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STRANDINGS

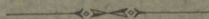
IN THE

DANISH WATERS

1858—1885

COMPILED BY

J. S. HOHLENBERG.



Dansk Ingeniørforenings
Bogsamling.

Mortensen

ek. 980.

REMARKS
ON THE
CHART SHOWING THE STRANDINGS
IN THE
DANISH WATERS
DURING
1858 — 1885
BY
J. S. HOHLENBERG.

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Dansk Ingeniørforening
Boghandel

REMARKS

CHART SHOWING THE STRAITS

OF THE WATER

1838-1839

J. S. RICHMOND

TEKNIK FIDUCIAR

London, 1838

Printed by

W. & A. G. Smith

Printed by

On the 10th of July 1882 the *Danish Government* appointed a commission to inquire into such localities on the west coast of Jutland, in the northern part of the Kattegat and on the Isle of Bornholm, as might be suitable for the establishing of harbours of export and refuge.

The report of this commission was published on the 12th of March 1887.

After having, for the use of the above commission, prepared a statistical account of the *Strandings on the Coasts of Denmark* during a period of *twenty-five* years, accompanied with a wreck chart for the same period, I have been invited by Messrs **Hecksher & Son** of Copenhagen to prepare and publish an enlarged edition of the Chart, with the addition of the strandings, which have occurred on that part of the Swedish coast, which touches our waters, viz. the coast between Marstrand and Carlskrona, and in publishing my latest examinations and the improved Chart I must observe that the several tables which accompanied the former edition have been considerably reduced, in order to make them less tedious to the reader.

The annexed Chart now embraces a period of *twenty-eight* years, for which space of time official reports have been at hand.

The expenses of the Chart have been defrayed by the above named gentlemen jointly with the four Marine Insurance Companies of Copenhagen, viz.

1. Det Kongelige oktr. Søassurance-Kompagni.
 2. De private Assurandører.
 3. Den Kjøbenhavnske Søassurance-Forening.
 4. Fjerde Søforsikkringselskab.
-

As a complete and official Register of the number of vessels which yearly pass round the Scaw, through the Belts and the Sound has not been at my disposal, and there is a decided want of sufficient data, such as tonnage, nature, build and age of the vessels; nature and value of the cargoes; trades in which the casualties happened; reliable reports of all the averages which in the course of the period in question have occurred through collisions; accidents to machinery, such as breakdowns, explosions; etc. it could not be my intention by the following remarks to give a full and detailed statement of the results of our average statistics, but I merely wish to point out some of the most important facts derived from the abstracts, which will appear from a complete list of the strandings occurred in the Danish waters during a period of twenty-eight years, commencing the 1st Jannary 1858, ending 31st December 1885, and compiled from official sources.

For the present examination, the whole of the coast line has been divided in four geographical principal districts, viz.

1. The west coast of Jutland (Jylland).
2. The coasts of the Kattegat, i. e. the sea, limited by the east coast of Jutland between the Scaw (Skagen) and Hassenöre; the north coast of Sealand (Sjælland) between Sjællands Odde and Gilbjerg Hoved; the west coast of Swe-

den between Kullen and Marstrand, and the coasts of the interjacent islands.

3. The coasts of the Little Belt (Lille Belt), the Great Belt (Store Belt) and the Baltic (Östersöen), as also of the Sound (Öresund), limited to the North by a line from Gilbjerg Hoved to Kullen, and to the East by the meridian of Falsterbo.
4. The Swedish coast between Falsterbo and Carlskrona, and the coasts of the Isle of Bornholm.

Referring to the symbols of the Chart for its right apprehension, the reader is invited to make a voyage round the coasts; it must, however, first be understood, that the Chart shows the spot where each casualty occurred, and that the dots have been put right off the very place of the coast, where the strandings have actually occurred; only, that the dots representing the *total losses* have been placed nearest to the coast, and the dots representing the strandings, which have *not resulted in a total loss*, farthest from the same. The strandings which have occurred in the Öresund, limited to the North by a line Gilbjerg Hoved-Kullen, and to the South by a line from Falsterbo to the southward of the Isle of Amager (Amager) make an exception, as it has been necessary to place some of the dots on the land on account of the limited space. As far as possible, however, the total losses have also in this fairway been placed at the very spot where the strandings did actually take place.

