DTU Aqua

Cruise Report

R/V Dana

Cruise 08/2020

”DK IBTS 3Q 2020”

Vessel: R/V DANA

Cruise number: 08/20

Cruise dates (planned): 28/7 – 14/8 2020

Cruise name: DK IBTS 3Q 2020

Port of departure:	Hirtshals	**Date:**	28 July
Port of return:	Hirtshals	**Date:**	14 August
Other ports:	Esbjerg	**Date and justification:**	5 August: Scheduled exchange of scientific staff and crew

Participants

Leg 1: Hirtshals – Esbjerg		
Name	**Institute**	**Function and main tasks**
Helle Rasmussen	DTU Aqua, Monitering	Cruise leader, Fish lab
Maria Jarnum	DTU Aqua, Monitering	Technician, Fish lab
Per Christensen	DTU Aqua, Monitering	Technician, Fish lab
Flemming Thaarup	DTU Aqua, Monitering	Technician, Fish lab
Jan W. Thomsen	DTU Aqua, Monitering	Technician, Fish lab
Christian Petersen	DTU Aqua, Monitering	Technician, CTD, Maintenance
Peter Munk	DTU Aqua, Oceans and Arctic	Scientist, Fish eggs and larvae
Nathan Gravier	DTU Aqua	Scientist, Jellyfish

Leg 2: Esbjerg – Hirtshals		
Name	**Institute**	**Function and main tasks**
Kai Wieland	DTU Aqua, Monitoring	Cruise leader, Fish lab
Stina Hansen	DTU Aqua, Monitoring	Technician, Fish lab
Tom Svoldgaard	DTU Aqua, Monitoring	Technician, Fish lab
Anne-Mette Kroner	DTU Aqua, Monitoring	Technician, Fish lab
Mads Jensen	DTU Aqua, Monitoring	Technician, Fish lab
Christian Petersen	DTU Aqua, Monitoring	Technician, CTD, Maintenance
Bastian Huwer	DTU Aqua	Scientist, Fish eggs and larvae
Nathan Gravier	DTU Aqua	Scientist, Jellyfish

Objectives

The survey is part of the 3rd quarter International Bottom Trawl Survey (IBTS) in the North Sea, which is coordinated by the ICES International Bottom Trawl Survey Working Group and has been conducted with standard fishing gear in the 3rd quarter since 1991.

The IBTS aims to provide ICES assessment and science groups with consistent and standardised data for examining spatial and temporal changes in (a) the distribution and relative abundance of fish and fish assemblages; and (b) of the biological parameters of commercial fish species for stock assessment purposes. The main objectives in the 3rd quarter IBTS are to:

- To determine the distribution and relative abundance of pre-recruits of the main commercial species (cod, haddock, whiting, Norway pout, saithe, herring, sprat, and mackerel) with a view of deriving recruitment indices;
- To monitor changes in the stocks of commercial fish species independently of commercial fisheries data;
- To monitor the distribution and relative abundance of all fish species and selected invertebrates;
- To collect data for the determination of biological parameters for selected species;
- To collect hydrographical and environmental information.
- To collect information of the amount and distribution of marine litter

The area to be covered by Denmark with RV Dana in the 3rd quarter 2020 was allocated during the IBTS Working Group meeting in April 2020. Technical details are described in the current version of the survey manual (ICES 2015. Manual for the International Bottom Trawl Surveys. Series of ICES Survey Protocols. SISP 10-IBTS IX. 86 pp.). Collection of information on the trawl setting and retrieval duration of the standard 30 minute tows which has been started in 2018 based on a request by the ICES IBTSWG was continued to supplement the existing international data set.

Additional midwater sampling with a MIK net for fish larvae and jellyfish was conducted during night.

Itinerary

R/V Dana left Hirtshals on Tuesday 28th July at 11:05 local time. The field work started in the western Skagerrak (Fig. 1). The vessel stayed in the port of Esbjerg on Wednesday 5th August from 9:30 to 12:15 for a scheduled exchange of scientific staff and crew.. R/V Dana returned to Hirtshals on Friday 14th August at 8:45 local time.

Rough weather conditions delayed the sampling progress in the northeastern part of the survey area during the beginning of the survey whereas favorable weather conditions prevailed thereafter and in particular during the 2nd cruise leg (Fig. 2).

Achievements

The working area consisted of 47 ICES statistical rectangles located in the Skagerrak and the North Sea and in 7 of these rectangles two stations were planned (Fig. 1).

The following activities were carried out:

54 valid standard trawl hauls with a GOV 36/47 (chalut á Grande Overture Verticale), all hauls were carried with the standard groundgear A (see IBTS Manual for specifications) and with 60 m sweeps. In all of hauls Vonin flyers were used replacing the standard kite.

54 CTD profiles (with additional sensors for dissolved oxygen, fluorescence and turbidity) at standard GOV stations.

Additional three so-called 0-minute and one 15-min experimental GOV tow were carried

out adjacent to the standard 30-minute tow in rectangle 39F6. This was done in order to supplement an existing international data set for analyzing the effect of tow duration on catch rates of demersal fish species.

Results

Routine sampling

The trawl parameters for the standard tows (Vertical net opening and door spread) as monitoring with a Scanmar system were in the range or close to the suggested limits specified in the IBTS manual in most cases (Fig. 3). A brand new polyethylene (PE) GOV trawl was used which showed some deviations from the net geometry observed with an older PE GOV applied in the past two years durin the first part of the survey. The reasons that the two PE GOV's are obviously not identical although delivered from the same company could not be resolved. The remaining deviations from the theoretical values for door spread and in particular net opening from flume tank experiments can likely be attributed to the high sensibility of the GOV to current effects and bottom type. Sensors for wing spread have not been available on this survey.

In total, 77 different species of fish, cephalopods and crustaceans were found in catches. The total weight of the catches from the 58 tows has been 32 tons (Tab. 1). Total catch and species richness in the standard tows ranged from 26 kg to 3.7 tons and from 12 to 33 different fish and IBTS invertebrate species, and high and species-rich catches were predominantly recorded in the southern and southwestern part of the survey area (Fig. 4).

