fessor Whittlesey's analysis of the Italian state presents an important interpretation of this weakness which is not solely a poverty of agricultural land and mineral resources.

Of the eighteen chapters in the book, six are devoted to Europe. The process of the formation of the nation-states is illustrated by a discussion of Great Britain, France and Germany. The chaotic mid-Danube is presented through an interpretation of the capitals. The conflict of interests in the Mediterranean Basin is set forth as a background for the treatment of Italy. The strong unitary tradition of France is interpreted in terms of the interaction of land and people, as the various constituent parts of the country were one by one attached to the nuclear core. If some scholars find fault with the actual extent of territory included in the Ile de France, this need not detract seriously from the strength of the argument regarding the origin of this strongly coherent state. In contrast stands Germany. "Confusing disintegration paralleled by surprising unification" is the phrase used to describe the process of state formation on the other side of the Rhine, in a land "which is made up of a crude gridiron of lines of travel, and in which neither boundaries nor internal environment set a decisive mold for plastic statecraft." The essential contrast between western industrial Germany and eastern feudal Germany throws light on the problems which that state must face in its struggle to remain coherent.

One chapter is devoted to Africa and five to the Americas. Here the essential contrast in the process of state formation becomes apparent between the accretion of areas around a central nucleus, and the expansion of colonies from a primary settlement center. In Great Britain, France or Germany the people of the nuclear core for one reason or another were able to conquer and attach to the original political area the people of bordering areas. This, indeed, was the process by which such great Indian states as the Empire of the Incas was formed. But it is not the process by which the modern states of the Americas were developed. The nuclear core of colonial states has a geopolitical function which differs profoundly from that of, let us say, France. Even where the native people remain in considerable numbers, as in Peru or Mexico, they are scarcely incorporated in the colonial states, as the people of the various parts of France were brought into the coherent French state. From primary centers of settlement, other colonies are sent out, producing, after a time, a pattern composed of clusters of population surrounded by areas of scantily occupied land. When states were formed, not by a slow process but suddenly by revolt from the mother country, the boundaries were commonly drawn through the thinly populated areas between the nuclear cores. Compared with Europe, the structure of such states is relatively simple. The process, however, is so different that some question might be raised concerning the advisability of applying the same terms to both.

Among the other chapters in Professor Whittlesey's book, two are of outstanding importance and interest. One discusses the political geography of colonies as related to highly localized commercial production. Three products, rubber, sugar and wheat, are treated. The historical geography of sugar, from the fabulous days of the Portuguese planters on the coast of north-eastern Brazil, through the scramble for sugar colonies in the West Indies, to the rise of modern Cuba and Java is set forth with a coherence which places this section of the book, in the reviewer's opinion, foremost among the brief treatments of this subject. Impressive, also, is the treatment of the modern importance of the oceans in relation to routes of communication and colonial expansion.

These chapters will be of interest to non-professional readers as well as to students of political geography, for they present in admirable form the contribution of this branch of geography to the problems of the modern world. The book will also be of considerable importance as a step forward in the formulation of both content and theory in the newly developing field of political geography. The importance of the interpretations and the logic of the view-point need not be obscured by such unfortunate blemishes as are produced by the failure of a draughtsman to learn well the place geography of South America. No more important book in the field of geography has appeared in recent years.

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NATURALISTS IN SOUTH AMERICA

The Great Naturalists Explore South America. By PAUL R. CUTRIGHT. xii + 340 pp.; 42 full-page illustrations; bibliography and index. New York: The Macmillan Company. $3.50.

THIS book, by a professional zoologist with experience in the tropics, will be read with intense interest by the general reader and by the many zoologists who still have an interest in the habits of animals as well as in their morphology, physiology, etc.

From the title it might have been expected that rather more space would have been devoted to the experiences of the "great naturalists"—from Humboldt, Wallace and Darwin to those still living; but Part II is so thoroughly readable that one would not have any of it omitted.

About a dozen of the typical South American mammals, such as the vampire, the tapir and the manatee, are described and sometimes figured with excellent photographs.

