

Fishermen and Scientists Research Society Lobster Recruitment Index from Standard Traps (LRIST)

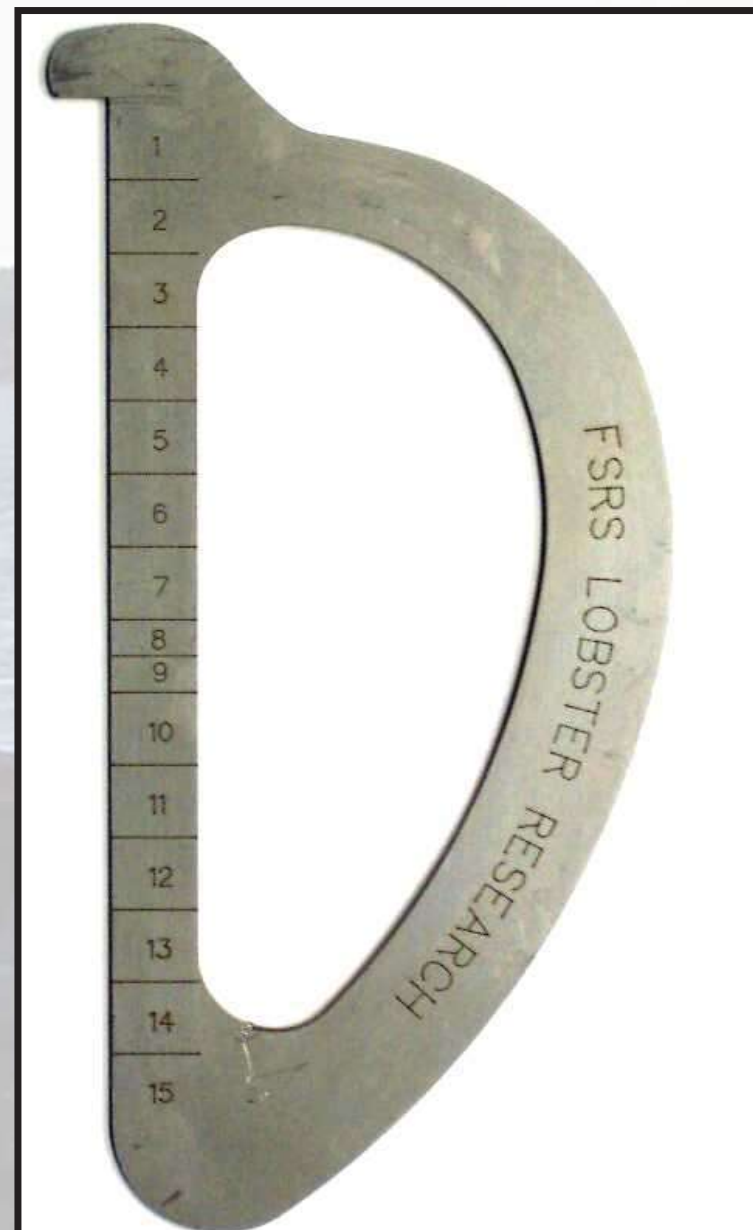
OVERVIEW

Goal: to provide an index of the number of lobsters that will molt into the legal sizes in the coming seasons

- LRIST began in the spring of 1999.
- It began as a 5 year project. After reviewing the project's usefulness, it is scheduled to continue for the foreseeable future. It has just completed its 11th year of collecting quality scientific information.
- LRIST involves volunteer fishermen fishing standard traps in fixed locations.
- The fishermen sex and count the lobsters in 15 size groups using a specially designed gauge. Before Fall 2003, the measuring gauge had 8 size groups.
- The standard traps are wire with one-inch mesh, and no escape mechanisms.
- Participants also monitor bottom temperatures with a minilog temperature gauge in one of the standard traps.
- LFA 33 also participates in a Commercial Trap study where the fishermen fish three of their own commercial traps near the Recruitment Traps. This study has been in effect since Fall 2002.