Length measurements were made for all commercial and non-commercial fish species. Sharks, skates and rays and selected shellfish species were measured separately by sex (length composition and weight). Single fish data (length, weight, sex and maturity) and otoliths were collected for the main commercial species (cod, haddock, whiting, Norway pout, saithe, herring, sprat, mackerel and plaice) as well as for hake in order to fulfil requirements of the national DCF (Data Collection Framework of the European Union) sampling requirements (Tab. 2). The preliminary abundance indices for the main commercial species indicate that e.g. whiting but also mackerel and plaice were widely distributed in the survey area whereas cod was quite rare and it appears noteworthy that only very few 0-group cod was caught (Tab. 3).

Catch and species composition for the experimental tows (Fig. 6, Tab. 4) will further be analyzed in combination with the international data collected on this issue in the previous years.

Total 'fishing' time and additional time the trawl was on the bottom outside the nominal tow duration of the 30 min standard tows ranged from 9 to 19 min and 4 to 9 min, respectively, of which total fishing time is positively correlated to depth, and winch speed during deployment and retrieval amounted to about 0.9 and 1.1 m/s on average (Fig. 5).

Marine litter was recorded in each GOV catch using four main categories: plastic, glass, metals and miscellaneous, which were subdivided in several minor categories to meet the request by the IBTS Working Group. The total amount of marine litter was 14.3 kg.

Temperature, salinity and dissolved oxygen content at surface and bottom were extracted from the CTD profiles for storage in the institute's fish data base. The temperature and salinity values will be submitted to the ICES DATRAS database together with the GOV catch

results and measurements of surface and bottom currents (speed and direction) at the trawl stations to DATRAS, and the complete CTD profiles will be submitted to the ICES hydrographical data center.

Additional activities

Selected fish and squid species collections were taken for education and open ship arrangements at DTU Aqua.

Results of the plankton sampling conducted during night will be reported later somewhere else.

Others

A cruise summary report has been delivered online to

http://seadata.bsh.de/csr/online/V1_index.html.

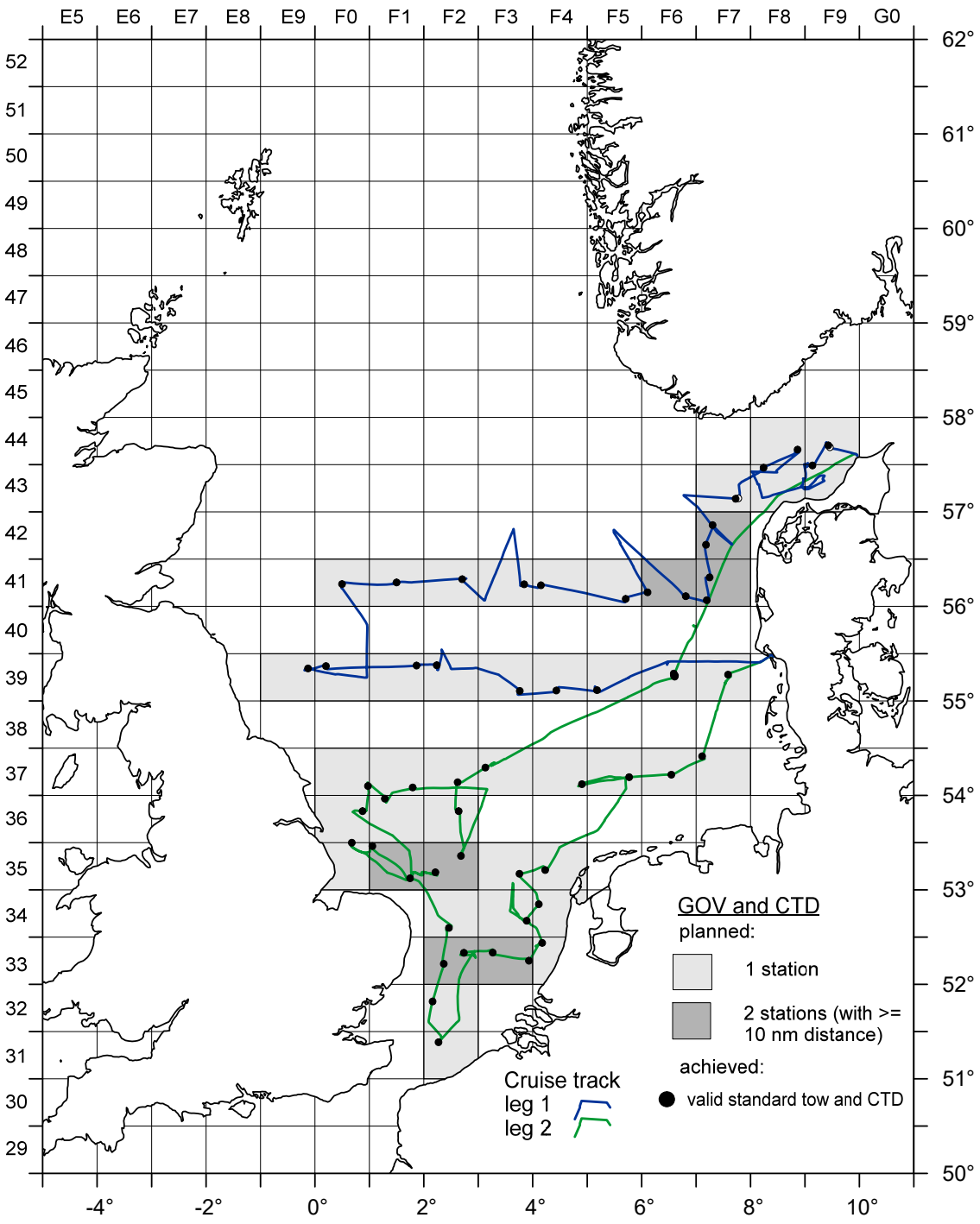

Fig. 1: Survey map with cruise track and sampling locations, Dana DK IBTS 3Q 2020.

