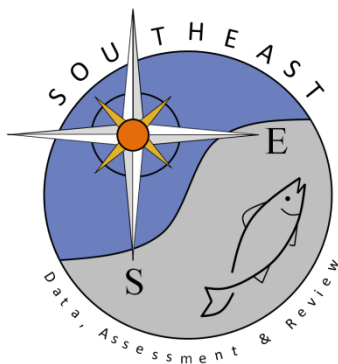


Size Composition of Eight SEDAR49 Data Limited Species by Sector and Gear

J.J. Isely, M.W. Smith and C-P Chih

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Size Composition of Eight SEDAR49 Data Limited Species by Sector and Gear

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Abstract

Size data were collected from standard sources as reported in previous SEDAR reports. The Data Limited Tool requires estimates of gear selectivity; specifically, size at first recruitment and size at full recruitment to the gear. Size at first recruitment is defined as the size when 5% of the total number sampled is captured. Size at full recruitment is defined as the modal size of all captures. We report these values for each fleet and gear for eight species assessed in SEDAR49.

Introduction

The data limited approach to stock assessment relies heavily on fleet-specific size composition. Selectivity in the data limited approach is based on size at first capture (or size at first recruitment to the gear) and size at full recruitment. Size at first recruitment is defined as the size when the cumulative number sampled reaches 5% of the total number sampled. Size at full recruitment is defined as the modal size of the sample. Although mean size at capture has been used, modal size at capture was recently recommended in SEDAR46. This report documents the length frequency distributions (LFDs) of eight SEDAR49 species collected from the Gulf of Mexico from 1981 to 2013. In this document, LFDs for both the recreational and commercial samples by gear in the Gulf of Mexico were estimated.

Methods

Length samples from commercial fisheries were obtained from the TIP database housed at the Southeast Fisheries Science Center and the Gulf FIN database. Commercial samples were separated by gear. Length samples for recreational fisheries were obtained from the Marine Recreational Fisheries Statistics Survey (i.e., the Marine Recreational Information Program, MRIP), the Head Boat Survey, the Texas Parks and Wildlife Department database, the Gulf FIN database, and the TIP database. All lengths were fork lengths in centimeters. Conversion equations for different length types were developed and provided by the Panama City Lab and are provided in a separate report.

Discussion

The total number of individuals measured by species ranged from 586 Wenchman to 324,696 Red Drum (Table 1). Commercial samples far outweighed recreational samples for Almaco Jack, Lesser Amberjack, Snowy Grouper, Speckled Hind, Wenchman and Yellowmouth Grouper. Recreational samples far outweighed commercial samples for Red Drum. Sample sizes were similar between recreational and commercial fisheries for Lane Snapper. No recreationally caught Wenchman were measured. Length frequency distributions by gear for each species are presented in Figures 1 – 8. Data were binned into 2 cm bins for the purpose of plotting. Un-binned data were provided to the assessment team.

Table 1.—Length at first recruitment (5% capture), length at full recruitment (Mode) and number of fish measured by gear across all years for SEDAR49 data limited species.

Species	Gear	length at 5%	Mode	N
Almaco Jack	Combined	29	43	13609
Almaco Jack	Hand Line	31	43	10526
Almaco Jack	Long Line	41	95	344
Almaco Jack	Recreational	26	35	2693
Lesser Amberjack	Combined	23	35	1665
Lesser Amberjack	Hand Line	25	35	1351
Lesser Amberjack	Long Line	NA	NA	11
Lesser Amberjack	Recreational	24	35	276
Lane Snapper	Combined	20	31	41673
Lane Snapper	Hand Line	19	31	21680
Lane Snapper	Long Line	26	30	2550
Lane Snapper	Recreational	20	23	14968
Red Drum	Combined	41	51	324696
Red Drum	Hand Line	37	51	93219
Red Drum	Long Line	NA	NA	1
Red Drum	Recreational	47	54	231104
Snowy Grouper	Combined	37	55	24026
Snowy Grouper	Hand Line	31	49	7744
Snowy Grouper	Long Line	41	59	16091
Snowy Grouper	Recreational	27	37	140
Speckled Hind	Combined	33	41	15413
Speckled Hind	Hand Line	33	41	2741
Speckled Hind	Long Line	33	45	12514
Speckled Hind	Recreational	23	33	85
Wenchman	Combined	12	20	586
Wenchman	Hand Line	18	21	206
Wenchman	Long Line	21	45	117
Wenchman	Recreational	NA	NA	0
Yellowmouth Grouper	Combined	33	59	1042
Yellowmouth Grouper	Hand Line	41	61	130
Yellowmouth Grouper	Long Line	25	31	675
Yellowmouth Grouper	Recreational	43	55	196

