Northeast Fisheries Science Center Reference Document 16-03

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LIST OF ACRONYMS AND ABBREVIATIONS

AA = Access area
ASM = At-Sea Monitoring Program
ASMFC = Atlantic States Marine Fisheries Commission
CV = coefficient of variation
d/k = discard/kept
FED = finfish excluder device
FMP = fishery management plan
GEN = General category
lg = large mesh
LIM = Limited access category
MA = Mid-Atlantic
MRIP = Marine Recreational Information Program
NE = New England
NEFOP = Northeast Fisheries Observer Program
NEFSC = Northeast Fisheries Science Center
NMFS = National Marine Fisheries Service
OPEN = Nonaccess area
SBRM = Standardized Bycatch Reporting Methodology
SE = standard error of the estimate
sm = small mesh
VTR = Vessel Trip Report
xlg = extra large mesh

EXECUTIVE SUMMARY

This report describes the analyses associated with the discard estimation of 14 federally managed fish and invertebrate species groups during the July 2014 through June 2015 time period and the expected coverage needed by at-sea observers for northeastern US fisheries for the April 2016 through March 2017 period using the Standardized Bycatch Reporting Methodology.

An estimated 57,063 mt (125,803,405 lb) of federally regulated species were discarded during the July 2014 through June 2015 time period. The predominant species groups discarded were skates (Rajidae*)* and spiny dogfish (*Squalus acanthias*). Across all species groups examined, "No Market" was the reason reported for the majority of discards. Analyses also revealed that for fleets with observer coverage, the coverage within a fleet corresponded with the spatial and temporal patterns of fishing activity in terms of kept weight of all species. The discards reported in this document may not necessarily correspond directly with the discard estimates derived for individual stock assessments because of differences in stratification and data. Hence, the discard estimates are not definitive, but indicative of where discarding occurred among commercial fleets and for which species groups.

The sea days needed to achieve a precision-based performance standard (30% coefficient of variation of the discard estimate) were estimated to be 10,746 sea days for the 14 fish and invertebrate species groups across 57 fleets. The sea day analyses used a standardized protocol to account for the importance of the discarded species relative to the amount of discards by each fleet and total fishing mortality.

INTRODUCTION

The Standardized Bycatch Reporting Methodology (SBRM) Omnibus Amendment (NEFMC 2007; NMFS 2008) was vacated by the US District Court of the District of Columbia on 15 September 2011 because of a deficiency associated with the prioritization process, an element of the amendment. The regulations implementing the SBRM were removed by the National Marine Fisheries Service (NMFS) on 29 December 2011 (NMFS 2011). A revised SBRM Omnibus Amendment was approved on 13 March 2015 and the final rule became effective 30 July 2015 (NEFMC 2015). This report provides some of the information required by the annual discard report specified in the SBRM amendment.

The SBRM discard estimation methods described in Wigley et al. 2007 are still applicable. The analyses conducted for 2016 are similar to those conducted in 2015 (Wigley et al. 2015) in which the sample size analyses are based on the assumption that the pattern of fishing activity observed in the prior year will be similar to that in the upcoming year.

This document presents the estimated discards and associated precision as well as the number of sea days needed to obtain a 30% coefficient of variation (CV) on the discard estimates for the 14 species groups associated with federal fishery management plans (FMPs) in northeastern US fleets[1]. Additionally, discard reasons associated with the discarded species are

[1] "Fleet" is synonymous with "fishing mode."

summarized. This document differs from SBRM documents prior to 2012 in that this document does not include a sea day prioritization[2] and does not contain information about sea turtles.

METHODS

Data Sources

The data sets used include July 2014 through June 2015 data from the Northeast Fisheries Observer Program[3] (NEFOP) database, the Vessel Trip Report (VTR; including logbooks from the surfclam [*Spisula solidissima*] and ocean quahog [*Arctica islandica*] fishery) database, the Northeast Fisheries Science Center (NEFSC) commercial landings database, and the National Oceanic and Atmospheric Administration Marine Recreational Information Program (MRIP) database.

The NEFOP is a comprehensive, multipurpose program that collects a broad range of data including information on all species, by disposition (retained and discarded), that are encountered during a fishing trip as well as gear characteristics data, economic information, and biological samples (NEFOP 2013). The NEFOP employs trained sea-going observers and monitors to collect these data. Fish and invertebrate species are recorded by weight. Conversion factors were applied to convert any dressed weight data to live[4] weight equivalents.

For this analysis, only observed hauls from NEFOP trips with a "complete" sampling protocol were used. A "complete" sampling protocol includes obtaining species weights for both kept and discarded portions of all species in the catch. NEFOP training trips have been included in the analysis. Aborted trips and "set only" trips were excluded from the analysis along with trips fishing in statistical areas associated with the Southeast Region (statistical area $\geq$ "700"), trips landing outside the Greater Atlantic Region (e.g., trips landing in Canada), and "carrier" trips (*fleet_type* = "050"; no fishing effort occurred on these trips). Hauls with no catch reported, species hail weight with discard reason "039" ("previously discarded"), and catch of nonliving matter (such as debris, shells, etc.; these items would not be kept and sold) were also excluded for the analysis. Additionally, there were 3 observed tuna purse seine trips; and 1 observed MA crab dredge for which there were no corresponding VTR trips for the gear type and 1 observed Mid-Atlantic other dredge trip, 1 observed Mid-Atlantic limited access scallop trawl trip, 1 observed New England small mesh haddock separator trawl trip, and 1 observed Mid-Atlantic large mesh Ruhle trawl trip with no corresponding VTR trips for the calendar quarter; consequently these 8 observed trips were removed from the analysis.

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[2] The observer sea day allocation documents are available online at: http://www.nefsc.noaa.gov/femad/fsb/SBRM/

[3] There were 1,406 At-Sea Monitoring Program (ASM) trips associated with New England hand line, longline, otter trawl, Ruhle trawl, and gillnet fleets in the July 2014 through June 2015 data. A comparison of discard rates derived from observer and at-sea monitor data in 2014 and 2015 revealed there were generally similar discard rates between the 2 data collection programs for the 18 fish species and 5 gear types (longline, large mesh otter trawl, large mesh Ruhle trawl, large mesh gillnet, and extra large mesh gillnet) where at-sea monitor data exist, hence NEFOP and ASM data were pooled. See Northeast Fisheries Observer Program (2013) for more information on ASM. The Atlantic States Marine Fisheries Commission (ASMFC) funded 65 otter trawl trips (66 trips when stratified by gear type and mesh size) in the July 2014 through June 2015 data. A comparison of discard rates derived from NEFOP-allocated and ASMFC-allocated trips revealed there were generally similar discard rates for the 3 fleets where ASMFC-allocated trips exist (Mid-Atlantic small mesh otter trawl fleet [49 trips], Mid-Atlantic large mesh otter trawl fleet [1 trip], and New England small mesh otter trawl fleet [16 trips]); hence, these data have been pooled.

[4] In this document, "live" is equivalent to "round" grade (i.e., includes the weight of the shell for shellfish).

The same broad stratification scheme used in previous SBRM analyses was employed in this analysis, in which trips were partitioned into nonoverlapping fleets by using 5 classification variables: geographic region, gear type, mesh, access area, and trip category. Calendar quarter was used in the analyses and was based on landed date to capture seasonal variations in fishing activity and discard rates. Two broad geographical regions were defined: New England (NE) and Mid-Atlantic (MA) based on port of departure[5]; ports in states from Maine to Rhode Island constituted the NE region, and ports in states from Connecticut to northern North Carolina (35^{o} N) constituted the MA region. Gear type was based on Northeast gear codes (*negear)*. Some gear codes were combined: sink, anchored, and drift gillnets, and single and paired mid-water trawls. Trips for which gear was unknown were excluded. Mesh size groups were formed for otter trawl and gillnet gear types. For otter trawls, 2 mesh groups were formed: small (mesh less than 5.50 in) and large (5.50 in mesh and greater). For gillnets, 3 mesh groups were formed: small (mesh less than 5.50 in), large (mesh from 5.50 to 7.99 in), and extra large (mesh 8.00 in and greater). Two access area categories were formed: access area (AA) and open (OPEN). The sea scallop fishery was divided into general (GEN) and limited (LIM) category trips. All other fisheries were combined into a category called "all." In the data set analyzed, there were also trips associated with 2 exempted fisheries where 100% monitoring coverage was required for trips. The exempted trips using a haddock separator trawl with small mesh have been grouped together to form the NE small mesh haddock separator trawl fleet (Row 18), and the exempted trips using a mid-water trawl fishing in the groundfish access area have been grouped together to form the NE AA mid-water trawl fleet (Row 57).

Stratification abbreviations used are given below.

Abbreviation	Definition
MA	Mid-Atlantic ports (CT and southward)
NE	New England ports (RI and northward)
sm	Small mesh (less than 5.50 in)
lg	Large mesh (from 5.50 to 7.99 in for gillnet; 5.50 in and greater for otter trawl)
xlg	Extra large mesh (8.00 in and greater)
LIM	Limited access category
GEN	General category
OPEN	Nonaccess area
AA	Access area

The VTR data are used as a basis for defining the sampling frame, since all federally permitted vessels are required to file a VTR for each fishing trip except those vessels that hold only a federal commercial lobster permit (See NMFS-Greater Atlantic Regional Fisheries Office http://www.greateratlantic.fisheries.noaa.gov/aps/evtr/doc/vtr_inst.pdf for guidance). These self-reported data[6] constitute the basis of the fishing activity of the commercial fleets. While dealer data are the preferred data to use because of more accurate weights, VTR data are used as a

[5] Wigley et al. (2007) found that the majority (over 93%) of 2004 observed trips both originated and fished in the same region and exhibited the same general pattern as in the VTR data. An updated analysis using July 2007 through June 2011 data found similar results (Wigley et al. 2012a).

[6] See Wigley et al. 2007 for more details on self-reported VTR data.

surrogate because dealer data do not contain mesh size and area fished information. The VTR data were thus used to expand the NEFOP discard ratios to total discards. For this analysis, the commercial federal VTR trips were used. Conversion factors were applied to convert various units of measure to pounds and all weight to live weight. VTR trip data were grouped into fleets as defined above. Trips participating in the US/Canada access area and other special access programs could not be identified in the VTR data. These trips were grouped by the other stratification variables and were not partitioned separately.

The VTR trips associated with the MA shrimp trawl fleet (Row 20) were partitioned into 2 groups: trips fishing in Pamlico Sound and trips fishing in ocean waters. Partitioning was needed because the Southeast Region has mandatory observer coverage of the southeastern shrimp fishery and allocates observer coverage to trips fishing in Pamlico Sound (Scott-Denton et al. 2012). MA shrimp trawl trips fishing in Pamlico Sound have been removed from these analyses, while trips fishing in ocean waters have been retained.

The clam fishery has a logbook system separate from the VTR logbook. The commercial clam logbook data were used to augment the VTR data for the clam dredge fishery. The commercial and recreational landings (in live weight) for the federally managed species were used only in sample size analysis.

A list of the 14 federally managed fish and invertebrate species groups analyzed and the individual species that compose each species groups is given in Table 1. Summaries of the data used, in terms of number of trips and number of sea days, by fleet, calendar quarter, and data source (NEFOP and VTR), are given in Tables 2 and 3, respectively.

The spatial and temporal patterns of observer coverage within a fleet were evaluated. Rather than using number of trips (a trip-based metric), the kept weight of all species reported in the VTR was used. The "kept weight with observer coverage" was derived as the kept weight of all species reported in the VTR summed by fleet, statistical area, and quarter, where at least 1 observed trip occurred in the fleet-quarter-statistical area cell and at least 3 observed trips[7] occurred in the fleet-quarter stratum. The "kept weight" was derived as the kept weight of all species reported in the VTR summed over all statistical areas and quarters within a fleet. The percentages of "kept weight with observer coverage" were calculated by dividing the "kept weight with observer coverage" by the "kept weight." These percentages were derived for the 57 fleets (reported as 53 individual fleets and 4 confidential fleets combined into "Confidential fleets"), "Other minor fleets," and all fleets combined. Additionally, as a relative measure of fleet activity among all fleets, the percentage of "kept weight" was derived by dividing the "kept weight" by the sum of the "kept weight" across all fleets.

Discard Estimation

Total discards of each of the 14 federally managed species groups were estimated for the July 2014 through June 2015 time period by using a combined discard/kept (d/k) ratio estimator (Cochran 1963), where d = discarded pounds of a given species group, and k = the kept pounds of all species (i.e., any species retained during the trip). Total discards (in weight) were derived by multiplying the estimated discard rate of each fleet by the corresponding fleet landings in the VTR database and then summing over fleets. In this analysis, no survival ratios were applied to discard estimates.

Simple imputation methods were used to fill quarterly cells for which there were fewer than 3 observed trips. Data from adjoining strata were pooled to impute estimates for cells with

[7] The 3 trips for fleet-quarter correspond with a minimum threshold for allocating observer coverage.

0, 1, or 2 trips. In this imputation only the temporal stratification (calendar quarter) was relaxed to an annual aggregation even though seasonal variation can occur for some species. This simple imputation could not be applied to fleets where observer coverage was low or missing throughout the year (i.e., too few data to support the simple imputation approach). In these cases, imputed values were not used, and the fleet was designated as a fleet in need of pilot coverage[8]. If some data were available, then discard estimates were derived, but these results were not used in sample size analyses.

The variances and standard errors (SE) of the discard estimates were also derived. In this document, CV is defined as the ratio of the standard error of the total discards divided by the total discards. The appendix presents the equations used in the analysis.

For each species/species group and fleet, the landings from the VTR and clam logbook are presented to provide perspective for the discard estimates.

Discard Reasons

For each species group and fleet, the fish dispositions associated with discarding (as reported by the at-sea observer) have been grouped into the following 6 discard reason categories: no market, regulation (size), regulation (quota), regulation (other), poor quality, and other. The discard reason categories and the associated fish dispositions are summarized in Appendix Table 2. The discard reasons "No Market" and "Poor Quality" are considered economic discards and not regulatory discards.

The observed (nonextrapolated) discards associated with each of the 6 discard reason categories were summed for each species group/species for the fleets where discards could be estimated. For individual fleets, the percentage of observed discards by discard reason category was derived by dividing the sum of the observed discards for each discard reason category by the sum of the total observed discards for each species group/species and fleet. The discard reason category percentages were taken from the observed discard reason category percentages. For each fleet that composes the "Other fleets filtered out" (an aggregated fleet that represents fleets where the variance of the discard estimate was not used in the annual sample size analysis), the observed discard reason category percentages were then multiplied by the total estimated (extrapolated) discards for each species group/species to derive the estimated discards by discard reason category. The total estimated discards by discard reason category were summed over the fleets that compose the fleet aggregation for each species group/species. The estimated discard reason category percentage was derived by dividing the estimated discards for each discard reason category by the sum of the total estimated discards for each species group/species and fleet. In other words, the "Other fleets filtered out" represents the weighted percentage where the weighting factor was the fleet extrapolated discards.

Sample Size Analysis

A sample size analysis (also referred to as sea day analysis) was conducted to estimate the number of baseline trips and sea days needed to monitor the 14 federally managed species groups in each fleet. As described in Wigley et al. 2007 (and given in the Appendix), the number of trips and sea days needed to achieve a given precision level was based on the variance of the

[8] Pilot coverage is defined as a minimum level of observer coverage necessary to acquire bycatch information with which to calculate variance estimates that can then be used to further define the level of sampling needed (NMFS 2004).

total discard estimate for a species group, with the assumption that the pattern of fishing activity observed in the prior year would be similar to that in the upcoming year. Sample sizes (trips and sea days) associated with the precision standard for discard estimates (30% CV) were derived. The sample size analysis was performed by using trips as the sampling unit and then converting the number of trips to sea days by multiplying by the weighted mean VTR trip length, where the weighting factor was the quarterly number of VTR trips that occurred during July 2014 through June 2015 time period. The percentage of trips was derived by dividing the number of trips needed by the number of VTR trips that occurred in the fleet. When total discards could not be estimated because of little or no observer coverage (no data), or when total discards were zero (no variance), the sample size (number of trips) was determined by using a pilot coverage level set to 2% of the quarterly VTR trips that occurred in a fleet, with a minimum of 3 trips per quarter (12 trips per year) and a maximum of 100 trips per quarter (400 trips per year). The 2% pilot coverage was the same as was used in previous sea day analyses. In this analysis, to avoid assigning more coverage than could be attained, a refinement was made to pilot coverage: if less than 3 VTR trips occurred in a fleet and quarter, then pilot coverage was set to zero. The quarterly trips were then multiplied by the quarterly mean VTR trip length to derive quarterly sea days. The quarterly trips and quarterly sea days were then summed for annual number of trips and sea days. It is recognized that pilot coverage may still result in too much coverage in cases where little or no observer coverage may actually be needed, when effort changes sharply between years, or when the fleet comprises a low number of trips on an annual basis. A trip filter is subsequently applied during the sea day allocation[9]. Some fleet/species combinations contribute very little to the total fishing mortality or discard of the species but may require significant resources to characterize the precision of the estimate. For example, a high variance estimate for a rare event within a fleet would require high levels of sampling, even though the total discard in that fleet was unimportant with respect to either the total discard or total fishing mortality of the resource. To address this, importance filters were used to provide a standardized protocol to further refine the number of baseline sea days based on: (a) the importance of the discarded species relative to the total amount of discards by a fleet, and (b) the total fishing mortality due to discards.

The 2016 baseline sea days were filtered by using a 95% cut-point in the discard filter and a 98% cut-point for the total mortality filter due to discards. In other words, estimates of sea day coverage for a given species or species group were derived for those fleets where discards constituted 95% of the discard mortality and catch constituted 98% of the total fishing mortality.

To determine the number of sea days (referred to as the "2016 sea days needed") and trips needed to achieve a 30% CV on the estimates of discards for each of the 14 species groups within a fleet, the maximum number of sea days for the 14 species groups (i.e., the maximum number of sea days in a row) was used. This approach ensures that all species groups will have a 30% CV or less. In the event that sea days for each species group within a fleet were filtered out, then the number of sea days for the fleet was based on minimum pilot days to maintain monitoring coverage for that fleet. Minimum pilot coverage represents a minimum threshold for the allocation of sea days and is defined as 3 trips per quarter for each quarter where industry activity was 3 trips or greater. The quarterly number of trips is multiplied by the quarterly mean VTR trip length and then summed over quarters to derive the annual minimum pilot days for the fleet. If the fleet was designated as a pilot fleet, then pilot sea days were used. These fleets are

[9] A description of the trip filter can be found in the sea day allocation documents from 2014 onward; see http://www.nefsc.noaa.gov/femad/fsb/SBRM/ .

indicated with a “P.” The fleets with sufficient data to estimate sample size are referred to as nonpilot fleets.

RESULTS

There were 57 fleets uniquely identified in the July 2014 through June 2015 data (Tables 2 and 3; Appendix Table 1). Based upon the industry activity during this time period, the NE mid-water trawl AA fleet (Row 57) was added to the collection of fleets analyzed (fleets that have not been included in previous analyses are indicated with a “+” in Tables 2 and 3). The other minor fleets not uniquely identified in this analysis were aggregated into a single fleet labeled “Other minor fleets.” Because of confidentiality rules, the landings and discards associated with 4 unique fleets (MA AA LIM scallop trawl [Row 10], NE twin trawl [Row 14], MA large mesh Ruhle trawl [Row 15], and NE small mesh haddock separator trawl [Row 18]) in Tables 2 and 3 were aggregated into a single fleet labeled “Confidential fleets” for reporting purposes in Tables 4 and 5. Hence, the fleet row numbers within Tables 2, 3, and 6 are sequential, while the fleet row numbers in Tables 4, 5, and 7 are ordered, but there are gaps in the row numbers.

Of the 57 fleets examined, 27 fleets had little or no observer data: 10 fleets had sparse observer data across all quarters, while 17 fleets were missing observer data in all quarterly cells. The fleets with no observer coverage were primarily pot and trap fisheries targeting particular species (e.g., red deepsea crab [*Chaceon quinquedens*], whelk also known as conch [*Busycon carica*, *Busycotypus canaliculatus*], shrimp [*Pandalus borealis*], and hagfish [Myxinidae]). No discard estimation was performed for the 17 fleets with no observer coverage, and they were designated as fleets in need of pilot coverage (Tables 2 and 3; Appendix Table 1). The 10 fleets with sparse observer coverage were also designated as fleets in need of pilot coverage for the sample size analysis; however, discard estimation was performed with the sparse observer data. For the 30 remaining fleets (designated as nonpilot fleets; Rows 1, 2, 4-8, 11, 13, 18, 19, 24-26, 28, 29, 31, 32, 34-39, 42, 43, 46, 48, 49, and 57), estimates of discards and their associated variance were derived and used to determine the sample sizes needed for a 30% CV. Of the 30 fleets, there were 12 fleets (Rows 1, 2, 4, 11, 13, 18, 31, 32, 34, 43, 46, and 48) where the simple imputation was applied (Tables 2 and 3).

Thus, for the discard estimation and precision analysis, 17 fleets had no discard estimation, and 40 fleets had discards estimated. For the sample size analysis, 30 fleets had sample sizes derived from the discard variances, and 27 fleets had sample sizes based upon pilot coverage.

A total of 4,023 trips (11,726 days) was observed during the July 2014 through July 2015 period. When these trips were stratified, some trips were partitioned between strata, resulting in 4,410 trips (12,723 days; Tables 2 and 3) in the NEFOP data set.

In terms of number of trips, the percentages of observed trips varied by fleet and calendar quarter. On an annual basis, for the 40 fleets with some observer coverage, the percentage of observed trips by fleet ranged between 0.2% (MA hand line, Row 3; Table 2) to 100% (NE small mesh haddock separator trawl fleet [Row 18] and NE AA mid-water trawl fleet [Row 57]; Table 2). It is unexpected to have coverage percentages at 100%; however, these 2 fleets are

composed of the exempt fisheries trips for which 100% monitoring was required[10]. For the 30 nonpilot fleets (excluding the 2 exempted fleets [Rows 18 and 57]), the percentage of observed trips ranged between 0.4% (NE lobster pot, Row 49) and 22.6% (NE large mesh gillnet fleet, Row 28). Over all fleets, the percentage of observed trips was 5.5% (Table 2). The percentage of observer days (Table 3) was generally similar to the percentage of observed trips.

In terms of kept weight of all species, the percentage of observer coverage over all fleets was 56% (Table 4). For the 30 nonpilot fleets, the percentage of observer coverage ranged between 4% and 100% with an average of 77% (Table 4). Twenty-three of the 30 fleets had a percentage greater than or equal to 67% with an average of 89%. This finding indicates that the majority of kept weight within the fleet was associated with statistical areas and quarters with observer coverage. Additionally, these 23 fleets composed 63% of the total kept weight across all fleets. The kept weight of all species was considered a surrogate for fishing effort; hence, observer coverage occurred spatially and temporally where the majority of fishing effort occurred at the statistical area and quarter year scales.

The landings associated with the combined fleet "Other minor fleets" contributed 0.3% of the total landings across all fleets (Table 4); thus, the 57 uniquely identified fleets account for almost all of the total VTR landings.

Annual VTR landings for all fleets and estimated discards (live weight, in pounds) with associated precision (CV and SE) for 38 individual fleets (Rows 1-9, 11, 13, 16, 17, 19, 20, 24-26, 28, 29, 31-39, 41-46, 48, 49, and 57[11]) and 2 combined fleets ("Confidential fleets" and "Other minor fleets" [with landings only]) are summarized for each of the 14 species groups, the individual species that composed those species groups, and the 14 species groups combined (Tables 5A, 5B, and 5C; Figures 1A and 1B). There were 15 fleets (Rows 12, 21-23, 27, 30, 40, 47, and 50-56) as well as the "Other minor fleets" that have no discard estimation because of the lack of NEFOP coverage. Fleets with no discard estimation have dark shade in Tables 5A and 5B. In Table 5A, the CVs associated with the cells (species group and fleet) that were not used in the sample size analysis (i.e., cells filtered out via the importance filter) are indicated in light shading. Precision of discards of individual species (Table 5B) and 14 species group combined (Table 5C) were not used in the sample size analysis.

Based upon this analysis, 57,063 mt (125,803,405 lb; live weight) of discards for the 14 species groups occurred during the July 2014 through June 2015 period (Table 5C). The majority (76%) of the discards comprises 2 species groups: skates (Rajidae; 64%) and spiny dogfish (*Squalus acanthias*; 12%); the remaining SBRM species groups each accounted for less than or equal to 7% (Table 5A).

The percentage of discards to total catch varied among the 14 species groups (Table 5A; Figure 1A) and individual species (Table 5B; Figure 1B). There was 1 species group (SAL) with zero discards (this species group is not presented in Figure 1A); 3 species groups (SCOQ, HERR, and TILE) where discards were less than 1% of total catch; 4 species groups (SCAL, BLUE, SBM, and RCRAB) where percentages of discards ranged between 1% and 10% of total catch; 4 species groups (FSB, GFL, GFS, and MONK) where discards ranged between 11% and 25% of total catch; and 2 species groups (DOG and SKATE) where discards were greater than

[10] For further information see: https://www.gpo.gov/fdsys/pkg/FR-2015-04-08/html/2015-08056.htm and http://federalregister.gov/r/0648-AY47

[11] Discards were estimated rather than summed for the NE AA mid-water trawl exempted fleet (Row 57) and NE small mesh haddock separator trawl exempted fleet (Row 18) because unobserved hauls occurred on observed trips in these fleets.

26% of total catch. The species groups with the highest percentage of total discards relative to total catch were: skates (72%), spiny dogfish (47%), and monkfish (*Lophius americanus*; 22%; Figure 1A). For individual species (Table 5B; Figure 1B), most notable are the high percentages of discards to total catch for Atlantic wolffish *(Anarhichas lupus*; >99%), ocean pout (*Zoarces americanus*; >99%), and windowpane flounder (*Scophthalmus aquosus*; >99%) because of the no possession regulations for these 3 individual species, and for Atlantic halibut (*Hippoglossus hippoglossus*; 66%) because of a 1 fish per trip regulation. Offshore hake (*Merluccius albidus*; 88%) had a high percentage of discards to total catch because of economic reasons (no market). The NE large mesh otter trawl fleet (Row 8) had the highest estimated discards of SBRM species (Table 5C).

The reasons for discarding varied among the 14 species groups (Appendix Table 3A) and individual species (Appendix Table 3B). Overall, for the 14 species groups, the majority (82%) of discards were attributed to "No Market." "Regulation" (size, quota, and other), "Poor Quality," and "Other" contributed 14%, 2%, and 2%, respectively (Appendix Table 3A).

The percentages of discards to total catch by fleet were also summarized for the 30 nonpilot fleets (Figure 2). Discards of 1 or more of the 14 species groups that were filtered out via the importance filter have been aggregated into a species group labeled "Other SBRM." Discards of nonfederally managed species have been aggregated into a species group labeled "Non-SBRM." The percentages of discards to total catch varied by fleet (Figure 2). There were 3 fleets (Rows 31, 42, and 57) where discards were less than 1% of the total catch in the fleet; 4 fleets (Rows 2, 4, 25, and 34) where the percentages of discards ranged between 1% and 10%; 11 fleets (Rows 1, 7, 18, 24, 26, 29, 32, 35, 37, 39, and 48) where the percentages of discards ranged between 11% and 25% of total catch; 9 fleets (Rows 5, 8, 19, 28, 36, 38, 43, 46, and 49) where the percentages of discards ranged between 26% and 50% of the total catch; and 3 fleets (Rows 6, 11, and 13) where discards were greater than 50% of the total catch (Figure 2).

The number of species groups discarded within a fleet also varied among fleets. The majority of fleets (21 of the 30 fleets) comprised 2 or 3 discarded species groups. For 8 of these fleets (Rows 2, 4, 11, 18, 25, 26, 32, and 34), the "Other SBRM" species group comprised the majority of the discards. This finding indicates that the majority of discards for those 8 fleets were filtered out via the importance filter. There were 10 fleets (Rows 1, 31, 36, 37, 42, 43, 46, 48, 49, and 57) for which the "Non-SBRM" species group comprised the majority of the discards. There were another 3 fleets where 2 of the 3 discarded species groups were "Other SBRM" and "Non-SBRM," and the third represented the majority of the discards: Row 13 (skate; 75%) and Rows 24 and 28 (spiny dogfish; 50% and 71% respectively; Figure 2). The remaining fleets (9 of the 30 fleets) had between 4 and 9 discarded species groups. The skate species group comprised the majority of the discards in 4 of these fleets (Rows 6, 8, 19, and 29) while the "Non-SBRM" group comprised the plurality of the discards in 4 fleets (Rows 5, 35, 38, and 39), and there was 1 fleet (Row 7) for which small mesh groundfish (GFS) comprised the plurality of discards. The dominant "Non-SBRM" species in the scallop dredge fleets (Rows 32-39) were: sand dollar (Clypeasteroida), sponge (Porifera), starfish (Asteroidea) and Jonah crab (*Cancer borealis*). "Fish, not known" was the dominant "Non-SBRM" species in the NE purse seine fleet and the MA and NE mid-water trawl fleets (Rows 31, 41, and 42, respectively). American lobster (*Homarus americanus*) and Jonah crab were the dominant "Non-SBRM" species in the MA and NE lobster pot fleets (Rows 48 and 49, respectively; Figure 2).

The precision of the discard estimates varied by species group and fleet (Table 5A). Of the 14 species groups, 10 species groups (BLUE, FSB, GFL, MONK, RCRAB, SCAL, SKATE,

GFS, DOG, and SBM) had an overall CV that was less than 30%, and 3 species groups (HERR, SCOQ, and TILE) had an overall CV that was greater than 30% and 1 species group (SAL) had zero discards and consequently no CV. The discards of 4 species groups (BLUE, HERR, SCOQ, and TILE) were filtered out in all fleets; this finding indicates that the discards of these species groups were a minor component of the total catch of these species (Table 5A; Figure 1A). The precision of the discard estimates for individual species are given in Table 5B; these precision estimates were not used in the sample size analysis.

The number of sea days needed for each species group and fleet, as well as the number of pilot coverage days, minimum pilot coverage days, and the sea days needed for the fleet (referred to as "2016 Sea Days Needed"), are summarized in Table 6. A total of 10,746 days are needed for the 57 fleets. As mentioned previously, 27 fleets had insufficient observer information to estimate discards, and the sea days for these fleets were based on pilot coverage. The number of sea days needed for fleets with the pilot coverage designation was 808 days (8% of 10,746 days; Table 6). Of these 27 fleets, there were 2 fleets (Rows 10 and 15) where industry activity was so low that pilot coverage was zero (Tables 2 and 6). There are 15 fleets for which the sea days for all species groups were filtered out via the importance filter, and minimum pilot coverage days were used to maintain some coverage (Rows 1, 2, 4, 11, 18, 25, 26, 31, 32, 37, 43, 46, 48, 49, and 57; Table 6). There was a total of 300 sea days associated with the fleets with minimum pilot coverage (3% of 10,746 days; Table 6). The sea days needed for the remaining 15 fleets (9,638 days, representing 90% of the total sea days needed) were derived by using the variance of the discard estimate (Tables 6). Of the 9,638 days, 3,531 days (37%) were associated with 1 fleet (NE large mesh otter trawl [Row 8]; Table 6).

The sample size (in terms of number of sea days, number of trips, and percentage of trips based on the July 2014 through June 2015 VTR trips) needed to achieve a 30% CV of the discard estimate in 15 fleets is given in Table 7. The relationship between sample size and precision, over a range of sample sizes, is shown in Figure 3 for species groups and fleets. If the precision standard (30% CV) was relaxed for the red crab species group in 1 fleet (Row 8), resulting in the penultimate (next largest) value being used in the fleet (e.g., 760 days rather than 3,531 days for Row 8), then the total number of sea days needed across the 57 fleets would be 7,975 days (a 26% decrease from the 10,746 days). When the penultimate value is used, the expected achieved precision of red crab discards in Row 8 would be about 72% CV (Figure 3).

DISCUSSION

A broad stratification was used to support the deployment of observers on commercial fishing trips among various fleets by using attributes known prior to the trip departure. As discussed in previous discard estimation analyses (Wigley et al. 2007, 2011), species-specific stock assessment discard estimation may differ from this report because of differences in stratification and data used (calendar year versus 12-month [July through June] time period; area fished versus region [port of departure]; gear groupings; discard mortality assumptions; and VTR landings versus dealer landings). Region, based on port of departure, was used for the deployment of observers. It is recognized that area fished would provide a better stratification for discard estimation. It is expected, however, that, when uncertainty in the estimates is taken into account, estimates would be in the same order of magnitude. The discard estimates presented here are not definitive estimates but rather are indicative of where discarding occurred among the

commercial fleets for the 14 federally managed species groups.

No survival ratios were applied to the discard estimates; we do not account for potential survival of organisms returned to the water. When comparing discard estimates from this study with those from stock assessments, it is useful to note that survival ratios are applied in stock assessments for Georges Bank and Gulf of Maine stocks of Atlantic cod (*Gadus morhua*), Atlantic sea scallop (*Placopecten magellanicus*), skates, spiny dogfish, fluke (*Paralichthys dentatus*), southern New England/Mid-Atlantic and Gulf of Maine stocks of winter flounder (*Pseudopleuronectes americanus*), and southern New England/Mid-Atlantic yellowtail flounder (*Limanda ferruginea*).

These analyses have used VTR data. Dealer (*CFDERSyyyy*) data do not contain mesh or area fished information until the trip-based allocation is performed (Wigley et al. 2008). The trip-based allocation of dealer (*CFDETT/SyyyyAA*) data is conducted annually and was not available when this analysis was initiated. Given that the VTR landings estimates are usually less (VTR reports the good faith hails) than the dealer records for a given fleet, the corresponding estimates of discards will also be underestimated. The magnitude of the underestimation will vary by fleet and year.

It is important to note the discard estimates provided in this analysis appropriately reflect the underlying data used (e.g., the VTR data used to raise the discard ratios to total discards and the observed trips used to derive the discard ratios were from the same VTR-based sampling frame). It is inappropriate to extrapolate beyond the sampling frame used unless it can be shown that the trips with no VTR reporting requirements have the same landings and discard characteristics as the trips with VTR reporting requirements.

In 2014, the northern shrimp fishery was closed and remained closed through 2015. As in years past, the VTR trips associated with NE shrimp trawl fleet (Row 21; Tables 2 and 3) were investigated. These trips used 2 inch mesh, and most trips reported catching small mesh groundfish and/or herring while a few trips reported catching squid. The northern shrimp fishery requires a finfish excluder device (FED); however, other small mesh exempted fisheries do not require a FED. Currently, there is no data element within the VTR database that indicates whether or not a FED or other bycatch reduction device was used. Based upon previous investigations, the captains of the vessels participating in the small mesh exempted fisheries indicated that a FED was not used. An additional data element within the VTR database is needed to distinguish trips using a FED from those that are not.

The analysis conducted for the spatial and temporal observer coverage used live weight. As a result, fleets using scallop dredge and clam dredge targeting species with shells have higher kept weight percentage than other fleets because of the use of “live” weight rather than “landed meat” weight. However, the use of live weight does not distort the observed percentage (spatial or temporal pattern) within a fleet. It is important to remember that percent observer coverage is an indicator of where observed kept weight (or trips) occurred relative to unobserved kept weight (or trips). The percentage observed should not be confused with the precision of the discard estimate, which is the metric used to describe discard variability and to determine the sample size needed for monitoring purposes.

The refinement to pilot coverage made in this analysis (pilot coverage was applied only when there were at least 3 VTR trips in a fleet and calendar quarter) reduced the pilot coverage in 11 of the 27 pilot fleets (Rows 10, 12, 14, 15, 16, 23, 27, 41, 44, 50, and 53; Table 2) where there were 1 or 2 VTR trips within a fleet and calendar quarter and prevented pilot coverage from exceeding industry activity. The refinement also resulted in no coverage for fleets with low

overall trip activity: MA AA LIM scallop trawl fleet (Row 10) and MA large mesh Ruhle trawl fleet (Row 15; Table 6). Each of these fleets had only 2 VTR trips during the July 2014 through June 2015 time period (Table 2).

There is 1 fleet with high sea day requirements (>2,000 sea days). The high monitoring coverage for NE large mesh otter trawl fleet (Row 8; Table 6) was because of high variability of red deepsea crab discards. In this analysis, as well as in previous analyses (NEFSC 2011a, 2011b; Wigley et al. 2011, 2012b, 2013, 2014, 2015), the high variability arose from observing some trips that were fishing in deep-water portions of statistical areas as well as observing the same trips or other trips that were fishing in shallower portions of the same statistical areas. Red deepsea crabs were encountered during trips fishing in deep water. Although the discard reason reported for this fleet was "No Market" (Appendix Table 3A), these vessels do not generally have permits to land red deepsea crabs, thus the red deepsea crabs must be discarded. Currently, the analysis does not stratify fleets further to account for depth because statistical area is the finest spatial resolution that defines a subtrip within the VTR (a subtrip within the VTR is a unique gear, mesh, and statistical area).

Fish may be discarded for economic reasons (e.g., "No Market" or "Poor Quality") or for regulatory reasons (size, quota, or other). When considering mechanisms to reduce discards, it may be useful to know why discarding is occurring.

It is important to note that large discard percentages may be associated with a small quantity of discards. Additionally, it is important to note that for many species, the discards are associated with fleets that have been filtered out by the importance filter. Observers classify the discards by fish disposition based upon the NEFOP protocol (NEFOP 2013) in which the observer asks the captain/crew why species are being discarded. Thus, these data should be considered a form of self-reported data, and as such, these data are difficult to verify and should be interpreted cautiously.

This analysis does not address the coverage needed for individual sectors or multiple stock components of a species. The analytical basis for the allocation of future sea day coverage in this analysis is a specified level of precision (i.e., 30% CV), and an expectation that the pattern of fishing activity observed in the prior year will be similar to that in the upcoming year.

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Table 1. List of the 14 fish and invertebrate species groups (in bold), with species group abbreviations in parentheses and scientific names in italics, and the species that compose these groups, corresponding to the 13 federal fishery management plans implemented in the waters off the northeastern United States.

ATLANTIC SALMON (SAL)	*Salmo salar*
BLUEFISH (BLUE)	*Pomatomus saltatrix*
FLUKE - SCUP - BLACK SEA BASS (FSB)	
Black sea bass	*Centropristis striata*
Fluke	*Paralichthys dentatus*
Scup	*Stenotomus chrysops*
HERRING, ATLANTIC (HERR)	*Clupea harengus*
LARGE MESH GROUNDFISH (GFL)	
American plaice	*Hippoglossoides platessoides*
Atlantic cod	*Gadus morhua*
Atlantic halibut	*Hippoglossus hippoglossus*
Atlantic wolffish	*Anarhichas lupus*
Haddock	*Melanogrammus aeglefinus*
Ocean pout	*Zoarces americanus*
Pollock	*Pollachius virens*
Redfish	*Sebastes fasciatus*
White hake	*Urophycis tenuis*
Windowpane flounder	*Scophthalmus aquosus*
Winter flounder	*Pseudopleuronectes americanus*
Witch flounder	*Glyptocephalus cynoglossus*
Yellowtail flounder	*Limanda ferruginea*
MONKFISH (MONK)	*Lophius americanus*
RED DEEPSEA CRAB (RCRAB)[12]	*Chaceon quinquedens*
SEA SCALLOP (SCAL)	*Placopecten magellanicus*
SKATE COMPLEX[13] **(SKATE)**	Rajidae
Barndoor skate	*Dipturus laevis*
Clearnose skate	*Raja eglanteria*
Little skate	*Leucoraja erinacea*
Rosette skate	*Leucoraja garmani*
Smooth skate	*Malacoraja senta*
Thorny skate	*Amblyraja radiata*
Winter skate	*Leucoraja ocellata*
SMALL MESH GROUNDFISH (GFS)	
Offshore hake	*Merluccius albidus*
Red hake	*Urophycis chuss*
Silver hake	*Merluccius bilinearis*
SPINY DOGFISH (DOG)	*Squalus acanthias*
SQUID[14] **- BUTTERFISH - MACKEREL (SBM)**	
Atlantic mackerel	*Scomber scombrus*
Butterfish	*Peprilus triacanthus*
Northern shortfin squid	*Illex illecebrosus*
Longfin inshore squid	*Doryteuthis (Amerigo) pealeii*
SURFCLAM - OCEAN QUAHOG (SCOQ)[15]	
Surfclam	*Spisula solidissima*
Ocean quahog	*Arctica islandica*
TILEFISH (TILE)	*Lopholatilus chamaeleonticeps*

[12] In previous documents (e.g., Wigley et al. 2014; Wigley et al. 2013) red deepsea crab was referred to as red crab.
[13] Skate complex is composed of 7 species as well as skate, unknown, and little/winter mixed skate. Individual species are not summarized separately.
[14] Squid, unclassified is included in this species group. Longfin inshore squid and northern shortfin squid are also known as Loligo squid and Illex squid, respectively.
[15] In this analysis, surfclams and ocean quahogs compose the species group and are not reported separately.

Table 2. Number of Northeast Fisheries Observer Program (NEFOP) and Vessel Trip Report (VTR) trips, by fleet and calendar quarter (Q) based on July 2014 through June 2015 data. "P" indicates fleets with "pilot" designation.

Fleet						NEFOP					VTR					
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
1	Longline	OPEN	all	MA	all	7	2	2	3	**14**	96	68	18	44	**226**	
2	Longline	OPEN	all	NE	all	5	1	2	.	**8**	683	171	5	39	**898**	
3	Hand Line	OPEN	all	MA	all	5	.	.	1	**6**	1,547	701	31	578	**2,857**	P
4	Hand Line	OPEN	all	NE	all	8	6	.	2	**16**	1,725	500	10	432	**2,667**	
5	Otter Trawl	OPEN	all	MA	sm	137	75	74	74	**360**	1,275	858	405	550	**3,088**	
6	Otter Trawl	OPEN	all	MA	lg	90	44	54	39	**227**	1,247	682	797	1,160	**3,886**	
7	Otter Trawl	OPEN	all	NE	sm	134	73	45	67	**319**	1,377	722	344	938	**3,381**	
8	Otter Trawl	OPEN	all	NE	lg	272	319	200	255	**1,046**	2,025	1,389	877	1,558	**5,849**	
9	Scallop Trawl	AA	GEN	MA	all	.	.	.	3	**3**	13	.	.	73	**86**	P
10	Scallop Trawl	AA	LIM	MA	all	.	.	.	.	**.**	2	.	.	.	**2**	P
11	Scallop Trawl	OPEN	GEN	MA	all	2	4	1	1	**8**	56	27	10	43	**136**	
12	Scallop Trawl	OPEN	LIM	MA	all	.	.	.	.	**.**	1	3	.	.	**4**	P
13	Otter Trawl, Twin	OPEN	all	MA	all	4	9	8	1	**22**	55	47	40	36	**178**	
14	Otter Trawl, Twin	OPEN	all	NE	all	.	2	1	.	**3**	1	7	6	1	**15**	P
15	Otter Trawl, Ruhle	OPEN	all	MA	lg	.	.	.	.	**.**	.	.	2	.	**2**	P
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	3	1	.	1	**5**	3	4	14	2	**23**	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	.	.	.	4	**4**	7	3	5	9	**24**	P
18	Otter Trawl, Haddock Separator	OPEN	all	NE	sm	3	1	.	1	**5**	3	1	.	1	**5**	
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	10	21	9	20	**60**	51	85	88	100	**324**	
20	Shrimp Trawl	OPEN	all	MA	all	1	1	.	1	**3**	53	21	10	46	**130**	P
21	Shrimp Trawl	OPEN	all	NE	all	.	.	.	.	**.**	41	.	5	25	**71**	P
22	Floating Trap	OPEN	all	MA	all	.	.	.	.	**.**	39	.	.	41	**80**	P
23	Floating Trap	OPEN	all	NE	all	.	.	.	.	**.**	15	.	.	2	**17**	P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	16	8	8	37	**69**	686	502	432	464	**2,084**	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	10	29	3	28	**70**	392	873	214	375	**1,854**	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	3	43	29	57	**132**	66	556	286	920	**1,828**	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	.	.	.	.	**.**	5	3	.	1	**9**	P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	429	228	33	55	**745**	1,883	850	114	445	**3,292**	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	341	117	22	59	**539**	1,370	757	291	879	**3,297**	
30	Purse Seine	OPEN	all	MA	all	.	.	.	.	**.**	17	.	.	155	**172**	P
31	Purse Seine	OPEN	all	NE	all	10	1	.	2	**13**	239	39	.	37	**315**	
32	Scallop Dredge	AA	GEN	MA	all	7	.	.	22	**29**	254	.	2	785	**1,041**	
33	Scallop Dredge	AA	GEN	NE	all	1	.	1	.	**2**	12	4	3	5	**24**	P
34	Scallop Dredge	AA	LIM	MA	all	21	.	1	34	**56**	176	3	4	233	**416**	
35	Scallop Dredge	AA	LIM	NE	all	35	13	8	23	**79**	198	77	24	147	**446**	

See text for fleet abbreviations; "+" = new fleets in 2016.

