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1910

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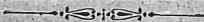
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Isforholdene i de danske Farvande i Vinteren 1910—11.

Bearbejdet af Kapt. C. I. Hansen.

Oplysningerne om Isforholdene i den forløbne Vinter er indsamlede og bearbejdede paa lignende Maade som de foregaaende Aar.

Tabel I viser Luftens Middeltemperatur og Afvigelserne fra Normalen paa 7 Steder i Landet. Som det fremgaar af Tabellen har Afvigelserne overalt været positive.

December 1910. Middellufttrykket var lavt, i Kjøbenhavn 757,6 mm^{*)} eller 3,4 mm lavere end normalt. I Maanedens første Halvdel var Vinden overvejende sydostlig, i den sidste Halvdel overvejende vestlig. Middeltemperaturen var 2,9° eller c. 2° højere end normalt, Dagene d. 6te—26de udgjorde en meget mild Periode, kun den 2den—4de og den 27de—28de havde Temperatur under Normalen. Paa Fyrskibene var den lavest aflæste Temperatur $\div 3,0^{\circ}$ (Lappegrund).

Januar 1911 havde et meget højt Middellufttryk, i Kjøbenhavn 766,6 mm eller 5,3 mm højere end normalt. Vindretningen var overvejende vestlig. Middeltemperaturen var 1,5°, hvilket er c. 2° højere end normalt. Maaneden havde 3 milde Perioder, nemlig den 1ste—12te, den 15de—22de og den 25de—28de. Paa Fyrskibene var den laveste aflæste Temperatur $\div 7,1$ (Lappegrund).

Februar havde i første Halvdel af Maaneden højt Lufttryk, i sidste Halvdel lavt Lufttryk, for hele Maaneden 759,4 mm eller 1,1 mm lavere end normalt. I Slutningen af Maaneden var Windsforholdene urolige med mildt og regnfuldt Vejr. Middeltemperaturen var c. 2° højere end normalt, kun 5 Dage havde Temperaturer lidt under Normalen, medens alle øvrige Dage gennemgaaende var milde. Paa Fyrskibene var den laveste Temperatur $\div 2,4^{\circ}$ (Lappegrund).

Marts havde omrent normalt Middellufttryk, i Kjøbenhavn 760,8 mm eller 1,5 mm højere end normalt, Vinden var overvejende omkring Øst, og Middeltemperaturen var $2\frac{1}{2}^{\circ}$, hvilket er 1,3° højere end normalt.

^{*)} reduceret til Havets Overflade og til Tyngden ved 45° Br.

The state of the ice in the Danish waters during the winter 1910—1911.

Prepared by Commander C. I. Hansen.

The informations concerning the state of the ice during the past winter have been gathered and prepared in a similar way as in the preceding years.

Tabel I gives the mean-temperature of the air and the variations from the normal at 7 places in the country. As it will appear from the table, the variations have everywhere been positive.

December 1910. The atmospherical mean-pressure was low; in Copenhagen it was 757 mm^{*)} or 3,4 mm below the normal. During the first half of the month SE.-ly winds were predominant, and during the last half, W.-ly winds. The mean-temperature was 2°,9 or about 2° above the normal, the days between the 6th and 26th forming a very mild period, and only the 2nd to 4th and the 27th and 28th had temperatures below the normal. On the light-ships the lowest temperature recorded was $\div 3,0^{\circ}$ (Lappegrund).

January 1911 had a very high atmospherical mean-pressure; in Copenhagen it was 766,6 mm, or 5,3 mm above the normal. The main-direction of the wind was W.-ly. The mean-temperature was 1°,5, that is about 2° above the normal. There were 3 mild periods during the month, viz 1st to 12th, 15th to 22nd and 25th to 28th. On the light-ships the lowest temperature was $\div 7,1$ (Lappegrund).

February. During the first half of the month the atmospherical mean-pressure was high, while it was low during the last half. The mean for the month was 759,4 mm, or 1,1 mm below the normal. During the end of the month the winds were changeable with mild and rainy weather. The mean-temperature was about 2° above the normal, only 5 days having temperatures below the normal, while all the other days were mild. On the light-ships the lowest temperature was $\div 2,4^{\circ}$ (Lappegrund).

March. The atmospherical mean-pressure was about normal; in Copenhagen it was a 760,8 mm, or 1,5 mm above the normal. The predominant wind-direction was E.-ly, and the mean-temperature was $2\frac{1}{2}^{\circ}$, which is 1,3°

^{*)} reduced to the surface of the sea and the gravity on lat. 45°.