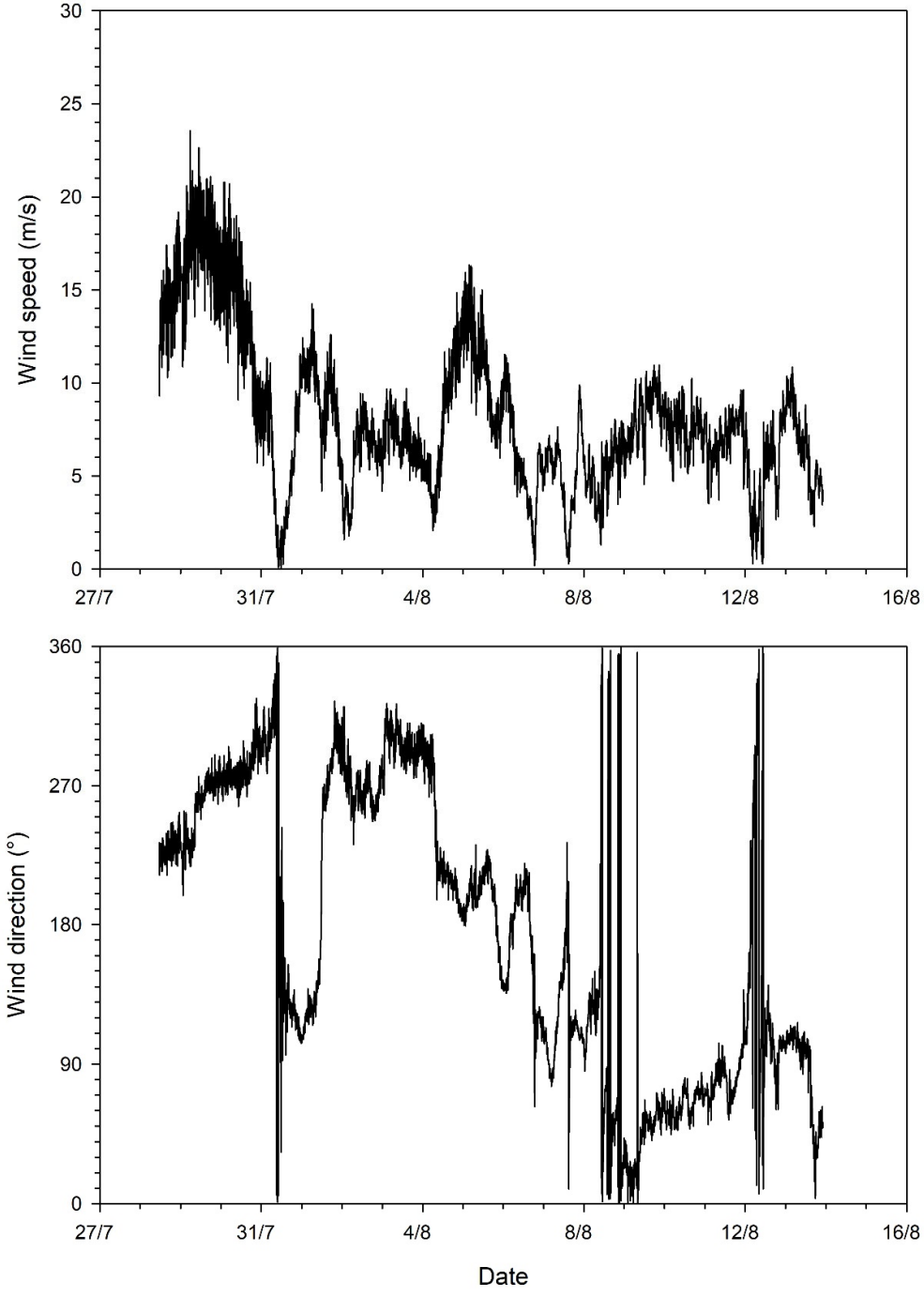

Fig. 2. Wind speed (m/s) and wind direction (°) recorded along the cruise track, Dana DK IBTS 3Q 2020.

