



KONGELIGE SÖKORT-ARKIV



**DET KONGELIGE SÖKORT-ARKIV**  
**(THE DANISH ROYAL HYDROGRAPHIC OFFICE)**

BY

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Under the Danish Ministry of Marine, in addition to the regular Naval Establishment, there are four Bureaux or Offices, each enjoying a separate budget, but in which the work is co-ordinated for the benefit of mariners: — (1) the Hydrographic Office, (2) the Lighthouse Board or Bureau, (3) the Buoyage Board or Bureau, and (4) the Pilot Board or Bureau. Each one of these four branches notifies the Navy Department, which is the central clearing office for information, of any matter for issue in Notices to Mariners and it, in turn, transmits all such Notices to the Hydrographic Office where they are published and issued.

The Director of the Sökort-Arkiv, or Hydrographic Office, is always a Naval Officer of great experience as a hydrographer, and the work of his Bureau is divided into four Sections, *viz*, Section *I*, which comprises actual surveying, plotting, drawing, engraving and printing of charts; Section *II*, which has charge of the correction of charts and the compilation of (*a*) Sailing Directions, (*b*) Light Lists, (*c*) Buoy Lists, (*d*) Harbour Sailing Directions and (*e*) Notices to Mariners; and Section *III*, which is charged with the Radio Notices to Mariners, chronometers, instruments, and all computations to check the work of Sections *I* and *II*, which it assists on other ways also.

The Paymaster's Office correspond to what would be Section *IV*, and sells charts, coast Sailing Directions, harbour Sailing Directions, Light Lists, Buoy Lists, etc., and makes all payments in connection with the maintenance of the Office.

Describing the work more in detail, the Chief of Section *I*. is the Captain of the surveying ship, or the Senior Officer when there are two ships doing surveying work. In summer he conducts the field work or surveying, and in winter he plots the season's work, and is directly in charge of Section *I*. All the work of plotting the finished chart, engraving it and printing it is done under the Chief of Section *I*.

Charts are printed from copper plates, there being one press in general use, with an older press in reserve. It is estimated that one printer can print thirty charts per day working for six hours, and that two printers can print sixty-five charts per day from copper plates. Very few charts are printed

and kept on hand for sale in excess of immediate demand, in order to avoid making many corrections by hand. The geodetic and topographic features of the Danish hydrographic charts are taken from the General Staff maps, but corrected for changes due to erosion of the coastline, for changes of contour, or, if necessary, by the addition of objects suitable for navigational use. No lithographic charts are made in the Danish Hydrographic Office, as all this work is done on aluminium plates by the General Staff. All sectors of lights shown are coloured by hand on the engraved charts. The copper plates used in chart printing are smoothed up by the galvano-plastic process for all corrections. The shore personnel of Section *I.* consists of five draughtsmen, five copper plate engravers and two printers.

Section *II.* is charged with the correction of charts in accordance with Notices to Mariners, the data for which comes from the Lighthouse, Buoyage and Pilot Boards or Bureaux, from harbour authorities and from captains of men-of-war and merchant vessels. This Section is further charged with the compilation and editing of (*a*) the Danish Coast Pilot, (*b*) the Danish Harbour Pilot, (*c*) the Faroe Island Pilot and (*d*) the Iceland Pilot. It also prepares, edits and publishes the Danish Light List and the Danish List of Buoys and Beacons from the data furnished by both the Lighthouse and Buoyage Boards. While the printing is actually done by private firms, yet it is considered an excellent arrangement that the Danish Hydrographic Office does supervise the printing of all information for the benefit of mariners, thereby acknowledging that it is the function of the Hydrographic Office to be the distributor of all such information. Section *II.* keeps four sets of books, (*a*) a book with a page for each chart issued, stating the date and fact of correction to finished charts on sale or in stock: (*b*) a book containing all corrections made to the copper plate: (*c*) a book for each standard chart which is kept on file giving all entries or corrections ever made, and (*d*) a "Wreck book" in which are entered all facts relating to each wreck in Danish waters until its final disappearance. There is a fireproof vault on the ground-floor in which all the original charts and surveying records are kept.

Section *III.* purchases all chronometers for the use of all Danish men-of-war and surveying ships, and all instruments used by the Hydrographic Service. These last named instruments are tested by a private firm of instrument makers. This Section does all the computations to check the work of Sections *I.* and *II.*

The Paymaster has charge of all charts for issue and sale, and all the publications of the Danish Hydrographic Office, including Coast Pilots, Harbour Pilots, Light Lists and Buoy Lists. All clerical work in the Danish Hydrographic Office is done by young Assistants during their apprenticeship as draughtsmen and engravers. Denmark has about eighty-five separate chart plates, of which about fifty-one are from original Danish surveys.

The building now occupied by the Royal Hydrographic Office was erected in 1874.

The first Director of the Royal Hydrographic Office was Rear Admiral POUL DE LÖWENÖRN, who was born on 11th August 1751 and died on 16th March 1826.



CONTRE ADMIRAL DE LÖWENÖRN

He received his first commission in the Royal Navy in 1770 and from 1776 to 1782 served in the French Navy in various vessels. He had always been interested in hydrographic matters and this interest was enhanced and encouraged by Captain VERDUN DE LA CRENNE under whom he served in the French frigate "*La Renommée*". Captain VERDUN was, at that time, one of the most highly trained scientific officers in the French Navy.

On his return to Denmark, DE LÖWENÖRN was inspired by the idea of establishing in his own country an organisation on lines similar to the French "Dépôt des Cartes de la Marine."

Until this time marine surveying had been almost entirely neglected in Denmark and navigators in Danish waters generally used the charts produced by VAN KEULEN which were already over a century old. There were a few more modern and reliable charts in existence, *e. g.* of the Sound, but these were kept secret.

The proposals made by DE LÖWENÖRN bore fruit in the establishment, in 1784, of the Royal Hydrographic Office of which he was the first Director.

He directed this office with unexampled ability and diligence until his death, which occurred forty-two years later.

During his tenure of office he carried out various surveys and expeditions. Thus, in 1786, he commanded an expedition sent to Greenland for the purpose of trying to locate the old Norse colony, the Osterbygd. Though the expedition failed in this object, DE LÖWENÖRN eagerly seized upon the opportunity which an enforced stay in Iceland presented, to collect very interesting data from which he drew up an extremely valuable description of the fjords and waters off the coasts of that island.

In 1799 he devised the plan for the EIDER CHANNEL, and in 1800 he founded and established a Bureau of Longitudes at Copenhagen. He was a member of the Institut de France and of many other foreign scientific bodies.

The thanks of the Bureau are due to Captain H. O. RAVN, the present Director, and to the Officers of the Royal Hydrographic Office for their kind reception of the writer and for the information given to him.