Paa Fyrskibene var den lavest aflæste Temperatur $\div 2,5$, (Læsø Rende).

Tabel II viser de Frostdage, som indtraf i Løbet af Vinteren; denne var saa mild, at man ikke kan tale om nogen egentlig Frostperiode. Som det fremgaar at Tabellen, havde Januar de fleste Frostdage, der var jævnt fordelt over hele Maaneden.

For hele Vinteren havde Randers den største Kuldemængde ($51,6^0$), Skagen den mindste ($9,3^0$).

Tabel III viser Vandets Overfladetemperatur og Saltholdighed i Løbet af Vinteren. Middeltallene er anført for hvert Tidøgn.

Vandets Temperatur i Overfladen var gennemgaaende ret høj. I Slutningen af Januar faldt Temperaturen overalt i Farvandene noget og naaede sit laveste i de to første Tidøgn af Februar, i hvilket Tidsrum det var lavest for alle Stationer undtagen Oddesund, hvor den laveste Temperatur blev maalt i Decembers første Tidøgn. Middeltemperaturen for et Tidøgn var kun et enkelt Sted — Aalborg — under Nul. I Hovedfarvandene havde det SE-lige Kattegat den laveste Middeltemperatur.

Efter 20de Februar steg Temperaturen jævnt i alle Farvande undtagen ved Bornholm, hvor Vandet ikke bliver saa koldt som i Kattegat og Bælt.

Saltholdigheden var gennemgaaende lavest i sidste Tidøgn af Marts, særlig i Sundet var den ret lav.

I Tabel IV er opført Resultaterne af de rundt om ved Kysterne o. fl. Steder anstillede daglige Iagttagelser over Isforholdene og disses Indflydelse paa Besejlingstorholdene. Naar en i Tabel V anført Lokalitet er udeladt i Tabel IV i en eller flere Maaneder, har der ingen Is været paa det paagældende Sted. I Tabel V er alle de Steder anført, hvorfra der anstilles Observationer.

For at hjælpe til en ensartet Bedømmelse er Isforholdene udtrykt ved Tal, som har følgende Betydning:

Isfrit	o	Svær Driv-Is	5
Løs Sjap- og Kvadder-Is	1	Pak-Is	6
Sammenpakket Sjap- og		Skrue-Is	7
Kvadder-Is	2	Tynd Fast-Is	8
Spredt Driv-Is	3	Svær Fast-Is	9
Driv-Is	4		

higher than normal. On the light-ships the lowtse temperature recorded was $\div 2,5$ (Læsø Rende).

Table II gives the frosty days which occurred in the course of the winter, this, however, being so mild, that one cannot speak about any real »frosty period«. As it will appear from the table, January had the greatest number of frosty days, these being equally distributed all over the month.

For the whole winter Randers had the greatest »amount of cold« ($51,6$) Skagen the least ($9,3$).

Table III gives the surface-temperature and the salinity of the water during the winter, the means being given for each decade.

The surface-temperature of the water was generally rather high. Towards the end of January the temperature went somewhat down in all the waters, attaining its minimum during the two first decades of February, this being the coldest period for all the stations except Oddesund, where the lowest temperature was recorded during the first decade of December. Only at one station — Aalborg — did the mean-temperature go below Zero. Of the open fairways, the SE-ly Kattegat had the lowest mean-temperature.

After February 20th the temperature rose gradually in all the waters except at Bornholm, where the water does not get so cold as in the Kattegat and the Belts.

The salinity was generally lowest during the last decade of March, and especially in the Sound is was comparatively low.

Table IV contains the results of the daily observations concerning the state of the ice and its influence on the navigation from the various stations. The non-appearance in the table IV for one month or more of one of the stations mentioned in table V means, that no ice has been observed at that station during the time in question. Table V gives the names of all the stations, at which observations are taken.

In order to obtain an equal judgement, the state of the ice is indicated by numbers having the following signification.