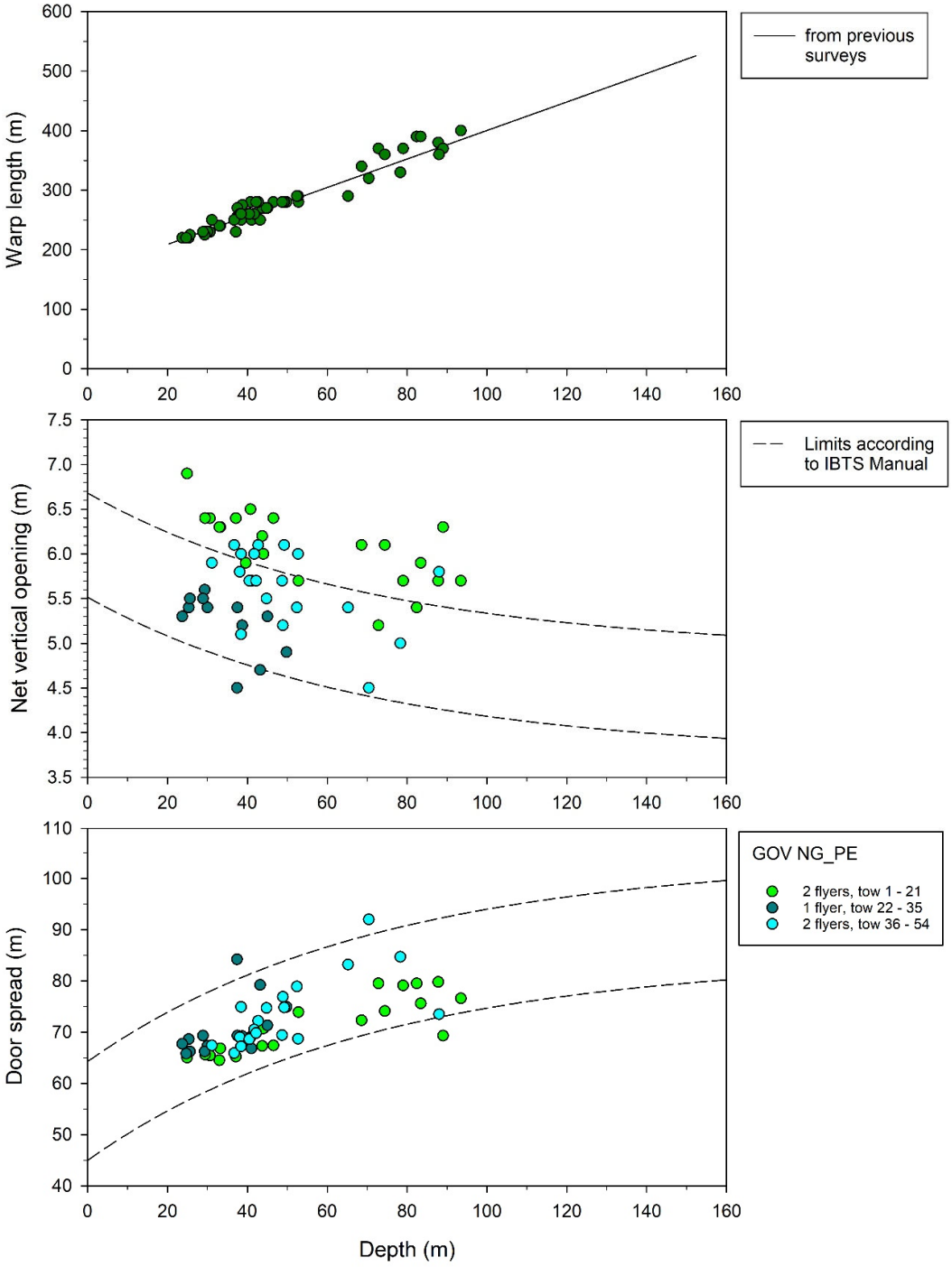

Fig. 3: Warp length, net opening and door spread in relation to depth, Dana DK IBTS 3Q 2020.

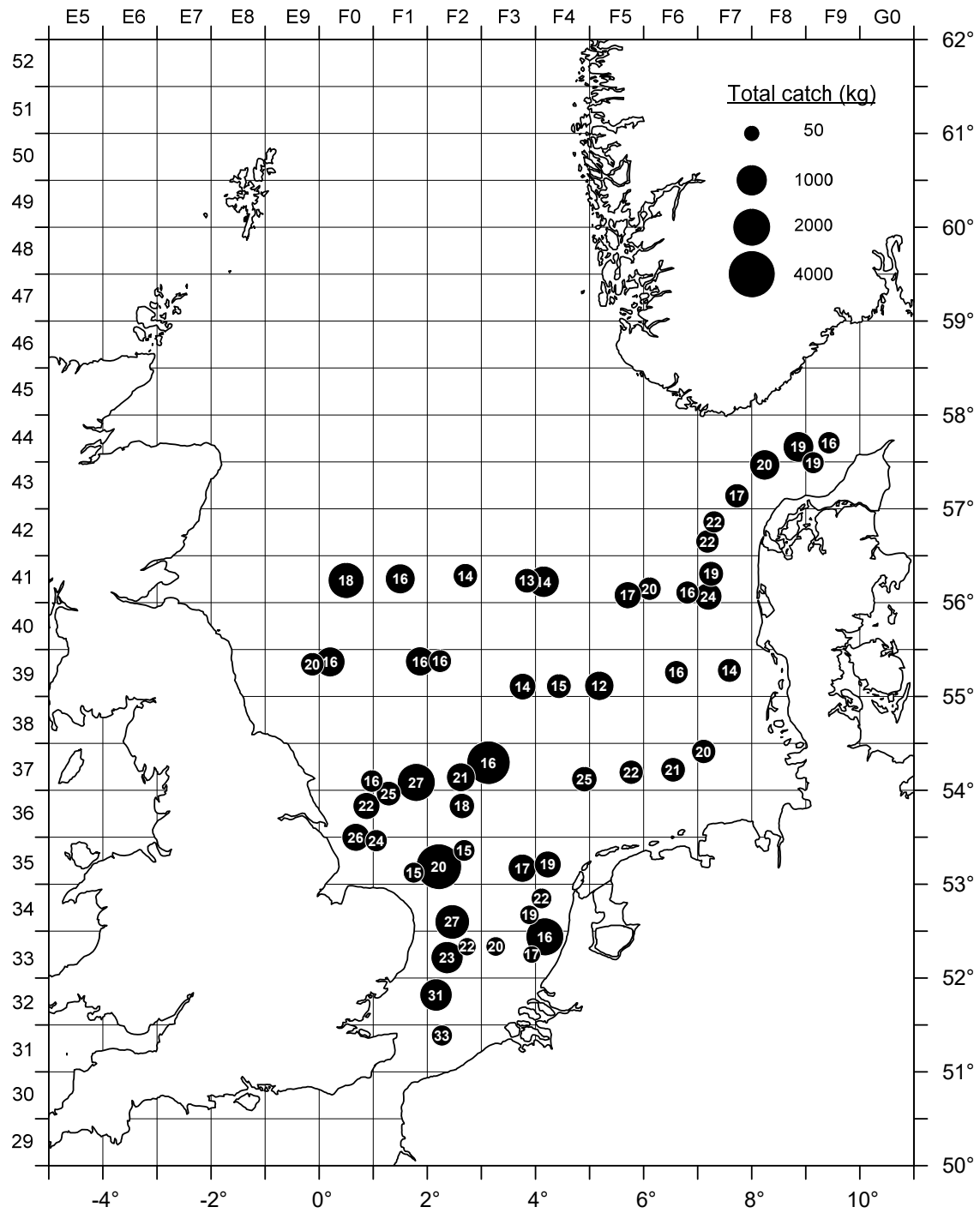

Fig. 4: Total catch (symbols) and species richness (numbers), Dana DK IBTS 3Q 2020.

