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MINISTRY OF AGRICULTURE, FISHERIES AND FOOD  
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

## 1985 COMMERCIAL VESSEL PROGRAMME

REPORT: FV ST GEORGES (LT 59) : CRUISE 2

## STAFF:

R G Houghton (observer)

## DURATION:

Left Lowestoft 0900 h 18 January 1985

Arrived Lowestoft 1930 h 29 January 1985

(All times are GMT)

## LOCALITY:

Southern &amp; Central North Sea

## AIMS:

1. To observe the working of a Lowestoft twin-beam trawler and the operation of the Lowestoft fleet.
2. To collect sole gut contents for food consumption and growth studies.
3. To collect plaice ovaries and carcasses for fecundity work (Dr Greer Walker)

## NARRATIVE:

ST GEORGES sailed at 0900 h 18 January and shot 13 miles east of Lowestoft towing north. 3 hauls produced a few cod, plaice, soles and rays and a split net. The ship moved north 3 hours to Smith's Knoll and made 4 hauls which produced better catches of mixed fish with a maximum of 1 basket of soles, 2 of plaice and 3 of cod. Sole guts were sampled over a 24 hour period in this area and the plaice ovary collection was started. Soles were generally large and well-advanced in maturity (Stages III & IV).

The catch-rates at Smith's Knoll were insufficient and ST GEORGES steamed north for 6½ hours to the Great Silver Pit where she fished for the remainder of the trip. Two further 24-hour sole gut collections were obtained and the plaice gonad sampling was completed. Plaice discards were estimated on several hauls and measured precisely on two. Catch-rates in the Silver Pit area were fairly consistent with 7 to 10 baskets of plaice, 1 of sole and some cod, haddock and turbot. Lemon soles were caught occasionally as were small quantities of Nephrops (mostly too badly damaged to keep). The plaice consisted of a full range of sizes from 20 to 65 cm; females were either stage IV, V or VI and the males in running condition. Unusually for a spawning ground, the sex ratio was about 2:1. Soles were mainly small to medium fish with relatively few large fish in spawning conditions in the Silver Pits area. Catches of benthos and rubbish were light and allowed tows of 3 to 3½ h duration (normally the ship tows for 2-2½ h).

On 22 January at 1130 h an RAF Nimrod flew over the fleet (ST GEORGES had by then been joined by several Lowestoft trawlers and 3 Dutch beamers). We learned that the Lowestoft beamer PESCOSO II had gone down that morning within 20 miles of ST GEORGES and that the crew had been rescued by RAF helicopter.

The weather worsened and the ship dodged through the night, meeting the rig standby ship WILLA to collect spares for the fish-room chiller.

On 26 January the ST GEORGES was boarded by fishery officers of HMS SHETLAND (Including Mr W. Bridge, DI of North Shields) who examined her catch and nets. The trip continued in worsening weather in the Pits area (2 hauls were made towards Cleaver Bank). The final haul was brought in at 0815 h 29 January, the gear stowed and ST GEORGES steamed for Lowestoft, arriving at 1930 h on the same day.

RESULTS:

1. ST GEORGES, owned by Colne Shipping Co Ltd, was the Dutch trawler JACOB (GO7) purchased in March 1984. She is 114 feet registered length, 79 registered net tonnage (217 gross) and powered by a Dentz 6 BVM main engine producing 1100 BHP at 380 rpm. Originally she was rigged with the Dutch 'open' gear but was fitted by Colne's with stone-mat gear on 2 x 9 m beams. The codend mesh is 80 mm. Differences in catch-rate between port and starboard, due to lightness of the older stone-mat on the port-side were adjusted during the trip by the addition of an extra 'free' beam tickler to the port side. Little damage occurred to the gear except when the links of the older stone-mat wore through and stones were caught. Benthos and rubbish catches were generally light (about 2 b in total per haul) with no evidence of blinding due to rubbish.

Sole discards were low (about 5 to 10 fish per haul). Plaice discards however were quite high and legal sized discards were estimated at 1 kg discarded for every 3.6 kg landed. The plaice discards were mainly of legal-sized fish (see Figure) in the range 18 to 35 cm and were mainly of 2, 3 and 4 year-old fish (9, 30 and 59% respectively). The discards occurred because of the prevailing poor market for chat plaice.

The trip turned out the following quantities (in Kitts = 62.5 kg)

Plaice	Large	23.1	
	Medium	52.6	
	Best small	124.0	
	Selected small	21.0	
	Chats	55.0	275.76
Sole	Large	2.0	
	Medium	3.07	
	Slips	5.75	
	Tongues	9.96	20.78
Cod			14.25
Haddock			12.25
Turbot			5.6
Others			9.66
Total			<u>338.3 kitt</u>

2. Sole guts were obtained and deep frozen over 3 x 24 hr periods during the trip, from about 750 fish in total. Several methods of collection were tried, the most convenient was to use cable straps to ligature the oesophagus before dissection. Samples of the same 5 cm size groups were then able to be frozen but analysed separately.

Most sole stomachs were empty, only about 10% had any signs of food in them, usually during the latter half of the night. Sea surface temperature was 5.8°C in the Smith's Knoll area and 6.5 to 7.0°C in the Silver Pits.

3. 53 plaice ovaries mainly from the Silver Pits area were fixed in Gilson's fluid. Carcasses were labelled and frozen for further analyses.

**ACKNOWLEDGEMENTS:**

I would like to thank Colne Shipping for allowing me on board ST GEORGES, in particular Mr J Balls who arranged the trip for me. Thanks also to Skipper D Athorn and his crew for their hospitality and assistance during the trip which was very worthwhile and instructive.

R G Houghton  
8 February 1985

**INITIALLED:**

D J G

**SEEN IN DRAFT:-**

D A, (Skipper)

**DISTRIBUTION:**

- Basic List +

R G Houghton

Mr J Balls

Skipper D Athorn) Colne Shipping Co Ltd

St Georges PLAICE 30/1/85  
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