

towns of North Bihar and Monghyr, especially Darbhanga, Muzaffarpur and Motihari. Outside the towns, the principal effects are broken and obliterated roads, the collapse of bridges, floods and great fissures in the ground, from which mud, sand and water have issued, covering fields and crops with a devastating slimy deposit. The central area contains more than 300 square miles under sugar-cane. Though much of this has been saved, nearly all the sugar-mills have been destroyed. The chief difficulties at present are the supply of drinking water and the prevention of epidemics in towns and villages.

Palestinian Remains at the British Museum

THE next special exhibition of prehistoric material at the British Museum will be opened on February 5 and will remain open for two or three months. Two cases at the head of the main staircase, in the Department of British and Mediæval Antiquities, will be devoted to a display of a typical series from stratified caves near Mount Carmel, where excavations have been carried out by the British School of Archæology in Jerusalem and the American School of Prehistoric Research, with Miss D. A. E. Garrod as field-director. Skeletal remains of palæolithic man will be shown (*Paleoanthropus palestinensis*), and a sequence of implements from an early phase of the Palæolithic to Mesolithic, the latter being known as Natufian. A special feature of the excavations is the blend of St. Acheul and Le Moustier elements for a period; and a long succession of Aurignac types gives place to the post-palæolithic with a different and peculiar fauna. The abundant yield is incidentally useful for its similarities and contrasts to the better-known European industries, and special interest is attached to the beginnings of agriculture in Palestine.

Velocity of Light

As was to be expected, the announcement which appeared in the press last summer (NATURE, 130, 25, July 2; 277, Aug. 20, 1932) to the effect that the latest experiments indicated a periodic variation in the velocity of light, has been construed in the sense that some seasonal instrumental error was at work. Science Service now issues an official confirmation of this view, given by the Mount Wilson authorities. The report adds that the best value for the velocity of light is now 299,774 km./sec. and that further analysis is only likely to change the last figure by one or two units. The present investigation of the velocity of light is being carried out by Pease and Pearson, who are continuing Michelson's work and using the well-known rotating mirror method. It will be remembered that when Michelson used long base lines between mountain peaks, he found that irregularities in atmospheric refraction—the astronomer's "bad seeing"—interfered with the definition of the reflected image. The base is now *in vacuo*, in a pipe line a mile in length. To obtain more accurate results, it would be necessary to build a more stable pipe line, use quartz mirrors and employ elaborate timing devices.

Projected Electric Railways in Palestine

IN the *Electrician* of January 5 a description is given of a projected railway system for Palestine radiating from Jerusalem. Four new lines will radiate from a terminus at Jerusalem located outside the city on the northern side and east of the Damascus Gate. Possibly recent economic developments in the country, the most important of which is the new harbour at Haifa on the Mediterranean, has tended to emphasise the isolated position of Jerusalem so far as railway facilities are concerned. The northern line is to be 67 miles long, starting from the Jerusalem terminus, going through the Jordan valley, where the line descends to 500 feet below the Mediterranean level, finally getting to Tul Keram Junction on the main Haifa-Cairo line. The eastern line (55 miles) would run from the terminus, crossing the River Jordan, passing through the Kalaat ez Zerka Station on the Hejaz railway to Ammam, the capital of Transjordan and the headquarters of the British Government's High Commissioner. The southern railway (50 miles) would run through Hebron to Beersheba. Finally, there would be a line (18 miles) from Wadi Fara on the northern line through Jericho to the potash works on the shore of the Dead Sea. It is proposed to build a power station and a reservoir in Transjordan and another on the eastern shore of the Dead Sea to provide the electric current for operating the four railways. The latter station would be necessary if an extension railway to the Red Sea should materialise. Some years ago this project was discussed, the terminals of the line being Haifa and the ancient port of Akaba on the Red Sea. This would place Jerusalem on a direct sea-to-sea railway from the Mediterranean to the Red Sea. Possibly it might revive the ancient and prosperous traffic route from the Red Sea to the Levant of the times of Solomon and the Romans.

Transmission of Power by High Tension Direct Current

AT the second World Power Conference held at Berlin in 1930, much consideration was given to international schemes for transmitting large amounts of power by high tension direct current. The most ambitious of these schemes was to transmit one million kilowatts from the western fiords of Norway at a pressure of 500 kilovolts across Sweden and Denmark to the industrial regions in Westphalia, Germany. The great advantage of utilising power from the western fiords is that a uniform output of power all the year round could be obtained. It was proposed that the line should pass through Göteborg and Copenhagen to Hamburg, small amounts of power being tapped off at the two former cities, but the great bulk being delivered to Hamburg for distribution in the German networks. In a paper read to the Institution of Electrical Engineers on January 18, H. Rissik discussed the engineering aspects of the problem. He pointed out that with the same overhead lines, much larger currents can be used with direct than with alternating currents and the difficulties of working are much less with the former than with the latter. On the other hand,

the methods of converting alternating current into high voltage direct current are still in the experimental stage, at least when dealing with power in bulk. Lord Kelvin was a great advocate for the transmission of electric power by direct current, and although most of the difficulties in working with alternating current have been overcome since his time, it is interesting to notice that several engineers still think that direct current will be used for transmission in the future.

