

Jákup Sverri Cruise Report

Cruise no. 2618

Faroese part of International Ecosystem Survey in the Norwegian Sea (IESNS) 2026

30 April – 12 May 2026

Jákup Sverri

Participants:

Ebba Mortensen, Poul Vestergaard, Árni Johansen, Eydna í Homrum (cruise leader)



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INTRODUCTION

The main aim of this cruise was to investigate the distribution and abundance of Norwegian spring spawning herring and blue whiting in the Norwegian Sea north of the Faroe Islands (yellow transects in **Figure 1**). Zooplankton and hydrographic data were collected for each 60 nm along the cruise tracks.

The cruise was part of the joint International Ecosystem Survey in the Norwegian Sea (IESNS). Five parties and research vessels (see text table below) took part in the survey, coordinated by the “Working Group of International Pelagic Surveys” (WGIPS) in ICES. The combined results from all five vessels will be used in the assessment of Norwegian spring spawning herring by the “Working Group on Widely Distributed Stocks” (WGWIDE) in August-September 2026.

Ship	Nation
Jákup Sverri	Faroese
G.O. Sars	Norway
Resolute	Great Britain
Þórunn Þórðardóttir	Iceland
Dana	Denmark (EU)

In general, the cruise went as planned. Acoustic data were collected and judged along 1021 nm of cruise track. The present survey report is based on data from Jákup Sverri only. Therefore, no estimate of abundance of Norwegian spring spawning herring is given due to incomplete coverage of the area.

MATERIAL AND METHODS

Cruise tracks with pre-planned hydrographic stations (CTD and WP2 net), and opportunistic pelagic trawl stations in the surveyed area are shown in **Figure 2**. Acoustic data were recorded with a Simrad EK-80 echo sounder (See acoustic settings in table below). Data from several drop keel mounted transducers were logged at sea and the data from the 38 kHz transducer used in the fish abundance estimation. The area backscattering recordings (sA) were averaged by each nautical mile and the recordings were scrutinised on a daily basis with the LSSS 3.2.0 software and allocated to primarily herring or blue whiting, and to some extent also to other fish (e.g. mesopelagic fish) based on pelagic trawling aimed at the various acoustic recordings. The 38 kHz echo sounder was calibrated with a standard copper sphere in March prior to this year’s IBWSS survey.

Biological data were sampled from the trawl hauls. The catch was sorted to species – by sub-sampling if the catch was more than ~50 kg. Stomachs were sampled from 5 individuals of herring and blue whiting. Otoliths were sampled from ~25-50 individuals, for which sex and maturity stage was also registered. Length and weight were measured for up to additionally 150 individuals. For non-target species, length and weight was measured. DNA samples were taken from all aged herring and blue whiting, but maximum 30 fish per station.

Zooplankton was sampled by WP2 net (0.25m² opening - 200µm mesh size). The samples were split in half – one part was preserved in 4% formalin for taxonomic studies and the other size-fractionated (2000µm, 1000µm and 200µm) and dried for biomass estimates. Salinity and temperature were sampled with a SeaBird CTD.

Acoustic instruments and settings	Jákup Sverri
Echo sounder	Simrad EK80
Frequency (kHz)	18, 38 , 70, 120, 200,
Primary transducer	ES38-7
Transducer installation	Drop keel
Transducer depth (m)	6-9
Upper integration limit (m)	15
Absorption coeff. (dB/km)	10.4
Pulse length (ms)	1.024
Band width (kHz)	3.06
Transmitter power (W)	2000
Angle sensitivity (dB)	21.9
2-way beam angle (dB)	-20.4
Sv Transducer gain (dB)	
Ts Transducer gain (dB)	26.88
s _A correction (dB)	-0.03
3 dB beam width (dg)	
alongship:	6.43
athw. ship:	6.43
Maximum range (m)	500
Post processing software	LSSS

RESULTS

Norwegian spring spawning herring

The abundance of Norwegian spring spawning herring was generally low, but highest in the area along the border between Faroese and Icelandic territorial waters (**Figure 3** and **4**). This year, the herring was observed farther south towards East Iceland and Faroes than has been observed the last years. The herring showed a quite consistent diurnal pattern, residing at 300-400 m depths during the day time and in or closer to the surface during night time (**Figure 4**).