Ice-free	o	Heavy Drift-ice	5
Brash- and pancake-ice	1	Pack	6
Packed brash- and pan-		Screw-ice	7
cake-ice	2	Thin fixed-ice	8
Open ice	3	Heavy fixed-ice	9
Drift-ice	4		

Til nærmere Forklaring på disse Benævnelser tjener følgende Beskrivelse:

1. *Sjap-Is* kaldes den Masse, der dannes af Sne og Vand eller af smaa Ispartikler, saalænge den ikke er frosset sammen endnu. *Kvadder-Is* kaldes de smaa, i Reglen afrundede Isflader eller Isklumper, som kan optræde for sig, førte sammen af Vind og Sø, men som hyppig træffes i Forbindelse med Sjap-Is.
2. *Sammenpakket Sjap- og Kvadder-Is* er Sjap-Is eller Kvadder-Is eller begge Dele i Forening, som paa Grund af Kuling eller Strøm, eller mulig Hindring for Isens Bevægelse, er pakket sammen i en grød-lignende Masse af antagelig Tykkelse.
3. *Spredt Driv-Is*. Isflager eller Iskodser, som med større Mellemrum er spredte over Farvandet, og som er i Drift.
4. *Driv-Is*. Isflager eller Iskodser i mere samlede Masser, som er i Drift.
5. *Svær-Driv-Is*. Svære Isflager eller Iskodser i samlede Masser, som er i Drift.
6. *Pak-Is*. Svære Iskodser, som af Kuling eller Strøm, eller, hvad oftest er Tilfældet, paa Grund af Indsnævring af Farvandet, er pakkede sammen til en svær tæt Masse.
7. *Skrue-Is*. Is, som skruer.
8. *Tynd Fast-Is*. En sammenfrosset, landfast Isflade af mindre Styrke.
9. *Svær Fast-Is*. En sammenfrosset, landfast Isflade af betydelig Styrke.

Besejlingsforholdene er udtrykt ved Tal, som har følgende Betydning:

Skibsfarten uhindret	1
» vanskelig for Sejlskibe	2
» vanskelig; for Sejlskibe kun mulig med Bugserhjælp	3
» lukket for Sejlskibe	4
» kun mulig for kraftige Dampere. 5	
» kun mulig med Isbryderhjælp . 6	
» helt lukket	7
Rende holdes aaben med Isbryder	8

Tabel V er Sammendrag af Tabel IV, men er tillige Fortegnelse over alle Observationsstederne. For hvert Sted er anført, hvormange Dage der har været

The following description gives a more precise explanation of the above designations:

1. *Brash-ice* is a mass consisting of snow and water or of very small pieces of ice not yet frozen together. *Pancake-ice* consists of small, generally round ice-flakes or ice-lumps. It may appear alone, brought together by the wind or the sea, but it often appears in connection with *brash-ice*.
2. *Packed brash- and pancake-ice* is brash-ice or pancake-ice or both at the same time, which has been packed together in a turbid mass of considerable thickness either by the wind or the current or by some obstruction to the free drift of the ice.
3. *Open-ice* is drifting ice-flakes or hummock-ice scattered over the water with greater intervals.
4. *Drift-ice* is drifting ice-flakes or hummock-ice in more collected masses.
5. *Heavy drift-ice* is drifting heavy ice-floes or hummock-ice in close masses.
6. *Pack* means heavy ice-floes, which have been packed together in heavy dense masses either by the wind, or the current or — as it is generally the case — by a narrowing of the waters.
7. *Screw-ice* means ice that is screwing or nipping.
8. *Thin fixed-ice* means thin land-ice.
9. *Heavy fixed-ice* means heavy land-ice.

The conditions of the navigation is indicated by numbers having the following signification.

Navigation unimpeded	1
» difficult for sailing vessels	2
» difficult, impossible for sailing ves- sels without tug-boat.....	3
» closed for sailing vessels.....	4
» only possible for powerful stea- mers	5
» impossible without assistance of ice-breaker.....	6
» quite closed.....	7
Channel kept open by means of ice-breaker	8

Table V is a summary of Table IV but also a list of all the stations. For each station is put down the number of days with ice of the various descriptions

Is af de forskellige Arter, og hvormange Dage Skibs-farten har været paavirket deraf. Endvidere findes Rubrikker for det samlede Dageantal med Is samt for Tiderne for første og sidste Ismelding. Det maa dog erindres, at Stedet i Mellemtiden godt kan have været isfrit selv i længere Tid.

I sidste Rubrik er der for enkelte Pladser anført den største Tykkelse i cm, som Isen har naaet.

Kort Oversigt over Isforholdene i de forskellige Farvande.

Jyllands Vestkyst var isfri; Ringkjøbing Fjord havde Is i 6 Dage.

Limfjorden havde Is i ganske faa Dage.

