News and Views

An Extra-galactic Star Cluster

IT is reported by the New York correspondent of *The Times* that Dr. Harlow Shapley has announced the discovery of a great cluster of stars in the southern constellation Sculptor. The discovery was accidental, the cluster being photographed with the 60-inch reflector at the Harvard Southern Station at Mazelspoort, near Bloemfontein, South Africa, on a very clear night with a highly sensitive plate. If the median absolute magnitude of the stars photographed be assumed to be $-1{\cdot}5$, the apparent magnitude being about $+18$, it follows that the distance of the cluster is about 250,000 light-years. This places it well beyond the limits of our galactic system, the distance being more than double that of the Magellanic Clouds, and adds another to the known systems that are relatively near to our galactic system. The angular diameter of the cluster is greater than 1° and the linear diameter is estimated to be about 6,500 light-years, which indicates a size comparable with the Small Magellanic Cloud. The cluster is oval-shaped, unlike the clusters in our galactic system, which are globular. It is stated that there are about 10,000 stars in the cluster between the brightest stars and the dimmest that have yet been counted. The Magellanic Clouds are rich in stars of very high luminosity. The Sculptor cluster would undoubtedly have been discovered earlier, if it had contained such stars. It is probable that, when further photographs are available, Cepheid variables will be discovered in it and the study of their light variations will enable a more accurate determination of the distance of the cluster to be made.

Bequests for Research in Marine Biology

MR. EDWARD THOMAS BROWNE, a governor of the Marine Biological Association, who died on December 10, 1937, was for many years the leading authority in Great Britain on medusæ and other cœlenterates. Under his will, a number of valuable bequests are made to different bodies for the benefit of scientific research. The residue of his estate, estimated to amount to some £50,000, goes to the Royal Society to form a fund for the promotion of marine expeditions or individual research on marine biology. In addition, £6,725, together with scientific books, instruments and apparatus, are left to the Marine Biological Association for special purposes in connexion with the Plymouth Laboratory, £15,000 to Queen's College, Oxford, for a research fellowship and a scholarship in biology, and £5,000 to University College, London, for a postgraduate research studentship in zoology, in memory of his wife. After graduating at Oxford, Mr. Browne took up the serious study of zoology under the late Prof. W. F. R. Weldon at University College, London, in 1891, and remained at the College as a research worker until 1909. His summers were spent at different marine laboratories, Port Erin, Plymouth, Millport and at other places suitable for his work, including Valencia, Falmouth and the Scilly Isles. A monograph on the British medusæ is nearly completed, and provision is made in his will for its publication. He examined and reported on the medusæ from many foreign collections, especially from expeditions, including those from the Maldive and Laccadive Archipelago, the Gulf of Manaar, the Indian Ocean, the Suez Canal, the Scottish Antarctic Expedition, the British National Antarctic Expedition, the Falkland Islands, Norway and Spitsbergen. Browne was a very thorough and careful worker, with a complete knowledge of the literature of the groups in which he specialized. He gave great assistance both financially and, as a member of their respective councils, in the administration of the scientific societies in which he was interested, including the Royal Microscopical Society and the Quekett Club.

Soviet Awards for North Polar Expedition

ON p. 629 of this issue we print an account of the preliminary scientific results obtained by the Russian men of science who occupied the drifting north polar station. The Riga correspondent of *The Times* states that the following awards have been made to members of the expedition: M. Ivan Papanin, already a 'Hero of the Soviet Union' and a member of the Order of Lenin, has received the second class of that order and a present of 30,000 roubles, and has been appointed first deputy chief of arctic navigation (of which Prof. Otto Schmidt is chief). MM. Krenkel, Shirshoff and Fedoroff have been decorated with the Order of Lenin, awarded the title of 'Hero of the Soviet Union', and also received 30,000 roubles each. The captains of the *Taimyr*, *Murman* and *Murmanets*, and M. Ostaltseff, who conducted the relief expedition on board the *Taimyr*, and the airman, M. Vlasoff, have been decorated with the Order of Lenin and received 10,000 roubles each; and 118 others who took part in organizing the expedition to the North Pole and the rescue of the ice-floe party have been awarded various other decorations and sums of money.

