

INTERNATIONAL COUNCIL FOR THE  
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C.M. 1973/F: 37.  
Demersal Fish (Northern) Committee



RESULTS OF DUTCH COD EGG SURVEYS IN THE NORTH SEA IN 1973

by

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Introduction.

Since 1970 yearly cod egg and larvae surveys have been carried out in the southern North Sea with the emphasis on the Southern Bight in order to estimate spawning stock size (cf. DAAN, 1972). In 1973 three surveys were performed during the months January, February and March, which relate roughly to the beginning, the peak and the end of the spawning season. In addition the Channel area was surveyed in January and in February an extension of the survey into the central North Sea has been made in order to get indications of the relative importance of the different spawning areas.

Results.

Fig. 1, 2a, 3a present the numbers of cod eggs caught under 1 m<sup>2</sup> for each station during the subsequent surveys and fig. 2b, 3b give the same information for larvae. During the January surveys hardly any larvae were caught and no figure for these has been produced. In January and March spawning in the Southern Bight appears to have taken place more to the north than observed in former years (cf. DAAN, 1971, 1972, 1973). Significant egg concentrations in this area, however, were only found in February. At that time dispersed eggs were widely spread over the central North Sea waters, with the exception of the shallow waters of the Doggerbank. Sea water temperatures were relatively high in comparison with former years and these might have been responsible for the more northerly distribution of the spawning activities.

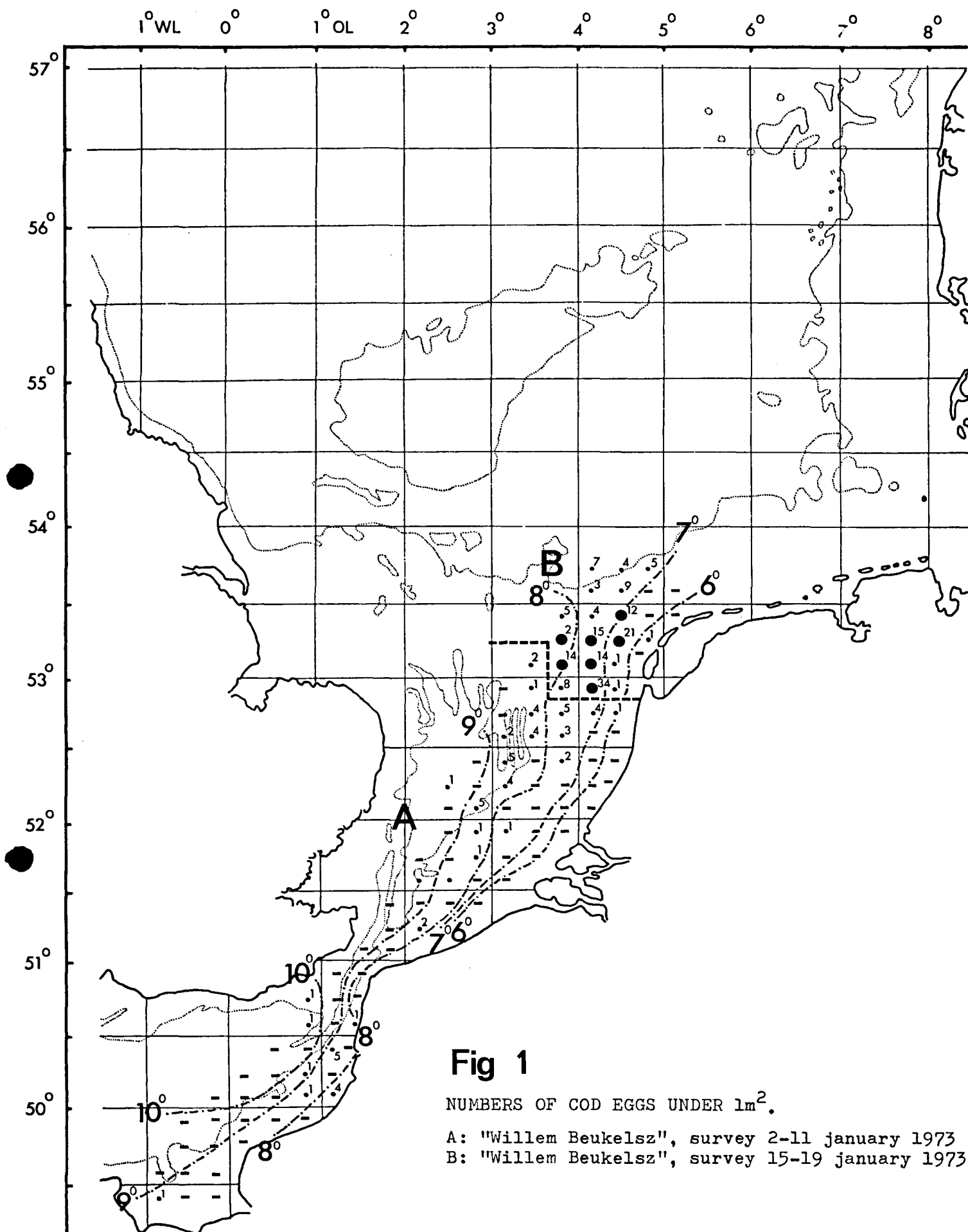
From the numbers under 1 m<sup>2</sup> and the surface area investigated total numbers of eggs and larvae present in different areas (shown in fig. 4) during the subsequent plankton surveys in 1970-1973 have been estimated (Table I). The interpretation of these results in respect of relative spawning intensity appears to be difficult because of differences in timing between the surveys. Still the suggestion is given that about one third of the total spawning of the southern stocks of cod takes place in the Southern Bight. In comparison with 1972 an increase in abundance of eggs is observed in this area, which is probably related to the maturation of the strong 1969 yearclass. It is, however, still well below the level in 1970, whereas the larval abundance was extremely low in 1973. The total egg abundance in 1973 in the rest of the southern North Sea agrees very well with the values obtained in 1971 and this is also true for the Outer Rough area.