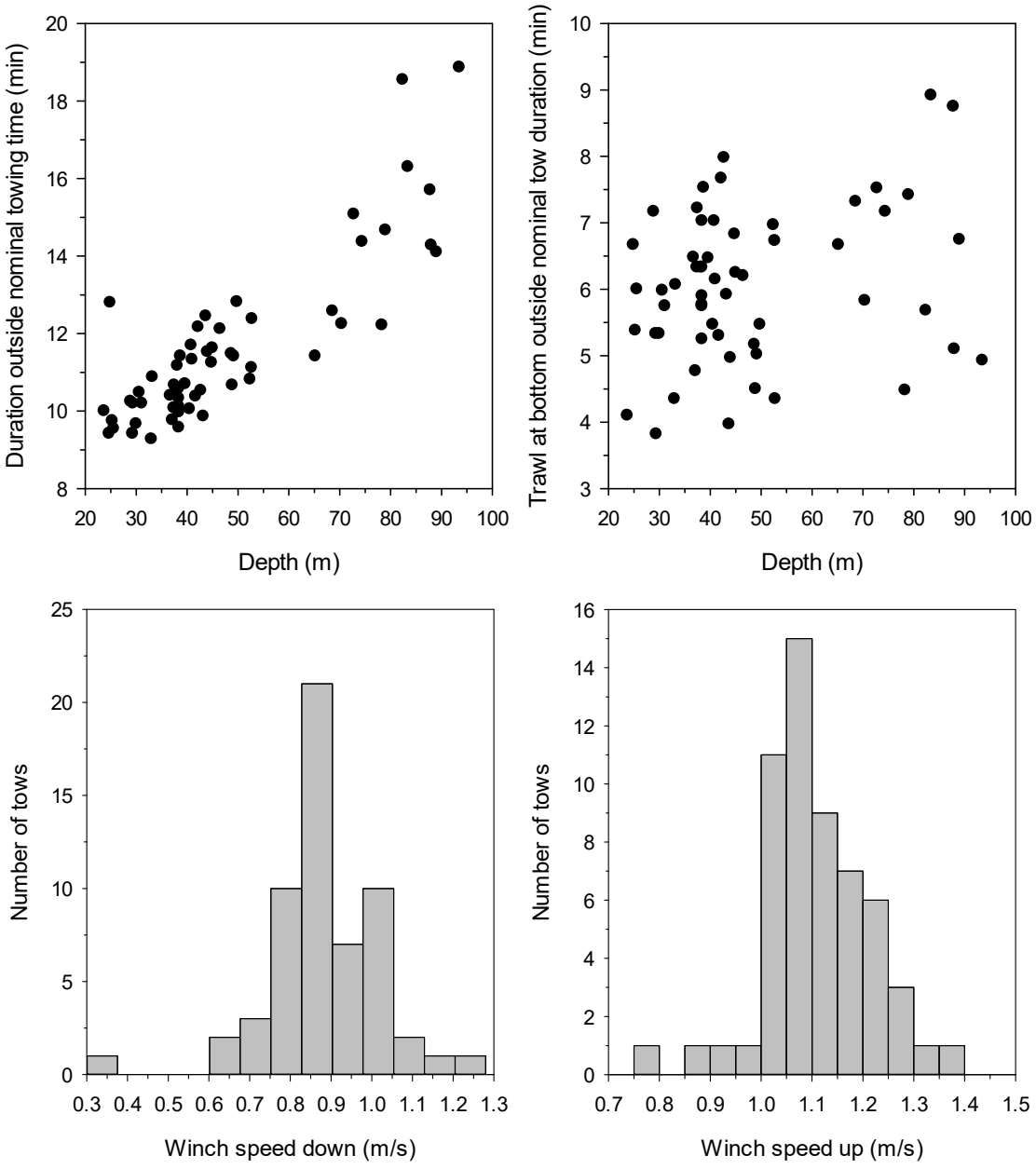

Fig. 5: Fishing times outside the nominal tow duration and winch speeds during descend and ascent, Dana DK IBTS 3Q 2020.

