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Title

Lobster Marking and Tagging Experiments in Egmont Bay,
P.E.I., September 15 to October 8, 1954 and
August 4 to October 5, 1955

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1956

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Lobster marking and tagging experiments in Egmont Bay, P.E.I.,
September 15 to October 8, 1954, and August 4 to October 5, 1955

by D. G. Wilder and R. C. Murray

Introduction

The lobster fishing season in District #8 which comprises the northern half of Northumberland Strait extends from August 10 to October 5. Throughout much of the remainder of the southern Gulf of St. Lawrence the season is open from May 1 to June 30. Enforcement of these closed seasons in adjacent areas is extremely difficult and many feel that a uniform season throughout the southern Gulf would be desirable.

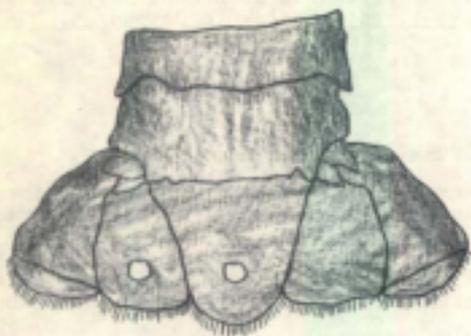
Fishermen now fishing in District #8 oppose a uniform season, arguing that they cannot catch commercial quantities of lobsters in the spring. They have long been of the opinion that lobsters move out of the Strait after the close of the "fall" season and do not return until just before the opening of the next fall season. They feel that their annual catch results from immigration rather than from recruitment through growth.

Repeated taggings of many thousands of lobsters in District #8 have shown that the rate of exploitation is exceptionally high and the movement of lobsters, as in other areas, is quite limited. Up to 8% of the legal-sized lobsters tagged at Miminogash, P.E.I., are recaptured in the two-month season. Too few lobsters escape the intensive fall fishery to provide good fishing the following spring and the few that are left are more difficult to catch in the colder waters. Under these conditions, fishing does not become profitable again until more lobsters have grown to legal size. This growth occurs principally in July and August.

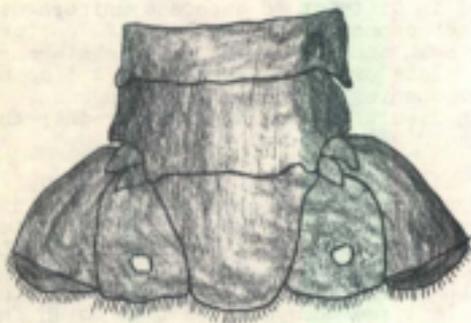
At the request of Egmont Bay, P.E.I., fishermen through Mr. J. W. MacNaught, M.P. for Prince County, a special study of the movements and growth of lobsters in that area was started in 1954.

1954 Marking Experiment

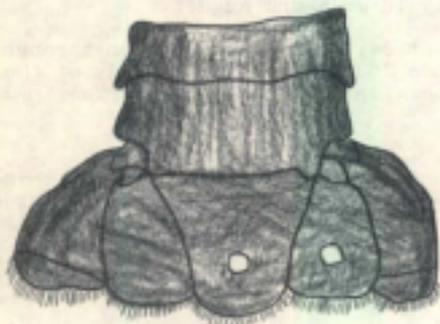
To obtain information on the growth of lobsters in this area, 6,989 sub-legal lobsters were marked from September 15 to October 4, 1954. The marks were made by punching two 3/16" diameter holes through sections of the tail fan as shown in Figure 1. Three carapace length groups were measured in thirty-seconds of an inch and marked as follows:



Group I



Group II



Group III

Figure 1. Pattern of punch marks used to distinguish three size groups of lobsters marked September 15 to October 4, 1954.

| Group | No. mkd. | No. lib. | Tail fan sections* marked | Length range in 1/32's** | Group mid point |
|--------|--------------|--------------|------------------------------|-----------------------------|-----------------|
| I | 611 | 586 | 2 and 3 | 68-71 | 70 = 2 3/16" |
| II | 2,086 | 2,002 | 2 and 4 | 72-75 | 74 = 2 5/16" |
| III | <u>4,292</u> | <u>4,128</u> | 3 and 4 | 76-79 | 78 = 2 7/16" |
| Totals | 6,989 | 6,716 | | | |

* Sections numbered 1 to 5 from left to right. Sections 1 and 5 were not used as they are more fragile.

** Lobsters recorded as 68/32 include all lobsters between 68.0 and 69.0 thirty-seconds and similarly for other sizes.

Of the lobsters marked 6,716 were liberated in good condition about 1 1/2 miles W.N.W. of Abrams Village wharf in about 4 fathoms of water (Figure 2). Most of the Abrams Village fishermen willingly landed sub-legal lobsters for marking and made no charge for this service. The lobsters were marked and liberated the same day they were caught, whenever weather permitted. The numbers marked and liberated are listed in Tables I and II. The average weight of lobsters marked was--males 0.395 pounds, females 0.401 pounds and combined 0.398 pounds. Of the marked lobsters, 273 were found at the time of liberation to be dead or mutilated and were discarded. Bad weather prevented fishing on September 23, 24, 29 and October 5.

The start of the marking experiment was purposely delayed until late in the season so that as few as possible of the marked lobsters would be recaptured and sold during the remainder of the season. From September 20 to October 4, 193 marked lobsters were found among the sub-legal lobsters landed for marking. These were promptly returned to the water. At the time the lobsters were marked only three small boats were fishing near the place where the marked lobsters were released. These boats probably landed and sold a few of the marked sub-legal lobsters but it appears unlikely that large numbers were involved.

Table I. The number, sex and weight of all lobsters marked in each size group.

| Date 1954 | Lobsters marked | | | | | | | | | | | | | | |
|--------------|-----------------|-----------|------------|--------------|----------|-----------|------------|--------------|----------|-----------|------------|--------------|------|------|------|
| | Males | | | | Females | | | | Combined | | | | | | |
| | Gr. I | Gr. II | Gr. III | Total Wt. | Gr. I | Gr. II | Gr. III | Total Wt. | Gr. I | Gr. II | Gr. III | Total Wt. | | | |
| Sept. 15 | 3 | 19 | 92 | 114 | 44 | 8 | 30 | 73 | 111 | 42 | 11 | 49 | 165 | 225 | 86 |
| 17 | 10 | 52 | 142 | 204 | 80 | 24 | 80 | 149 | 253 | 94 | 34 | 132 | 291 | 457 | 174 |
| 18 | 41 | 149 | 273 | 463 | 151 | 37 | 138 | 254 | 429 | 141 | 78 | 287 | 527 | 892 | 292 |
| 20 | 41 | 67 | 187 | 295 | 116 | 35 | 91 | 146 | 272 | 103 | 76 | 158 | 333 | 567 | 219 |
| 22 | 17 | 39 | 185 | 241 | 97 | 27 | 60 | 142 | 229 | 91 | 44 | 99 | 327 | 470 | 188 |
| 25 | 39 | 145 | 322 | 506 | 197 | 57 | 154 | 320 | 531 | 198 | 96 | 299 | 642 | 1037 | 395 |
| 25 | 1 | 4 | 25 | 30 | 12 | 2 | 8 | 23 | 33 | 13 | 3 | 12 | 48 | 63 | 25 |
| 25 | 23 | 97 | 232 | 352 | 140 | 24 | 113 | 205 | 342 | 141 | 47 | 210 | 437 | 694 | 281 |
| 27 | 5 | 51 | 113 | 169 | 71 | 14 | 47 | 125 | 186 | 81 | 19 | 98 | 238 | 355 | 152 |
| 28 | 16 | 81 | 154 | 251 | 105 | 33 | 111 | 165 | 309 | 124 | 49 | 192 | 319 | 560 | 229 |
| 30 | 18 | 58 | 126 | 202 | 90 | 19 | 91 | 147 | 257 | 149 | 37 | 149 | 273 | 459 | 239 |
| Oct. 2 | 14 | 54 | 145 | 213 | 89 | 23 | 91 | 137 | 251 | 103 | 37 | 145 | 282 | 464 | 192 |
| 2 | 20 | 80 | 117 | 217 | 91 | 27 | 72 | 113 | 212 | 87 | 47 | 152 | 230 | 429 | 178 |
| 4 | 18 | 45 | 90 | 153 | 63 | 15 | 59 | 90 | 164 | 67 | 33 | 104 | 180 | 317 | 130 |
| Total | 266 | 941 | 2203 | 3410 | 1346 | 345 | 1145 | 2089 | 3579 | 1434 | 611 | 2086 | 4292 | 6989 | 2780 |

Table II. Date and time of liberation, number and sex by size groups of marked lobsters actually liberated.

| Date | Time liberated | Males | | | Females | | | Combined | | | No. recovered during 1954 marking | | | |
|----------|----------------|-------|--------|---------|---------|--------|---------|----------|--------|---------|-----------------------------------|------|------|-----|
| | | Gr. I | Gr. II | Gr. III | Gr. I | Gr. II | Gr. III | Gr. I | Gr. II | Gr. III | | | | |
| Sept. 15 | 6:30p.m. | 3 | 19 | 92 | 8 | 30 | 73 | 111 | 11 | 49 | 165 | 225 | - | |
| 17 | 10:30a.m. | 10 | 51 | 139 | 19 | 62 | 128 | 209 | 29 | 113 | 267 | 409 | - | |
| 18 | 1:30p.m. | 41 | 149 | 268 | 37 | 134 | 252 | 423 | 78 | 283 | 520 | 881 | - | |
| 20 | 2:00p.m. | 41 | 67 | 187 | 35 | 91 | 146 | 272 | 76 | 158 | 333 | 567 | 5 | |
| 22 | 1:30p.m. | 17 | 39 | 180 | 27 | 55 | 142 | 224 | 44 | 94 | 322 | 460 | 3 | |
| 25 | 10:30a.m. | 28 | 117 | 277 | 55 | 139 | 281 | 475 | 83 | 256 | 558 | 897 | 17 | |
| 25 | 1:30p.m. | 1 | 4 | 25 | 2 | 8 | 23 | 33 | 3 | 12 | 48 | 63 | 1 | |
| 25 | 7:30p.m. | 23 | 96 | 229 | 23 | 111 | 201 | 335 | 46 | 207 | 430 | 683 | 17 | |
| 27 | 6:30p.m. | 5 | 51 | 113 | 14 | 47 | 125 | 186 | 19 | 98 | 238 | 355 | 19 | |
| 28 | 6:40p.m. | 16 | 81 | 154 | 33 | 111 | 165 | 309 | 49 | 192 | 319 | 560 | 25 | |
| 30 | 6:20p.m. | 18 | 58 | 126 | 19 | 91 | 147 | 257 | 37 | 149 | 273 | 459 | 33 | |
| Oct. 2 | 9:20a.m. | 13 | 52 | 122 | 18 | 83 | 123 | 224 | 31 | 135 | 245 | 411 | 28 | |
| 2 | 6:25a.m. | 20 | 80 | 117 | 27 | 72 | 113 | 212 | 47 | 152 | 230 | 429 | 26 | |
| 4 | 6:40p.m. | 18 | 45 | 90 | 15 | 59 | 90 | 164 | 33 | 104 | 180 | 317 | 19 | |
| Total | | 254 | 909 | 2119 | 3282 | 332 | 1093 | 2009 | 3434 | 586 | 2002 | 4128 | 6716 | 193 |

1954 Tagging Experiment

Since the marked lobsters would not likely be recognized by the fishermen, their exact point of recapture would not be known. They would therefore provide only limited information on movements. To obtain more reliable data on movements, 998 lobsters were marked with monel metal carapace tags and liberated October 6 and 8, 1954. Four hundred and ninety-eight of these (serial numbers 51,001-51,500 less 51,232 and 51,300) were liberated $1\frac{1}{2}$ to 2 miles W.N.W. of Abrams Village wharf in 4 fathoms. The remaining 500 (serial number 51,501-52,000) were liberated $4\frac{1}{2}$ to 5 miles W. of Abrams Village wharf in 8 fathoms. The liberation points are shown in Figure 2.