The spring spawning herring caught in the trawl were on average 33.2 cm, 248 g and predominantly 10 years old. Around 50% of the herring were from the 2016 year class (**Figure 5**), but also the 2021 year class appeared in relatively high numbers. The proportion of NSSH and non-NSSH is shown in **Figure 6**, this year there was only one station, where the proportion of non-NSSH exceeded 10%, this was in the area bordering the North Sea.

Blue whiting

Blue whiting was observed along the Faroe-Iceland Ridge and Faroe Plateau and the easternmost transect-ends (**Figure 3** and **4**). It resided primarily at 200-400 m depth but sometimes also closer to the surface. The abundance was higher than the last years.

The majority of the age-read blue whiting were 1 and 2 years old but 3-5 year old blue whiting also contributed with more than 20% to the age-read blue whiting. The average length of blue whiting was 23.7 cm, average weight was 84 g – but the size distribution was bimodal due to the presence of the 1 year old blue whiting (**Figure 7**).

Mackerel

Mackerel was caught in a small sample in one surface haul in the south-eastern part of the survey area. Mean length was 35.8 cm (**Figure 8**).

Plankton and hydrography

Plankton and hydrography will be analysed as part of the joint post-cruise meeting in June 2026.

Survey effort for Jákup Sverri 30 April – 12 May 2026

Effective survey period	Length of cruise track (nm)	Trawl stations	CTD stations	Plankton sampling	Aged fish Herring/blue whiting	Length-measured herring/blue whiting
30/4 – 9/5	1021	15 (9 with herring catch 6 with blue whiting catch)	19	18	307/250	1206/1139

Trawl specifications for the Jákup Sverri, MULTPELT 832 trawl

Circumference (m)	832
Vertical opening (m)	30–40
Mesh size in cod end (mm)	45
Typical towing speed (kn)	3.4–4.6

Sampling effort of individual fish

	Species	
Length measurements	Herring	100-150
	Blue Whiting	100-150
	Mackerel	100-150
	Other	30-100
Weighed, sexed and maturity determination	Herring	100-150*
	Blue Whiting	100-150*
	Mackerel	100-150*
	Other	10-100*
Otoliths/scales collected	Herring	25-50
	Blue Whiting	25-50
	Mackerel	14
	Other	0

Stomach sampling	Herring	5
	Blue Whiting	5
	Mackerel	5
	Other	0
Genetic samples	Herring	30
	Blue whiting	30

* Only fish that are aged are being determined for sex and maturity.