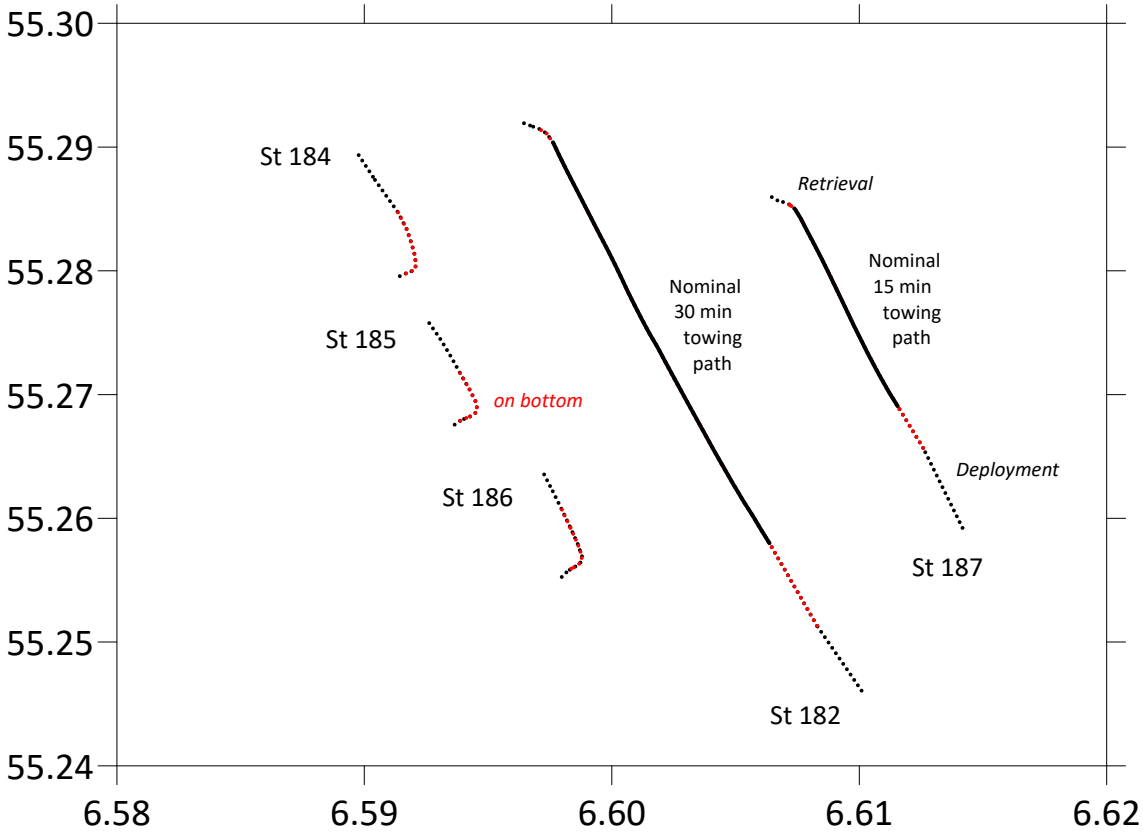

Fig. 6: Towing tracks of the experimental 0- and 15-min tow in rectangle 39F6, Dana DK IBTS 3Q2020.

Tab. 1: Species list, Dana DK IBTS 3Q 2020 (L: total length in cm below (fish); ML: mantle length (cephlapods); CPL or CPW: carapace length or width (crusteaceans).

Latin name	English name	Danish name	Weight (kg)	Number	L_{min} (cm)	L_{max} (cm)	Remark
Aequipecten opercularis	Queen scallop	Jomfruøsters	0.307	5	-	-	
Agonus cataphractus	Pogge	Panser ulk	0.106	7	9.0	15.0	
Alloteuthis subulata	European common squid	Dværgblæksprutte	31.792	6643	2.0	14.0	ML
Amblyraja radiata	Starry ray	Tærbe	5.060	12	11.0	45.0	
Ammodytes marinus	Lesser sandeel	Tobis-hav	2.463	174	4.5	21.0	
Anarhichas lupus	Catfish	Stribet havkat	3.840	1	74.0	74.0	
Arnoglossus laterna	Scaldfish	Tungehvarre	0.828	68	7.0	14.0	
Buglossidium luteum	Solenette	Glastunge	1.290	137	6.0	14.0	
Callionymus lyra	Common dragonet	Stribet fløjfisk	6.940	156	9.0	25.0	
Callionymus reticulatus	Reticulated dragonet	Kortfinnet fløjfisk	0.018	2	10.0	15.0	
Cancer pagurus	Edible crab	Taskekrabbe	78.137	181	5.1	20.0	CPW
Chelidonichthys cuculus	Red gurnard	Tværstribet knurhane	1.514	13	19.0	26.0	
Chelidonichthys lucerna	Tub gurnard	Rød knurhane	20.539	63	19.0	51.0	
Clupea harengus	Herring	Sild	1597.168	51484	6.5	32.0	
Dicentrarchus labrax	Bass	Havbars	7.138	7	35.0	58.0	
Echiichthys vipera	Lesser weever	Fjæsing lille	35.969	1877	5.0	17.0	
Eledone cirrhosa	Horned octopus	Eledone Blæksprutte	0.935	1	-	-	
Enchelyopus cimbrius	Four-bearded rockling	Firetrådet havkvabbe	5.226	148	13.0	25.0	
Engraulis encrasicolus	Anchovy	Ansjos	0.461	16	13.0	19.0	
Entelurus aequoreus	Snake pipefish	Snippe	0.072	6	30.0	46.0	
Eutrigla gurnardus	Grey gurnard	Grå knurhane	939.987	15459	12.0	35.0	
Gadus morhua	Cod	Torsk	275.231	800	11.0	90.0	
Galeorhinus galeus	Tope	Gråhaj	298.562	27	38.0	157.0	
Glyptocephalus cynoglossus	Witch	Skærising	0.400	2	28.0	31.0	
Gymnammodytes semisquamatus	Smoothed sandeel	Tobis-nøgen	17.637	1116	14.5	20.5	
Helicolenus dactylopterus	Blackbelly rosefish	Blåkjeft	1.198	17	14.0	18.0	
Hippoglossoides platessoides	American plaice	Håising	101.339	2229	10.0	27.0	
Homarus gammarus	European lobster	Almindelig hummer	22.497	43	4.5	14.6	CPL
Hyperoplus lanceolatus	Greater sandeel	Tobiskonge	136.874	4479	13.5	33.0	
Illex coindetii	Southern shortfin squid	Illex coindetii	4.620	60	8.0	24.0	ML
Limanda limanda	Common dab	Ising	3393.237	57386	5.0	32.0	
Lithodes maja	Norway king crab	Troldkrabbe	0.490	2	7.5	9.5	CPW
Loliginidae		Loliginidae	103.090	1963	2.0	26.0	ML
Loligo forbesii	Northern squid	Loligo forbesii	32.346	566	3.0	30.0	ML
Loligo sp	Loligo sp	Loligo forbesi/vulgaris	1.554	558	2.0	5.0	ML
Loligo vulgaris	European squid	Loligo vulgaris	0.255	1	18.0	18.0	ML
Lophius piscatorius	Monk	Havtaske	3.704	6	16.0	46.0	
Lycodes gracilis	Vahls eelpout	Ålebromse	0.044	2	15.0	16.0	
Maja squinado	Common spider crab	Edderkoppekrabbe	1.362	2	12.0	12.9	CPL
Melanogrammus aeglefinus	Haddock	Kuller	3861.604	52716	8.0	42.0	
Merlangius merlangus	Whiting	Hvilling	11895.768	177535	4.0	40.0	
Merluccius merluccius	Hake	Kulmule	118.256	82	17.0	103.0	
Microstomus kitt	Lemon sole	Rødtunge	222.968	1904	11.0	33.0	
Molva molva	Ling	Lange	6.050	7	45.0	68.0	
Mullus surmuletus	Striped red mullet	Stribet (rød) Mulle	44.650	501	13.0	30.0	
Mustelus asterias	Starry smooth-hound	Stjernehaj	105.443	58	52.0	105.0	
Mustelus mustelus	Smooth hound	Glathaj	62.604	30	59.0	125.0	
Myoxocephalus scorpius	Bull rout	Ulk	1.087	15	12.0	23.0	
Myxine glutinosa	Hagfish	Slimål	0.048	1	-	-	
Nephrops norvegicus	Norway lobster	Jomfruhummer	16.397	438	2.1	5.5	CPL
Pecten maximus	Great scallop	Stor kammusling	0.077	1	-	-	
Platichthys flesus	Flounder	Skrubbe	4.827	17	24.0	36.0	
Pleuronectes platessa	Plaice	Rødspætte	410.142	2974	11.0	55.0	
Pollachius virens	Saithe	Sej	4.568	3	26.0	77.0	
Pomatoschistus sp	Sand gobies	Sand kutlinger	0.004	3	4.0	6.0	
Raja brachyura	Blonde ray	Blond rokke	9.494	6	46.0	82.0	
Raja clavata	Thornback ray	Sømrokke	49.200	31	22.0	86.0	
Raja montagui	Spotted Ray	Storplettet Rokke	7.715	14	20.0	49.0	
Rossia macrosoma	Stout bobtail squid	Ross's blæksprutte	0.038	4	-	-	
Sardina pilchardus	Pilchard	Sardin	51.064	551	14.0	25.0	
Scomber scombrus	Mackerel	Makrel	1537.486	11431	8.0	43.0	
Scophthalmus maximus	Turbot	Pighvarre	23.952	27	17.0	58.0	
Scophthalmus rhombus	Brill	Slethvarre	10.640	14	21.0	46.0	
Scyliorhinus canicula	Lesser-spotted dogfish	Småplettet rødhaj	261.844	531	16.0	67.0	
Sepia officinalis	Common cuttlefish	Sepiablæksprutte	1.199	5	9.0	14.0	
Solea solea	Sole	Tunge	6.036	68	15.0	34.0	
Spondyliosoma cantharus	Black sea bream	Havrude	0.250	1	24.0	24.0	
Sprattus sprattus	Sprat	Brisling	4726.151	373253	3.0	14.5	
Squalus acanthias	Spurdog	Pighaj	17.526	6	46.0	109.0	
Taurulus bubalis	Sea scorpion	Langtornet ulk	0.375	6	14.0	20.0	
Todaropsis eblanae	Lesser flying squid	Todaropsis eblanae	0.377	4	9.0	17.0	ML
Trachinus draco	Greater weever fish	Fjæsing	49.130	265	16.0	40.0	
Trachurus trachurus	Horse mackerel	Hestemakrel	1377.969	22505	2.0	39.0	
Trisopterus esmarkii	Norway pout	Sperling	1.641	227	3.0	18.0	
Trisopterus luscus	Bib	Skægtorsk	3.549	59	10.0	23.0	
Trisopterus minutus	Poor-cod	Glyse	11.696	501	6.0	22.0	
Zeus faber	John dory	Sct. Peter fisk	1.448	6	21.0	26.0	