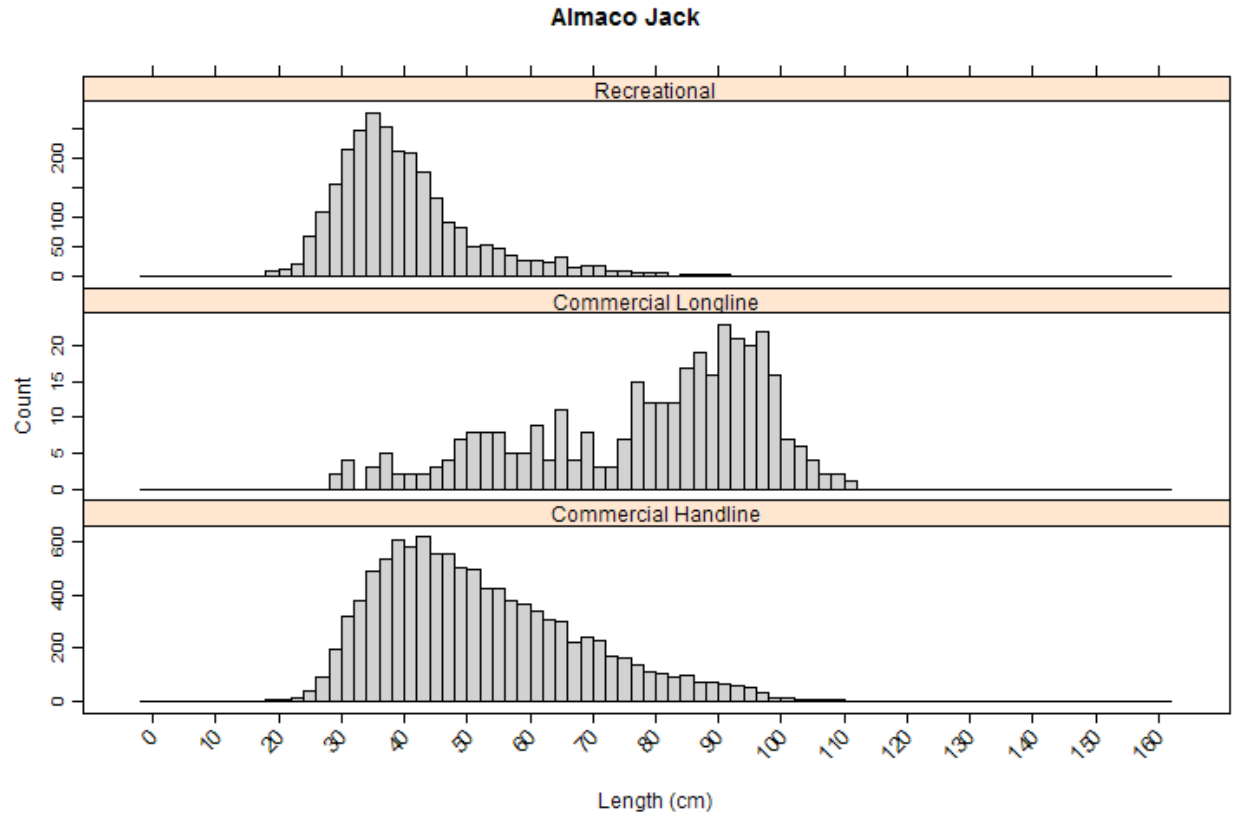


Figure 1.—Length frequency by gear across all years for Almaco Jack, one of the SEDAR49 data limited species.

