more dangerous than scientists"), notwithstanding that he holds intelligence to be based on imagination, and he makes a point of registering disagreement with Earl Baldwin's hope, confided to the Congress of Universities of the Empire, that from those universities may presently come forth "poets who will inspire Europe and the world once more with a sense of unity and a sense of freedom".

The Utilization of Wood as Fuel for Motive Power

IN the *Bulletin* of the 'Société d'encouragement pour l'Industrie Nationale' of January is printed an abstract of a paper by R. Vaultrin on the utilization of wood as fuel for motive power. Towards the end of the Great War, the French Ministry of Inventions made experiments on carrying heavy loads between Paris and Rouen by motor-lorries provided with suitable gas generators using wood for fuel, but the results obtained were not good. In 1928, after a further rally with 'camions à gazogène', the problem was completely solved; but at that time the price of the wood fuel was too high to make it profitable. A notable rally was made in 1930 between Paris and Rome, crossing the Alps and the Apennines, and another was made through the Landes where resinous fuel was used and found suitable. Recent results for tourist vehicles gave 50 miles per hour consuming about 70 lb. of firewood, costing six francs for a sixty miles run. Heavy motor-lorries can run at 30 miles per hour, the cost for sixty miles being fifteen francs. In France, there is an annual over-production of thirteen million cubic yards of firewood. This would be sufficient for 60,000 motor-vehicles using gas generators. At the moment, the difficulty is to obtain, on the road, supplies of suitable wood with constant humidity. This double problem has been solved between Frankfurt and Cologne. In France there are already large stores on a 'national' road, and all the main routes on the east are being supplied with stores. The control of the humidity of the wood distributed is being studied.

Electric Furnaces

DURING last year the use of electricity for the melting and heat treatment of iron and steel in Great Britain considerably increased. There has been a revival in the demand for arc furnaces, a number of which, varying in capacity from 500 to 6,000 kilowatts, are being installed. In the *Electrical Review* of April, Mr. D. Campbell states that the furnaces ordered from a single manufacturing company during last year would consume about a 100 million electric units a year. The cost of the annual power bill for these furnaces alone would be about £200,000. A