Beginning at the west coast of Jutland, it will at once be observed, that this coast is in its whole length fringed with an unbroken chain of dots; these are, however, at some places sprinkled, at others thickly crowded, but upon the whole this ironbound coast gives an awful impression of the heavy tribute imposed upon shipping.

The greatest number of dots are to be found around the entrance to the Limfjord, from which place they thin away to the southward as well as to the northward. The long and dangerous Horns Reef (Rev), stretching out from the coast of Jutland, is comparatively

faintly dotted, but it is to be supposed that in the course of years many wrecks have occurred on this fatally-renowned Reef, without having been recorded, especially previous to 1878, when a lightship was established there.

It will likewise be seen, how comparatively few strandings have occurred round the point of Hanstholm, to the East of which point, however, they largely increase until Lildstrand, where the extensive, partially rocky, Jammer Bay begins. Off Lökken, the only shipping place in this bay, the dots are gradually increasing in number towards the light of Hirtshals, the mistaking of which for the light of Skagen has occasioned frequent disasters between these two points. The dots stand in a dense group (408) round Skagen, to the West, North and East of this the most northerly point of the peninsula, passed by thousands of ships of all nationalities on their way to and from the Danish, Swedish, German and Russian ports.

In regarding the coast line treated of here, one cannot help noticing the comparatively small number of ships that have succeeded in getting off after having struck, and escaped total loss, and it may be taken for granted that in many of these cases a great number of valuable cargoes, in the course of years, have been lost on the west coast of Jutland.

Excepting the Skagen light, which was established more than three hundred years ago, it will appear from the Chart that at the beginning of the period in question the light of Hanstholm was the only one established on the west coast of Jutland, while now the lights at Hirtshals, Lodbjerg and Bovbjerg, besides the floating light on Horns Reef, partake in lighting the Danish Northsea coast.

The first Danish lifeboat stations were established in 1852, but a glance at the Chart will show at once that their number has since then been considerably increased, and the coast is now in its whole length between the Scaw and Fanö provided with numerous stations, the greater part of which are provided with lifeboat and rocket apparatus, some of them with the former only, others with the latter, and it may be stated with just pride that many hundreds of

shipwrecked seamen owe their rescue to the intrepidity, hardiness and heroic conduct, which under the most dangerous circumstances have been displayed by the brave men serving our lifeboats.

Before leaving this coast, the efforts should be mentioned which by the well-known *Em. Z. Svitzer's Salvage Establishment* have been made, to bring stranded ships off the ground, or assist ships in distress on this the most dangerous part of the Danish coasts. The Company's steamers, always ready to leave port at shortest notice, are stationed at Frederikshavn, Korsør, Elsinore (Helsingör), Copenhagen (Kjöbenhavn) and Rönne.

Now, on the point of rounding the Scaw, it is but proper to mark the excellent manner in which the same has been lighted, partly by a splendid, fixed light, partly by a lightvessel, stationed at the end of the dangerous Reef, and how it, in its capacity of Signal and Salvage Station has been provided with all available means for rendering aid and assistance to shipping.

After having arrived into the Kattegat, the second of the above-named four geographical districts, we will commence our survey in this fairway by throwing a glance at the east coast of Jutland. All along this coast the wrecks lie somewhat thick together, and the dots are pretty equally distributed until around Hasenöre, naturally clustering round the principal trading-ports and the entrances to the several friths (fjorde). The greater part of the dots representing total loss are to be found between Skagen and the entrance to the Limfjord, as also to the North and to the South of Fornæs light, while the coasts between the friths of Hobro and Mariager and round Hasenöre have a smaller number of these black dots. In order to follow the coast line as indicated above, the reader will now have to cross the Kattegat to Sjællands Odde, from which point the coast is fringed with dots to Gilbjerg Hoved. The black dots, as well as those representing a grounding only, are pretty regularly distributed, although the greater part of them are to be found round the entrance to the Isefjord, where they gather rather thickly.