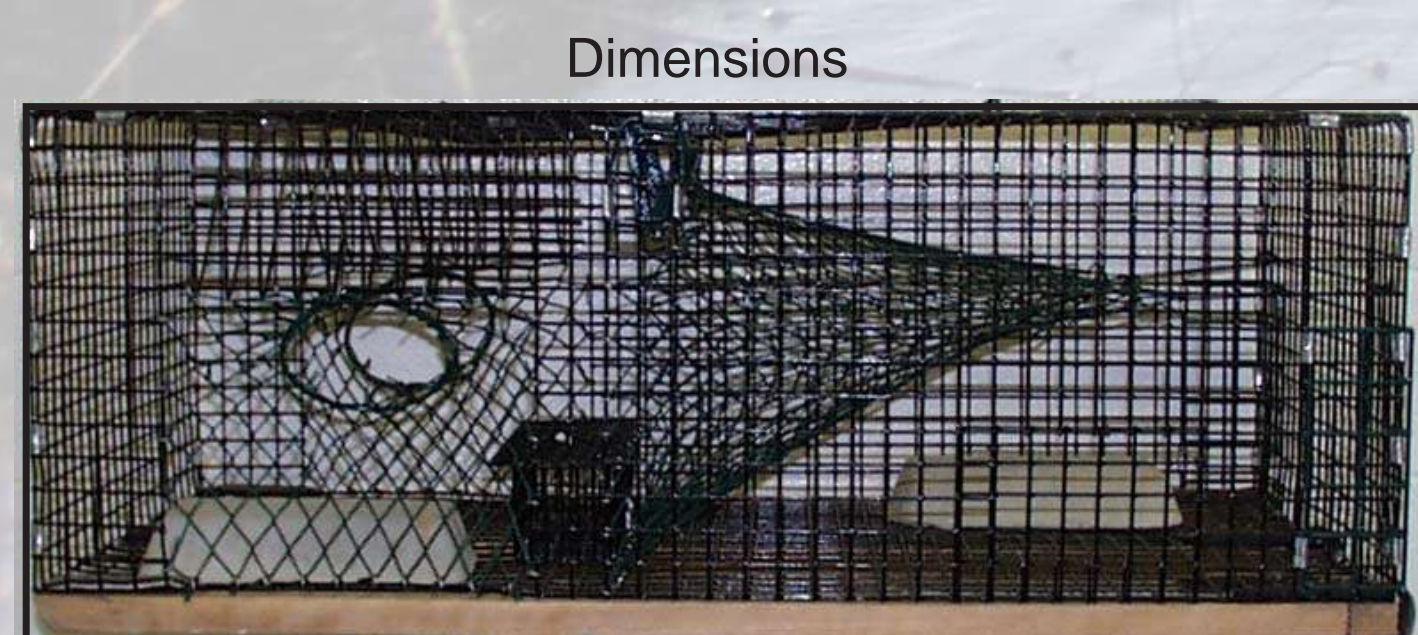
MEASURING GAUGE (Currently used)

- Size 1 (less than 10.99mm)
- Size 2 (11mm – 20.99mm)
- Size 3 (21mm – 30.99mm)
- Size 4 (31mm – 40.99mm)
- Size 5 (41mm – 50.99mm)
- Size 6 (51mm – 60.99mm)
- Size 7 (61mm – 70.99mm)
- Size 8 (71mm – 75.99mm)
- Size 9 (76mm – 80.99mm)
- Size 10 (81mm – 90.99mm)
- Size 11 (91mm – 100.99mm)
- Size 12 (101mm – 110.99mm)
- Size 13 (111mm – 120.99mm)
- Size 14 (121mm – 130.99mm)
- Size 15 (greater than 130mm)