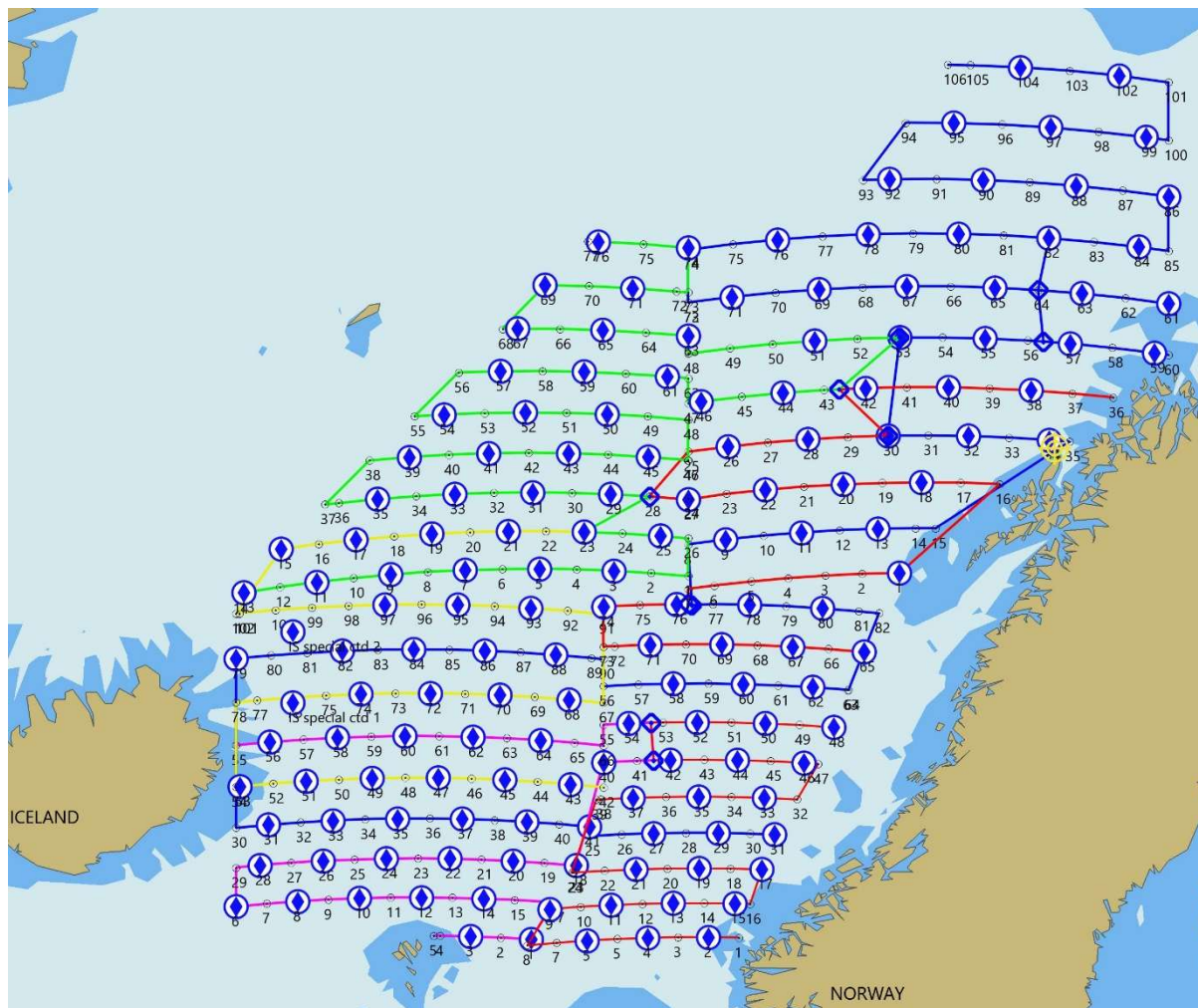


Figure 1. Cruiseplan for the International Ecosystem Survey in the Norwegian Sea in April-May 2026. The participating vessels were: Þórunn Þórðardóttir IS, G.O. Sars NO, Dana EU, Jákup Sverri FO and Resolute UK. Jákup Sverri covered the yellow transects in Faroese, Icelandic and international waters.

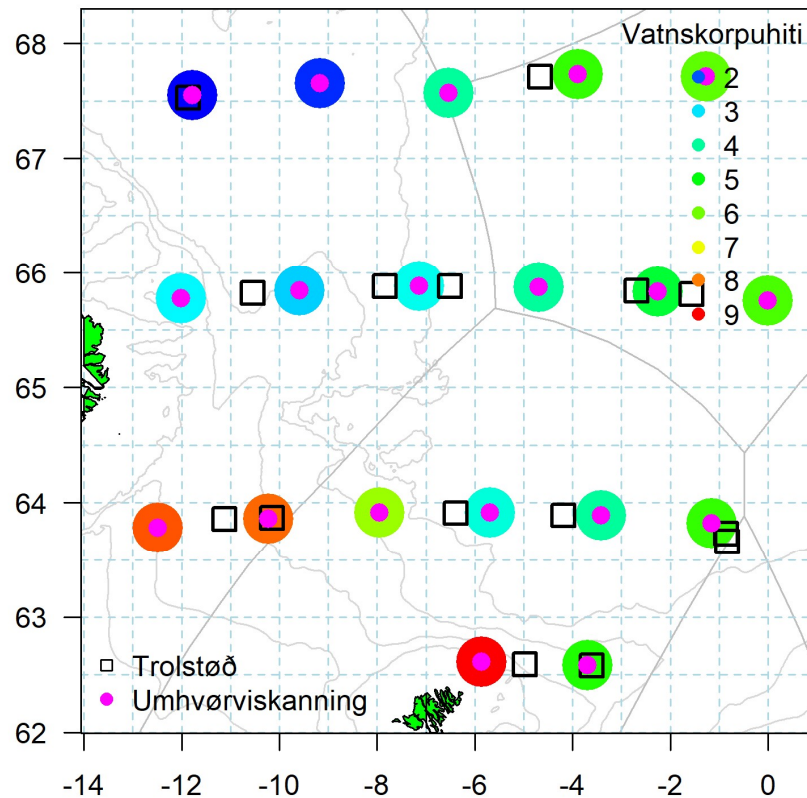


Figure 2. Cruise track, with 19 hydrographic stations (magenta circles) and 15 trawl stations (black squares) north of the Faroes, for Jákup Sverri cruise 2618, 30 April – 12 May 2026. The surface temperature is shown around the hydrographic stations (colour scales from cold=blue, medium=green and warm=red). The acoustic registrations were logged and scrutinised on 1021 nautical miles.