On the eastern coast of the Kattegat, viz. the Swedish coast be-

tween Kullen and Marstrand, the strandings are specially clustering about the principal trading-ports, but it is a matter of course, that numerous dots are also to be found around such prominent places and reefs as Hallands Väderö, Nidingen, Vinga and Paternoster. Numerous wrecks must inevitably happen on the Isle of Læsö with its large, surrounding shoals, on the Isle of Anholt with similar reefs and shallows and, on a smaller scale, on the little Isle of Hesselö, all of which are bordering on the principal passage through the Kattegat; but it should also here be noticed that these islands, as well as the opposite Swedish coast, have been liberally provided with lights, lightvessels and lifeboat stations.

Entering now the third district and looking at the coasts of the Little Belt, the Great Belt and the Danish north coast of the Baltic, there will be found no place conspicuously marked with dots, no place which brings a comparatively large contribution to the tale of shipwrecks in these waters, but as places where the dots are clustering somewhat more thickly than at others, may be named: Revsnæs, the fairway between Samsö and Funen (Fyen), Romsö, Sprogö, and also the south coasts of the islands of Laaland and Falster.

A great many of the strandings, which have taken place on the east coasts of Sealand and Möen, many of which resulted in total loss, were owing to the flood of 13th November 1872, which exceptional catastrophe caused not less than 160 shipwrecks on the coasts of Denmark.

On the Danish and Swedish coasts, limited to the South by a line Stevns-Falsterbo and to the North by a line Gilbjerg Hoved-Kullen, the dots stand in a dense group, but comparatively few of the strandings which have occurred in this fairway have resulted in total loss.

It only remains to make a few observations on the Isle of Bornholm and on the Swedish coast between Falsterbo and Carlskrona.

Upon the whole the Isle of Bornholm brings a large contribution of dots, of which, however, but a small part is to be found on the coast between Rönne and Dueodde, owing principally to the fact that no ports are to be found here, and that the principal passage to

and from the Swedish and Russian ports generally goes to the North of the island.

On the Swedish coast, Falsterbo, Trelleborg, Smygehuk, Ystad, Sandhammaren, Simrishamn and Åhus may be named as the places that are the most thickly dotted with the marks of destruction, but also this coast as well as that of Bornholm is, as appears from the Chart, well provided with lights and lifeboat stations.

For further explanation of some of the facts, contained in the present paper, I subjoin a few statistical tables, showing the number of the strandings with regard to time and place.

Table 1.

Number of Strandings during each of the twenty-eight years ended 31st December 1885.

1858	165	1865	202	1872	423	1879	227
1859	177	1866	245	1873	180	1880	282
1860	222	1867	310	1874	223	1881	253
1861	261	1868	193	1875	234	1882	331
1862	211	1869	194	1876	261	1883	191
1863	279	1870	154	1877	189	1884	187
1864	157	1871	201	1878	199	1885	165
Total 6316 . Annual average 226 . Maximum 423 . Minimum 154 .							

It appears from the above table that on the coasts in question 6316 strandings of sailing vessels and steam ships have occurred during the twenty-eight years ending 31st December 1885. The annual average is 226 strandings, or, the whole period making 10227 days, $\frac{6}{10}$ th of a stranding a day.

The lowest number of strandings (154) occurred in 1870, and the highest number (423) in 1872, which was principally due to

the destruction to shipping in the Baltic, caused, as stated before, by the memorable and fearful storm and inundation of 13th November 1872.

Table 2.
Number of Strandings, distinguishing the Parts of the Coasts on which they happened.