Normally most lobsters tagged during one fall season moult and lose their tags before the opening of the next season. To reduce this loss of tags as much as possible, only moderately large, non-egg-bearing females were tagged. Most of these were mature and could be expected to lay eggs in the summer of 1955 and would therefore be unlikely to moult.

Expenses incurred in the 1954 marking and tagging experiments were as follows:

| | | |
|--|---|-----------------|
| F. L. Arsensult, Abrams Village | 1013 market lobsters 1035 lbs. @ 45¢ | \$465.75 |
| Acadian Fishermen's Co-operative, Abrams Village | Boat hire from Sept. 15 to Oct. 8 for getting to and from float and libera- ting marked lobsters | 50.00 |
| John L. Arsensult, Wellington | One inshore liberation of tagged lobsters One offshore liberation of tagged lobsters | 2.50 5.00 |
| Joseph Bernard, Wellington | Assistance with tagging | 10.00 |
| | Total | <u>\$533.25</u> |

Fifteen extra lobsters were purchased as replacements for lobsters found to be weak or damaged at the time of liberation. Four of these were used October 6 and seven on October 8. The remainder were released untagged. U. J. Walsh, who was stationed at Miminegash, P.E.I., assisted with the work at Abrams Village on September 23.

1955 Tagging Experiment

In order to estimate the number of marked lobsters that survived to the 1955 season, a second tagging was conducted in Egmont Bay from August 4 to 6, 1955--just before the opening of the season. The fraction of these tags returned should lead to an estimate of the fraction of available marked lobsters that were recaptured. Five hundred legal-sized lobsters were tagged with

monel metal carapace tags, serial numbers 31,501-32,000. These tags were coloured red to distinguish them easily from the tags put out in 1954. These were distributed over the fishing grounds in five lots of 100 lobsters as shown in Figure 2.

The costs of this tagging were as follows:

| | |
|--|---------|
| John L. Arsenault, 500 legal-sized lobsters @ 12¢ each | \$60.00 |
| Abrams Village Liberating tagged lobsters | 15.00 |
| Total | \$75.00 |

The size distribution of these tagged lobsters is given in Table III.

Table III. Total length distribution (cm.) of male and female lobsters tagged by sub areas in Egmont Bay, P.E.I., August 4 to 6, 1955.

| Total | Males | | | | | | TL cm. | Females | | | | | Total |
|-------|------------------|-------------------|--------------------|-------------------|------------------|------------------|-----------|-------------------|--------------------|-------------------|------------------|-----|-------|
| | Sub area V | Sub area IV | Sub area III | Sub area II | Sub area I | Sub area I | | Sub area II | Sub area III | Sub area IV | Sub area V | | |
| 11 | 2 | 2 | 2 | 3 | 2 | 18 | | 1 | | | | 1 | |
| 34 | 5 | 5 | 9 | 8 | 7 | 19 | 5 | 5 | 8 | 5 | 5 | 28 | |
| 63 | 16 | 9 | 12 | 11 | 15 | 20 | 5 | 7 | 9 | 8 | 8 | 37 | |
| 79 | 19 | 16 | 14 | 16 | 14 | 21 | 9 | 4 | 5 | 10 | 7 | 35 | |
| 55 | 11 | 12 | 13 | 7 | 12 | 22 | 3 | 4 | 8 | 6 | 4 | 25 | |
| 42 | 7 | 11 | 6 | 12 | 6 | 23 | 3 | 6 | 5 | 4 | 3 | 21 | |
| 24 | 5 | 3 | 2 | 5 | 9 | 24 | 2 | 1 | 1 | 2 | 1 | 7 | |
| 17 | 5 | 3 | 2 | 4 | 3 | 25 | 3 | 0 | 1 | | | 4 | |
| 8 | 1 | 1 | 1 | 3 | 2 | 26 | | 0 | 0 | | | 0 | |
| 3 | 1 | 1 | 1 | 0 | | 27 | | 1 | 1 | | | 2 | |
| 1 | | 0 | | 1 | | 28 | | | | | | | |
| 0 | | 0 | | 0 | | 29 | | | | | | | |
| 3 | | 2 | | 1 | | 30 | | | | | | | |
| 340 | 72 | 65 | 62 | 71 | 70 | | 30 | 29 | 38 | 35 | 28 | 160 | |

Return of marked lobsters during 1955

An intensive search for the marked and tagged lobsters was carried on in 1955.

District 7b

During the May and June season in district 7b, U. J. Walsh examined total catches of lobsters in the Tignish-North Cape area of P.E.I. To be caught in district 7b the lobsters would have to have travelled 40 miles to the north or 25 miles to the south. Any tagged lobsters that did so and were recaptured would have been noticed by the fishermen and the tags returned through regular channels. The marked lobsters, however, would still be below legal size in the spring of 1955. Even if caught and landed in fairly large numbers they would not likely be noticed by the fishermen. No Egmont Bay tags were reported during the May and June season, and no marked lobsters were found among 2,440 pounds of canners and 1,091 pounds of markets examined at North Point from May 14 to June 29, or among 1,295 pounds of shorts, 3,272 pounds of canners, and 685 pounds of markets examined at Tignish during May and June.

The N.B. side of District 8

Cape Bald, N.B., is about 13 miles from where the marked lobsters were liberated. Fishermen from here and other N.B. ports normally fish part of their gear in the Egmont Bay area. These fishermen should catch fair numbers of the marked lobsters even if no migration occurred. D. W. McLeese started searching for marked lobsters in the Cape Bald area at the start of the 1955 fall season and later extended his search to ports on either side of Cape Bald. Capt. L. I. Cross who was stationed at Richibucto on larval work searched for marked lobsters whenever the opportunity arose.

The P.E.I. side of District 8 including Egmont Bay

From 1954 observations, it was learned that 63 boats fished from Abrams Village, Cape Egmont and Mont Carmel. Fifty-two of these landed all their lobsters at two points--Abrams Village and Cape Egmont. R. C. Murray and W. A. Johnstone, assisted by local fisheries officers and wardens, searched at these two points. After the early season rush period, periodic spot checks were made at ports from West Point to Borden. U. J. Walsh who was stationed at Miminegash searched for marked lobsters there and at additional ports to the south. All observers were asked to record daily returns of marked and tagged lobsters by each boat, to keep a record of the weights of lobsters examined and to obtain records of total landings at all ports where marked lobsters were found.

The number of marked lobsters found

The number of marked lobsters found, the weights of lobsters examined, and where available the weights of lobsters landed are listed in Table IV. A total of 870 marked lobsters were found, 822 on the P.E.I. side and 48 on the N.B. side. The actual landings for all ports from Miminegash to Summerside, with the exception

of Cape Wolfe were obtained. Although records of landings were obtained from dealers and fishery officers for the N.B. ports, a great deal of intershipment occurs. From the N.B. records available it appears to be impossible to relate the weights of lobsters examined to weights actually landed at particular ports.

Daily records of lobsters landed, lobsters examined and marked lobsters found at Abrams Village and Rocky point are listed in Table V. Similar records for Cape Egmont are given in Table VI.

Table IV. Numbers of marked lobsters found during 1955 season at P.E.I. and N.B. ports. Weights of lobsters examined and weights of lobsters landed (where available).

| Port | Wt. landed | | Wt. examined | | No. marked found | | % of catch examined |
|-----------------|-----------------|----------|-----------------|----------|------------------|------------------|---------------------|
| | Cannery Markets | Combined | Cannery Markets | Combined | Males | Females Combined | |
| Abrams Village | 197607 | 54293 | 1251900 | 115584 | 385 | 295 | 680 |
| Rocky Point | 39592 | 8131 | 47223 | 17088 | | | 44.3 |
| Cape Egmont | 106877 | 28607 | 135584 | 4546 | 51 | 75 | 126 |
| Mont Carmel | 78431 | 29354 | 107785 | 3754 | 1 | 0 | 1 |
| Summerside | 21992 | 25132 | 47124 | 13138 | 0 | 0 | 0 |
| Higgins Wharf | 44741 | 11567 | 58308 | 40660 | 4 | 5 | 9 |
| Bree Harbour | 58994 | 14006 | 73000 | 1768 | 3 | 0 | 3 |
| West Point | 125447 | 39800 | 165327 | 4055 | 0 | 3 | 3 |
| Cape Wolfe | not obtained | | | 1649 | 0 | 0 | 0 |
| Minegash | 146025 | 24365 | 170390 | 2271 | 0 | 0 | 0 |
| Sub-totals | | | 246624 | 58309 | 444 | 378 | 822 |
| N.B. | | | | | | | |
| Port Elgin | | | 155 | | 0 | 0 | 0 |
| Cape Tormentine | | | 15466 | | 0 | 0 | 0 |
| Murray Corner | | | 1300 | | 0 | 0 | 0 |
| Botsford | | | 4700 | | 0 | 0 | 0 |
| Sherogue | | | 1700 | | 0 | 0 | 0 |
| Lower Cape * | | | 400 | | 0 | 0 | 0 |
| Pearcock Cove | | | 700 | | 0 | 0 | 0 |
| L. Cape Bald | | | 34925 | | not sexed | | 41 |
| Cocagne Cape | | | 3300 | | 0 | 0 | 0 |
| Cocagne | | | 10900 | | 0 | 4 | 4 |
| Cormierville | | | 3650 | | 0 | 0 | 0 |
| Richibucto Cape | | | 8645 | | 1 | 2 | 3 |
| Richibucto | | | 700 | | 0 | 0 | 0 |
| St. Louis | | | 3800 | | 0 | 0 | 0 |
| Pt. Sapiro | | | 9900 | | 0 | 0 | 0 |
| Sub-totals | | | 100243 | | 100243 | | 48 |
| Totals | | | 346867 | 58309 | 405176 | | 870 |