Bronze Age Cairns in Glamorganshire

TWO cairns of the bronze age, adjoining the village of Coity, near Bridgend, Glamorganshire, excavated by Sir Cyril Fox, director of the National Museum of Wales, and Lady Fox have made notable additions to the records of British archæology. The Simondston Cairn affords evidence of the earliest known use of coal as fuel in the British Isles. In the second, the Pond Cairn, was found a pit containing the remains of vegetation and grains of wheat and barley, believed to be the first food grains of the bronze age

recorded in southern Britain. The excavations were described before the Society of Antiquaries of London by Sir Cyril Fox on March 31. The Simondston Cairn is of the normal highland Early Bronze Age type and contains burials of two adults and a child, dating from about 1600 B.C. In the southern rim of the cairn were five cremation burials of about a generation later. It was in one of these that the traces of coal were identified. The nearest outcrop of coal is about a mile and a half away. The second cairn, Pond Cairn, lies half a mile away from Simondston and is on a lower level. It is of a very unusual type both as regards its structure and the ritual acts involved in the construction. Near the centre was a rock-cut pit, probably dedicatory, which was filled with stones and contained the scattered burnt bones of a child. The primary burial was an urn of about 1300 B.C. which was covered with a heap of stones and a vertical-sided turf stack. A basin with a projection, phallic in plan, and lined with charcoal, fronted the urn. Around the turf stack was a continuous cairn ring, sixty feet in diameter, with an inner wall face and outer kerb. The space between the ring and the stack was scattered over with charcoal, and had been trodden hard, presumably in some ceremonial movement. Later the inner face of the ring was broken and the pit, to which reference is made above, was dug. It was covered with a pile of stones, linking the ring with the stack. The Pond Cairn is comparable with examples in Devon. With the secondary deposits at Simondston it probably represents an intrusion across the Severn Sea into the Glamorgan plain.

Roman Dorchester

RESUMED excavation on behalf of the Dorset Archæological Society on the site at Colliton Park, Dorchester, which has been purchased by the County Council for the erection of a shire hall, has already produced several discoveries (*The Times*, March 3). It will be remembered that last year, when excavation began, a large Roman town house was discovered belonging to the Roman city of Durnovaria which underlies the modern town. This has been completely excavated and is to be preserved intact by the County Council. Trial trenches have now revealed that four important Roman buildings underlie the area upon which the shire hall is to be erected. These it is hoped to examine. A well-made path of cobble flints leading to the door of the house has been brought to light. It overlies an earlier wooden cookhouse, furnished with an oven. A large pit was also found. This was circular in plan and lined with blocks of stone. It is fourteen feet in diameter and sixteen feet deep. A passage to the west leads to the Roman town wall. Excavations will be continued for a further period of at least three months.

Jungfraujoch Research Party

AT the end of this month Mr. G. Seligman, author of "Snow Structure and Ski Fields", will take a party of scientific workers to the Jungfraujoch Research Institute in Switzerland to undertake scientific research work on glaciers. This will be the first British expedition ever to spend its whole time studying glaciological problems, and it will form a continuation of Mr. Seligman's previous researches on the nature of snow. The party will spend five months at the Institute, at a height of more than 11,000 feet, and will consist of: Mr. T. P. Hughes, of the Physical-Chemical Laboratory, Cambridge—physicist; Mr. M. F. Perutz, of the Crystallographic Laboratory, Cambridge—crystallographer; Mr. A. E. Benfield, of the Department of Geodesy and Geophysics, Cambridge, and Mr. E. A. Ferguson, of the Department of Geography, Cambridge—assistants. The chief problem to be investigated will be the transition of firn into glacier ice, but other problems, particularly those which may have some bearing on the main question, will be investigated, notably the movement of glaciers, the formation of ice-bands and the connexion, if any, between those in the névé regions and those near the snout of the glacier. In addition, Mr. Hughes will carry out certain experiments on the friction of solid bodies on ice, in connexion with his work at the Physical-Chemical Laboratory, Cambridge. Mr. Seligman has been granted a Leverhulme Research Fellowship for the purpose of this research, and the expedition is also supported by the Royal Geographical Society, the Ski Club of Great Britain and the Alpine Ski Club.

Changing Conceptions of Education

AT a public meeting of the Derbyshire County Association of the National Union of Teachers on March 26, Mr. A. E. Henshall, education secretary of the Union, spoke on present-day teachers' aims and attitudes as contrasted with those of their predecessors. The attitudes established by the notorious payment-by-results system persisted long after its abolition, but to-day there is fairly general acceptance of the view that the teacher is concerned before everything else with the welfare of the individual child, considered as a person destined in due course to contribute to the welfare of the community as a citizen of a democratic State. It follows, at least in theory, that teachers of children in all stages in every kind of school—infants, junior, senior, central, secondary—are united in a single task and owe it to themselves and their charges that they should co-operate as fellow workers in a unitary service. To promote such co-operation by providing convenient occasions for getting together and comparing notes is an important function of the local associations of the National Union. Mr. Henshall stressed the pioneer role of the new senior schools and warned their teachers against sacrificing their comparative freedom in a misguided effort to rival the secondary schools. With equal emphasis he insisted on the importance of the junior schools, the teachers of which should be regarded as having a status not inferior to that of senior school teachers.

Social Services of the League of Nations

IN an article entitled "The Non-Political Value of the League" contributed to the *Quarterly Review* for