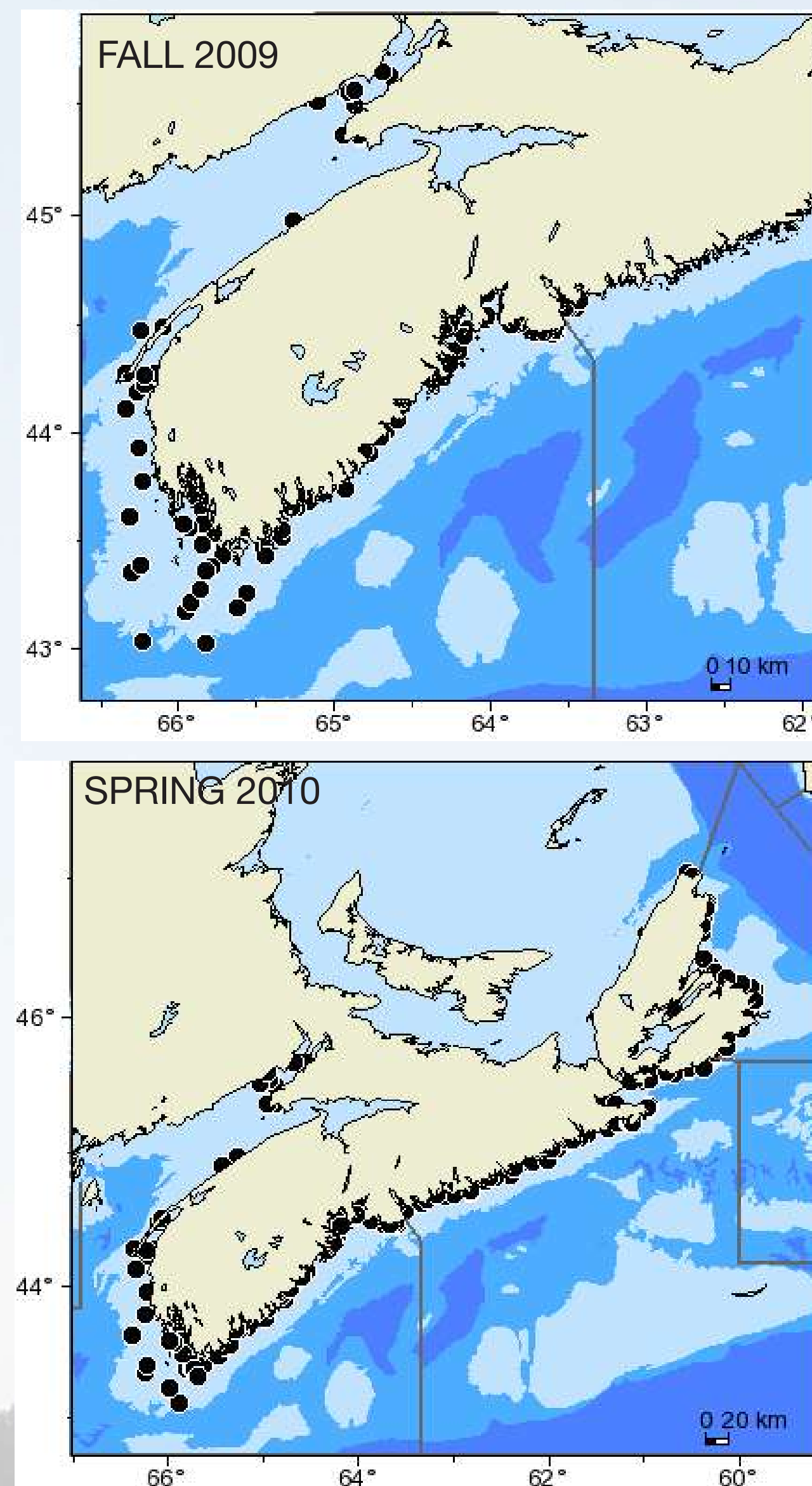


Note: Size groupings 8 and 9 are in 5mm increments to give a clear indication of the number of lobsters just under the legal size limit.

The new measuring gauge was designed (Fall 2003) to reflect smaller and larger size groupings. The GOMLF(Gulf of Maine Lobster Foundation) lobster fishermen have been using the same new designed gauge.



