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

1979 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 1

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

P O Johnson
J P Bridger
Mrs W A Dawson
S Warnes
W L Huggins
D Cook
H Edge (GY)
D Snowball (North Shields)
J K Curtis (Newlyn)

DURATION:

Left Grimsby 1000 h 5 January
Arrived Grimsby 1330 h 24 January

LOCALITY:

Western English Channel, Bristol Channel, Celtic Sea

AIMS:

1. To carry out an acoustic survey for pelagic fish shoals, with particular emphasis on the coastal water belt from Lyme Bay to the Cornish peninsula.
2. To identify pelagic fish shoals by trawling.
3. To make in situ target strength measurements on pelagic fish.
4. To collect mackerel blood for biochemical analysis (UEA and Mr D Swift)
5. To collect and deep freeze material for fish identification courses (Mr R W Blacker).
6. To collect and deep freeze specimens of Euphausiids (Mr C Anderson).

NARRATIVE:

Easterly gales delayed sailing until 5 January when CIROLANA made passage to the western English Channel to commence the acoustic survey off Portland Bill at 1330 hours on 6 January. The survey of the Lyme Bay - Tor Bay area was completed late on 7 January and after an overnight delay awaiting an improvement in weather the survey covering the sector Start Point to Lizard Point commenced on 8 January. This was interrupted by a storm force south westerly gale late on 9 January which necessitated overnight dodging. Conditions moderated the following morning but this proved

to be only a temporary lull and CIROLANA was again forced to dodge in a severe westerly gale until the afternoon of 11 January when the survey was able to resume and extend westwards to cover the area off Mounts Bay on 12 January. Over the following two days the survey covered the waters around the Scilly Isles and over the approaches to the Bristol Channel to Lundy Island. Early on 15 January passage was made to the edge of the continental shelf to survey the UK sector. Work continued in this area until the 17 January when the weather again deteriorated and a severe easterly gale developed which hindered the return to Cornish waters until the weather moderated early in the afternoon of 19 January. A more intensive survey was then carried out in the region off Mounts Bay which continued until late on 21 January when a south easterly gale brought work to an end. CIROLANA then dodged until 1600 hours on 22 January when her return passage commenced in an easterly gale, eventually docking at Grimsby by 1330 hours on 24 January.

RESULTS

1. An acoustic survey was made with a towed body transducer to cover the coastal water belt extending offshore to 20-25 miles from Portland Bill to Lands End, around the Scilly Isles, over the approaches to the Bristol Channel (within the area Lands End - Smalls - Lundy Island - north Cornish coast) and within an offshore area covering the edge of the continental shelf from 8° to 10° W. In the Lyme Bay - Tor Bay region only thinly dispersed fish were found and no pelagic fish concentrations, and this situation also prevailed over the area south of Start Point where horse mackerel concentrations are normally to be found at this time of year. This dispersion of fish could have been caused by the exceptionally severe easterly gales which had occurred just prior to the survey. The first pelagic shoals of any size were recorded in the vicinity of the Eddystone and towards St. Austell and Mevagissey Bays. Mid-water trawl hauls in these areas yielded mainly pilchard and some sprat which was also confirmed by the fishing vessels then operating in the area. There were no major mackerel concentrations found east of the Lizard: the main concentrations were confined to the area off Mounts Bay and mostly within the 12 mile limit. This was confirmed by our own sampling and the distribution of the mackerel fishing fleet. No major pelagic fish concentrations were found around the Scillies or over the approaches to the Bristol Channel. Along the edge of the continental shelf a very restricted band of echo-trace was recorded close to the bottom over a depth range of 250-300 metres, and fishing with a bottom trawl yielded a mixture of species, including Boar fish, but predominantly small Blue Whiting in the length range 16 - 20 cm.

2. A limited run of in situ target strength measurements were made on thinly dispersed mackerel but this work was curtailed by bad weather.

3. Mackerel blood samples were taken for biochemical studies, the bulk samples of mixed blood preserved in heparin or EDTA and the plasma samples deep frozen (UEA and Mr Swift).

4. A variety of species were deep frozen for fish identification courses (Mr R W Blacker).

5. Samples of the Euphausiids *Nyctiphanes couchii* and *Meganyctiphanes norvegica* were caught with the 1 metre Stramin net and individually deep frozen for biochemical work (Mr C Anderson).

