THE Shippee-Johnson Peruvian Expedition, which sailed from New York on December 6, 1930, to carry out, with the endorsement of the American Geographical Society, a program of aerial mapping and other photographic work from the air in various parts of Peru, returned on September 7. In spite of numerous delays occasioned by the unstable conditions in Peru the expedition was able to accomplish even more than had been planned in its tentative program. In addition to the mapping, from elevations of over 25,000 feet, of the deep valley of the Colca River some seventy miles north of Arequipa—the primary object of the expedition—a land party spent two weeks in the valley studying its people, the history of the little-known agricultural communities of the valley floor, their methods of agriculture, etc. Archeologists as well as geographers will be interested to know that the expedition mapped the whole of the Chimú Valley and the ruins of Pachacamac and discovered and photographed, a short distance north of Chimbote, the remains of what appears to be a great defensive wall believed by Peruvian archeologists to be a part of the Chimú fortifications against the Inca invaders. Besides the aerial mapping, hundreds of aerial photographs were taken and a large amount of motion picture film exposed throughout the coastal region of Peru and the western border of the Andes. Several flights from Lima over the western range of the Andes to Huancayo resulted in a series of remarkable photographs of much geological and physiographic interest. A report on the work of the expedition will appear in a forthcoming number of the *Geographical Review*.

THE *Pelican*, a ninety-foot motor vessel of the U. S. Fisheries Service, loaned to the International Passamaquoddy Fisheries Commission by the United States Government, has just arrived in St. Andrews. Oceanographic equipment will be installed there and it is expected that within a few days active field work will begin. A second vessel, the *Edward E. Prince*, loaned to the commission by the Biological Board of Canada, has already been outfitted. The *Pelican* was constructed during the past year at Newport News, Virginia, for the U. S. Fisheries Service at Boothbay Harbor, Maine. The captain, George Greenleaf, has had considerable experience in oceanographic work, having formerly been associated with Dr. Fish in investigations for several years in the Gulf of Maine and for two years in Lake Erie, where a cooperative survey was carried on in 1929 and 1930. For the remainder of the summer season the two vessels will base at the Atlantic Biological Station, where headquarters for the commission have been established.

A LOAN exhibition of modern British optical instruments took place in the Science Museum, South Kensington, England, at the time of the British Association centenary meeting, and apparatus was loaned by a number of the leading manufacturers in Great Britain. The display will be on view up to the end of October in the optical instrument gallery, and popular demonstrations will take place at intervals. About 100 exhibits have been provisionally selected, including binoculars, rangefinders, photographic and microscopic objectives, projection-microscopes and surveying instruments. Aerial cameras, microphotometers, spectrographs and a cinema projector are among the developments of optical technique to be illustrated, and a strain-viewer will demonstrate the differences and flaws to be observed in various everyday objects of glass.

PRELIMINARY plans for a new entomology building to be built at a cost of $150,000 for the University of California Experiment Station at Riverside were virtually brought to completion, following a recent conference of the director, Dr. L. D. Batchelor, members of the staff and R. A. Weaver, of the department of buildings and grounds at Berkeley. The new building will be L shaped in floor plan, 100 feet on the longest side and 70 on the other. The major part of the structure will be two stories in height with a basement and attic. There will probably be a greenhouse in the attic and rooms for testing large power spray rigs in the basement. Other facilities included in the plans are rooms for fumigation experiments, spraying investigations, taxonomical and physiological studies, etc. Several of the rooms will be equipped for carrying on experiments requiring controlled environment with constant temperature and humidity. The site selected for the new building is a short distance northeast of the main building of the experiment station, close to the recently completed insectary, the facilities of which it will supplement.

DISCUSSION

A NEW MATHEMATICAL REVIEW

FOR the first time in the history of mathematics there was inaugurated in April of the current year a monthly periodical exclusively devoted to the prompt review of mathematical publications or to the preliminary announcements of results which are expected to be published later *in extenso* in the technical journals. It appears under the heading *Zentralblatt für Mathematik und ihre Grenzgebiete*, and the reviews include, besides pure mathematics, such subjects bor-

dering thereon as theoretical physics, astrophysics and geophysics. The editor-in-chief is O. Neugebauer, of Göttingen, who is well known as a mathematical historian, and the publisher is Julius Springer, Berlin.