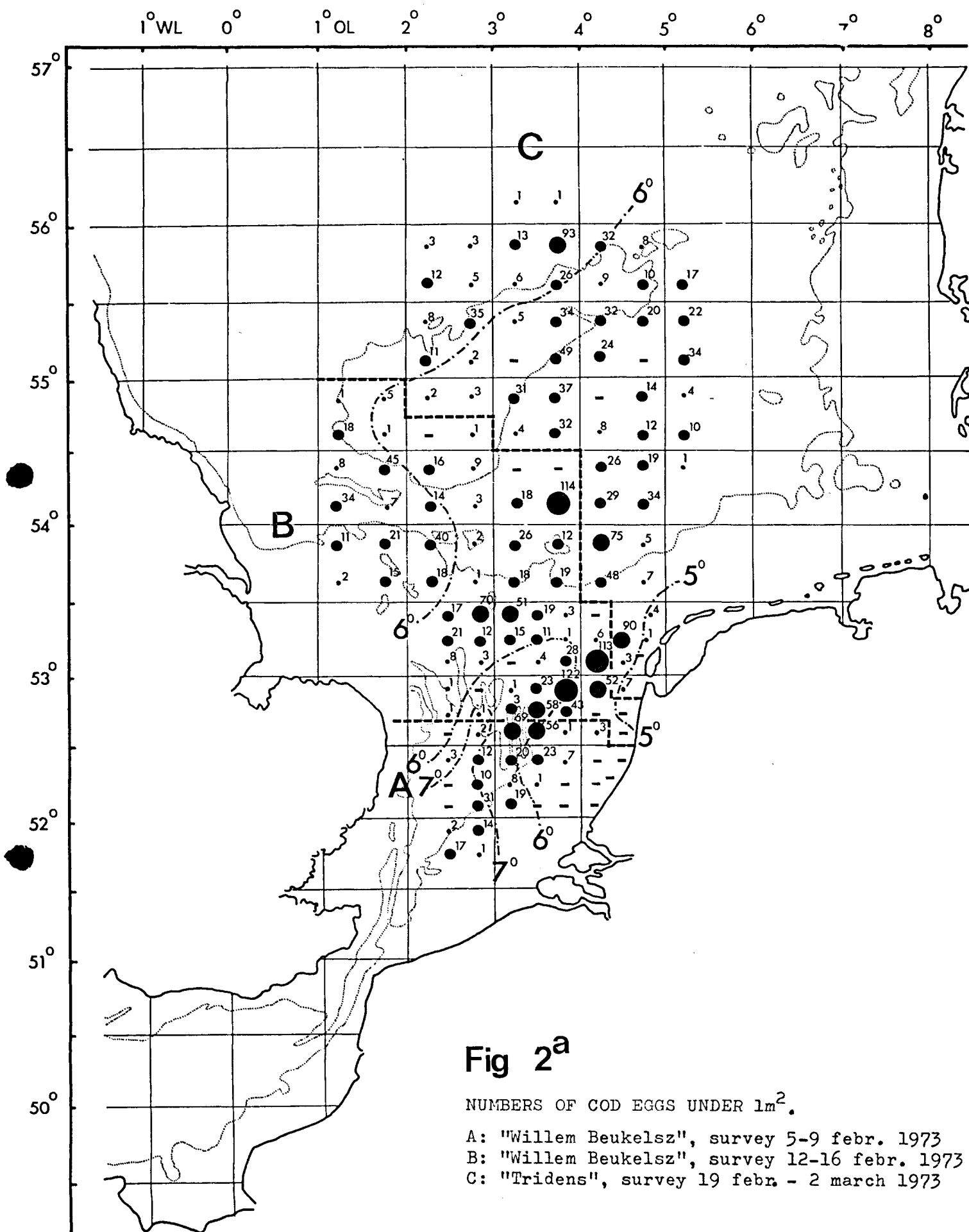
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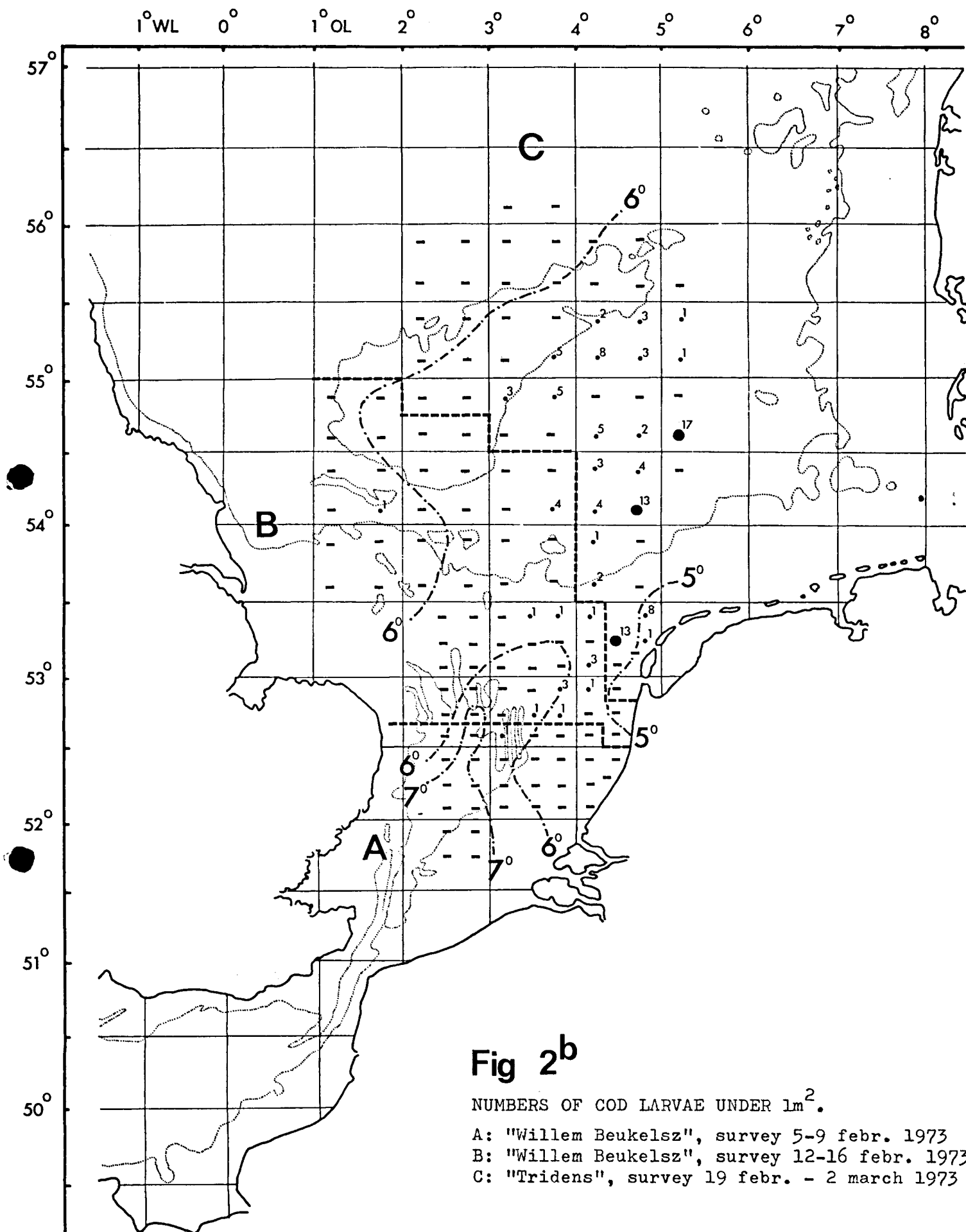
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| DAAN, N., 1971. | Dutch cod egg and larvae surveys in 1970.<br>Ann. Biol., 27 (1970): 88.                         |
| DAAN, N., 1972. | Dutch data on cod egg surveys in the southern North Sea in 1972.<br>ICES C.M. 1972/F:7 (mimeo). |
| DAAN, N., 1973. | Dutch cod egg and larvae surveys in 1971.<br>Ann. Biol., 28 (1971): 98.                         |

