

PRAKTISCHE ORKANKUNDE
mit Anweisungen zum Manövriren in Stürmen
 (PRACTICAL TREATISE ON REVOLVING STORMS
 with instructions for handling the ship in Storms)

by

CAPTAIN L. SCHUBART, OBERREGIERUNGSRAT & CHIEF OF DIVISION
 OF THE DEUTSCHE SEEWARTE.

(E. S. MITTLER & Sohn, Berlin, 1934. 27×19 cms., 143 pp. III fig. Pr.: Rm. 10).

This is one of those valuable books in the production of which German writers excel, viz. books which summarize all the information on a particular subject which is scattered in many other works.

The author is to be congratulated on the arrangement and the clarity of the information given, for, though there is nothing new in the book, it is not given to every writer to express himself as lucidly and in such simple yet amply sufficient language.

As Captain SCHUBART states in his preface, other works on this subject have appeared but it is many years since a comprehensive work on revolving storms has been published and the want of an up-to-date book summarizing modern knowledge on this subject has been felt for a long while.

The treatise opens with a chapter, entitled "General". This deals summarily with the barometer and thermometer, their graduations and corrections, the scales for wind-force and state of the sea, the determination of the true direction and force of the wind, the origin and meaning of the word "Hurricane" with a short history of the development of knowledge on Revolving Storms, the connection between Isobars and Winds and, finally, the frequency of storms in the various oceans.

The remainder of the book is divided into three parts :

Part I deals with tropical Revolving Storms ;

Part II with the handling of the ship during a Revolving Storm ; and Part III with storms outside the tropics.

Part I, section 1, gives a full description of a Revolving Storm, the movements of the air, the directions and forces of the wind, the track of the storm, its duration and its effects.

Section 2 contains descriptions of Revolving Storms in the various oceans, the areas of their formation, their tracks and their frequency.

Part II, section 1, describes the signs of an approaching storm and storms which give no warning of their approach.

Section 2 deals with the avoidance of approaching storms and the determination of their tracks, and Section 3 with the handling of ships when approaching and in depressions.

Part III, as stated above, contains information on meteorological conditions outside the tropics and the handling of ships when approaching and in depressions.

G. S. S.

OCEANOGRAPHICAL AND METEOROLOGICAL RESULTS
OF THE "SEDOV" EXPEDITION OF 1930.

by H. A. BAUER.

(Extract from *Geographical Review*, New York, April 1934, page 333).

The entire number (173 pages) of Volume I of *Transactions of the Arctic Institute* (Leningrad, 1933) is devoted to the "Scientific Results of the Arctic Expedition in the

Sedov in 1930: Hydrology and Meteorology". The expedition covered the eastern part of the Barents Sea and the northern part of the Kara Sea, with extensive surface observations and 25 oceanographic stations, the latter being taken in the northern Kara Sea. The arrangement of the stations permitted a ready evaluation of the collected data by two latitudinal and two meridional profiles of several hundred miles each, extending approximately between the parallels of 76° N. and 81° N. and between the meridians of 60° E. and 90° E.

Surface temperatures and surface-water samples were taken every hour, or practically every 10 sea miles, during the entire trip, so that a complete picture of surface conditions could be constructed. The oceanographic data included temperature, salinity, dissolved oxygen, alkalinity, and hydrogen-ion concentration; in addition, a full chemical analysis of the sampled water was made.

Professor W. J. WIESE, assisted by A. F. LAKTIONOV, presents an exhaustive discussion of the tabulated material together with some 47 profiles and surface maps. Ice conditions are described and interpreted in a special chapter containing one general and four special ice charts. Some 202 soundings and a continuous meteorological record amplify the elaborate program.

While not revealing any really new Arctic phenomena, the findings of the *Sedov* have added considerably to a more precise knowledge of the circulation of Arctic waters, especially of the rôle played by river water and melting ice. The advance of Atlantic water from the polar basin into the north-western part of the Kara Sea is clearly exhibited by a middle layer of higher temperature and salinity, while nothing seems to indicate a penetration of cooler water from the depth of the polar basin. Summer conditions, in contrast with the homogeneity of winter, are characterized by several minohaline tongues (between 10 and 25 meters) of southern origin, clearly outlined by the trend of surface isohalines and remarkably well exhibited in the vertical distribution of salinity. The westernmost of these minohaline areas, known as the "Ob and Yenisei Current", had been recognized before; the second, pointing to 60 miles north of Novaya Zemlya, was first observed by the *Sedov* Expedition of 1929 ("Sedov Current"); a central area of diminished salinity has its apex in the region of the newly discovered Wiese Island ("St. Anna Current"); while the easternmost minohaline tongue, extending almost to Schmidt Island, has its source in a northward surface current, to which the name "Eclipse Current" has been given.

Since many of the oceanographic stations were established in or at the edge of extended ice areas, definite conclusions could be drawn as to the striking increase of alkalinity by the melting of ice in summer. When one considers the as yet problematic stage of ice forecast for the Barents and Kara seas (N. N. ZUBOV: *The Circumnavigation of Franz Josef Land, Geographical Review* Vol. 23, 1933, pp. 394-401), the practical importance of the ice survey as made by the *Sedov* Expedition needs no further comment.

SUBMARINE VALLEYS

(Extract from *Nature* - London, 9th June 1934, p. 877).

The submarine valleys of continental margins have generally been explained as having originated during a period of emergence and having retained their form for one reason or another during subsequent submergence. This origin, at least in relation to the submarine valleys of the coast of southern California, is questioned by the late Prof. W. M. DAVIS in the *Geographical Review* for April 1934. Several of these valleys are continued to depths of 200-300 fathoms, which is considerably lower than DALY's estimate of the glacial lowering of sea-level. Nor is there any evidence of upheaval or subsidence by that measure of height. Further, ordinary depositional processes which are building up the shallow sea-floor ought to have obliterated at least the inner part of these valleys, but the reverse is true: some process is keeping these valleys open. Prof. DAVIS termed these valleys submarine mock valleys, since he does not believe they are due to subaerial erosion. He throws out the suggestion that the real explanation lies in a slow progress of submarine erosion in rock disintegrated by a sea-floor current