Kattegat og Havnene derved var isfri. I Fjordene var der Sjapis i en halv Snæ Dage.

Sundet og Havnene derved var isfri.

Store Bælt og Havnene derved var isfri. I Nak-skov Fjord var der Is i en halv Snæ Dage.

Lille Bælt var isfri. Kolding- og Vejle Fjorde havde lidt Is i 2 à 3 Uger.

Østersøen var isfri. I Rønne Havn var Is i en halv Snæ Dage.

De indre Farvande var gennemgaaende isfri, hist og her var der nogen Isdannelse. I Isefjorden havde Roskilde Havn 20 Dage med Is. I Smaalandsfarvandet havde Guldborgsund en halv Snæ Dage med Is og Vordingborg Havn 20 Dage og Bøgestrømmen c. 2 Uger. Farvandene Syd for Fyn var isfrie, dog havde Svendborg Havn Is i c. 1 Uge.

Det højeste Antal Dage med Is — 31 — havde Skive Havn og Fjord.

Den første Is viste sig den 24de November (Skive); den sidste Is forsvandt den 17de Februar (Guldborgsund udfør Nykøbing samt Farvandet fra Kallehave til Stege).

Isens Tykkelse blev maalt fra 11 Stationer i de indre Farvande; den gennemsnitlige Tykkelse var 4,0 cm, den største Tykkelse ren Is blev maalt i Vordingborg og var 10 cm.

Pakis og Skrueis blev ikke observeret i Vinterens Løb.

Ismeddelelsestjenesten var ikke i Virksomhed, da der i Vinterens Løb ikke viste sig Is i Hoved-farvandene.

and the number of days, on which the navigation has been affected by the ice. Further rubrics will be found giving the total number of days with ice, and the dates of the first and the last report of ice. However, it must be noted, that in the intermediate time the station may very well have been ice-free, even for a longer period.

In the last column is — for some of the stations — given the greatest thickness in cm, which the ice has attained.

Brief summary of the state of the ice in the various waters.

The W-coast of Jutland was icefree; in Ringkjøbing-Fjord there was ice during 6 days.

Limfjorden had ice only for a very few days.

The Kattegat and its ports were ice-free. In the fjords there was brash-ice for about ten days.

The Sound and its ports were ice-free.

Great-Belt and its ports were ice-free. In Nak-skov-Fjord there was ice for about ten days.

Little Belt was ice-free. In Kolding-Fiord and Vejle-Fiord there was a little ice during 2 to 3 weeks.

The Baltic was ice free. Rønne harbour had ice for about 10 days.

The closed waters were generally ice-free, still here and there a little ice was formed. In Isefjorden Roskilde harbour had ice for about 20 days. In Smaalandsfarvandet Guldborgsund had ice for about 10 days, Vordingborg harbour 20 days and Bøgestrømmen about 2 weeks. The waters S. of Fyen were ice free, only Svendborg harbour had ice for about a week.

The greatest number of days with ice — 31 — occurred in Skive harbour and Fiord.

The first ice appeared November 24th (Skive); the last ice disappeared February 17th (Guldborgsund off Nykøbing and the water from Kallehave to Stege).

The thickness of the ice was measured at 11 stations in the closed waters; the mean-thickness was 4,0 cm; the greatest thickness of clean ice was measured at Vordingborg and amounted to 10 cm.

Throughout the winter neither pack nor screw-ice was observed.

The ice-signal-service was not at work, as no ice appeared in the principal fairways during the winter.

I Tab. VI gives en Oversigt over Fyrskibenes Inddragning for Is i de sidste 33 Aar.

Til Sammenligning mellem de forskellige Vintre tjener følgende Tabel, hvor Tallene angiver det gennemsnitlige Antal Dage med Is for de forskellige Farvande og Havne:

Table VI gives a general view of the withdrawal of light-ships on account of ice during the last 33 years.

The following table serves to compare the various winters, the figures giving the average number of days with ice in the various waters and harbours.

	1906—1907	1907—1908	1908—1909	1909—1910	1910—1911
Aabne Farvande (<i>The fairways</i>)	6.6	0.2	18.6	0.1	0
Havne ved aabent Farvand (<i>Harbours situated at the fairways</i>)	17.4	2.9	28.4	2.2	0.5
Tildels lukkede Farvande (<i>Partly closed waters</i>)	24.2	6.7	41.0	21	0.2
Havne ved indelukkede Farvande (<i>Harbours situated in closed waters</i>)	52.8	25.5	69.2	14.2	9.6
Indelukkede Farvande (<i>Closed waters</i>)	57.9	32.2	66.3	20.7	5.6
Alle Stationer (<i>All stations</i>)	30.3	10.1	38.8	5.7	2.4

Det fremgaar tydeligt af denne Tabel, hvilken ualmindelig isfri Vinter, det har været i 1910—1911.

