there at the beginning of the next academic year. Dr. William S. Foster, now instructor in psychology in Cornell University, has been made assistant professor of education.

DISCUSSION AND CORRESPONDENCE

THE ORIGIN OF PACIFIC ISLAND FAUNAS

To the Editor of Science: In the current number of Science (April 14) I read with interest the abstract of a paper by Dr. Pilsbry on the land shells of the Pacific islands as a guide to former geographic conditions. The author rejects "the hypothesis that Pacific snails reached the islands by oversea drift" because it "leaves the absence of higher snails unexplained."

It is perhaps dangerous to criticize an argument from an abstract, but as this point has been cited in other cases where I know it involved a fallacy, I venture to suggest that Doctor Pilsbry may also have overlooked the fact that the older a given group is the longer time there has been for the chances of oversea dispersal, hence the greater the probability of its reaching the more remote islands. Obviously a group which has not become dominant until the later Tertiary has but a very small chance of having reached remote islands as compared with a group that was dominant during the Mesozoic or earlier. Certain features in the Mesozoic and early Tertiary climates would tend to increase greatly the chances of oversea transport, and a third explanation might be cited in the differences of habitat which would tend to facilitate the drift dispersal of some types more than others. That the higher types should be found in the larger islands and those nearer to the continental platforms is quite to be expected; and by the law of chances, where only a limited number of primary stocks of the more ancient groups have reached the more distant islands, one ought not to expect to find any of the groups of comparatively recent dominance.

With many if not most groups of land invertebrates, as with the land vertebrates, the evolution and dispersal of the modern dominant fauna took place during the Tertiary, and much of it I suspect rather late in the Tertiary. But, as also with vertebrates, the wide oceanic dispersal of the older or lower groups may be due more to their greater facilities for dispersal than to their greater antiquity.

W. D. Matthew

BELGIAN HARE, A MISLEADING MISNOMER

In a paper entitled "Anatomical Adaptations in the Thoracic Limbs of the California Pocket Gopher and Other Rodents,"[1] Charles Daniel Holliger has identified the so-called Belgian hare as *Lepus europaeus* (p. 449). At various places in the text and particularly in the last paragraph of the summary (p. 489) he comes to the conclusion that "domestication reduces specialization" and that "the typical cursorial modifications [of the Jack rabbit] have either disappeared or have been much reduced in the Belgian hare."

As a matter of fact the "Belgian hare" is a domestic variety of the European rabbit and the striking differences observed by Holliger are due to inherent generic differences, the Jack rabbit belonging to the genus *Lepus* and the European rabbit and with it the Belgian hare belonging to the rather conspicuously different genus *Oryctolagus*.[2] Or to put it the other way around, the striking differences observed by Holliger (see especially table p. 487) are part of those on which the genera *Lepus* and *Oryctolagus* are founded.

M. W. Lyon, Jr.

George Washington University

THE VAPOR PRESSURE OF SOLUTIONS

In Science of January 14 last Arthur Tabor Jones describes an apparatus for observing the change in the volume of solutions in the presence of the solvent owing to the difference in the vapor pressures. He could not determine the rate of change owing to the roughness of the bell jar. The following apparatus has

[1] *Univ. Calif. Publ.*, Vol. 13, pp. 447–497, March 7, 1916.

[2] See Lyon, *Smiths. Miscell. Coll.*, Vol. 45, pp. 323, 406, pl. 98, June 15, 1904; and Miller, Cat. Museum West. Europe Brit. Mus., p. 485, November 23, 1912.

been used by me and has proved very satisfactory.

In a foot-cylinder with a ground top is placed a smaller graduated cylinder containing the solution. The larger cylinder contains sufficient solvent to reach nearly to the top of the smaller one. The system is enclosed by a ground-glass vaselined plate covering the outer cylinder. Gradually the volume of the solution increases and the change in volume can be accurately followed and recorded.

In an experiment which lasted two months the total change in a nearly saturated salt solution was from 5.8 c.c. to 6.6 c.c., or nearly 14 per cent. This is to be repeated for verification, and other solutions of various solvents and solutes studied.

JAMES H. RANSOM

PURDUE UNIVERSITY,
March 25, 1916

SCIENTIFIC BOOKS

Engineering as a Career. A series of papers by eminent engineers, edited by F. H. NEWELL and C. E. DRAYER.

This book of 214 pages is made up of selections from the writings of different engineers so chosen as to embrace a broad field of practise. It is a mosaic presenting attractive fragments from the work of active leaders in steel-making, in manufacturing, in marine engineering, in railroad operation and maintenance, in municipal administration, in industrial management, in architecture, in mining and metallurgical work, and in other equally interesting and important lines of activity. The book opens with a general discussion of the engineer and his profession by Mr. Albert J. Himes. Mr. Worcester R. Warner speaks especially from the standpoint of the mechanical engineer, Mr. A. W. Johnston from that of the railway engineer, and Mr. Chester W. Larner from that of the hydraulic engineer. Altogether twenty-two selections are presented. They make an impressive picture drawn by men of experience, concerning the opportunities offered to and the attributes of character required by one who seeks a career as an engineer.

The book will interest parents, ambitious for the success of their growing sons, who are approaching the question as to whether their sons shall go to college, and if so, whether they shall seek to become engineers; it will interest multitudes of high-school boys, who are wavering between the call of business and that of the technical or professional school; and it will interest engineers who enjoy any well-considered formulated statement which seeks to set forth broad views of the engineer's problem and of the place which he must assume in society. But it is especially for the boy and for the parents of boys.

The editing has been a labor of love, the work having been done by Mr. C. E. Drayer, secretary and later president of the Cleveland Engineering Society, and by Professor F. H. Newell, head of the department of civil engineering of the University of Illinois, who for twenty-five years served the government in an engineering capacity, principally as chief engineer and later as director of the United States Reclamation Service which has been responsible for the building of great reservoirs and irrigation canals throughout the arid west.

W. F. M. GOSS

UNIVERSITY OF ILLINOIS

The Rare Earths. By S. I. LEVY, B.A. (Cantab.), B.Sc. (Lond.), A.I.C., Late Hutchinson Research Student of St. John's College, Cambridge. Longmans, Green and Company. With illustrations. Pp. 359. Net, $3.00.

This is the first book published in English that attempts to give a fairly comprehensive account of the rare-earth group, and the magnitude of the task has resulted in a volume of considerable size.

An introduction written by Sir William Crookes, himself a master in this field of research, does much at the outset to give the book standing.

The work is divided into three parts: I. Occurrence of the Rare Earths; II. Chemistry of the Elements; III. Technology of the Elements. The author has included zirconium and titanium among the elements treated, because of their occurrence in rare-earth min-