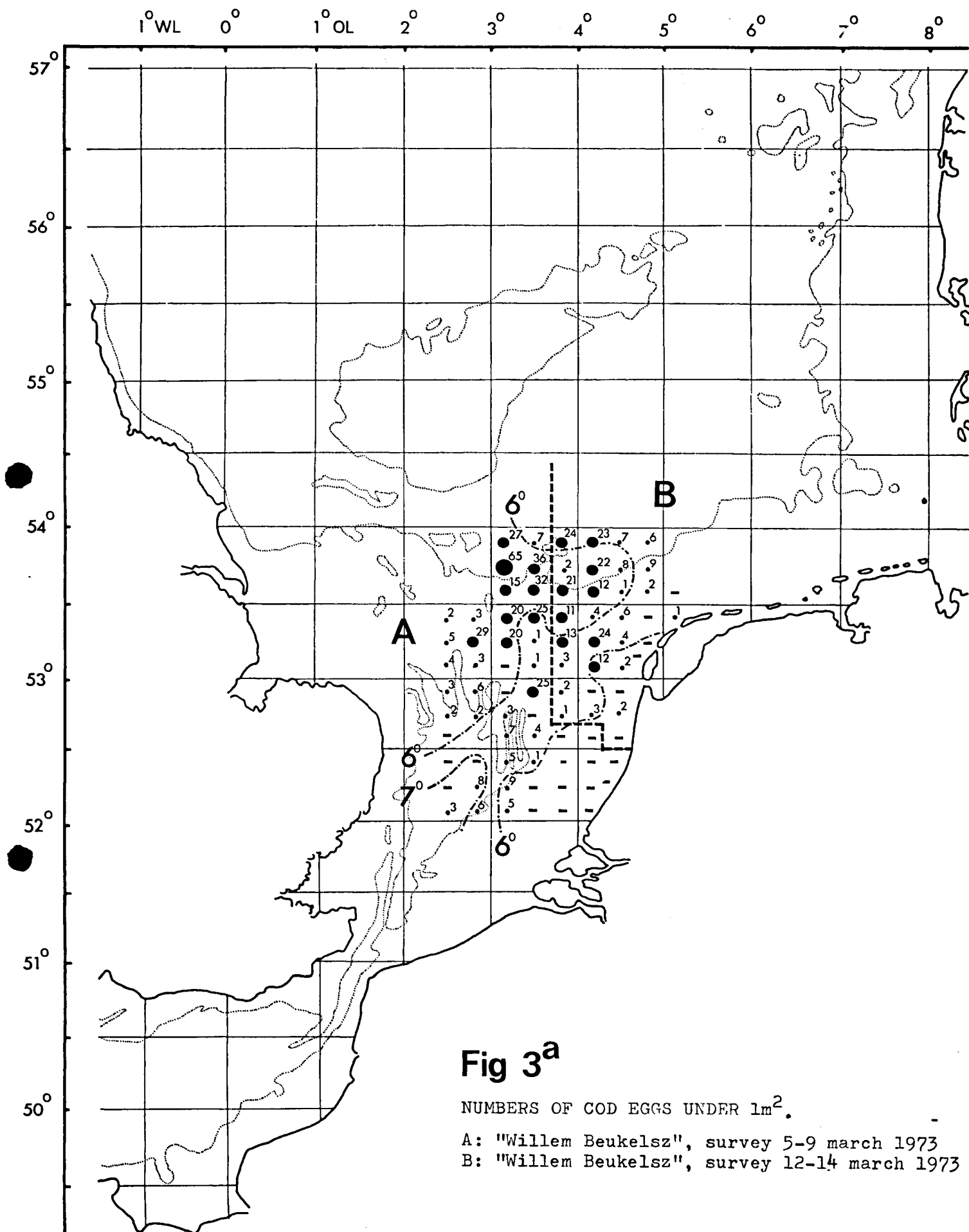
TABLE I. - Estimated numbers (in thousands of millions) of cod eggs and larvae present in different areas (cf. fig. 4) during the plankton surveys in 1970 - 1973.