Tab. 2: Number of single fish data (length, individual weight, and sex; maturity for herring, sprat and hake) and samples for ageing (hake: not read), Dana DK IBTS 3Q 2020.

Species	Total
Herring (Clupea harengus)	485
Sprat (Sprattus sprattus)	220
Cod (Gadus morhua)	138
Haddock (Melanogrammus aeglefinus)	290
Whiting (Merlangius merlangus)	577
Saithe (Pollachius virens)	3
Norway pout (Trisopterus ermarkii)	13
Mackerel (Scomber scombrus)	340
Plaice (Pleuronectes platessa)	694
Hake (Merluccius merluccius)	65
Sum:	2825

Tab. 3: Preliminary abundance indices (number per hour trawling) for commercial IBTS species per tow, Dana DK IBTS 3Q 2020.

		COD			HADDOCK			WHITING			NORWAY POUT			HERRING			SPRAT		MACKEREL			SAITHE			PLAICE		
Age:		0	1	2+	0	1	2+	0	1	2+	0	1	2+	0	1	2+	1	2+	0	1	2+	0	1	2+	0	1	2+
Length:		<18	18-37	≥38	<17	17-29	≥30	<17	17-23	≥24	<13	13-15	≥16	<15.5	15.5-22.5	≥23	<13	≥13	<17	17-29	≥30	<22	22-32	≥33	<10	10-18	≥19
St No	Rect																										
3	44F9		121	6																62							68
4	43F9															2				805	17					16	68
14	44F8		751	34	214	1343	904	143	4572	1336	143	9	9		12	28				10	12		4				14
15	43F8		514	52		3288	589		3928	354	189					2				8	10			2			34
18	43F7			6	625	4			4						16	6				2550							33
26	42F7		12		30	8		14	52	4				79	880	48	2379	876		98							228
28	42F7				22	10		8	219	14				46	24		2474	371		102	36					26	265
29	41F7				10			14	8					112	84	6	9613	694		1034	13					78	76
31	41F7		2		472	8		4	30	2				4	28	4	262	63		1999	50					146	150
33	41F6				572	4		88	82						8		318	23		618						92	219
40	41F6		6	2	2336	20		435	1082	137				18	252	6	4979	88			8					6	348
42	41F5				919	8		23	609	41			2	1016	2644	1737	23791	1996								8	88
43	41F4		4		10116	52		411	268	71	10			1921	26105	262	5309	4076									40
46	41F3				1471	38		373	263	30				4	87	2	20	2		2	4						72
53	41F2				4689	171	16	48	117	157	4				82	197										2	34
55	41F1		22	8	3472	3026	1084		453	1587			2		500	756					2						86
56	41F0		4	2	70	13013	1671	4	4223	2750			6			10	92	2		4	4						34
63	39E9				575	744	23	30	2830	274	2		2			10	80	20								14	68
65	39F0		4		28	3084	467		5164	1986	47	10	18		10	918	874	793									16
66	39F1				43592	96	2	24	419	20					4	10	10	6		22	2					2	62
68	39F2				1997			58	2170	58						2				6							46
75	39F3				205			191	80	2				845	8968		14141	2631	2							16	172
76	39F4		4		2033			5258	608	44				100	181	12	2710	456								2	50
78	39F5				132			152	22					1320	373	228	60187	6687								12	178
85	39F7				2															3344	55					56	2
92	37F7							3575	494						4	2				325	6					22	44
93	37F6				2			18165		2				12466	12	4	5771			98	14					16	44
95	37F5							2							2					195	2					14	32
96	37F4	2			180			32300	163					6473		30	27501			2						32	147
105	35F4							2690	70					168			34051	4256		2109	46					12	20
107	35F3							521	14					2590		2	111767	766		18						58	74
108	34F4							6	30							2	14			102	2					52	54
110	34F3								8								4			248						28	34
117	33F4							45825	9532	4										4581	190					14	16
119	33F3							30	8											16	2					46	22
120	33F3							2	4											54	4					8	22
122	33F2		6			2	2		10	6										38	2					6	28
131	31F2		3						6	12										6						51	304
132	32F2		2	6		2	6	2	9868	6726										6	2					37	309
134	33F2								2947	4152					393	2686				50	104					2	26
136	34F2					2			14029	9480					27	56				61	17					2	29
144	35F0					2		14	1496	1719					16	38	12005	429		8	62						2
146	35F1		5					46		46				2		5	14			10	2						2
147	35F1								189	53										303	5					2	2
148	35F2								88259	11139					19	60				136	7					7	86
156	36F0				6	2	2	10	4062	410						6	6			151	34					2	2
158	37F0								2430	172						2	10	2		286	3					20	60
160	36F1		2					39	2633	20					2			2		2	4					88	156
161	37F1		18			1829	45	150	20883	10768					2	32	1189	546		2	120					20	144
170	35F2							20	125	6						2				135	6					2	42
171	36F2							7647	412	102				27576	26		6314	44		4	8					2	64
173	37F2				2	16		3547	7015	3086				193		2	4599	53		2	2						206
175	37F3				24			2283	1445	56				18	22	8	354888	33345		34	20					4	117
182	39F6				2			2	62	4										761	14					56	208