From this table it will plainly appear how uncommonly ice-free the winter 1910—11 has been.

Meteorologisk Institut bringer sin Tak til alle de Observatorer, hvis Jagttagelser har gjort det muligt at fremkomme med de foreliggende Oplysninger om Isforholdene i de danske Farvande i Vinteren 1910—1911.

The Meteorological Institute expresses its thanks to the many observers, who have made it possible to publish the present particulars concerning the state of the ice in the Danish waters during the winter 1910—1911.

Tab. I.

Luftens Middeltemperatur samt Afgigelserne fra Normalen i Vinteren 1910—1911.

The main temperature of the air and the variations from the normal temperature during the winter 1910—1911.

		Fanø (Nordby)	Skagen (Fyret)	Randers (Strømmen)	Samsø (Tranebjerg)	Bogø (Navig. Skolen)	Kjøbenhavn (Met. Inst.)	Hammershus (Sandvig)
December	Middeltemp.. Afgelsen ..	3.3 + 1.6	3.7 + 1.9	2.5 + 2.0	3.5 + 1.8	3.3 + 2.2	3.5 + 2.3	3.7 + 1.9
Januar	Middeltemp.. Afgelsen ..	2.2 + 2.0	2.6 + 1.9	1.4 + 1.7	1.9 + 1.6	1.5 + 1.8	2.0 + 2.0	—
Februar	Middeltemp. Afgelsen ..	2.5 + 2.0	2.3 + 2.2	1.6 + 1.9	2.2 + 1.9	1.6 + 1.6	1.8 + 1.9	0.9 + 0.7
Marts	Middeltemp.. Afgelsen ..	2.6 + 0.9	2.5 + 1.6	2.1 + 1.1	2.7 + 1.3	2.8 + 1.3	2.8 + 1.6	2.3 + 1.2

Frostperiode og Frostdage i Vinteren 1910—1911.

The frosty periods and frosty days during the winter 1910—1911.

Tab. II.

	November			December			Januar			Februar			Marts			April			Samlede Kulde-mængde Total amount of cold
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	Samlede Kulde-mængde Total amount of cold
Fanø (Nordby)	a b c			24/11—27/11 4 — 5.2	3/12 1 — 0.7	27/12 1 — 1.7	5/1—6/1 2 — 0.8	12/1—13/1 2 — 1.4	23/1 1 — 1.6	20/1—30/1 2 — 4.8	8/2—18/2 4 m. A. — 4.2	18/3—19/3 2 — 0.4	26/3 1 — 0.3	3/4—5/4 3 — 4.8				— 25.9	
Skagen (Fyret)	a b c					27/12 1 — 0.5		12/1 1 — 0.5	28/1 1 — 0.2	29/1—30/1 2 — 3.2		17/3—19/3 3 — 1.2		4/4—5/4 2 — 3.7				— 9.3	
Randers (Strømmen)	a b c	6/11 1 — 1.0	12/11—18/11 2 — 0.5	28/11—27/12 5 — 4.5	1/12—4/12 3 m. A. — 5.9	27/12—30/12 3 — 3.6	5/1—7/1 3 — 2.2	12/1—14/1 3 — 5.0	23/1 1 — 2.6	29/1—31/1 3 — 8.1	1/2 1 — 1.4	6/2—18/2 7 m. A. — 7.8	18/3—21/3 4 — 3.1	3/4—5/4 3 — 5.9				— 51.6	
Samsø (Tranebjerg)	a b c					27/12 1 — 0.4		12/1—14/1 1 — 0.4	28/1 1 — 1.5	29/1—30/1 2 — 2.2		6/2—18/2 4 m. A. — 4.9		8/4—5/4 3 — 4.0				— 14.8	
Bogø (Navig. Skolen)	a b c			25/11 1 — 0.5		27/12—28/12 2 — 1.5	5/1 1 — 0.1	12/1—14/1 2 — 2.3	28/1—24/1 2 — 2.5	29/1—31/1 3 — 6.2		6/2—18/2 6 m. A. — 6.9	18/3 1 — 0.4	3/4—5/4 3 — 5.8				— 26.2	
København (Met. Inst.)	a b c			25/11 1 — 0.4	3/1, 1 — 0.7	27/12—28/12 2 — 2.2	5/1 1 — 0.2	12/1—14/1 2 — 2.7	23/1 1 — 1.1	29/1—31/1 3 — 6.6		6/2—18/2 6 m. A. — 3.7	18/3 1 — 0.5	3/4—5/4 3 — 5.9				— 24.0	
Hammershus (Sandvig)	a b c											6/2—14/2 6 m. A. — 8.4	20/2—21/2 2 — 1.1	18/3—20/3 2 — 1.1	4/4—6/4 3 — 5.0				— 15.6