Table V. Daily 1955 landings (pounds) of cannery and market lobsters by 36 boats fishing from Abrams Village and Rocky Point, pounds of lobsters examined, and number of marked lobsters found.

| Date 1955 | Lobsters landed | | Examined | | Marked | |
|--------------|-----------------|---------|----------|---------|---------|---------|
| | Cannery | Markets | Cannery | Markets | Cannery | Markets |
| Aug. 10 | 15,363 | 4,358 | 5,025 | 0 | 29 | 0 |
| 11 | 22,813 | 5,901 | 6,735 | 0 | 30 | 0 |
| 12 | 18,877 | 4,129 | 3,343 | 0 | 31 | 0 |
| 13 | 15,211 | 3,751 | 6,177 | 0 | 57 | 0 |
| 14 | - | - | - | - | - | - |
| 15 | 15,419 | 4,467 | 8,169 | 0 | 77 | 0 |
| 16 | 3,281 | 911 | 3,177 | 827 | 43 | 0 |
| 10-16 | 90,964 | 23,517 | 32,626 | 827 | 267 | 0 |
| 17 | 7,509 | 2,584 | 6,100 | 1,111 | 37 | 0 |
| 18 | 4,523 | 1,443 | 3,212 | 566 | 42 | 0 |
| 19 | 3,190 | 1,139 | 2,453 | 420 | 44 | 0 |
| 20 | 4,513 | 1,792 | 3,495 | 236 | 36 | 0 |
| 21 | - | - | - | - | - | - |
| 22 | 4,627 | 2,361 | 3,713 | 144 | 40 | 0 |
| 23 | 2,151 | 830 | - | - | - | - |
| 17-23 | 26,513 | 10,149 | 18,973 | 2,477 | 199 | 0 |
| 24 | 1,384 | 489 | 760 | 0 | 5 | 0 |
| 25 | 3,052 | 1,415 | 2,693 | 418 | 37 | 0 |
| 26 | 1,312 | 908 | 1,196 | 300 | 6 | 0 |
| 27 | 2,862 | 1,106 | 2,374 | 301 | 13 | 0 |
| 28 | - | - | - | - | - | - |
| 29 | - | - | - | - | - | - |
| 30 | 4,136 | 1,558 | 3,803 | 453 | 23 | 1 |
| 24-30 | 12,746 | 5,076 | 10,826 | 1,472 | 84 | 1 |
| 31 | 1,710 | 530 | 1,527 | 443 | 11 | 1 |
| Sept. 1 | 2,914 | 833 | 2,440 | 655 | 11 | 0 |
| 2 | 3,307 | 1,048 | 2,739 | 177 | 9 | 1 |
| 3 | 3,965 | 1,058 | - | - | - | - |
| 4 | - | - | - | - | - | - |
| 5 | 5,633 | 1,447 | - | - | - | - |
| 6 | 3,751 | 900 | - | - | - | - |
| 31-6 | 21,280 | 9,816 | 6,706 | 1,275 | 31 | 2 |
| 7 | 945 | 238 | - | - | - | - |
| 8 | 3,513 | 911 | 3,194 | 807 | 0 | 0 |
| 9 | 6,969 | 1,650 | 3,294 | 955 | 5 | 8 |
| 10 | 5,438 | 1,151 | 2,739 | 584 | 3 | 3 |
| 11 | - | - | - | - | - | - |
| 12 | 5,111 | 1,120 | - | - | - | - |
| 13 | 4,935 | 1,021 | 4,275 | 893 | 3 | 4 |
| 7-13 | 26,911 | 6,091 | 13,502 | 3,239 | 11 | 15 |

Continued

Table V. Continued

| Date 1955 | Lobsters landed | | Examined | | Marked | |
|--------------|-----------------|---------|----------|---------|---------|---------|
| | Canners | Markets | Canners | Markets | Canners | Markets |
| Sept. 14 | 6,358 | 1,395 | 3,848 | 823 | 1 | 1 |
| 15 | 2,696 | 566 | 2,149 | 421 | 2 | 3 |
| 16 | 5,168 | 1,051 | 2,934 | 662 | 0 | 3 |
| 17 | 5,344 | 1,097 | 2,208 | 774 | 1 | 4 |
| 18 | - | - | - | - | - | - |
| 19 | 5,507 | 1,190 | - | - | - | - |
| 20 | 5,025 | 1,029 | 2,119 | 655 | 0 | 5 |
| 14-20 | 30,098 | 6,328 | 13,258 | 3,335 | 4 | 16 |
| 21 | - | - | - | - | - | - |
| 22 | - | - | - | - | - | - |
| 23 | 5,836 | 1,180 | 5,038 | 1,006 | 1 | 7 |
| 24 | 3,349 | 715 | 2,700 | 564 | 0 | 7 |
| 25 | 226 | 46 | - | - | - | - |
| 26 | - | - | - | - | - | - |
| 27 | 4,446 | 776 | 1,927 | 549 | 0 | 3 |
| 21-27 | 13,857 | 2,717 | 9,665 | 2,119 | 1 | 17 |
| 28 | 1,996 | 414 | 1,717 | 350 | 0 | 4 |
| 29 | 1,894 | 378 | 1,602 | 325 | 1 | 0 |
| 30 | 3,125 | 593 | 2,742 | 534 | 0 | 4 |
| Oct. 1 | 2,027 | 358 | 1,402 | 234 | 1 | 2 |
| 2 | - | - | - | - | - | - |
| 3 | 3,393 | 656 | 969 | 483 | 0 | 2 |
| 4 | 1,290 | 213 | 1,068 | 211 | 2 | 2 |
| 5 | 502 | 78 | - | - | - | - |
| 28-5 | 14,227 | 2,690 | 9,500 | 2,137 | 4 | 14 |
| Totals | 236,596 | 62,384 | 115,056 | 16,881 | 601 | 65 |

Table VI. Daily 1955 landings (pounds) of canner and market lobsters, by 16 boats fishing from Cape Egmont, pounds of lobsters examined and number of marked lobsters found.

| Date 1955 | Lobsters landed | | Examined | | Marked | |
|--------------|-----------------|---------|----------|---------|---------|---------|
| | Cannery | Markets | Cannery | Markets | Cannery | Markets |
| Aug. 10 | 10,449 | 2,423 | 5,502 | 48 | 10 | 0 |
| 11 | 10,265 | 1,955 | 350 | 0 | 4 | 0 |
| 12 | 7,798 | 1,581 | 2,288 | 0 | 7 | 0 |
| 13 | 6,207 | 1,565 | 3,179 | 0 | 7 | 0 |
| 14 | | | | | | |
| 15 | 6,788 | 2,086 | 2,817 | 54 | 18 | 0 |
| 16 | 2,121 | 565 | 1,551 | 23 | 6 | 0 |
| 10-16 | 41,628 | 10,175 | 15,687 | 125 | 52 | 0 |
| 17 | 2,328 | 740 | 1,475 | 0 | 11 | 0 |
| 18 | 2,099 | 657 | 1,264 | 106 | 6 | 0 |
| 19 | 902 | 333 | 786 | 0 | 3 | 0 |
| 20 | 1,807 | 553 | 1,643 | 49 | 8 | 0 |
| 21 | | | | | | |
| 22 | 1,956 | 641 | 1,901 | 0 | 8 | 0 |
| 23 | 1,046 | 331 | 796 | 101 | 3 | 1 |
| 17-23 | 10,138 | 3,255 | 7,865 | 256 | 39 | 1 |
| 24 | 1,028 | 287 | 1,028 | 0 | 6 | 0 |
| 25 | 1,372 | 397 | 1,229 | 180 | 3 | 0 |
| 26 | 1,094 | 345 | 860 | 88 | 3 | 0 |
| 27 | 1,397 | 448 | 601 | 46 | 0 | 0 |
| 28 | | | | | | |
| 29 | 1,271 | 444 | | | | |
| 30 | 1,710 | 587 | 1,224 | 87 | 0 | 0 |
| 24-30 | 7,872 | 2,508 | 4,942 | 401 | 12 | 0 |
| 31 | 995 | 296 | 898 | 135 | 2 | 1 |
| Sept. 1 | 1,354 | 449 | 586 | 43 | 0 | 0 |
| 2 | 1,462 | 461 | | | | |
| 3 | 1,789 | 577 | | | | |
| 4 | | | | | | |
| 5 | 2,500 | 843 | | | | |
| 6 | 1,694 | 496 | | | | |
| 31-6 | 9,794 | 3,122 | 1,484 | 178 | 2 | 1 |
| 7 | 171 | 52 | | | | |
| 8 | 2,582 | 820 | 2,472 | 728 | 1 | 4 |
| 9 | 1,978 | 561 | 1,551 | 557 | 2 | 2 |
| 10 | 2,054 | 595 | 1,027 | 367 | 0 | 0 |
| 11 | | | | | | |
| 12 | 2,537 | 766 | | | | |
| 13 | 2,209 | 659 | 218 | 257 | 0 | 1 |
| 7-13 | 11,531 | 3,453 | 5,268 | 1,909 | 3 | 7 |

