

News and Views

The Globular Corona

THE sensational and distorted press comments on the coronal photographs secured from the stratosphere at the total eclipse of the sun last June, to which reference was made in NATURE of August 21, p. 310, have now been followed by more reasoned statements about the photographs. They amount to this: the photographs show more clearly to the eye what the measurements of von Klüber (*Z. f. Astrophysik*, 3, 159; 1931) and others have already proved, namely, that the successive isophotes of the corona round the sun are nearly circular. Graff, Bergstrand and Ludendorff were early workers in the same field of study and they have shown the differences in the behaviour during the solar cycle of this more regular corona and the superposed streamers. That some essential difference exists in the nature of the two main constituents of the corona was shown by the difference in the polarization between the inner corona and the streamers noted by Newall so long ago as 1905 and referred to again in a letter by K. G. Zakharin which appears in this issue of NATURE (p. 586).

The Storstrøm Bridge

A SHORT history and description of the Storstrøm bridge connecting the Danish islands Falster and Masnedo, which was opened by King Christian X on September 26, appears in *The Times* of September 25. Masnedo was linked up with Zealand by the Masnedesund Bridge constructed in an earlier section of the bridge building programme initiated in 1933. The Storstrøm Bridge, which crosses an arm of the Great Belt, curving in a wide sweep of more than two miles, has been built for the Danish State Railways by the British firm, Messrs. Dorman Long and Co., Ltd., and completed seven weeks before the scheduled date. In its construction, the new 'chromador' steel, which has improved corrosion-resisting properties, has been used. The bridge has three navigable spans, the centre one 430 ft. in length and with about 80 ft. head-room, and forty-six shorter spans in the approaches. Tidal conditions, pack-ice and sea-scour were provided for by new and ingenious methods adopted in the building of the concrete and granite piers and in the erection of the steel girders. The bridge is described as being of a slender appearance but having a magnificence which can best be appreciated when the aluminium coloured steel is viewed in the morning sunshine. It provides a carriage way, a foot and cycle track, and a single line of railway on which trains can pass at a speed of 50 miles per hour. It completes the railway link between the Continent and Scandinavia for, by its opening, trains or cars can now run, via Warnemunde train-ferry, from Hook of Holland, Paris and Berlin, direct to Copenhagen, whence they can proceed by another train-ferry to Malmø, so that the Danish route now

compares favourably with that via Trelleborg-Sassnitz. It has the additional importance that it makes possible the extended use of modern streamlined 'lightning' trains in consequence of the longer journeys now undertaken.

Bimillenary of the Emperor Augustus

ON September 23, Signor Mussolini inaugurated the celebration of the bimillenary of the Emperor Augustus Cæsar, who was born on September 23 in the year B.C. 63, by declaring open the "Augustan Exhibition of Romanism". Great Britain was represented by delegates from the British Museum, the Society of Antiquaries of London, the Societies for the Promotion of Hellenic and Roman Studies, and the University of London. The assistance which had been given by Great Britain in the preparation for the exhibition was generously recognized by Prof. G. Quirino Giglioli, who has been responsible for its organization—the work of five years. Nor does this long period of preparation seem excessive, when the vastness of the field covered by the exhibition is taken into consideration. Not only do they illustrate every side of life and culture of the city of Rome itself as the centre of the Empire, but they also include reproductions of the most remarkable monuments Rome has left in other parts of the ancient world. Further, they cover the religions, the arts and the material culture of the many and varied peoples who came under the sway of Rome, as well as trace in a special section the rise and growth of Christianity from the birth of Christ down to the Edict of Constantine. In this aspect the exhibition has a double significance for the archaeologist and the historian. On one side it emphasizes an internal mobility of peoples and cultures, which at a momentous phase in the history of civilization brought about such an interchange of beliefs and ideas as that, for example, which left for the contemplation of later generations a characteristic emblem of the eastern Mithraic cult in north Britain below the Roman Wall. At the same time, from the other side, it demonstrates the solidarity of the Empire, as against the rest of the ancient world, which has set its seal on European peoples, the heirs of imperial culture, no less effectually than the more familiar contrast of East and West.