Months	1	2	3	4	1—4	Annual average	Maximum	Minimum
	Total	Total	Total	Total	Gross Total			
January.....	69	100	70	15	254	9	19	3
February.....	57	91	72	23	243	9	26	1
March.....	107	144	122	46	419	15	46	"
April.....	160	162	189	68	579	21	41	9
May.....	91	108	129	54	382	14	41	3
June.....	42	44	131	22	239	8	24	"
July.....	69	51	102	20	242	9	21	2
August.....	77	71	141	41	330	12	33	4
September.....	134	134	180	46	494	18	31	7
October.....	262	249	374	100	985	35	100	14
November.....	208	314	515	177	1214	43	228	13
December.....	247	329	278	81	935	33	86	5
Twenty-eight years.	1523	1797	2303	693	6316	226	423	154
Percentage.....	24	29	36	11	100	—	—	—

In this table all the strandings have been classified according to the before mentioned four principal districts and marked down with the number in which they have occurred in the different months.

The greatest number of strandings which has happened in one month, is 228 (November 1872).

24 per Cent took place on the coasts of district 1, 29 per Cent in district 2, 36 per Cent in district 3, and 11 per Cent in district 4.

Table 3.

Percentage of Strandings, distinguishing the Parts of the Coasts on which they happened.

Months	1	2	3	4	1—4
	Percentage	Percentage	Percentage	Percentage	Percentage
January....	4,5	5,6	3,0	2,2	4,0
February...	3,7	5,1	3,1	3,3	3,9
March.....	7,0	8,0	5,3	6,6	6,6
April.....	10,5	9,0	8,2	9,8	9,2
May	6,0	6,0	5,6	7,8	6,1
June	2,8	2,4	5,7	3,2	3,8
July	4,5	2,8	4,4	2,9	3,8
August	5,1	3,9	6,1	5,9	5,2
September..	8,8	7,5	7,8	6,7	7,8
October....	17,2	13,9	16,3	14,4	15,6
November ..	13,7	17,5	22,4	25,5	19,2
December ..	16,2	18,3	12,1	11,7	14,8

The percentage of the strandings contained in the above table has been deduced from the figures contained in Table 2.

Table 4.

Percentage of Strandings, distinguishing Seasons and Parts of the Coasts where happened.

Seasons	1		2		3		4		1—4	
		Per-centage		Per-centage		Per-centage		Per-centage		Per-centage
Spring	3	24	3	23	2	19	2	24	3	22
Summer ...	4	12	4	9	4	17	4	12	4	13
Autumn....	1	40	1	39	1	46	1	47	1	42
Winter	2	24	2	29	3	18	3	17	2	23

From the percentage contained in Table 4 it will be seen, that in the four districts, taken separately, a greater number of strandings occur in autumn, than in any of the other seasons, and that, when all the coast lines of the four districts are taken as a whole, 42 per Cent of all the strandings occur in autumn, 23 in winter, 22 in spring and 13 in summer.

The subjoined diagram gives a graphic illustration of the figures contained in Table 3, and from this it will at once be seen that while the *Minimum* of strandings in districts 1 and 2 falls in the month of *June*, the *Minimum* on the coasts of districts 3 and 4 falls in *January*. The *Maximum* of strandings in district 1 falls in the month of *October*, in district 2 in *December*, in districts 3 and 4 in *November*.

The full-drawn curve exhibits in an intelligible and concise way the range of the strandings during the year and shows how they, after having had their *Absolute Minimum* in the month of *June*, increase through *July*, *August*, *September* and *October*, until they attain their *Absolute Maximum* in *November*. Gradually decreasing through *December* and *January*, the *Winter Minimum* occurs in *February*, when the number increases in *March*, attains its *Spring Maximum* in *April* and decreases again through *May* till *June*.

It ought constantly to be kept in mind, that the percentage which has furnished the materials for the construction of the diagram is based upon the number of strandings which have occurred during 28×12 , i. e. 336 months.

The figures contained in Tables 1—4 show the number of *all* the strandings that have taken place, regardless of the circumstance of their having resulted in total loss or not.

Table 5, however, is merely exhibiting the number of ships, steam and sail, that have been *totally* lost.

It appears that the total loss of steam ships has been 91, and of sailing ships 2742, which gives an average total loss for the whole period of $3\frac{2}{10}$ steam and $97\frac{9}{10}$ sail, per year.

DIAGRAM

SHOWING THE MONTHLY PERCENTAGE OF
TWENTY-EIGHT YEARS' STRANDINGS.