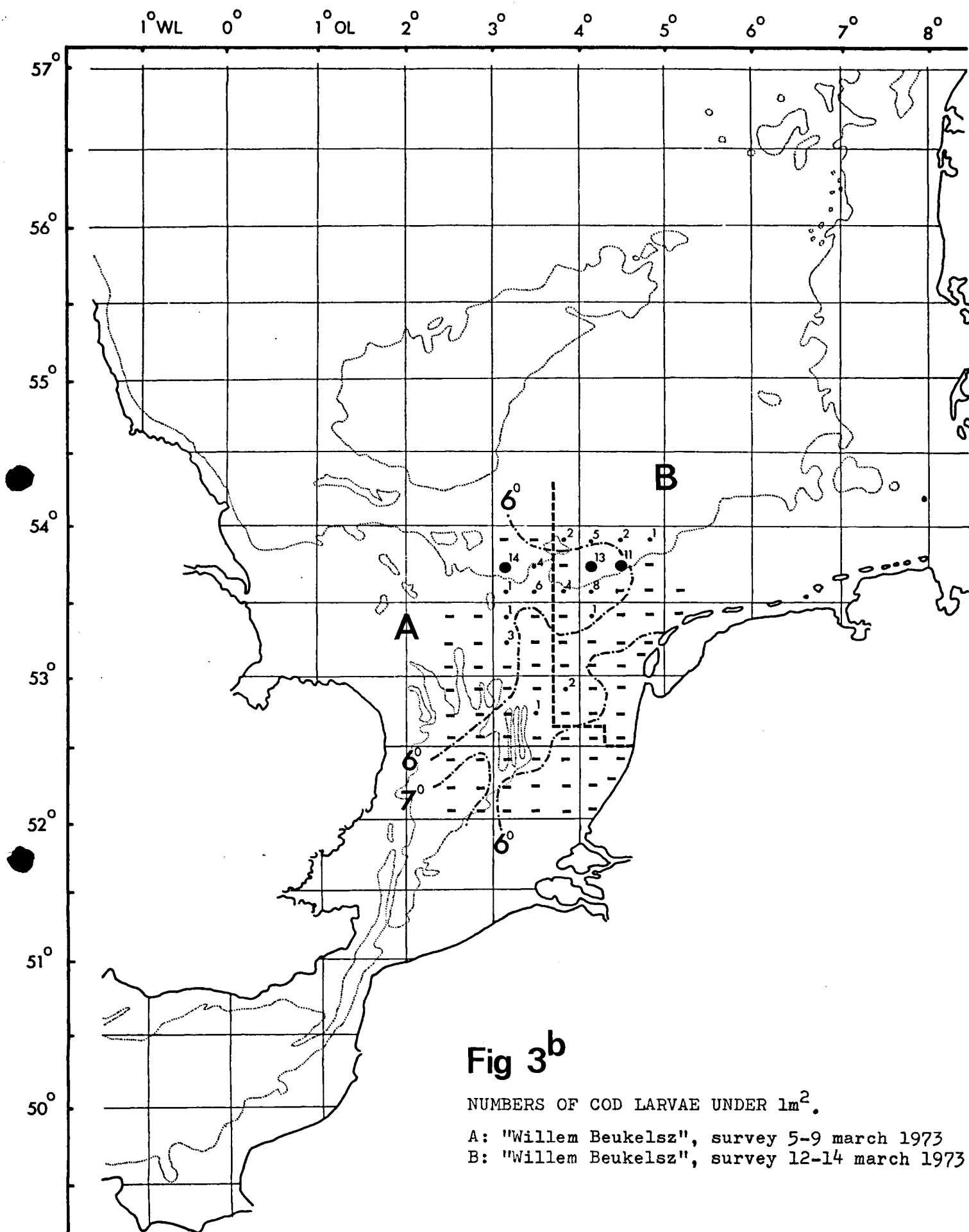
YEAR	SHIP	DATE	CHANNEL		SOUTHERN BIGHT		SOUTHERN NORTH SEA		OUTER ROUGH	
			Eggs	Larvae	Eggs	Larvae	Eggs	Larvae	Eggs	Larvae
1970	"W. Beukelsz."	2-12 Jan.	36	0.3	-	-	-	-	-	-
	"W. Beukelsz."	14-28 Jan.	-	-	866	4	-	-	-	-
	"W. Beukelsz."	23 Feb.-6 Mar.	-	-	1577	441	-	-	-	-
1971	"W. Beukelsz."	4-13 Jan.	21	0.5	-	-	-	-	-	-
	"Corella"	4-14 Jan.	-	-	140	0	-	-	-	-
	"W. Beukelsz."	13-22 Jan.	-	-	339	0	-	-	-	-
	"Corella"	20-30 Jan.	-	-	500	1	-	-	-	-
	"Tridens"	25 Jan.- 20 Feb.	-	-	-	-	1056	11	103	1
	"W. Beukelsz."	16-30 Mar.	-	-	-	-	653	243	391	243
	"W. Beukelsz."	2-9 Jan.	2	0	-	-	-	-	-	-
1972	"W. Beukelsz."	11 Jan.- 11 Feb.	-	-	165	15	-	-	-	-
	"Tridens"	23 Feb.	-	-	-	-	-	-	81	0
	"W. Beukelsz."	6-18 Mar.	-	-	69	3	-	-	-	-
	"W. Beukelsz."	2-7 Jan.	6	0.5	-	-	-	-	-	-
1973	"W. Beukelsz."	7-19 Jan.	-	-	79	1	-	-	-	-
	"W. Beukelsz."	5-16 Feb.	-	-	387	15	-	-	-	-
	"Tridens"	19 Feb.- 2 Mar.	-	-	-	-	1086	74	194	0
	"W. Beukelsz."	5-14 Mar.	-	-	80	5	-	-	-	-
	"W. Beukelsz."	2-7 Jan.	6	0.5	-	-	-	-	-	-