Continued

Table VI. Continued

| Date 1955 | Lobsters landed | | Examined | | Marked | |
|--------------|-----------------|---------|----------|---------|---------|---------|
| | Canners | Markets | Canners | Markets | Canners | Markets |
| Sept. 14 | 1,740 | 428 | 690 | 194 | 0 | 1 |
| 15 | 886 | 213 | 240 | 96 | 0 | 1 |
| 16 | 2,072 | 607 | 442 | 520 | 0 | 3 |
| 17 | 1,529 | 422 | 433 | 269 | 0 | 4 |
| 18 | | | | | | |
| 19 | 2,402 | 644 | | | | |
| 20 | 1,719 | 506 | 1,227 | 315 | 0 | 0 |
| 14-20 | 10,348 | 2,820 | 3,038 | 1,394 | 0 | 9 |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | 2,272 | 595 | | | | |
| 24 | 1,563 | 413 | | | | |
| 25 | | | | | | |
| 26 | 463 | 103 | | | | |
| 27 | 2,213 | 629 | | | | |
| 21-27 | 6,511 | 1,750 | 0 | 0 | 0 | 0 |
| 28 | 721 | 184 | | | | |
| 29 | 1,370 | 306 | | | | |
| 30 | 1,357 | 326 | | | | |
| Oct. 1 | 1,025 | 250 | 1,004 | 250 | 0 | 0 |
| 2 | | | | | | |
| 3 | 1,562 | 387 | | | | |
| 4 | 618 | 46 | | | | |
| 5 | 502 | 35 | | | | |
| 28-5 | 7,155 | 1,514 | 1,004 | 250 | 0 | 0 |
| | 106,927 | 28,607 | 39,288 | 4,513 | 108 | 18 |

Growth of marked lobsters

The size distributions of the marked lobsters recovered in Groups I, II and III by two week periods are listed in Tables VII, VIII, and IX respectively. It is obvious from these tables that the lobsters recovered during the last half of the season were considerably larger than those taken during the first half. In Table X the data are regrouped to show the size distribution and average size during the first and last halves of the season. The average growth in carapace length for males and females in Groups I, II, and III is shown in Table XI. Between the time of marking (October 6 to 8, 1954) and recovery during the first half of the 1955 season (August 10 to September 6) the male lobsters had grown 15.2 to 17.6 thirty-seconds (20 to 25%) and the females 13.6 to 14.7 thirty-seconds (18 to 21.0%). During the 1955 season the males grew an additional 8 to 16%, the females 3 to 14%. Considering all lobsters recovered during the complete season, the males grew 22 to 27%, the females 19 to 22%. Absolute growth was relatively constant in the different size groups but percentage growth declined with size.

From the average carapace lengths and equations* for Tignish, P.E.I., lobsters relating carapace length to total length and to weight it is possible to calculate the average carapace length, total length and weight of the lobsters when marked and recovered. The data are given in Tables XII to XIV and summarized in Table XV. On the average the lobsters recovered grew 0.5" (21%) in carapace length, 1.4" (20%) in total length and 5.2 ounces (84%) in weight. The 110 lobsters taken during the last half of the season had on the average been free for about 1½ months. Their growth for almost a full year was 0.9" (36%) in carapace length, 2.3" (33%) in total length and 10.2 ounces (165%) in weight. This is much faster growth than found in previous marking experiments.

Earlier growth studies have indicated that lobsters are unlikely to grow as much as 20% in carapace length in a single moult. Using this as a criterion, it appears that 96(87%) of the 110 lobsters taken during the last half of the season had moulted twice. Although all the lobsters were "short" (under 2½" carapace length) when marked, 71% of those taken during the last half of the season had passed through the canner size range (2½" to 3 3/16") to reach the more valuable market sizes.

The carapace length distributions of the lobsters when marked and recovered are shown in Figure 3.

* Wilder, D. G., 1953. The growth rate of the American lobster (Homarus americanus). J. Fish. Res. Bd. Can. 10(7), p.388.

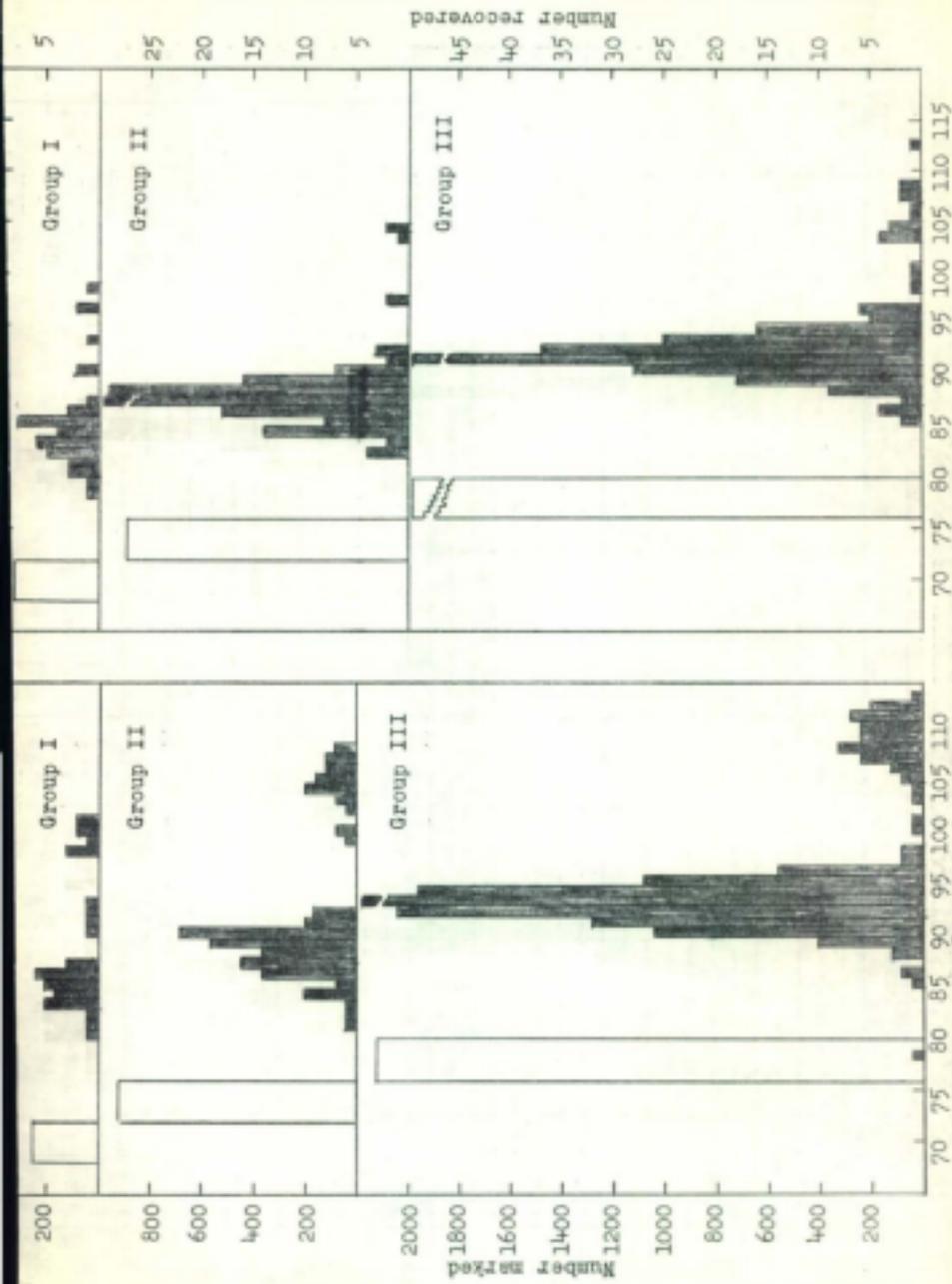


Figure 3. Carapace length distribution of 6716 lobsters marked September 15 to October 4, 1954, and of the 870 recovered August 10 to October 5, 1955.

Table VII. Return of Group I marked lobsters by two week periods from Aug. 10-Oct. 5, 1955.

| Size 2nd" | Males | | | | Females | | | | Total Combined | | |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|----|----|
| | 1st period | 2nd period | 3rd period | 4th period | 1st period | 2nd period | 3rd period | 4th period | | | |
| 78 | | | | | | | | | 1 | | |
| 79 | | | | | | | | | 1 | | |
| 80 | 1 | | | | 1 | | | | 2 | | |
| 81 | 1 | | | | 1 | | | | 2 | | |
| 82 | | | 1 | | | | | | 1 | | |
| 83 | 5 | | | | 4 | | | | 9 | | |
| 84 | 4 | | | | 4 | | | | 8 | | |
| 85 | 4 | 1 | | | 4 | | | | 9 | | |
| 86 | 6 | | | | 2 | | | | 8 | | |
| 87 | 3 | | | | 2 | | | | 5 | | |
| 88 | | | | | 1 | | | | 1 | | |
| 89 | | | | | | | | | | | |
| 90 | 1 | | | | 1 | | | | 2 | | |
| 91 | | | | 1 | | | | | 1 | | |
| 92 | | | 1 | | | | | | 1 | | |
| 93 | | | 1 | | | | | | 1 | | |
| 94 | | | | | | | | | | | |
| 95 | | | | | | | | | | | |
| 96 | | | | | | | | | | | |
| 97 | | | | | | | | | | | |
| 98 | 1 | 2 | | | 1 | | | | 4 | | |
| 99 | | | | | | | | | | | |
| 100 | | | 1 | | 1 | | | | 2 | | |
| 101 | | 2 | | | 2 | | | | 4 | | |
| 102 | | | | | | | | | | | |
| 103 | | | | | | | | | | | |
| 104 | | | | | | | | | | | |
| 105 | | | | | | | | | | | |
| 106 | | | | | | | | | | | |
| 107 | | | | | | | | | | | |
| 108 | | | | | | | | | | | |
| 109 | | | | | | | | | | | |
| 110 | | | | | | | | | | | |
| 111 | | | | | | | | | | | |
| 112 | | | | | | | | | | | |
| 113 | | | | | | | | | | | |
| Total | 26 | 5 | 4 | 3 | 18 | 27 | 8 | 5 | 1 | 41 | 79 |

Adjusted average lengths: Males 83.8, Females 85.2

* Since lobsters falling between two graduations were recorded as the smaller, 0.5 has been added to each average.

xxxx-xxxx: return of group II marked lobsters by two week periods (including pre-season) from Aug. 4-Oct. 5, 1955.