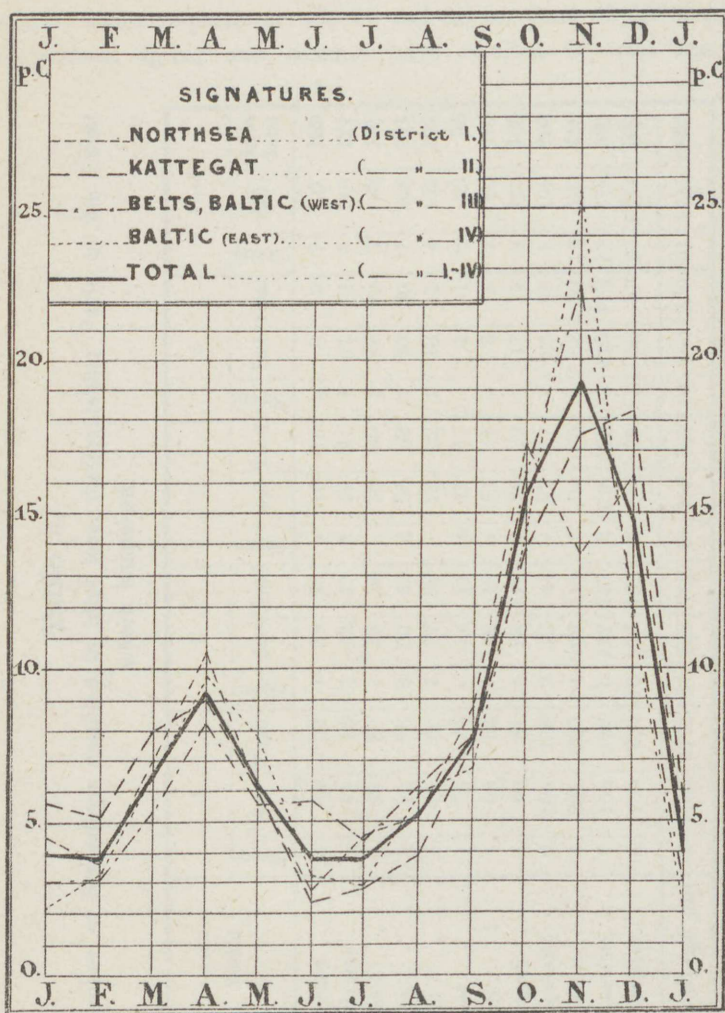


DIAGRAM
SHOWING THE MONTHLY PERCENTAGE OF
TWENTY EIGHT TRADE STANDARDS

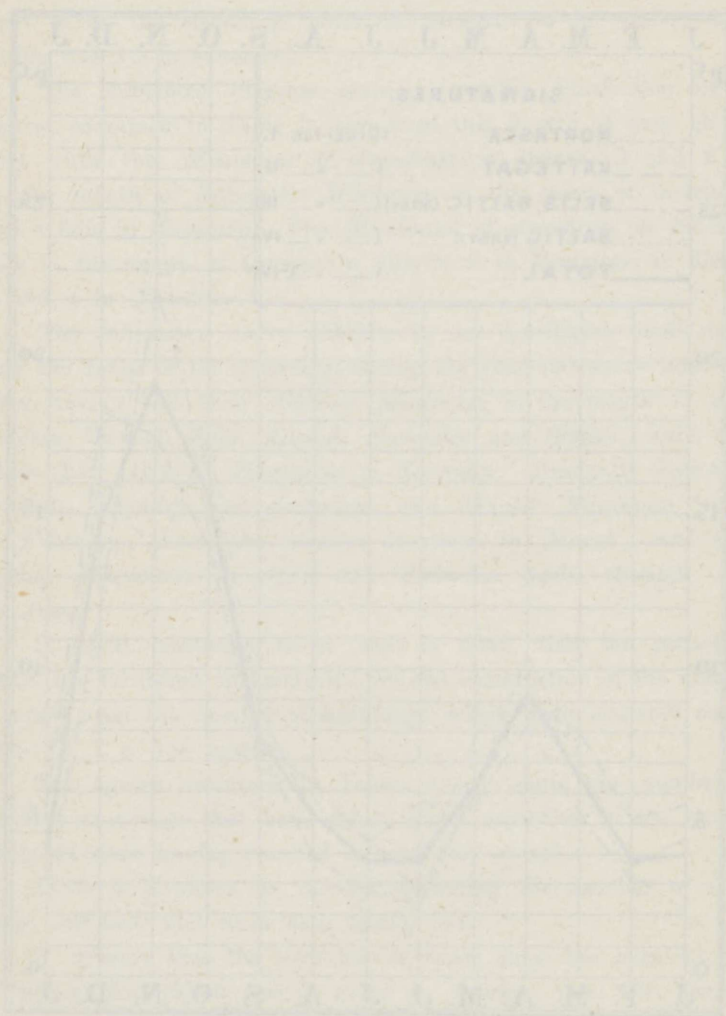


Table 5.

Number of Strandings resulted in total loss, distinguishing Parts of the Coast where happened.

Months	1			2			3			4			1—4		
	Steam	Sail	Total	Steam	Sail	Total	Steam	Sail	Total	Steam	Sail	Total	Steam	Sail	Gross Total
January	3	49	52	4	31	35	"	16	16	"	6	6	7	102	109
February	"	43	43	3	42	45	2	19	21	1	11	12	6	115	121
March	1	88	89	1	49	50	"	30	30	1	21	22	3	188	191
April	1	85	86	3	60	63	2	30	32	1	29	30	7	204	211
May	1	61	62	1	37	38	"	22	22	2	13	15	4	133	137
June	"	26	26	"	11	11	2	15	17	"	1	1	2	53	55
July	1	53	54	"	18	18	"	11	11	"	8	8	1	90	91
August	1	60	61	1	28	29	"	22	22	"	17	17	2	127	129
September	3	105	108	2	42	44	"	27	27	"	25	25	5	199	204
October	4	221	225	4	106	110	1	94	95	1	58	59	10	479	489
November	7	155	162	5	152	157	2	156	158	3	115	118	17	578	595
December	15	189	204	10	152	162	1	77	78	1	56	57	27	474	501
Twenty-eight years	37	1135	1172	34	728	762	10	519	529	10	360	370	91	2742	2833

It would hardly answer the purpose to give a table stating the number of total losses in proportion to the number of strandings; and it shall only be stated, that on all the coasts, as a whole, 49 per Cent of the strandings have resulted in total loss during winter, whilst respectively 47, 39 and 33 per Cent. of the strandings in autumn, spring and summer have resulted in total loss. If,