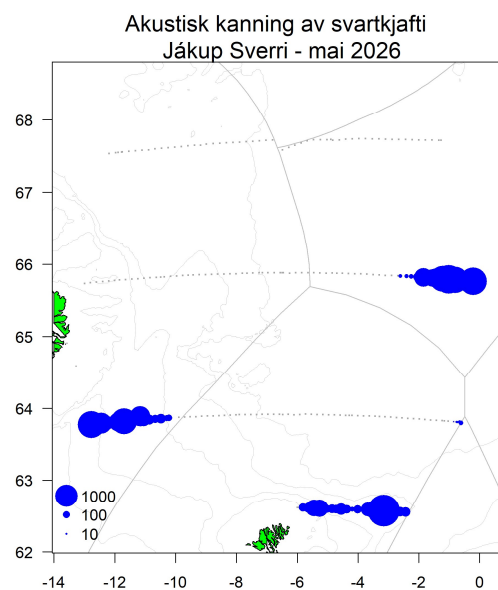
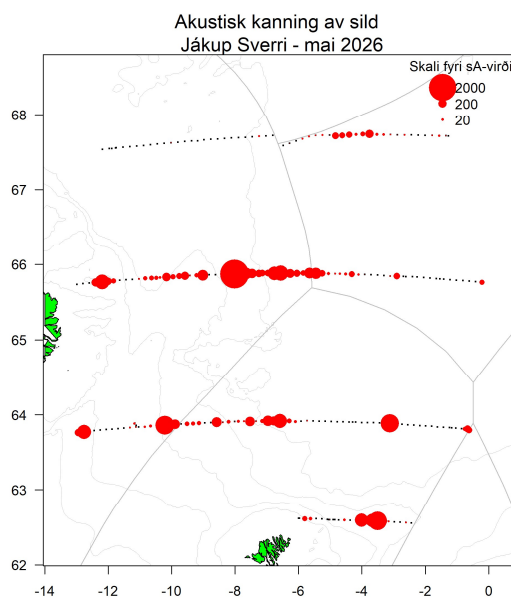


Figure 3. Integration values (sA/nm^2) of Norwegian spring spawning herring (top) and blue whiting (bottom) along the cruise tracks. Further details of the here shown transects are found in **Figure 4**.