Table 2, continued. Number of Northeast Fisheries Observer Program (NEFOP) and Vessel Trip Report (VTR) trips, by fleet and calendar quarter (Q) based on July 2014 through June 2015 data. "P" indicates fleets with "pilot" designation.

Fleet						NEFOP					VTR					
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
36	Scallop Dredge	OPEN	GEN	MA	all	24	22	21	24	**91**	595	388	433	490	**1,906**	
37	Scallop Dredge	OPEN	GEN	NE	all	40	27	22	35	**124**	723	673	865	929	**3,190**	
38	Scallop Dredge	OPEN	LIM	MA	all	13	6	7	11	**37**	141	52	44	113	**350**	
39	Scallop Dredge	OPEN	LIM	NE	all	22	13	24	50	**109**	246	93	138	392	**869**	
40	Danish Seine	OPEN	all	MA	all	.	.	.	.	**.**	12	.	.	44	**56**	P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	.	.	1	.	**1**	.	1	21	4	**26**	P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	18	18	3	4	**43**	88	106	96	73	**363**	
43	Pots and Traps, Fish	OPEN	all	MA	all	3	3	.	1	**7**	383	275	39	250	**947**	
44	Pots and Traps, Fish	OPEN	all	NE	all	3	.	.	.	**3**	513	53	2	55	**623**	P
45	Pots and Traps, Conch	OPEN	all	MA	all	1	3	.	3	**7**	161	514	57	226	**958**	P
46	Pots and Traps, Conch	OPEN	all	NE	all	2	9	.	7	**18**	422	385	.	280	**1,087**	
47	Pots and Traps, Hagfish	OPEN	all	NE	all	.	.	.	.	**.**	27	16	9	17	**69**	P
48	Pots and Traps, Lobster	OPEN	all	MA	all	4	1	3	5	**13**	738	346	110	293	**1,487**	
49	Pots and Traps, Lobster	OPEN	all	NE	all	17	12	8	57	**94**	11,707	8,250	1,454	4,695	**26,106**	
50	Pots and Traps, Crab	OPEN	all	MA	all	.	.	.	.	**.**	58	18	2	8	**86**	P
51	Pots and Traps, Crab	OPEN	all	NE	all	.	.	.	.	**.**	11	13	18	21	**63**	P
52	Beam Trawl	OPEN	all	MA	all	.	.	.	.	**.**	42	11	4	24	**81**	P
53	Beam Trawl	OPEN	all	NE	all	.	.	.	.	**.**	12	2	2	4	**20**	P
54	Dredge, Other	OPEN	all	MA	all	.	.	.	.	**.**	.	79	143	33	**255**	P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	.	.	.	.	**.**	457	398	364	372	**1,591**	P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	.	.	.	.	**.**	685	462	415	182	**1,744**	P
57+	Mid-water Paired & Single Trawl	AA	all	NE	all	17	3	.	.	**20**	18	2	.	.	**20**	
					Total	1,718	1,115	590	987	**4,410**	32,652	21,090	8,253	18,629	**80,624**	

See text for fleet abbreviations; "+" = new fleets in 2016.

Table 3. Number of Northeast Fisheries Observer Program (NEFOP) and Vessel Trip Report (VTR) sea days, by fleet and calendar quarter (Q) based on July 2014 through June 2015 data. "P" indicates fleets with "pilot" designation.

Fleet						NEFOP					VTR					
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
1	Longline	OPEN	all	MA	all	64	24	27	40	**155**	515	317	209	415	**1,456**	
2	Longline	OPEN	all	NE	all	5	5	2	.	**12**	685	175	5	39	**904**	
3	Hand Line	OPEN	all	MA	all	16	.	.	1	**17**	1,742	745	38	610	**3,135**	P
4	Hand Line	OPEN	all	NE	all	19	12	.	2	**33**	1,919	675	11	472	**3,077**	
5	Otter Trawl	OPEN	all	MA	sm	280	235	332	150	**997**	2,101	1,895	1,644	1,121	**6,761**	
6	Otter Trawl	OPEN	all	MA	lg	142	154	197	90	**583**	1,962	1,929	3,298	2,161	**9,350**	
7	Otter Trawl	OPEN	all	NE	sm	336	253	142	202	**933**	3,349	1,743	1,449	2,306	**8,847**	
8	Otter Trawl	OPEN	all	NE	lg	781	1,026	849	955	**3,611**	4,515	4,335	3,747	4,750	**17,347**	
9	Scallop Trawl	AA	GEN	MA	all	.	.	.	6	**6**	26	.	.	148	**174**	P
10	Scallop Trawl	AA	LIM	MA	all	.	.	.	.	**.**	17	.	.	.	**17**	P
11	Scallop Trawl	OPEN	GEN	MA	all	3	6	1	2	**12**	96	46	21	79	**242**	
12	Scallop Trawl	OPEN	LIM	MA	all	.	.	.	.	**.**	5	15	.	.	**20**	P
13	Otter Trawl, Twin	OPEN	all	MA	all	4	10	16	1	**31**	59	63	114	36	**272**	
14	Otter Trawl, Twin	OPEN	all	NE	all	.	20	8	.	**28**	1	54	49	11	**115**	P
15	Otter Trawl, Ruhle	OPEN	all	MA	lg	.	.	.	.	**.**	.	.	13	.	**13**	P
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	15	3	.	9	**27**	15	8	35	14	**72**	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	.	.	.	35	**35**	45	14	11	69	**139**	P
18	Otter Trawl, Haddock Separator	OPEN	all	NE	sm	15	6	.	9	**30**	15	6	.	9	**30**	
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	76	172	67	160	**475**	412	702	566	778	**2,458**	
20	Shrimp Trawl	OPEN	all	MA	all	5	6	.	5	**16**	270	150	72	105	**597**	P
21	Shrimp Trawl	OPEN	all	NE	all	.	.	.	.	**.**	42	.	5	44	**91**	P
22	Floating Trap	OPEN	all	MA	all	.	.	.	.	**.**	39	.	.	41	**80**	P
23	Floating Trap	OPEN	all	NE	all	.	.	.	.	**.**	15	.	.	2	**17**	P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	16	8	8	54	**86**	744	505	452	471	**2,172**	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	11	29	3	28	**71**	419	889	228	382	**1,918**	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	4	52	44	73	**173**	71	688	414	1,062	**2,235**	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	.	.	.	.	**.**	9	3	.	2	**14**	P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	579	344	103	128	**1,154**	2,475	1,314	416	863	**5,068**	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	395	155	54	98	**702**	1,633	975	575	1,640	**4,823**	
30	Purse Seine	OPEN	all	MA	all	.	.	.	.	**.**	17	.	.	157	**174**	P
31	Purse Seine	OPEN	all	NE	all	23	2	.	4	**29**	498	85	.	78	**661**	
32	Scallop Dredge	AA	GEN	MA	all	13	.	.	33	**46**	471	.	4	1,299	**1,774**	
33	Scallop Dredge	AA	GEN	NE	all	2	.	3	.	**5**	30	9	8	10	**57**	P
34	Scallop Dredge	AA	LIM	MA	all	148	.	9	258	**415**	1,170	29	25	1,671	**2,895**	

See text for fleet abbreviations; "+" = new fleets in 2016.

Table 3, continued. Number of Northeast Fisheries Observer Program (NEFOP) and Vessel Trip Report (VTR) sea days, by fleet and calendar quarter (Q) based on July 2014 through June 2015 data. "P" indicates fleets with "pilot" designation.

Fleet						NEFOP					VTR					
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
35	Scallop Dredge	AA	LIM	NE	all	283	132	63	178	**656**	1,576	712	186	1,108	**3,582**	
36	Scallop Dredge	OPEN	GEN	MA	all	39	46	48	44	**177**	975	819	863	816	**3,473**	
37	Scallop Dredge	OPEN	GEN	NE	all	58	45	40	53	**196**	1,051	909	1,041	1,290	**4,291**	
38	Scallop Dredge	OPEN	LIM	MA	all	131	47	47	131	**356**	1,271	401	354	1,142	**3,168**	
39	Scallop Dredge	OPEN	LIM	NE	all	253	123	204	559	**1,139**	2,502	904	1,170	4,377	**8,953**	
40	Danish Seine	OPEN	all	MA	all	.	.	.	.	**.**	12	.	.	44	**56**	P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	.	.	8	.	**8**	.	4	111	19	**134**	P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	91	47	7	15	**160**	396	238	270	285	**1,189**	
43	Pots and Traps, Fish	OPEN	all	MA	all	3	3	.	1	**7**	389	280	39	262	**970**	
44	Pots and Traps, Fish	OPEN	all	NE	all	3	.	.	.	**3**	513	54	3	55	**625**	P
45	Pots and Traps, Conch	OPEN	all	MA	all	1	3	.	3	**7**	170	522	57	227	**976**	P
46	Pots and Traps, Conch	OPEN	all	NE	all	2	9	.	7	**18**	424	388	.	280	**1,092**	
47	Pots and Traps, Hagfish	OPEN	all	NE	all	.	.	.	.	**.**	198	131	90	116	**535**	P
48	Pots and Traps, Lobster	OPEN	all	MA	all	8	1	4	5	**18**	931	477	123	351	**1,882**	
49	Pots and Traps, Lobster	OPEN	all	NE	all	43	52	39	101	**235**	14,189	10,599	3,125	6,530	**34,443**	
50	Pots and Traps, Crab	OPEN	all	MA	all	.	.	.	.	**.**	111	28	4	33	**176**	P
51	Pots and Traps, Crab	OPEN	all	NE	all	.	.	.	.	**.**	50	127	138	127	**442**	P
52	Beam Trawl	OPEN	all	MA	all	.	.	.	.	**.**	103	45	19	48	**215**	P
53	Beam Trawl	OPEN	all	NE	all	.	.	.	.	**.**	18	3	8	8	**37**	P
54	Dredge, Other	OPEN	all	MA	all	.	.	.	.	**.**	.	80	144	41	**265**	P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	.	.	.	.	**.**	830	810	705	866	**3,212**	P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	.	.	.	.	**.**	867	592	526	307	**2,292**	P
57+	Mid-water Paired & Single Trawl	AA	all	NE	all	55	6	.	.	**61**	58	4	.	.	**62**	
					Totals	3,922	3,036	2,325	3,440	**12,723**	52,017	35,496	22,385	39,177	**149,074**	

See text for fleet abbreviations; "+" = new fleets in 2016.

Table 4. Vessel Trip Report kept weight of all species (live mt), percentage of kept weight of all species across all fleets, kept weight of all species (live mt) with Northeast Fisheries Observer Program (NEFOP) coverage from statistical areas and quarters with at least 1 observed trip and at least 3 observed trips in the fleet and quarter, and percentage of kept weight of all species with observer coverage, by fleet based on July 2014 through June 2015 data.

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Kept Weight (mt)	Percentage of Kept Weight	Kept Weight with NEFOP coverage (mt)	Percentage of Kept Weight with NEFOP coverage
1	Longline	OPEN	all	MA	all	856	0.2	394	46.0
2	Longline	OPEN	all	NE	all	1,517	0.3	58	3.8
3	Hand Line	OPEN	all	MA	all	209	<0.1	82	39.1
4	Hand Line	OPEN	all	NE	all	930	0.2	646	69.5
5	Otter Trawl	OPEN	all	MA	sm	13,191	2.7	11,438	86.7
6	Otter Trawl	OPEN	all	MA	lg	6,469	1.3	6,004	92.8
7	Otter Trawl	OPEN	all	NE	sm	24,577	5.0	23,479	95.5
8	Otter Trawl	OPEN	all	NE	lg	23,470	4.7	23,435	99.9
9	Scallop Trawl	AA	GEN	MA	all	195	<0.1	32	16.4
11	Scallop Trawl	OPEN	GEN	MA	all	137	<0.1	31	22.9
12	Scallop Trawl	OPEN	LIM	MA	all	20	<0.1	0	0.0
13	Otter Trawl, Twin	OPEN	all	MA	all	528	0.1	461	87.3
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	640	0.1	15	2.3
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	319	0.1	54	16.8
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	2,946	0.6	2,922	99.2
20	Shrimp Trawl	OPEN	all	MA	all	302	0.1	0	0.0
21	Shrimp Trawl	OPEN	all	NE	all	63	<0.1	0	0.0
22	Floating Trap	OPEN	all	MA	all	196	<0.1	0	0.0
23	Floating Trap	OPEN	all	NE	all	3	<0.1	0	0.0
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	2,261	0.5	1,522	67.3
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	2,328	0.5	1,777	76.3
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	2,783	0.6	2,755	99.0
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	8	<0.1	0	0.0
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	4,366	0.9	4,179	95.7
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	8,864	1.8	8,222	92.8
30	Purse Seine	OPEN	all	MA	all	14,409	2.9	0	0.0
31	Purse Seine	OPEN	all	NE	all	27,621	5.6	20,618	74.6
32	Scallop Dredge	AA	GEN	MA	all	2,604	0.5	2,443	93.8
33	Scallop Dredge	AA	GEN	NE	all	134	<0.1	0	0.0
34	Scallop Dredge	AA	LIM	MA	all	19,643	4.0	19,199	97.7
35	Scallop Dredge	AA	LIM	NE	all	20,832	4.2	20,726	99.5
36	Scallop Dredge	OPEN	GEN	MA	all	3,893	0.8	3,622	93.1
37	Scallop Dredge	OPEN	GEN	NE	all	3,405	0.7	3,003	88.2
38	Scallop Dredge	OPEN	LIM	MA	all	14,571	2.9	13,006	89.3
39	Scallop Dredge	OPEN	LIM	NE	all	51,552	10.4	48,571	94.2
40	Danish Seine	OPEN	all	MA	all	1,162	0.2	0	0.0
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	3,195	0.6	0	0.0
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	55,505	11.2	43,210	77.8
43	Pots and Traps, Fish	OPEN	all	MA	all	228	<0.1	61	26.7
44	Pots and Traps, Fish	OPEN	all	NE	all	86	<0.1	69	80.3
45	Pots and Traps, Conch	OPEN	all	MA	all	980	0.2	616	62.8
46	Pots and Traps, Conch	OPEN	all	NE	all	311	0.1	179	57.5
47	Pots and Traps, Hagfish	OPEN	all	NE	all	1,027	0.2	0	0.0
48	Pots and Traps, Lobster	OPEN	all	MA	all	639	0.1	192	30.1
49	Pots and Traps, Lobster	OPEN	all	NE	all	13,773	2.8	10,710	77.8
50	Pots and Traps, Crab	OPEN	all	MA	all	191	<0.1	0	0.0

See text for fleet abbreviations.

Table 4, continued. Vessel Trip Report kept weight of all species (live mt), percentage of kept weight of all species across all fleets, kept weight of all species (live mt) with Northeast Fisheries Observer Program (NEFOP) coverage from statistical areas and quarters with at least 1 observed trip and at least 3 observed trips in the fleet and quarter, and percentage of kept weight of all species with observer coverage, by fleet based on July 2014 through June 2015 data.

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Kept Weight (mt)	Percentage of Kept Weight	Kept Weight with NEFOP coverage (mt)	Percentage of Kept Weight with NEFOP coverage
51	Pots and Traps, Crab	OPEN	all	NE	all	1,257	0.3	0	0.0
52	Beam Trawl	OPEN	all	MA	all	70	<0.1	0	0.0
53	Beam Trawl	OPEN	all	NE	all	16	<0.1	0	0.0
54	Dredge, Other	OPEN	all	MA	all	106	<0.1	0	0.0
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	81,565	16.4	0	0.0
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	73,059	14.7	0	0.0
57	Mid-water Paired & Single Trawl	AA	all	NE	all	5,165	1.0	5,165	100.0
	Confidential fleets					412	0.1	31	7.6
	Other minor fleets					1,260	0.3	0	0.0
					Total	**495,848**	**100.0**	**278,928**	**56.3**

See text for fleet abbreviations.

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: ATLANTIC SALMON (Salmo salar)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	0	0	0			
8	Otter Trawl	OPEN	all	NE	lg	0	0	0			
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	0	0	0			
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: ATLANTIC SALMON (Salmo salar)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	0	0	0			
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	0	0	0			
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					0	0	0			
	Other minor fleets					0	0				
					TOTAL	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: BLUEFISH (Pomatomus saltatrix)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	118	118	0			
3	Hand Line	OPEN	all	MA	all	105,786	105,786	0			P
4	Hand Line	OPEN	all	NE	all	23,973	23,973	0			
5	Otter Trawl	OPEN	all	MA	sm	90,355	86,189	4,166	0.743	3,094	
6	Otter Trawl	OPEN	all	MA	lg	59,466	55,472	3,994	0.740	2,955	
7	Otter Trawl	OPEN	all	NE	sm	144,704	138,725	5,979	0.430	2,573	
8	Otter Trawl	OPEN	all	NE	lg	36,630	31,790	4,840	0.528	2,556	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	203	203	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	627	555	72	0.530	38	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Shrimp Trawl	OPEN	all	MA	all	888	888	0			P
21	Shrimp Trawl	OPEN	all	NE	all	167	167				P
22	Floating Trap	OPEN	all	MA	all	97,533	97,533				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	187,909	184,698	3,211	0.958	3,077	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	640,514	624,845	15,669	0.708	11,095	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	40,262	32,583	7,679	0.439	3,373	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	3,250	3,250				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	274,902	273,403	1,499	0.379	569	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	33,501	19,683	13,818	0.175	2,424	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: BLUEFISH (Pomatomus saltatrix)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	0	0	0			
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	12	0	12	1.287	15	
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	118	0	118	0.987	116	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	233	5	228	0.770	176	
43	Pots and Traps, Fish	OPEN	all	MA	all	625	625	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	85	85	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	30	30	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	203	203	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	1,460	1,460				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					8,145	10	8,135	0.614	4,994	
	Other minor fleets					1,053	1,053				
					TOTAL	1,752,752	1,683,332	69,420	0.207	14,374	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: FLUKE (Paralichthys dentatus) - SCUP (Stenotomus chrysops) - BLACK SEA BASS (Centropristis striata)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	5	5	0			
2	Longline	OPEN	all	NE	all	26	26	0			
3	Hand Line	OPEN	all	MA	all	169,368	167,509	1,859	0.649	1,206	P
4	Hand Line	OPEN	all	NE	all	28,944	28,944	0			
5	Otter Trawl	OPEN	all	MA	sm	6,671,245	5,770,462	900,783	0.268	241,018	
6	Otter Trawl	OPEN	all	MA	lg	10,162,787	9,608,358	554,429	0.186	102,852	
7	Otter Trawl	OPEN	all	NE	sm	5,438,503	4,890,547	547,956	0.277	151,782	
8	Otter Trawl	OPEN	all	NE	lg	3,696,474	3,196,160	500,314	0.139	69,443	
9	Scallop Trawl	AA	GEN	MA	all	234	182	52	0.726	38	P
11	Scallop Trawl	OPEN	GEN	MA	all	48,810	30,874	17,936	1.158	20,762	
12	Scallop Trawl	OPEN	LIM	MA	all	330	330				P
13	Otter Trawl, Twin	OPEN	all	MA	all	31,515	21,341	10,174	0.192	1,955	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,351	1,300	51	0.009	<1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	23,445	23,445	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,701	1,259	2,442	0.493	1,203	
20	Shrimp Trawl	OPEN	all	MA	all	159,910	159,910	0			P
21	Shrimp Trawl	OPEN	all	NE	all	4,478	4,478				P
22	Floating Trap	OPEN	all	MA	all	1,635	1,635				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	1,449	963	486	0.381	185	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	16,100	14,557	1,543	1.430	2,207	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	51,951	27,906	24,045	0.441	10,612	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	214	214				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	141,308	141,026	282	0.411	116	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	124,279	39,967	84,312	0.184	15,478	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	2,115	564	1,551	0.330	512	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	24,514	1,687	22,827	0.253	5,781	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: FLUKE (Paralichthys dentatus) - SCUP (Stenotomus chrysops) - BLACK SEA BASS (Centropristis striata)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	34,765	2	34,763	0.298	10,351	
36	Scallop Dredge	OPEN	GEN	MA	all	57,975	12,094	45,881	0.169	7,747	
37	Scallop Dredge	OPEN	GEN	NE	all	12,006	3,578	8,428	0.317	2,670	
38	Scallop Dredge	OPEN	LIM	MA	all	163,982	21,484	142,498	0.243	34,595	
39	Scallop Dredge	OPEN	LIM	NE	all	373,262	34	373,228	0.205	76,675	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	29,040	29,040	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	4,645	1,020	3,625	0.770	2,791	
43	Pots and Traps, Fish	OPEN	all	MA	all	420,324	308,105	112,219	0.454	50,991	
44	Pots and Traps, Fish	OPEN	all	NE	all	278,843	182,186	96,657	0.249	24,085	P
45	Pots and Traps, Conch	OPEN	all	MA	all	2,162	549	1,613	2.224	3,587	P
46	Pots and Traps, Conch	OPEN	all	NE	all	635	425	210	0.316	66	
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	135,571	130,246	5,325	0.499	2,658	
49	Pots and Traps, Lobster	OPEN	all	NE	all	54,712	21,137	33,575	0.673	22,584	
50	Pots and Traps, Crab	OPEN	all	MA	all	5	5				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	61,753	61,753				P
53	Beam Trawl	OPEN	all	NE	all	7,450	7,450				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					5,980	4,314	1,666	0.316	527	
	Other minor fleets					1,653	1,653				
					TOTAL	28,449,455	24,918,724	3,530,731	0.093	329,128	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: HERRING, ATLANTIC (Clupea harengus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	1,323	816	507	0.793	402	
5	Otter Trawl	OPEN	all	MA	sm	166,498	141,914	24,584	0.758	18,625	
6	Otter Trawl	OPEN	all	MA	lg	8,346	7,360	986	0.539	532	
7	Otter Trawl	OPEN	all	NE	sm	7,865,541	7,779,454	86,087	0.420	36,129	
8	Otter Trawl	OPEN	all	NE	lg	14,994	4,411	10,583	0.156	1,655	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,372,004	1,372,000	4	0.009	<1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	246,256	246,000	256	0.153	39	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,768	0	3,768	0.283	1,067	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	33,645	33,645				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	2,265	2,265				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	220	220	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	132	132	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	375	375				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	3,956	626	3,330	0.235	781	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	60,893,388	60,893,249	139	0.289	40	
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: HERRING, ATLANTIC (Clupea harengus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	1	0	1	1.057	1	
36	Scallop Dredge	OPEN	GEN	MA	all	2	2	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	5	0	5	0.855	4	
39	Scallop Dredge	OPEN	LIM	NE	all	47	0	47	0.491	23	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	3,274,300	3,274,300	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	116,457,100	116,455,466	1,634	0.929	1,518	
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	2,250	2,250				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	11,378,935	11,378,926	9	0.064	1	
	Confidential fleets					1	0	1	1.081	1	
	Other minor fleets					0	0				
					TOTAL	201,725,354	201,593,411	131,943	0.309	40,736	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: LARGE MESH GROUNDFISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	189	108	81	0.852	69	
2	Longline	OPEN	all	NE	all	3,665	2,770	895	1.340	1,199	
3	Hand Line	OPEN	all	MA	all	4,418	4,418	0			P
4	Hand Line	OPEN	all	NE	all	112,371	77,486	34,885	0.920	32,098	
5	Otter Trawl	OPEN	all	MA	sm	181,668	5,119	176,549	0.346	61,089	
6	Otter Trawl	OPEN	all	MA	lg	772,965	255,633	517,332	0.142	73,598	
7	Otter Trawl	OPEN	all	NE	sm	1,651,999	40,702	1,611,297	0.236	379,904	
8	Otter Trawl	OPEN	all	NE	lg	32,325,806	30,195,337	2,130,469	0.059	125,710	
9	Scallop Trawl	AA	GEN	MA	all	55	0	55	0.506	28	P
11	Scallop Trawl	OPEN	GEN	MA	all	6,640	0	6,640	0.338	2,242	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	26,640	12,920	13,720	0.514	7,059	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	44,853	35,943	8,910	0.040	355	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	468,607	429,147	39,460	0.021	814	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	6,721,476	6,206,395	515,081	0.135	69,618	
20	Shrimp Trawl	OPEN	all	MA	all	31,682	50	31,632	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	5	5				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	106	13	93	1.190	111	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	1,596	390	1,206	0.380	458	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	979	587	392	0.523	205	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	5,244	5,244				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	4,137,536	3,934,802	202,734	0.072	14,623	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	70,282	40,342	29,940	0.170	5,085	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	639	0	639	0.443	283	
33	Scallop Dredge	AA	GEN	NE	all	318	0	318	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	55,567	0	55,567	0.718	39,922	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: LARGE MESH GROUNDFISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	272,641	835	271,806	0.183	49,848	
36	Scallop Dredge	OPEN	GEN	MA	all	42,367	0	42,367	0.121	5,125	
37	Scallop Dredge	OPEN	GEN	NE	all	74,342	50	74,292	0.115	8,510	
38	Scallop Dredge	OPEN	LIM	MA	all	80,741	15	80,726	0.233	18,772	
39	Scallop Dredge	OPEN	LIM	NE	all	957,581	2,848	954,733	0.148	140,911	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	19,662	16,670	2,992	0.873	2,611	
43	Pots and Traps, Fish	OPEN	all	MA	all	3,509	1,782	1,727	0.603	1,041	
44	Pots and Traps, Fish	OPEN	all	NE	all	374	163	211	0.281	59	P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	20,145	1,987	18,158	0.921	16,727	
49	Pots and Traps, Lobster	OPEN	all	NE	all	199,210	1,212	197,998	0.368	72,843	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	7,753	7,700	53	0.242	13	
	Confidential fleets					186,605	176,663	9,942	0.179	1,784	
	Other minor fleets					2,210	2,210				
					TOTAL	48,492,445	41,459,546	7,032,899	0.064	453,249	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: MONKFISH (Lophius americanus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	400	0	400	0.353	141	
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	143	143	0			P
4	Hand Line	OPEN	all	NE	all	12	12	0			
5	Otter Trawl	OPEN	all	MA	sm	174,455	88,857	85,598	0.344	29,421	
6	Otter Trawl	OPEN	all	MA	lg	529,189	339,879	189,309	0.191	36,087	
7	Otter Trawl	OPEN	all	NE	sm	141,622	112,361	29,262	0.321	9,403	
8	Otter Trawl	OPEN	all	NE	lg	6,775,469	5,843,513	931,956	0.082	76,803	
9	Scallop Trawl	AA	GEN	MA	all	731	279	452	0.481	218	P
11	Scallop Trawl	OPEN	GEN	MA	all	2,337	2,179	158	0.624	99	
12	Scallop Trawl	OPEN	LIM	MA	all	133	133				P
13	Otter Trawl, Twin	OPEN	all	MA	all	15,744	10,584	5,160	0.166	857	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	116	76	40	0.051	2	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	596	535	61	0.186	11	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	110,368	99,089	11,279	0.376	4,237	
20	Shrimp Trawl	OPEN	all	MA	all	22,959	1,614	21,344	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	10	10				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	6,134	6,134	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	47,701	47,573	128	0.792	102	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	3,129,308	3,077,527	51,781	0.337	17,476	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	5,064	5,064				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	277,736	263,832	13,903	0.082	1,141	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	4,055,337	3,909,868	145,469	0.142	20,596	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	26,717	4,023	22,694	0.225	5,099	
33	Scallop Dredge	AA	GEN	NE	all	182	40	142	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	231,583	14,886	216,697	0.168	36,488	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: MONKFISH (Lophius americanus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	525,240	163,608	361,632	0.119	43,033	
36	Scallop Dredge	OPEN	GEN	MA	all	129,336	76,855	52,481	0.171	8,968	
37	Scallop Dredge	OPEN	GEN	NE	all	90,468	18,936	71,532	0.212	15,195	
38	Scallop Dredge	OPEN	LIM	MA	all	334,740	65,742	268,997	0.172	46,359	
39	Scallop Dredge	OPEN	LIM	NE	all	2,295,244	529,896	1,765,347	0.141	248,815	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	32	0	32	1.191	38	
43	Pots and Traps, Fish	OPEN	all	MA	all	6	6	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	28	28	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	3,347	31	3,316	0.509	1,689	
50	Pots and Traps, Crab	OPEN	all	MA	all	190	190				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	1,282	1,282				P
53	Beam Trawl	OPEN	all	NE	all	874	874				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	10,088	10,088				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	7,085	7,085				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					5,021	3,775	1,246	0.046	58	
	Other minor fleets					1,882	1,882				
					TOTAL	18,958,906	14,708,490	4,250,416	0.065	276,562	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: RED DEEPSEA CRAB (Chaceon quinquedens)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	5	0	5	1.235	6	
6	Otter Trawl	OPEN	all	MA	lg	9,212	0	9,212	1.054	9,711	
7	Otter Trawl	OPEN	all	NE	sm	77	0	77	0.613	47	
8	Otter Trawl	OPEN	all	NE	lg	55,968	0	55,968	0.327	18,291	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	2	0	2	0.009	<1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	86	0	86	0.489	42	
20	Shrimp Trawl	OPEN	all	MA	all	169,888	0	169,888	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	89	0	89	0.235	21	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	23	0	23	0.888	20	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: RED DEEPSEA CRAB (Chaceon quinquedens)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	0	0	0			
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	0	0	0			
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	59	59	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	1,885	0	1,885	2.540	4,787	
50	Pots and Traps, Crab	OPEN	all	MA	all	373,724	373,724				P
51	Pots and Traps, Crab	OPEN	all	NE	all	2,452,754	2,452,754				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					0	0	0			
	Other minor fleets					0	0				
					TOTAL	3,063,771	2,826,537	237,234	0.090	21,255	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SEA SCALLOP (Placopecten magellanicus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	140,704	58,577	82,127	0.863	70,843	
6	Otter Trawl	OPEN	all	MA	lg	1,130,891	1,044,945	85,946	0.336	28,890	
7	Otter Trawl	OPEN	all	NE	sm	68,255	10,646	57,609	0.394	22,678	
8	Otter Trawl	OPEN	all	NE	lg	67,872	44,840	23,032	0.356	8,198	
9	Scallop Trawl	AA	GEN	MA	all	564,737	429,078	135,659	0.558	75,704	P
11	Scallop Trawl	OPEN	GEN	MA	all	240,161	231,299	8,862	0.529	4,689	
12	Scallop Trawl	OPEN	LIM	MA	all	42,650	42,650				P
13	Otter Trawl, Twin	OPEN	all	MA	all	308,515	304,423	4,091	0.534	2,183	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	59	0	59	0.620	37	
20	Shrimp Trawl	OPEN	all	MA	all	214,706	214,706	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	471	0	471	0.397	187	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	1,132	0	1,132	0.785	888	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	354	0	354	0.315	112	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	6,430,680	5,733,431	697,250	0.329	229,660	
33	Scallop Dredge	AA	GEN	NE	all	303,041	295,482	7,559	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	44,199,116	42,732,099	1,467,017	0.225	330,294	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SEA SCALLOP (Placopecten magellanicus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	48,121,733	45,761,813	2,359,920	0.155	365,041	
36	Scallop Dredge	OPEN	GEN	MA	all	8,540,565	8,403,294	137,271	0.418	57,442	
37	Scallop Dredge	OPEN	GEN	NE	all	7,580,550	7,414,701	165,849	0.324	53,812	
38	Scallop Dredge	OPEN	LIM	MA	all	33,431,308	32,594,105	837,203	0.384	321,228	
39	Scallop Dredge	OPEN	LIM	NE	all	115,657,536	113,118,834	2,538,702	0.199	505,197	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	2,982	2,982	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	10,829	10,829				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	9,896	9,896				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	852,259	852,259				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	467,296	467,296				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					154,938	154,938	0			
	Other minor fleets					91,397	91,397				
					TOTAL	268,634,632	260,024,519	8,610,113	0.095	819,691	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SKATE COMPLEX (*Rajidae*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	82,037	512	81,526	0.310	25,251	
2	Longline	OPEN	all	NE	all	16,889	3,541	13,348	0.804	10,732	
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	477	477	0			
5	Otter Trawl	OPEN	all	MA	sm	3,260,842	421,457	2,839,385	0.280	794,409	
6	Otter Trawl	OPEN	all	MA	lg	17,302,018	1,709,049	15,592,969	0.110	1,708,648	
7	Otter Trawl	OPEN	all	NE	sm	1,444,384	277,962	1,166,422	0.219	254,924	
8	Otter Trawl	OPEN	all	NE	lg	38,252,774	10,421,791	27,830,982	0.084	2,345,533	
9	Scallop Trawl	AA	GEN	MA	all	15,095	0	15,095	0.578	8,727	P
11	Scallop Trawl	OPEN	GEN	MA	all	434,739	36,562	398,177	0.150	59,553	
12	Scallop Trawl	OPEN	LIM	MA	all	80	80				P
13	Otter Trawl, Twin	OPEN	all	MA	all	1,466,233	76,703	1,389,530	0.634	881,302	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	8,413	0	8,413	0.048	404	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	39,434	1,769	37,665	0.123	4,641	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	1,577,428	123,230	1,454,199	0.177	257,047	
20	Shrimp Trawl	OPEN	all	MA	all	18,868	23	18,845	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	12,767	8,883	3,884	0.778	3,022	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	187,572	109,264	78,308	1.898	148,591	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	3,442,909	2,833,281	609,628	0.104	63,598	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	2,838	2,838				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	415,929	310,037	105,892	0.070	7,465	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	16,138,949	14,365,961	1,772,988	0.096	170,199	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	72,370	104	72,266	0.211	15,270	
33	Scallop Dredge	AA	GEN	NE	all	6,352	0	6,352	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	1,061,052	0	1,061,052	0.454	481,852	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SKATE COMPLEX (*Rajidae*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	3,273,592	0	3,273,592	0.130	426,259	
36	Scallop Dredge	OPEN	GEN	MA	all	1,920,267	10,749	1,909,518	0.106	202,985	
37	Scallop Dredge	OPEN	GEN	NE	all	613,489	100	613,389	0.170	104,318	
38	Scallop Dredge	OPEN	LIM	MA	all	5,660,078	153	5,659,925	0.128	726,969	
39	Scallop Dredge	OPEN	LIM	NE	all	14,927,741	39	14,927,702	0.105	1,571,927	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	5	5	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	2,164	0	2,164	1.737	3,758	
49	Pots and Traps, Lobster	OPEN	all	NE	all	1,139	0	1,139	0.624	711	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	24,220	24,220				P
53	Beam Trawl	OPEN	all	NE	all	182	182				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					4,777	447	4,330	0.301	1,302	
	Other minor fleets					2,270	2,270				
					TOTAL	111,690,371	30,741,687	80,948,684	0.045	3,672,199	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SMALL MESH GROUNDFISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	757	161	596	1.230	733	
2	Longline	OPEN	all	NE	all	899	47	852	0.821	700	
3	Hand Line	OPEN	all	MA	all	2,178	2,178	0			P
4	Hand Line	OPEN	all	NE	all	213	213	0			
5	Otter Trawl	OPEN	all	MA	sm	4,552,002	4,314,399	237,603	0.347	82,564	
6	Otter Trawl	OPEN	all	MA	lg	181,404	127,730	53,674	0.352	18,878	
7	Otter Trawl	OPEN	all	NE	sm	12,857,952	10,732,594	2,125,358	0.215	455,913	
8	Otter Trawl	OPEN	all	NE	lg	1,318,708	527,564	791,144	0.072	57,140	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	37	9	28	0.624	17	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	6,039	340	5,699	0.490	2,791	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	30,703	0	30,703	0.029	903	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	11,096	800	10,296	0.125	1,288	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	107,978	17,383	90,595	0.232	21,048	
20	Shrimp Trawl	OPEN	all	MA	all	44,729	16	44,713	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	42,385	42,385				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	15	15	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	85	71	14	0.788	11	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	211	15	196	0.510	100	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	40	40				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	180,096	152,144	27,952	0.138	3,861	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	11,351	9,229	2,122	0.241	512	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	302	2	300	0.523	157	
33	Scallop Dredge	AA	GEN	NE	all	394	0	394	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	8,677	0	8,677	0.588	5,105	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SMALL MESH GROUNDFISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	62,903	63	62,840	0.184	11,555	
36	Scallop Dredge	OPEN	GEN	MA	all	1,419	33	1,386	0.292	404	
37	Scallop Dredge	OPEN	GEN	NE	all	5,891	0	5,891	0.234	1,380	
38	Scallop Dredge	OPEN	LIM	MA	all	4,648	0	4,648	0.368	1,709	
39	Scallop Dredge	OPEN	LIM	NE	all	120,424	100	120,324	0.145	17,450	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	26,611	26,547	64	0.669	43	
43	Pots and Traps, Fish	OPEN	all	MA	all	4,403	4,403	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	1	1	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	17,737	16,343	1,394	0.706	985	
49	Pots and Traps, Lobster	OPEN	all	NE	all	76,823	13,432	63,391	0.596	37,750	
50	Pots and Traps, Crab	OPEN	all	MA	all	10	10				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	10,600	10,600				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	1	0	1	0.257	<1	
	Confidential fleets					13,593	546	13,047	0.264	3,439	
	Other minor fleets					1,320	1,320				
					TOTAL	19,704,635	16,000,733	3,703,902	0.127	469,757	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SPINY DOGFISH (Squalus acanthias)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	274,000	242,006	31,994	1.160	37,126	
2	Longline	OPEN	all	NE	all	3,428,080	3,336,601	91,479	1.148	105,003	
3	Hand Line	OPEN	all	MA	all	2,418	2,418	0			P
4	Hand Line	OPEN	all	NE	all	1,040,017	1,038,181	1,836	1.512	2,777	
5	Otter Trawl	OPEN	all	MA	sm	2,243,153	377,206	1,865,947	0.275	512,999	
6	Otter Trawl	OPEN	all	MA	lg	1,819,877	146,436	1,673,441	0.195	326,376	
7	Otter Trawl	OPEN	all	NE	sm	1,941,797	250,218	1,691,579	0.293	495,006	
8	Otter Trawl	OPEN	all	NE	lg	4,400,816	368,897	4,031,919	0.087	351,544	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	3,320	1,400	1,920	0.851	1,634	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	112,317	2,075	110,242	0.362	39,861	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	105,420	0	105,420	0.051	5,342	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	2,931	0	2,931	0.186	544	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	447,032	0	447,032	0.370	165,341	
20	Shrimp Trawl	OPEN	all	MA	all	909	0	909	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	1,770,069	1,297,459	472,610	0.929	439,148	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	3,637,463	3,523,769	113,694	0.705	80,139	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	170,413	122,766	47,647	0.178	8,462	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	10	10				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	7,525,870	4,381,342	3,144,528	0.123	387,155	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	1,267,091	1,124,271	142,820	0.112	15,930	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	780	0	780	0.528	412	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	2,133	0	2,133	0.703	1,499	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SPINY DOGFISH (Squalus acanthias)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	6,662	0	6,662	0.271	1,804	
36	Scallop Dredge	OPEN	GEN	MA	all	15,444	0	15,444	0.323	4,992	
37	Scallop Dredge	OPEN	GEN	NE	all	11,204	0	11,204	0.440	4,935	
38	Scallop Dredge	OPEN	LIM	MA	all	21,185	0	21,185	0.309	6,549	
39	Scallop Dredge	OPEN	LIM	NE	all	37,613	0	37,613	0.263	9,881	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	50	50	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	408,045	4,050	403,995	0.664	268,230	
43	Pots and Traps, Fish	OPEN	all	MA	all	14	14	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	19,100	19,100	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	2,948	7	2,941	0.870	2,560	
49	Pots and Traps, Lobster	OPEN	all	NE	all	11,525	0	11,525	0.620	7,146	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					35,912	9	35,903	0.284	10,209	
	Other minor fleets					5,008	5,008				
					TOTAL	30,770,625	16,243,293	14,527,332	0.075	1,096,114	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SQUID (Doryteuthis [Amerigo] pealeii, Illex illecebrosus)- BUTTERFISH (Peprilus triacanthus) - MACKEREL (Scomber scombrus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	324	324	0			
3	Hand Line	OPEN	all	MA	all	535	535	0			P
4	Hand Line	OPEN	all	NE	all	689,450	662,522	26,928	0.793	21,354	
5	Otter Trawl	OPEN	all	MA	sm	15,406,002	14,466,584	939,418	0.473	443,953	
6	Otter Trawl	OPEN	all	MA	lg	365,888	344,613	21,275	0.227	4,820	
7	Otter Trawl	OPEN	all	NE	sm	30,743,808	29,338,184	1,405,624	0.196	275,760	
8	Otter Trawl	OPEN	all	NE	lg	343,672	292,675	50,997	0.109	5,576	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	225	104	121	0.992	120	
12	Scallop Trawl	OPEN	LIM	MA	all	10	10				P
13	Otter Trawl, Twin	OPEN	all	MA	all	845,429	707,033	138,396	0.514	71,116	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,258	545	713	0.008	6	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	6,737	1,455	5,282	0.186	980	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	10,837	760	10,077	0.608	6,123	
20	Shrimp Trawl	OPEN	all	MA	all	44,297	1,049	43,248	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	51,858	51,858				P
22	Floating Trap	OPEN	all	MA	all	353	353				P
23	Floating Trap	OPEN	all	NE	all	3,433	3,433				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	10,726	10,295	431	1.394	600	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	560	556	4	2.179	9	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	339	327	12	0.855	10	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	25	25				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	25,261	22,563	2,698	0.182	490	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	659	191	468	0.537	251	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	1,515	1,500	15	1.133	18	
32	Scallop Dredge	AA	GEN	MA	all	24	1	23	0.743	17	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	964	0	964	0.292	281	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SQUID (Doryteuthis [Amerigo] pealeii, Illex illecebrosus)- BUTTERFISH (Peprilus triacanthus) - MACKEREL (Scomber scombrus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	808	0	808	0.363	293	
36	Scallop Dredge	OPEN	GEN	MA	all	964	70	894	0.310	277	
37	Scallop Dredge	OPEN	GEN	NE	all	177	31	146	0.390	57	
38	Scallop Dredge	OPEN	LIM	MA	all	2,558	60	2,498	0.299	747	
39	Scallop Dredge	OPEN	LIM	NE	all	5,993	0	5,993	0.279	1,673	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	2,561,135	2,561,135	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	5,855,270	5,852,999	2,271	0.752	1,708	
43	Pots and Traps, Fish	OPEN	all	MA	all	119	119	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	81	81	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	338	209	129	0.746	96	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	43,874	43,874				P
53	Beam Trawl	OPEN	all	NE	all	3,750	3,750				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	2	0	2	0.188	<1	
	Confidential fleets					649,236	563,809	85,427	0.300	25,606	
	Other minor fleets					383,489	383,489				
					TOTAL	58,061,980	55,317,121	2,744,859	0.193	528,590	

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SURFCLAM (Spisula solidissima) - OCEAN QUAHOG (Arctica islandica)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	3,082	0	3,082	0.678	2,088	
7	Otter Trawl	OPEN	all	NE	sm	287	0	287	0.613	176	
8	Otter Trawl	OPEN	all	NE	lg	2,614	0	2,614	0.473	1,235	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	1,082	0	1,082	1.872	2,026	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	766	0	766	1.060	812	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	14	0	14	0.858	12	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	2	0	2	0.982	2	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SURFCLAM (Spisula solidissima) - OCEAN QUAHOG (Arctica islandica)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	19	0	19	0.857	16	
36	Scallop Dredge	OPEN	GEN	MA	all	51	0	51	1.037	53	
37	Scallop Dredge	OPEN	GEN	NE	all	3,869	3,800	69	0.567	39	
38	Scallop Dredge	OPEN	LIM	MA	all	42	0	42	1.029	44	
39	Scallop Dredge	OPEN	LIM	NE	all	1,043	0	1,043	0.764	797	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	178,954,861	178,954,861				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	160,425,109	160,425,109				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					0	0	0			
	Other minor fleets					303,528	303,528				
					TOTAL	339,696,371	339,687,298	9,073	0.371	3,365	

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: TILEFISH (Lopholatilus chamaeleonticeps)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	1,422,218	1,420,369	1,849	0.936	1,731	
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	737	737	0			P
4	Hand Line	OPEN	all	NE	all	100	100	0			
5	Otter Trawl	OPEN	all	MA	sm	3,898	3,293	605	0.914	553	
6	Otter Trawl	OPEN	all	MA	lg	1,252	1,102	150	1.144	171	
7	Otter Trawl	OPEN	all	NE	sm	5,710	3,364	2,346	0.735	1,723	
8	Otter Trawl	OPEN	all	NE	lg	1,514	1,407	107	1.040	111	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	216	216	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	139	25	114	0.530	60	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	1,795	946	849	0.508	431	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5A, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: TILEFISH (Lopholatilus chamaeleonticeps)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	0	0	0			
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	0	0	0			
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	260	260	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	564	23	541	0.735	397	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	45	45				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					535	295	240	0.413	99	
	Other minor fleets					32	32				
					TOTAL	1,439,014	1,432,214	6,800	0.380	2,583	

See text for fleet abbreviations.