- Height 14 inches
- Width 21 inches
- Length 40 inches



RESULTS FROM FALL 2009

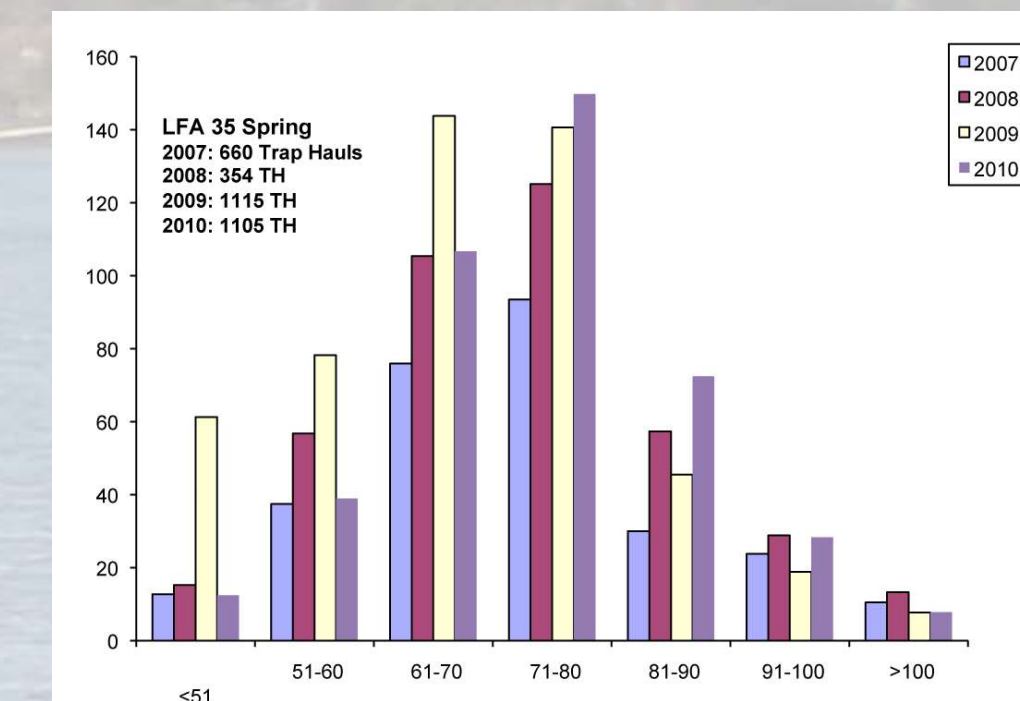
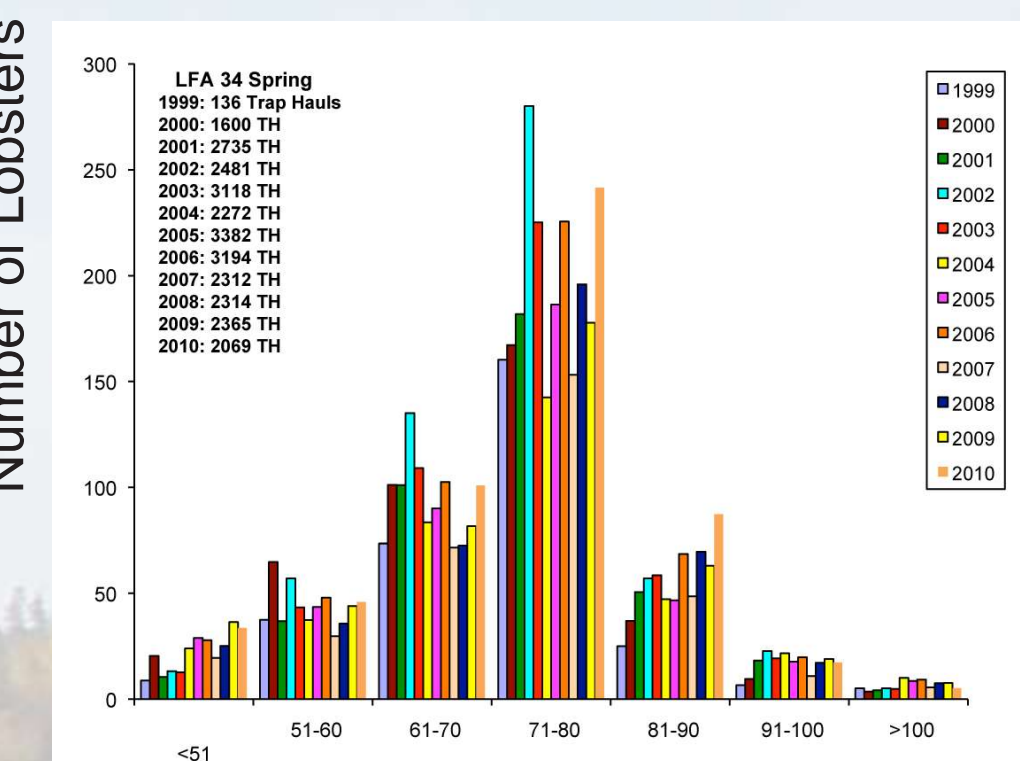
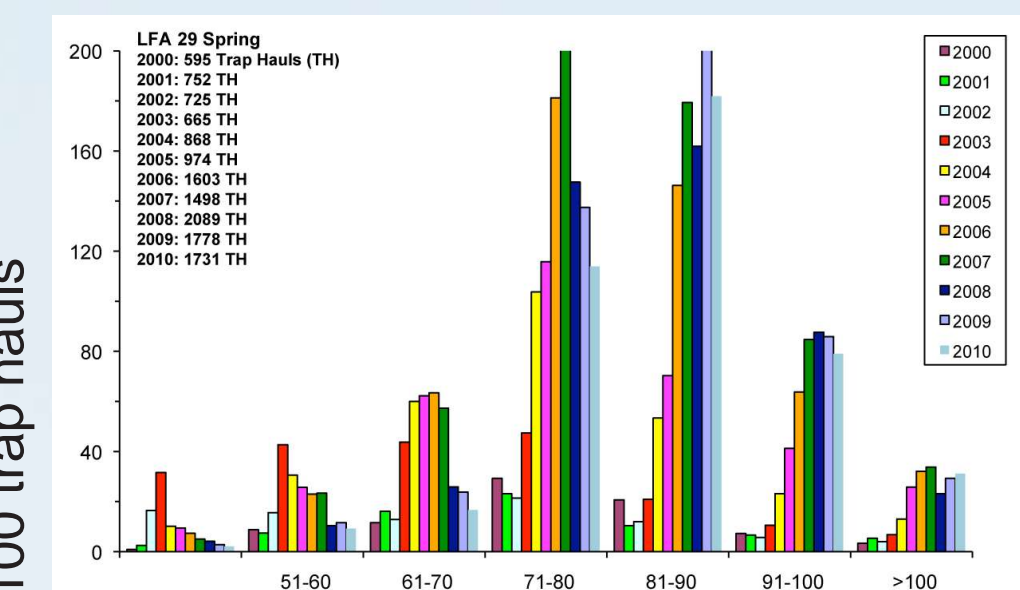
