Research Items.

THE OLDEST-DATED SEAL CYLINDERS.—M. Leon Legrain, in the March issue of the *Museum Journal*, claims for the University Museum, Philadelphia, the possession of the oldest-dated cylinder seal, brought from Baghdad in 1890, which belonged to Basha-Enzu, probably the first king of the IVth Kish dynasty, about 2990 B.C. It therefore antedates the famous buffalo seal of Sargani of Akkad, and pushes back toward the third millenium B.C. a standard of art formerly known as the Gudea style. The engraving is of special interest from the point of view of Babylonian ritual. The museum also prides itself on possessing the oldest Cassite royal seal cylinder so far known, bearing the earliest contemporary record of the war god Shugamuna. It is inscribed with the name of the son of King Karaindash, and may be dated about 1540 B.C.

HONEY THAT DROVE MEN MAD.—In the September issue of *Discovery*, Prof. W. R. Halliday, with the help of his colleague, Prof. McLean Thompson, has cleared up a difficulty unsolved by editors of Xenophon's "Anabasis." The historian describes how the retreating Greeks, when they arrived near Trebizond, ate some honey, with effects ranging from intoxication to insensibility. Some authorities have denied that poisonous honey was found in Pontus, but the writers now point out that there is no evidence to show that the breed of bees in Pontus, or the general climatic condition, was responsible for this poisonous honey. When honey is produced in excess, and the floral parts fail to develop, there results an accumulation of by-products in which toxins abound. When the competition for nectar pollen is intense many insects develop a biting habit, piercing the tissues of plants in search of short-cuts to food supply, and this habit results in the formation of poisoned honey. The observation of Pliny that honey was poisonous in some seasons and not in others is thus proved to be accurate, and can be explained on scientific grounds.

THE ROCKS OF MOUNT EVEREST.—In the *Geographical Journal* for September, Dr. A. M. Heron has a note on a small collection of rock specimens made at heights between 23,000 ft. and 27,000 ft. by the climbers on the recent expedition. These specimens show Mount Everest to be a pile of altered sedimentary rocks—shales and limestones—converted into banded hornfels, finely foliated calc-silicate schists, and crystalline limestones. They confirm the views reached by Dr. Heron last year by examination of moraine material from the northern spurs, and by inspection of the mountain by telescope from the Rongbuk valley. From 21,000 ft. to 27,000 ft., Mount Everest appears to be built of these dark hornfels and schists, with occasional bands of white limestone and veins of quartz and muscovite granite. From 27,000 to 27,500 ft. extends an almost horizontal belt of schorl muscovite granite, above which are black schists. Dr. Heron thinks that the age of the rocks may perhaps be assumed, for the present, to be Jurassic or Trias.

WIND-SPEED FROM SEA AND LAND.—The Meteorological Office has issued, as Professional Notes No. 28, a comparison of the anemometer records for Shoeburyness and the Maplin lighthouse, by Messrs. N. K. Johnson and S. N. Sen. The wind-speed in each case is recorded by a Dines pressure tube anemometer. For wind direction Shoeburyness has been used throughout, the Maplin direction recorder being out of order. The wind-speed observations are only available for about ten months in 1919, no observations being to hand from Maplin for the comparison from June 12 to September 1. Maplin lighthouse is five miles from the coast, and is situated twelve miles east-north-east of Shoeburyness. The head of the anemometer at Shoeburyness is carried above the top of a steel girder tower to a height of sixty feet above the surrounding buildings and ninety feet above ground, but there is an avenue of trees about seventy feet high running parallel to the coast at a distance of 150 yards on the landward side of the anemometer. At Maplin the head of the anemometer is about five feet above the apex of the roof of the lighthouse, on the western side, being fifty feet above sea-level. Shoeburyness is said to have a slight predominance of light winds, and at Maplin lighthouse strong winds are decidedly more frequent; the latter is explained by the suggestion that the increased friction over land as compared with the sea causes the air to pile up over the land. This difference of pressure, it is said, must tend to reduce the speed of the surface wind as it approaches the shore-line. There is good evidence of the land and sea-breeze. The height of the head of the anemometer at Maplin seems scarcely sufficient to insure that it is clear from an upward rush of air caused by the obstruction of the lighthouse.

METALLURGICAL RESEARCH.—Volume 16 of the Collected Researches of the National Physical Laboratory has recently been published. It is predominantly of a metallurgical character, although certain papers dealing with engineering subjects are contained therein. The twenty-one papers which it contains are all reprints of papers published by members of the staff in various scientific and technological journals during the years 1919 and 1920. Fourteen of the papers are definitely metallurgical, and a considerable number of these relate to aluminium and its alloys, which have been intensively studied during the last few years, under the general superintendence of Dr. Rosenhain, the head of the department. These investigations are of a very valuable nature, and have contributed in no small degree to the continually extending use of aluminium alloys, not only in aviation, but also in general engineering. Of the papers dealing with iron, attention may be directed to that published by Dr. and Mrs. Hanson on the constitution of nickel iron alloys. The investigations of these authors on this series of alloys have finally enabled the general nature of the equilibrium diagram to be settled once and for all, although they are careful to point out that no very high degree of accuracy can well be claimed. It is interesting to notice that the general result of their researches is to establish firmly the late M. Osmond's hypothesis of the constitution of these alloys, particularly in the range from 0-30 per cent. of nickel. The importance of keeping down the impurities to a minimum is clearly seen in this work, otherwise a true equilibrium is not established. Attention may also be directed to the paper by Dr. Haughton on the study of thermal E.M.F. as an aid in the investigation of the constitution of alloy systems and on the measurement of the electrical conductivity of metals and alloys at high temperatures. The volume contains a paper of the first importance by Dr. Stanton, D. Marshall, and C. N. Bryant on the conditions at the boundary of a fluid in turbulent motion, and two papers by Mr. Baker, the superintendent of the William Froude National Tank. The high character of the series is well maintained in the present volume.