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: BLACK SEA BASS (Centropristis striata)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	5	5	0			
2	Longline	OPEN	all	NE	all	1	1	0			
3	Hand Line	OPEN	all	MA	all	54,084	53,774	310	0.649	201	P
4	Hand Line	OPEN	all	NE	all	11,438	11,438	0			
5	Otter Trawl	OPEN	all	MA	sm	892,754	626,143	266,611	0.362	96,509	
6	Otter Trawl	OPEN	all	MA	lg	532,173	446,618	85,555	0.306	26,221	
7	Otter Trawl	OPEN	all	NE	sm	185,845	71,122	114,723	0.253	28,972	
8	Otter Trawl	OPEN	all	NE	lg	68,354	34,192	34,162	0.182	6,216	
9	Scallop Trawl	AA	GEN	MA	all	13	2	11	0.924	10	P
11	Scallop Trawl	OPEN	GEN	MA	all	3,496	1,152	2,344	1.634	3,829	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	1,000	985	15	2.147	32	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	51	0	51	0.009	<1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	22	0	22	0.677	15	
20	Shrimp Trawl	OPEN	all	MA	all	8,445	8,445	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	267	267				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	20	20	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	604	604	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	1,851	1,793	58	1.196	69	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	50	50				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	7,262	7,106	156	0.539	84	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	480	236	244	0.437	107	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	25	15	10	0.974	9	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	527	100	427	0.266	113	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: BLACK SEA BASS (Centropristis striata)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	828	0	828	0.422	350	
36	Scallop Dredge	OPEN	GEN	MA	all	654	95	559	0.434	243	
37	Scallop Dredge	OPEN	GEN	NE	all	33	0	33	0.791	26	
38	Scallop Dredge	OPEN	LIM	MA	all	1,366	77	1,289	0.364	469	
39	Scallop Dredge	OPEN	LIM	NE	all	4,393	0	4,393	0.412	1,811	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	890	890	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	97	50	47	0.770	36	
43	Pots and Traps, Fish	OPEN	all	MA	all	405,626	296,373	109,253	0.472	51,539	
44	Pots and Traps, Fish	OPEN	all	NE	all	162,704	76,492	86,212	0.275	23,718	P
45	Pots and Traps, Conch	OPEN	all	MA	all	2,141	528	1,613	2.224	3,587	P
46	Pots and Traps, Conch	OPEN	all	NE	all	510	300	210	0.316	66	
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	133,657	128,367	5,290	0.500	2,645	
49	Pots and Traps, Lobster	OPEN	all	NE	all	49,336	18,510	30,826	0.714	22,016	
50	Pots and Traps, Crab	OPEN	all	MA	all	5	5				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	4,577	4,577				P
53	Beam Trawl	OPEN	all	NE	all	200	200				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					1,233	1,212	21	0.517	11	
	Other minor fleets					160	160				
					TOTAL	2,537,177	1,791,904	745,273	0.162	120,919	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: FLUKE (Paralichthys dentatus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	25	25	0			
3	Hand Line	OPEN	all	MA	all	52,367	50,818	1,549	0.649	1,005	P
4	Hand Line	OPEN	all	NE	all	9,368	9,368	0			
5	Otter Trawl	OPEN	all	MA	sm	586,630	435,122	151,508	0.315	47,797	
6	Otter Trawl	OPEN	all	MA	lg	6,909,128	6,646,924	262,204	0.180	47,147	
7	Otter Trawl	OPEN	all	NE	sm	843,132	712,941	130,191	0.248	32,233	
8	Otter Trawl	OPEN	all	NE	lg	1,687,742	1,282,321	405,421	0.162	65,693	
9	Scallop Trawl	AA	GEN	MA	all	218	180	38	0.749	29	P
11	Scallop Trawl	OPEN	GEN	MA	all	44,130	29,357	14,773	1.142	16,870	
12	Scallop Trawl	OPEN	LIM	MA	all	50	50				P
13	Otter Trawl, Twin	OPEN	all	MA	all	23,774	16,483	7,291	0.324	2,359	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	100	100	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	1,035	1,035	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,679	1,259	2,420	0.497	1,203	
20	Shrimp Trawl	OPEN	all	MA	all	151,350	151,350	0			P
21	Shrimp Trawl	OPEN	all	NE	all	102	102				P
22	Floating Trap	OPEN	all	MA	all	1,350	1,350				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	853	367	486	0.381	185	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	14,259	12,716	1,543	1.430	2,207	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	49,190	25,379	23,811	0.445	10,601	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	69	69				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	23,255	23,196	59	0.398	24	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	120,488	36,450	84,038	0.184	15,448	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	2,090	549	1,541	0.330	509	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	23,935	1,587	22,348	0.256	5,716	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: FLUKE (Paralichthys dentatus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	33,729	2	33,727	0.299	10,087	
36	Scallop Dredge	OPEN	GEN	MA	all	56,092	10,908	45,184	0.170	7,682	
37	Scallop Dredge	OPEN	GEN	NE	all	11,238	2,843	8,395	0.317	2,658	
38	Scallop Dredge	OPEN	LIM	MA	all	162,383	21,407	140,976	0.244	34,379	
39	Scallop Dredge	OPEN	LIM	NE	all	368,323	34	368,289	0.206	75,955	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	1,850	1,850	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	40	40	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	3,558	1,591	1,967	0.925	1,819	
44	Pots and Traps, Fish	OPEN	all	NE	all	400	400	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	7	7	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	674	660	14	0.510	7	
49	Pots and Traps, Lobster	OPEN	all	NE	all	476	476	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	57,142	57,142				P
53	Beam Trawl	OPEN	all	NE	all	3,400	3,400				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					2,703	1,262	1,441	0.321	463	
	Other minor fleets					812	812				
					TOTAL	11,251,147	9,541,932	1,709,215	0.078	132,913	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: SCUP (Stenotomus chrysops)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	62,917	62,917	0			P
4	Hand Line	OPEN	all	NE	all	8,138	8,138	0			
5	Otter Trawl	OPEN	all	MA	sm	5,191,861	4,709,197	482,664	0.300	144,822	
6	Otter Trawl	OPEN	all	MA	lg	2,721,485	2,514,816	206,669	0.317	65,571	
7	Otter Trawl	OPEN	all	NE	sm	4,409,526	4,106,484	303,042	0.361	109,397	
8	Otter Trawl	OPEN	all	NE	lg	1,940,378	1,879,647	60,731	0.219	13,311	
9	Scallop Trawl	AA	GEN	MA	all	3	0	3	0.817	2	P
11	Scallop Trawl	OPEN	GEN	MA	all	1,184	365	819	1.584	1,298	
12	Scallop Trawl	OPEN	LIM	MA	all	280	280				P
13	Otter Trawl, Twin	OPEN	all	MA	all	6,741	3,873	2,868	0.512	1,469	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,200	1,200	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	22,410	22,410	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Shrimp Trawl	OPEN	all	MA	all	115	115	0			P
21	Shrimp Trawl	OPEN	all	NE	all	4,376	4,376				P
22	Floating Trap	OPEN	all	MA	all	18	18				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	576	576	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	1,237	1,237	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	910	734	176	0.614	108	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	95	95				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	110,791	110,724	67	0.527	35	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	3,311	3,281	30	0.554	17	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	52	0	52	0.837	43	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: SCUP (Stenotomus chrysops)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	208	0	208	0.455	94	
36	Scallop Dredge	OPEN	GEN	MA	all	1,229	1,091	138	0.381	53	
37	Scallop Dredge	OPEN	GEN	NE	all	735	735	0			
38	Scallop Dredge	OPEN	LIM	MA	all	233	0	233	1.017	237	
39	Scallop Dredge	OPEN	LIM	NE	all	547	0	547	0.611	334	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	26,300	26,300	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	4,508	930	3,578	0.770	2,755	
43	Pots and Traps, Fish	OPEN	all	MA	all	11,140	10,141	999	1.285	1,284	
44	Pots and Traps, Fish	OPEN	all	NE	all	115,739	105,294	10,445	0.079	823	P
45	Pots and Traps, Conch	OPEN	all	MA	all	14	14	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	125	125	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	1,240	1,219	21	2.634	56	
49	Pots and Traps, Lobster	OPEN	all	NE	all	4,899	2,151	2,748	1.064	2,924	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	34	34				P
53	Beam Trawl	OPEN	all	NE	all	3,850	3,850				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					2,044	1,840	204	0.329	67	
	Other minor fleets					681	681				
					TOTAL	14,661,131	13,584,888	1,076,243	0.180	193,495	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: AMERICAN PLAICE (Hippoglossoides platessoides)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	1,867	1,054	813	0.838	682	
6	Otter Trawl	OPEN	all	MA	lg	4,794	167	4,627	1.040	4,811	
7	Otter Trawl	OPEN	all	NE	sm	13,195	2,440	10,755	0.313	3,365	
8	Otter Trawl	OPEN	all	NE	lg	2,570,358	2,405,203	165,155	0.076	12,471	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	41	3	38	0.081	3	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	178	117	61	0.186	11	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	45,010	33,988	11,022	0.278	3,063	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	5	5	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	24,312	21,962	2,350	0.173	407	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	1,077	431	646	0.760	491	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	918	0	918	0.940	863	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: AMERICAN PLAICE (Hippoglossoides platessoides)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	2,105	0	2,105	0.507	1,066	
36	Scallop Dredge	OPEN	GEN	MA	all	116	0	116	0.714	83	
37	Scallop Dredge	OPEN	GEN	NE	all	1,232	0	1,232	0.358	441	
38	Scallop Dredge	OPEN	LIM	MA	all	25	0	25	0.862	22	
39	Scallop Dredge	OPEN	LIM	NE	all	23,022	975	22,047	0.310	6,843	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	1	0	1	0.257	<1	
	Confidential fleets					206	124	82	0.217	18	
	Other minor fleets					0	0				
					TOTAL	2,688,464	2,466,469	221,995	0.071	15,785	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC COD (Gadus morhua)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	259	259	0			
3	Hand Line	OPEN	all	MA	all	3,620	3,620	0			P
4	Hand Line	OPEN	all	NE	all	44,804	27,688	17,116	0.860	14,714	
5	Otter Trawl	OPEN	all	MA	sm	6,998	40	6,958	1.718	11,953	
6	Otter Trawl	OPEN	all	MA	lg	4,444	3,278	1,166	0.520	606	
7	Otter Trawl	OPEN	all	NE	sm	5,380	738	4,642	0.421	1,954	
8	Otter Trawl	OPEN	all	NE	lg	2,465,648	2,395,302	70,346	0.138	9,693	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	43	43	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	250	185	65	0.009	1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	7,817	788	7,029	0.089	622	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	258,457	240,192	18,265	0.193	3,521	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	601	23	578	0.530	307	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	251	200	51	0.858	43	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	1,798	1,798				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	649,490	621,309	28,181	0.082	2,300	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	24,156	18,759	5,397	0.165	892	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	117	0	117	0.941	110	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC COD (Gadus morhua)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	988	0	988	0.304	301	
36	Scallop Dredge	OPEN	GEN	MA	all	20	0	20	1.162	23	
37	Scallop Dredge	OPEN	GEN	NE	all	331	0	331	0.387	128	
38	Scallop Dredge	OPEN	LIM	MA	all	89	15	74	0.762	56	
39	Scallop Dredge	OPEN	LIM	NE	all	5,650	42	5,608	0.305	1,710	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	3,459	1,732	1,727	0.603	1,041	
44	Pots and Traps, Fish	OPEN	all	NE	all	369	158	211	0.281	59	P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	3,639	1,977	1,662	1.266	2,104	
49	Pots and Traps, Lobster	OPEN	all	NE	all	45,177	753	44,424	0.432	19,197	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					950	806	144	0.383	55	
	Other minor fleets					1,700	1,700				
					TOTAL	3,536,504	3,321,405	215,099	0.136	29,216	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC HALIBUT (Hippoglossus hippoglossus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	1,819	1,819	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	364	364	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	37	0	37	0.648	24	
7	Otter Trawl	OPEN	all	NE	sm	1,321	0	1,321	0.495	654	
8	Otter Trawl	OPEN	all	NE	lg	69,671	26,264	43,407	0.096	4,155	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	6,890	2,718	4,172	0.311	1,299	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	82	82	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	9,626	4,002	5,624	0.131	735	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	22,265	2,911	19,354	0.209	4,036	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC HALIBUT (Hippoglossus hippoglossus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	38	0	38	0.859	32	
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	289	0	289	1.115	322	
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	1,646	0	1,646	0.879	1,446	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	311	311	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					0	0	0			
	Other minor fleets					0	0				
					TOTAL	114,359	38,471	75,888	0.082	6,197	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC WOLFFISH (Anarhichas lupus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	928	0	928	1.597	1,482	
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	1,583	0	1,583	0.490	776	
8	Otter Trawl	OPEN	all	NE	lg	27,580	0	27,580	0.125	3,437	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,983	0	3,983	0.350	1,396	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	41	0	41	0.797	33	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	6,258	0	6,258	0.104	650	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	180	0	180	0.956	172	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC WOLFFISH (Anarhichas lupus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	0	0	0			
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	317	0	317	0.611	194	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	3,086	0	3,086	1.292	3,987	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					0	0	0			
	Other minor fleets					50	50				
					TOTAL	44,005	50	43,955	0.131	5,739	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: HADDOCK (Melanogrammus aeglefinus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	1,357	462	895	1.340	1,199	
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	4,904	2,677	2,227	1.294	2,882	
5	Otter Trawl	OPEN	all	MA	sm	1,030	0	1,030	1.579	1,626	
6	Otter Trawl	OPEN	all	MA	lg	55	2	53	0.821	43	
7	Otter Trawl	OPEN	all	NE	sm	1,479,743	15,805	1,463,938	0.249	363,997	
8	Otter Trawl	OPEN	all	NE	lg	6,116,969	5,372,465	744,504	0.105	78,049	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	44,179	35,568	8,611	0.040	345	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	436,737	405,197	31,540	0.017	521	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	5,084,788	4,679,265	405,523	0.167	67,802	
20	Shrimp Trawl	OPEN	all	MA	all	50	50	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	87	87				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	54,731	44,423	10,308	0.077	792	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	791	534	257	0.293	75	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	363	0	363	0.817	297	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: HADDOCK (Melanogrammus aeglefinus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	2,970	0	2,970	0.276	821	
36	Scallop Dredge	OPEN	GEN	MA	all	17	0	17	0.654	11	
37	Scallop Dredge	OPEN	GEN	NE	all	740	0	740	0.603	446	
38	Scallop Dredge	OPEN	LIM	MA	all	25	0	25	0.958	24	
39	Scallop Dredge	OPEN	LIM	NE	all	27,800	6	27,794	0.222	6,164	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	15,859	15,855	4	0.770	3	
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	6	6	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	2,478	0	2,478	0.537	1,330	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	7,700	7,700	0			
	Confidential fleets					181,223	171,710	9,513	0.174	1,656	
	Other minor fleets					300	300				
					TOTAL	13,464,903	10,752,112	2,712,791	0.140	378,470	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: OCEAN POUT (Zoarces americanus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	2	2	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	12,780	0	12,780	0.844	10,787	
6	Otter Trawl	OPEN	all	MA	lg	48,237	187	48,050	0.385	18,494	
7	Otter Trawl	OPEN	all	NE	sm	1,177	0	1,177	1.040	1,223	
8	Otter Trawl	OPEN	all	NE	lg	69,689	0	69,689	0.174	12,145	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	310	0	310	0.624	193	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	46	0	46	0.479	22	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,027	0	3,027	0.378	1,145	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	65	0	65	0.339	22	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	4	0	4	1.113	5	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: OCEAN POUT (Zoarces americanus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	170	0	170	0.340	58	
36	Scallop Dredge	OPEN	GEN	MA	all	366	0	366	0.728	266	
37	Scallop Dredge	OPEN	GEN	NE	all	195	0	195	0.695	135	
38	Scallop Dredge	OPEN	LIM	MA	all	169	0	169	0.497	84	
39	Scallop Dredge	OPEN	LIM	NE	all	1,782	0	1,782	0.311	555	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	16,355	0	16,355	0.902	14,750	
49	Pots and Traps, Lobster	OPEN	all	NE	all	18,761	0	18,761	0.829	15,544	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					0	0	0			
	Other minor fleets					0	0				
					TOTAL	173,134	189	172,945	0.189	32,685	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: POLLOCK (Pollachius virens)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	618	618	0			P
4	Hand Line	OPEN	all	NE	all	58,511	44,046	14,465	0.989	14,312	
5	Otter Trawl	OPEN	all	MA	sm	600	600	0			
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	1,527	60	1,467	0.308	452	
8	Otter Trawl	OPEN	all	NE	lg	3,656,249	3,513,705	142,544	0.217	30,980	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	18	3	15	0.085	1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	2,550	2,550	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	315,775	305,035	10,740	0.292	3,137	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	32	32	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	3,300	3,300				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	2,602,768	2,486,467	116,301	0.099	11,504	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	12,113	8,977	3,136	0.222	695	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: POLLOCK (Pollachius virens)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	0	0	0			
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	0	0	0			
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	139	0	139	0.784	109	
43	Pots and Traps, Fish	OPEN	all	MA	all	3	3	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	4	4	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	386	0	386	0.880	339	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	50	0	50	0.254	13	
	Confidential fleets					18	18	0			
	Other minor fleets					0	0				
					TOTAL	6,654,661	6,365,418	289,243	0.125	36,160	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: REDFISH (Sebastes fasciatus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	70	70	0			
2	Longline	OPEN	all	NE	all	20	20	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	891	743	148	1.628	242	
5	Otter Trawl	OPEN	all	MA	sm	12	0	12	1.750	21	
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	3,546	70	3,476	0.467	1,624	
8	Otter Trawl	OPEN	all	NE	lg	9,396,492	9,094,091	302,401	0.180	54,513	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	18,786	18,786	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	396,647	369,344	27,303	0.372	10,154	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	10	10	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	119,540	113,330	6,210	0.203	1,264	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	58	55	3	0.886	3	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: REDFISH (Sebastes fasciatus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	207	0	207	0.772	160	
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	26	0	26	0.996	26	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	3,663	815	2,848	0.879	2,503	
43	Pots and Traps, Fish	OPEN	all	MA	all	40	40	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	2,018	0	2,018	0.793	1,601	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	2	0	2	0.257	<1	
	Confidential fleets					0	0	0			
	Other minor fleets					0	0				
					TOTAL	9,942,028	9,597,374	344,654	0.161	55,569	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WHITE HAKE (Urophycis tenuis)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	119	38	81	0.852	69	
2	Longline	OPEN	all	NE	all	50	50	0			
3	Hand Line	OPEN	all	MA	all	167	167	0			P
4	Hand Line	OPEN	all	NE	all	1,850	1,850	0			
5	Otter Trawl	OPEN	all	MA	sm	12,620	55	12,565	1.858	23,347	
6	Otter Trawl	OPEN	all	MA	lg	3,123	2,995	128	0.508	65	
7	Otter Trawl	OPEN	all	NE	sm	8,025	678	7,347	0.546	4,012	
8	Otter Trawl	OPEN	all	NE	lg	1,896,962	1,882,310	14,652	0.381	5,582	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	695	695	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	17	17	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	77	77	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	98,369	98,113	256	0.497	127	
20	Shrimp Trawl	OPEN	all	MA	all	462	0	462	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	6	6	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	217	0	217	0.859	186	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	52	52				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	559,849	537,209	22,640	0.133	3,013	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	4,915	4,369	546	0.371	202	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	128	0	128	0.779	100	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WHITE HAKE (Urophycis tenuis)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	902	0	902	0.454	410	
36	Scallop Dredge	OPEN	GEN	MA	all	36	0	36	0.841	30	
37	Scallop Dredge	OPEN	GEN	NE	all	12	0	12	1.279	15	
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	969	0	969	0.415	402	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	87	0	87	0.510	45	
49	Pots and Traps, Lobster	OPEN	all	NE	all	122,513	148	122,365	0.462	56,509	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					2,204	2,204	0			
	Other minor fleets					160	160				
					TOTAL	2,714,585	2,531,193	183,392	0.336	61,605	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WINDOWPANE FLOUNDER (Scophthalmus aquosus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	11	11	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	79,551	1,863	77,688	0.303	23,501	
6	Otter Trawl	OPEN	all	MA	lg	392,512	0	392,512	0.156	61,037	
7	Otter Trawl	OPEN	all	NE	sm	29,918	0	29,918	0.274	8,204	
8	Otter Trawl	OPEN	all	NE	lg	352,407	0	352,407	0.091	31,898	
9	Scallop Trawl	AA	GEN	MA	all	55	0	55	0.506	28	P
11	Scallop Trawl	OPEN	GEN	MA	all	5,386	0	5,386	0.505	2,721	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	11,740	0	11,740	0.543	6,380	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	101	0	101	0.081	8	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	464	0	464	0.165	77	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	19,801	0	19,801	0.248	4,913	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	100	7	93	1.190	111	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	810	314	496	0.552	274	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	89	21	68	0.439	30	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	1,515	2	1,513	0.180	272	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	173	0	173	0.414	72	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	639	0	639	0.443	283	
33	Scallop Dredge	AA	GEN	NE	all	219	0	219	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	39,096	0	39,096	0.748	29,260	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WINDOWPANE FLOUNDER (Scophthalmus aquosus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	149,974	0	149,974	0.233	34,930	
36	Scallop Dredge	OPEN	GEN	MA	all	33,084	0	33,084	0.139	4,590	
37	Scallop Dredge	OPEN	GEN	NE	all	23,654	0	23,654	0.201	4,765	
38	Scallop Dredge	OPEN	LIM	MA	all	55,621	0	55,621	0.205	11,380	
39	Scallop Dredge	OPEN	LIM	NE	all	489,007	0	489,007	0.236	115,276	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	7	7	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	19	0	19	1.245	23	
49	Pots and Traps, Lobster	OPEN	all	NE	all	4,456	0	4,456	0.700	3,121	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					110	0	110	0.371	41	
	Other minor fleets					0	0				
					TOTAL	1,690,518	2,225	1,688,293	0.086	144,855	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WINTER FLOUNDER (Pseudopleuronectes americanus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	160	160	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	117	117	0			
5	Otter Trawl	OPEN	all	MA	sm	21,643	1,490	20,153	0.542	10,931	
6	Otter Trawl	OPEN	all	MA	lg	139,929	109,091	30,838	0.246	7,590	
7	Otter Trawl	OPEN	all	NE	sm	69,944	19,741	50,203	0.217	10,910	
8	Otter Trawl	OPEN	all	NE	lg	3,292,728	3,236,325	56,403	0.156	8,794	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	74	0	74	0.624	46	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	3,026	2,526	500	1.006	503	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	103	103	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	225	225	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	441,067	439,647	1,420	0.427	606	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	5	5				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	29	6	23	0.583	13	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	274	274	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	48,776	47,640	1,136	0.146	165	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	3,322	3,159	163	0.588	96	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	54	0	54	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	1,644	0	1,644	0.685	1,126	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WINTER FLOUNDER (Pseudopleuronectes americanus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	42,242	835	41,407	0.317	13,136	
36	Scallop Dredge	OPEN	GEN	MA	all	2,668	0	2,668	0.269	719	
37	Scallop Dredge	OPEN	GEN	NE	all	15,694	50	15,644	0.211	3,295	
38	Scallop Dredge	OPEN	LIM	MA	all	4,224	0	4,224	0.423	1,787	
39	Scallop Dredge	OPEN	LIM	NE	all	217,808	1,350	216,458	0.175	37,818	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	5	5	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	36	0	36	2.634	94	
49	Pots and Traps, Lobster	OPEN	all	NE	all	15	0	15	3.057	47	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					1,711	1,679	32	0.383	12	
	Other minor fleets					0	0				
					TOTAL	4,307,522	3,864,428	443,094	0.101	44,640	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WITCH FLOUNDER (Glyptocephalus cynoglossus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	41,765	0	41,765	0.601	25,101	
6	Otter Trawl	OPEN	all	MA	lg	13,748	1,338	12,410	0.232	2,880	
7	Otter Trawl	OPEN	all	NE	sm	9,311	1,155	8,156	0.493	4,018	
8	Otter Trawl	OPEN	all	NE	lg	1,014,576	928,674	85,902	0.106	9,104	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	401	0	401	0.530	213	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	22	21	1	0.084	<1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	654	593	61	0.223	14	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	30,522	26,113	4,409	0.312	1,375	
20	Shrimp Trawl	OPEN	all	MA	all	31,170	0	31,170	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	27	0	27	0.857	24	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	7	7				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	6,576	6,275	301	0.170	51	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	467	459	8	0.955	8	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	1,809	0	1,809	0.498	902	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: WITCH FLOUNDER (Glyptocephalus cynoglossus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	4,692	0	4,692	0.207	970	
36	Scallop Dredge	OPEN	GEN	MA	all	520	0	520	0.376	196	
37	Scallop Dredge	OPEN	GEN	NE	all	3,140	0	3,140	0.678	2,130	
38	Scallop Dredge	OPEN	LIM	MA	all	2,382	0	2,382	0.278	663	
39	Scallop Dredge	OPEN	LIM	NE	all	49,996	475	49,521	0.224	11,077	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	9	0	9	3.034	28	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					16	13	3	0.383	1	
	Other minor fleets					0	0				
					TOTAL	1,211,813	965,123	246,690	0.119	29,475	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: YELLOWTAIL FLOUNDER (Limanda ferruginea)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	1	1	0			
5	Otter Trawl	OPEN	all	MA	sm	2,801	17	2,784	0.822	2,288	
6	Otter Trawl	OPEN	all	MA	lg	166,085	138,575	27,510	0.368	10,114	
7	Otter Trawl	OPEN	all	NE	sm	27,330	15	27,315	0.336	9,169	
8	Otter Trawl	OPEN	all	NE	lg	1,396,478	1,340,998	55,480	0.129	7,144	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	871	0	871	0.624	544	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	10,688	9,656	1,032	0.738	762	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	121	43	78	0.069	5	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	1,119	814	305	0.186	57	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	17,140	11,980	5,160	0.563	2,905	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	68	0	68	0.672	45	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	39	10	29	0.862	25	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	54,030	52,183	1,847	0.171	315	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	761	688	73	0.693	51	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	45	0	45	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	11,492	0	11,492	0.679	7,804	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: YELLOWTAIL FLOUNDER (Limanda ferruginea)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	68,354	0	68,354	0.178	12,133	
36	Scallop Dredge	OPEN	GEN	MA	all	5,541	0	5,541	0.197	1,089	
37	Scallop Dredge	OPEN	GEN	NE	all	29,055	0	29,055	0.110	3,183	
38	Scallop Dredge	OPEN	LIM	MA	all	18,205	0	18,205	0.405	7,365	
39	Scallop Dredge	OPEN	LIM	NE	all	139,558	0	139,558	0.140	19,479	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					167	109	58	0.751	44	
	Other minor fleets					0	0				
					TOTAL	1,949,951	1,555,089	394,862	0.076	30,086	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: OFFSHORE HAKE (Merluccius albidus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	415	152	263	1.312	345	
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	3	3	0			
5	Otter Trawl	OPEN	all	MA	sm	10,963	1,200	9,763	1.846	18,027	
6	Otter Trawl	OPEN	all	MA	lg	1,296	869	427	0.634	271	
7	Otter Trawl	OPEN	all	NE	sm	1,021	924	97	0.873	85	
8	Otter Trawl	OPEN	all	NE	lg	2,814	2,511	303	0.835	252	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0			
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0	0			P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Shrimp Trawl	OPEN	all	MA	all	32,239	0	32,239	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	3	3	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	51	47	4	0.863	4	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	2	2	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: OFFSHORE HAKE (Merluccius albidus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	118	63	55	0.771	42	
36	Scallop Dredge	OPEN	GEN	MA	all	33	33	0			
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	0	0	0			
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0			
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					1	0	1	0.615	1	
	Other minor fleets					0	0				
					TOTAL	48,960	5,807	43,153	0.418	18,035	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: RED HAKE (Urophycis chuss)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	323	0	323	1.201	388	
2	Longline	OPEN	all	NE	all	471	45	426	1.349	575	
3	Hand Line	OPEN	all	MA	all	2,138	2,138	0			P
4	Hand Line	OPEN	all	NE	all	17	17	0			
5	Otter Trawl	OPEN	all	MA	sm	466,979	333,761	133,218	0.418	55,726	
6	Otter Trawl	OPEN	all	MA	lg	43,319	28,813	14,506	0.324	4,706	
7	Otter Trawl	OPEN	all	NE	sm	1,581,606	590,255	991,351	0.279	276,336	
8	Otter Trawl	OPEN	all	NE	lg	281,107	42,732	238,375	0.111	26,454	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	98	72	26	1.065	27	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	5,236	0	5,236	0.007	35	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	1,252	0	1,252	0.154	193	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	43,659	2	43,657	0.356	15,555	
20	Shrimp Trawl	OPEN	all	MA	all	12,489	16	12,473	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	760	760				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	10	10	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	3	3	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	4,448	50	4,398	0.104	456	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	54	0	54	0.413	22	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	197	0	197	0.780	153	
33	Scallop Dredge	AA	GEN	NE	all	394	0	394	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	6,828	0	6,828	0.693	4,732	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: RED HAKE (Urophycis chuss)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	51,007	0	51,007	0.194	9,892	
36	Scallop Dredge	OPEN	GEN	MA	all	925	0	925	0.351	325	
37	Scallop Dredge	OPEN	GEN	NE	all	3,806	0	3,806	0.319	1,212	
38	Scallop Dredge	OPEN	LIM	MA	all	3,268	0	3,268	0.455	1,487	
39	Scallop Dredge	OPEN	LIM	NE	all	92,291	0	92,291	0.152	14,048	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	6	1	5	1.191	5	
43	Pots and Traps, Fish	OPEN	all	MA	all	4,403	4,403	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	17,737	16,343	1,394	0.706	985	
49	Pots and Traps, Lobster	OPEN	all	NE	all	74,761	11,420	63,341	0.596	37,741	
50	Pots and Traps, Crab	OPEN	all	MA	all	10	10				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	2,600	2,600				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					1,608	0	1,608	0.411	661	
	Other minor fleets					70	70				
					TOTAL	2,703,881	1,033,521	1,670,360	0.172	286,668	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: SILVER HAKE (Merluccius bilinearis)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	19	9	10	1.561	15	
2	Longline	OPEN	all	NE	all	428	2	426	0.942	402	
3	Hand Line	OPEN	all	MA	all	40	40	0			P
4	Hand Line	OPEN	all	NE	all	193	193	0			
5	Otter Trawl	OPEN	all	MA	sm	4,074,060	3,979,438	94,622	0.466	44,117	
6	Otter Trawl	OPEN	all	MA	lg	136,790	98,048	38,742	0.394	15,272	
7	Otter Trawl	OPEN	all	NE	sm	11,275,325	10,141,415	1,133,910	0.225	255,124	
8	Otter Trawl	OPEN	all	NE	lg	1,034,787	482,321	552,466	0.073	40,459	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	37	9	28	0.624	17	
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	5,941	268	5,673	0.494	2,802	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	25,466	0	25,466	0.034	876	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	9,844	800	9,044	0.121	1,095	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	64,319	17,381	46,938	0.211	9,922	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	41,625	41,625				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	12	12	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	75	61	14	0.788	11	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	208	12	196	0.510	100	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	40	40				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	175,597	152,047	23,550	0.153	3,614	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	11,296	9,229	2,067	0.245	506	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	103	0	103	0.370	38	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	1,849	0	1,849	0.380	703	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: SILVER HAKE (Merluccius bilinearis)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	11,778	0	11,778	0.221	2,599	
36	Scallop Dredge	OPEN	GEN	MA	all	461	0	461	0.317	146	
37	Scallop Dredge	OPEN	GEN	NE	all	2,085	0	2,085	0.232	483	
38	Scallop Dredge	OPEN	LIM	MA	all	1,380	0	1,380	0.264	365	
39	Scallop Dredge	OPEN	LIM	NE	all	28,133	100	28,033	0.179	5,015	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	26,606	26,546	60	0.703	42	
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	1	1	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	2,061	2,012	49	1.206	60	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	8,000	8,000				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	1	0	1	0.257	<1	
	Confidential fleets					11,985	546	11,439	0.307	3,515	
	Other minor fleets					1,250	1,250				
					TOTAL	16,951,795	14,961,405	1,990,390	0.132	262,815	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC MACKEREL (Scomber scombrus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	317	317	0			
3	Hand Line	OPEN	all	MA	all	447	447	0			P
4	Hand Line	OPEN	all	NE	all	689,049	662,121	26,928	0.793	21,354	
5	Otter Trawl	OPEN	all	MA	sm	174,311	148,696	25,615	0.616	15,769	
6	Otter Trawl	OPEN	all	MA	lg	3,908	3,824	84	0.449	38	
7	Otter Trawl	OPEN	all	NE	sm	1,975,372	1,957,187	18,185	0.558	10,147	
8	Otter Trawl	OPEN	all	NE	lg	7,639	4,916	2,723	0.175	476	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	135	1	134	0.530	71	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	16	0	16	0.009	<1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	5,038	0	5,038	0.186	935	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	4,703	313	4,390	0.718	3,152	
20	Shrimp Trawl	OPEN	all	MA	all	0	0	0			P
21	Shrimp Trawl	OPEN	all	NE	all	5	5				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	3,428	3,428				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	102	102	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	164	164	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	308	301	7	0.855	6	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	20	20				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	25,224	22,557	2,667	0.184	490	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	659	191	468	0.537	251	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	1,515	1,500	15	1.133	18	
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0			

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: ATLANTIC MACKEREL (Scomber scombrus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	6	0	6	1.068	7	
36	Scallop Dredge	OPEN	GEN	MA	all	62	2	60	0.905	54	
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0			
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0			
39	Scallop Dredge	OPEN	LIM	NE	all	39	0	39	0.546	21	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	2,561,000	2,561,000	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	5,851,233	5,851,182	51	0.723	37	
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	20	20				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	2	0	2	0.188	<1	
	Confidential fleets					50	0	50	0.543	27	
	Other minor fleets					24,863	24,863				
					TOTAL	11,329,637	11,243,157	86,480	0.331	28,618	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: BUTTERFISH (Peprilus triacanthus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	10	10	0			P
4	Hand Line	OPEN	all	NE	all	4	4	0			
5	Otter Trawl	OPEN	all	MA	sm	1,134,157	484,897	649,260	0.549	356,349	
6	Otter Trawl	OPEN	all	MA	lg	91,128	80,680	10,448	0.262	2,740	
7	Otter Trawl	OPEN	all	NE	sm	6,262,257	5,154,096	1,108,161	0.218	242,005	
8	Otter Trawl	OPEN	all	NE	lg	43,187	38,254	4,933	0.185	913	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	55,372	582	54,790	0.517	28,339	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	142	0	142	0.009	1	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	114	0	114	0.547	62	
20	Shrimp Trawl	OPEN	all	MA	all	772	772	0			P
21	Shrimp Trawl	OPEN	all	NE	all	2,446	2,446				P
22	Floating Trap	OPEN	all	MA	all	353	353				P
23	Floating Trap	OPEN	all	NE	all	1	1				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	10,610	10,179	431	1.394	600	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	240	236	4	2.179	9	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	29	25	4	0.855	4	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	5	5				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	32	5	27	0.245	7	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	90	0	90	0.589	53	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: BUTTERFISH (Peprilus triacanthus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	96	0	96	0.587	56	
36	Scallop Dredge	OPEN	GEN	MA	all	12	0	12	0.499	6	
37	Scallop Dredge	OPEN	GEN	NE	all	31	31	0			
38	Scallop Dredge	OPEN	LIM	MA	all	78	0	78	0.696	54	
39	Scallop Dredge	OPEN	LIM	NE	all	29	0	29	0.453	13	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	2,151	305	1,846	0.770	1,421	
43	Pots and Traps, Fish	OPEN	all	MA	all	1	1	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	81	81	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	2	2				P
53	Beam Trawl	OPEN	all	NE	all	1,205	1,205				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					67,170	14,151	53,019	0.580	30,766	
	Other minor fleets					991	991				
					TOTAL	7,672,796	5,789,312	1,883,484	0.230	432,795	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: NORTHERN SHORTFIN SQUID (Illex illecebrosus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			P
4	Hand Line	OPEN	all	NE	all	11	11	0			
5	Otter Trawl	OPEN	all	MA	sm	7,958,372	7,827,792	130,580	0.451	58,827	
6	Otter Trawl	OPEN	all	MA	lg	1,663	1,180	483	1.131	546	
7	Otter Trawl	OPEN	all	NE	sm	9,313,301	9,128,938	184,363	0.300	55,244	
8	Otter Trawl	OPEN	all	NE	lg	33,969	1,238	32,731	0.152	4,980	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0			
12	Scallop Trawl	OPEN	LIM	MA	all	0	0				P
13	Otter Trawl, Twin	OPEN	all	MA	all	52,128	0	52,128	0.530	27,628	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	98	0	98	0.084	8	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	0	0	0			P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	1,888	0	1,888	0.328	619	
20	Shrimp Trawl	OPEN	all	MA	all	43,248	0	43,248	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	0	0				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	0	0				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	3	0	3	0.633	2	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	0	0	0			
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	35	0	35	0.729	26	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: NORTHERN SHORTFIN SQUID (Illex illecebrosus)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	237	0	237	0.419	99	
36	Scallop Dredge	OPEN	GEN	MA	all	19	0	19	1.031	19	
37	Scallop Dredge	OPEN	GEN	NE	all	48	0	48	0.778	37	
38	Scallop Dredge	OPEN	LIM	MA	all	23	5	18	0.690	12	
39	Scallop Dredge	OPEN	LIM	NE	all	205	0	205	0.440	90	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	0	0	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	193	192	1	1.191	2	
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	0	0				P
53	Beam Trawl	OPEN	all	NE	all	0	0				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					24,970	0	24,970	0.093	2,322	
	Other minor fleets					0	0				
					TOTAL	17,430,410	16,959,356	471,054	0.181	85,479	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: LONGFIN INSHORE SQUID (Doryteuthis [Amerigo] pealeii)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	0	0	0			
2	Longline	OPEN	all	NE	all	7	7	0			
3	Hand Line	OPEN	all	MA	all	78	78	0			P
4	Hand Line	OPEN	all	NE	all	386	386	0			
5	Otter Trawl	OPEN	all	MA	sm	6,139,161	6,005,199	133,962	0.467	62,517	
6	Otter Trawl	OPEN	all	MA	lg	268,214	258,814	9,400	0.318	2,993	
7	Otter Trawl	OPEN	all	NE	sm	13,188,930	13,097,795	91,135	0.306	27,899	
8	Otter Trawl	OPEN	all	NE	lg	258,776	248,259	10,517	0.202	2,127	
9	Scallop Trawl	AA	GEN	MA	all	0	0	0			P
11	Scallop Trawl	OPEN	GEN	MA	all	225	104	121	0.992	120	
12	Scallop Trawl	OPEN	LIM	MA	all	10	10				P
13	Otter Trawl, Twin	OPEN	all	MA	all	737,794	706,450	31,344	0.484	15,185	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,002	545	457	0.009	4	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	1,699	1,455	244	0.186	45	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	4,133	447	3,686	0.752	2,771	
20	Shrimp Trawl	OPEN	all	MA	all	277	277	0			P
21	Shrimp Trawl	OPEN	all	NE	all	49,407	49,407				P
22	Floating Trap	OPEN	all	MA	all	0	0				P
23	Floating Trap	OPEN	all	NE	all	4	4				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	14	14	0			
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	156	156	0			
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	1	1	0			
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	0	0				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	1	1	0			
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0			
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	0	0	0			
32	Scallop Dredge	AA	GEN	MA	all	24	1	23	0.743	17	
33	Scallop Dredge	AA	GEN	NE	all	0	0	0			P
34	Scallop Dredge	AA	LIM	MA	all	839	0	839	0.317	266	

See text for fleet abbreviations.

Table 5B, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 23 individual species that compose the 14 species groups, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: LONGFIN INSHORE SQUID (Doryteuthis [Amerigo] pealeii)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	468	0	468	0.499	234	
36	Scallop Dredge	OPEN	GEN	MA	all	863	60	803	0.338	271	
37	Scallop Dredge	OPEN	GEN	NE	all	98	0	98	0.450	44	
38	Scallop Dredge	OPEN	LIM	MA	all	2,453	50	2,403	0.299	719	
39	Scallop Dredge	OPEN	LIM	NE	all	5,720	0	5,720	0.292	1,673	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	135	135	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	1,692	1,320	372	0.770	287	
43	Pots and Traps, Fish	OPEN	all	MA	all	118	118	0			
44	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			P
45	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
49	Pots and Traps, Lobster	OPEN	all	NE	all	338	209	129	0.746	96	
50	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
51	Pots and Traps, Crab	OPEN	all	NE	all	0	0				P
52	Beam Trawl	OPEN	all	MA	all	43,872	43,872				P
53	Beam Trawl	OPEN	all	NE	all	2,525	2,525				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	0	0				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	0	0				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0			
	Confidential fleets					557,011	549,658	7,353	0.590	4,336	
	Other minor fleets					357,635	357,635				
					TOTAL	21,624,068	21,324,992	299,076	0.236	70,434	

See text for fleet abbreviations.