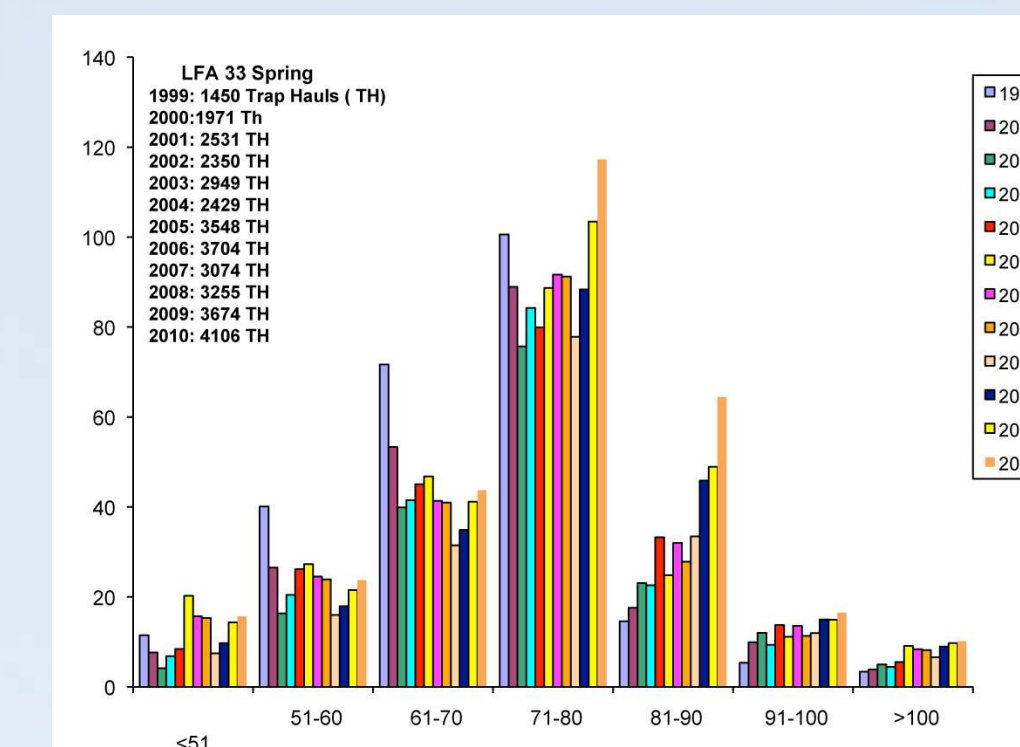
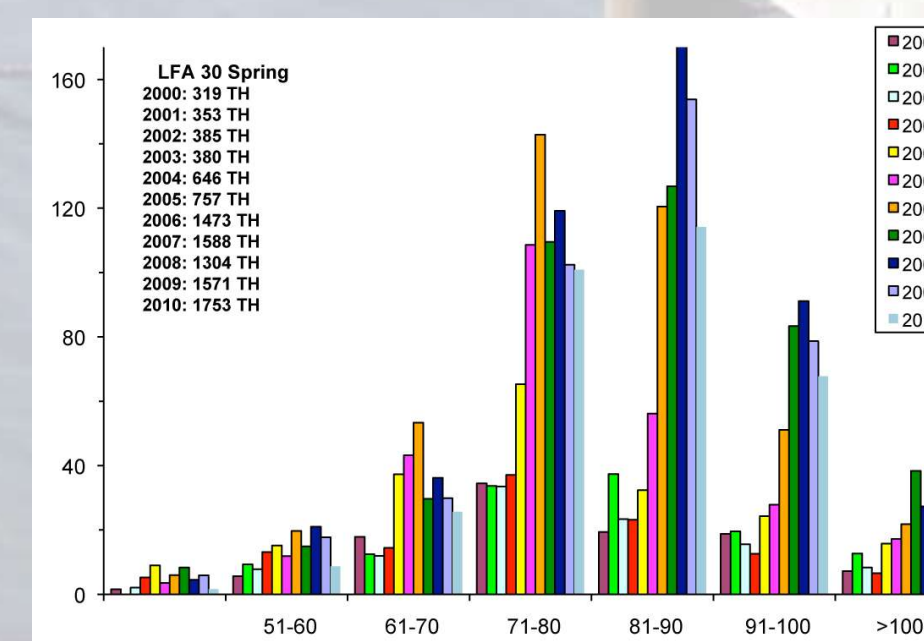
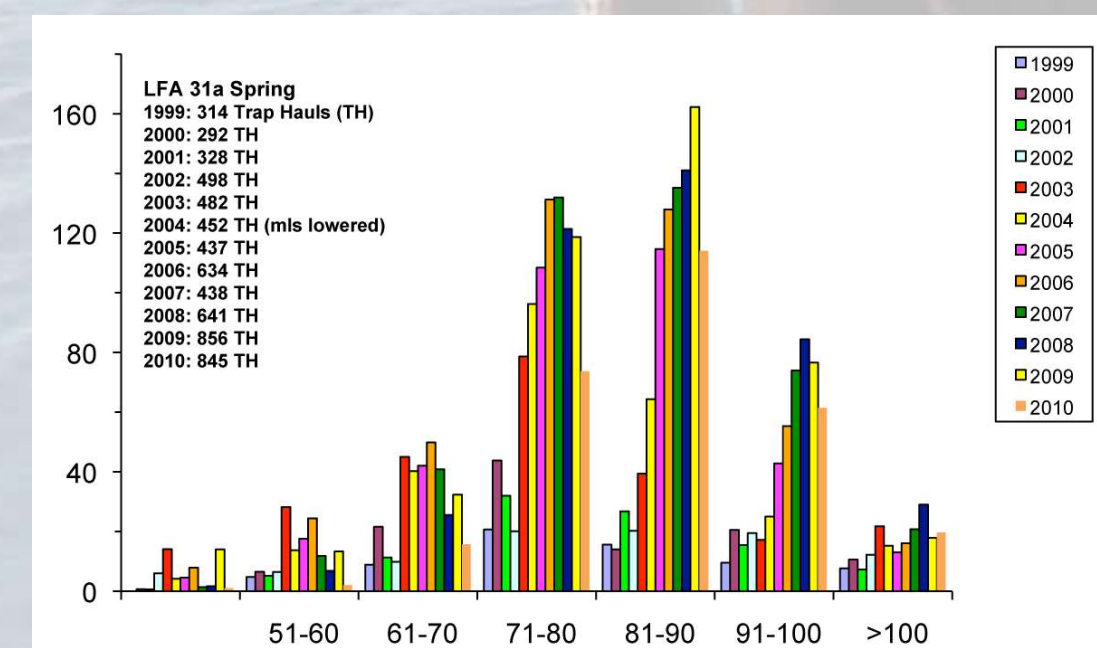
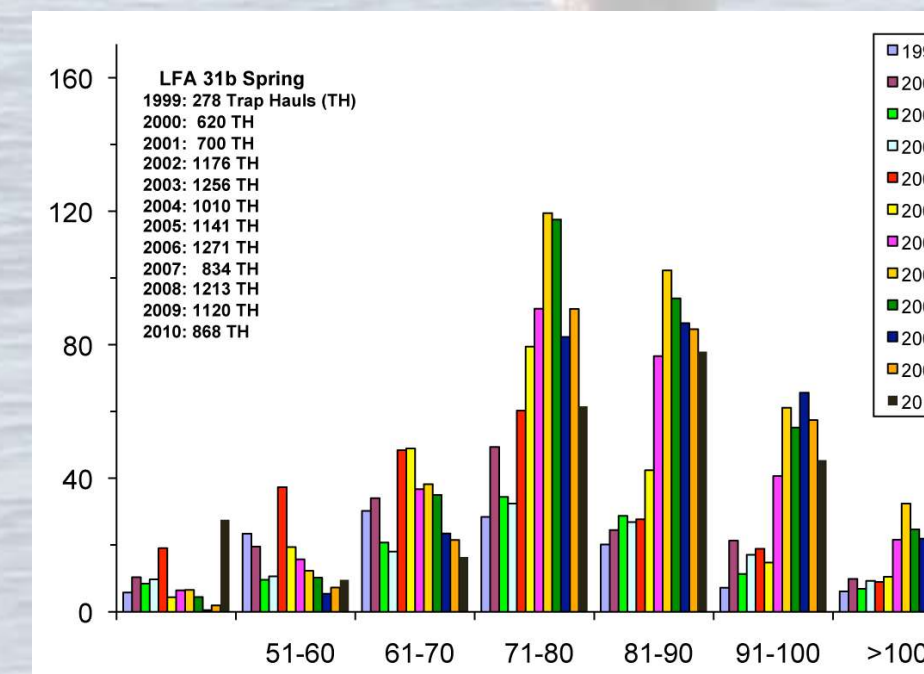
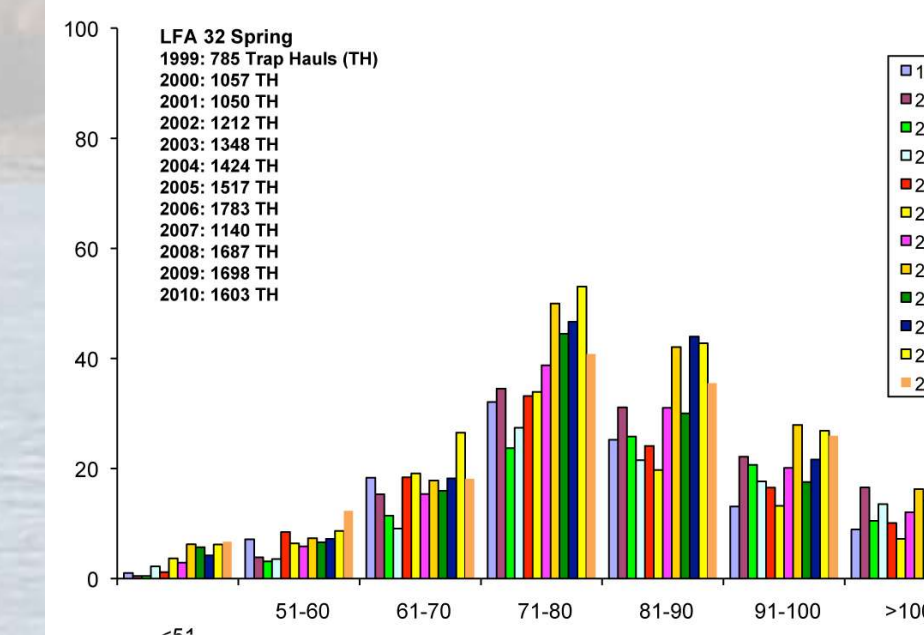