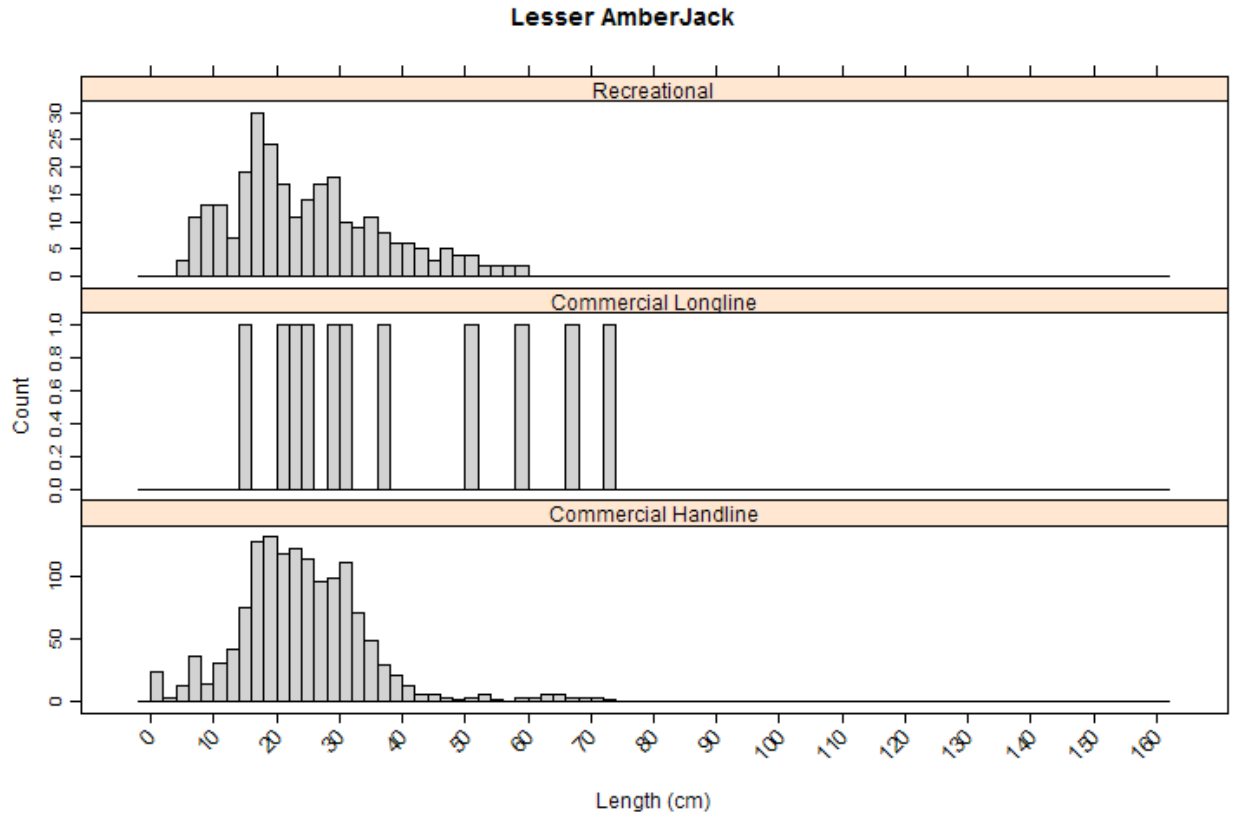


Figure 2.—Length frequency by gear across all years for Lesser Amberjack, one of the SEDAR49 data limited species.