| Size | Males | | | | Females | | | | Com- bined | | | | | | |
|-------|----------------|---------------|---------------|---------------|---------------|-------|----------------|---------------|---------------|---------------|---------------|---------------|-------|-----|-----|
| | Pre- season | 1st period | 2nd period | 3rd period | 4th period | Total | Pre- season | 1st period | | 2nd period | 3rd period | 4th period | Total | | |
| 78 | | | | | | | | | | | | | | | |
| 79 | | | | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | | | | |
| 81 | | 1 | | | 1 | | | | | | | 1 | | | |
| 82 | | 1 | | | 1 | | | | | | | 1 | | | |
| 83 | | 4 | 1 | | 3 | | | | | | | 4 | | | |
| 84 | | 2 | | | 5 | | | | | | | 2 | | | |
| 85 | | 2 | | | 3 | | | | | | | 14 | | | |
| 86 | | 6 | | | 6 | | | | | | | 10 | | | |
| 87 | | 9 | 2 | | 9 | | | | | | | 8 | | | |
| 88 | 1 | 2 | 1 | | 11 | | | | | | | 27 | | | |
| 89 | | 13 | 1 | | 9 | | | | | | | 43 | | | |
| 90 | 1 | 12 | 1 | | 14 | | | | | | | 18 | | | |
| 91 | | 4 | 1 | | 17 | | | | | | | 10 | | | |
| 92 | | 3 | | | 6 | | | | | | | 7 | | | |
| 93 | | 3 | | | 4 | | | | | | | 3 | | | |
| 94 | | | | | | | | | | | | | | | |
| 95 | | | | | | | | | | | | | | | |
| 96 | | | | | | | | | | | | | | | |
| 97 | | | | | | | | | | | | | | | |
| 98 | | | | | | | | | | | | | | | |
| 99 | | | | | | | | | | | | | | | |
| 100 | | | | | | | | | | | | | | | |
| 101 | | | | | | | | | | | | | | | |
| 102 | | | | | | | | | | | | | | | |
| 103 | | | | | | | | | | | | | | | |
| 104 | | | | | | | | | | | | | | | |
| 105 | | | | | | | | | | | | | | | |
| 106 | | | | | | | | | | | | | | | |
| 107 | | | | | | | | | | | | | | | |
| 108 | | | | | | | | | | | | | | | |
| 109 | | | | | | | | | | | | | | | |
| 110 | | | | | | | | | | | | | | | |
| 111 | | | | | | | | | | | | | | | |
| 112 | | | | | | | | | | | | | | | |
| 113 | | | | | | | | | | | | | | | |
| Total | 2 | 63 | 16 | 19 | 2 | 102 | | | | 105 | 28 | 9 | 1 | 143 | 245 |

Adjusted average length*: Males 92.3, Females 88.3
 * Since lobsters falling between two graduations were recorded as the smaller, 0.5 has been added to each average.

Table IX. Returns of Group III marked lobsters by two week periods (including pre-season) from Aug. 4-Oct. 5, 1955.

| Size 32nd | Males | | | | Females | | | | Total | | | | |
|--------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|-------|---------------|---------------|-----|-----|
| | Pre- season | 1st period | 2nd period | 3rd period | 4th period | Pre- season | 1st period | 2nd period | | 3rd period | 4th period | | |
| 78 | | | | | | | | | | | | | |
| 79 | | | | | | | | | | | | | |
| 80 | | | | | | | | | | | | | |
| 81 | | | | | | | | | | | | | |
| 82 | | | | | | | | | | | | | |
| 83 | | | | | | | | | | | | | |
| 84 | | | | | | | | | | | | | |
| 85 | | 1 | | | | | | | | | | | |
| 86 | | 2 | | | | | | | | | | | |
| 87 | | | | | | | | | | | | | |
| 88 | | 2 | | | | | | | | | | | |
| 89 | | 7 | | | | | | | | | | | |
| 90 | | 20 | | | | | | | | | | | |
| 91 | | 26 | | | | | | | | | | | |
| 92 | | 38 | | | | | | | | | | | |
| 93 | | 40 | | | | | | | | | | | |
| 94 | | 37 | | | | | | | | | | | |
| 95 | | 20 | | | | | | | | | | | |
| 96 | | 9 | | | | | | | | | | | |
| 97 | | 1 | | | | | | | | | | | |
| 98 | | 1 | | | | | | | | | | | |
| 99 | | 1 | | | | | | | | | | | |
| 100 | | 1 | | | | | | | | | | | |
| 101 | | 1 | | | | | | | | | | | |
| 102 | | | | | | | | | | | | | |
| 103 | | | | | | | | | | | | | |
| 104 | | | | | | | | | | | | | |
| 105 | | | | | | | | | | | | | |
| 106 | | | | | | | | | | | | | |
| 107 | | | | | | | | | | | | | |
| 108 | | | | | | | | | | | | | |
| 109 | | | | | | | | | | | | | |
| 110 | | | | | | | | | | | | | |
| 111 | | | | | | | | | | | | | |
| 112 | | | | | | | | | | | | | |
| 113 | | | | | | | | | | | | | |
| Total | 12 | 216 | 49 | 29 | 20 | 326 | 1 | 176 | 26 | 5 | 12 | 220 | 546 |

Adjusted average length: Males 95.4, Females 92.6
 * Since lobsters falling between two graduations were recorded as the smaller, 0.5 has been added to each average.

Table X. Size distribution of lobsters returned from the Egmont Bay marking experiment grouped by first and second halves of the season, including pre-season fishing.

Group I

| Size 32nd" | First half of season | | | Second half of season | | |
|---------------------------|----------------------|---------|----------|-----------------------|---------|----------|
| | Males | Females | Combined | Males | Females | Combined |
| 78 | | | | 1 | | 1 |
| 79 | | | | 1 | | 1 |
| 80 | 1 | 2 | 3 | 1 | | 1 |
| 81 | 1 | 3 | 4 | | | |
| 82 | | 5 | 5 | 1 | | 1 |
| 83 | 5 | 6 | 11 | | | |
| 84 | 4 | 4 | 8 | | | |
| 85 | 5 | 8 | 13 | | | |
| 86 | 6 | 3 | 9 | | | |
| 87 | 3 | 1 | 4 | | | |
| 88 | | | | | | |
| 89 | | | | | | |
| 90 | 1 | 1 | 2 | | 1 | 1 |
| 91 | | | | 1 | | 1 |
| 92 | | | | 1 | | 1 |
| 93 | | 1 | 1 | 1 | | 1 |
| 94 | | | | | | |
| 95 | | | | | | |
| 96 | | 1 | 1 | | 1 | 1 |
| 97 | | | | | | |
| 98 | 3 | | 3 | | 1 | 1 |
| 99 | | | | 1 | | 1 |
| 100 | | | | 2 | | 2 |
| 101 | 2 | | 2 | | | |
| 102 | | | | | | |
| 103 | | | | | | |
| 104 | | | | | | |
| 105 | | | | | | |
| 106 | | | | | | |
| 107 | | | | | | |
| 108 | | | | | | |
| 109 | | | | | | |
| 110 | | | | | | |
| 111 | | | | | | |
| 112 | | | | | | |
| 113 | | | | | | |
| Totals | 31 | 35 | 66 | 7 | 6 | 13 |
| | 2700 | 2951 | 5651 | 652 | 521 | 1178 |
| | 31 | 35 | 66 | 7 | 6 | 13 |
| Adjusted average lengths* | 87.1 | 84.3 | 85.6 | 93.9 | 86.8 | 90.6 |
| Adjusted average lengths* | 87.6 | 84.8 | 86.1 | 94.4 | 87.3 | 91.1 |

In the above table 41 marked lobsters returned at Cape Bald, N.B., with no sex recorded have been sorted into 22 males and 19 females according to the sex ratio of the other 829 marked lobsters recovered.

* Since lobsters falling between two graduations were recorded as the smaller, 0.5 has been added to each average.

Continued

Table X Continued.

Group II

| Size 32nd" | First half of season | | | Second half of season | | |
|---------------------------|----------------------|--------------|--------------|-----------------------|------------|-------------|
| | Males | Females | Combined | Males | Females | Combined |
| 78 | | | | | | |
| 79 | | | | | | |
| 80 | | | | | | |
| 81 | 1 | | 1 | | | |
| 82 | 1 | 4 | 5 | | | |
| 83 | 1 | 2 | 3 | | | |
| 84 | 5 | 14 | 19 | | | |
| 85 | 2 | 8 | 10 | | | |
| 86 | 9 | 18 | 27 | | | |
| 87 | 11 | 31 | 42 | | 1 | 1 |
| 88 | 9 | 29 | 38 | | | |
| 89 | 14 | 16 | 30 | | | |
| 90 | 16 | 6 | 22 | 1 | 1 | 2 |
| 91 | 5 | 2 | 7 | | | |
| 92 | 3 | 2 | 5 | 1 | 1 | 2 |
| 93 | | | | | | |
| 94 | | | | | | |
| 95 | | | | | | |
| 96 | | | | | | |
| 97 | | | | | 2 | 2 |
| 98 | | | | | | |
| 99 | | | | 1 | | 1 |
| 100 | | | | 2 | | 2 |
| 101 | | 1 | 1 | | 2 | 2 |
| 102 | | | | 1 | | 1 |
| 103 | | | | 2 | 1 | 3 |
| 104 | 1 | | 1 | 4 | 2 | 6 |
| 105 | 2 | | 2 | 2 | | 2 |
| 106 | 1 | | 1 | 2 | | 2 |
| 107 | | | | 3 | | 3 |
| 108 | | | | 2 | | 2 |
| 109 | | | | | | |
| 110 | | | | | | |
| 111 | | | | | | |
| 112 | | | | | | |
| 113 | | | | | | |
| Totals | 81 | 133 | 214 | 21 | 10 | 31 |
| | <u>2196</u> | <u>11578</u> | <u>18774</u> | <u>2164</u> | <u>976</u> | <u>3140</u> |
| | 81 | 133 | 214 | 21 | 10 | 31 |
| Adjusted average lengths* | = 88.8 | = 87.1 | = 87.7 | = 103.0 | = 97.6 | = 101.3 |
| | 89.3 | 87.6 | 88.2 | 103.5 | 98.1 | 101.8 |

Continued

Table X Continued.