Table 5C. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 Standardized Bycatch Reporting Methodology (SBRM) species groups combined, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CV were not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: 14 SBRM SPECIES GROUPS COMBINED

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline	OPEN	all	MA	all	1,779,607	1,663,161	116,446	0.386	44,939	
2	Longline	OPEN	all	NE	all	3,450,002	3,343,427	106,575	0.990	105,559	
3	Hand Line	OPEN	all	MA	all	285,583	283,724	1,859	0.649	1,206	P
4	Hand Line	OPEN	all	NE	all	1,896,880	1,832,723	64,156	0.603	38,654	
5	Otter Trawl	OPEN	all	MA	sm	32,890,827	25,734,057	7,156,771	0.151	1,079,920	
6	Otter Trawl	OPEN	all	MA	lg	32,346,375	13,640,578	18,705,797	0.093	1,744,884	
7	Otter Trawl	OPEN	all	NE	sm	62,304,639	53,574,756	8,729,883	0.100	873,613	
8	Otter Trawl	OPEN	all	NE	lg	87,293,310	50,928,385	36,364,925	0.065	2,378,096	
9	Scallop Trawl	AA	GEN	MA	all	580,852	429,539	151,313	0.504	76,206	P
11	Scallop Trawl	OPEN	GEN	MA	all	737,554	302,630	434,923	0.146	63,336	
12	Scallop Trawl	OPEN	LIM	MA	all	43,203	43,203				P
13	Otter Trawl, Twin	OPEN	all	MA	all	2,814,039	1,136,191	1,677,848	0.528	885,103	
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,564,121	1,409,864	154,257	0.035	5,444	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	799,102	703,151	95,951	0.052	5,012	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	8,982,734	6,448,116	2,534,619	0.124	314,259	
20	Shrimp Trawl	OPEN	all	MA	all	708,834	378,256	330,579	0.000	0	P
21	Shrimp Trawl	OPEN	all	NE	all	132,543	132,543				P
22	Floating Trap	OPEN	all	MA	all	99,526	99,526				P
23	Floating Trap	OPEN	all	NE	all	5,698	5,698				P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	1,989,396	1,508,681	480,715	0.914	439,170	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	4,531,724	4,321,157	210,566	0.804	169,204	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	6,836,857	6,094,991	741,865	0.091	67,422	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	17,059	17,059				P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	12,983,953	9,479,800	3,504,153	0.111	387,526	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	21,703,621	19,510,458	2,193,163	0.079	172,967	
30	Purse Seine	OPEN	all	MA	all	0	0				P
31	Purse Seine	OPEN	all	NE	all	60,894,904	60,894,749	155	0.284	44	
32	Scallop Dredge	AA	GEN	MA	all	6,533,627	5,738,125	795,501	0.289	230,225	
33	Scallop Dredge	AA	GEN	NE	all	310,287	295,522	14,765	0.000	0	P
34	Scallop Dredge	AA	LIM	MA	all	45,583,606	42,748,672	2,834,935	0.207	586,738	

See text for fleet abbreviations.

Table 5C, continued. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 Standardized Bycatch Reporting Methodology (SBRM) species groups combined, by fleet, based on July 2014 through June 2015 data. Dark shading indicates fleets not considered or with no Northeast Fisheries Observer Program trips in the annual analysis. These CV were not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species: 14 SBRM SPECIES GROUPS COMBINED

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
35	Scallop Dredge	AA	LIM	NE	all	52,298,363	45,926,321	6,372,043	0.089	565,272	
36	Scallop Dredge	OPEN	GEN	MA	all	10,708,390	8,503,097	2,205,293	0.096	211,411	
37	Scallop Dredge	OPEN	GEN	NE	all	8,392,008	7,441,196	950,811	0.125	118,806	
38	Scallop Dredge	OPEN	LIM	MA	all	39,699,288	32,681,559	7,017,729	0.114	797,130	
39	Scallop Dredge	OPEN	LIM	NE	all	134,376,602	113,651,751	20,724,851	0.081	1,677,566	
40	Danish Seine	OPEN	all	MA	all	0	0				P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	5,864,525	5,864,525	0			P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	122,771,598	122,356,757	414,841	0.647	268,267	
43	Pots and Traps, Fish	OPEN	all	MA	all	429,005	315,059	113,947	0.448	51,002	
44	Pots and Traps, Fish	OPEN	all	NE	all	279,303	182,435	96,868	0.249	24,085	P
45	Pots and Traps, Conch	OPEN	all	MA	all	21,262	19,649	1,613	2.224	3,587	P
46	Pots and Traps, Conch	OPEN	all	NE	all	635	425	210	0.316	66	
47	Pots and Traps, Hagfish	OPEN	all	NE	all	0	0				P
48	Pots and Traps, Lobster	OPEN	all	MA	all	179,024	149,041	29,982	0.586	17,564	
49	Pots and Traps, Lobster	OPEN	all	NE	all	352,726	39,229	313,497	0.273	85,550	
50	Pots and Traps, Crab	OPEN	all	MA	all	384,758	384,758				P
51	Pots and Traps, Crab	OPEN	all	NE	all	2,452,754	2,452,754				P
52	Beam Trawl	OPEN	all	MA	all	132,589	132,589				P
53	Beam Trawl	OPEN	all	NE	all	35,047	35,047				P
54	Dredge, Other	OPEN	all	MA	all	0	0				P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	179,817,208	179,817,208				P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	160,899,490	160,899,490				P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	11,386,689	11,386,626	63	0.201	13	
	Confidential fleets					1,064,744	904,806	159,938	0.177	28,316	
	Other minor fleets					793,842	793,842				
					TOTAL	1,132,440,311	1,006,636,905	125,803,405	0.032	4,031,261	

See text for fleet abbreviations.

Table 6. The number of sea days needed to achieve a 30% coefficient of variation of the discard estimate for each of the 14 fish and invertebrate species groups, the number of pilot sea days, the number of minimum pilot sea days, and the maximum number of sea days needed for each fleet (2016 Sea Days Needed) for fish and invertebrate species groups based on July 2014 through June 2015 data. Bold red font indicates basis for fleet sea days. "P" indicates fleets with "pilot" designation. Species group abbreviations are given in Table 1.

Row	Fleet Gear Type	Access Area	Trip Category	Region	Mesh Group	BLUE	HERR	SAL	RCRAB	SCAL	SBM	MONK	GFL	GFS	SKATE	DOG	FSB	SCOQ	TILE	Pilot Days	Min Pilot Days	2016 Sea Days Needed	Pilot
1	Longline	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93	**93**	93	
2	Longline	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	**12**	12	
3	Hand Line	OPEN	all	MA	all	66	66	66	66	66	66	66	66	66	66	66	66	66	66	**66**	13	66	P
4	Hand Line	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	**14**	14	
5	Otter Trawl	OPEN	all	MA	sm	0	0	0	0	0	**1,717**	0	0	1,014	694	676	644	0	0	135	30	1,717	
6	Otter Trawl	OPEN	all	MA	lg	0	0	0	0	0	0	229	128	0	77	**240**	217	0	0	187	31	240	
7	Otter Trawl	OPEN	all	NE	sm	0	0	0	0	0	378	0	535	450	464	**798**	723	0	0	177	35	798	
8	Otter Trawl	OPEN	all	NE	lg	0	0	0	**3,531**	0	0	287	146	214	286	304	760	0	0	347	38	3,531	
9	Scallop Trawl	AA	GEN	MA	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	**12**	12	12	P
10	Scallop Trawl	AA	LIM	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	P
11	Scallop Trawl	OPEN	GEN	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	**22**	22	
12	Scallop Trawl	OPEN	LIM	MA	all	15	15	15	15	15	15	15	15	15	15	15	15	15	15	**15**	15	15	P
13	Otter Trawl, Twin	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	**109**	0	0	0	0	19	19	109	
14	Otter Trawl, Twin	OPEN	all	NE	all	48	48	48	48	48	48	48	48	48	48	48	48	48	48	**48**	48	48	P
15	Otter Trawl, Ruhle	OPEN	all	MA	lg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	P
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	29	29	29	29	29	29	29	29	29	29	29	29	29	29	**29**	29	29	P
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	63	63	63	63	63	63	63	63	63	63	63	63	63	63	**63**	63	63	P
18	Otter Trawl, Haddock Separator	OPEN	all	NE	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	**15**	15	
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0	0	0	0	0	109	291	177	**628**	0	0	0	92	92	628	
20	Shrimp Trawl	OPEN	all	MA	all	65	65	65	65	65	65	65	65	65	65	65	65	65	65	**65**	65	65	P
21	Shrimp Trawl	OPEN	all	NE	all	11	11	11	11	11	11	11	11	11	11	11	11	11	11	**11**	11	11	P
22	Floating Trap	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	**6**	6	6	P
23	Floating Trap	OPEN	all	NE	all	3	3	3	3	3	3	3	3	3	3	3	3	3	3	**3**	3	3	P
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	0	0	0	0	0	0	0	0	0	0	**594**	0	0	0	43	12	594	
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	**13**	13	
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	**15**	15	
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	8	8	8	8	8	8	8	8	8	8	8	8	8	8	**8**	8	8	P
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	0	0	0	0	0	0	0	0	0	0	**225**	0	0	0	104	25	225	
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	0	0	0	0	0	0	**190**	0	0	89	134	0	0	0	96	19	190	
30	Purse Seine	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	**6**	6	6	P
31	Purse Seine	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	**19**	19	
32	Scallop Dredge	AA	GEN	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	**11**	11	
33	Scallop Dredge	AA	GEN	NE	all	28	28	28	28	28	28	28	28	28	28	28	28	28	28	**28**	28	28	P
34	Scallop Dredge	AA	LIM	MA	all	0	0	0	0	0	0	**195**	0	0	0	0	0	0	0	105	89	195	
35	Scallop Dredge	AA	LIM	NE	all	0	0	0	0	193	0	117	**266**	0	139	0	0	0	0	105	97	266	
36	Scallop Dredge	OPEN	GEN	MA	all	0	0	0	0	0	0	0	0	0	**22**	0	0	0	0	69	22	22	
37	Scallop Dredge	OPEN	GEN	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	**16**	16	
38	Scallop Dredge	OPEN	LIM	MA	all	0	0	0	0	0	0	**118**	0	0	67	0	0	0	0	105	105	118	
39	Scallop Dredge	OPEN	LIM	NE	all	0	0	0	0	534	0	270	300	289	154	0	**565**	0	0	192	119	565	
40	Danish Seine	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	**6**	6	6	P
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	30	30	30	30	30	30	30	30	30	30	30	30	30	30	**30**	30	30	P
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	**440**	0	0	0	40	40	440	
43	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	**12**	12	
44	Pots and Traps, Fish	OPEN	all	NE	all	16	16	16	16	16	16	16	16	16	16	16	16	16	16	**16**	9	16	P
45	Pots and Traps, Conch	OPEN	all	MA	all	21	21	21	21	21	21	21	21	21	21	21	21	21	21	**21**	12	21	P
46	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	**9**	9	
47	Pots and Traps, Hagfish	OPEN	all	NE	all	97	97	97	97	97	97	97	9	97	97	97	97	97	97	**97**	97	97	P

See text for fleet abbreviations.

Table 6, continued. The number of sea days needed to achieve a 30% coefficient of variation of the discard estimate for each of the 14 fish and invertebrate species groups, the number of pilot sea days, the number of minimum pilot sea days, and the maximum number of sea days needed for each fleet (2016 Sea Days Needed) for fish and invertebrate species groups based on July 2014 through June 2015 data. Bold red font indicates basis for fleet sea days. "P" indicates fleets with "pilot" designation. Species group abbreviations are given in Table 1.

Row	Fleet Gear Type	Access Area	Trip Category	Region	Mesh Group	BLUE	HERR	SAL	RCRAB	SCAL	SBM	MONK	GFL	GFS	SKATE	DOG	FSB	SCOQ	TILE	Pilot Days	Min Pilot Days	2016 Sea Days Needed	Pilot
48	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	**15**	15	
49	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	443	**18**	18	
50	Pots and Traps, Crab	OPEN	all	MA	all	23	23	23	23	23	23	23	23	23	23	23	23	23	23	**23**	23	23	P
51	Pots and Traps, Crab	OPEN	all	NE	all	84	84	84	84	84	84	84	84	84	84	84	84	84	84	**84**	84	84	P
52	Beam Trawl	OPEN	all	MA	all	40	40	40	40	40	40	40	40	40	40	40	40	40	40	**40**	40	40	P
53	Beam Trawl	OPEN	all	NE	all	11	11	11	11	11	11	11	11	11	11	11	11	11	11	**11**	11	11	P
54	Dredge, Other	OPEN	all	MA	all	10	10	10	10	10	10	10	10	10	10	10	10	10	10	**10**	10	10	P
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	64	64	64	64	64	64	64	64	64	64	64	64	64	64	**64**	24	64	P
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	46	46	46	46	46	46	46	46	46	46	46	46	46	46	**46**	17	46	P
57	Mid-water Paired & Single Trawl	AA	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	**16**	16	
					Totals	**808**	**808**	**808**	**4,339**	**1,535**	**2,903**	**2,214**	**2,292**	**3,066**	**3,086**	**4,847**	**3,717**	**808**	**808**	**3,613**	**1,743**	**10,746**	

See text for fleet abbreviations.

Table 7. Number of sea days, trips, and percentage of trips (based upon previous industry activity) needed to achieve a 30% coefficient of variation of the discard estimate, by fleet and species group, based on July 2014 through June 2015 data. See Table 1 for species group abbreviations.

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Species Group	Sea Days	Trips	% of Trips
5	Otter Trawl	OPEN	all	MA	sm	SBM	1,717	784	25
						GFS	1,014	463	15
						SKATE	694	317	10
						DOG	676	309	10
						FSB	644	294	10
6	Otter Trawl	OPEN	all	MA	lg	DOG	240	100	3
						MONK	229	95	2
						FSB	217	90	2
						GFL	128	53	1
						SKATE	77	32	1
7	Otter Trawl	OPEN	all	NE	sm	DOG	798	305	9
						FSB	723	276	8
						GFL	535	204	6
						SKATE	464	178	5
						GFS	450	172	5
						SBM	378	145	4
8	Otter Trawl	OPEN	all	NE	lg	RCRAB	3,531	1,191	20
						FSB	760	256	4
						DOG	304	103	2
						MONK	287	97	2
						SKATE	286	96	2
						GFS	214	72	1
						GFL	146	49	1
13	Otter Trawl, Twin	OPEN	all	MA	all	SKATE	109	71	40
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	DOG	628	83	26
						GFS	291	38	12
						SKATE	177	23	7
						GFL	109	14	4
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	DOG	594	570	27
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	DOG	225	146	4
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	MONK	190	130	4
						DOG	134	91	3
						SKATE	89	61	2
34	Scallop Dredge	AA	LIM	MA	all	MONK	195	28	7
35	Scallop Dredge	AA	LIM	NE	all	GFL	266	33	7
						SCAL	193	24	5
						SKATE	139	17	4
						MONK	117	15	3
36	Scallop Dredge	OPEN	GEN	MA	all	SKATE	22	12	1
38	Scallop Dredge	OPEN	LIM	MA	all	MONK	118	13	4
						SKATE	67	7	2

See text for fleet abbreviations.

Table 7, continued. Number of sea days, trips, and percentage of trips (based upon previous industry activity) needed to achieve a 30% coefficient of variation of the discard estimate, by fleet and species group, based on July 2014 through June 2015 data. See Table 1 for species group abbreviations.

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Species Group	Sea Days	Trips	% of Trips
39	Scallop Dredge	OPEN	LIM	NE	all	FSB	565	55	6
						SCAL	534	52	6
						GFL	300	29	3
						GFS	289	28	3
						MONK	270	26	3
						SKATE	154	15	2
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	DOG	440	134	37

See text for fleet abbreviations.

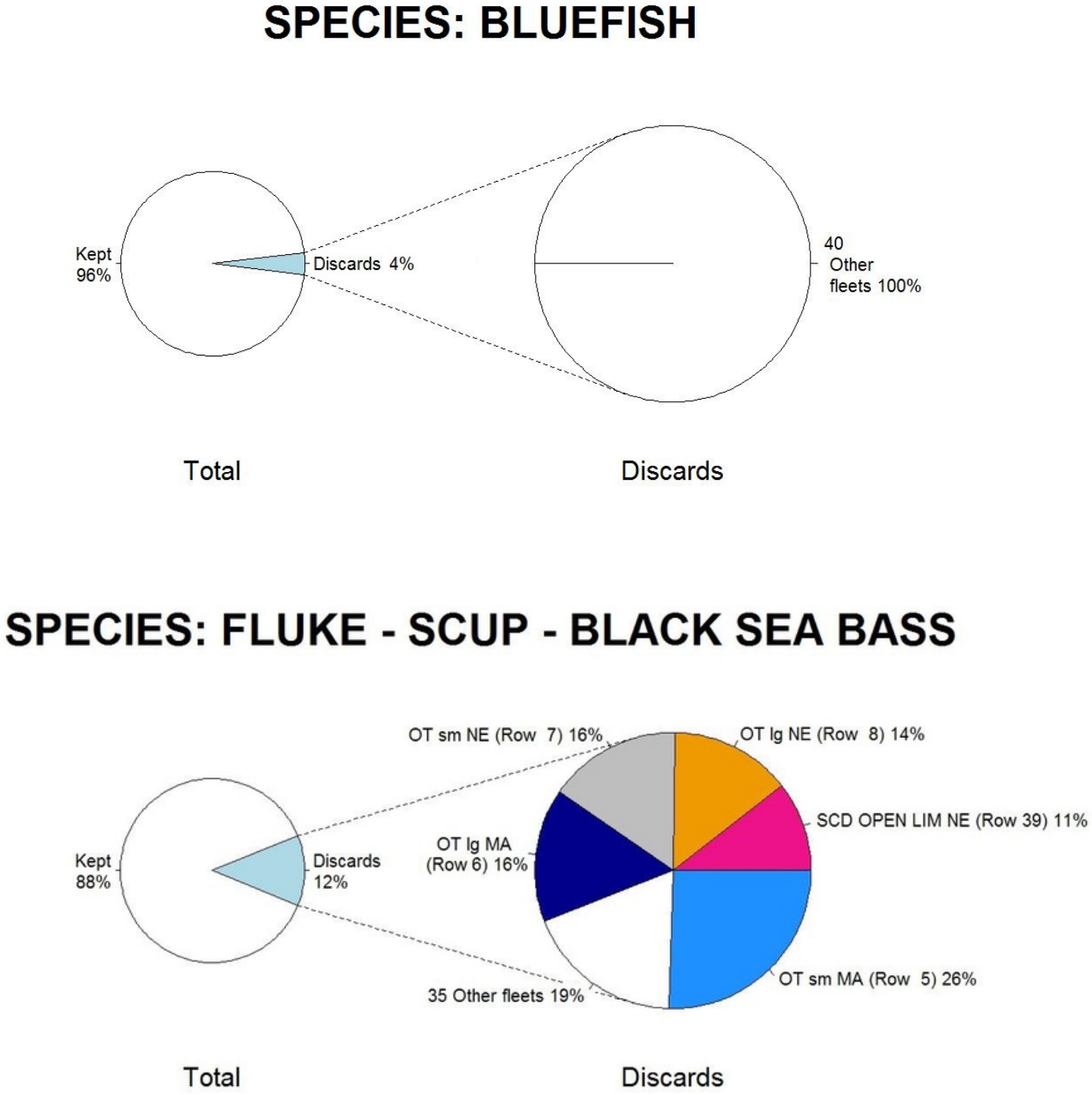
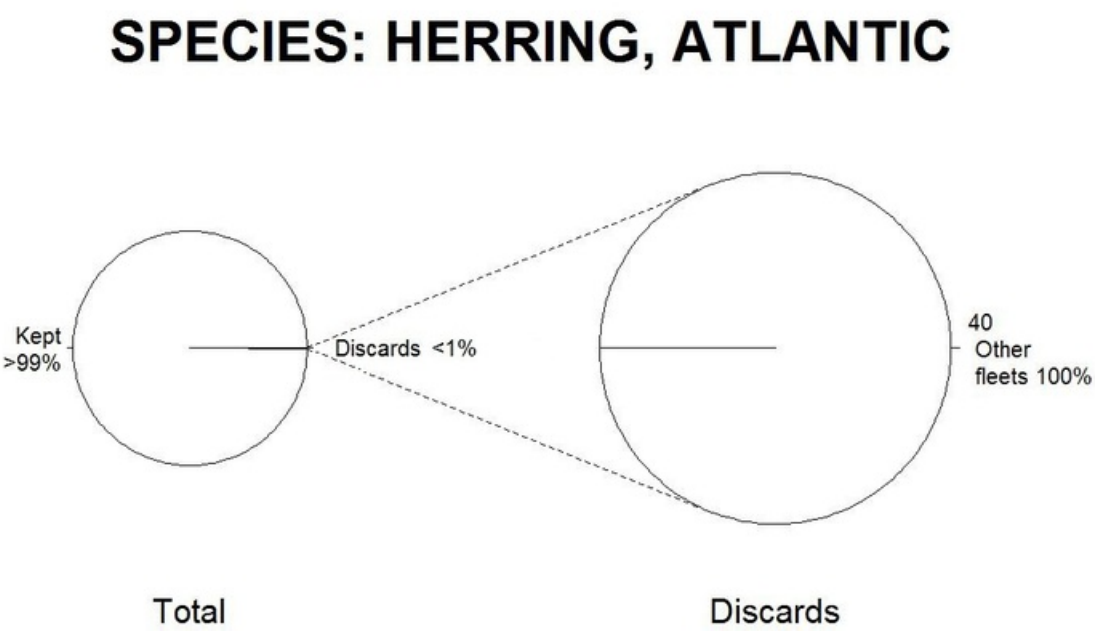


Figure 1A. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: bluefish *(Pomatomus saltatrix);* bottom: fluke (*Paralichthys dentatus)* - scup *(Stenotomus chrysops)* - black sea bass *(Centropristis striata).*



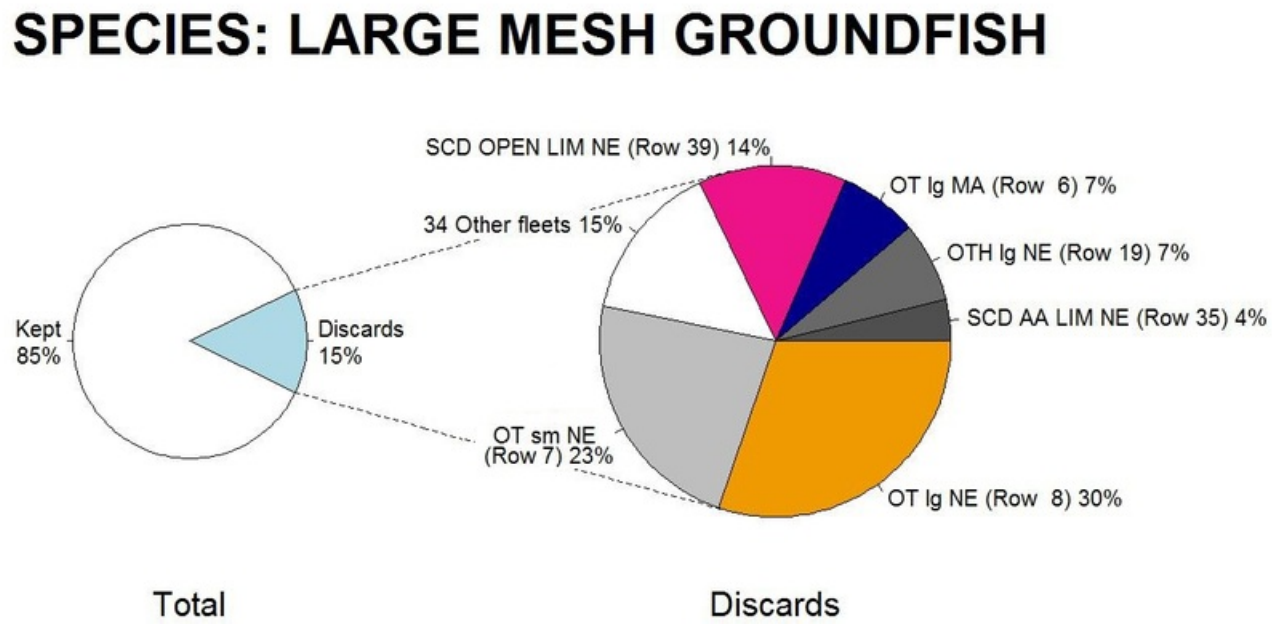
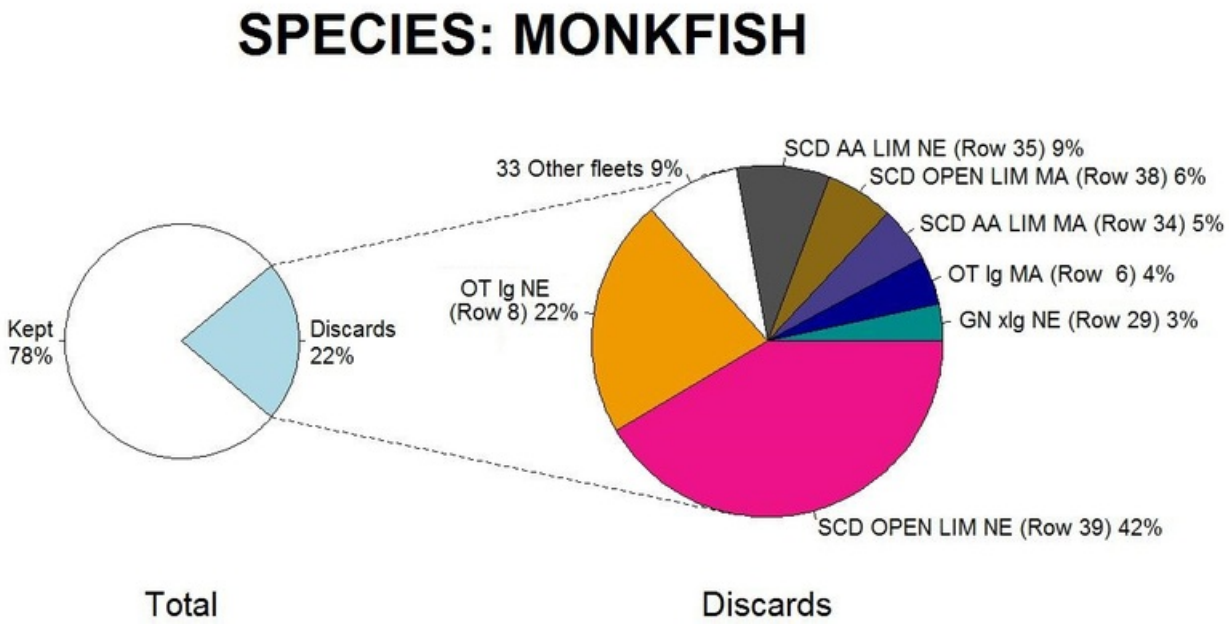


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar]*), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: Atlantic herring *(Clupea harengus);* bottom: large mesh groundfish.



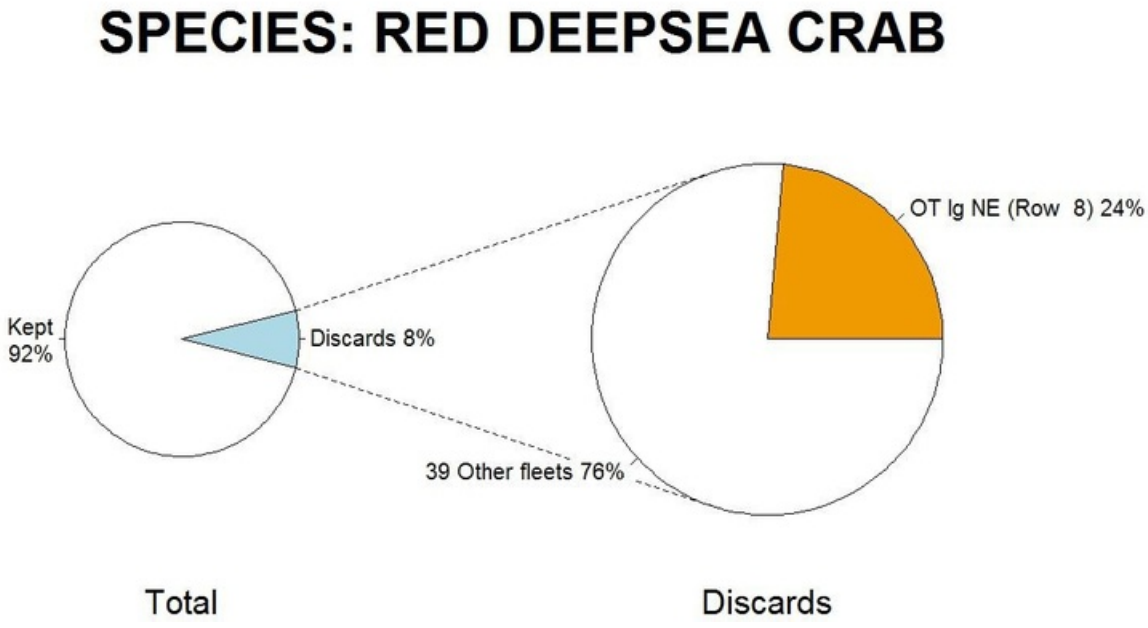


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar]*), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: monkfish (*Lophius americanus)*; bottom: red deepsea crab (*Chaceon quinquedens*).

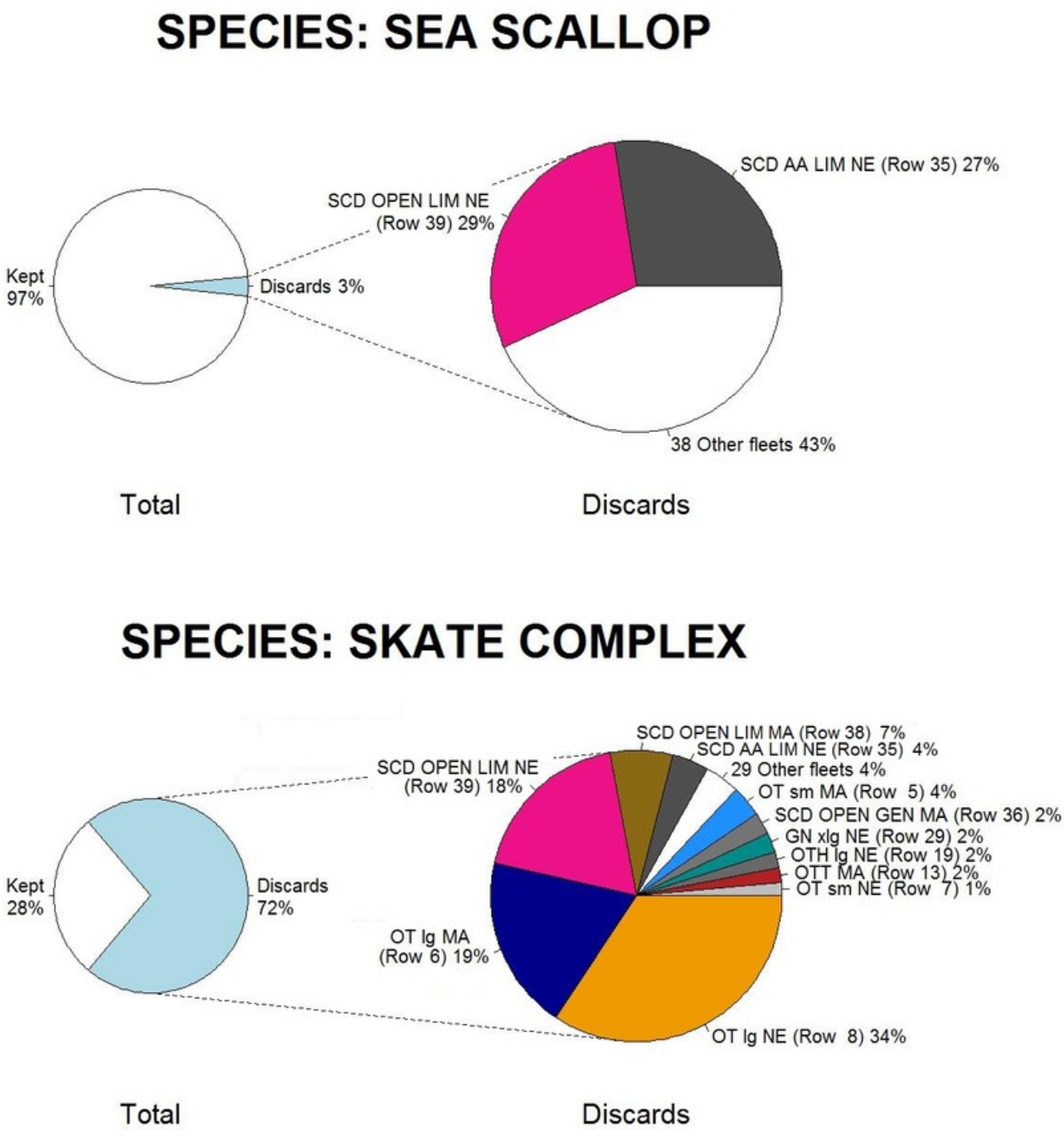
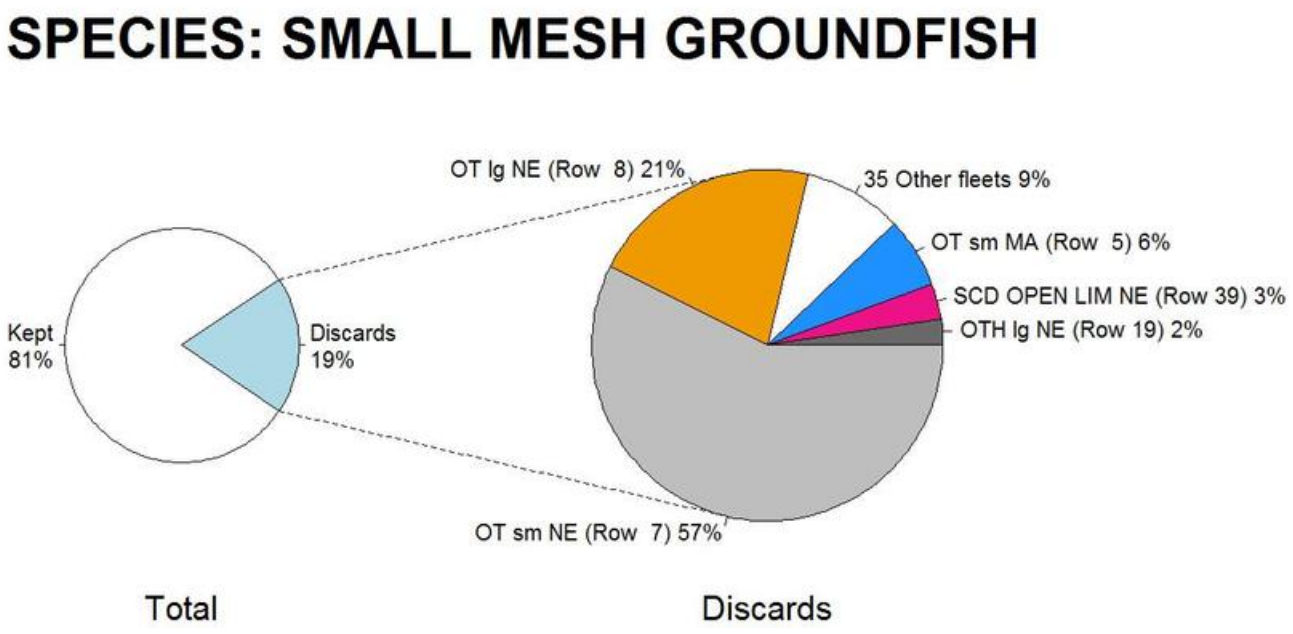


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar]*), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: sea scallop (*Placopecten magellanicus*); bottom: skate complex (Rajidae).



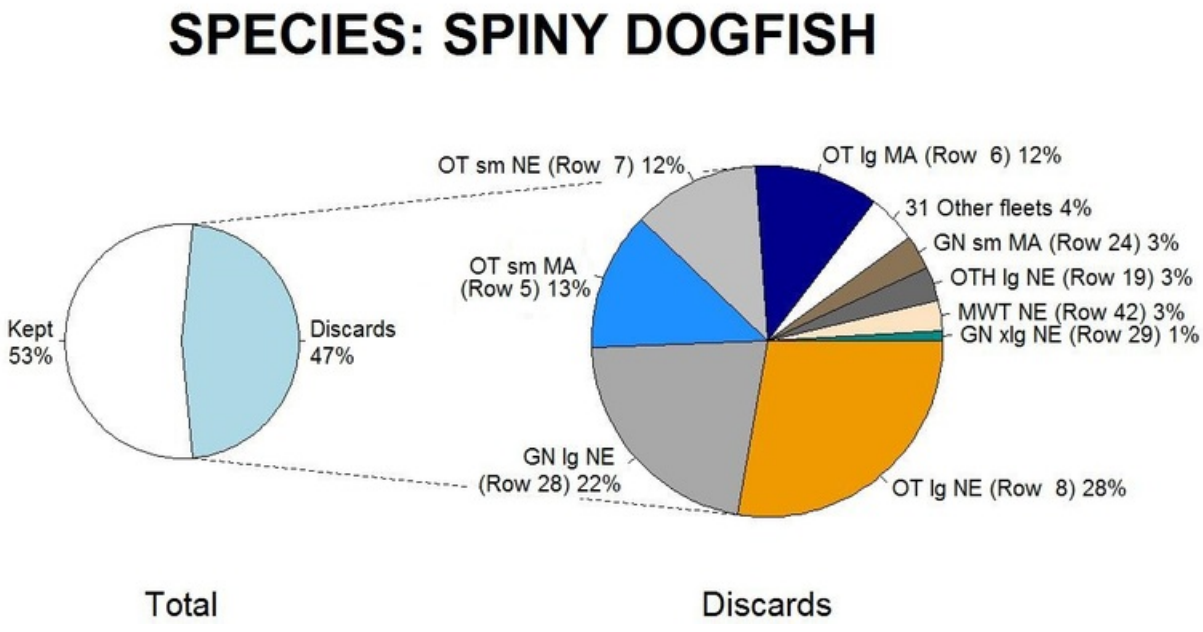
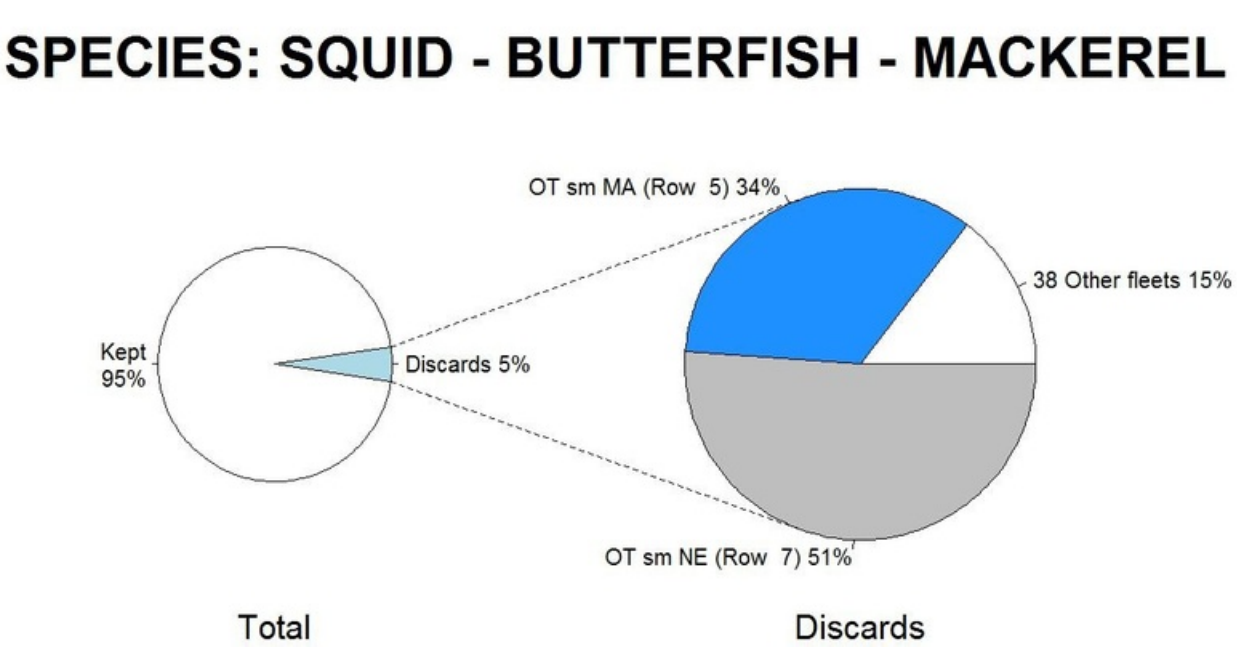


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar]*), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: small mesh groundfish; bottom: spiny dogfish (*Squalus acanthias*).



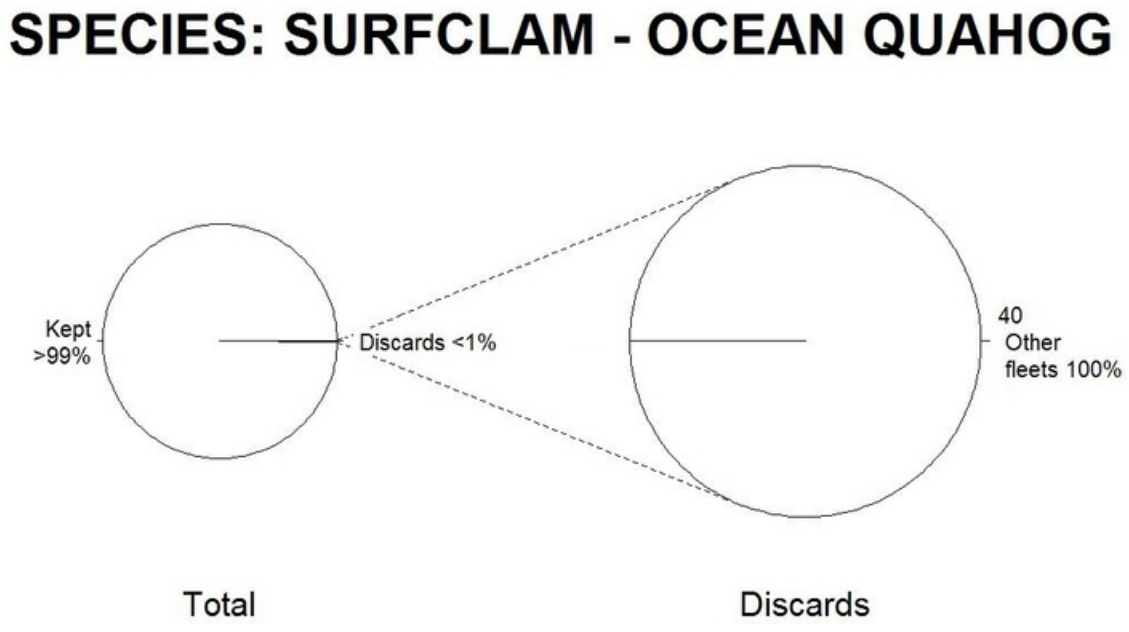


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar]*), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: squid (*Doryteuthis [Amerigo] pealeii, Illex illecebrosus*) – butterfish (*Peprilus triacanthus*) – Atlantic mackerel (*Scomber scombrus*); bottom: surfclam (*Spisula solidissima*) - ocean quahog (*Arctica islandica*).