Data of Social and Economic Problems

IN a recent number of *Planning* (16 Queen Anne's Gate, London, S.W.1) attention is directed to the lack of necessary data on many urgent social and economic problems. A civilisation has grown up under industrialism which calls for enormous resources of knowledge in order to operate it without constant and painful breakdowns. Yet we neither possess the required knowledge nor are we making at present any adequate effort to get it, although its provision offers no insuperable difficulties. Our whole attitude towards the question is still coloured by the prejudices and assumptions of a pre-scientific and pre-technical age. It has yet to be recognised that the same technique which has produced electricity, wireless, fertilisers and new breeds of plants and animals can, if suitably adapted, produce those social, political and economic inventions which we so desperately need.

WHILE the industrial executive in Great Britain and elsewhere has come to recognise that provision must continually be made for new patterns and new techniques, there is no corresponding awareness or equipment for checking and improving the performance of, say, the machinery of government, the health services or the handling of traffic. Immense problems such as the modern scourge of noise, of smoke and chemical pollution in air and water, of street accidents, of crime, of destruction of amenities and many others are allowed to grow up unchecked and almost unobserved. The problem is how to make effective the many demands for new knowledge which are at present frustrated because they do not promise profit to particular individuals or undertakings although they may involve great savings to the community. Obviously one solution would be a great expansion of State-aided research, but much more thought and inquiry would be needed before concluding that this is the only, or the best, solution.

A New Arctic Island

THE discovery of a new island in the arctic is now a rare event, but in the *Geographical Review* of January, Mr. V. Stefansson describes what is probably such an occurrence. In September 1931 a party of Eskimo, searching for whales north of Alaska, came to an island on which they went ashore in a position of approximately lat. $71^{\circ} 20' N.$, long. $145^{\circ} 30' W.$ This is about 85 miles north of Flaxman Island and due east of Point Barrow. The island was reported to be about half a mile long and of the same width and to rise to an altitude of about fifty feet. There was some vegetation but no drift-

wood. Mr. Stefansson vouches for the reliability of the Eskimo Takpuk who led the party and whose name has been given to the island. Further, he discounts the suggestion that the island was merely earth on floating ice. That part of the Beaufort Sea has been little explored though the nearest soundings, some twenty-five miles to the west, show deep water. The question arises as to the possibility of Takpuk Island being Keenan Land, reported in the 'seventies of last century and placed in various longitudes in about lat. $73^{\circ} N.$, but this seems more than doubtful. Photographs of Takpuk Island are reproduced with the article.

The Australian Geographer

THE format has been remodelled and the scope changed of the *Australian Geographer*, the periodical published by the Geographical Society of New South Wales. It is hoped now to publish it more often than once a year and to give special consideration to the work of Australian writers on the geography of the continent. A special feature will be the continuance in every issue of a bibliography of Australian geographical literature. This feature, which begins with the year 1926 in the current issue (No. 1, vol. 2), should prove of considerable value. Another valuable article is that by Dr. M. Holmes in the Australian geographical environment, which treats the subject in much detail.

Philosophy and Everyday Life

THE organ of the Philosophical Society of England, the *Philosopher*, enters on its twelfth year of publication under new editorship and in a new and attractive format. As is pointed out in the opening article, the special branches of science have found exponents capable of interpreting their many recent advances to the general reader, and it is the purpose of the *Philosopher* in a similar way to interpret current thought in philosophy and to indicate its contacts with the world of to-day. Thus in the issue before us there is an article on "Reason in Action" by Prof. John Macmurray, another on "Reflection and Common Sense" by Prof. A. E. Heath and another by Paul Painlevé, the distinguished French mathematician, philosopher and statesman who died towards the end of last year, on "Civilisation and Modern Science". Students of philosophy will perhaps turn more readily to the "Courses of Study", where notes are given on various aspects of the subject, with suggestions for further reading. There are also reviews and notices of recent books, a section on educational intelligence, a record of meetings of the Philosophical Society and so on. The journal has thus a double appeal, to the layman and to the student, and at the modest price of 6d. should have a wide circle of readers. Copies of the *Philosopher* can be obtained from the Honorary Secretary of the Philosophical Society, 13 Woodlands Road, London, S.W.13.

Physica

THE first number of the new Dutch periodical *Physica* (December 1933, pp. 96, published by Martinus Nijhoff, The Hague, 25 guilders yearly)