

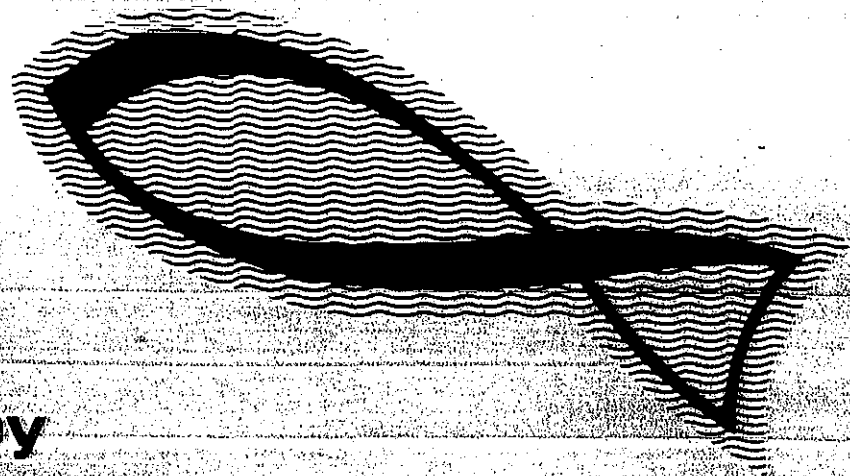


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**Preliminary Results of Salmon
Tagging in the Killala Bay Area
1977**



**by
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Preliminary Results of Salmon Tagging in the Killala Bay Area 1977

Abstract

Salmon movements in and around Killala Bay in 1977 were investigated by tagging. A total of 40 tags (20%) were returned. The areas of recovery ranged from the River Shannon to the south coast of England.

Introduction

The investigations of movements of salmon in the sea has been in progress since 1948, and available information on recaptures of salmon tagged in the open sea has been summarised by Went (1970). The present work, which commenced in 1976, was undertaken to obtain information on local movements of salmon in and around Killala Bay. The results of the 1976 tagging have been published (Browne, 1978). This paper gives preliminary results of the recoveries obtained from the taggings during 1977.

Materials and Methods

The fish were obtained, as in 1976, from the commercial drift nets fishing in this general area, and were tagged as they were taken from the nets. Only fish in good condition following tagging were released. Details of the tag and the tagging method have already been described (Browne, 1978).

Release and Recapture

A total of 200 salmon were tagged in close proximity to the bay during the period 21st June to the 12th July (Fig. 1). The number circled is the number of fish tagged at each tagging station; the number in the square is the total number of recoveries obtained from fish tagged at these stations and the number at the end of the arrow represents the tags recovered from the River Moy. Thus at Lenadoon Point 24 salmon were tagged; 7 tags were returned and of these 3 were recovered from the River Moy. Details of the number tagged, the number recovered, percentage recovery and the location of recapture are given in Table 1. From a total of 200 tagged fish released, 40 tags (20%) were returned.

Discussion

Movements. The recapture points ranged from the River Shannon to the River Itchen on the south coast of England (Fig. 2). Despite the wide range of recovery points 92.5% of the tags were recovered between Tullaghan Bay, Co Mayo and Inver Bay, Co Donegal. The River Moy accounted for 18.9% of the recaptures and the Easky River for 18.5%. In general, fish tagged on the west side of the bay (Fig. 2) appeared to be in transit and were recovered at great distances outside the bay, while salmon tagged on the east side (Fig. 3) seemed destined for locations in Killala Bay, Sligo Bay and Donegal Bay. There was no migration from the east side of the bay out of the area.

Time at liberty. Table 3 shows the number and the corresponding percentage of tags recovered during 10-day periods. In general the fish were at liberty for short periods. Within ten days following release, 70.6% of the tags had been returned, and 88.2% of the tags were returned within 20 days after their release. The fish which remained at liberty for the longest time was recaptured after 164 days in the Itchen River at Cotsleigh, Hampshire, England.

Length and weight. The average length and weight of the fish at the time of the tagging was 64.8 cm. (standard deviation 2.8) and 3.2 kg (standard deviation 1.8) respectively. The average length and weight of the fish recovered with tags was 64.3 cm. (standard deviation 3.2) and 3.2 kg (standard deviation 1.6) respectively. There is no statistical difference between these two groups of fish.