Group III

| Size 32nd" | First half of season | | | Second half of season | | |
|---------------------------------|----------------------|--------------|--------------|-----------------------|-------------|-------------|
| | Males | Females | Combined | Males | Females | Combined |
| 78 | 1 | | 1 | | | |
| 79 | | | | | | |
| 80 | | | | | | |
| 81 | | | | | | |
| 82 | | | | | | |
| 83 | | | | | | |
| 84 | | | | | | |
| 85 | 1 | 2 | 3 | | | |
| 86 | 2 | 4 | 6 | | | |
| 87 | | 2 | 2 | | | |
| 88 | 3 | 9 | 12 | | | |
| 89 | 10 | 18 | 28 | | | |
| 90 | 25 | 28 | 53 | 1 | | 1 |
| 91 | 32 | 51 | 83 | | | |
| 92 | 50 | 36 | 86 | 1 | 1 | 2 |
| 93 | 52 | 25 | 82 | 1 | | 1 |
| 94 | 48 | 16 | 64 | 1 | | 1 |
| 95 | 27 | 5 | 32 | | | |
| 96 | 14 | 6 | 20 | | | |
| 97 | 2 | | 2 | | | |
| 98 | 2 | | 2 | | 1 | 1 |
| 99 | | 1 | 1 | | | |
| 100 | 1 | | 1 | | 1 | 1 |
| 101 | 1 | | 1 | | | |
| 102 | | | | | | |
| 103 | | | | 1 | 4 | 5 |
| 104 | | | | 1 | 3 | 4 |
| 105 | | | | 2 | 1 | 3 |
| 106 | | | | 3 | 1 | 4 |
| 107 | 1 | | 1 | 5 | 2 | 7 |
| 108 | | | | 8 | 2 | 10 |
| 109 | | | | 6 | | 6 |
| 110 | | | | 6 | | 6 |
| 111 | | | | 7 | | 7 |
| 112 | | | | 5 | 1 | 6 |
| 113 | | | | 1 | | 1 |
| Totals | 277 | 203 | 480 | 49 | 17 | 66 |
| | <u>25621</u> | <u>18534</u> | <u>44205</u> | <u>5267</u> | <u>1767</u> | <u>2034</u> |
| | 277 | 203 | 480 | 49 | 17 | 66 |
| | = 92.7 | = 91.3 | = 92.1 | = 107.5 | = 103.9 | = 106.6 |
| Adjusted average lengths* | 93.2 | 91.8 | 92.6 | 108.0 | 104.4 | 107.1 |

Table XI. Average carapace lengths in thirty-seconds of an inch of male and female lobsters marked and recovered during (a) first half of season, (b) last half of season, (c) complete season, and the percentage growth.

| | Males | | | Females | | |
|--|---------|----------|-----------|---------|----------|-----------|
| | Group I | Group II | Group III | Group I | Group II | Group III |
| Average C.L. when marked | 70 | 74 | 78 | 70 | 74 | 78 |
| Average C.L. first half of season | 87.6 | 89.3 | 93.2 | 84.7 | 87.6 | 91.8 |
| % growth between seasons | 25.2 | 20.7 | 19.5 | 21.0 | 18.4 | 17.7 |
| Average C.L. last half of season | 94.4 | 103.5 | 108.0 | 87.3 | 98.3 | 104.4 |
| % growth within season | 7.8 | 15.9 | 15.9 | 3.1 | 12.2 | 13.7 |
| Total % growth for year | 34.9 | 39.9 | 38.5 | 24.7 | 32.8 | 33.8 |
| Average C.L. of all lobsters recovered | 88.8 | 92.3 | 95.4 | 85.2 | 88.3 | 92.8 |
| % growth of all lobsters recovered | 26.8 | 24.7 | 22.3 | 21.7 | 19.3 | 19.0 |

Table XII. Average carapace length, total length, and weight of 6,716 lobsters marked. Males and females combined.

| | Males | | | Females | | | Combined average |
|----------------------------------|-------|-------|-------|---------|-------|-------|---------------------------|
| | I | II | III | I | II | III | |
| Size group | | | | | | | |
| Number | 254 | 909 | 2119 | 332 | 1093 | 2009 | |
| Carapace length in 1/32" | 70 | 74 | 78 | 70 | 74 | 78 | 76.11 = 2.378" |
| Calculated total length - inches | 6.33 | 6.67 | 7.00 | 6.44 | 6.80 | 7.16 | 6.918" |
| Calculated weight - grams | 130.2 | 155.5 | 184.2 | 138.7 | 163.2 | 190.6 | 174.52 gm. = 6.156 oz. |

Table XIII. Average carapace length, total length and weight of 870 marked lobsters recovered during 1955 season, males and females combined.

| Size group | <u>Males</u> | | | <u>Females</u> | | | <u>Combined average</u> |
|----------------------------------|--------------|-------|-------|----------------|-------|-------|-------------------------|
| | I | II | III | I | II | III | |
| Number | 38 | 102 | 326 | 41 | 143 | 220 | |
| Carapace length in 1/32" | 88.8 | 92.3 | 95.4 | 85.2 | 88.3 | 92.8 | 92.44 = 2.888" |
| Calculated total length - inches | 7.91 | 8.20 | 8.46 | 7.80 | 8.08 | 8.49 | 8.320" |
| Calculated weight - grams | 285.9 | 324.2 | 357.0 | 249.2 | 275.7 | 320.0 | 322.25 gm. = 11.367 oz. |

Table XIV. Average carapace length, total length and weight of 110 marked lobsters recovered during last half of 1955 season, males and females combined.

| Size group | <u>Males</u> | | | <u>Females</u> | | | <u>Combined average</u> |
|----------------------------------|--------------|-------|-------|----------------|-------|-------|-------------------------|
| | I | II | III | I | II | III | |
| Number | 7 | 21 | 49 | 6 | 10 | 17 | |
| Carapace length in 1/32" | 94.4 | 103.5 | 108.0 | 87.3 | 98.1 | 104.4 | 103.69 = 3.240" |
| Calculated total length - inches | 8.38 | 9.14 | 9.51 | 7.99 | 8.96 | 9.53 | 9.238" |
| Calculated weight - grams | 342.5 | 461.2 | 527.0 | 279.0 | 372.2 | 453.0 | 463.65 gm. = 16.354 oz. |

Table XV. Summary of growth in carapace length, total length, and weight. Males and females combined.

| | <u>Carapace L.</u> <u>inches</u> | <u>Total L.</u> <u>inches</u> | <u>Weight</u> <u>ounces</u> |
|--|-------------------------------------|----------------------------------|--------------------------------|
| Average size when marked | 2.38 | 6.92 | 6.16 |
| Average size all lobsters recovered | 2.89 | 8.32 | 11.37 |
| Growth | 0.51 | 1.40 | 5.21 |
| % growth | 21.4 | 20.2 | 84.5 |
| Average size of lobsters last half of season | 3.24 | 9.24 | 16.35 |
| Growth | 0.86 | 2.32 | 10.19 |
| Total % growth for year | 36.1 | 33.5 | 165.5 |

Movements of marked lobsters

The punch marks are much less conspicuous than the carapace tags and are unlikely to be noticed by the fishermen. Virtually all the marked lobsters recovered were found by trained observers in a careful search through landed commercial catches. For this reason accurate information as to where each marked lobster was caught is not available. However, the general area of recapture can be determined from the known area fished by each of the boats.

In general the marked lobsters showed the same pattern of movement as the tagged lobsters. Of the 870 recovered, 822 (94.6%) were taken by P.E.I. fishermen, the remainder by N.B. fishermen. None were found north of West Point, P.E.I., or Richibucto Cape, N.B., or south of Mont Carmel, P.E.I., or Lower Cape Bald, N.B. Over 94% of the marked lobsters recovered were taken by Egmont Bay boats -- that is boats fishing from West Point, P.E.I., to Cape Egmont, P.E.I.

Returns from 1954 tagging

Of the 998 non-egg-bearing female lobsters tagged October 6 to 8, 1954, a total of 253 (25.4%) were returned during the 1955 season. The size distributions of those tagged and recovered are listed in Table XVI.

The daily tag returns from this tagging are shown in Table XVII. The tag returns by fishing ports are shown in Table XVIII. The distances moved by these lobsters are shown in Table XIX in intervals of one nautical mile. None of the tagged lobsters moved over 25 miles and 95% were caught within 15 miles of the point of liberation. The average estimated distance moved was 7.2 nautical miles. The reported recapture points are illustrated in Figure 4.

Table XVI. Size distribution of lobsters tagged October 6-8, 1954, and returned August 10-October 5, 1955.

| Total length in cm. | Tagged | | | Returned | | |
|------------------------|---------|----------|----------|----------|----------|----------|
| | Inshore | Offshore | Combined | Inshore | Offshore | Combined |
| 23 | 17 | 19 | 36 | 1 | 4 | 5 |
| 24 | 229 | 256 | 485 | 52 | 69 | 121 |
| 25 | 176 | 146 | 322 | 46 | 42 | 88 |
| 26 | 63 | 63 | 126 | 20 | 12 | 32 |
| 27 | 10 | 12 | 22 | 5 | 1 | 6 |
| 28 | 3 | 4 | 7 | 0 | 1 | 1 |
| Totals | 498 | 500 | 998 | 124 | 129 | 253 |

Table XVII. Daily tag returns during 1955 season from lobsters liberated in Egmont Bay, October 6-8, 1954.

| Aug. 1955 | Inshore | Offshore | Combined | Sept. 1955 | Inshore | Offshore | Combined |
|--------------|---------|----------|----------|---------------|---------|----------|----------|
| 10 | 3 | 8 | 11 | 1 | 2 | 1 | 3 |
| 11 | 11 | 7 | 18 | 2 | - | - | - |
| 12 | 18 | 14 | 32 | 3 | 2 | 3 | 5 |
| 13 | 6 | 11 | 17 | 4 | - | - | - |
| 14 | - | - | - | 5 | 1 | 2 | 3 |
| 15 | 12 | 9 | 21 | 6 | - | - | - |
| 16 | 4 | 6 | 10 | 7 | - | - | - |
| 17 | 5 | 7 | 12 | 8 | 1 | 3 | 4 |
| 18 | 5 | 2 | 7 | 9 | - | 2 | 2 |
| 19 | 2 | 3 | 5 | 10 | 2 | 1 | 3 |
| 20 | 1 | 4 | 5 | 11 | - | - | - |
| 21 | - | - | - | 12 | - | - | - |
| 22 | 1 | 5 | 6 | 13 | 1 | - | 1 |
| 23 | 2 | 1 | 3 | 14 | 1 | 1 | 2 |
| 24 | - | 1 | 1 | 15 | 1 | - | 1 |
| 25 | 2 | 7 | 9 | 16 | - | - | - |
| 26 | 6 | 1 | 7 | 17 | - | - | - |
| 27 | 4 | 6 | 10 | 18 | - | - | - |
| 28 | - | - | - | 19 | 1 | - | 1 |
| 29 | - | - | - | 20 | 1 | 1 | 2 |
| 30 | 2 | 1 | 3 | 21 | - | - | - |
| 31 | 3 | - | 3 | 22 | - | - | - |
| 10-15 | 1 | 1 | 2 | 23 | - | - | - |
| Unknown | 12 | 15 | 27 | 24 | 1 | 1 | 2 |
| Total | | | | 25 | - | - | - |
| August | 100 | 109 | 209 | 26 | - | - | - |
| | | | | 27 | 1 | 1 | 2 |
| | | | | 28 | - | - | - |
| | | | | 29 | 1 | 1 | 2 |
| | | | | 30 | - | - | - |
| | | | | Unknown | 8 | 3 | 11 |
| | | | | Total | | | |
| | | | | September | 24 | 20 | 44 |
| | | | | Total | | | |
| | | | | season | 124 | 129 | 253 |