Racial History in the Arctic

DR. ALĚS HRDLIČKA, of the Smithsonian Institution, Washington, D.C., on his recent return from his ninth expedition of anthropological investigation in the arctic regions of North-West America, has issued through the Smithsonian Institution a preliminary report on the results of his season's work in the Aleutian Islands, in which he discusses the character and distribution of early racial types in the Far North. The investigations and excavations carried out by

Dr. Hrdlička in 1936 and 1937 have been directed more particularly to the study of the problem whether racial migration from Asia, in addition to the Bering Sea route, may have made use of the more southerly passage by the Aleutian Islands—a suggestion which on a general line of argument would appear to have much to support it, but for which until recently positive evidence has been regarded as inadequate. In the expedition of 1936, it may be remembered, evidence was obtained which was held to support Dr. Hrdlička's view. Skeletal material and a large quantity of archaeological material accruing from the expedition's excavations in 1937, and now awaiting further detailed examination in Washington, Dr. Hrdlička holds, confirm his previously formulated theories, and afford him a basis for the racial classification to which reference is made above. "The finds," he states, "make more probable than ever the hypothesis of a 'race nursery' in the Far North for the aboriginal population of the New World."

BRIEFLY, Dr. Hrdlička's preliminary conclusions are that the present-day Aleutians, a broad-headed people, who do not fall precisely into either an Indian or an Eskimo classification, were preceded by an oblong-headed race, who had a much longer occupancy. This race he regards as the same as that which he discovered in the deepest parts of his excavations on Kodiak Island in 1931-35; while a similar type has been found in the lower layers of a mound at the mouth of the Frazer River, British Columbia. There are indications that this stock may have spread so far south as California. The Aleuts cannot be regarded as descendants of this people, and may, in fact, represent a backward migration from Alaska towards Asia. Dr. Hrdlička is now prepared to recognize in the North-West, not one or two racial types, as previously held, but five distinct, though basically related strains, as follows: (1) the long- and high-headed Eskimo of the Seward Peninsula, Barrow, and eastward along the arctic coast to Labrador and Greenland; (2) the broad-headed and medium-vaulted Eskimo of the Bering Sea coast and along the interior rivers from the Yukon southward; (3) the Aleuts with broad heads and low-vaulted skulls; (4) the Alaskan Indians; (5) the oblong-headed pre-Aleuts, whose remains were found by the expedition in the exploration of the past season. The archaeological finds included a new stone industry belonging to this people.

"Minnesota Man"

FURTHER investigations by Prof. A. E. Jenks in the northern lake area of Minnesota, from which were obtained the skeletal remains described elsewhere in this issue of NATURE (see p. 596) have brought to light evidence of what would appear to be an extensive camping ground of early man. From a kitchen midden buried some three feet under a bog of grasses and marsh weeds in Itaska State Park, Prof. Jenks has excavated some two thousand knife-marked bones, with knives of stone and other implements of both stone and bone. The bone bed varies in

thickness up to about four feet five inches. Associated with the bones of bear, elk, caribou and other big game animals in the kitchen refuse are the remains of an extinct form of bison (*Bison occidentalis*), confirming the early character of the site and the early date of its occupation by man. Prof. Jenks states in *Science* of September 10 that of five stone artefacts recovered from the bone bed, three are flake implements with retouch, while two are chopping tools, chipped to rough parallel faces, and retouched on the cutting edges.

Roman Jerusalem

THE discovery of an interesting and important relic of the Roman occupation of Jerusalem is reported. The Department of Antiquities, it is stated by the correspondent of *The Times* in the issue of September 28, while conducting excavations in connexion with the plan of the municipality for clearing away buildings from the Damascus Gate, has brought to light a Roman moulded plinth ten feet high, of which the top was found at a depth of thirteen feet below the surface. The plinth consists of massive blocks of stone, which, it is said, recall the finest work of the Roman period. The site has been identified provisionally with the city gate beside the "Women's Towers", mentioned by Josephus. It is hoped that excavation will be carried further in the expectation that it will throw light on the much-discussed problem of the Third Wall of Jerusalem.

Brood Diseases of Bees Investigations

EARLIER in the present year an appeal was made to beekeepers and beekeeping associations to support financially the continuation of the research on brood diseases of bees at Rothamsted Experimental Station. This work had been carried on for three years by Dr. Tarr with funds half of which were provided by the Government and half by the British Beekeepers Associations. The results of the first three years' work were so promising that it was unanimously decided by the Bee Research Advisory Committee at Rothamsted to continue for a further period of three years if possible. The estimated cost is £550 per annum, of which the Agricultural Research Council has promised £300, if £250 per annum can be raised from other sources. As the result of the appeal a sum of £226 has been received for the current year, which leaves a balance of only £34 to be made up. For the two following years, there is only at present a guaranteed fund of £103 per annum.

THE work carried out up to the present has already cleared up many difficult points. Dr. Tarr has shown that European and American foul brood are two distinct diseases caused by different organisms. He has confirmed that American foul brood is due to a bacterium, *Bacillus larvæ*, and that its incidence is independent of the strength of the colony. European foul brood, on the other hand, is a disease of weak stocks and is probably caused by *Bacillus pluton*, in association with other organisms. He has also shown that a third condition known as 'addled brood' is