

EXTRACTS AND REVIEWS OF BOOKS.

GEOGRAPHIE GENERALE DES MERS

by CAMILLE VALLAUX

Librairie Félix ALCAN, Paris

(Medium 8vo, 796 pp., 114 Figs., 20 pl.)

M. Camille VALLAUX, whose interesting articles on oceanographical subjects our readers have been able to appreciate in the *Hydrographic Review* (Nos. 13 and 15), has published an important book of 796 pages on the General Geography of the Seas. Having taught this subject for a long time at the Naval College at Brest, he is particularly well qualified to fill the want which has existed in geographical literature, where two thirds of our world, the part covered by the water of the oceans, has generally been passed by almost in silence. Mons. C. VALLAUX has thus written one of the most important chapters of the physics of the globe, and has compiled in a fine synthesis, and with equal competence, a description of everything concerning this complex world of the oceans, their formation, their physical aspect, the uneven topography of their depths, the various movements which disturb them, the atmosphere above them and the life which animates them. In the rôle of economist, historian and philosopher, he has told the story of the great voyages and their methods, the resources gleaned by man from the oceans, the tracks they open for his commerce and for the development of civilisation.

The oceanographer and the geologist will find in this book a rich fund of documentation for their specialised studies, for the author has kept in touch with all the literature up to the most recent, and has been at pains to indicate all references to the special works the gist of which he has summarised. He sets forth the latest theories, showing the preferences among them which his experience and considered reasoning dictate.

By its accomplished style and clarity of presentation, M. VALLAUX's book appeals also to all those readers who merely wish to escape from their ignorance of the immense expanse that forms the greater part of the realm bequeathed for the enjoyment of mankind. But above all this book has been written for the seaman. The latter will never know enough of the domain which he roams in every direction; as a rule he finds in official nautical documents more or less local information only which cannot be co-ordinated into a general view; the synthesis offered to us to-day links up these data, giving us the causes, or at least the most plausible hypotheses, which govern them.

The necessity of defining the matters under discussion leads the author to suggest limits for the oceans. Apart from the coasts, which form indisputable boundaries, he seeks them chiefly in differences of meteorological conditions, temperature of the air and surface water, winds and currents; and is led to discuss the partly arbitrary delimitation which the INTERNATIONAL HYDROGRAPHIC BUREAU has adopted with a strictly utilitarian object limited to the standardisation of nautical documents. It seems to us that the limits proposed by M. VALLAUX between the Atlantic and the Southern Ocean on one hand and the Atlantic and inner Arctic Sea on the other, *i. e.* the parallel of 35° S. and the Antarctic Circle, cannot escape this reproach of arbitrariness; the author declares that the division from the Southern Ocean includes numerous seasonal oscillations. This is the objection to the criterion adopted. It seems to us that the limits should rather be fixed by the submarine topography, which alone offers the necessary guarantee of stability; also it is necessary that the bottom should be sufficiently known. In the same way, the three seas into which the author divides the Pacific Ocean are rather portions of oceans which are fairly clearly distinguished by certain physical characteristics; their limits, which are very vague, may suffice for the needs of oceanographers, but have not the accuracy required for nautical documents.

Unfortunately the topography of the submarine depths is still far from being well enough known to serve as a definite basis for delimiting the oceans. The method of sounding by echo, by rendering the study of it so much easier, unfolds to us daily an unexpected complexity in these depths and leads us to conclude that their true topographical representation will be obtainable only by ships specially fitted out and entrusted with the minute examination of relatively restricted areas.

It is this type of contribution which will enable a bathymetric chart to be established of the same value as those we possess for the emergent relief. A chart of this kind is the indispensable basis for all oceanographical studies. The INTERNATIONAL HYDROGRAPHIC BUREAU hopes to produce shortly a new edition of the sheet covering the North Atlantic in the GENERAL BATHYMETRIC CHART OF THE OCEANS; this edition will include the result of all surveys carried out. But the resources of the Bureau have been sorely attenuated and it is to be feared that the new editions of the other sheets will be subject to vexations delays unless those oceanographical institutions specially interested in this work come to the rescue with the necessary assistance of liberal subsidies.

P. V.

ANAIS HIDROGRAPHICOS

TOMO I.

Rio de Janeiro, 1933.

The DIRETORIA DE NAVEGAÇÃO of the Brazilian Navy has recently issued the first number of the Brazilian Hydrographic Record (*Anais Hidrográficos*). The Director of Navigation, Vice Admiral H. DA GRAÇA ARANHA, in an introductory note, states very truly that publications of this type are of interest in that they contain notes on hydrographic work undertaken and a succession of useful, timely and informative articles. He adds that the fact that the Brazilian Navy has recently inaugurated courses in hydrography, thus standardising and giving proper direction to this work, fully justifies the decision to publish these *Anais* which show how real and ardent is the desire of all under his direction to forward the practical development of such an important and quite indispensable Service.

The first chapter in the *Anais* is devoted to a short biography of Commander Manoel Antonio VITAL DE OLIVEIRA, who is described in the Introduction as the "pattern of a true hydrographic officer" and, at the close of the article, as "the greatest Brazilian Hydrographic surveyor of his time".

The next article deals with the charts of Brazil with some historical notes in connection with the preparation thereof. It contains index charts showing (1) the numbers of the charts of the Brazilian coast published by the Brazilian Division of Hydrography, (2) those of similar charts published by various other Hydrographic Offices (mostly French) and (3) the scheme of charting the coast which the Brazilian Division of Hydrography proposes to carry out.

Next comes a short chapter showing the number of Lights, Beacons, Buoys etc. maintained by the Division of Lights, and a report on the work done during 1933 and to be done during 1934 by that Division.

It is interesting to note that the first radio-beacon in Brazil was established at São Tomé during 1933 and that it is proposed to erect two others, one on the Abrolhos and the other at Boi Point, during the present year.

A short report follows on the survey of Ilha Grande Bay. This survey included the measurement of a base, a triangulation, observations for geographical position, azimuth and magnetic elements, the establishment of a CASSELLA self-recording tide gauge (from the graphs of which over a period 30 days, the harmonic constants were calculated by the LIVERPOOL TIDAL INSTITUTE) and the observation of surface currents. As the bay had already been well sounded previously a comparatively few check soundings only were taken, mostly with the hand lead, but a WARLUZEL sounder was used also. In addition many areas within the bay were examined with a sweep and several new dangers were located.