Table XVIII. Return in 1955 by port of landing of tags liberated in Egmont Bay, October 6-8, 1954.

| Port | Inshore liberation | Offshore liberation | Total return |
|------------------------|--------------------|---------------------|-------------------|
| Abrams Village, P.E.I. | 42 | 47 | 89 |
| Rocky Point, P.E.I. | 4 | 2 | 6 |
| Cape Egmont, P.E.I. | 18 | 9 | 27 |
| Mont Carmel, P.E.I. | 2 | 1 | 3 |
| Higgins Wharf, P.E.I. | 1 | 2 | 3 |
| Cape Wolfe, P.E.I. | 0 | 3 | 3 |
| Campbellton, P.E.I. | 1 | 1 | 2 |
| Bras Harbor, P.E.I. | 0 | 1 | 1 |
| West Point, P.E.I. | 11 | 12 | 23 |
| Cape Bald, N.B. | 12 | 21 | 33 |
| Dupuis Corner, N.B. | 9 | 12 | 21 |
| Little Cape, N.B. | 2 | 1 | 3 |
| Robichaud Office, N.B. | 4 | 5 | 9 |
| Caissie Cape, N.B. | 0 | 2 | 2 |
| Cocagne Cape, N.B. | 6 | 1 | 7 |
| Breau Village, N.B. | 2 | 2 | 4 |
| Cornierville, N.B. | 3 | 2 | 5 |
| Richibucto Cape, N.B. | 3 | 0 | 3 |
| Shediac, N.B. | 1 | 1 | 2 |
| Bourgeois Office, N.B. | 1 | 1 | 2 |
| St. Anne, N.B. | 1 | 0 | 1 |
| St. Thomas, N.B. | 1 | 3 | 4 |
| Total | 124(24.9%) | 129(25.8%) | 253(25.4%) |

Table XIX. Distances moved by lobsters tagged in Egmont Bay October 6-8, 1954, and recaptured August 10-October 5, 1955.

| <u>Nautical miles</u> | <u>No. of lobsters</u> | <u>Nautical miles</u> | <u>No. of lobsters</u> |
|-----------------------|------------------------|-----------------------|------------------------|
| 0-1 | 12 | 13-14 | 7 |
| 1-2 | 6 | 14-15 | 4 |
| 2-3 | 24 | 15-16 | 1 |
| 3-4 | 34 | 16-17 | 3 |
| 4-5 | 24 | 17-18 | 0 |
| 5-6 | 32 | 18-19 | 0 |
| 6-7 | 23 | 19-20 | 1 |
| 7-8 | 9 | 20-21 | 3 |
| 8-9 | 8 | 21-22 | 0 |
| 9-10 | 5 | 22-23 | 1 |
| 10-11 | 16 | 23-24 | 1 |
| 11-12 | 17 | 24-25 | 2 |
| 12-13 | 20 | Total | 253 |

Returns from 1955 tagging

Of the 500 tagged lobsters liberated August 4 to 6, 1955, a total of 277 (55.4%) were recaptured during the August 10 to October 5, 1955, season. The size distribution of those recaptured is shown in Table XX by sex and by sub areas. Returns by sex and sub area are summarized in Table XXI. Daily returns by sub areas are given in Table XXII. Returns by sub areas tagged and port of landing are given in Table XXIII.

It was obvious from the improved landings and the shell condition of the lobsters that a second moult occurred in the Egmont Bay area during late August and early September. The poor September returns from this tagging suggest that some of the tags were lost during this second moult.

In addition to the 277 Egmont Bay tags from the 1955 tagging, four tags from the 1955 Miminegash tagging were returned at Abrams Village (2), Higgins Wharf (1), and Dupuis Corner (1), (serial numbers 55382, 55543, 55806 and 55972). One celluloid tag (#981) from the 1945 Cape Bald tagging and one monel metal tag (#47400) from the 1953 Miminegash tagging were submitted from Shediac. These were reported to be caught in September 1953 and 1955 respectively.

Table XX. Total length distribution (cm.) of male and female lobsters returned during August 10-October 5, 1955, season from those tagged August 4-6, 1955.

| Total | <u>Males</u> | | | | | T.L. cm. | <u>Females</u> | | | | | Total |
|-------|------------------|-------------------|--------------------|-------------------|------------------|-------------|------------------|-------------------|--------------------|-------------------|------------------|-------|
| | Sub area V | Sub area IV | Sub area III | Sub area II | Sub area I | | Sub area I | Sub area II | Sub area III | Sub area IV | Sub area V | |
| 2 | | 2 | | | | 18 | | | | | | |
| 16 | 3 | 1 | 3 | 5 | 4 | 19 | 4 | 4 | 4 | 4 | 3 | 19 |
| 31 | 6 | 4 | 5 | 7 | 9 | 20 | 4 | 5 | 6 | 5 | 7 | 27 |
| 48 | 11 | 11 | 8 | 10 | 8 | 21 | 1 | 0 | 3 | 5 | 4 | 13 |
| 34 | 8 | 5 | 6 | 7 | 8 | 22 | 1 | 3 | 1 | 3 | 2 | 10 |
| 22 | 4 | 6 | 2 | 7 | 3 | 23 | 2 | 4 | 3 | 3 | 2 | 14 |
| 14 | 3 | 1 | 0 | 2 | 8 | 24 | 1 | 1 | 0 | 2 | | 4 |
| 8 | 2 | 1 | 1 | 2 | 2 | 25 | 2 | 0 | 1 | | | 3 |
| 6 | 1 | 1 | 1 | 2 | 1 | 26 | | 0 | 0 | | | 0 |
| 2 | 1 | 0 | 1 | 0 | | 27 | | 1 | 1 | | | 2 |
| 0 | | 0 | | 0 | | 28 | | | | | | |
| 0 | | 0 | | 0 | | 29 | | | | | | |
| 2 | | 1 | | 1 | | 30 | | | | | | |
| 185 | 39 | 33 | 27 | 43 | 43 | | 15 | 18 | 19 | 22 | 18 | 92 |

Table XXI. Summary by sub areas of lobsters tagged August 4-6, 1955, and returned August 10-October 5, 1955.

| Sub area | <u>Tagged</u> | | | <u>Returned</u> | | | % Return |
|-------------|---------------|---------|----------|-----------------|---------|----------|----------|
| | Males | Females | Combined | Males | Females | Combined | |
| I | 70 | 30 | 100 | 43 | 15 | 58 | 58.0 |
| II | 71 | 29 | 100 | 43 | 18 | 61 | 61.0 |
| III | 62 | 38 | 100 | 27 | 19 | 46 | 46.0 |
| IV | 65 | 35 | 100 | 33 | 22 | 55 | 55.0 |
| V | 72 | 28 | 100 | 39 | 18 | 57 | 57.0 |
| Total | 340 | 160 | 500 | 185 | 92 | 277 | 55.4 |

Table XXII. Daily tag returns during 1955 season by sub areas of lobsters tagged August 4-6, 1955.

| Aug. 1955 | Sub area | | | | | Total | Sept. 1955 | Sub area | | | | | Total |
|--------------|----------|----|-----|----|----|-------|---------------|----------|----|-----|----|----|-------|
| | I | II | III | IV | V | | | I | II | III | IV | V | |
| 10 | 2 | | | | 9 | 23 | 1 | | 2 | | | 4 | |
| 11 | 6 | 4 | 3 | 5 | 12 | 31 | 2 | 1 | | 1 | | 2 | |
| 12 | 5 | 5 | 3 | 7 | 6 | 28 | 3 | | | | 3 | 3 | |
| 13 | 6 | 1 | 5 | 5 | 4 | 21 | 4 | 1 | | | | 1 | |
| 14 | - | - | - | - | - | - | 5 | | | | 1 | 1 | |
| 15 | 9 | 14 | 6 | 9 | 7 | 45 | 6 | 1 | | 1 | 1 | 3 | |
| 16 | 3 | - | 4 | 1 | 2 | 10 | 7 | | | | | - | |
| 17 | 7 | 3 | 3 | 5 | 2 | 20 | 8 | | 2 | | | 2 | |
| 18 | 1 | 5 | 3 | 1 | 1 | 11 | 9 | 1 | 1 | | | 2 | |
| 19 | 1 | 1 | 1 | 1 | - | 4 | 10 | | | | | - | |
| 20 | 2 | 2 | 2 | 2 | 2 | 10 | 11 | | | | | - | |
| 21 | - | - | - | - | - | - | 12 | | | | | - | |
| 22 | 4 | 3 | - | 3 | 1 | 11 | 13 | | | | | - | |
| 23 | 1 | - | - | 2 | 1 | 4 | 14 | | | | | - | |
| 24 | - | 1 | - | - | 2 | 3 | 15 | | | | | - | |
| 25 | - | 1 | 1 | - | - | 2 | 16 | | | 1 | | 1 | |
| 26 | 1 | 2 | 3 | 1 | 2 | 9 | 17 | | | | | - | |
| 27 | - | 1 | - | 1 | - | 2 | 18 | | | | | - | |
| 28 | - | - | - | - | - | - | 19 | | | | | - | |
| 29 | - | - | - | - | - | - | 20 | | | 1 | | 1 | |
| 30 | - | 1 | - | 2 | - | 3 | 21 | | | | | - | |
| 31 | - | 1 | - | - | - | 1 | 22 | | | | | - | |
| 10-15 | 1 | - | 1 | - | - | 2 | 23 | | | | 1 | 1 | |
| 10-20 | 1 | 2 | - | - | - | 3 | 24 | | | | | - | |
| Unknown | 4 | 3 | 3 | 1 | 1 | 12 | 25 | | | | | - | |
| Total | | | | | | | 26 | | | | | - | |
| August | 56 | 55 | 41 | 51 | 52 | 255 | 27 | | | | | - | |
| | | | | | | | 28 | | | | | - | |
| | | | | | | | 29 | | | | 1 | 1 | |
| | | | | | | | 30 | | | | | - | |
| | | | | | | | Total | | | | | - | |
| | | | | | | | September | 2 | 6 | 5 | 4 | 5 | 22 |
| | | | | | | | Total | | | | | | - |
| | | | | | | | season | 58 | 61 | 46 | 55 | 57 | 277 |

Table XXIII. Return of tags in 1955 from August 4-6, 1955, Egmont Bay tagging by sub areas and port of landing.