Ind. I: a er Frostperiodens Varighed (the duration of the frosty period).

b er Antal af Dage, hvil Middeletemperatur var under 0° (number of days with a mean-temperature below 0°).

c er Kuldesummen (Produktet af Frostperiodens Middeletemperatur og Dageantallet) (the amount of cold (the product of the mean-temperature of the frosty period and the number of days of the period)).

Tab. III.

Middeltal af Vandets Overfladetemperatur og Saltholdighed Kl. 8 Fm. i Vinteren 1910—1911.

The mean-temperature and -salinity of the surface-water at 8 a. m. during the winter 1910—1911.

(Det øverste Tal i hver Rubrik angiver Temperaturen, det underste Saltholdigheden.)

(The upper number in each rubric indicates the temperature, the lower the salinity).

1910—1911	Skagens-Rev	Læsør-Rende	Anholt-Knob	Lappe-Grund	Gjedser-Rev	Oddesund	Aalborg	Middelfart	Svendborg-Sund	Kolby-Kaas	Sprosgø	Kjels-Nor	Rørvig	Middelgrunds-foret	Masnedø	Christiansø
1/12—10/12	4.9 28.1	4.1 24.6	4.2 22.0	5.4 9.0	0.7 26.2	1.0 18.5	4.0 17.6	3.6 18.0	3.8 14.1	3.9 12.0	4.1 22.5	2.6 8.4	5.2 8.5	4.0 6.2	6.5	
11/12—20/12	5.2 28.5	4.6 23.1	4.2 20.5	4.9 12.2	5.1 8.9	2.5 26.7	2.9 21.3	3.8 17.5	3.6 19.0	4.3 16.9	4.6 12.3	4.5 11.3	3.7 21.7	5.7 10.5	4.4 9.3	6.2
21/12—31/12	4.6 32.2	4.4 27.4	3.9 23.6	3.7 20.4	4.1 15.4	3.0 28.0	1.8 21.0	4.1 20.7	3.7 21.2	3.5 19.9	3.9 18.6	4.2 21.1	2.8 21.2	4.5 21.2	3.2 11.5	5.5
1/1—10/1	4.1 32.1	3.2 27.8	3.4 25.0	2.9 12.7	3.2 13.2	1.6 26.9	0.5 18.4	3.5 19.7	3.1 18.7	2.8 23.2	3.2 20.0	3.0 17.1	1.7 21.9	3.8 11.6	2.8 10.2	4.5
11/1—20/1	4.1 32.8	3.6 30.1	2.9 26.2	2.4 20.5	2.4 13.9	1.5 27.5	0.7 20.9	2.9 21.4	2.6 19.6	2.5 23.7	3.0 21.4	2.7 18.4	1.9 22.1	3.3 16.7	2.1 12.0	4.2 5.8
21/1—31/1	4.1 33.2	3.3 31.4	2.6 26.2	2.3 19.7	2.1 13.7	2.5 28.2	1.8 22.4	3.0 21.0	2.1 18.9	2.5 25.1	2.8 22.9	2.5 19.9	1.5 22.4	2.5 14.9	1.9 10.9	3.5 6.1
1/2—10/2	3.1 32.6	1.8 30.2	1.3 24.0	1.3 10.0	1.6 9.6	1.2 27.6	—0.2 21.9	2.3 20.5	1.8 19.9	1.3 22.4	1.7 17.2	1.7 15.2	0.5 23.3	1.5 9.2	1.0 7.8	3.0 6.1
11/2—20/2	3.0 33.1	1.8 28.5	1.5 24.4	1.2 14.1	1.5 11.1	0.7 28.1	0.7 22.1	1.5 20.4	1.5 20.1	1.4 19.0	1.5 15.6	1.3 13.1	0.8 22.4	1.8 14.0	1.8 9.4	2.3 6.4
21/2—28/2	3.1 32.2	2.6 30.6	2.8 28.7	2.2 23.6	2.1 15.9	2.8 28.9	1.8 21.8	2.9 22.2	2.3 19.9	2.4 24.7	2.6 23.6	2.5 19.4	2.0 23.4	2.0 23.8	2.3 12.2	2.3 6.4
1/3—10/3	3.6 32.1	2.9 29.3	3.0 28.4	2.8 16.8	2.5 12.9	2.9 27.0	2.7 22.4	3.0 22.4	2.8 19.9	2.5 25.0	3.0 22.8	2.6 20.0	2.7 23.5	2.9 12.7	2.8 10.2	2.5 6.7
11/3—20/3	3.2 30.4	2.8 27.1	2.9 25.9	2.8 8.5	2.5 8.4	2.6 26.0	2.6 22.1	3.2 19.9	3.4 19.7	2.8 18.9	2.8 11.9	2.6 11.5	3.0 23.4	2.9 8.5	2.4 7.0	2.3 6.8
21/3—31/3	3.0 23.3	2.6 18.6	2.6 15.4	2.5 8.0	2.5 8.0	2.1 24.6	2.6 22.3	2.8 17.3	3.5 19.3	2.3 12.1	2.6 9.5	2.5 9.1	2.7 19.5	2.9 7.8	2.4 8.1	2.5 6.8

