

papers, followed by short communications, book reviews, notices and lists of books and papers received.

Forum

A NEW educational journal has recently been launched with the view of discussing new trends in education with the appropriate title of *Forum*, and under the joint editorship of two lecturers in education at the University of Leicester, R. Pedley and B. Simon. Particularly concerned with the efforts to abolish the tripartite system of education in England and Wales, the first issue contains details of the present stage of the London plan to reorganize its secondary education in a system of comprehensive schools. There is also an account of the early stages of the Leicestershire experiment to eliminate the 'eleven-plus' examination, without bringing all children within a single comprehensive school. These will be followed in future issues by articles describing changes in other areas of Britain where some form of comprehensive education is taking place. The journal is also concerned with the efforts now being made in many junior schools to modify rigid streaming and with new developments in the secondary modern schools. There is also a symposium on "Science Teaching in the Nuclear Age" and an article by Dr. Robin Pedley assessing the educational programmes of the political parties. Provided that future issues of the journal will remain as free from political bias as the first, *Forum* should provide a valuable means of communicating new thoughts and developments in the realm of secondary education. Whether this courageous experiment can survive at its present price (3s. for single issues or 8s. 6d. for three issues in one year) must be a cause for concern. The journal is published from 71 Clarendon Park Road, Leicester.

Science in Six American States

A REPORT recently issued by the U.S. National Science Foundation, entitled "Scientific Activities in Six State Governments", summarizes the findings of a survey conducted in 1954 to determine expenditure and man-power involved in scientific activities in California, Connecticut, New Mexico, New York, North Carolina and Wisconsin. The study covered only State-supported activities, including research and development, collection of data, dissemination of scientific information, training of scientific man-power, and testing and standardization. Of the total expenditure of 68.9 million dollars reported, 57 million dollars were spent on research and development, and of the total 4,335 man-years, 3,831 were similarly devoted. Scientific activities in State universities and agricultural experimental stations accounted for just less than 70 per cent of the totals in both dollars and man-years. The proportion devoted to research and development was similar in all six States, and health, education, welfare, research development and public works accounted for 80 per cent of both funds and man-years. In all six States, the business, labour and vocational licensing agencies and the State universities tended to rely more heavily on Federal funds for their programmes of scientific activity than did other groups of agencies, and this is attributed directly to the high level of Federal participation in the employment security functions of State governments. Some reference is made to the character of State organization in the conduct of research and development, to interdepartmental

machinery for co-ordinating programmes, as well as to the inter-State and Federal influence of such co-ordination.

Birds and Mammals of Canada

FOLLOWING many requests from visitors to the Museum, the Department of Northern Affairs and National Resources of the National Museum of Canada has published two attractive booklets describing many of the native birds and mammals. The first ("Quelques Oiseaux du Canada." Pp. 48. (14 planches.) Ottawa: Queen's Printer, 1957. 35 cents), written in French by W. E. Godfrey, describes the typical characteristics of a bird, the distribution and numbers of birds throughout Canada, song, territory and breeding cycles, migration routes, food and the relation of birds to man. This is supported by details of some of the better-known and less well-known birds of Canada. The second ("Canadian Mammals." Pp. 81. Ottawa: Queen's Printer, 1958. 50 cents), written in English by A. W. Cameron, describes most of the bigger mammals such as the harp seal, the finback, white whale and blackfish, as well as the smaller mammals like the cinereous shrew and the star-nosed mole. Each account includes details of the anatomy, ecology and breeding behaviours of the mammal as well as a clear and attractive black-and-white drawing by John Crosby. The birds have been similarly illustrated by the same artist.

Coastal Erosion

ONE of the principal preoccupations of students of coastal erosion is the way in which beach material moves under the influence of waves and currents. Until recently, it has not been possible to obtain direct evidence. In an article in the *Geographical Journal* (124, part 2, 210; June 1958) a method of marking pebbles with the radioactive isotope barium-140 - lanthanum-140 is described. It is possible, by searching the sea bed and beach with Geiger counters, to trace the movement of the marked pebbles. This has been done at Scolt Head, and the present paper, by C. Kidson, A. P. Carr and D. B. Smith, gives an account of its application to Orford Ness, the shingle spit at the mouth of the River Ore in Suffolk. During a period of six weeks a large number of contacts was obtained, and it was shown that beach material moves along shore under almost all conditions and in more than one direction. The direction of movement is principally determined by the winds prevailing at the time, and the general direction of longshore drift is that developed under the influence of the dominant wind. It was also shown that river mouths, even where flood and ebb tides are strong, do not form barriers to the movement of beach material.

Ga'actic Rotation

MORE than twenty years ago Plaskett and Pearce gave an authoritative discussion of the rotation of the galactic system, using material referring mostly to the northern section of the Milky Way and to distances less than one kiloparsec. During the past six years the lack of observations from the southern hemisphere has been remedied at the Radcliffe Observatory, Pretoria, where 350 velocities of early-type stars have been obtained. A new analysis of galactic rotation has been made by M. W. Feast and A. D. Thackeray, and their results have now been published (*Monthly*