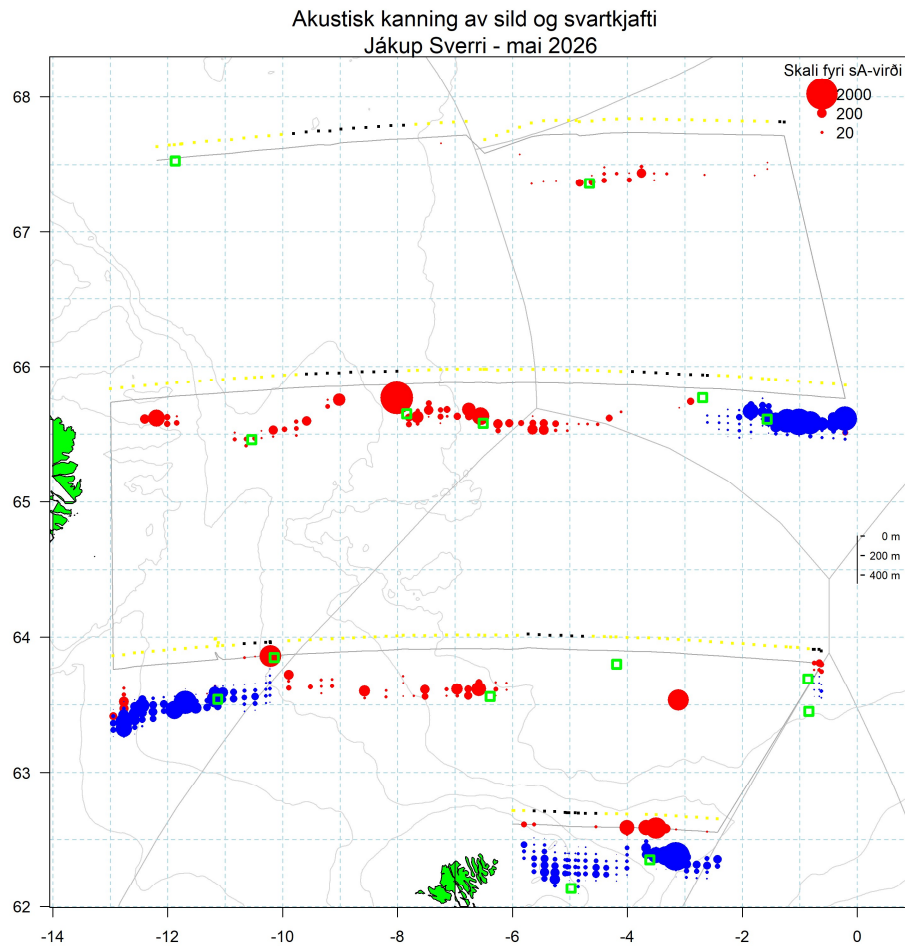


Figure 4. Vertical distribution of herring (red) and blue whiting (blue) per each nm along the cruise tracks (See **Figure 3**). Time of day is indicated at the top of each transect, showing the darkest hours in black. Trawl hauls are indicated by green squares.

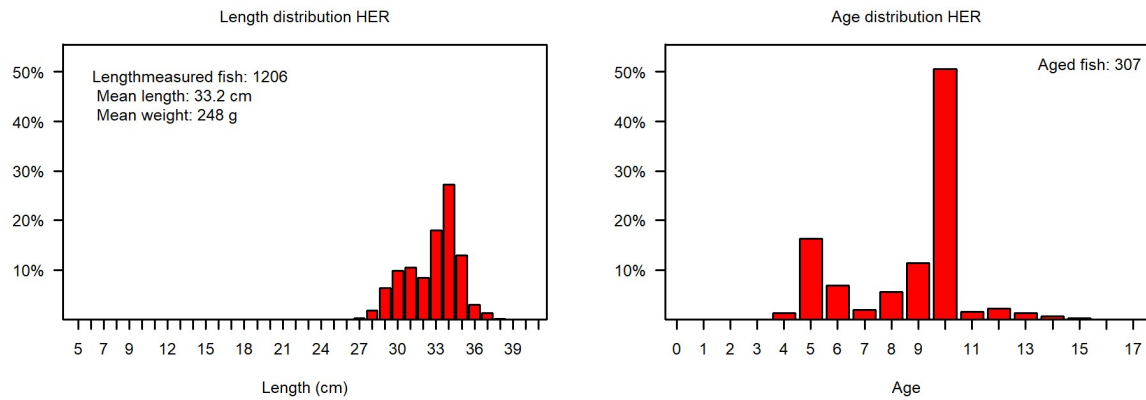


Figure 5. Length and age distribution of spring spawning herring, Jákup Sverri cruise 2618. Left panel: all length measured herring. Right panel: only age read fish, OBS!! Autumn and summer spawning fish have been omitted.