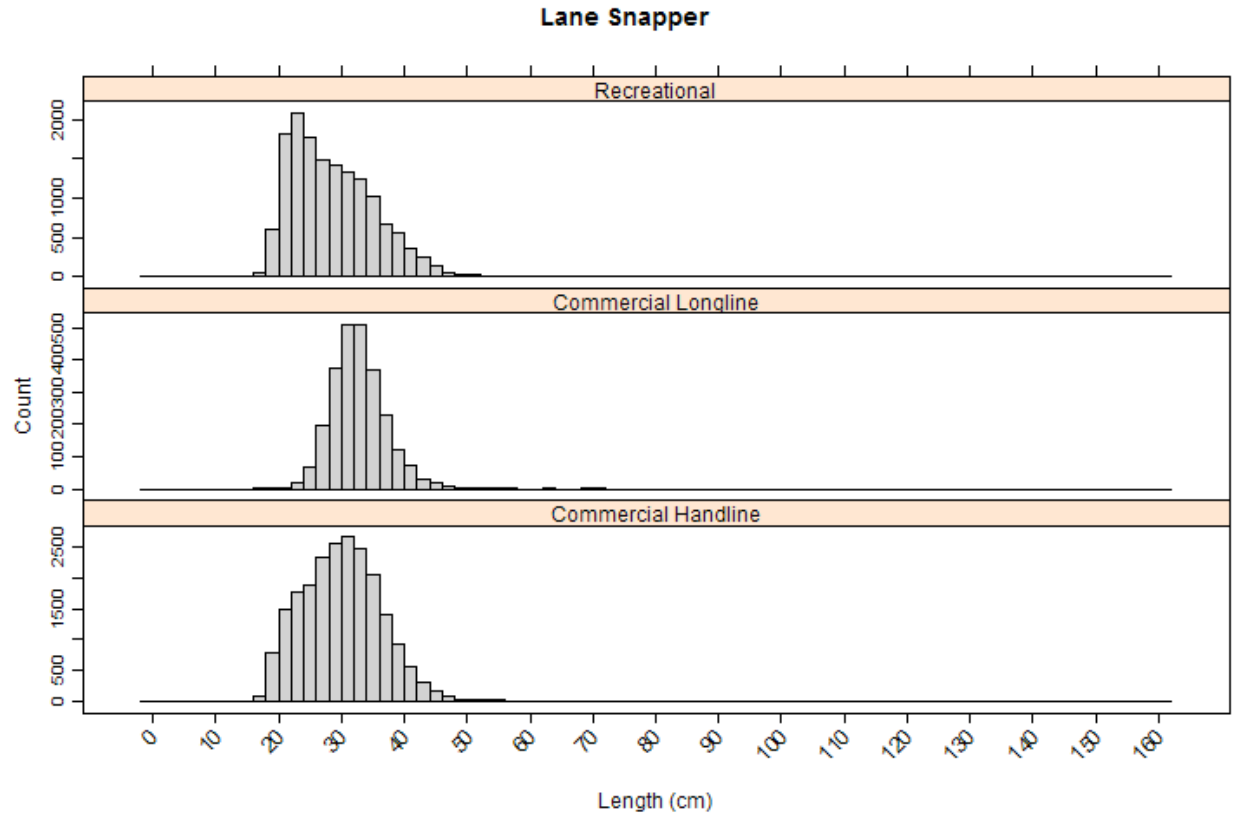


Figure 3.—Length frequency by gear across all years for Lane Snapper, one of the SEDAR49 data limited species.