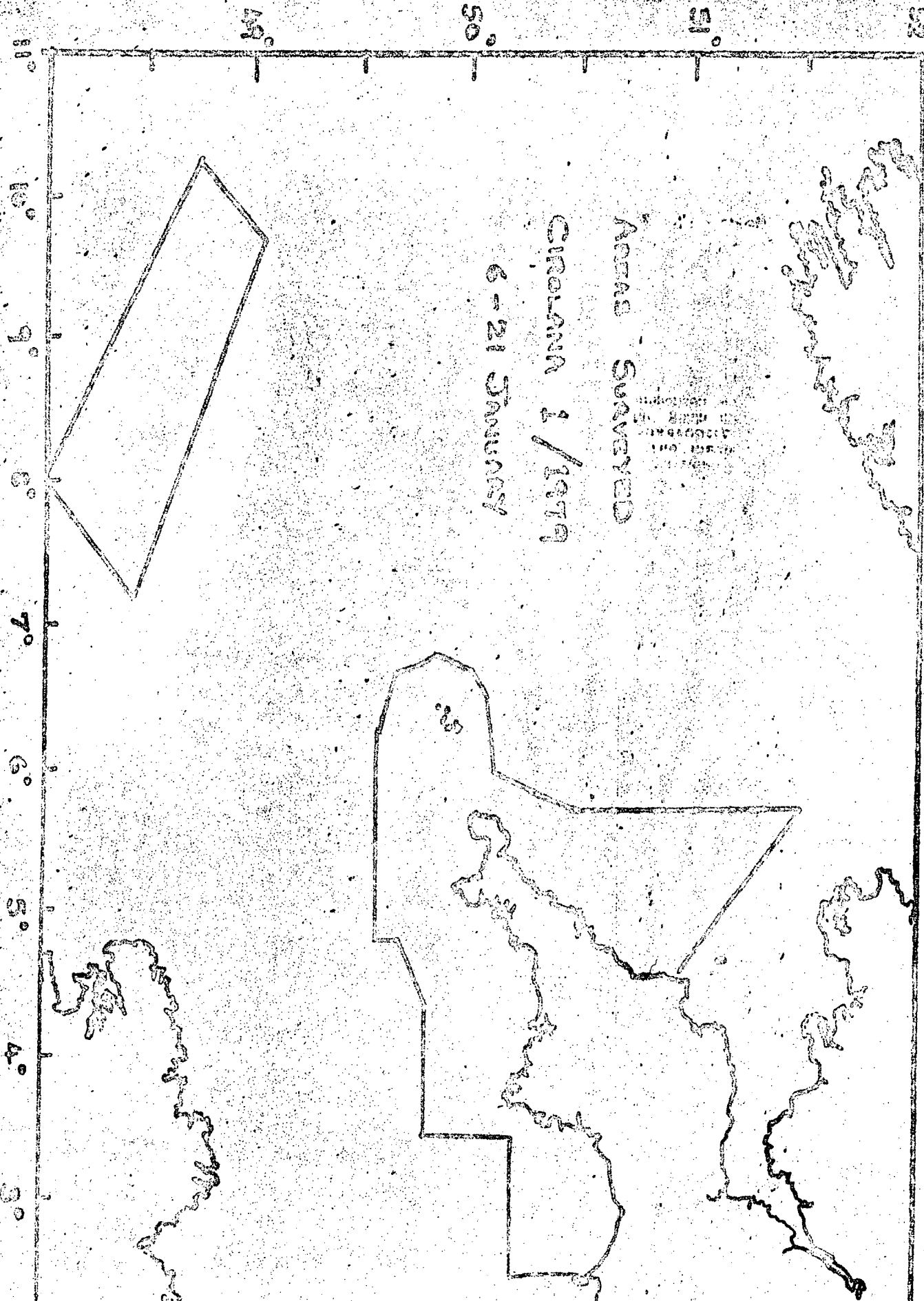
P O Johnson
24 January 1979

SEEN IN DRAFT: THF, WJS

INITIALLED: AJL

DISTRIBUTION:

Basic list
P O Johnson
J P Bridger
Mrs W A Dawson
S Warnes
W L Huggins
D Cook
H Edge (GY)
D Snowball (North Shields)
J K Curtis (Newlyn)

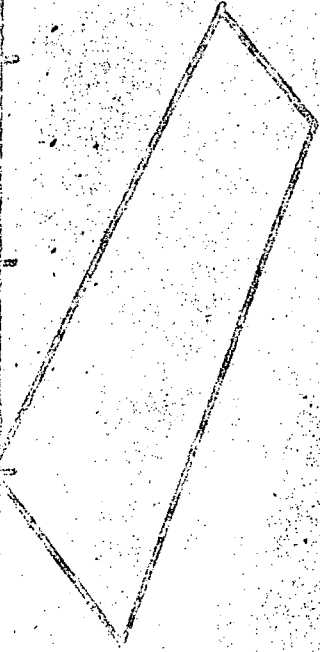
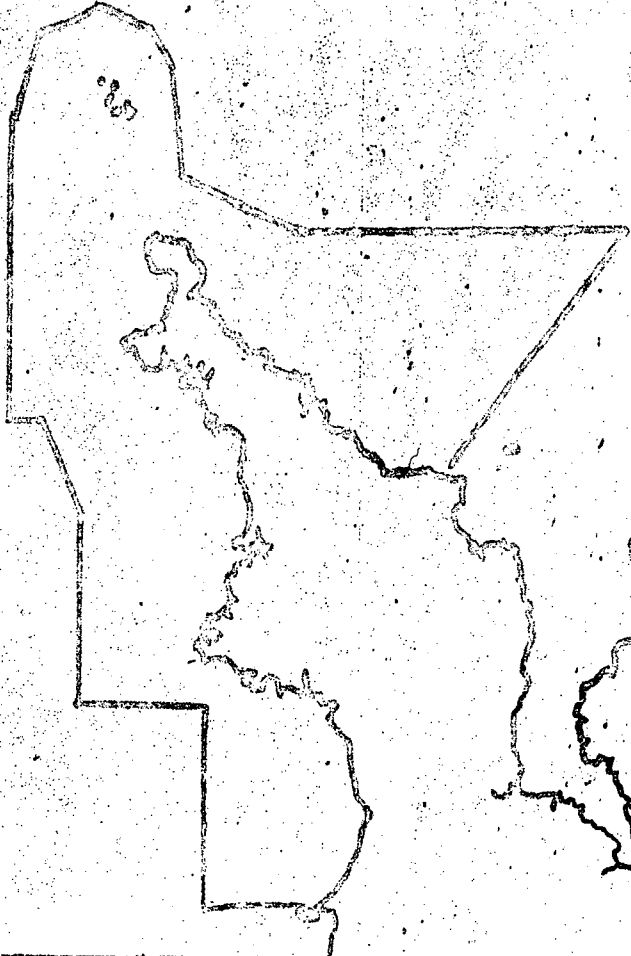


Areas Surveyed

SIRAMUN 1/1979

6-21 January

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50°
49°

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10°
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8°
7°
6°
5°
4°
3°