Judging from the first five numbers, which cover 384 pages, the reviews are unusually reliable and the publication promises to be very useful to those who try to keep in touch with the latest developments in the fields concerned. While it covers to a large extent the same field as has been covered acceptably for more than half a century by the "Jahrbuch über die Fortschritte der Mathematik" its more prompt and more frequent appearance tend to make it a welcome supplement thereto. It seems to have exercised already a wholesome influence on this annual since the parts of the latter have recently appeared much more promptly than theretofore.

In addition to these two reviews, which are published in Germany, the mathematical public has had the advantage since 1893 of another very useful periodical devoted to reports on recent publications in its field and appearing in various countries. This periodical is published under the auspices of the Mathematical Society of Amsterdam and appears under the title *Revue Semestrielle des Publications Mathématiques*. A very useful supplement to this periodical appears in the form of supplementary volumes each covering a period of five years. The main novel feature of the new periodical noted above is therefore the rendering of prompter service to the mathematical student of to-day.

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ON THE IMPROVEMENT OF THE DICTIONARY

DICTIONARIES and all other word-tabulations are valuable in proportion to their comprehensiveness and to their ease of use. Assume that we have a comprehensive table. How much it is used will depend mainly on how much trouble its use involves, or how fatiguing are the operations of the human eye and hand. When I contemplate the fact that a certain German-English dictionary has no less than 15 two-column pages of words beginning with "sch" I am tempted to forego the pleasure of adding to my knowledge the English equivalent of some word in this group.

In looking up such a word as "schmieden" the attention is first focused upon the initial letter and the pages are turned to "s." Time and effort can here be saved if the edges of the pages are so cut that the whole alphabet is seen at a glance with the letters running vertically downward from A to Z along the right-hand edge. The thumb may be placed on "s" and the book opened at nearly the right page. Turning a few pages brings one to "sch." Here the real trouble begins. The mental attention is no longer focused upon "sch" but upon "mieden." The eye strives to find these letters. However instead of making them prominent and as easy to find as the first letter of a word the printer has artfully concealed them behind "sch." The eye must search through 15 pages looking always for the fourth letter of the word, then for the fifth letter, etc. There are no heavy face type, no italics, no capitals to aid in this search. It is veritably a game of hide and seek, and after a dozen such attempts the mind is fatigued, some of the words are not found, and the dictionary is thrown down in irritation. How much more convenient it would be with the elimination of all syllables or even all letters common to the series, after they have once been given. Such is the present day practice in tables of numbers. Common figures are eliminated. The following tables show: 1, an old number table; 2, the typical present day arrangement; 3, the usual way of listing words; 4, the proposed system.

Table 1		Table 2		Table 3	Table 4
N	log N	N	log N	Usual system	Proposed system
150	17609	151	17609		
151	17898	2	898	schmelz	schMELZ
152	18184	3	18184	schmelzarbeit	ARBEIT
153	18469	4	469	schmelzbar	BAR
154	18752	4	752	schmelzhafen	HAFEN
155	19033	5	19033	schmelzwerk	WERK
156	19312	6	312	schmer	schMER
157	19590	7	590	schmergel	GEL
158	19866	8	866	schmerhaft	HAFT
159	20140	9	20140	schmerz	Z
160	20411	160	411	schmetterling	schMETTERLING
				schmettern	N
				schmetterschlag	SCHLAG
				schmidt	schMIDT
				schmied	schMIED
				schmiedbar	BAR
				schmiedbarkeit	BARKEIT
				schmiede	E
				schmiedearbeit	schmiedeARBEIT
				schmiedeeisen	EISEN
				schmiedeeisern	EISERN
				schmiedefeuer	FEUER
				schmiedeherd	HERD
				schmiedeisen	schmiedEISEN
				schmiedeisern	EISERN
				schmieden	EN
				schmiegen	schMIEGEN
				schmiegsam	SAM

I think, so far as is possible, that it is better to introduce whole new syllables rather than each new letter by capitals, *e.g.*, by schMIDT, schMIED, rather than schmIDT, schmiED, because the latter seems to distort the apparent pronunciation of the words. Speed and facility in the use of number tables have been enormously enhanced by the modern arrangement, and I believe the same advantages will be gained by modernizing the old "Wörterbuch." In regard to cost, I have the opinion of an experienced professional book-printer that the cost of typesetting will be less for the proposed system. Many printers