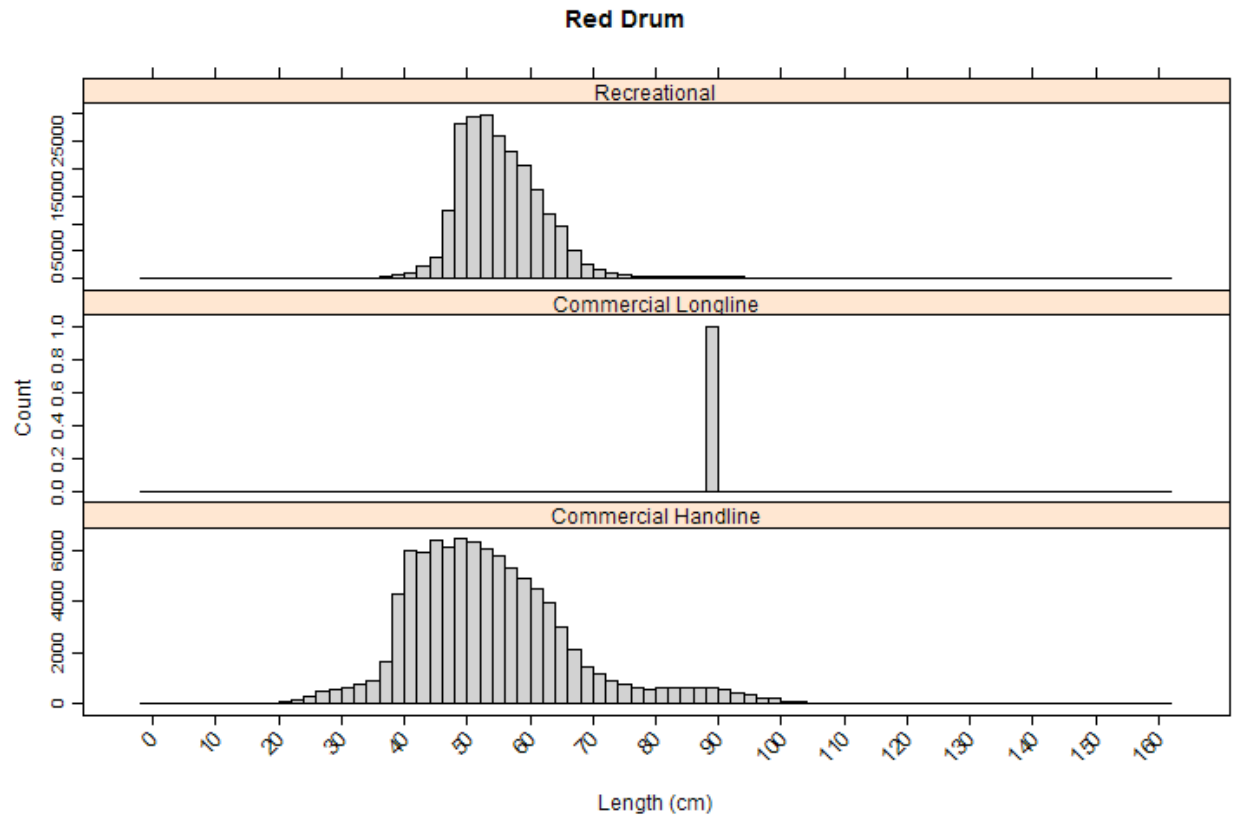


Figure 4.—Length frequency by gear across all years for Red Drum, one of the SEDAR49 data limited species.