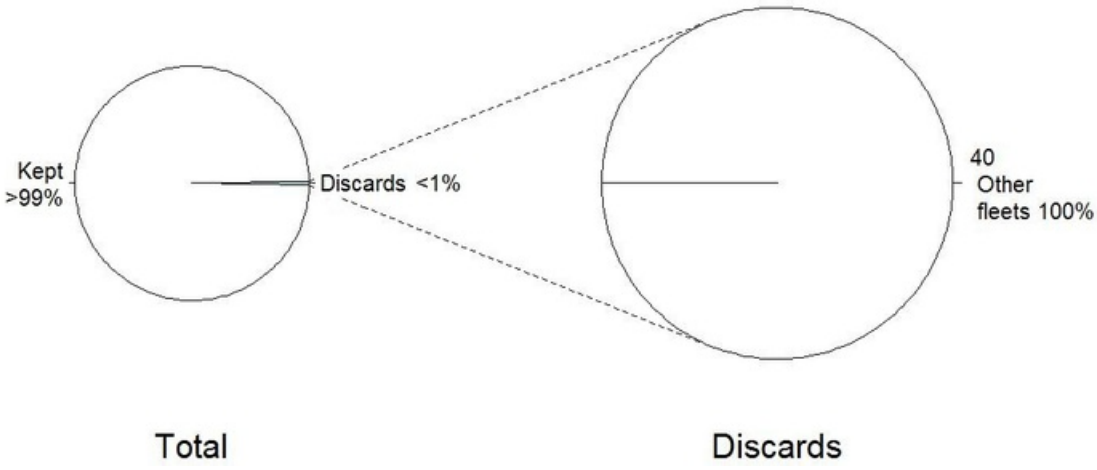
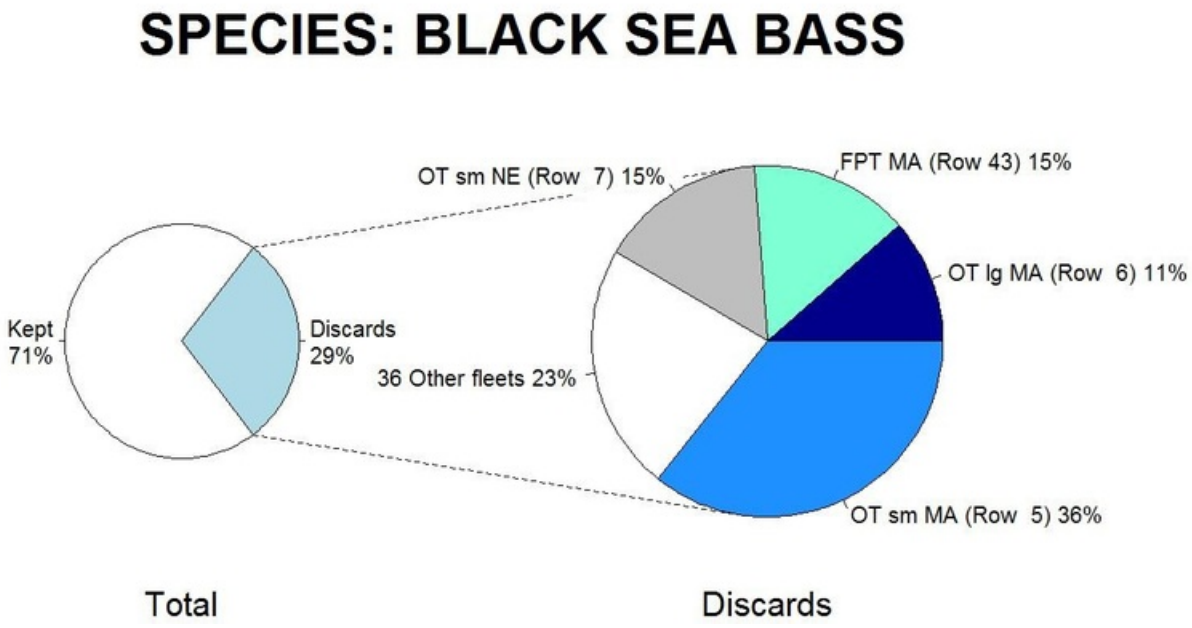


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar]*), based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.
Top: tilefish (*Lopholatilus chamaeleonticeps*).



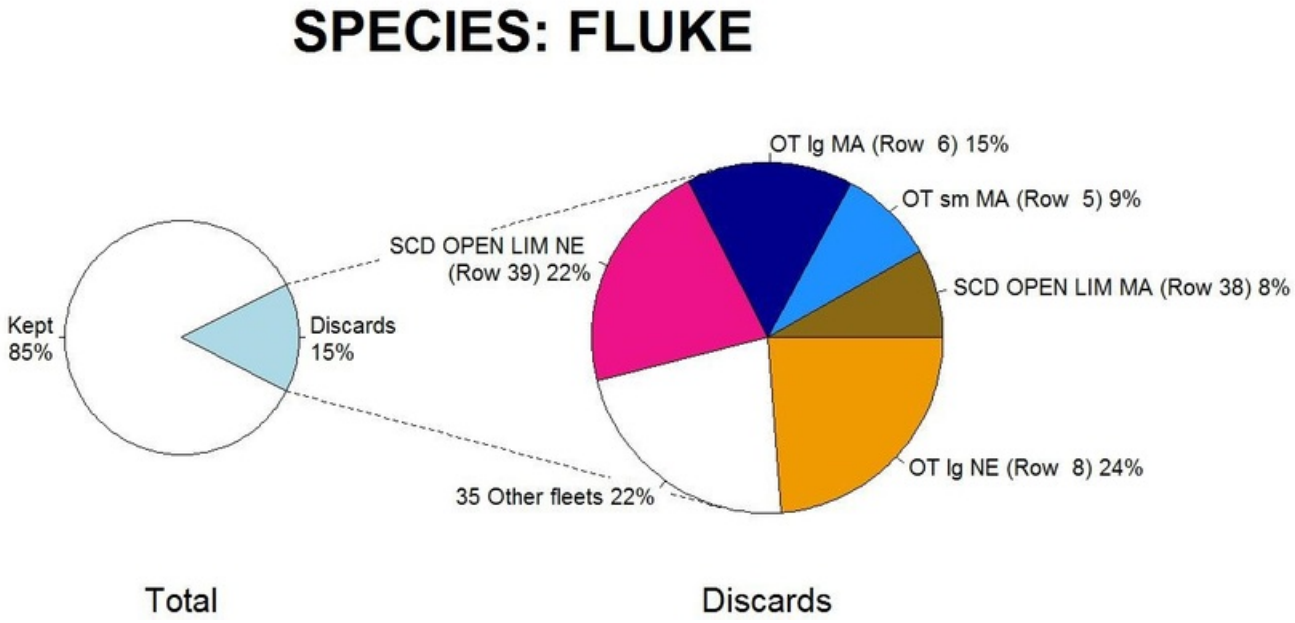
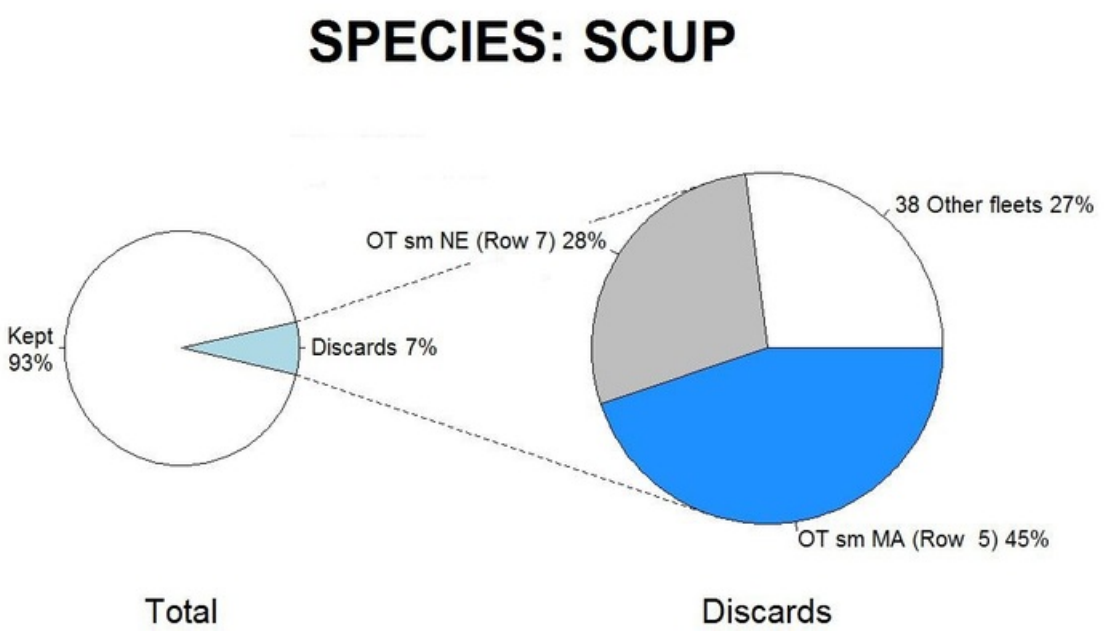


Figure 1B. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: black sea bass (*Centropristis striata*); bottom: fluke (*Paralichthys dentatus*).



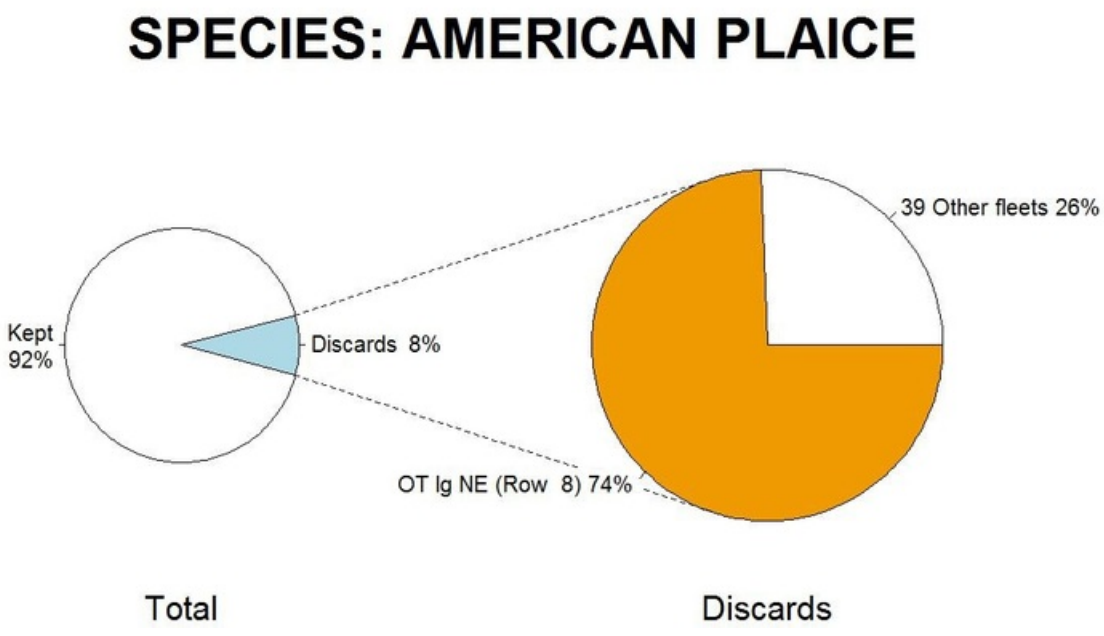


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: scup (*Stenotomus chrysops*); bottom: American plaice (*Hippoglossoides platessoides*).

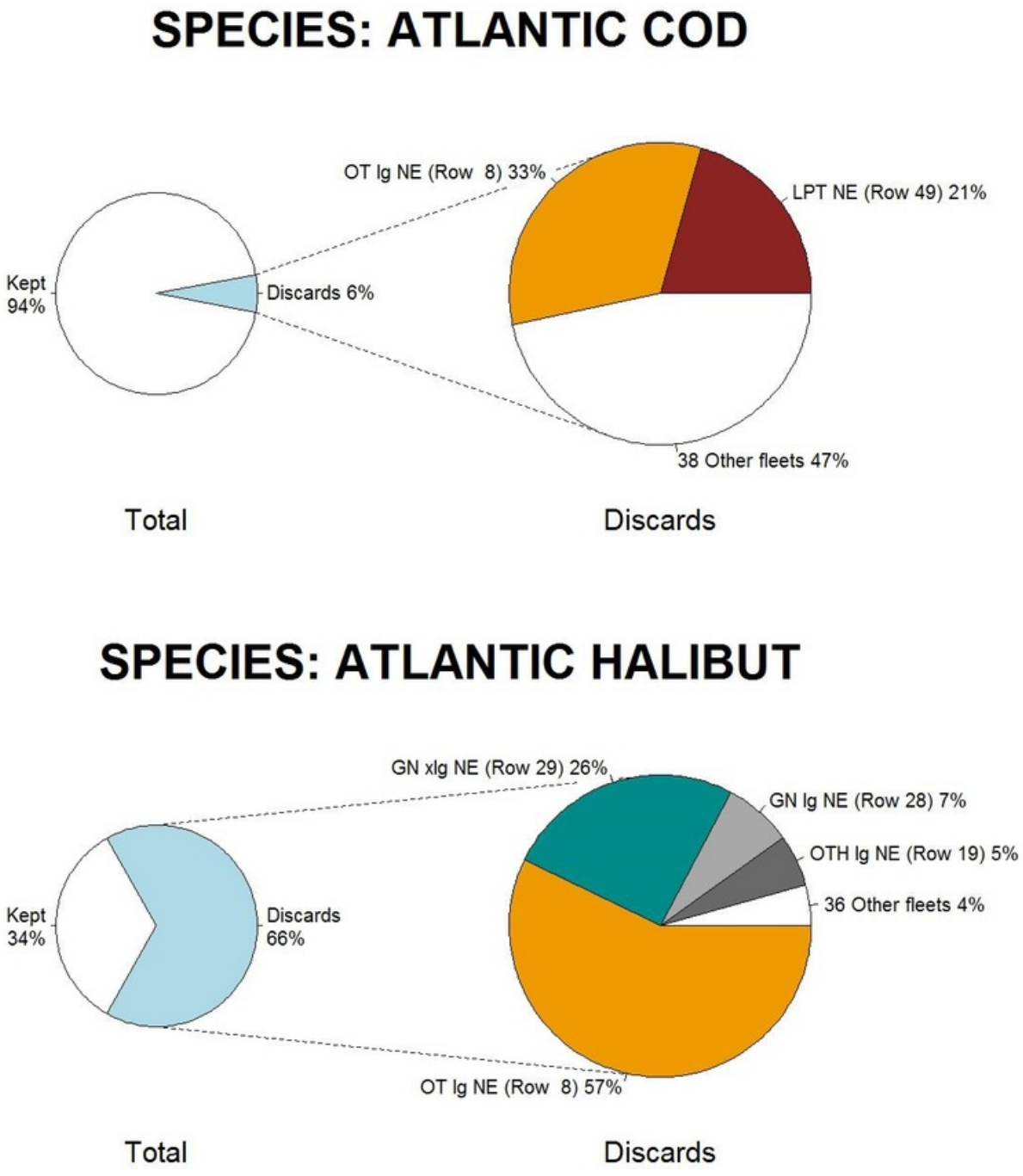


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: Atlantic cod (*Gadus morhua*); bottom: Atlantic halibut (*Hippoglossus hippoglossus*).

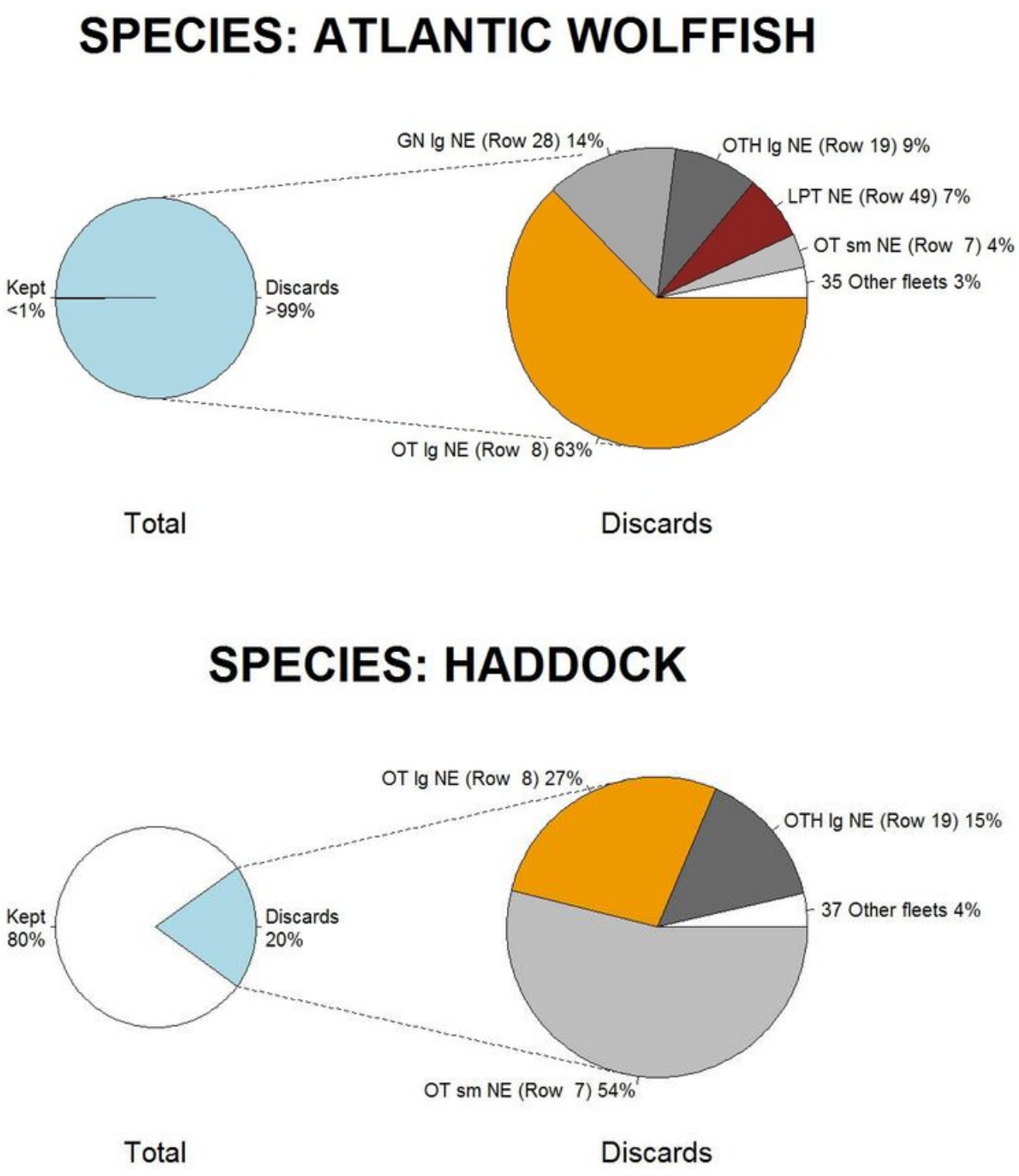
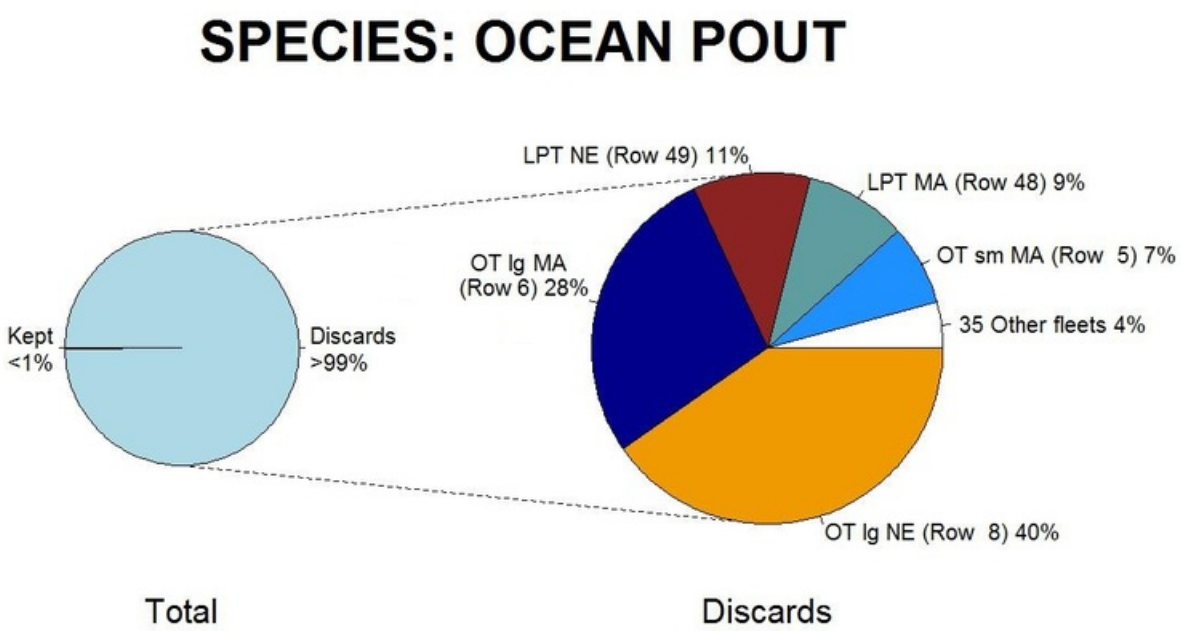


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: Atlantic wolffish (*Anarhichas lupus*); bottom: haddock (*Melanogrammus aeglefinus*).



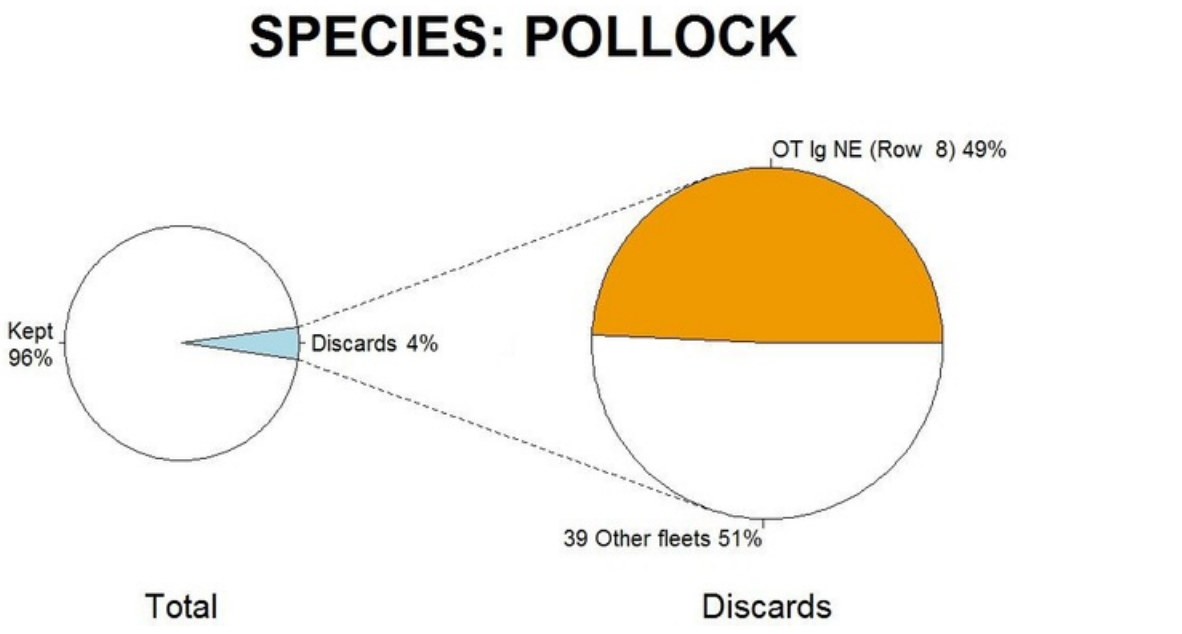
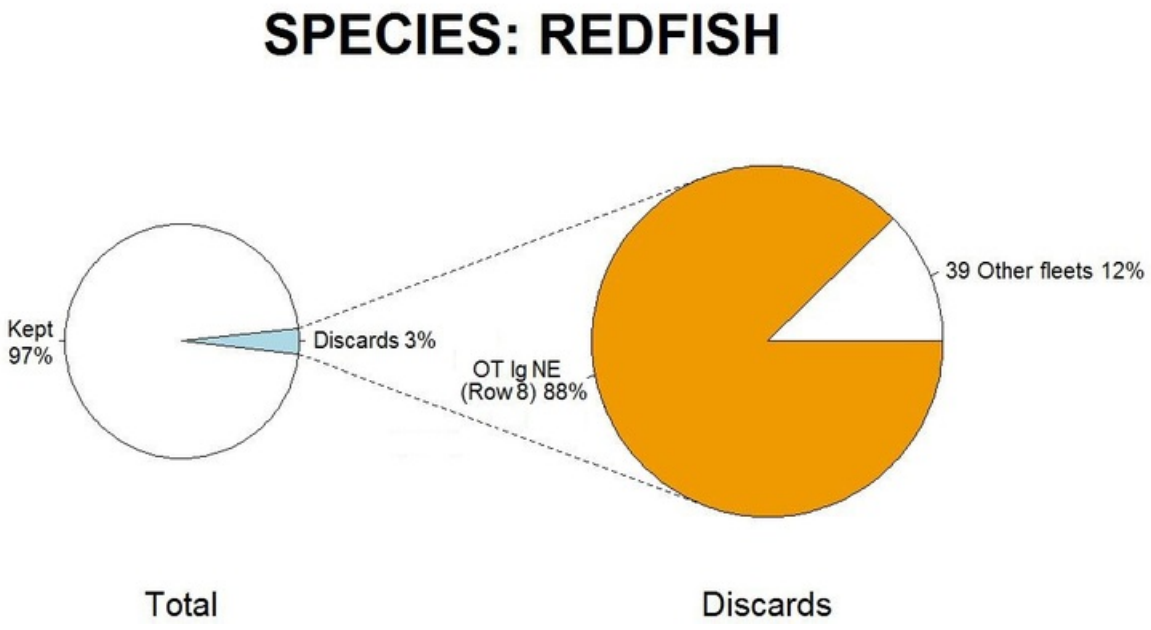


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: ocean pout (*Zoarces americanus*); bottom: pollock (*Pollachius virens*).



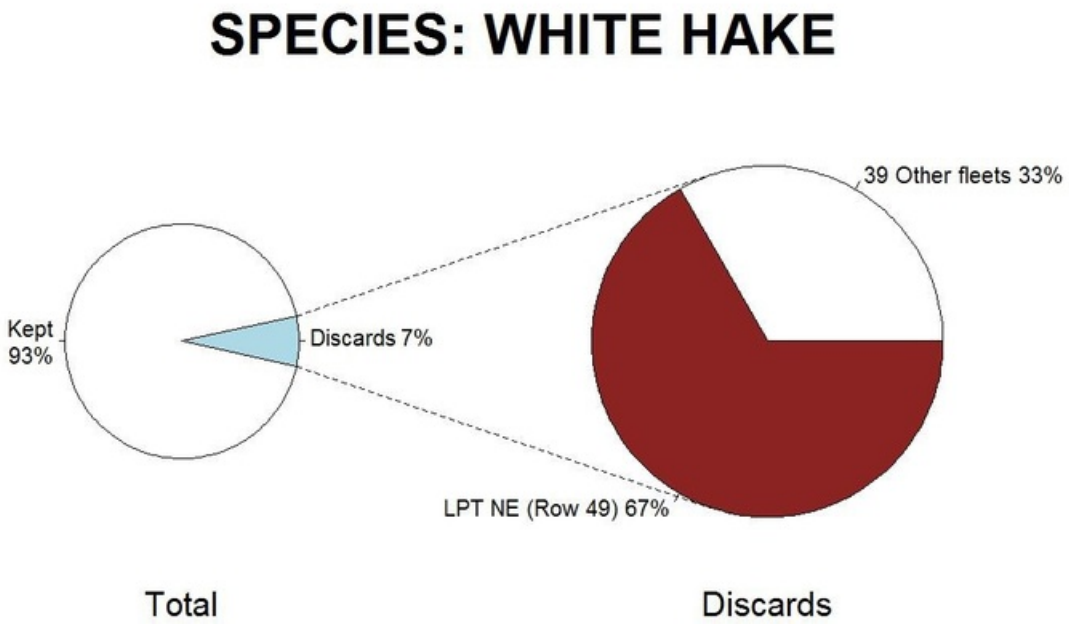


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: redfish (*Sebastes fasciatus*); bottom: white hake (*Urophycis tenuis*).

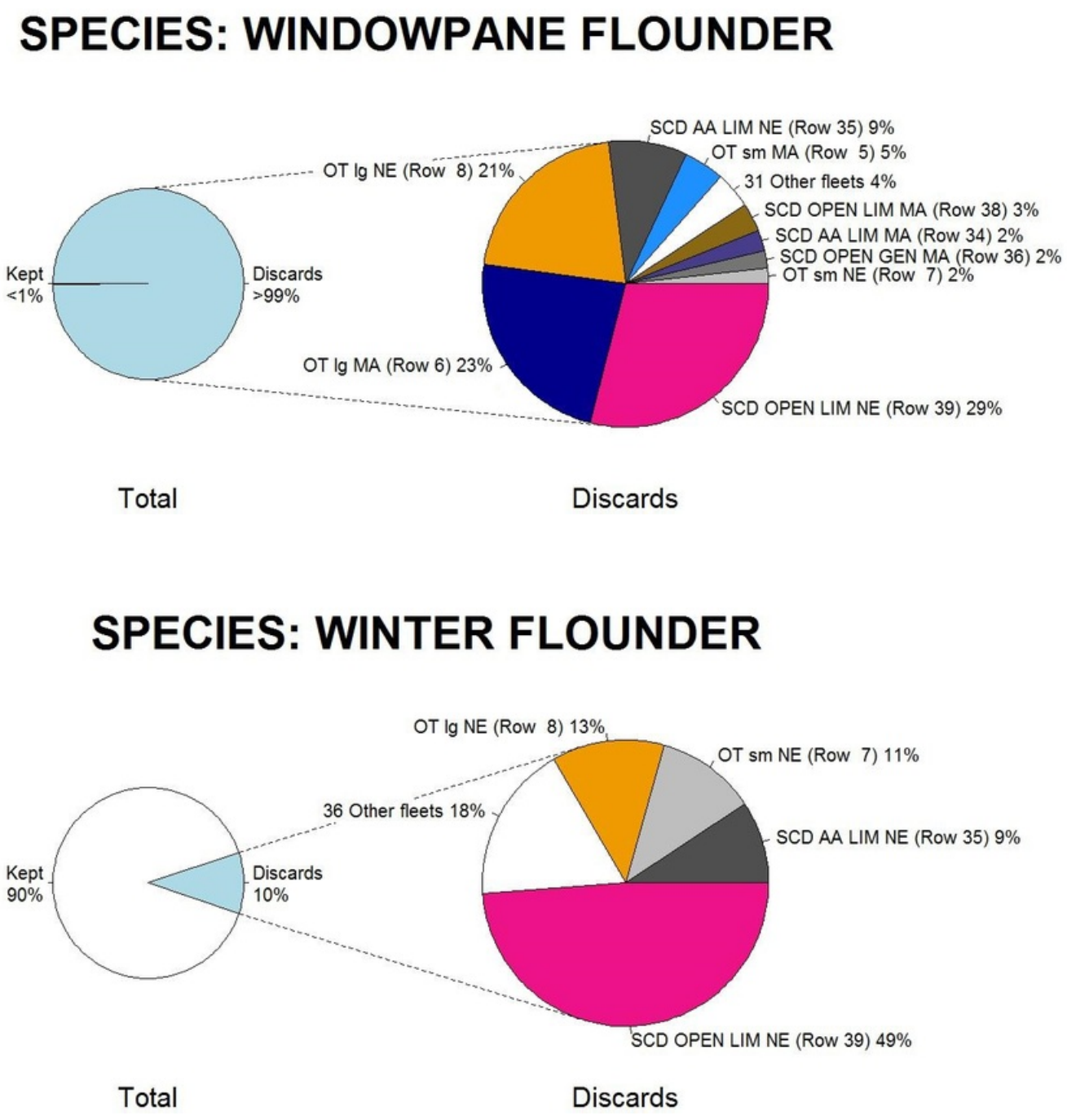
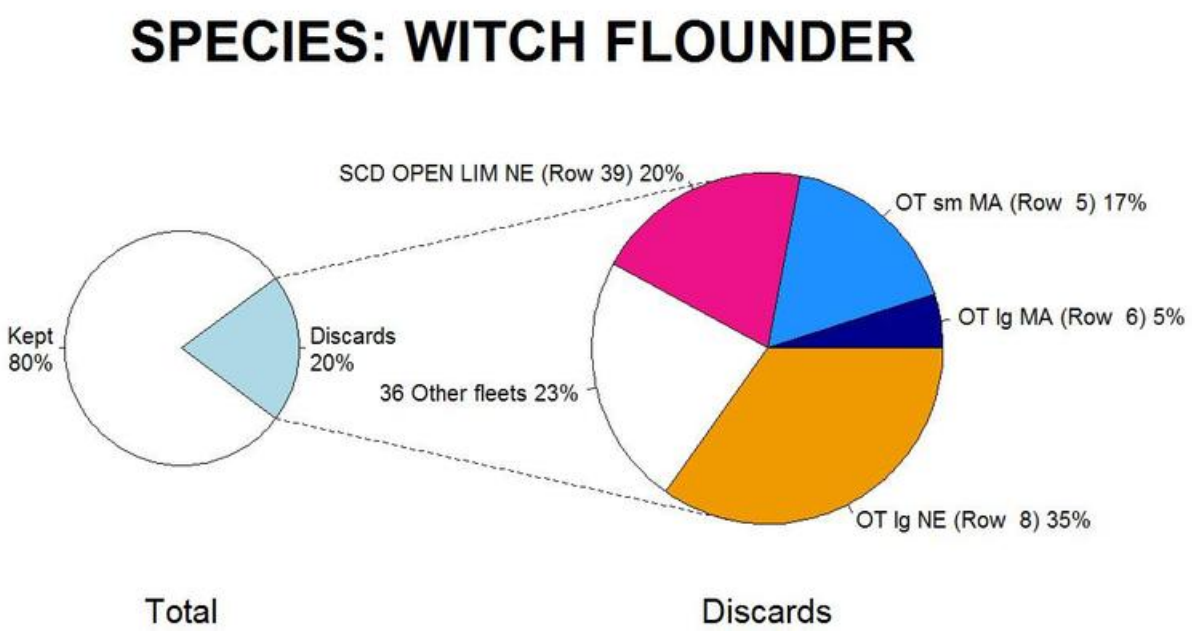


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: windowpane flounder (*Scophthalmus aquosus*); bottom: winter flounder (*Pseudopleuronectes americanus*).



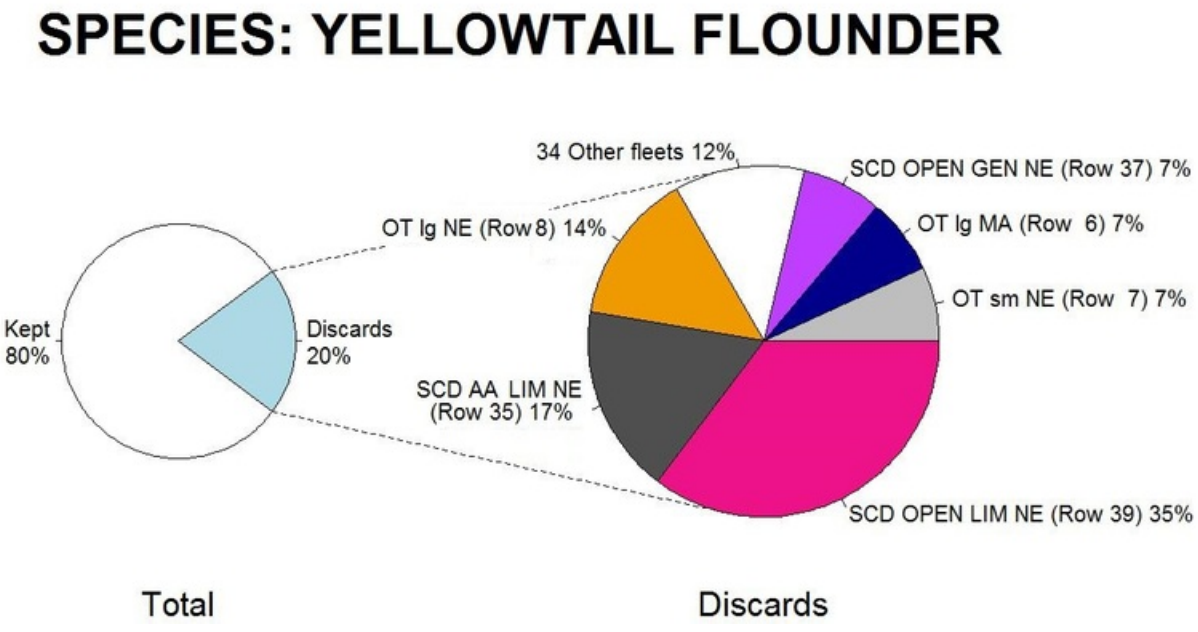


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: witch flounder (*Glyptocephalus cynoglossus*); bottom: yellowtail flounder (*Limanda ferruginea*).

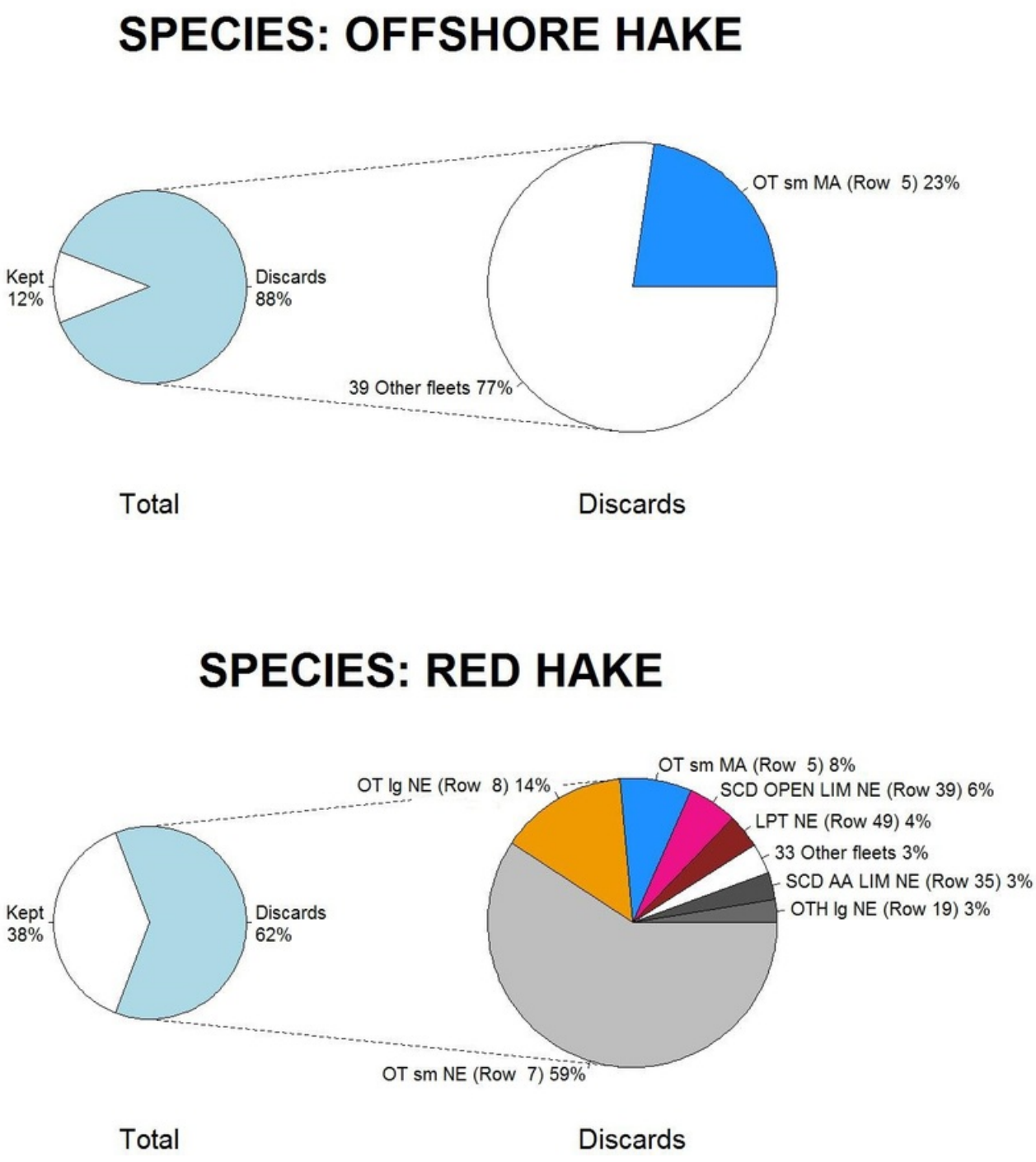
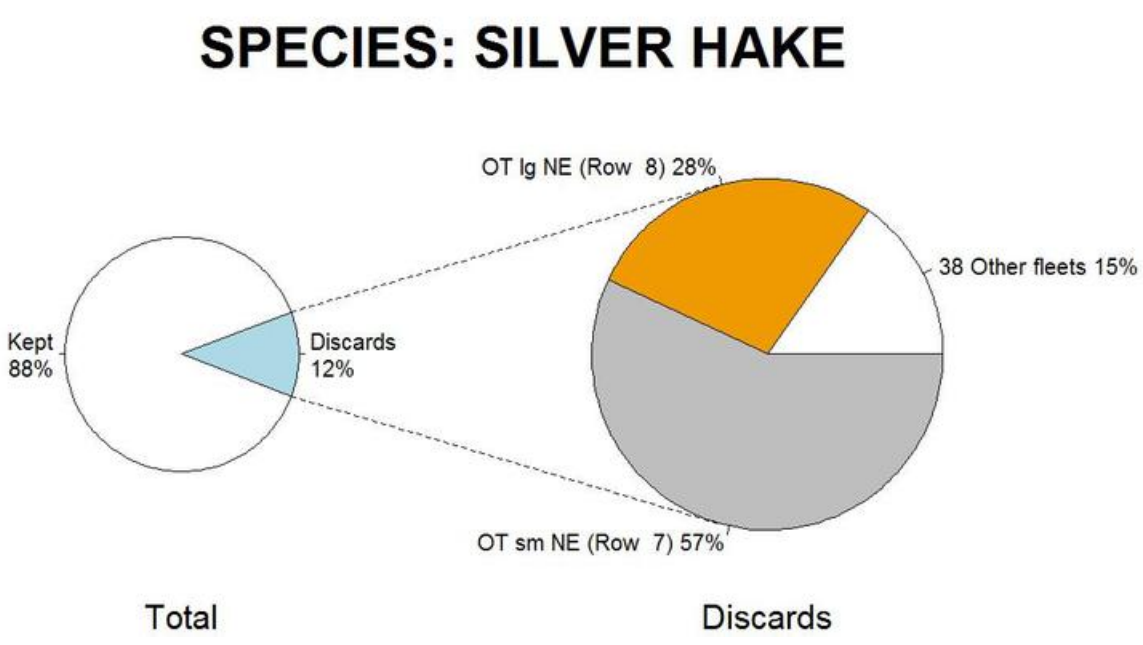


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: offshore hake (*Merluccius albidus*); bottom: red hake (*Urophycis chuss*).