Daglige lagttagelser over Is- og Besejlingsforholdene

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Tab. IV.

i de danske Farvande for Vinteren 1910—1911.

Daily observations concerning the ice and the navigation in the danish waters during the winter 1910—1911.

		November																													Bemærkninger Remarks					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
	Limfjorden.																																			
Skive Havn og Fjord	{Isforh. Besejlfh.	8	8	8	8	8	.	.	6 cm. d. 28.
	Lille Bælt.																																			
Vejle Havn og Fjord	{Isforh. Besejlfh.	8	8	I	I	I	I	I	I cm. d. 28.
Kolding Havn og Fjord	{Isforh. Besejlfh.	8	2	2	I	I	I	I	I	
	Jyllands Vestkyst.																																			
Ringk. Fjord (nordl. Del)	{Isforh. Besejlfh.	.	I	I	I	I	I	2			
	Limfjorden.																																			
Thyborøn Kanal	{Isforh. Besejlfh.	.	3	3	2 cm. d. 4.	
Lemvig Havn og Lem-Vig	{Isforh. Besejlfh.	.	8	7	0.5 cm. d. 4.	
Oddesund	{Isforh. Besejlfh.	.	I	I	I	0.5 cm. d. 4.	
Skive Havn og Fjord	{Isforh. Besejlfh.	.	I	8	8	8	8	8	3	3	3	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6 cm. d. 4.		
Limfjorden udfor Nibe	{Isforh. Besejlfh.	.	8	8	8	8	8	2	2	2	2	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Kattegat.																																			
Mariager Fjord	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	2				
Randers Fjord	{Isforh. Besejlfh.	.	I	I	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	I	I					
	Store Bælt.																																			
Nakskov Havn	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	2				
	Lille Bælt.																																			
Vejle Havn og Fjord	{Isforh. Besejlfh.	8	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I cm. d. 13.					
Kolding Havn og Fjord	{Isforh. Besejlfh.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2 cm. d. 31.						
	Isefjorden.																																			
Roskilde Havn	{Isforh. Besejlfh.	.	8	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	Farvandet S. for Fyen.																																			
Svendborg Havn	{Isforh. Besejlfh.	.	8	I	0.4 cm.	
	Januar																																			
	Jyllands Vestkyst.																																			
Ringk. Fjord (nordl. Del)	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	4					
	Limfjorden.																																			
Lemvig Havn og Lem-Vig	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	4	.	.			
Skive Havn og Fjord	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	I	I	.	.	I	8	5 cm. d. 31.
Limfjorden udfor Løgstør	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	.	.	I	2	2
Limfjorden udfor Nibe	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	2	.	.	I	2	2
Limfjorden Aalborg—Hals	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	I	I	.	.	I	2	2

Tab. IV.

i de danske Faryande for Vinteren 1910—1911.

Daily observations concerning the ice and the navigation in the danish waters during the winter 1910—1911.