Tab. 4: Comparison of catch composition of experimental tows with the standard tow in 39F6, Dana DK IBTS 3Q 2020.

3Q2020	39F6	Station 182 (standard tow)				Station 184 (zero-minute tow)				Station 185 (zero-minute tow)				Station 186 (zero-minute tow)				Station 187 (15-minute tow)			
Group	Species	W (kg)	N	L_{min}	L_{max}	W (kg)	N	L_{min}	L_{max}	W (kg)	N	L_{min}	L_{max}	W (kg)	N	L_{min}	L_{max}	W (kg)	N	L_{min}	L_{max}
Pelagic fish	Mackerel	55.016	387	24.0	35.0	16.300	114	23.0	33.0	0.914	6	23.0	27	13.100	100	23	34.0	81.545	551	24.0	30
Demersal gadoids	Whiting	2.260	34	9.0	24.0	0.182	2	21.0	24.0	0.111	2	18.0	21.0	6.860	89	17.0	26.0	0.865	12	18.0	24.0
	Haddock	0.029	1	14.0	14																
Flatfish	Solenette	0.011	3	6.0	8.0					0.003	1	6.0	6.0								
	Common dab	136.711	2080	12.0	26.0	19.859	288	12.0	23.0	22.618	329	11.0	28.0	22.920	363	11.0	25.0	62.777	1013	11.0	25.0
	Plaice	18.060	132	14.0	55.0	2.384	14	15.0	33.0	4.520	29	15.0	33.0	3.780	24	18.0	34.0	8.340	60	15.0	34.0
	Brill									0.700	1	36.0	36								
Other demersal fish	Horse mackerel	2.432	43	3.0	27.0	0.002	3	2.0	4.0	0.004	3	3.0	5.0	0.179	6	4.0	25.0	0.007	6	4.0	5.0
	Grey gurnard	6.585	133	13.0	24.0	0.942	17	14.0	25.0	0.618	15	15.0	19.0	3.012	52	14.0	23.0	6.109	129	13.0	23.0
	Tub gurnard	1.149	4	24.0	35.0									0.120	1	22.0	22.0				
	Common dragonet	0.025	1	18.0	18					0.023	1	18.0	18					0.031	1	17.0	17
	Striped red mullet	0.473	2	21.0	29.0									0.473	5	19.0	22.0				
	Greater sandeel	0.199	6	21.0	25.5	0.468	14	20.5	25.5	0.169	5	21.0	25.5	1.251	38	20.5	28.0				
	Lesser-spotted dogfish													0.442	1	46.0	46.0				
Crustaceans	Edible crab	2.830	4	11.3	18.2	0.207	1	12.0	12.0	0.900	2	14.3	16.1	0.739	1	16.4	16.4	0.442	2	8.8	12.9
	European lobster													0.684	1	10.3	10.3	0.772	1	10.3	10.3
Molluscs	European common squid	0.712	249	3.0	5.0	0.042	18	2.0	4.0	1.202	367	3.0	6.0	0.018	7	3.0	5.0	2.152	689	3.0	7.0
	Northern squid	0.907	9	8.0	19.0	0.053	2	7.0	8.0	0.029	1	8.0	8.0	0.646	5	8.0	21.0				
	Lesser flying squid	0.264	2	15.0	17.0																
Total pelagic fish		55.016	387	24.0	35.0	16.300	114	23.0	33.0	0.914	6	23.0	27.0	13.100	100	23.0	34.0	81.545	551	24.0	30.0
Total demersal fish		167.934	2439	3.0	55.0	23.837	338	2.0	33.0	28.766	386	3.0	36.0	38.595	578	4.0	34.0	78.129	1221	4.0	34.0
Total number of pelagic fish taxa		1				1				1				1				1			
Total number demersal fish taxa		11				6				9				9				6			
					pel. fish	29.6	29.4			1.7	1.5			23.8	25.8			148.2	142.1	% of standard tow	
					dem. fish	14.2	13.9			17.1	15.8			23.0	23.7			46.5	50.1	% of standard tow	