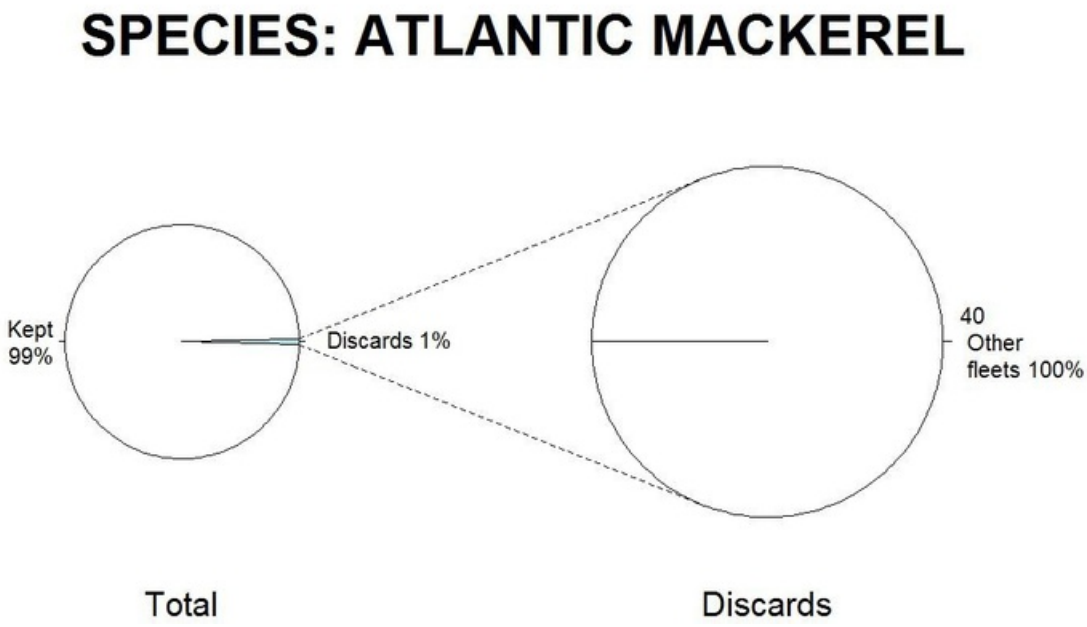
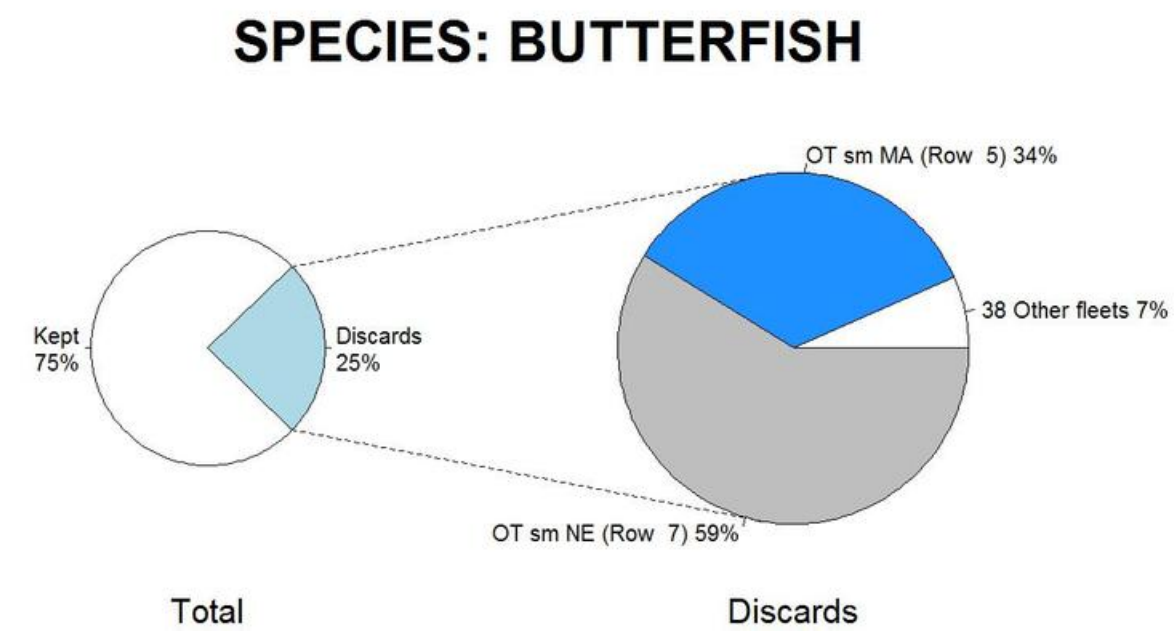


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: silver hake (*Merluccius bilinearis*); bottom: Atlantic mackerel (*Scomber scombrus*).



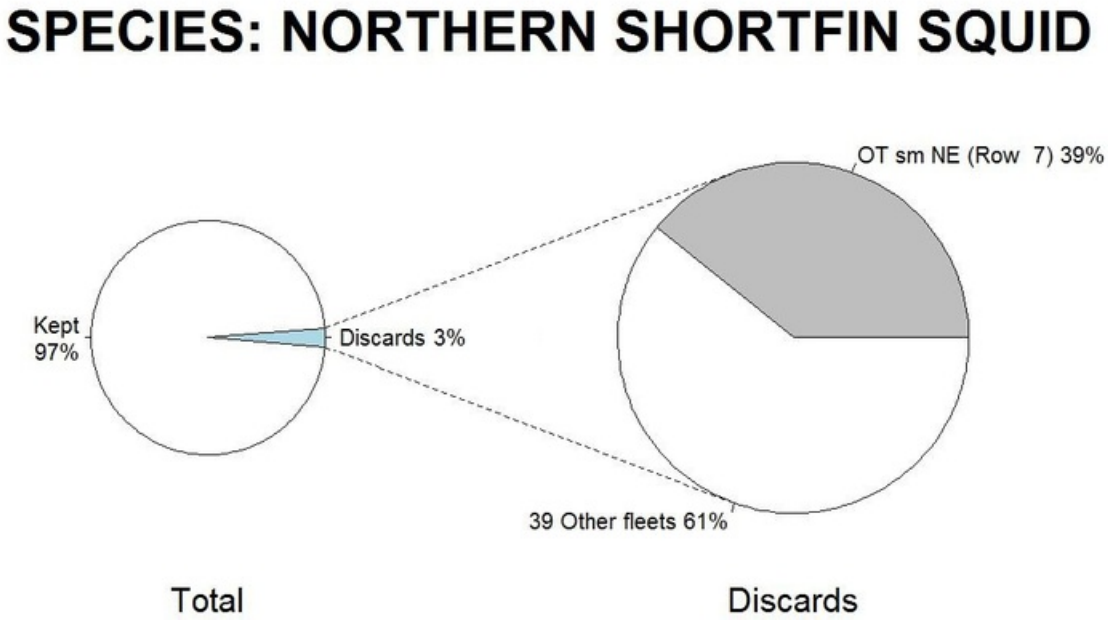


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: butterfish (*Peprilus triacanthus*); bottom: northern shortfin squid (*Illex illecebrosus*).

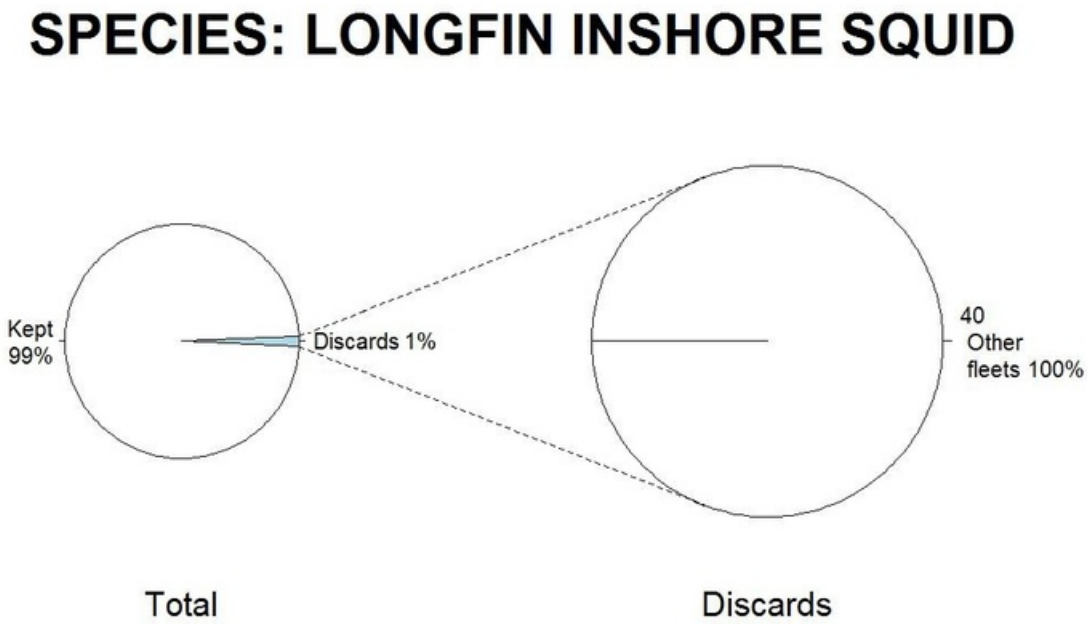


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Top: Longfin inshore squid (*Doryteuthis [Amerigo] pealeii*).

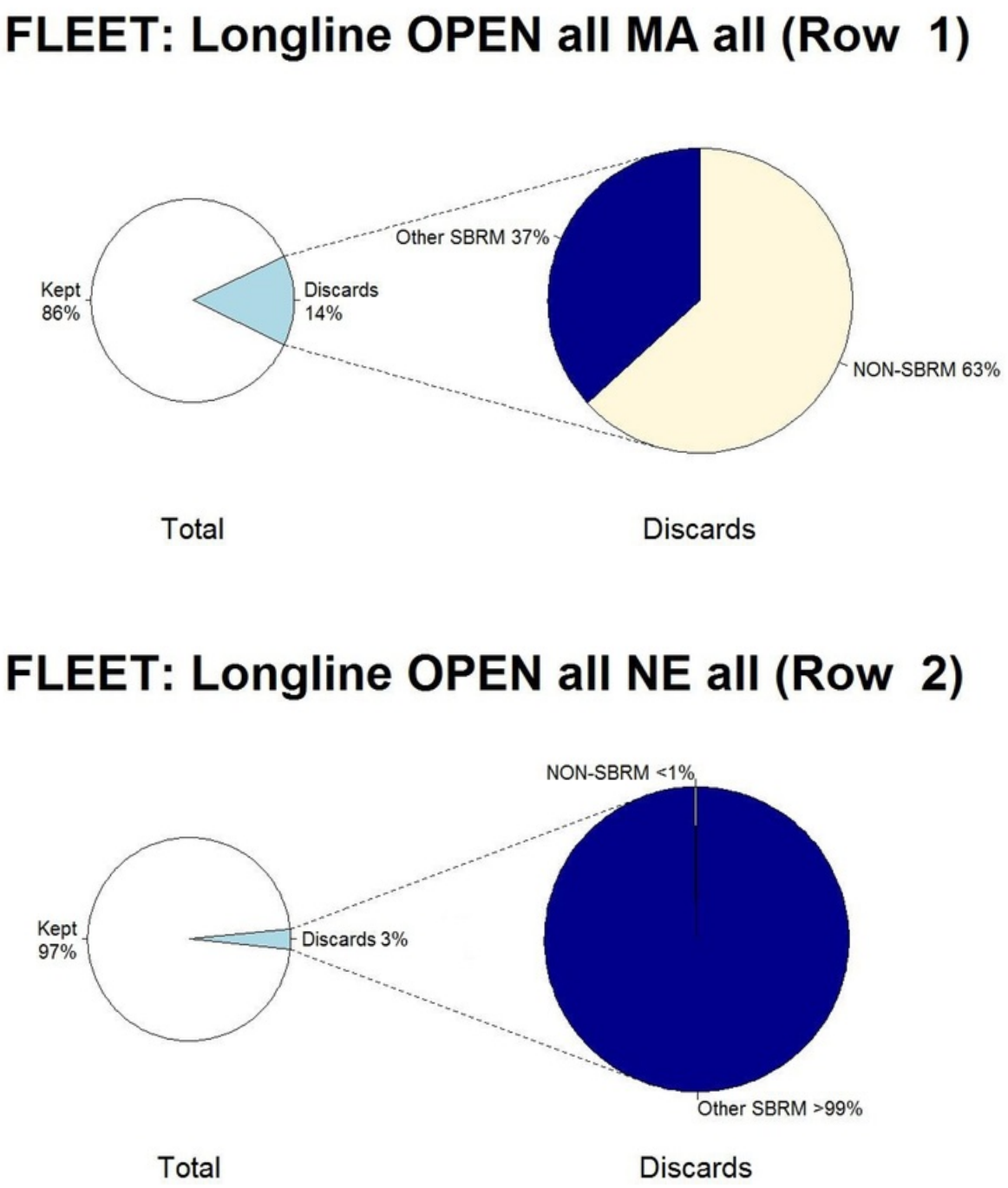
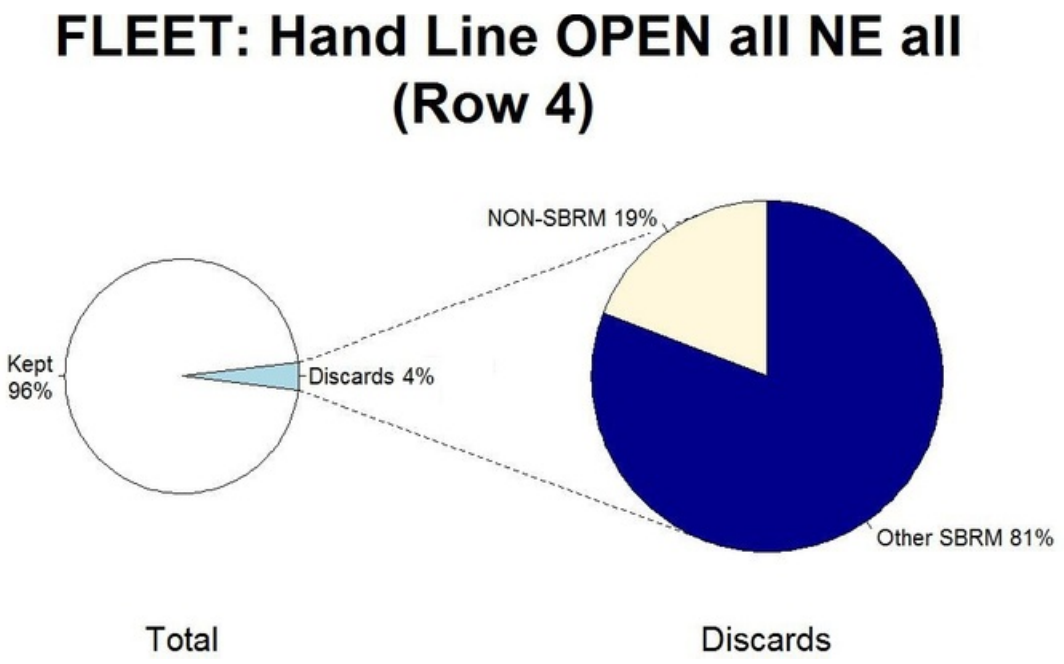


Figure 2. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for the 30 nonpilot fleets, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1 for species group abbreviations; see text and Appendix Table 4 for fleet abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM;" non-SBRM species have been grouped and labeled "Non-SBRM."



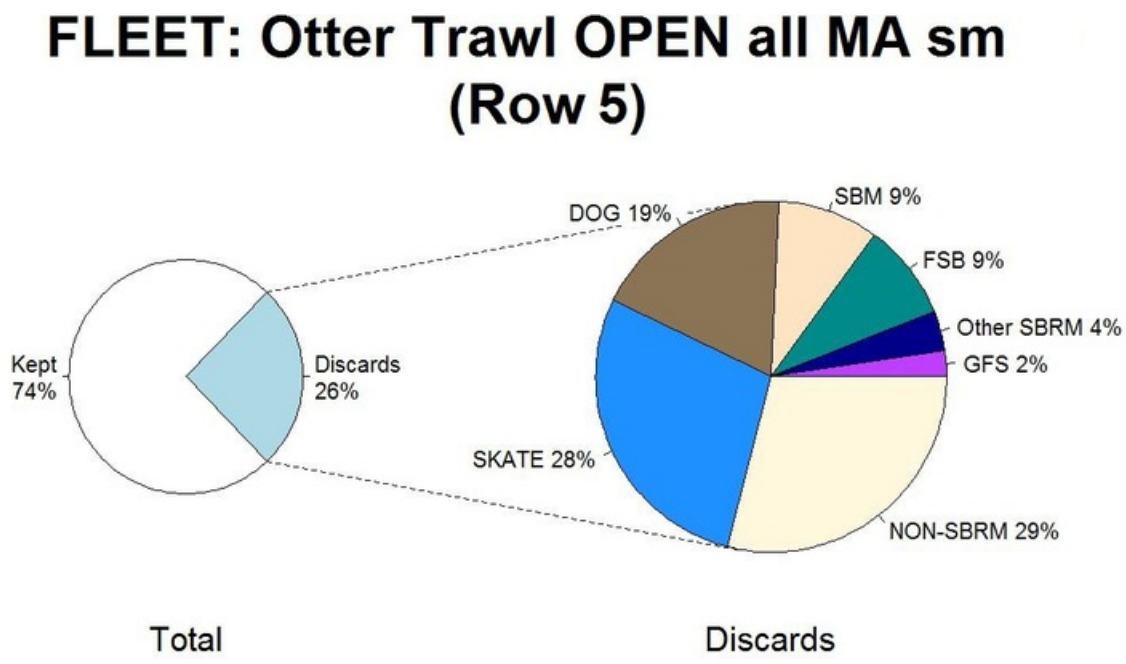
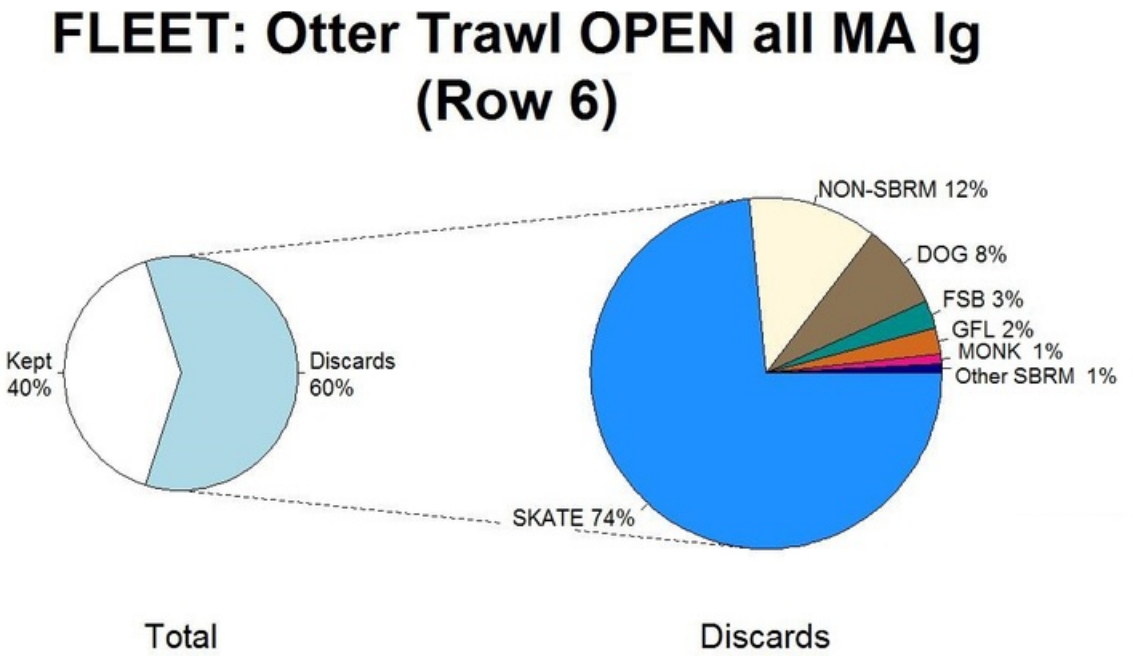
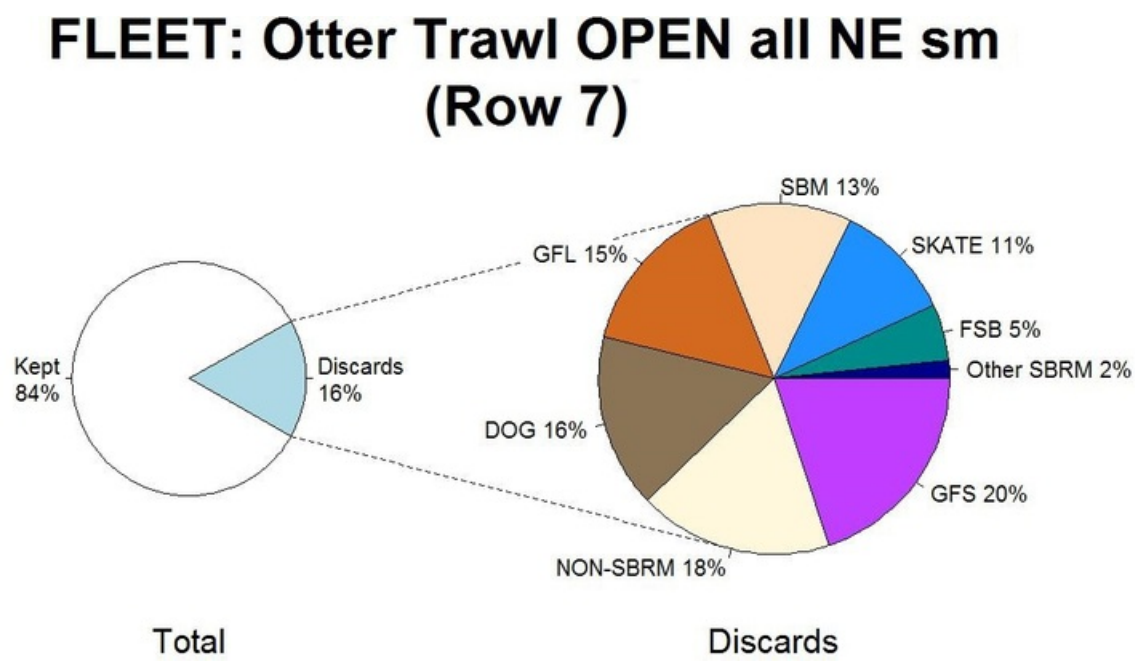


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for the 30 nonpilot fleets, based on July 2014 through June 2015 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1 for species group abbreviations; see text and Appendix Table 4 for fleet abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM;" non-SBRM species have been grouped and labeled "Non-SBRM."





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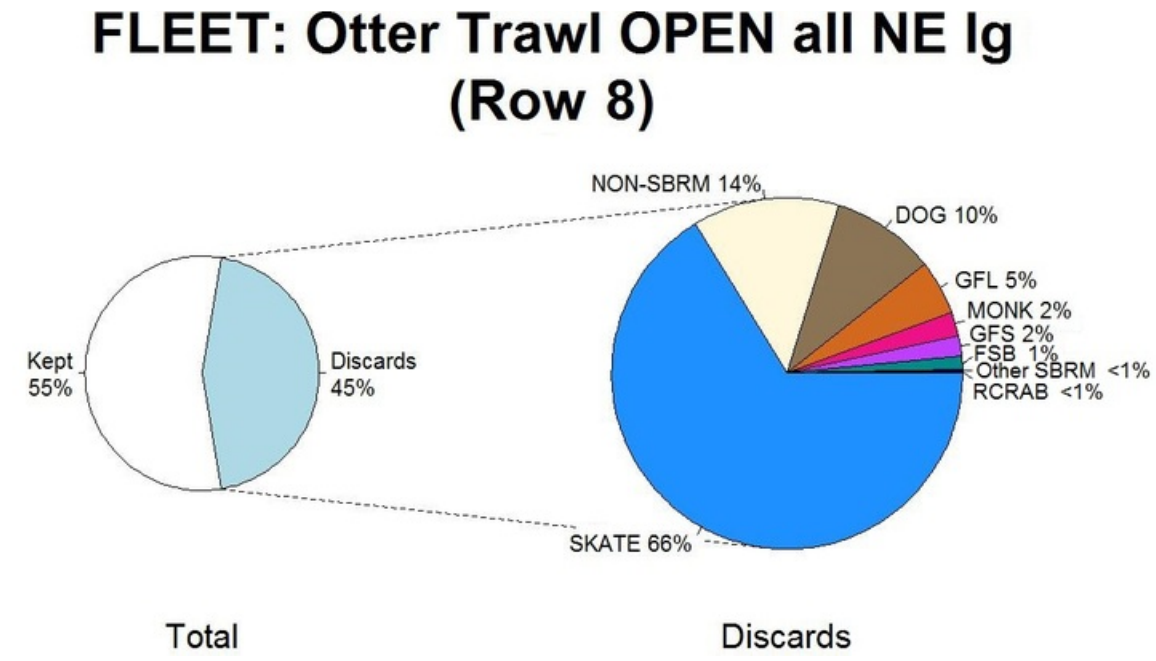

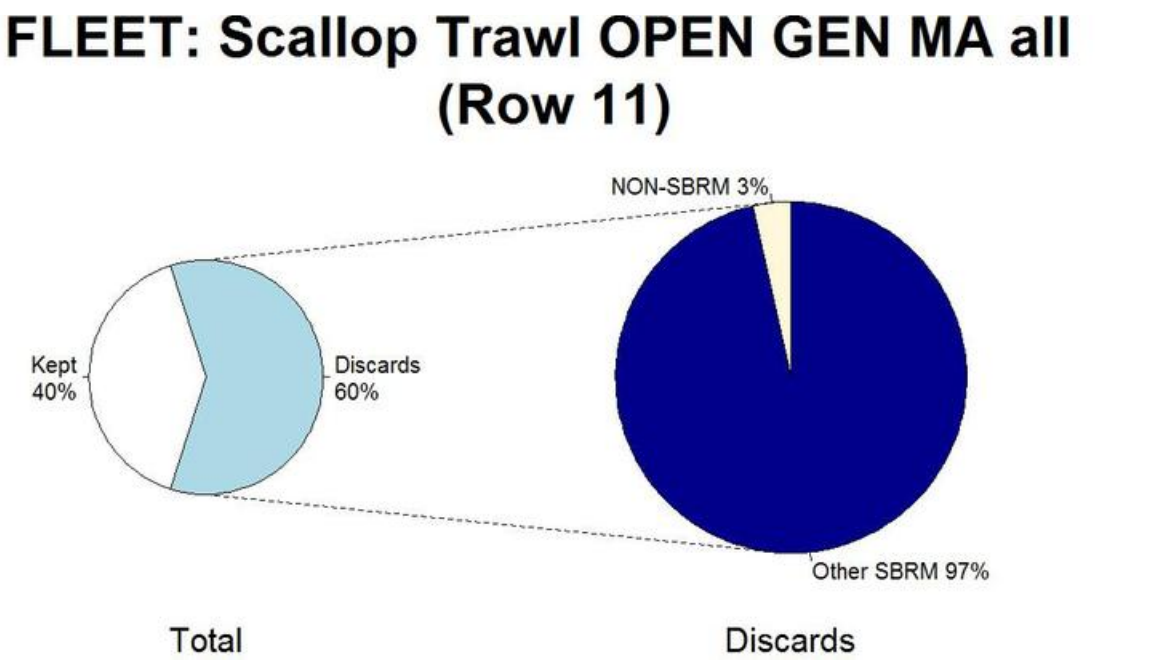

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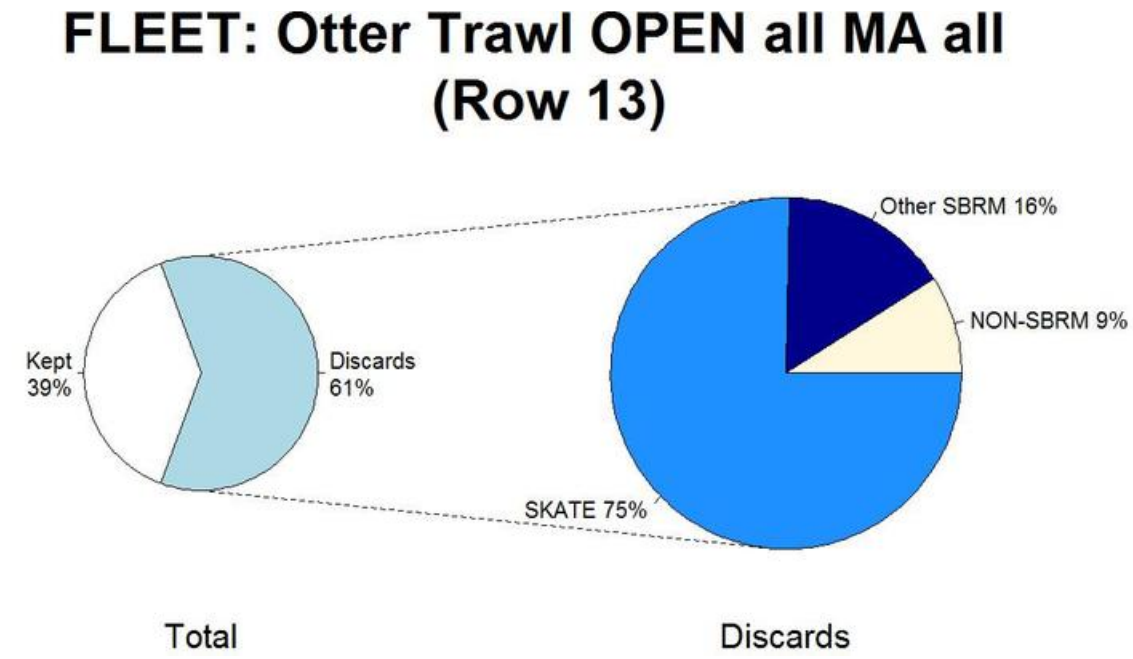

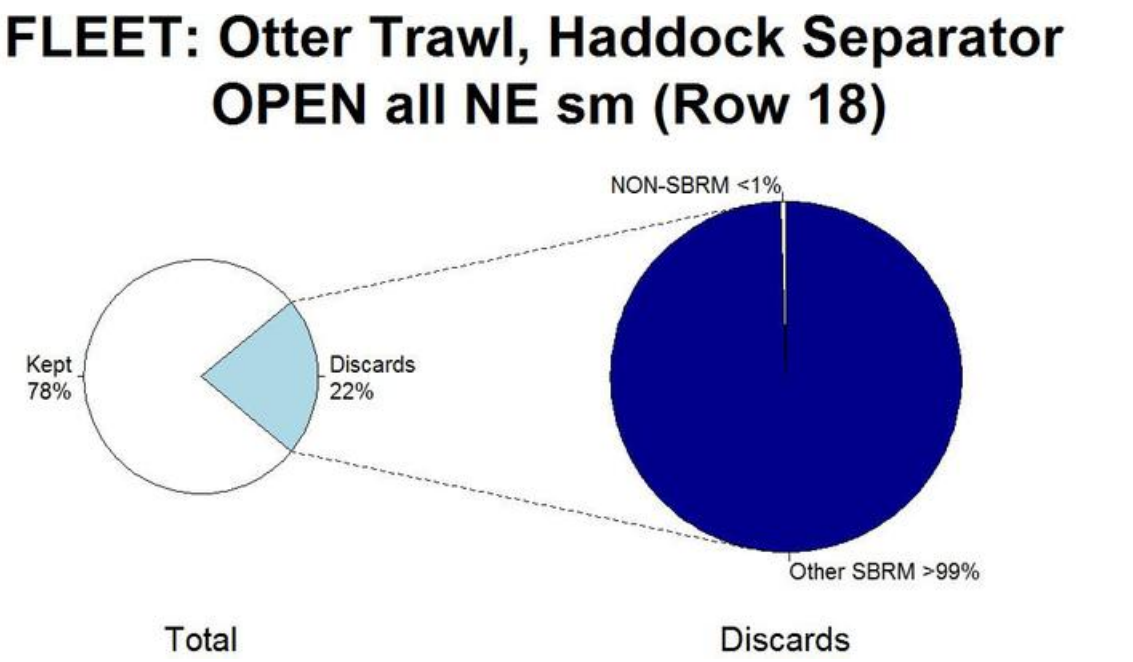

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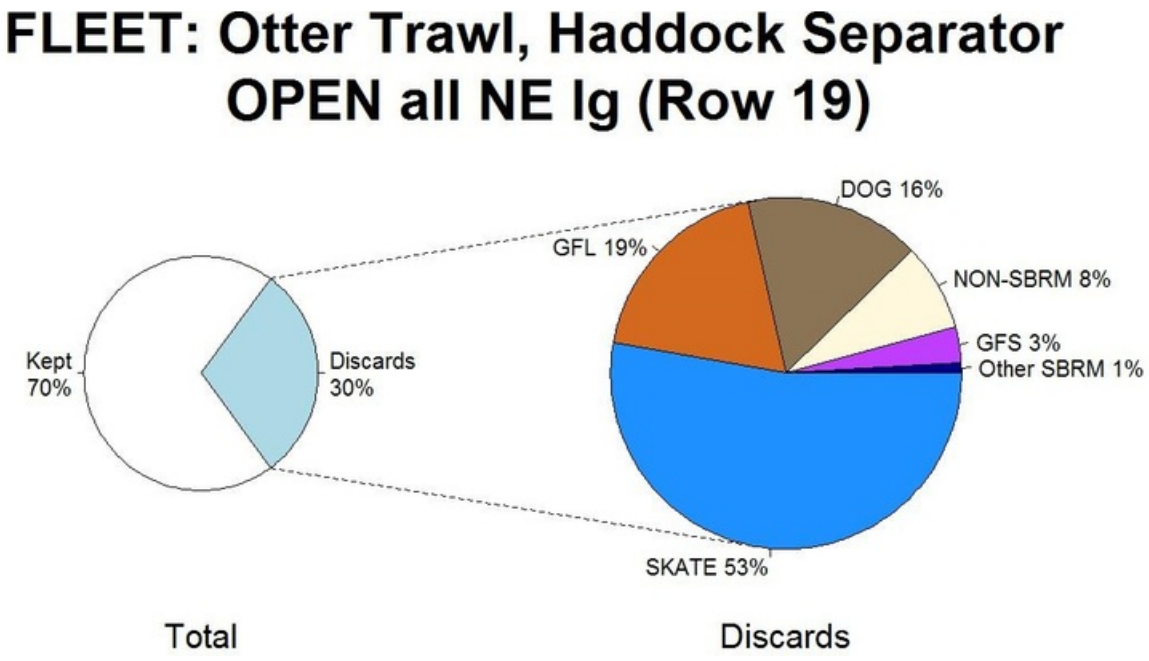

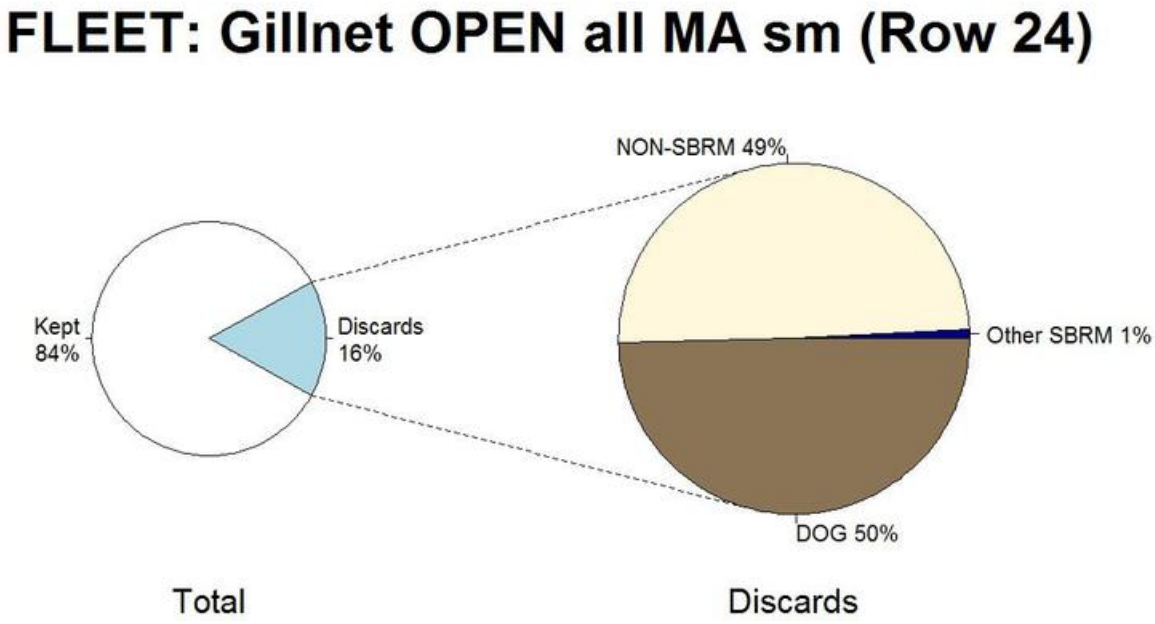

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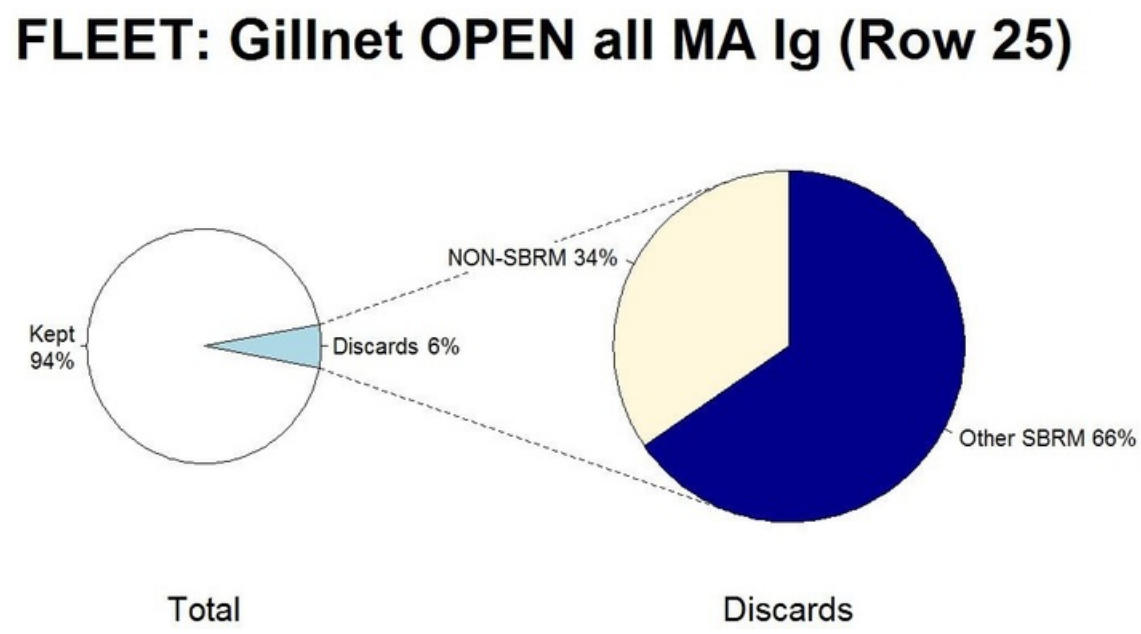

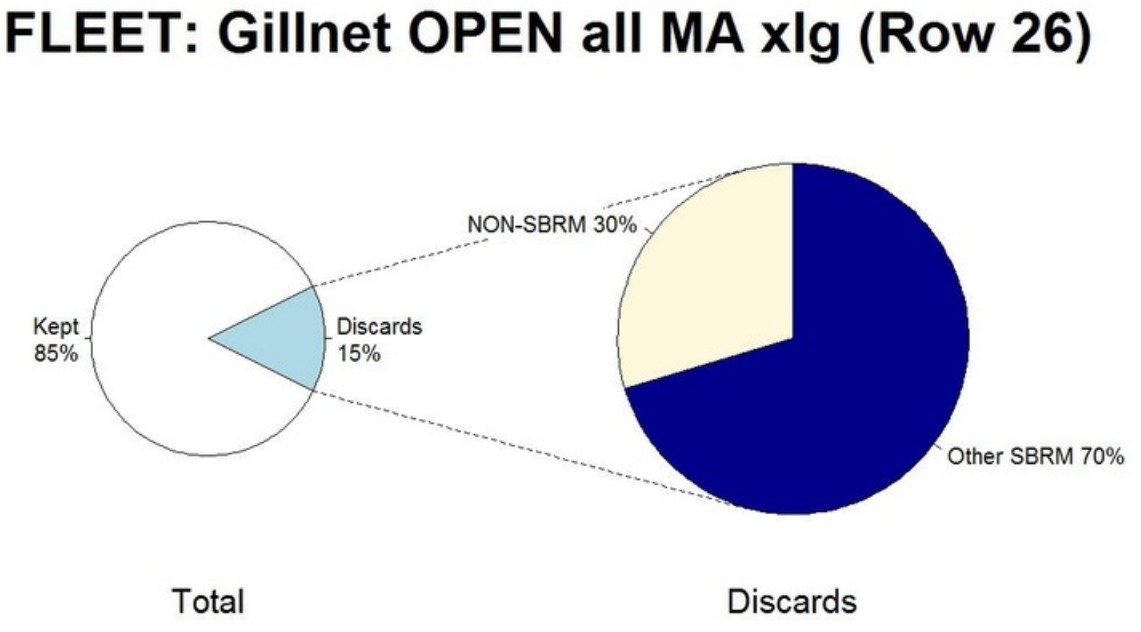

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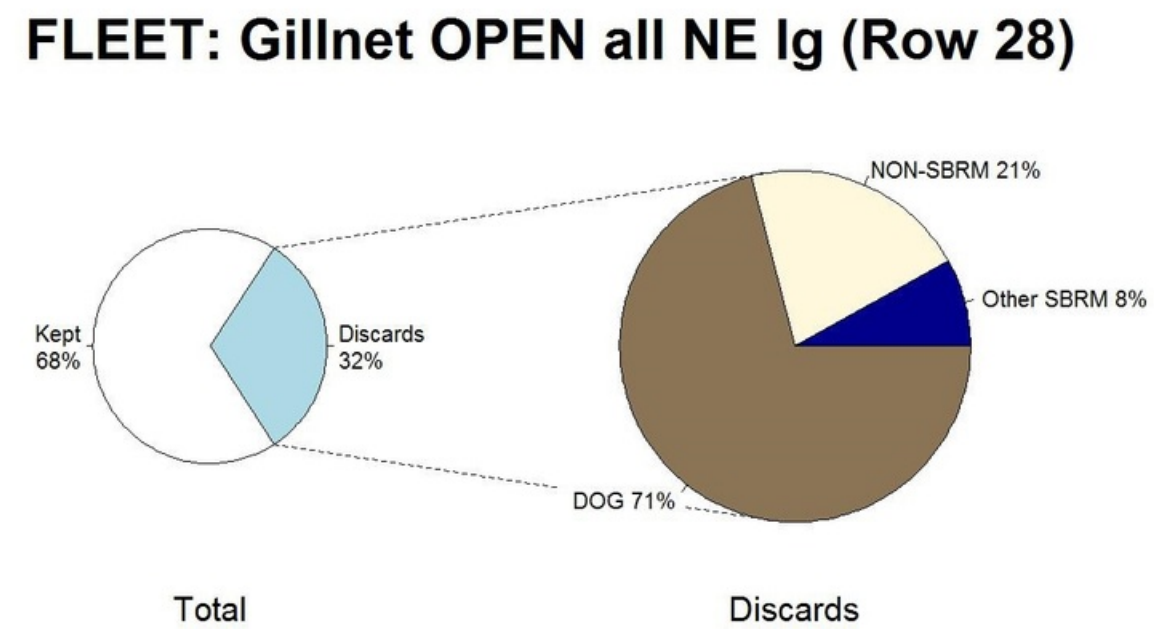

