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LOBSTER TRAP CENSUS 1969

by

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Fisheries Division

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This leaflet adds to the information given in Fishery Leaflet No. 11 (Gibson, 1969) concerning lobster traps in use around the Irish coasts in 1968. The catch figures supplied to the Fisheries Division by various collectors have been correlated with the lobster gear used by boats fishing off 12 maritime counties. The purpose of these continuing records is to provide an annual measure of the effects of fishing upon lobster stocks and thereby to analyse trends in the landings, by comparing annual catch and effort.

There was little change in 1969 in the type and popularity of the designs of fishing traps used, which were:-

- a. French crawfish barrels,
- b. Scottish lobster traps,
- c. Kilmore Quay (wire) traps,
- d. U.S. parlour traps,
- e. Norwegian (wire) traps and
- f. Home-designed traps not fitting into any of above categories,

in that order of usage.

Once again four types of boat were designated namely, those with outboard engines; those up to 30' in length, with inboard engines; those of 31' - 45' and those over 45' in length. The distribution of the various types of trap used in relation to the class of boat fished is set out in Table 1. In Table 2 the total numbers of all types of traps used and the average catch per trap in 1968 and 1969 are given.

The total number of boats of all kinds engaged in lobster fishing was 671 (Table 1), compared with 626 in 1968, representing an apparent increase of 45 boats. For the Kerry area only 20 boats with outboard engines were recorded in 1968, but this figure would not appear to be understated as the 1969 census showed 46 boats of this class, so that the real increase in the overall number of boats in 1969 over 1968 was probably of the order of 20, or less than 4%. The total number of punts, most of them equipped with outboard engines, used in 1969 was 466, or 169 more than the figure given for 1968.

The number of motor vessels of up to 30' in length was 175 in 1969, or 92 fewer than in 1968, whilst boats from 31' - 45' in length numbered 44 in 1968 and 109 in 1969, an apparent increase of 65 in all. From these figures it becomes clear that in 1968, the first year in which this census took place, some confusion may have resulted from the choice of length classification of boats. It seems likely that the 1969 census, being the second of its kind, more accurately reflects the true position. The distribution of the various length categories of boats is also shown in Table 1. The greatest number of boats engaged in lobster fishing operated off the Co. Galway coast and the fewest off Co. Louth.

The number of boats fishing for lobsters off each maritime county is related to the length of the relevant county coastline in Table 3. In eight counties the ratio of boats per mile was 1 : 3 or less, but off counties Louth, Wicklow, Clare and Mayo, it was over 1 : 3. In the case of Louth and Wicklow, the amount of lobster ground available is rather small and isolated, and this limits the number of boats which can fish there. Only Counties Galway and Donegal have reached a density of fishing of 1 lobster boat per mile of coastline. If it is assumed that Ireland has about 1,300 miles of coastline off which there is an area within half a mile of the shore in which lobster fishing can take place, then there are about 416,000 acres of lobster ground around the Irish coasts. Various estimates of the numbers of lobsters of all sizes and ages per acre have been made by American, Canadian and Norwegian workers. It seems probable that there are not less than 16 lobsters of six inches in length and over per acre of fishing ground. This suggests that the total stock of lobsters, both adolescent and mature, in Irish waters could be of the order of 6,000,000. Of these about half will be of commercial size. If, therefore, total deaths of adult lobsters by fishing and natural causes were 50%, the catch should be of the order of 1,000,000 per annum. However, since lobsters are very local in their habitat and show no significant migrations, over-fishing of particular parts of the sea bed is quite possible. In order to get the maximum yield of lobsters it is essential that fishing be on a rotational basis and that electronic aids be used to seek out and map lobster-bearing grounds which are not visible by any other means. Furthermore, disregard for the size limit will have a disastrous effect on the abundance of lobsters.