| Port | Sub areas | | | | | Total |
|------------------------|-----------|-----------|-----------|-----------|-----------|------------|
| | I | II | III | IV | V | |
| Abrams Village, P.E.I. | 22 | 23 | 15 | 20 | 7 | 87 |
| Rocky Point, P.E.I. | 5 | 6 | 6 | 2 | 1 | 20 |
| Cape Egmont, P.E.I. | 2 | 8 | 9 | 10 | 25 | 54 |
| Mont Carmel, P.E.I. | 1 | 2 | 1 | 8 | 5 | 17 |
| Higgins Wharf, P.E.I. | 12 | 4 | 3 | 0 | 1 | 20 |
| Brae Harbor, P.E.I. | 4 | 7 | 3 | 0 | 0 | 14 |
| West Point, P.E.I. | 3 | 0 | 0 | 0 | 1 | 4 |
| Cape Bald, N.B. | 5 | 1 | 5 | 7 | 11 | 29 |
| Dupuis Corner, N.B. | 2 | 5 | 1 | 5 | 1 | 14 |
| Little Cape, N.B. | 0 | 1 | 0 | 0 | 2 | 3 |
| Robichaud Office, N.B. | 2 | 2 | 1 | 2 | 2 | 9 |
| Breau Village, N.B. | 0 | 0 | 2 | 1 | 0 | 3 |
| Pointe du Chene, N.B. | 0 | 1 | 0 | 0 | 0 | 1 |
| Bourgeois Office, N.B. | 0 | 0 | 0 | 0 | 1 | 1 |
| Unknown | 0 | 1 | 0 | 0 | 0 | 1 |
| Totals | 58 | 61 | 46 | 55 | 57 | 277 |

Estimate of marked lobsters actually caught and the number that survived from 1954 to 1955.

Since only a fraction of the lobsters caught in the general vicinity of Egmont Bay could be examined, the 870 marked lobsters recovered represent only a fraction of those actually caught during the 1955 season. From the lobsters landed, the fraction examined and the number of marked ones found, an attempt was made to estimate the total number caught. For the 36 boats fishing out of Abrams Village and Rocky Point, the daily landings of canner and market lobsters, the weight of cannery and market lobsters examined each day and the number of marked canner and market lobsters found are recorded in Table V together with weekly sub totals. Although only a few market lobsters were examined during the first week, there is good evidence that very few, if any, marked lobsters reached the market size category (102/32" and over) during the first two weeks of the season. In calculating the catch of marked lobsters by these boats cannery only are considered for this two week period. Calculating from the weekly totals of lobsters landed, examined and marked lobsters found, it is estimated that these boats caught 1392 marked lobsters during the season. Similar data for the 16 boats fishing out of Egmont Cape are presented in Table VI. Similar calculations indicate that these boats caught an additional 307 marked lobsters.

At other P.E.I. ports few marked lobsters were found and examination was not continuous throughout the season. At these ports the weight examined and the number found are related to

corresponding data from Abrams Village and Rocky Point for the same period to determine the relative abundance of marked lobsters in each area. The relative abundance is then related to total landings in both areas and the estimated catch of marked lobsters by Abrams Village and Rocky Point boats to estimate the catch of marked lobsters at the various ports. In these calculations the canner and market size categories are not separated. The data are summarized in Table XXIV.

Table XXIV. Summary of data used to calculate number of marked lobsters caught at four P.E.I. ports.

| Port | West Point | Brae Harbour | Higgins Wharf | Mont Carmel |
|--|--|--|-----------------------------------|--|
| Period | Aug. 17- Sept. 30 | Sept. 2-28 | All season | Aug. 19- Sept. 23 |
| Pounds examined | 12,883 | 7,342 | 50,640 | 12,661 |
| No. marked found | 3 | 3 | 9 | 1 |
| Pounds examined same period at Abrams Village | 94,117 | 50,101 | - | 70,119 |
| No. marked found same period at Abrams Village | 390 | 78 | - | 285 |
| Abundance of marked lobsters relative to Abrams Village area | 1:17.8 | 1:3.8 | - | 1:51.4 |
| Total landings | 165,327 | 73,000 | 56,308 | 107,785 |
| Estimate of marked lobsters found | $\frac{165.3 \times 1392}{299.0 \times 17.8} = 43$ | $\frac{73.0 \times 1392}{299.0 \times 3.8} = 89$ | $\frac{56.3 \times 9}{50.6} = 10$ | $\frac{107.8 \times 1392}{299.0 \times 51.4} = 10$ |

The estimated total catch of marked lobsters at all P.E.I. ports is as follows:

| | | |
|--------------------------------|-------|------|
| Abrams Village and Rocky Point | - | 1392 |
| Cape Egnont | - | 307 |
| West Point | - | 43 |
| Brae Harbour | - | 89 |
| Higgins Wharf | - | 10 |
| Mont Carmel | - | 10 |
| | Total | 1851 |

Since reliable figures on the total landings by ports in N.B. are not available, the N.B. catch of marked lobsters can not be estimated in this way. Of the 253 tags returned in 1955 from the 1954 tagging, 96 (37.9%) were caught by N.B. boats. This indicates that the 1851 marked lobsters caught in P.E.I. represent 62.1% of the total caught by both P.E.I. and N.B. boats. The estimated total catch is therefore 2981 marked lobsters. From the calculated average weight of all marked lobsters recovered, it is estimated that these 2981 lobsters weighed 2118 pounds. This is about 18% less than the 2586 pounds the 6716 lobsters were estimated to weigh when liberated. For comparative purposes, the same method of estimating weight was used for both the lobsters liberated and recovered.

Of the 500 tags liberated just before the opening of the 1955 season, 277 (55.4%) were recovered during the season. This indicates that the fishermen caught only 55.4% of the marked lobsters available at the start of the season. On this basis, 5,381 (80.1%) of the lobsters marked in 1954 survived to the start of the 1955 season. Of these, 2400 escaped the 1955 fishery and 1920 (80%) of these should survive to the 1956 season. If 55% of these are caught in 1956 and the individual lobsters weigh 24 ounces, 50% more than they did at the end of the 1955 season, the 1956 catch should amount to 1050 marked lobsters weighing 1575 pounds. Of the 6716 lobsters which weighed 2586 pounds when liberated in 1954, it is estimated that 4031 would be recaptured in the 1955 and 1956 seasons. These would weigh 3693 pounds or 43% more than the total weight liberated.

Other work

General information on number of boats fishing, number of traps set and lost, weight of lobsters landed is recorded in Table XXV for several P.E.I. ports. In this table, "on and off the area" refers to the area tagged in 1955.

The 1955 landings for the 63 Abrams Village area boats were reported to be the highest since 1942. The plants could not cope with the unusually heavy landings during the first week of the season and lost about 5,000 pounds of lobsters on the week-end of August 14.

Four total catches of lobsters were measured at Abrams Village and one at Cape Egmont. The information on these catches is summarized in Table XXVI.

Table XXV. Summary of lobster landings, boats fishing, traps set and lost during 1955 season at several P.E.I. district #8 ports.

| Port | No. of boats | | Traps set* | | Weight landed | | Traps lost | Catches per trap set lb. | Av. no. days fished | |
|----------------|--------------|------|------------|-------|---------------|----------|------------|--------------------------|---------------------|----|
| | On | Off | Canuers | Total | Markets | Combined | | | | |
| Abrams Village | 28 | 4191 | 2370 | 6561 | 197607 | 54293 | 251900 | 258 | 38.4 | 37 |
| Rocky Point | 8 | 575 | 1000 | 1575 | 39592 | 8131 | 47723 | 63 | 30.3 | 29 |
| Cape Egmont | 16 | 2857 | 640 | 3497 | 106977 | 28607 | 135584 | 153 | 38.8 | 39 |
| Mont Carmel | 11 | 240 | 2250 | 2490 | 78431 | 29354 | 107785 | 474 | 43.3 | 39 |
| Egmont Bay | | | | | | | | | | |
| Co-op. boats | 63 | 7863 | 6260 | 14123 | 422607 | 120385 | 542992 | 4.1 ¹ | 38.4 | 37 |
| | | | | | | | 52 boats | | | |
| Higgins Wharf | 6 | 0 | 2390 | 2390 | 44741 | 11567 | 56308 | - | 23.6 | 33 |
| Brae Harbour | 19 | 0 | 4255 | 4255 | 58994 | 14006 | 73000 | - | 17.2 | 24 |
| West Point | 22 | - | - | - | 125447 | 39880 | 165327 | - | - | - |
| Summerside | 6 | 0 | 1315 | 1315 | 21992 | 25132 | 47124 | - | 35.8 | 39 |

* On and off the area refers to the area tagged in August, 1955. This comprises a five-mile radius using the place of liberation of the marked lobsters as the centre of the area. (See Figure 2)

Table XXVI. Summary of total catches measured at Abrams Village and Cape Egmont, August 4-September 27, 1955.

| (a) | Place | Date | No. trap hauls | No. of lobsters | | | | |
|-----|----------------|----------|----------------|-----------------|---------|------------------|---------|----|
| | | | | Shorts | Canners | Markets Combined | Berried | |
| | Abrams Village | Aug. 4 | 33 | 13 | 239 | 62 | 314 | 1 |
| | " | " 6 | 20 | 12 | 160 | 41 | 213 | |
| | " | " 6 | 20 | 2 | 34 | 2 | 38 | |
| | " | Sept. 27 | 183 | 107 | 172 | 19 | 298 | 3 |
| | " | Totals | 236 | 134 | 605 | 124 | 863 | 4 |
| | Cape Egmont | Sept. 2 | 235 | 83 | 158 | 22 | 263 | 17 |

| (b) | Place | Av. total length in cm. | | Av. weight in pounds | | | |
|-----|----------------|-------------------------|------------|----------------------|--------|---------|---------|
| | | All sizes | Legal size | Markets only | Shorts | Canners | Markets |
| | Abrams Village | 20.61 | 21.19 | 24.40 | 0.40 | 0.62 | 1.04 |
| | Cape Egmont | 19.55 | - | 24.05 | 0.40 | 0.52 | 1.14 |

Acknowledgements

Fishermen in the Egmont Bay area willingly landed short lobsters for marking purposes and co-operated in the return of marked and tagged lobsters. Dealers and buyers on both the P.E.I. and N.B. sides of district #8 readily made their books available so that total landings could be obtained at ports where required. Fisheries officers and wardens in district #8 ably assisted in the examination of catches for marked lobsters and in the collection of lobster tags.

These individuals contributed in no small measure to the success of the experiment and their assistance is gratefully acknowledged.