Acknowledgements

I would like to thank James Carroll and Paul Gleeson of the Fisheries Research Centre Laboratory staff, and the fishermen who cooperated and gave us every assistance, Mr Munnelly, Mr Garvey, Mr Gallagher, who kindly allowed us to tag from their boats. Thanks must go to Mr Pat Boland and the fishermen at Kilcummin who made special efforts to ensure that we could carry out the tagging programme. I also want to thank the many fishermen who returned tags and thus made the work worthwhile.

References

Browne J (1978) Results of Salmon Tagging in the Killala Bay Area 1976.

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Weut AEJ (1970) Salmon movements around Ireland.

Berichte der Deutschen.

Wissenschaftlichen Kommission fur Meeresforschung 21. (1970): H (1 - 4) 33 - 45.

Table 1. Recaptures of Tagged salmon released in Killala Bay in 1977

Location of Tagging Station	No. tagged	No. recovered	Percentage recovery	No. of days at liberty	Locations of recaptures
Creevagh Head	79	16	20.25%	22	Easky River, Co. Sligo.
				7	Easky River, Co. Sligo.
				-	Eagle Island, Co. Mayo.
				-	Eagle Island, Co. Mayo.
				7	Teelin Bay, Co. Donegal.
				3	Teelin Bay, Co. Donegal.
				4	Tullaghan Bay, Co. Mayo.
				37	Tullaghan Bay, Co. Mayo.
				1	Dromore West, Co. Sligo.
				164	River Itchen, Hampshire, England.
				8	River Shannon, Newtown, Co. Limerick.
				13	Dundalk Bay, Co. Louth.
				1	Manisrone, Co. Sligo.
				1	Aughris Head, Co. Sligo.
-	Creevagh Head, Co. Mayo.				
-	Creevagh Head, Co. Mayo.				
Kilcummin Head	33	6	18.18%	9	River Moy, Foxford, Co. Mayo.
				4	River Moy, Ballina, Co. Mayo.
				4	River Moy, Ballina, Co. Mayo.
				4	Manisrone, Co. Sligo.
				4	Manisrone, Co. Sligo.
				-	Bruckless Bay, Co. Donegal.
Pollacheeny	6	-	-	-	
Lenadoc Point	24	7	29.16%	8	River Moy, Ballina, Co. Mayo.
				13	River Moy, Ballina, Co. Mayo.
				8	River Moy, Ballina, Co. Mayo.
				59	River Moy, Co. Donegal.
				8	Duff River, Cliffoney, Co. Sligo.
				14	Mount Charles Bay, Co. Donegal.
1	Lenadoc Point, Co. Sligo.				
Easky	46	9	19.56%	4	River Moy, Ballina, Co. Mayo.
				10	Easky River, Co. Sligo.
				9	Easky River, Co. Sligo.
				9	Easky River, Co. Sligo.
				14	Duff River, Co. Leitrim.
				2	Duff River, Co. Leitrim.
				6	Carrownabinna Point, Co. Sligo.
				9	North Mayo Coast
				5	Rossnowlagh, Co. Donegal
Carrownabinna Point	11	2	18.18%	13	Ballisodare River, Co. Sligo.
				3	Teelin Bay, Co. Donegal.

Table 2. Number and percentage of fish that travelled at various speeds

Miles per day	0-4.9	5.0-9.9	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9
No. of fish	17	4	1	3	2	1
Percentage	60.7	14.3	3.5	10.7	7.1	3.5

Table 3. Number and percentage of fish recaptured during 10-day periods after release

No. of days at liberty	1-10	11-20	21-30	31-40	41-50	Over 50
No. of tags recovered	24	6	1	1	0	2
Percentage	70.6	17.6	2.9	2.9	0	5.9