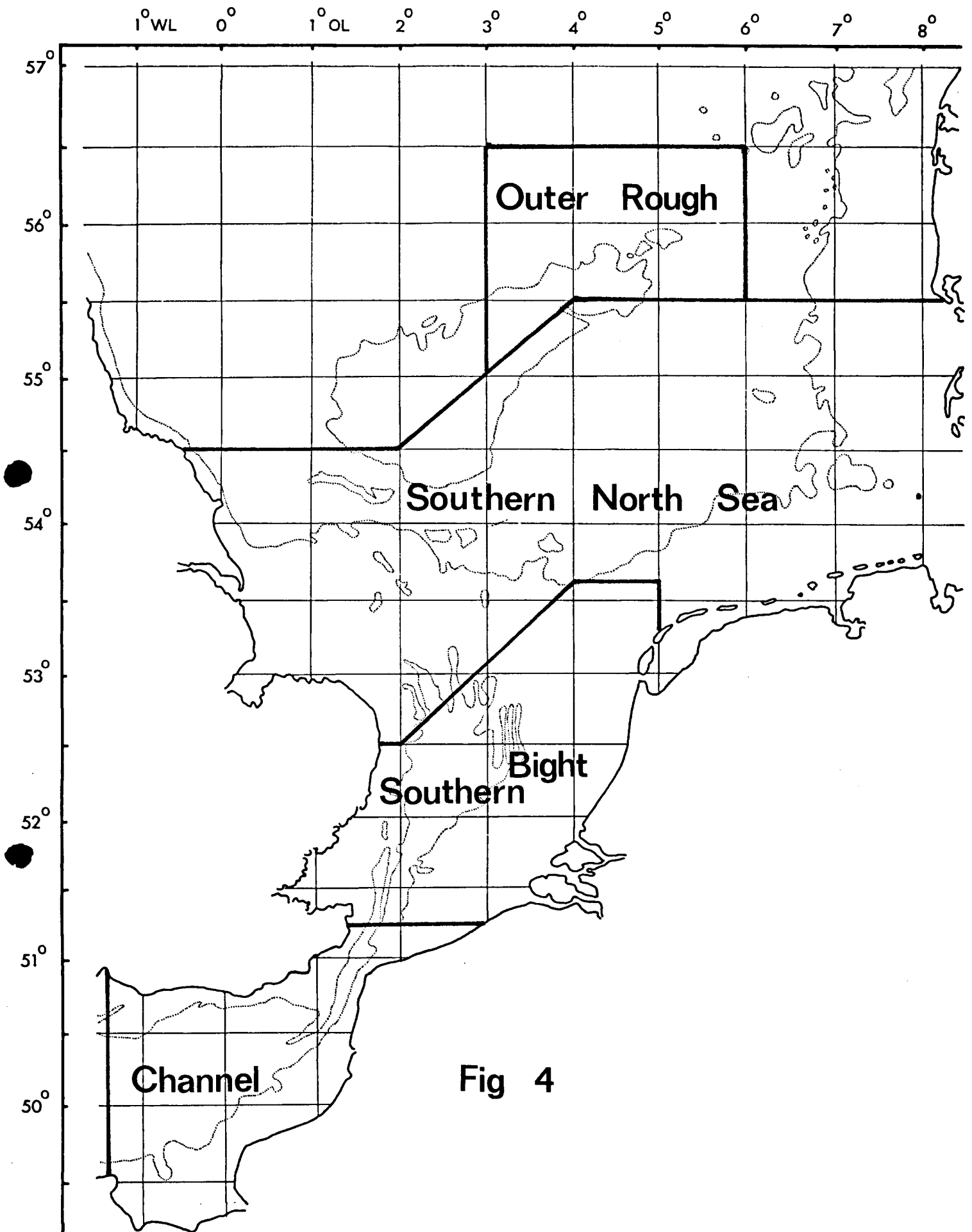












**Fig 4**