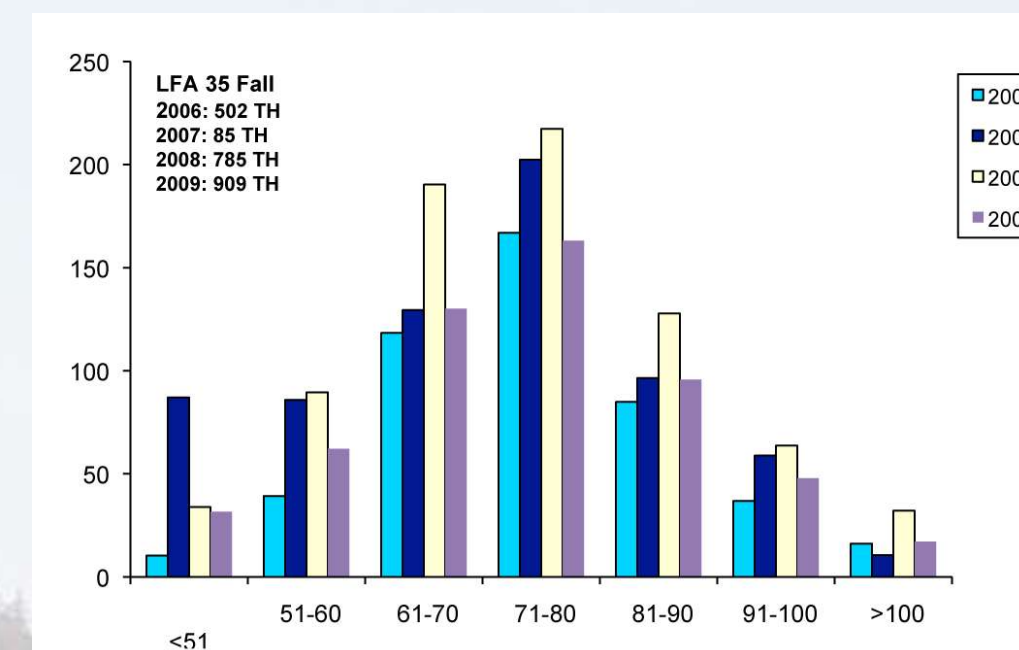
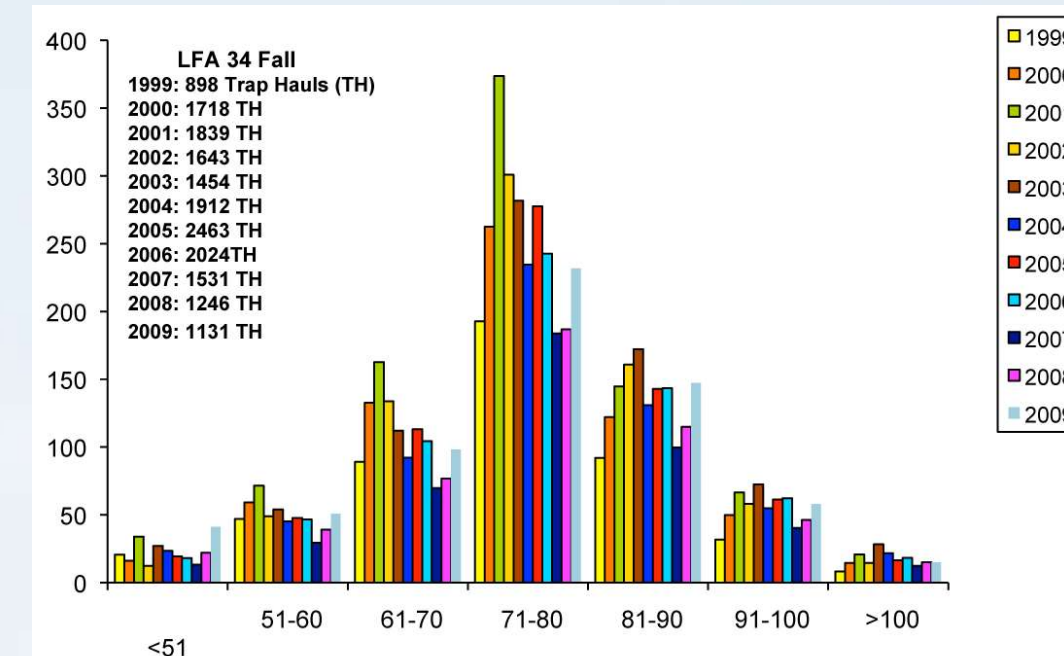
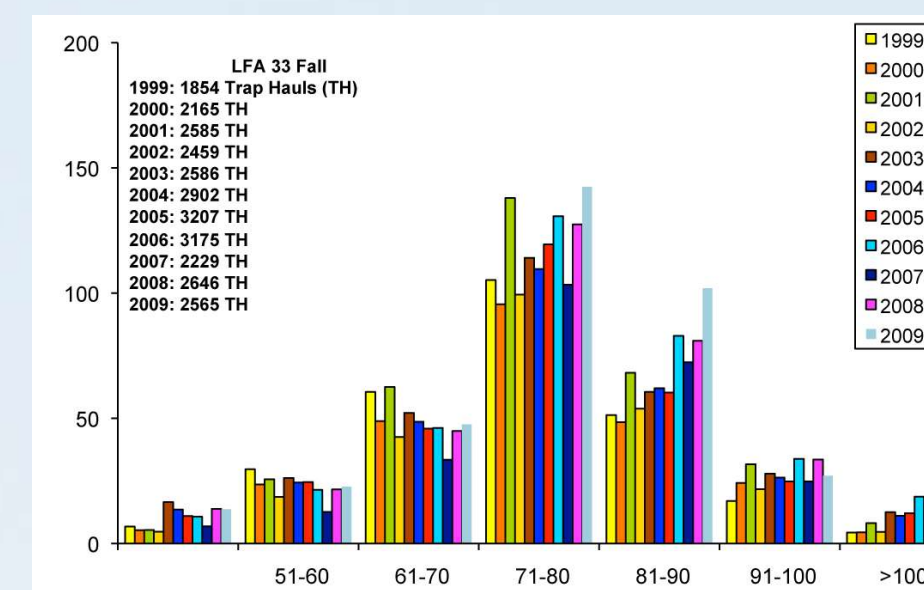
- This was the eleventh fall (Nov-Feb) with data from the standard traps
- 87 fishermen took part in LFA's 33, 34 and 35
- 258 project traps were fished in 2009
- 4605 total project hauls in Fall 2009
- The LFA's combined for a total of 21,550 lobsters measured

