

of the Sibley College of Engineering. When he took charge the total attendances in all classes was about 60; at his death in 1903 the attendances were about 960. The teaching staff had grown from 7 to 43. Besides his work as a teacher, writer and experimentalist, Thurston served on various committees and was a member of numerous societies both at home and abroad. The gathering at Ithaca on October 25 will pay tribute to his memory, and will also discuss ways in which engineering may meet the crucial challenge of our rapidly changing world.

#### A National Atlas of Great Britain

THE report of the committee appointed by the British Association in 1938 to prepare a scheme for a projected National Atlas of Great Britain and Northern Ireland was presented to the Association at the Dundee meeting and contains provisional details of the format and contents of such an atlas. "The proposed atlas," the report runs, "aims at a strictly objective and scientific presentation of the natural conditions, natural resources and economic development of the land (and adjacent seas), of the history and pre-history of the country, and of the distributions, occupations, movement and social conditions of the population." To this very comprehensive programme the proviso must be added "in so far as they provide suitable material for cartographic exposition", since it is not intended that there shall be any accompanying text to the maps. Such a work necessarily involves the collaboration of scientific workers in very different fields, and six sections of the Association were represented on the reporting committee, which sat under the chairmanship of Prof. E. G. R. Taylor (Section E).

THE complete Atlas will be in two large folio volumes, each volume containing 60-70 plates. The number of maps will, of course, be many times greater than the number of plates, but the sheet size has been selected so as to show the whole of England and Wales at a single opening on the scale of one to a million, a scale which experience has shown to be appropriate for many types of general map. The maps are grouped under four general headings: physical geography, bio-geography, industry and commerce, and human geography. Under physical geography are included cartography, orography, geology (with geomorphology), climatology and hydrography. Under bio-geography the sub-headings are soil, vegetation, distribution of species, pre-history (of plants), land utilization, forestry and agriculture. Many of the maps will be of types not hitherto constructed, or at least not hitherto published for Great Britain. Such, for example, are maps dealing with health and disease, recreation and amenities, which fall within the human geography section, and maps of accessibility from and to the leading cities, in the section devoted to industry and commerce. For certain sections and sub-sections, the contents of individual maps are indicated in the report, the object being to ensure constructive criticism and co-operation from workers engaged in particular

fields of research. As the report states, the success of the enterprise "must depend on scientific workers and scientific bodies willing to undertake responsibility for the accuracy of maps within particular fields".

#### Contemporaries of the Mammoth

IN an article contributed to "Russia To-day Press Service" (Sept. 12, 1939) Prof. P. Kaptelev gives an account of his experiments with organisms contained in frozen soil from Siberia. A paper by Prof. Kaptelev on his discoveries was read before the Academy of Sciences of the U.S.S.R. during 1936 (see NATURE, 138, 714; 1936). The flora associated with the mammoth has been known for years from the contents of the food canal of frozen individuals, but it is astounding to learn that plants and animals contemporary with the mammoth have been brought to life after remaining in a state of suspended animation which at a low computation must have extended over twenty thousand years. The soil from which the organisms were obtained consisted of silt strata obtained in the galleries of mines in the taiga of Siberia at a depth of 131½ feet, far within the limit of the permanently frozen soil, for even in the hottest summer the thaw never penetrates deeper than seven to ten feet. In contemporary strata the explorers found the bones of mammoths, the woolly rhinoceros, bison, and musk-ox, indicating a period contemporary with the interglacial period which came between the last two Ice Ages (Riss-Würm period) or with the last Ice Age (Würm period). The soil samples were placed in sterilized containers in a sterilized atmosphere, and they eventually yielded living organisms which included several kinds of soil bacteria, including a distinctive nitrogen bacterium, fungi and water plants, the majority being closely related to present-day forms. From another sample of later geological date, taken at a depth of 14 feet, twenty different kinds of water-plants, mosses, filaments of fungi and a crustacean (entomostracan) were obtained, and placed in favourable laboratory conditions these organisms began to multiply rapidly. But this stratum is reckoned to have been only from one to three thousand years old!

#### Archæological Excavations in Northern Syria

MR. M. E. L. MALLOWAN'S account of his further excavations in Northern Syria in the report of the British School of Archæology in Iraq (Gertrude Bell Memorial) for the year ended June 30, 1939, again records a striking frequency in the occurrence of amulets of various kinds among the finds—a feature to which attention was directed in earlier reports. The report on Mr. Mallowan's work covers the fifth expedition to Northern Syria and the third consecutive season's excavations at Brak, one of the largest of the mounds in this part of Syria. The great mud-brick temple, which Mr. Mallowan has named "The Temple of a Thousand Eyes" on account of the enormous number of alabaster "eye idols" found in the foundations of the platform on which the temple is built, has so far produced the most