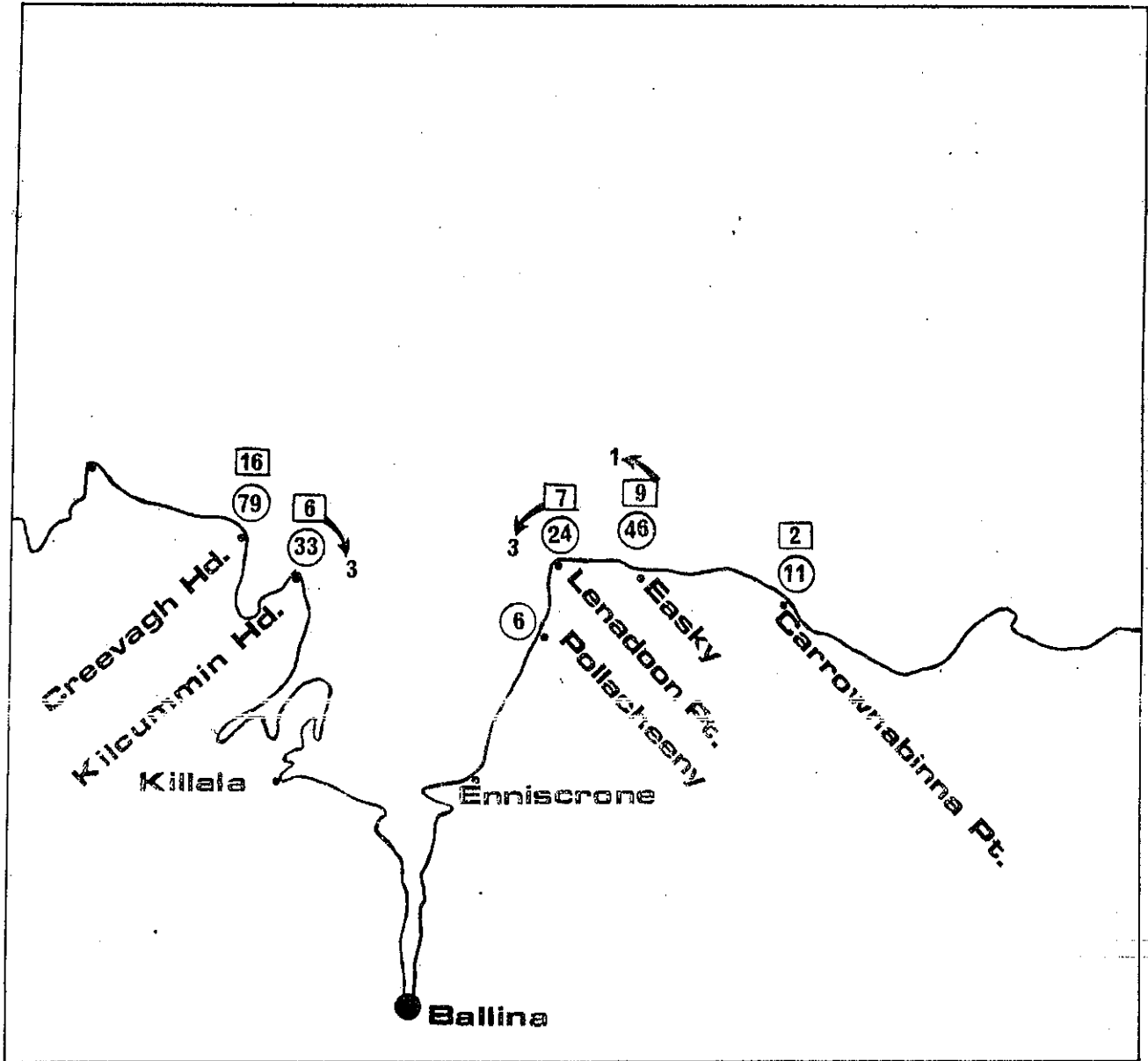


Fig. 1

The locations of the tagging stations around Killala bay. The following details are given for each station, a) the number of salmon tagged (circled), b) the number of salmon recovered with tags from the tagging at that station (in the square), c) the number of those recoveries which were from the River Moy (the number at the end of the arrow).