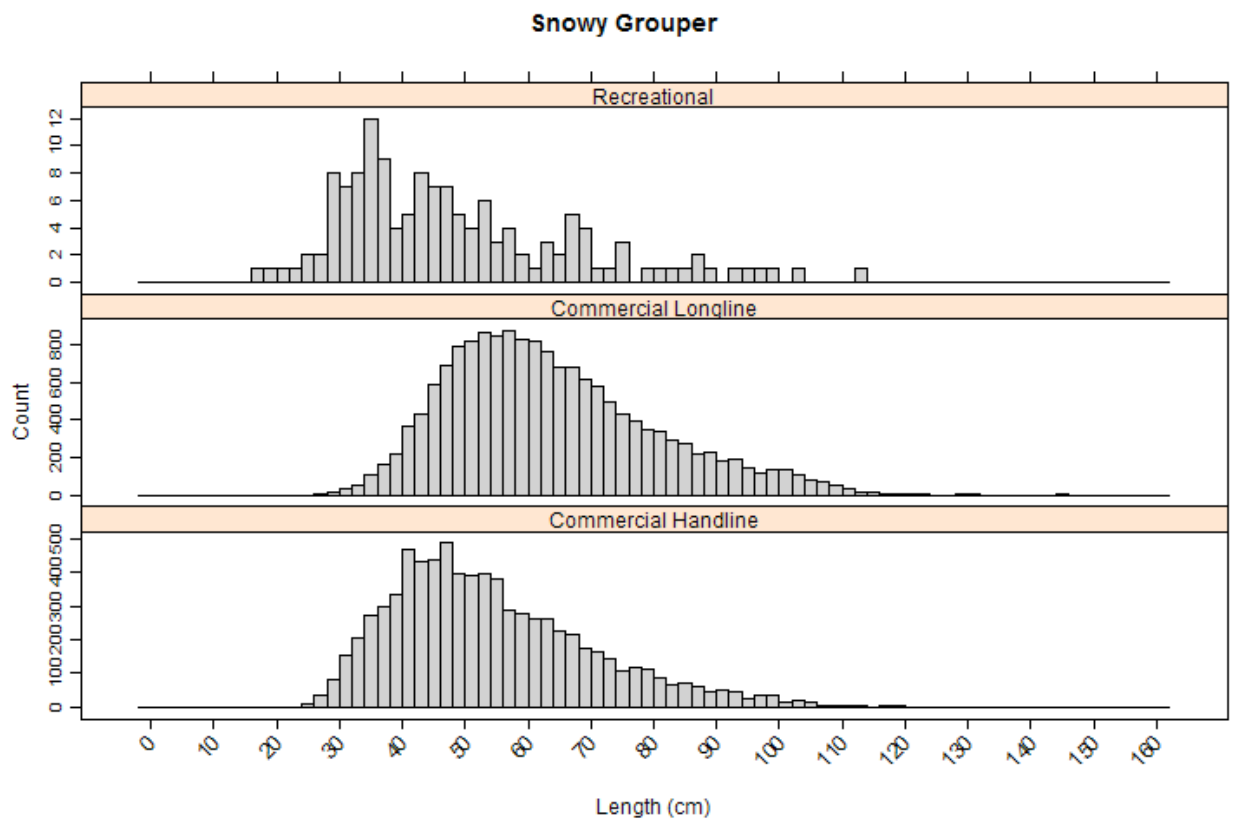


Figure 5.—Length frequency by gear across all years for Snowy Grouper, one of the SEDAR49 data limited species.