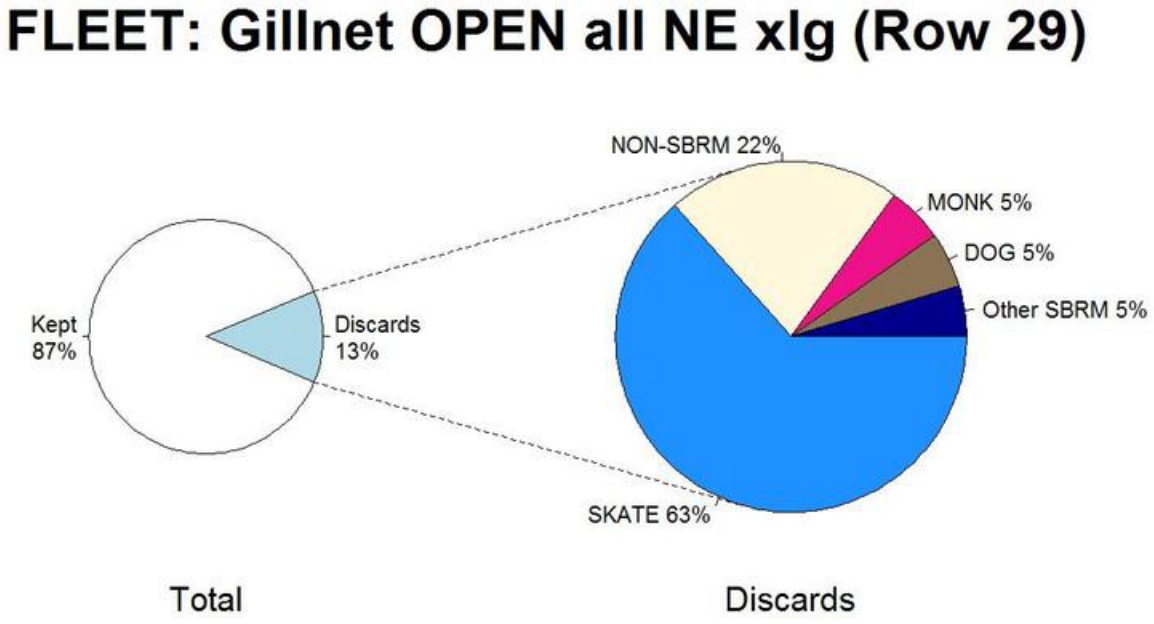

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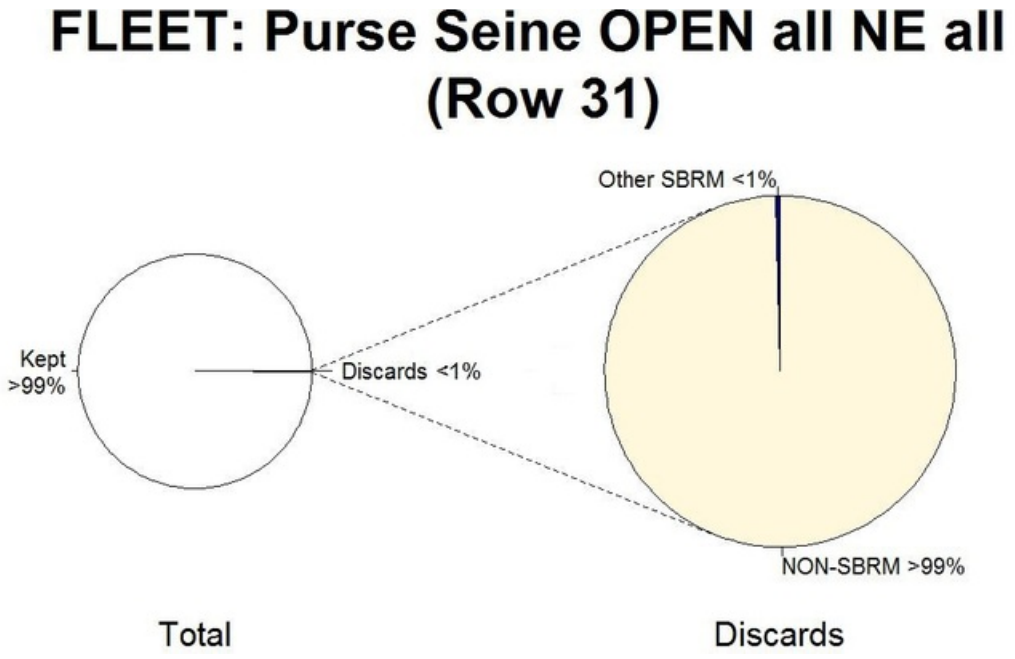

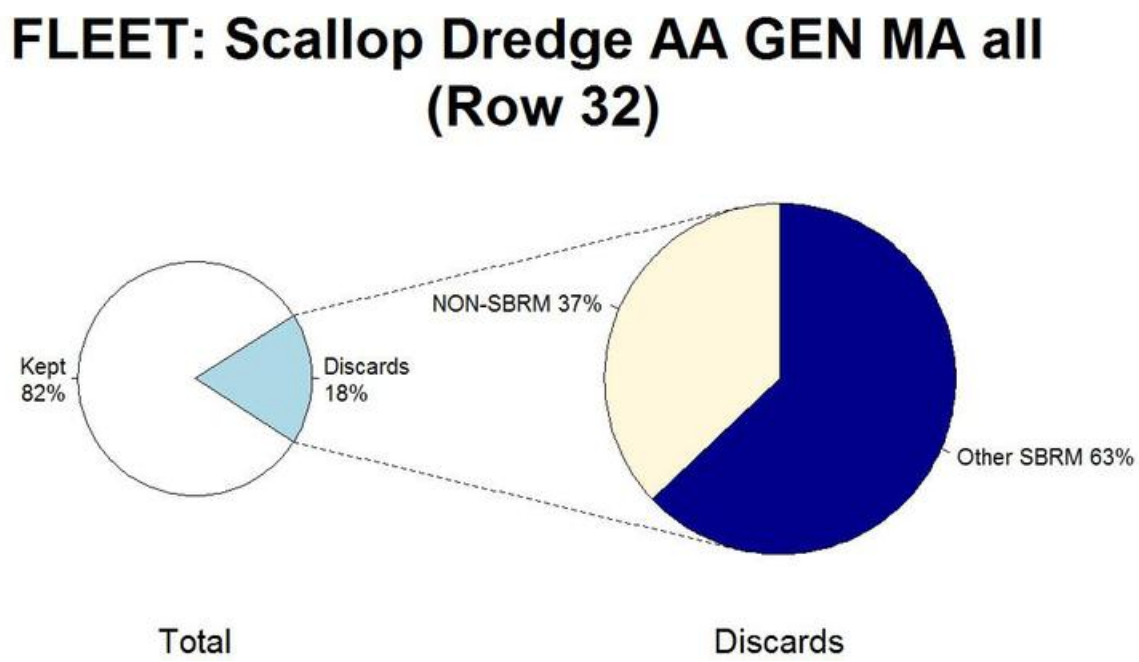

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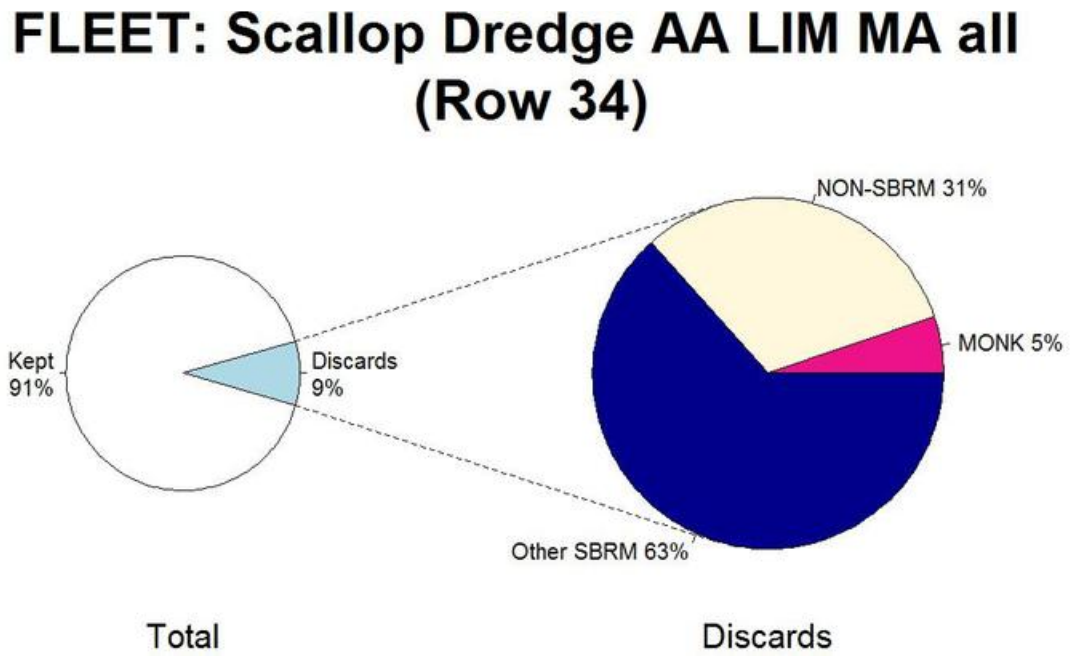

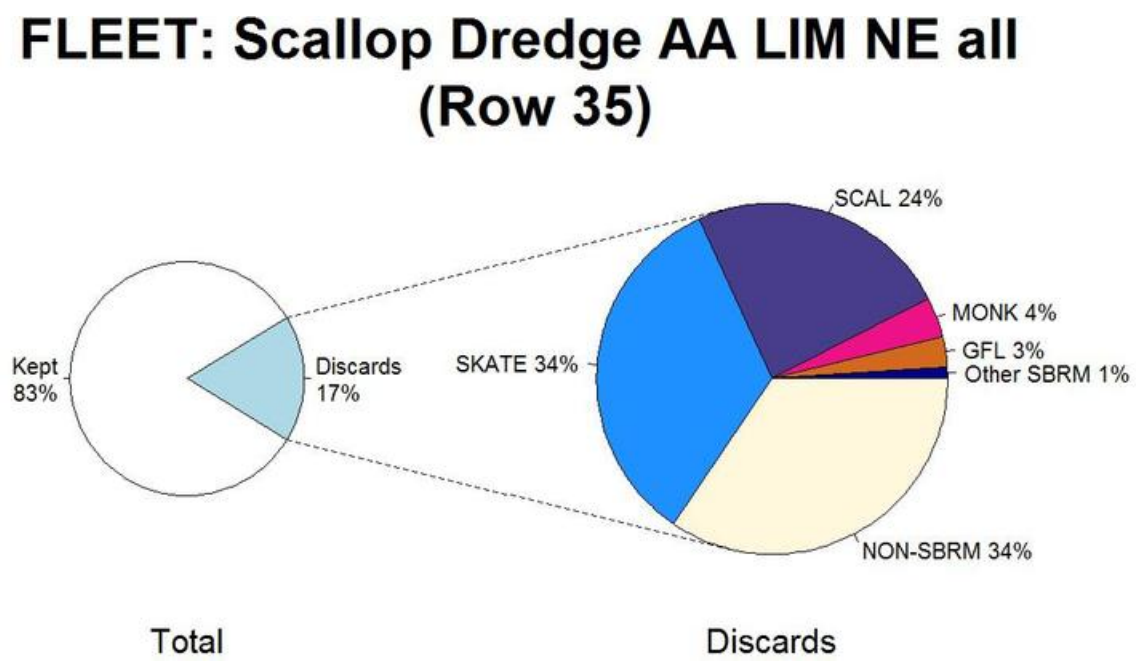

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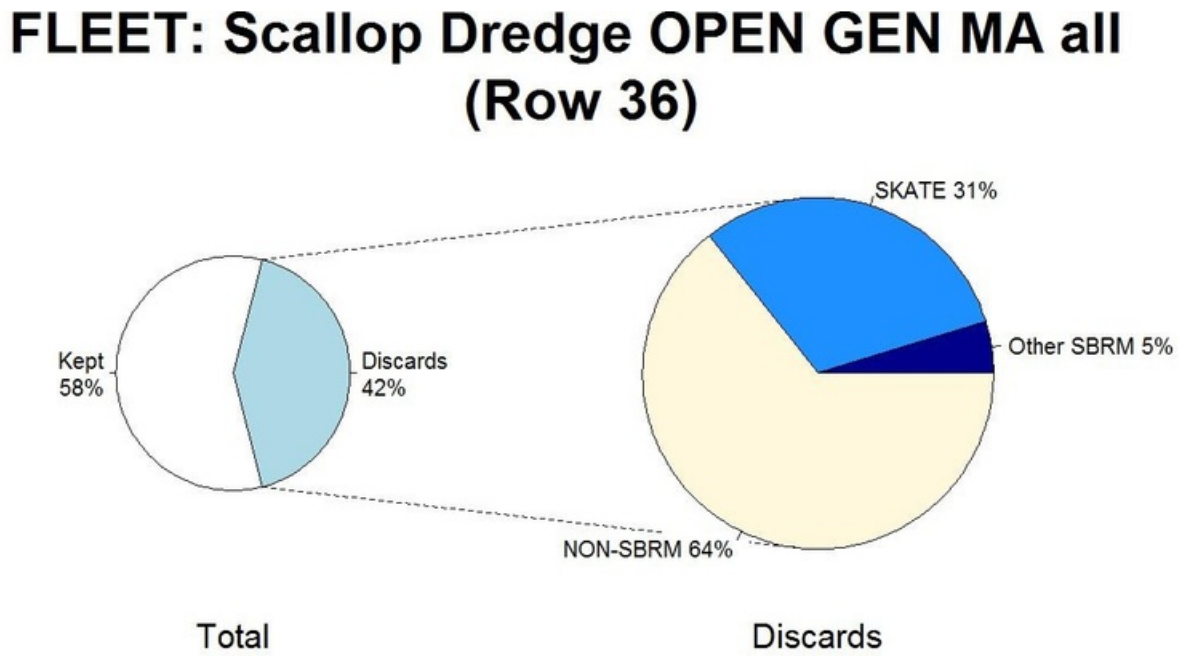

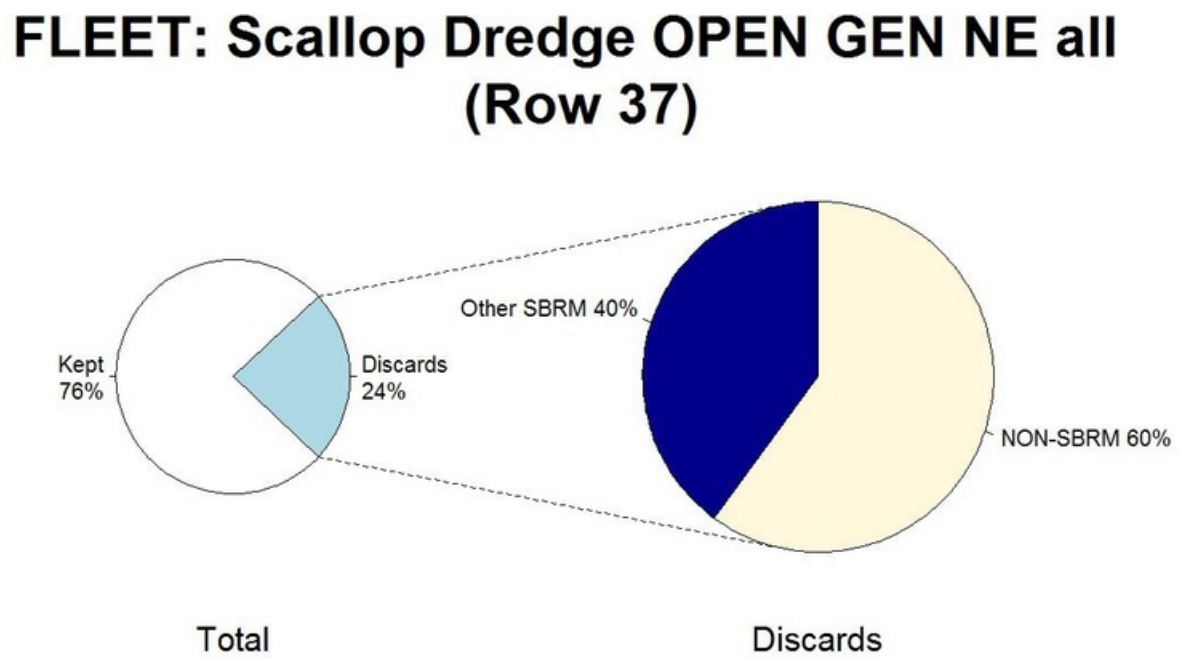

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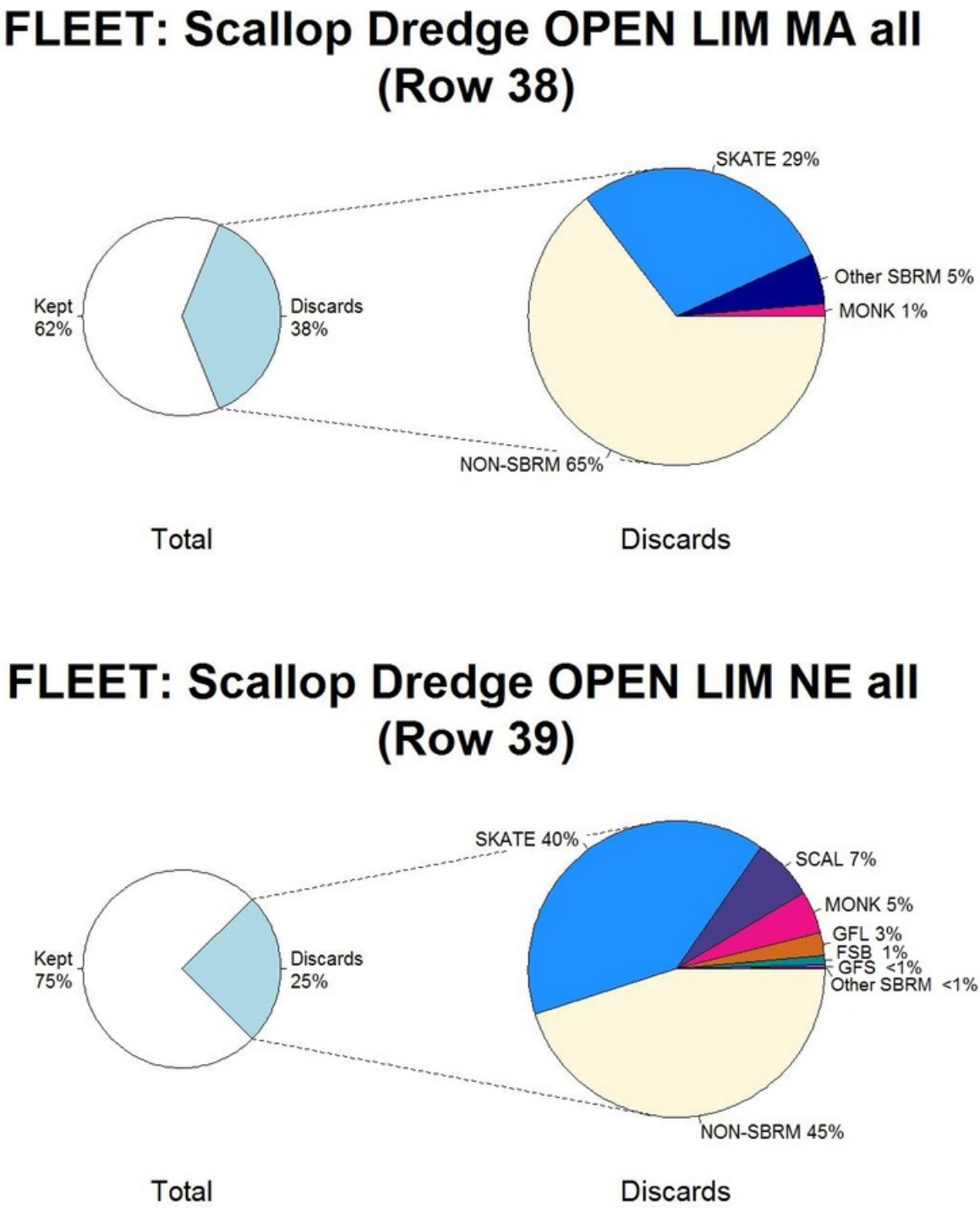

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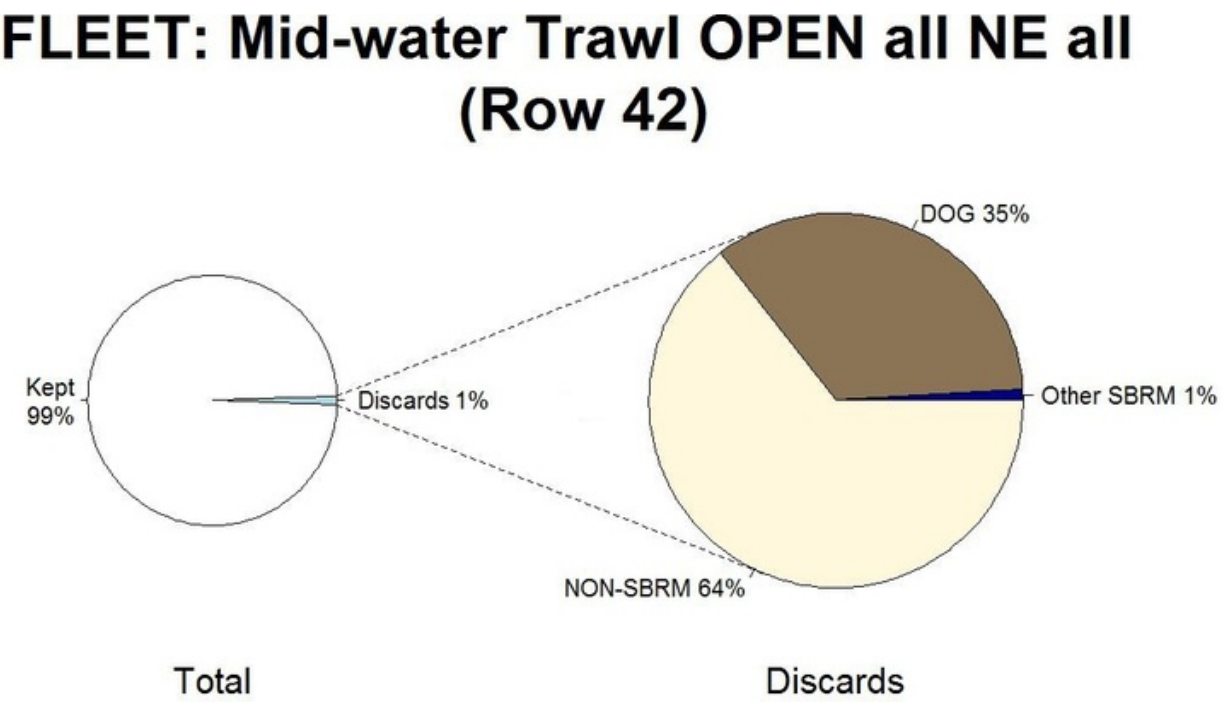

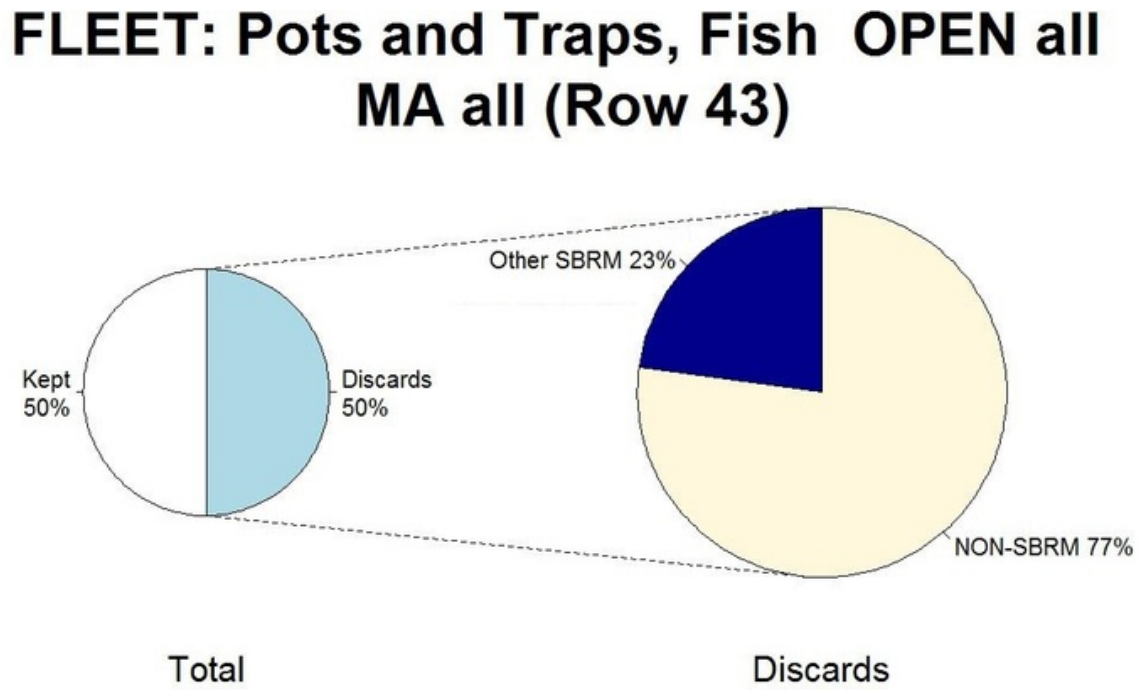

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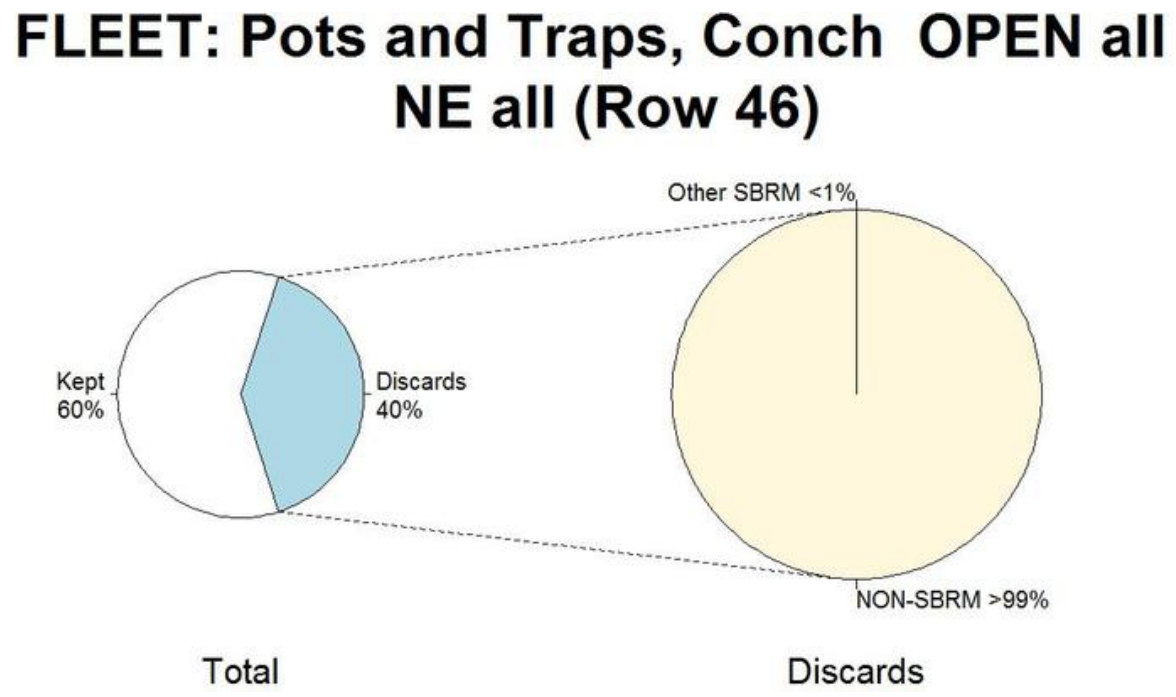

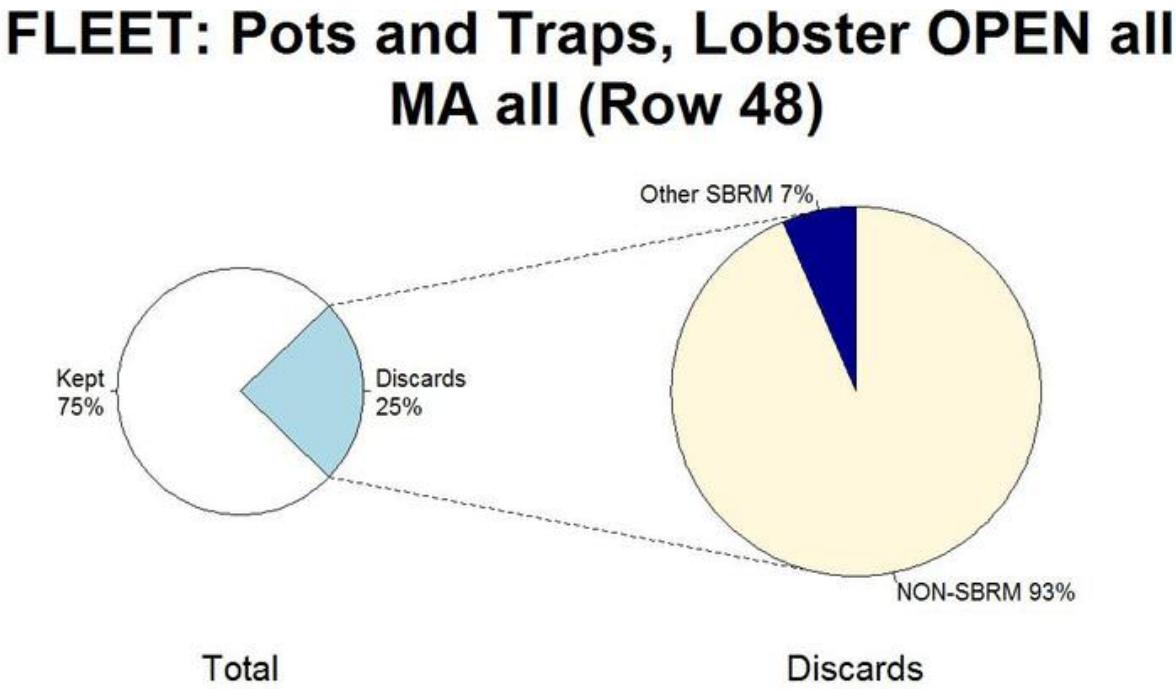

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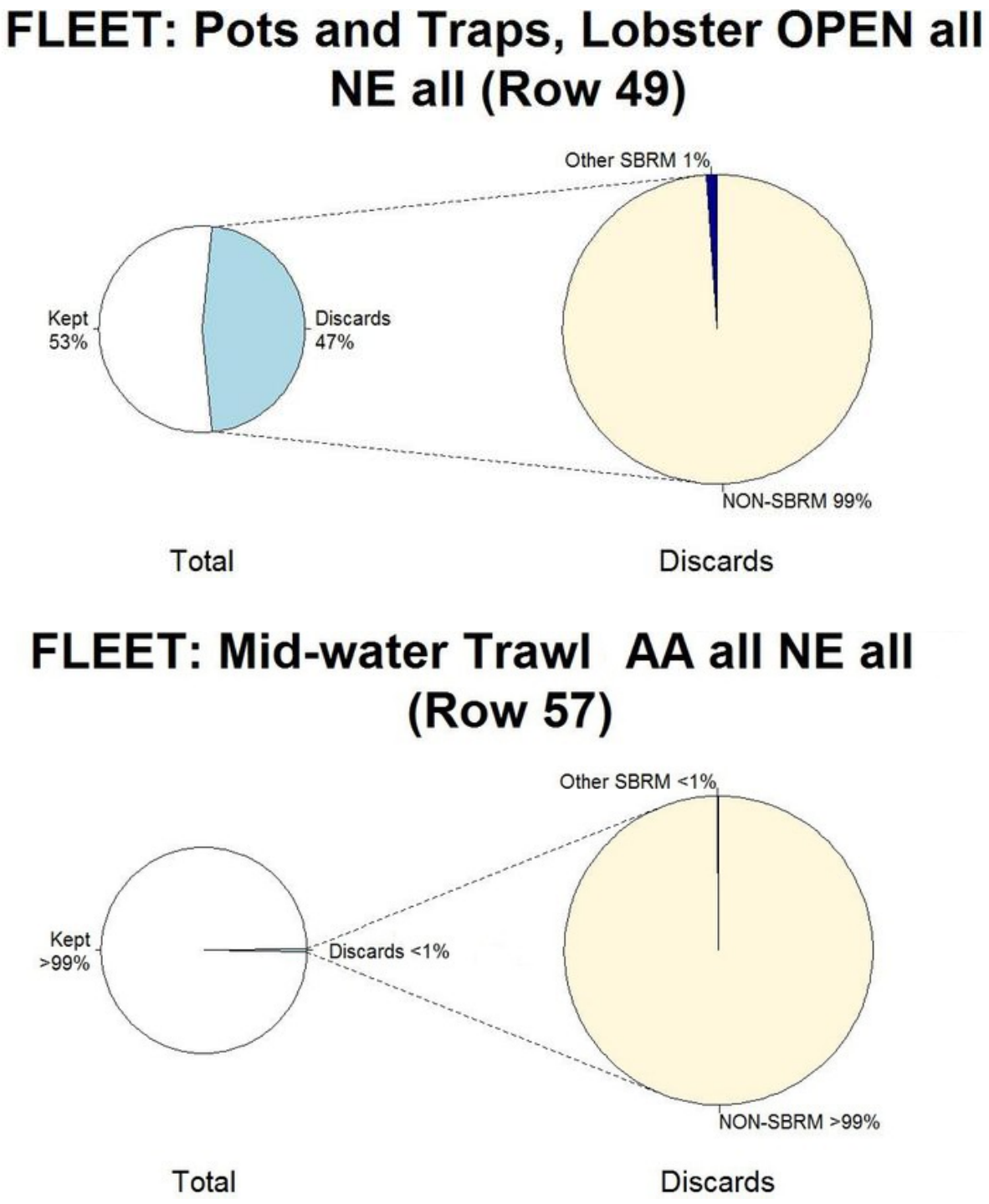

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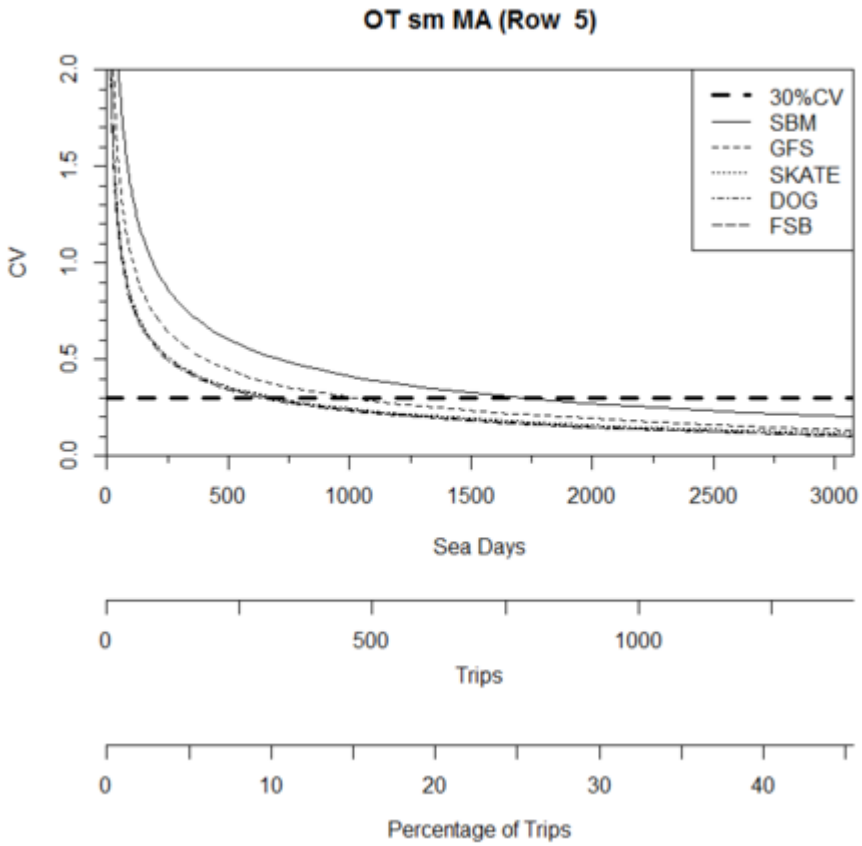


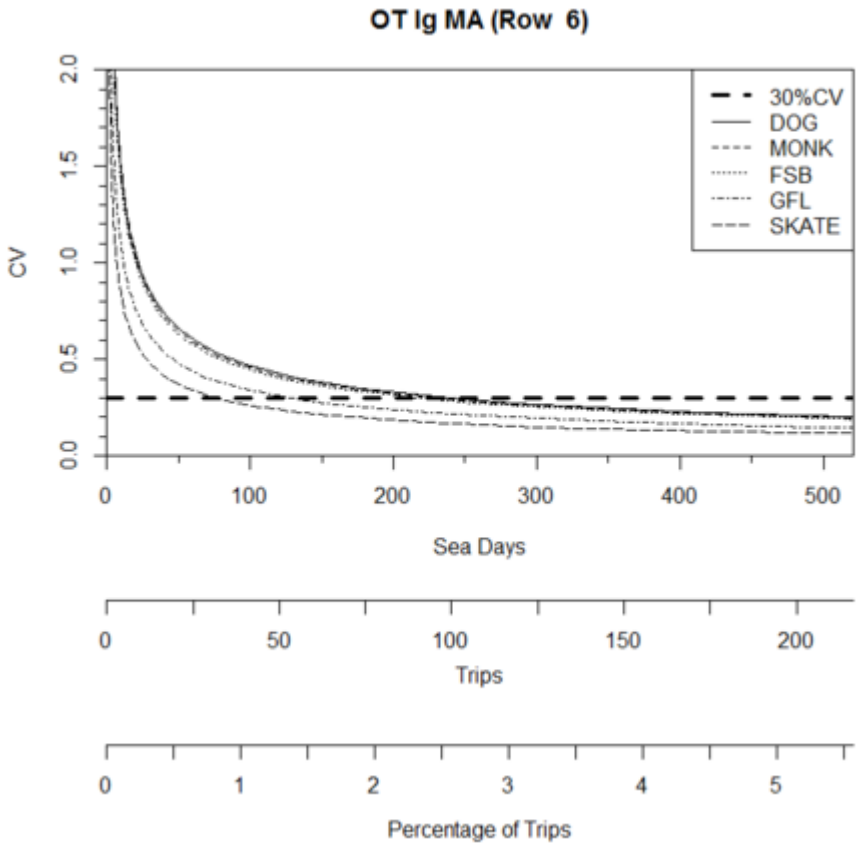


Figure 3. Results from the 2016 sample size analysis conducted for selected fleets. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. For species group and fleet abbreviations, see Table 1 and Appendix Table 4, respectively.

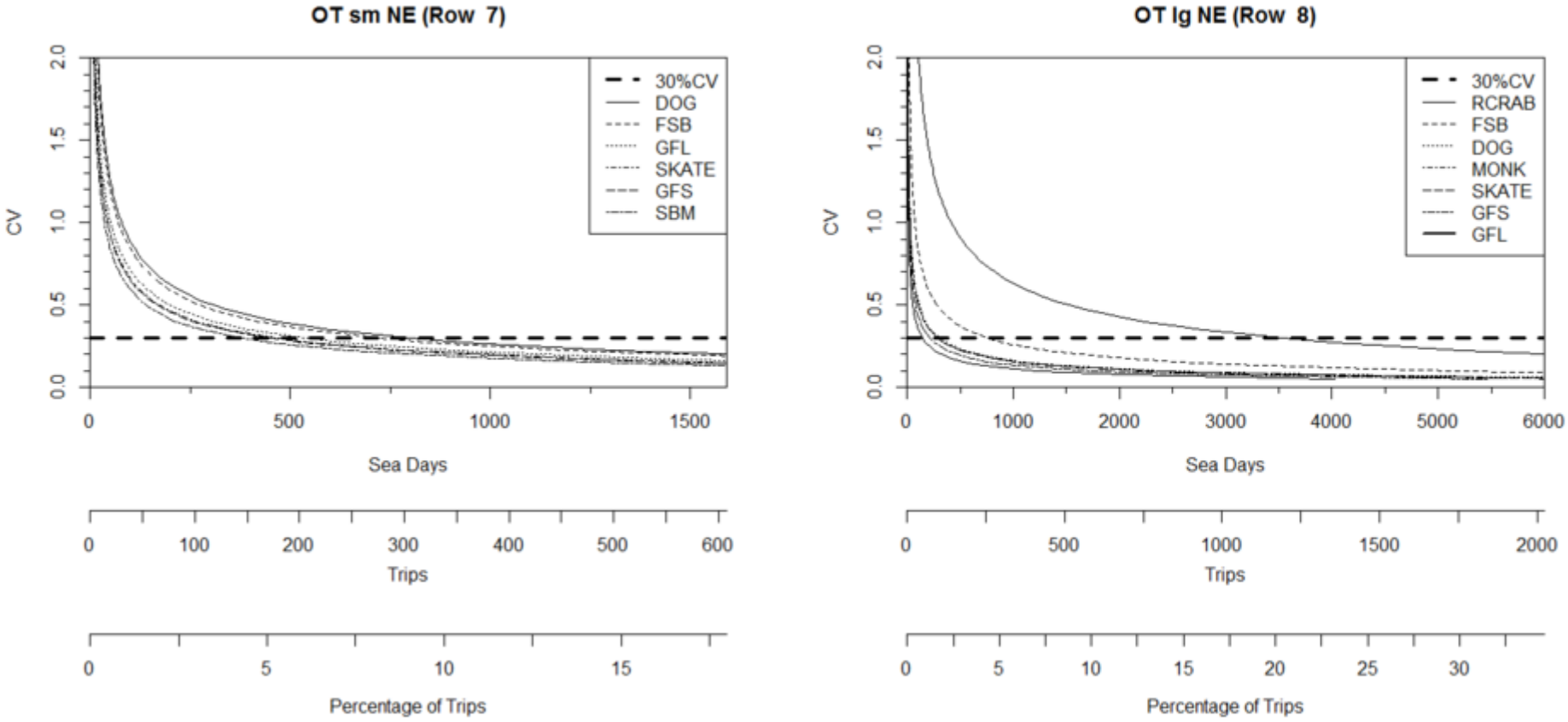
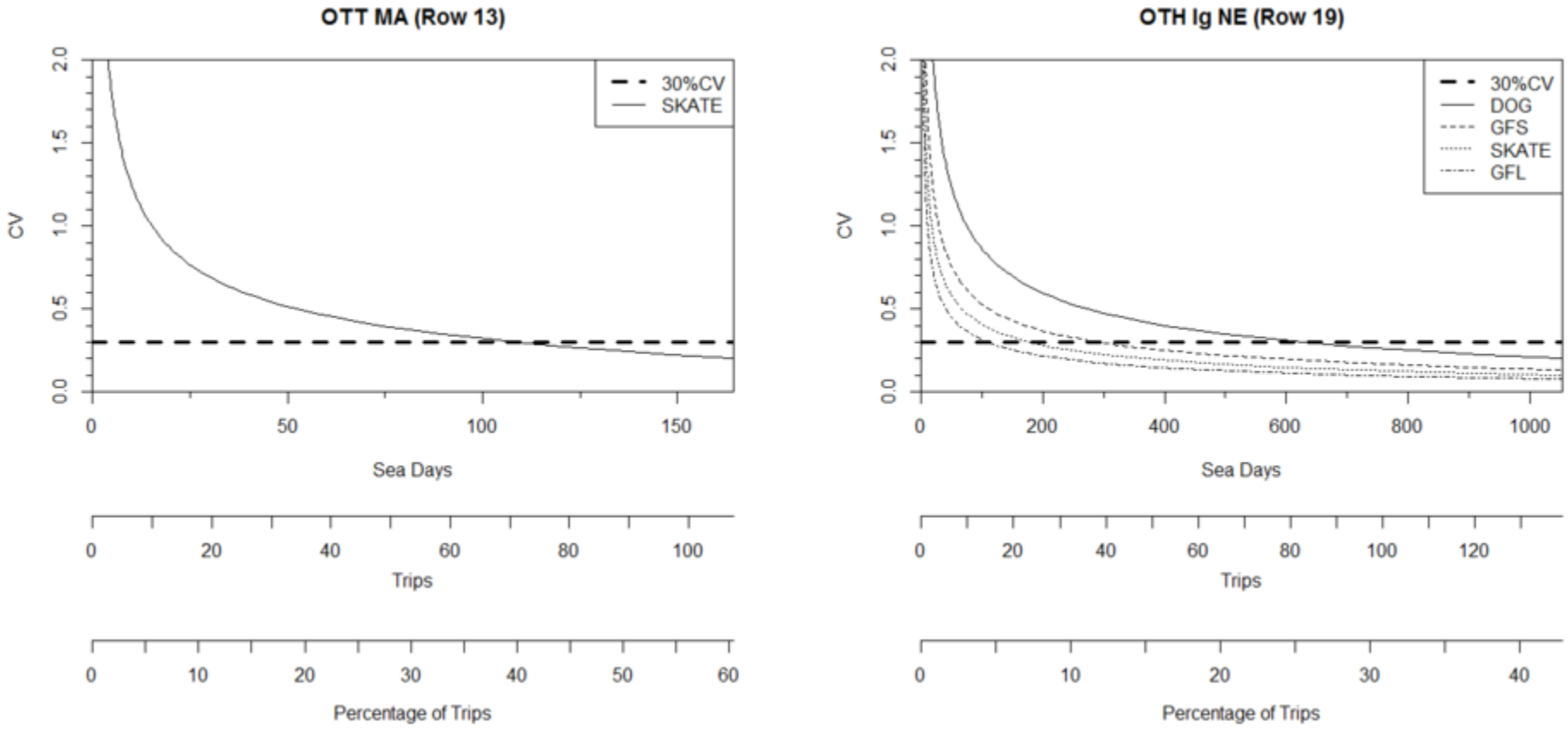


Figure 3, continued. Results from the 2016 sample size analysis conducted for selected fleets. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. For species group and fleet abbreviations, see Table 1 and Appendix Table 4, respectively.