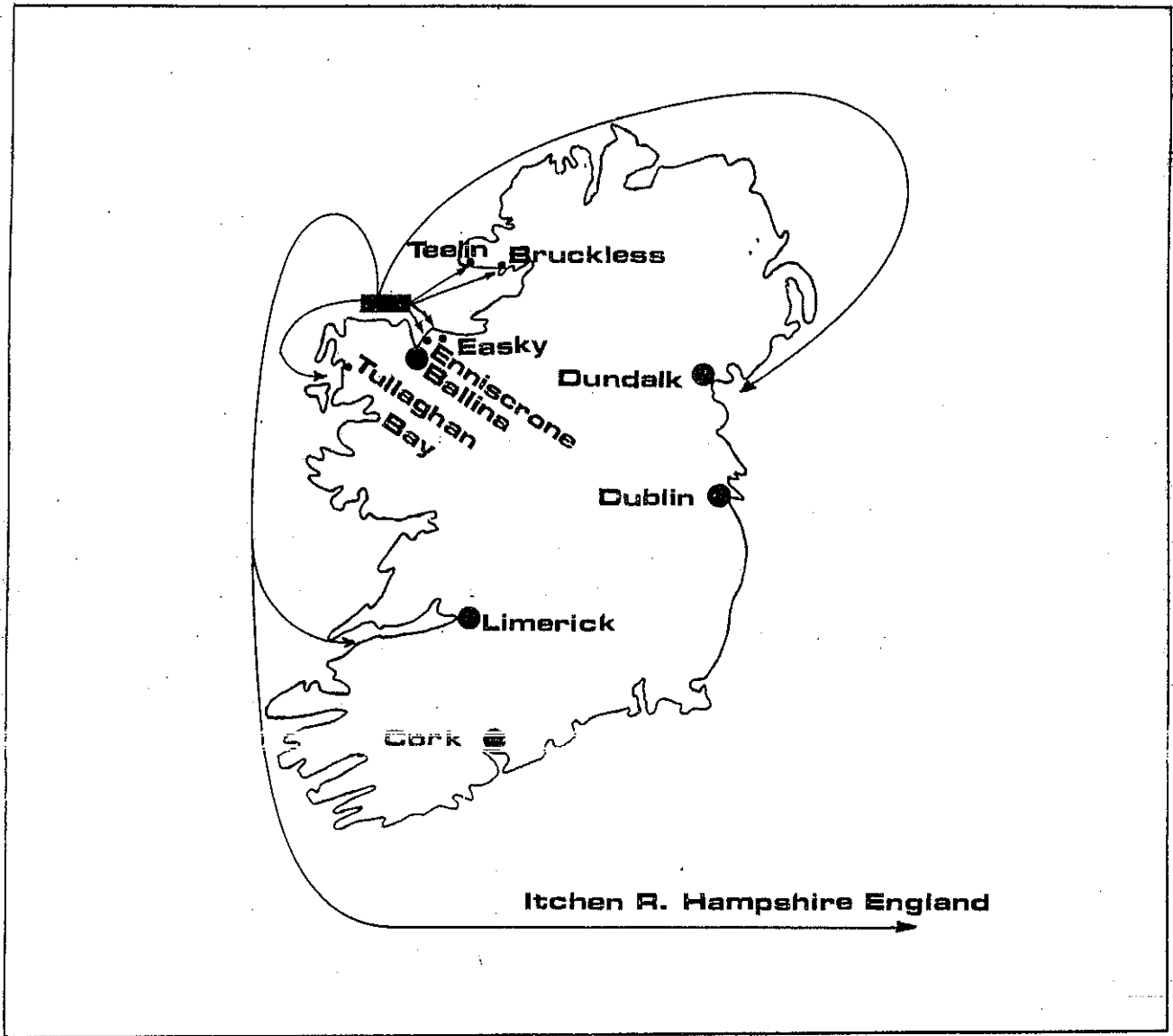


Fig. 2

The recovery points of salmon which were tagged in the area shown to the west of Killaloe bay.