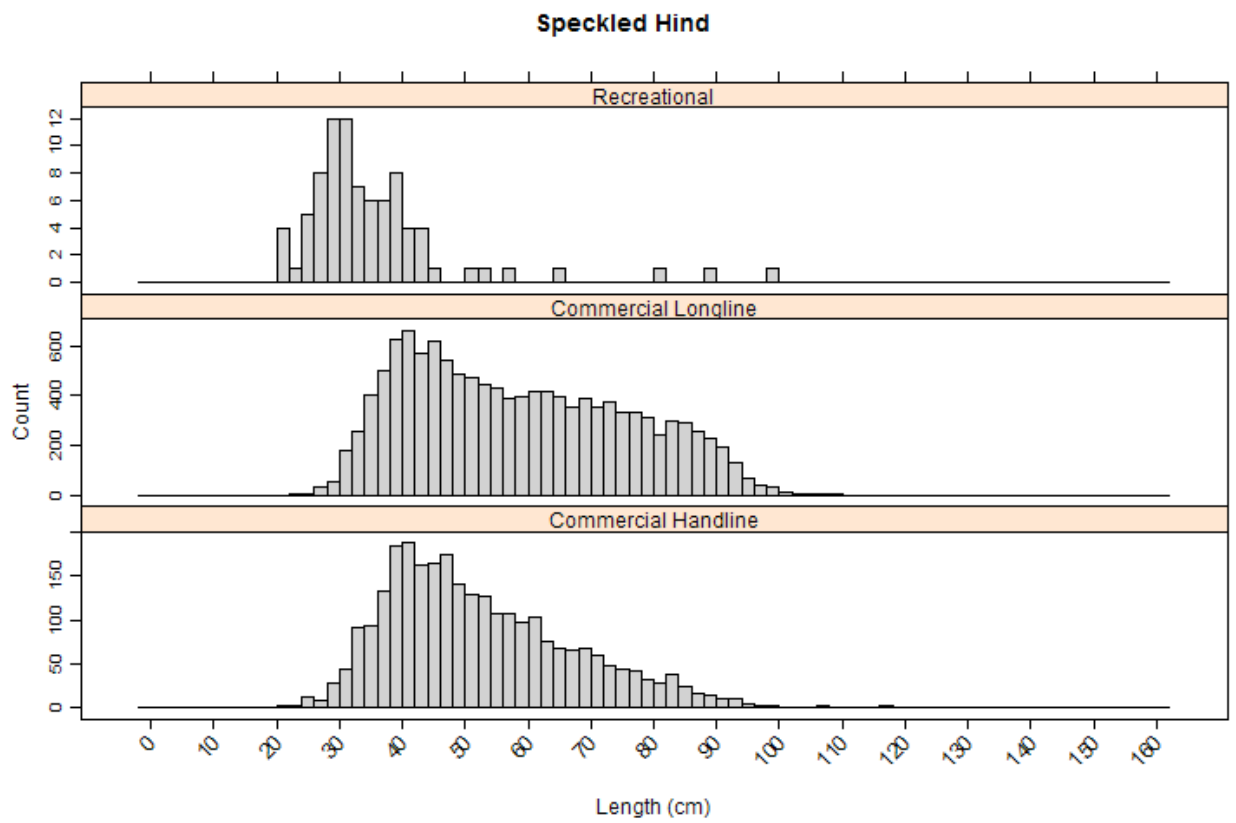


Figure 6.—Length frequency by gear across all years for Speckled Hind, one of the SEDAR49 data limited species.

Whenchman

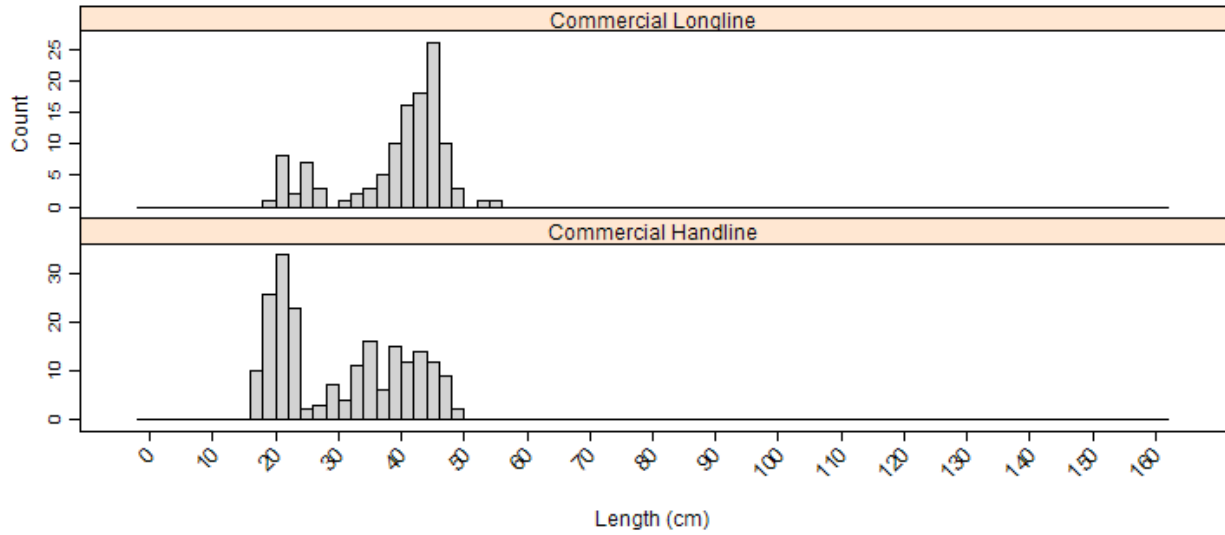


Figure 7.—Length frequency by gear across all years for Whenchman, one of the SEDAR49 data limited species.