		Januar																													Bemærkninger Remarks			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
	Kattegat.																																	
Mariager Fjord	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	8	2	8	.	.	.	.	.	.	.	.	.	.	.	.	8	8	8		
Randers Fjord.....	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	1	8	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	2			
Horsens Havn og Fjord...	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	8	8		
Odense Havn og Kanal...	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	8	.	.	.	.	.	.	.	2	2	2			
Mellem Revsnæs—Samsø ..	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	2		
	Store Bælt.																																	
Nakskov Havn	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	8	8	.	.	.	.	.	.	.	8	8	.	.	.	.	.	8	2	2	2	2		
Nakskov Fjord	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	2	8	.	.	.	.	.	.	8	8	.	.	.	.	.	.	8	8	8	2	2			
	Lille Bælt.																																	
Vejle Havn og Fjord	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	8	.	.	.	.	.	8	8	8	2	2	2	
Kolding Havn og Fjord...	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	8	8	.	.	.	.	.	.	.	2	2	.	.	.	.	.	8	8	8	2	2	2	4 cm. d. 31.	
	Østersøen.																																	
Præstø Havn og Fjord ...	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8	2	2		
	Bornholm.																																	
Rønne Havn	{Isforh. Besejlfh.	.	.	.	.	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	2 cm. d. 13.		
	Isefjorden.																																	
Holbæk Havn og Fjord ..	{Isforh. Besejlfh.	8	8	1	1	8	2
Roskilde Havn	{Isforh. Besejlfh.	8	8	2	2	2
Fjorden udfor Frederiksv.	{Isforh. Besejlfh.	8	2
	Smaalandsfarvandet.																																	
Guldborgsund udf. Nykb...	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	8	8	.	.	.	2	2	.	.	.	.	.	.	.	.	.	.	8	8	8	2	2	2
Vordingborg Havn	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	8	.	.	.	2	.	.	.	.	8	.	.	.	.	.	.	2	.	2	2	2	2	
Kallehave—Stege.....	{Isforh. Besejlfh.	8	1	.	.	.	2	1	4	2
Bøgestrømmen	{Isforh. Besejlfh.	.	.	.	.	.	.	.	.	.	8	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	3	2	2	2	2
	Farvandet S. for Fyen.																																	
Svendborg Havn	{Isforh. Besejlfh.	8	.	.	.	1	8	8	1	1	1		

Februar

Daglige lagttagelser over Is- og Besejlingsforholdene

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Tab. IV.

i de danske Farvande for Vinteren 1910—1911.

Daily observations concerning the ice and the navigation in the danish waters during the winter 1910—1911.

Tab. V. Summary of Tab. IV.

Tab. V. (Sammendrag af Tabel IV.)
Summary of Tab. IV.

Oversigt over Inddragningen af danske Fyrskibe under Isforhold.

Oplysningerne strækker sig over 33 Aar.

Withdrawal of Danish light-ships during ice.

The informations extend over 33 years.

	Vinteren 1910—1911		Antal Dage fra Station paa Grund af Is <i>Number of days of the station on account of ice</i>	Har i 33 Aar været inddraget withdrawn during 33 years			Bemærkninger <i>Remarks</i>
	Inddraget <i>withdrawn</i>	Udlagt <i>replaced</i>		i Antal Vintre <i>Number of winters</i>	ialt Dage <i>Total number of days</i>	Antal Dage pr. Vinter med Is <i>Number of days pr. winter with ice</i>	
Horns-Rev			—	I	3	3	
Vyl.....			—	I	12	12	
Graadyb			—	0	0	0	{ Udlagt i 1906 Established in 1906
Skagens-Rev			—	10	368	37	
Læsø-Trindel			—	11	391	36	
Østre-Flak			—	I	20	20	{ Udlagt i Juli 1908 Established in July 1908
Anholt-Knob.....			—	12	442	37	
Læsø-Rende			—	11	404	37	
Schultz's-Grund			—	11	457	42	
Lappe-Grund			—	11	290	26	{ Oplysningerne strækker sig kun over 29 Aar The informations only extend over 29 years
Drogden			—	12	491	41	
Gjedser-Rev			—	11	495	45	
Hals.....			—	—	—	—	
Ikke inddraget i Vinteren 1910—11 <i>Not withdrawn during the winter 1910—11</i>		Ikke inddraget i Vinteren 1910—11 <i>Not withdrawn during the winter 1910—11</i>					