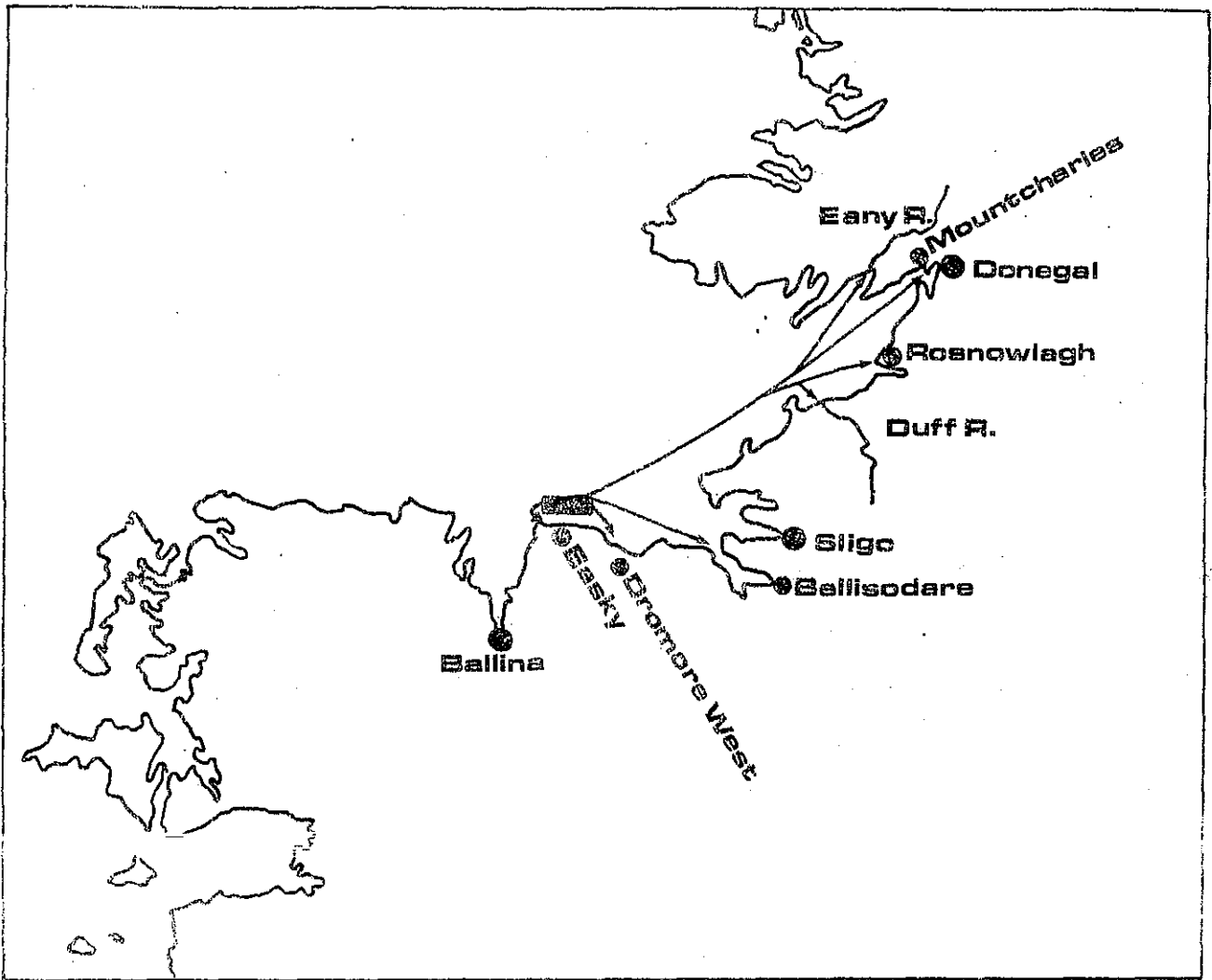


Fig. 3

The recovery points of salmon which were tagged in the area shown to the east of Killala bay.

APPENDIX

List of people who returned tags

Mr. Bern, Kilsely, Co. Limerick.
Mr. N. Bourke, Kilglass, Co. Sligo.
Mr. J. Byrne, Teelin, Carrick, Co. Donegal.
Mr. E. Carroll, Blackrock, Dundalk, Co. Louth.
Dr. D.M. Clarke, Westport, Co. Mayo.
Mr. M.P. Doocey, Geeshala, Ballina, Co. Mayo.
Mr. J. Dunphy, Easky, Co. Sligo
Mr. Ford, Killala, Co. Mayo.
Mr. T. Gannon, Pier Road, Enniscrone, Co. Sligo.
Mr. J. Haughey, Teelin, Carrick, Co. Donegal.
Mr. J. Hennessy, Cliffoey, Co. Sligo.
Mr. B. Johnson, 46 Richhill Park, Belfast 5.
Mr. E. Kelly, Carrenrush, Rathlee, Co. Sligo.
Mr. L. Kelly, The Mullins, Donegal, Co. Donegal.
Mr. A. Lynott, o/c E.S.B. Station, Bellacorrick, Ballina, Co. Mayo.
Mr. W. McGowan, 19 Marian Villas, Donegal.
Mr. C. McIntyre, Bunduff, Castlegal, Co. Sligo.
Mr. H. McIntyre, Bunduff, Castlegal, Co. Sligo.
~~Mr. D. McKean, Enniscrone, Co. Sligo.~~
Mr. J. McNern, Bruckless, Co. Donegal.
Mr. E. McPartland, Sligo Road, Ballisodare, Co. Sligo.
Mr. J. Munnely, Ross, Killala, Co. Mayo.
Mr. A. Reynolds, Creevy, Ballyshannon, Co. Donegal.
Mr. T.S. Scanlon, Geeshala, Ballina, Co. Mayo.
Mr. S. Toy, Strandhill, Co. Sligo.
Mr. S. Walsh, Belderrig, Ballina, Co. Mayo.
Mr. G. Wilson, The Rock, Mountcharles, Co. Donegal.
Mr. D.J. Woodford, 8 Rogers Road, Bishopstoke, Eastleigh, England.