

others, and the book gives information of no other place for getting them. The American novice, for example, would have no information concerning the excellent optical houses in his own country which supply exactly what is needed; and all worry about the British "methylated spirits" might easily be avoided by explaining that ordinary alcohol or "denatured" alcohol would answer equally well.

It would be so easy to adapt a fundamentally good book of this kind to the country where it is to be introduced that it seems incomprehensible why publishers are not more awake to the advantages of such adaptation.

These suggestions are made in the most friendly spirit, and with the hope that future editions will be made the most useful possible in the new environment; for certainly no one at all familiar with the subject could read these 86 delightful pages, so full of helpful suggestions to the beginner, and so full of enthusiasm for the beautiful world which the microscope reveals, without a feeling of gratitude to the author for making so plain the way into this new realm, for uncovering a road which has no end and which has new beauties for each advancing step.

S. H. G.

The Polynesian Wanderings. Tracks of the Migration Deduced from an Examination of the Proto-Samoan Content of Efate and other Languages of Melanesia. By WILLIAM CHURCHILL. The Carnegie Institution of Washington. 1911. Pp. 516, 2 maps.

The wanderings of the Polynesians have long been a fascinating crux in ethnology. The peopling of an inconceivably vast area sprinkled with islands appeals to our wonder more than the settling of continents, and from the time of the earliest explorers in the Pacific attempts have been made to hit upon some clew to the dissemination of oceanic peoples. It early appeared that language afforded the best means of tracing these movements and in the gross this index has been used since the time of Hale by students of the Pacific insular races.

Philology has made great strides both ma-

terially and scientifically in recent years, however, and Mr. Churchill is foremost among those who have applied the analysis of the content of a language to the solution of the historical problems connected with the migratory movements of peoples, his method in this case being to ascertain the percentage of Proto-Samoan loan words in the Melanesian languages over the area in question and to chart the lines of migrations of the Polynesians along the lines of greatest percentage. The method thus establishes a definite quantitative basis of language research, the results of which are very gratifying.

Mr. Churchill has shown by his percentage measure that the Proto-Samoans emerged from the East Indies, passed out into the Pacific, and with various Melanesian landfalls, reached Samoa, regarded as the primary distributing focus of Polynesians, thence by diverse routes, populating other islands, and in turn streaming from several foci, completing the population of the islands where we now find Polynesians. The earliest movement, according to Mr. Churchill, appears to have taken place about 1,500 years ago.

Among its other valuable qualifications the work is a remarkable analysis of an archaic language which Mr. Churchill hopes will supply the data for the genesis of speech. This, Mr. Churchill modestly puts forward as the feature of his monumental book which will give it a continued and wide influence.

The Carnegie Institution is to be congratulated on the publication.

Two maps accompany the work, the one showing the tracks of Polynesian migration and the other the migration tracks through Melanesia.

There are three appendices, one containing data and notes, two, the southern gateway, and three, a bibliography. An adequate index is supplied.

WALTER HOUGH

CHANGES IN THE GERMAN UNIVERSITIES

THE former student returning to Germany finds many changes. In the development of the new Germany from the old, much that was familiar has disappeared or has been replaced