The distribution of the various types of trap in use in 1969 is shown in Table 4 by maritime county, irrespective of boat class. The total number of traps of all kinds used was 37,701, or about 56 per boat, which is slightly greater than in 1968, when it was 50 per boat. The total rise in the number of traps used is probably not as great as it appears to be, because the boat underestimate in the 1968 figures, already mentioned, would account for over 35% of the apparent increase of 4211 traps used in 1969. Once again the least number of traps were used off Co. Wicklow (less than 1%) and the greatest number were fished off Co. Galway (almost 31%). There were small reductions in the numbers of traps fished off counties Louth, Dublin, Cork and Donegal in 1969 compared with 1968 (Table 2). The number of traps fished off Galway rose by almost 20% on the 1968 figure. Table 2 shows that the counties where true lobster fishing gear was preferred to crawfish gear were Louth, Dublin, Wicklow, Wexford, Waterford, Clare, Sligo and Donegal. The most important aspect of Table 2 is the comparison which it affords of the average catch of lobsters per trap in 1968 and 1969. Catches were up on the 1968 levels in eastern and southern areas, being doubled off Co. Louth, but down off western and northern counties. There were many reports from western areas of prolonged periods of heavy ground swell during 1969, which was claimed to have reduced trap efficiency. The total catch of lobsters per county (see Table 5) was well up in 1969 off counties Louth, Dublin, Wexford, Waterford, Cork and Clare. It was considerably lower off counties Galway, Sligo and Donegal.

Generally speaking, where effort and catch increase simultaneously (see Wexford and Waterford, Table 2), the stock fished is in a healthy state. This is also true in a case where effort is reduced but catch increases (see Louth and Cork, Table 2). When catch and effort both fall simultaneously (see Donegal, Table 2), this being the converse of simultaneous increase, no information is provided about stock. However, where effort increases and catch goes down, a dangerous situation may be arising. In the cases of Clare, Galway, Mayo and Sligo the effort increased, but the catch declined in 1969. In the case of Clare, which in 1968 was shown to have a catch of 28 lobsters per trap, the fall to 23 lobsters in 1969 is nearing the expected national yield of 20 lobsters per trap per season; in the case of Sligo, however, the catch going down by over half could be serious.

French crawfish creels (55%) and Scottish lobster creels (22%) together comprised over 75% of the traps used in 1969, as they did in 1968. Kilmore Quay and U.S. traps increased slightly in popularity, Norwegian traps almost trebled in number, but somewhat fewer home-designed traps were operated. As has been pointed out before, the crawfish trap is designed to fish for crawfish but not for lobsters. This trap was the commonest one in use off counties Cork, Kerry, Galway and Mayo. Traps designed specifically to catch lobsters were the most popular used off counties Louth, Dublin, Wicklow, Waterford, Clare, Sligo and Donegal. There was no indication in 1969 that the French crawfish creel continued to lose popularity; if anything it was slightly more used in 1969 than in the previous year.

The catch of lobsters for all types of trap per county is indicated in Table 5 in terms of catch per trap. The average national yield per trap was 17 lobsters, almost exactly the same as in 1968, while the weight per trap remained the same at 21 lb. in 1969. These are not striking figures, and the trend in succeeding years will reveal their significance. The catch per trap per county, as given in Table 5, shows that, in those areas where lobster fishing gears dominate, i.e. counties Louth, Dublin, Wicklow, Wexford, Clare, Sligo and Donegal, the number of lobsters per trap fished is higher than in counties Cork, Kerry, Galway and Mayo, where the majority of the traps used are of the French crawfish design (see also Table 4). In Kerry, Galway and Mayo the average number of lobsters per trap was 10.5, 10.0, respectively.

If all traps used in 1969 had been designed for lobster fishing they could have produced about 755,000 lobsters. This would have been an increase of about 220,000 lobsters, valued at approximately £120,000. The fact that the catch of crawfish was valued at £133,000 is, presumably, the main reason why fishermen do not choose to use lobster fishing gear only, but instead, in some counties, use the crawfish gear which is somewhat dual purpose.

Conclusions:

1. A total of 671 boats, ranging from row boats to vessels over 45' in length, took part in the 1969 lobster fishery.
2. The total catch of lobsters was 527,340 in 1969, up by some 19,900 lobsters on 1968, and by 32,000 lobsters on 1967.
3. A total of 37,701 traps were used, of which approximately 55% were designed for crawfish fishing and 45% for lobster fishing.
4. The national average yield of lobsters per trap was 17, or about 21 lb., in 1969, which was almost exactly the same^{as} in 1968.

Reference:-

Gibson, F.A. (1969). Lobster trap census, 1968 Fishery Leaflet
No. 11. Department of Agriculture and Fisheries, Dublin.

TABLE 1. Distribution of the numbers of boats by size category by county, comparing 1968 with 1969.