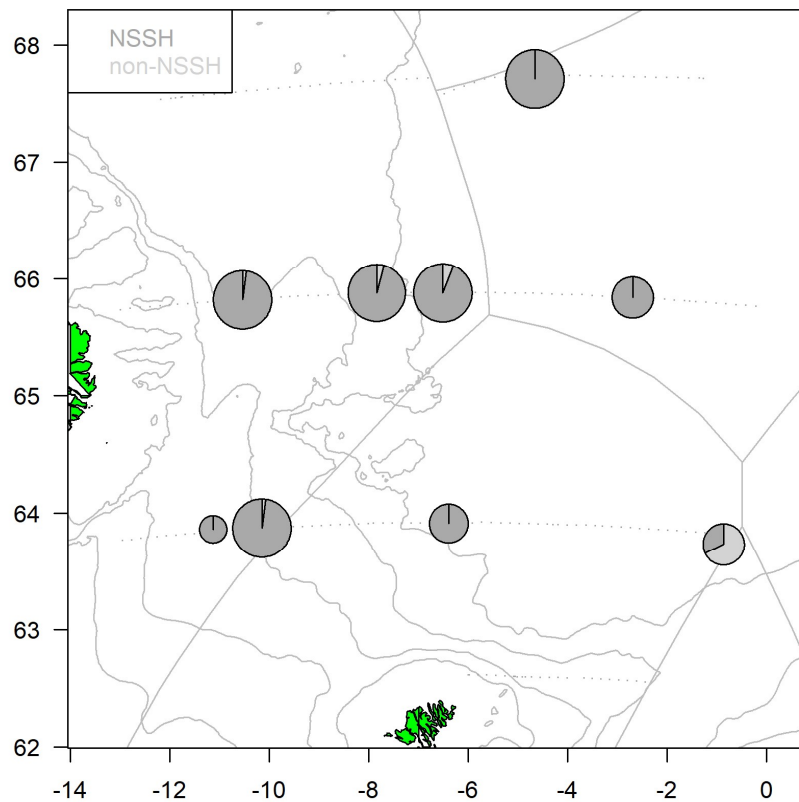


Figure 6. Proportion of NSSH and non-NSSH otoliths in the age samples. Jákup Sverri cruise 2618.

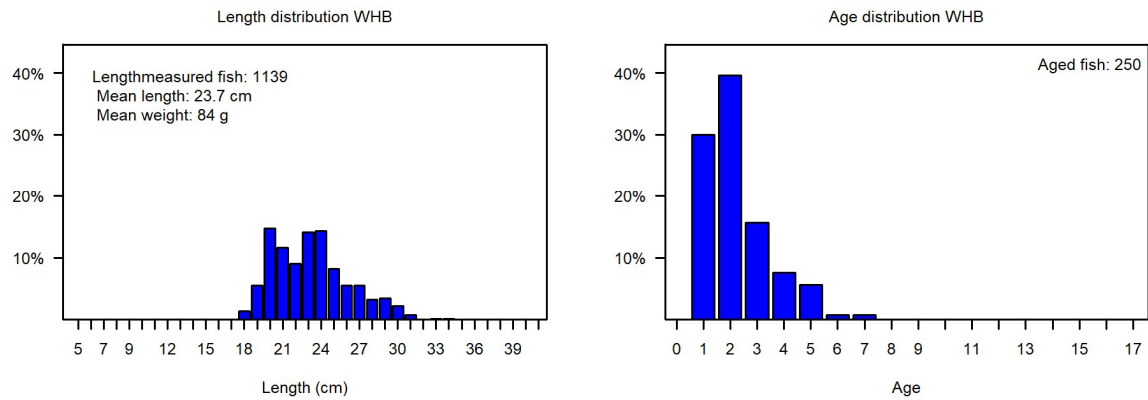


Figure 7. Length and age distribution of blue whiting, Jákup Sverri cruise 2618.

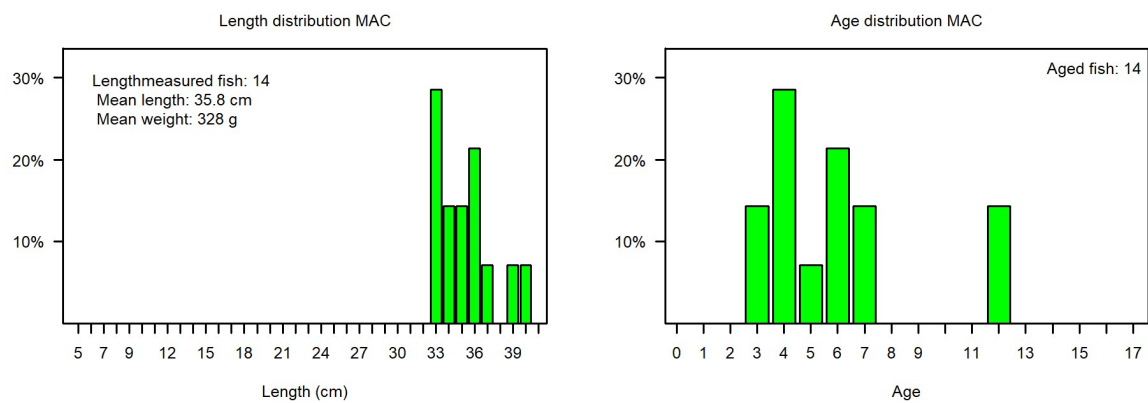


Figure 7. Length and age distribution of mackerel, Jákup Sverri cruise 2618.