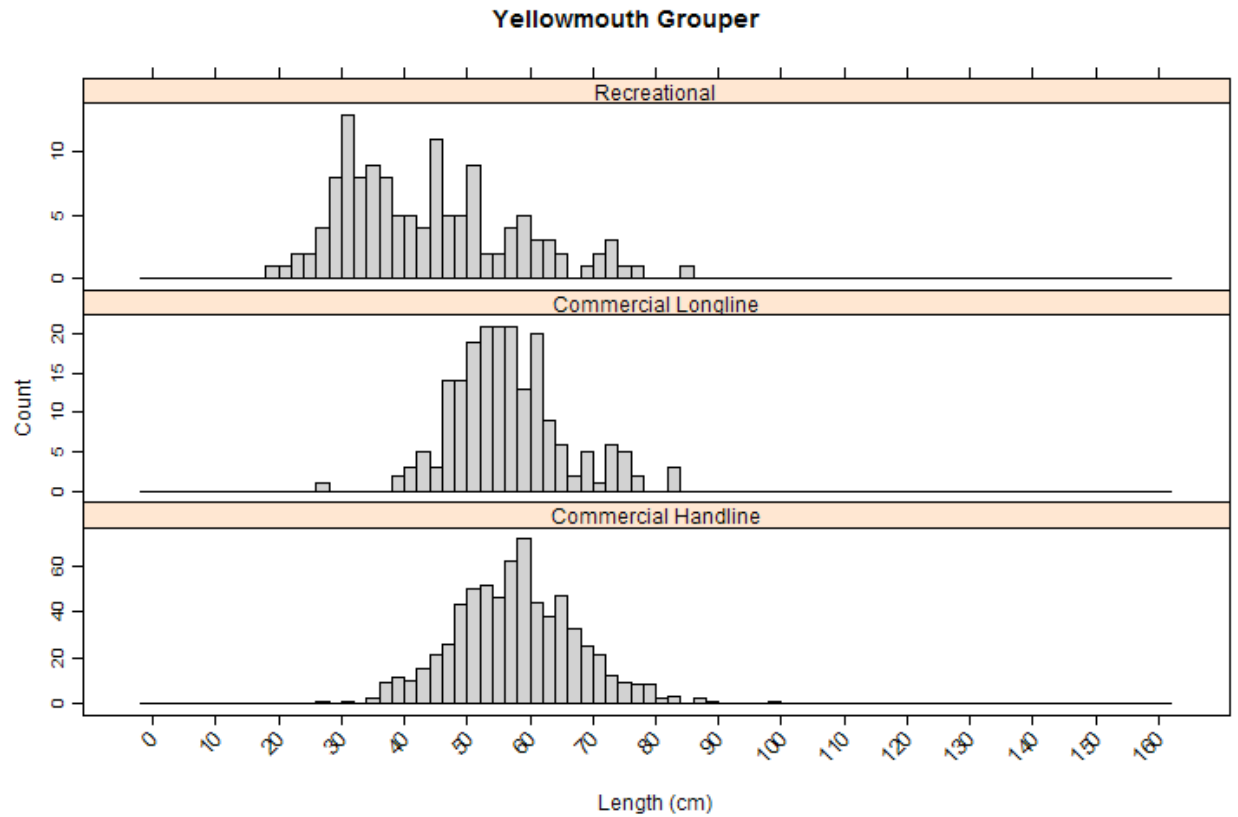


Figure 8.—Length frequency by gear across all years for Yellowmouth Grouper, one of the SEDAR49 data limited species.