however, the results of the percentage in the four districts are compared, it appears that in districts 1, 2 and 4 respectively 77, 42 and 53 per Cent of the stranded ships have been totally lost, but in district 3 only 23 per Cent, a fact, that, in view of the geographical situation of our country, and the different character of the surrounding seas, will be easily understood, and when looking at the Chart, the impression will be striking that it is almost exceptional that a ship, stranded on the west coast of Jutland, escapes a total loss, whilst the greater part of the numerous strandings, which took place in the Sound for instance, are to be regarded merely as minor casualties.

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CHART
SHOWING THE
STRANDINGS ON THE COASTS OF DENMARK
AND ON THE
SWEDISH COAST BETWEEN MARSTRAND AND CARLSKRONA
DURING THE PERIOD
FROM 1ST JANUARY 1858 TO 31ST DECEMBER 1885.

FROM OFFICIAL RETURNS

COMPILED BY

J. S. HOHLENBERG.

SYMBOLS.

- Signifies a Sailing Vessel totally lost.
- ———— aground, but got off.
- ▲ ———— Steamer totally lost.
- △ ———— aground, but got off.
- Lifeboat Station.
- * — Rocket Apparatus Station.
- ⚡ — Light House.
- ⚓ — Light Vessel.

The circles round the lights indicate the distances at which the lights are seen.
The year named at the stations signifies when established.

Scale of Nautic Miles.



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