County	1968					1969				
	OBE	30'	31'-45'	More than 45'	Total	OBE	30'	31'-45'	More than 45'	Total
Louth	2	3	-	-	5	2	2	-	-	2
Dublin	21	6	-	-	27	15	4	-	-	19
Wicklow	6	-	-	-	6	5	-	1	-	6
Wexford	9	21	-	1	31	9	15	7	1	32
Waterford	17	9	3	3	32	12	4	8	2	26
Cork	32	36	14	2	84	46	16	14	1	77
Kerry	20	12	12	9	53	46	12	11	11	80
Clare	14	6	4	-	24	14	11	2	-	27
Galway	84	81	8	3	176	117	52	34	4	207
Mayo	29	38	1	-	68	19	23	10	2	54
Sligo	5	14	-	-	19	9	10	5	-	24
Donegal	58	41	2	-	101	72	26	17	-	115
Totals	297	267	44	18	626	466	175	109	21	671

OBE = Small boats equipped with outboard engines.

TABLE 2. Number of traps per county and average catch per trap compared for 1968 and 1969.

County	No. of traps in 1968	No. of traps in 1969	Lobster traps in 1969 as % of total traps	Average catch per trap 1968	Average catch per trap 1969
Louth	480	348	100%	8	17.0
Dublin	805	720	100%	15	22.5
Wicklow	122	126	100%	22	21.0
Wexford	3,095	3,630	91%	13	16.0
Waterford	1,712	1,728	88%	17	21.5
Cork	4,809	4,622	23%	12	15.0
Kerry	3,665	4,505	6%	10	10.5
Clare	1,080	1,445	86%	28	23.0
Galway	9,530	11,687	25%	14	10.0
Mayo	2,855	3,330	6%	11	10.0
Sligo	1,112	1,551	94%	28	13.0
Donegal	4,225	4,009	90%	23	21.0
Totals	33,490	37,701	Mean	17	17.0

TABLE 3. Approximate effective mileage off each county for lobster fishing, together with the number of boats per coast, and the ratio of boats to mileage.

County	No. of boats all classes	Effective coastal mileage	Ratio of boats to coastal mile.
Louth	4	40	1 : 10.0
Dublin	19	45	1 : 2.4
Wicklow	6	40	1 : 6.7
Wexford	32	84	1 : 2.6
Waterford	26	54	1 : 2.1
Cork	77	108	1 : 1.4
Kerry	80	198	1 : 2.5
Clare	27	104	1 : 3.9
Galway	227	207	1 : 0.9
Mayo	54	220	1 : 4.1
Sligo	24	68	1 : 2.8
Donegal	115	120	1 : 1.0
Totals	671	1,288	1 : 1.9 (Average)

TABLE 4. Distribution of the types of trap used in 1969, by county

County	Types of trap used						Totals
	Scottish lobster traps	French crawfish barrels	Kilmore Quay traps	U.S. parlour traps	Norwegian traps	Home-designed traps	
Louth	348	-	-	-	-	-	348
Dublin	590	-	-	30	-	100	720
Wicklow	96	-	-	30	-	-	126
Wexford	485	337	2,808	-	-	-	3,630
Waterford	1,248	380	100	-	-	-	1,728
Cork	40	3,862	380	110	-	230	4,622
Kerry	-	3,920	585	-	-	-	4,505
Clare	-	250	765	240	190	-	1,445
Galway	50	8,755	-	1,915	710	257	11,687
Mayo	365	2,925	-	20	20	-	3,330
Sligo	1,353	50	-	10	28	110	1,551
Donegal	3,644	240	5	105	-	15	4,009
Totals	8,219	20,719	4,643	2,460	948	712	37,701

TABLE 5. Total catch of lobsters and number of traps per county in 1969, together with the average catch of lobsters per trap.

County	Total catch of lobsters	Total number of all types of traps	Average catch per trap
Louth	5,916	348	17.0
Dublin	16,220	720	22.5
Wicklow	2,700	126	21.0
Wexford	58,927	3,630	16.0
Waterford	37,421	1,728	21.5
Cork	70,859	4,622	15.0
Kerry	47,121	4,505	10.5
Clare	33,400	1,445	23.0
Galway	116,390	11,687	10.0
Mayo	32,950	3,330	10.0
Sligo	20,324	1,551	13.0
Donegal	85,112	4,009	21.0
Totals	527,340	37,701	(mean) 17.0 (corrected).