Half a dozen birds are described in the same way, and then the Crocodilians and serpents are discussed.

Of the fishes the dreaded piranha, the sting-ray and the electric eel are made more real to most of us, who have spent, at most, only a few months in the South American jungle, than they ever were before.

The descriptions end with certain jungle pests and insects for which the continent is noted.

A six-page bibilography and an index add to the usefulness of the book.

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REPORTS

THE NEW INTERNATIONAL COMMISSION OF SNOW AND GLACIERS

AT the Seventh Assembly of the International Union of Geodesy and Geophysics, which was held in Washington last September, the International Association of Scientific Hydrology, one of the component units of the Union, effected the consolidation of two of its own commissions—the Commission of Snow and the Commission of Glaciers. The action was taken after a preliminary poll of the membership of the two commissions had shown an overwhelming majority in favor of the consolidation. Moreover, the presidents of the two commissions, Professor J. E. Church, of the University of Nevada (Snow), and Professor J. M. Wordie, of St. Johns College, Cambridge, England (Glaciers), had strongly recommended it.

Professor Church was designated acting president of the new Commission of Snow and Glaciers, to serve in that capacity until international relations will permit the holding of a formal election of officers. Like all other sections of the International Union of Geodesy and Geophysics the Association of Hydrology has deferred election of officers for the present triennial, in view of the sparse attendance of European delegates at the Washington Assembly, due to war conditions.

The new Commission of Snow and Glaciers aims to take into its purview all research relating to snow and ice in their varied forms. It might appropriately have been named Commission of Snow and Ice, but it preferred to adopt the name Commission of Snow and Glaciers in deference to the former Commission of Glaciers, which is by far the older of the two bodies that are now consolidated, and which, indeed, was in existence long before the Association of Hydrology was formed.

The original *Commission Internationale des Glaciers* had its inception in 1894, at the International Geological Congress at Zurich. It was charged, broadly, with the task of studying existing glaciers throughout the world, but actually its efforts have been concentrated on securing statistics of the secular variations—advance and recession—of glaciers in response to climatic fluctuations. Inasmuch as this task requires the making of annual measurements on large numbers of glaciers in different countries, with the aid of many cooperating agencies, governmental, scientific and other, it has inevitably grown into a vast enterprise. The results, however, have proved of value, not only to glaciologists but also to hydrologists, hydraulic engineers (making use of runoff from glaciers for economic purposes) and climatologists.

In 1914 the work of the commission was stopped by the World War, and coordinated effort ceased for a number of years. In 1927, however, at the invitation of the International Association of Scientific Hydrology, the commission transferred its functions and its personnel to a new *Commission Glaciologique* (Commission of Glaciers) created by the association, and under these new auspices its work has been carried on ever since.

Meanwhile, at the Lisbon. Assembly, in 1933, the association set up a Commission of Snow and appointed Professor Church president thereof. So rapidly did this commission grow under the enthusiastic leadership of its president that by 1936, when the association met in Edinburgh, it had become by far the largest and most active of all the commissions of the association and had expanded its field to cover all phenomena of snow and ice, with the exception of glacier-variations. Overlap with the work of the Commission of Glaciers seemed almost inevitable, and so the question naturally arose whether consolidation of the two commissions would not in the end be mutually advantageous to them. Their union was approved by the executive committee of the association at its meeting in April, 1939, at Montreux, Switzerland, and so the way was paved for its final consummation at the Washington Assembly.

Provision has been made within the new Commission of Snow and Glaciers for a permanent Committee on Glacier-Measurements, which will continue the work previously carried on by the Commission of Glaciers, securing systematic records of the annual variations of glaciers. It is Professor Church's intention to expand the scope of that work, which heretofore was restricted largely to Europe and the United States, so as to take in all the more important glacier-districts of the world, including the Andes of South America, the great mountain chains of Asia, the Alps of New Zealand and the Arctic regions.

Aside from this enterprise the commission has