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|--------|--------------------------|
| LFA 33 | 3.68 Lobsters/ Trap Haul |
| LFA 34 | 6.42 Lobsters/ Trap Haul |
| LFA 35 | 5.47 Lobsters/ Trap Haul |

RESULTS FROM SPRING 2010

- 165 fishermen took part in the spring of 2010
- LFA's 27, 28, 29, 30, 31A, 31B, 32, 33, 34 and 35 were sampled
- 513 project traps were fished in 2010
- 18,458 total project trap hauls in Spring 2010
- All project traps combined in Spring 2010 – total of 64,090 lobsters measured

| | |
|---------|---------------------------|
| LFA 27 | 3.45 Lobsters/ Trap Haul |
| LFA 29 | 4.34 Lobsters / Trap Haul |
| LFA 30 | 3.69 Lobsters/ Trap Haul |
| LFA 31A | 2.87 Lobsters/ Trap Haul |
| LFA 31B | 2.55 Lobsters/ Trap Haul |
| LFA 32 | 1.52 Lobsters/ Trap Haul |
| LFA 33 | 2.91 Lobsters/ Trap Haul |
| LFA 34 | 5.32 Lobsters/ Trap Haul |
| LFA 35 | 4.16 Lobsters/ Trap Haul |



COMMERCIAL TRAP STUDY RESULTS

Fall 2009

- 45 participants from LFA 33
- 2469 commercial trap hauls were recorded
- 6243 lobsters measured
- Average of 2.52 lobsters caught per trap haul

Spring 2010

- 45 participants from LFA 33
- 4002 commercial trap hauls were recorded
- 6614 lobsters were measured
- Average of 1.65 lobsters caught per trap haul

ONGOING ANALYSES

- Comparison of standard traps with commercial traps
- Analyses of the data to get an indication of exploitation rates, used in LFA assessments
- Analyzing the predictability of the trends in recruitment
- Analyses of temperature effects on catch rates
- Annual changes in numbers of undersize lobsters

We look forward to future years of this study and to the new challenges we face in providing scientific insight into today's lobster fishery issues. For more results please contact the FSRS office at 902-461-8119.

ACKNOWLEDGEMENTS

FSRS would like to thank all Fishermen who participated in the project and the community technicians for their work onboard vessels and for working with the fishermen. The FSRS gauge was a modified version of one designed by lobster biologists in the Invertebrate Fisheries Division (IFD) (St. Andrews) for use by LFA 35 fishermen. Pictures contributed by Jeff Graves, and Carl MacDonald.

Poster created March 8, 2011 by Shannon Scott-Tibbetts (FSRS), and BIO technographics.