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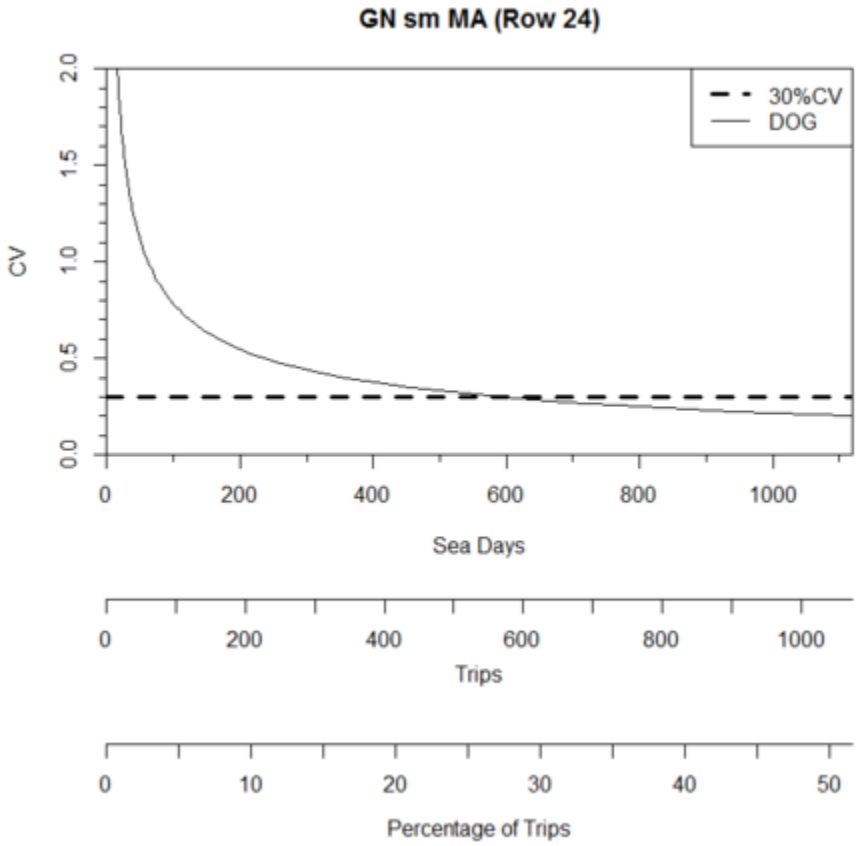

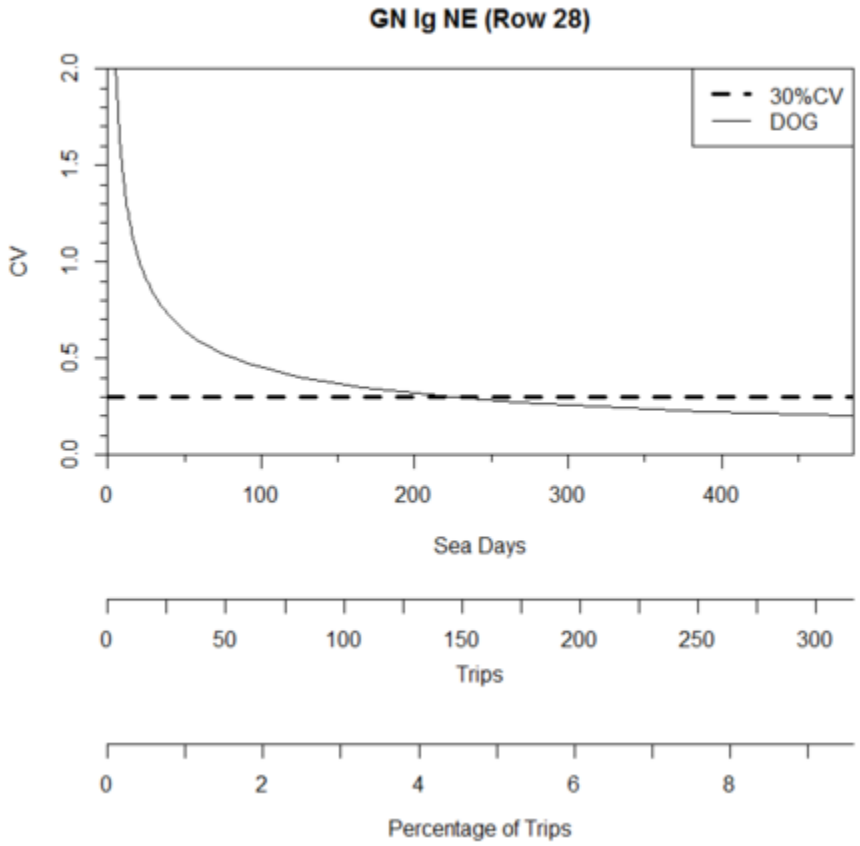

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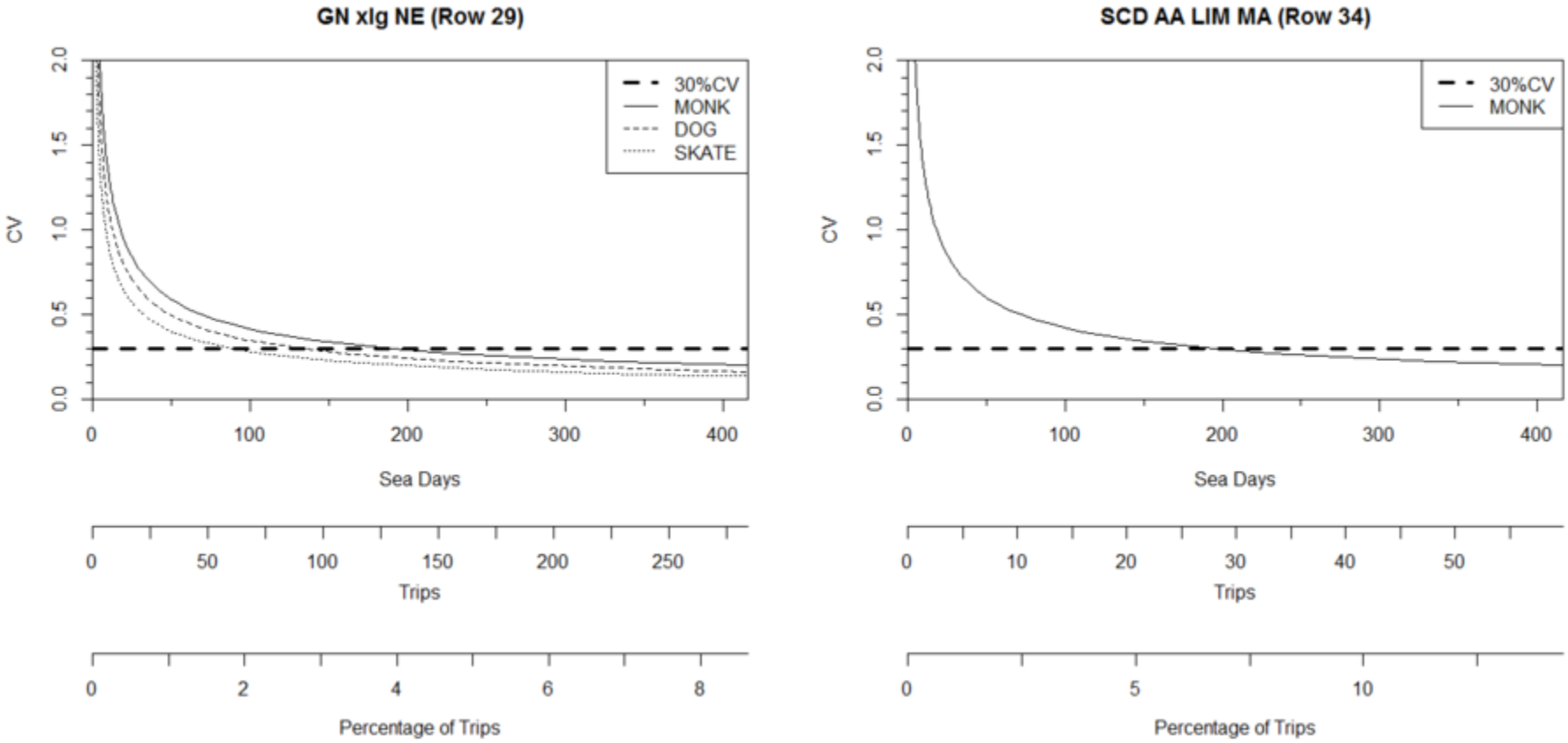

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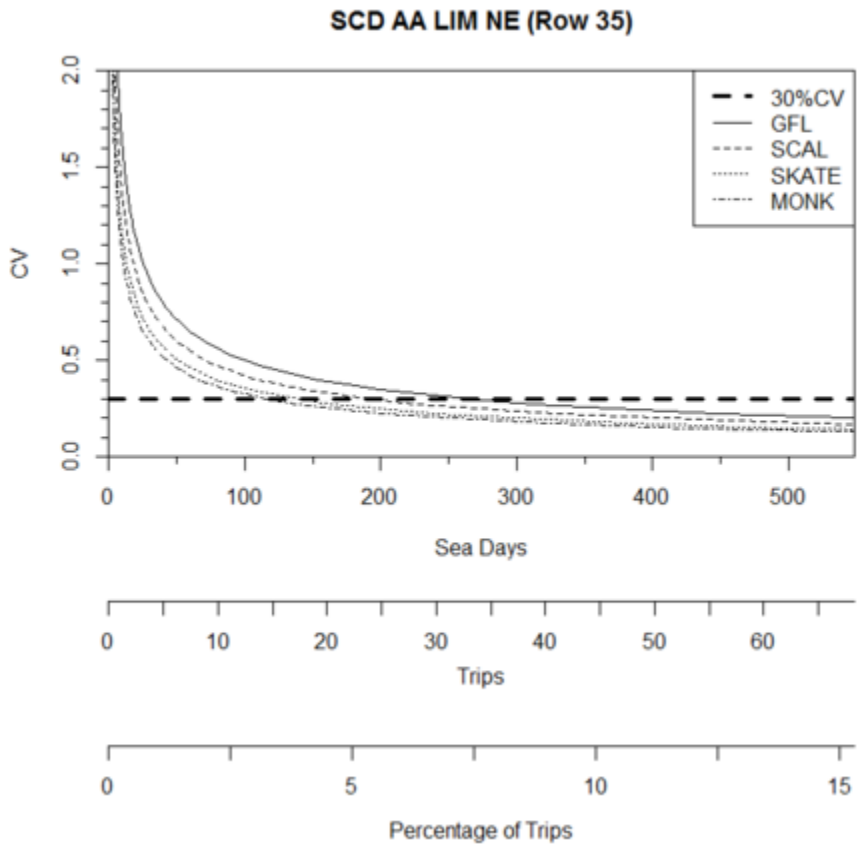

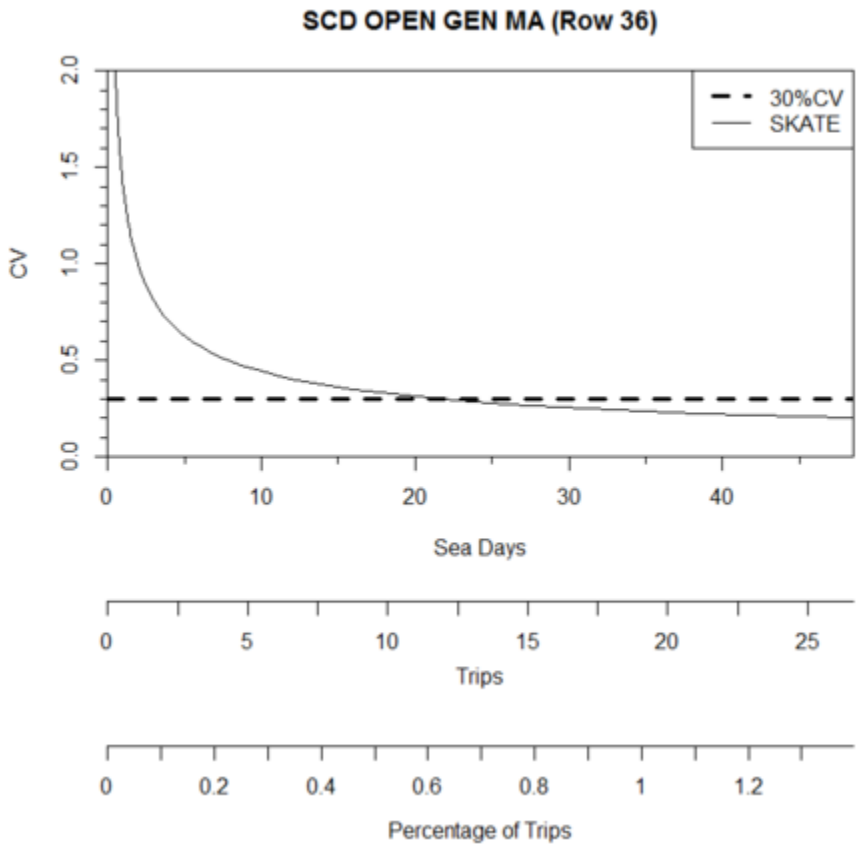

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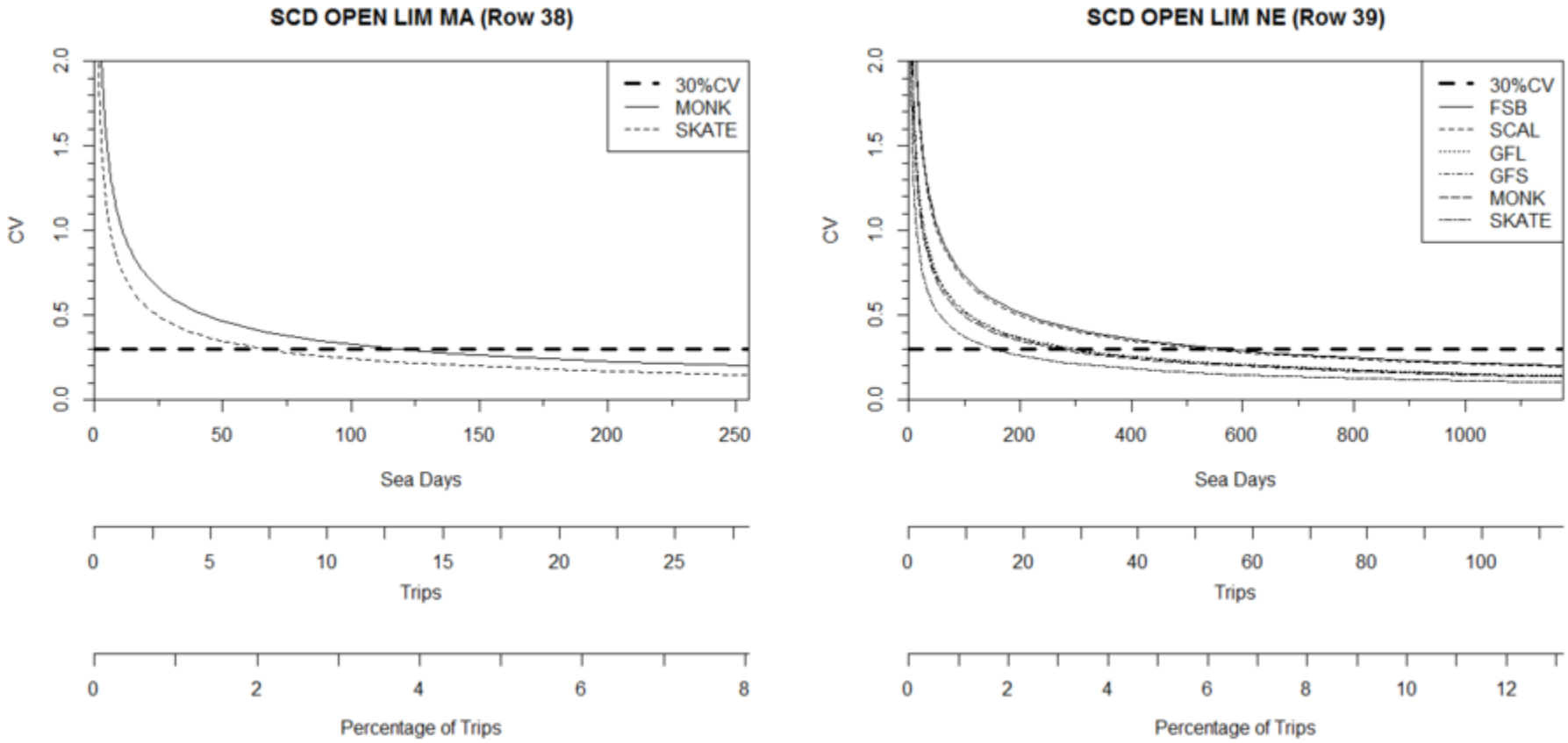

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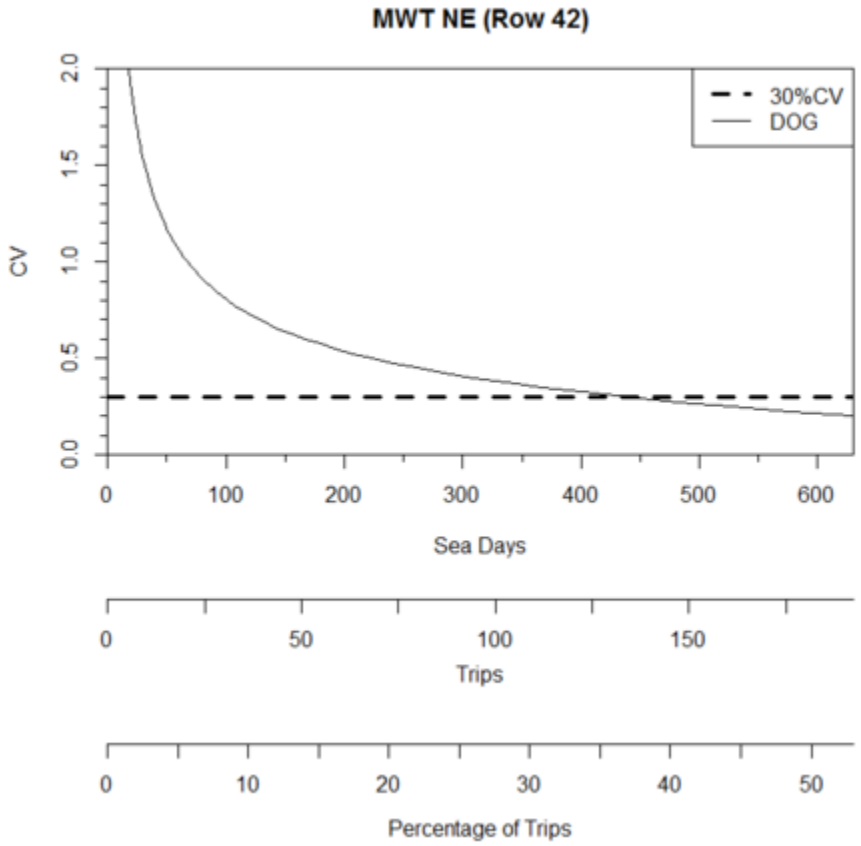

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Appendix Table 1. The number of fleets used in analyses and reported in the tables of this report.

```
57 fleets uniquely identified in Tables 2 & 3

   17 fleets with no observer coverage
       discard estimation not conducted
       pilot fleet designation for sample size analysis

         2 confidential fleets (Rows 10, 15)
            aggregated into “Confidential fleets” in Tables 4 & 5
        15 nonconfidential fleets

    10 fleets with sparse observer coverage
       discard estimation conducted
       pilot fleet designation for sample size analysis

         1 confidential fleet (Row 14)
            aggregated into with “Confidential fleets”  in Tables 4 & 5.
         9 nonconfidential fleets

   30 fleets with sufficient observer coverage
       discard estimation conducted
       variance of discard used for sample size analysis
       nonpilot fleets

         1 confidential fleet (Row 18)
            aggregated into “Confidential fleets” in Tables 4 & 5
        29 nonconfidential fleets
```

```
Other minor fleets
     not uniquely identified
     aggregated into “Other minor fleets”  in Tables 4 & 5
```

Appendix Table 2. Discard reason categories used in Appendix Tables 3A and 3B and the associated discard fish dispositions.

Discard Reason Category	FISH DISPOSITIION Code	FISH DISPOSITIION Description
No Market	001	NO MARKET, REASON NOT SPECIFIED
	002	NO MARKET, TOO SMALL
	003	NO MARKET, TOO LARGE
	005	NO MARKET, WONT KEEP UNTIL TRIP END
	006	NO MARKET, BUT RETAINED BY VESSEL FOR ALTERNATE PROGRAM
	007	NO MARKET, BUT RETAINED FOR OBSERVER FOR SCIENTIFIC PURPOSES
	008	NO MARKET, BROUGHT ONBOARD ONLY FOR THE PURPOSE OF OBSERVER SAMPLING
Regulation (Size)	012	REGULATIONS PROHIBIT RETENTION, TOO SMALL
	013	REGULATIONS PROHIBIT RETENTION, TOO LARGE
Regulation (Quota)	004	NO MARKET, QUOTA FILLED
	014	REGULATIONS PROHIBIT RETENTION, QUOTA FILLED
	015	REGULATIONS PROHIBIT RETENTION, NO QUOTA IN AREA
	025	REGULATIONS PROHIBIT ANY RETENTION
Regulation (Other)	011	REGULATIONS PROHIBIT RETENTION, REASON NOT SPECIFIED
	022	REGULATIONS PROHIBIT RETENTION, V-NOTCHED
	023	REGULATIONS PROHIBIT RETENTION, SOFT-SHELL
	024	REGULATIONS PROHIBIT RETENTION, WITH EGGS
Poor Quality	030	POOR QUALITY, GREY MEAT/PARASITES OBSERVED
	031	POOR QUALITY, REASON NOT SPECIFIED
	032	POOR QUALITY, SANDFLEA DAMAGE
	033	POOR QUALITY, SEAL DAMAGE
	034	POOR QUALITY, SHARK DAMAGE
	035	POOR QUALITY, CETACEAN DAMAGE
	036	POOR QUALITY, HAGFISH DAMAGE
	037	POOR QUALITY, SHELL DISEASE
	038	POOR QUALITY, GEAR DAMAGE
Other	000	DISCARDED, UNKNOWN REASON
	040	NOT BROUGHT ON BOARD, OPERATIONAL DISCARDS
	041	NOT BROUGHT ON BOARD, REASON NOT SPECIFIED
	042	NOT BROUGHT ON BOARD, GEAR DAMAGE PREVENTED CAPTURE
	043	NOT BROUGHT ON BOARD, FELL OUT/OFF OF GEAR
	044	NOT BROUGHT ON BOARD, CONSIDERED TO HAVE NO MARKET VALUE
	045	NOT BROUGHT ON BOARD, SAFETY REASON
	046	NOT BROUGHT ON BOARD, MECHANICAL FAILURE
	047	NOT BROUGHT ON BOARD, SPINY DOG CLOGGING PUMP
	048	NOT BROUGHT ON BOARD, VESSEL CAPACITY FILLED
	049	NOT BROUGHT ON BOARD, NOT ENOUGH FISH TO PUMP ABOARD
	052	INCIDENTAL TAKE (MAMMAL, SEA TURTLE, SEA BIRD)
	053	DEBRIS
	054	EMPTY SHELLS
	062	UPGRADED
	063	RETAINING ONLY CERTAIN SIZE BETTER PRICE TRIP QUOTA IN EFFECT
	064	RETAINING ONLY CERTAIN SIZE FOR BEST PRICE DUE TO PRICE DIFFERENCE
	070	NOT BROUGHT ON BOARD, QUALITY OF FISH
	071	NOT BROUGHT ON BOARD, CLOGGED PUMP OTHER
	099	DISCARDED, OTHER

Note: Fish disposition code '039' = POOR QUALITY, PREVIOUSLY DISCARDED has been excluded from this report.

Appendix Table 3A. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2014 through June 2015 data.

Species Group: ATLANTIC SALMON (Salmo salar)

Fleet						Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
	40 Other fleets filtered out					0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					Total	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Species Group: BLUEFISH (Pomatomus saltatrix)

Fleet						Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
	40 Other fleets filtered out					69,420	37.2	4.5	4.6	0.6	34.5	18.6	100.0
					Total	69,420	37.2	4.5	4.6	0.6	34.5	18.6	100.0

Species Group: FLUKE (Paralichthys dentatus) - SCUP (Stenotomus chrysops) - BLACK SEA BASS (Centropristis striata)

Fleet						Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	900,783	9.2	52.0	30.0	0.2	0.1	8.4	100.0
6	Otter Trawl	OPEN	all	MA	lg	554,429	12.0	49.8	33.1	0.0	0.1	5.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	547,956	17.0	45.5	33.3	0.0	0.4	3.8	100.0
8	Otter Trawl	OPEN	all	NE	lg	500,314	6.8	12.1	57.2	3.5	0.1	20.2	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	373,228	78.7	0.1	21.1	0.0	0.1	0.0	100.0
	35 Other fleets filtered out					654,022	19.2	27.0	48.5	0.0	3.1	2.2	100.0
					Total	3,530,731	19.7	34.9	37.4	0.6	0.7	6.8	100.0

Species Group: HERRING, ATLANTIC (Clupea harengus)

Fleet						Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
	40 Other fleets filtered out					131,943	57.6	0.0	35.1	0.0	0.1	7.3	100.0
					Total	131,943	57.6	0.0	35.1	0.0	0.1	7.3	100.0

See text for fleet abbreviations.

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2014 through June 2015 data.

Species Group: LARGE MESH GROUNDFISH

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
6	Otter Trawl	OPEN	all	MA	lg	517,332	16.9	4.1	78.9	0.0	0.1	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	1,611,297	2.8	15.0	82.1	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	2,130,469	9.7	68.1	20.7	0.0	0.6	0.9	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	515,081	1.9	91.9	5.4	0.0	0.6	0.2	100.0
35	Scallop Dredge	AA	LIM	NE	all	271,806	72.7	0.1	27.1	0.1	0.0	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	954,733	70.8	0.2	28.9	0.0	0.0	0.0	100.0
34 Other fleets filtered out						1,032,182	33.9	18.2	35.6	0.0	12.2	0.2	100.0
					Total	7,032,899	22.4	33.8	41.5	0.0	2.0	0.3	100.0

Species Group: MONKFISH (Lophius americanus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
6	Otter Trawl	OPEN	all	MA	lg	189,309	13.2	77.7	5.6	0.0	0.0	3.5	100.0
8	Otter Trawl	OPEN	all	NE	lg	931,956	1.0	97.8	0.0	0.0	0.0	1.1	100.0
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	145,469	0.8	7.3	1.9	0.0	90.0	0.0	100.0
34	Scallop Dredge	AA	LIM	MA	all	216,697	87.2	10.7	1.8	0.0	0.3	0.0	100.0
35	Scallop Dredge	AA	LIM	NE	all	361,632	65.1	27.6	6.6	0.0	0.8	0.0	100.0
38	Scallop Dredge	OPEN	LIM	MA	all	268,997	81.8	17.9	0.1	0.0	0.2	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	1,765,347	77.0	16.6	4.6	0.0	0.3	1.4	100.0
33 Other fleets filtered out						371,008	29.2	44.0	12.9	0.0	13.6	0.3	100.0
					Total	4,250,416	50.5	39.9	4.0	0.0	4.5	1.0	100.0

Species Group: RED DEEPSEA CRAB (Chaceon quinquedens)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	55,968	100.0	0.0	0.0	0.0	0.0	0.0	100.0
39 Other fleets filtered out						181,266	100.0	0.0	0.0	0.0	0.0	0.0	100.0
					Total	237,234	100.0	0.0	0.0	0.0	0.0	0.0	100.0

See text for fleet abbreviations.

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2014 through June 2015 data.

Species Group: SEA SCALLOP (Placopecten magellanicus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
35	Scallop Dredge	AA	LIM	NE	all	2,359,920	78.5	0.0	3.6	0.0	3.8	14.1	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	2,538,702	90.9	0.0	0.0	0.0	9.1	0.0	100.0
38 Other fleets filtered out						3,711,491	49.9	2.1	16.6	0.0	6.7	24.7	100.0
					Total	8,610,113	69.8	0.9	8.1	0.0	6.6	14.5	100.0

Species Group: SKATE COMPLEX (Rajidae)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	2,839,385	91.4	0.1	8.4	0.0	0.0	0.1	100.0
6	Otter Trawl	OPEN	all	MA	lg	15,592,969	94.3	0.1	5.5	0.0	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	1,166,422	86.7	0.1	12.7	0.0	0.0	0.5	100.0
8	Otter Trawl	OPEN	all	NE	lg	27,830,982	86.0	0.1	12.6	0.0	0.0	1.3	100.0
13	Otter Trawl, Twin	OPEN	all	MA	all	1,389,530	99.8	0.0	0.1	0.0	0.0	0.1	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	1,454,199	91.2	0.0	8.8	0.0	0.0	0.0	100.0
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	1,772,988	42.0	0.0	22.3	0.0	33.4	2.2	100.0
35	Scallop Dredge	AA	LIM	NE	all	3,273,592	92.2	0.0	7.8	0.0	0.0	0.0	100.0
36	Scallop Dredge	OPEN	GEN	MA	all	1,909,518	93.6	1.1	5.3	0.0	0.0	0.0	100.0
38	Scallop Dredge	OPEN	LIM	MA	all	5,659,925	98.5	0.0	1.4	0.0	0.1	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	14,927,702	96.9	0.0	3.1	0.0	0.0	0.0	100.0
29 Other fleets filtered out						3,131,473	85.6	0.4	12.8	0.0	0.6	0.6	100.0
					Total	80,948,684	90.5	0.1	8.1	0.0	0.8	0.5	100.0

See text for fleet abbreviations.

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2014 through June 2015 data.

Species Group: SMALL MESH GROUNDFISH

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	237,603	88.4	9.5	0.0	0.0	2.0	0.1	100.0
7	Otter Trawl	OPEN	all	NE	sm	2,125,358	85.0	5.7	5.6	0.0	3.0	0.6	100.0
8	Otter Trawl	OPEN	all	NE	lg	791,144	97.8	0.7	1.0	0.0	0.4	0.0	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	90,595	98.4	1.6	0.0	0.0	0.0	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	120,324	96.6	0.0	3.3	0.0	0.0	0.0	100.0
	35 Other fleets filtered out					338,878	90.0	0.1	6.4	0.0	3.5	0.0	100.0
					Total	3,703,902	89.1	4.1	4.1	0.0	2.3	0.4	100.0

Species Group: SPINY DOGFISH (Squalus acanthias)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	1,865,947	99.9	0.0	0.1	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	1,673,441	98.7	0.0	0.5	0.0	0.9	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	1,691,579	89.1	0.0	5.0	0.0	0.0	6.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	4,031,919	99.5	0.0	0.5	0.0	0.0	0.0	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	447,032	99.9	0.0	0.1	0.0	0.0	0.0	100.0
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	472,610	100.0	0.0	0.0	0.0	0.0	0.0	100.0
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	3,144,528	91.7	0.3	6.0	0.0	1.5	0.5	100.0
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	142,820	62.3	0.0	4.2	0.2	32.9	0.5	100.0
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	403,995	100.0	0.0	0.0	0.0	0.0	0.0	100.0
	31 Other fleets filtered out					653,461	81.8	0.0	6.5	0.3	11.2	0.1	100.0
					Total	14,527,332	95.4	0.1	2.4	0.0	1.3	0.8	100.0

See text for fleet abbreviations.

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2014 through June 2015 data.

Species Group: SQUID (Doryteuthis [Amerigo] pealeii, Illex illecebrosus)- BUTTERFISH (Peprilus triacanthus) - MACKEREL (Scomber scombrus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	939,418	80.6	2.6	0.7	0.0	0.5	15.6	100.0
7	Otter Trawl	OPEN	all	NE	sm	1,405,624	89.5	5.2	0.6	0.0	4.1	0.6	100.0
38 Other fleets filtered out						399,818	88.0	2.8	1.0	0.0	0.5	7.7	100.0
					Total	2,744,859	86.3	4.0	0.7	0.0	2.3	6.7	100.0

Species Group: SURFCLAM (Spisula solidissima) - OCEAN QUAHOG (Arctica islandica)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
40 Other fleets filtered out						9,073	99.9	0.0	0.1	0.0	0.0	0.0	100.0
					Total	9,073	99.9	0.0	0.1	0.0	0.0	0.0	100.0

Species Group: TILEFISH (Lopholatilus chamaeleonticeps)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
40 Other fleets filtered out						6,800	56.2	4.4	7.0	0.0	20.7	11.6	100.0
					Total	6,800	56.2	4.4	7.0	0.0	20.7	11.6	100.0

See text for fleet abbreviations.

Appendix Table 3B. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: BLACK SEA BASS (Centropristis striata)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	266,611	1.4	16.7	61.0	0.1	0.0	20.7	100.0
6	Otter Trawl	OPEN	all	MA	lg	85,555	13.7	27.3	49.9	0.0	0.0	9.1	100.0
7	Otter Trawl	OPEN	all	NE	sm	114,723	1.1	14.2	80.5	0.0	0.0	4.2	100.0
43	Pots and Traps, Fish	OPEN	all	MA	all	109,253	0.0	77.1	13.0	0.0	9.9	0.0	100.0
36 Other fleets filtered out						169,131	9.7	42.1	39.3	0.1	0.0	8.7	100.0
					Total	745,273	4.5	32.1	50.8	0.1	1.5	11.1	100.0

Species: FLUKE (Paralichthys dentatus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	151,508	1.6	21.5	69.2	1.1	0.0	6.5	100.0
6	Otter Trawl	OPEN	all	MA	lg	262,204	0.0	41.3	50.8	0.0	0.2	7.7	100.0
8	Otter Trawl	OPEN	all	NE	lg	405,421	3.3	5.2	62.6	4.4	0.1	24.4	100.0
38	Scallop Dredge	OPEN	LIM	MA	all	140,976	37.3	1.6	59.6	0.0	1.4	0.1	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	368,289	78.6	0.1	21.3	0.0	0.1	0.0	100.0
35 Other fleets filtered out						380,817	15.3	9.3	68.8	0.0	2.0	4.6	100.0
					Total	1,709,215	24.3	11.7	53.6	1.1	0.6	8.6	100.0

Species: SCUP (Stenotomus chrysops)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	482,664	15.5	79.6	2.1	0.0	0.2	2.6	100.0
7	Otter Trawl	OPEN	all	NE	sm	303,042	29.3	68.4	1.6	0.0	0.7	0.0	100.0
38 Other fleets filtered out						290,537	27.0	64.6	8.1	0.0	0.1	0.2	100.0
					Total	1,076,243	22.5	72.4	3.6	0.0	0.3	1.2	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: AMERICAN PLAICE (Hippoglossoides platessoides)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	165,155	0.6	97.0	0.0	0.0	2.4	0.0	100.0
	39 Other fleets filtered out					56,839	44.7	24.2	30.2	0.3	0.6	0.0	100.0
					Total	221,995	11.9	78.4	7.7	0.1	1.9	0.0	100.0

Species: ATLANTIC COD (Gadus morhua)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	70,346	0.0	65.8	31.4	0.0	0.1	2.7	100.0
49	Pots and Traps, Lobster	OPEN	all	NE	all	44,424	76.4	0.4	23.2	0.0	0.0	0.0	100.0
	38 Other fleets filtered out					100,329	6.5	51.5	19.4	0.0	21.5	1.1	100.0
					Total	215,099	18.8	45.6	24.1	0.0	10.1	1.4	100.0

Species: ATLANTIC HALIBUT (Hippoglossus hippoglossus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	43,407	0.1	55.2	38.4	0.0	0.1	6.2	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	4,172	0.0	39.0	49.7	0.0	0.0	11.3	100.0
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	5,624	0.0	100.0	0.0	0.0	0.0	0.0	100.0
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	19,354	0.0	70.8	15.9	0.0	13.3	0.0	100.0
	36 Other fleets filtered out					3,331	46.4	22.5	31.1	0.0	0.0	0.0	100.0
					Total	75,888	2.1	60.2	30.1	0.0	3.5	4.2	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: ATLANTIC WOLFFISH (Anarhichas lupus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	1,583	31.1	0.0	68.9	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	27,580	4.5	0.0	95.0	0.4	0.0	0.2	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,983	4.3	0.0	95.7	0.0	0.0	0.0	100.0
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	6,258	1.7	0.0	97.5	0.0	0.0	0.8	100.0
49	Pots and Traps, Lobster	OPEN	all	NE	all	3,086	18.0	0.0	82.0	0.0	0.0	0.0	100.0
	35 Other fleets filtered out					1,466	11.1	0.0	88.9	0.0	0.0	0.0	100.0
					Total	43,955	6.2	0.0	93.4	0.2	0.0	0.2	100.0

Species: HADDOCK (Melanogrammus aeglefinus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	1,463,938	1.6	16.1	82.4	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	744,504	0.0	99.0	0.6	0.0	0.5	0.0	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	405,523	0.8	98.7	0.0	0.0	0.5	0.0	100.0
	37 Other fleets filtered out					98,826	27.1	65.4	5.5	0.0	2.0	0.0	100.0
					Total	2,712,791	1.9	53.0	44.8	0.0	0.3	0.0	100.0

Species: OCEAN POUT (Zoarces americanus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	12,780	17.2	0.0	82.8	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	48,050	65.5	0.0	34.5	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	69,689	48.1	0.0	51.8	0.1	0.0	0.0	100.0
48	Pots and Traps, Lobster	OPEN	all	MA	all	16,355	7.3	0.0	92.7	0.0	0.0	0.0	100.0
49	Pots and Traps, Lobster	OPEN	all	NE	all	18,761	75.8	0.0	24.2	0.0	0.0	0.0	100.0
	35 Other fleets filtered out					7,311	59.8	0.0	40.2	0.0	0.0	0.0	100.0
					Total	172,945	50.3	0.0	49.7	0.0	0.0	0.0	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: POLLOCK (Pollachius virens)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	142,544	0.2	98.9	0.0	0.0	0.7	0.2	100.0
39 Other fleets filtered out						146,698	1.7	47.9	0.4	0.0	50.0	0.0	100.0
					Total	289,243	0.9	73.0	0.2	0.0	25.7	0.1	100.0

Species: REDFISH (Sebastes fasciatus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	302,401	39.8	55.1	0.0	0.0	0.3	4.7	100.0
39 Other fleets filtered out						42,253	16.7	69.5	9.0	0.0	3.0	1.8	100.0
					Total	344,654	37.0	56.9	1.1	0.0	0.7	4.4	100.0

Species: WHITE HAKE (Urophycis tenuis)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
49	Pots and Traps, Lobster	OPEN	all	NE	all	122,365	79.4	0.0	20.6	0.0	0.0	0.0	100.0
39 Other fleets filtered out						61,028	51.7	5.9	3.8	0.0	38.2	0.4	100.0
					Total	183,392	70.2	2.0	15.0	0.0	12.7	0.1	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: WINDOWPANE FLOUNDER (Scophthalmus aquosus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	77,688	10.1	0.0	89.9	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	392,512	13.7	0.0	86.2	0.0	0.1	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	29,918	9.8	0.0	90.1	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	352,407	10.6	0.0	89.4	0.1	0.0	0.0	100.0
34	Scallop Dredge	AA	LIM	MA	all	39,096	94.5	0.0	5.5	0.0	0.0	0.0	100.0
35	Scallop Dredge	AA	LIM	NE	all	149,974	87.0	0.0	13.0	0.0	0.0	0.0	100.0
36	Scallop Dredge	OPEN	GEN	MA	all	33,084	49.8	0.0	50.2	0.0	0.0	0.0	100.0
38	Scallop Dredge	OPEN	LIM	MA	all	55,621	50.6	0.0	49.4	0.0	0.0	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	489,007	66.8	0.0	33.2	0.0	0.0	0.0	100.0
31 Other fleets filtered out						68,986	30.0	0.0	70.0	0.0	0.0	0.0	100.0
					Total	1,688,293	39.2	0.0	60.8	0.0	0.0	0.0	100.0

Species: WINTER FLOUNDER (Pseudopleuronectes americanus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	50,203	13.1	6.3	80.6	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	56,403	4.6	81.9	11.9	0.0	1.6	0.0	100.0
35	Scallop Dredge	AA	LIM	NE	all	41,407	62.2	0.0	37.3	0.3	0.0	0.2	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	216,458	75.0	0.0	25.0	0.0	0.0	0.0	100.0
36 Other fleets filtered out						78,624	22.6	13.0	63.7	0.1	0.6	0.0	100.0
					Total	443,094	48.5	13.5	37.6	0.0	0.3	0.0	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: WITCH FLOUNDER (Glyptocephalus cynoglossus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	41,765	32.3	5.8	61.2	0.0	0.0	0.7	100.0
6	Otter Trawl	OPEN	all	MA	lg	12,410	24.7	31.7	43.6	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	85,902	4.1	92.9	1.0	0.0	1.0	0.9	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	49,521	82.3	0.0	17.7	0.0	0.0	0.0	100.0
36 Other fleets filtered out						57,091	34.6	9.1	56.0	0.0	0.4	0.0	100.0
					Total	246,690	32.7	37.0	29.4	0.0	0.5	0.4	100.0

Species: YELLOWTAIL FLOUNDER (Limanda ferruginea)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
6	Otter Trawl	OPEN	all	MA	lg	27,510	0.0	24.6	74.9	0.5	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	27,315	8.4	1.8	89.8	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	55,480	1.8	96.3	0.6	0.1	1.2	0.0	100.0
35	Scallop Dredge	AA	LIM	NE	all	68,354	44.3	0.0	55.7	0.0	0.0	0.0	100.0
37	Scallop Dredge	OPEN	GEN	NE	all	29,055	38.8	0.1	61.1	0.0	0.0	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	139,558	67.7	0.0	32.3	0.0	0.0	0.0	100.0
34 Other fleets filtered out						47,590	37.1	15.9	45.6	0.0	1.3	0.0	100.0
					Total	394,862	39.8	17.3	42.6	0.1	0.3	0.0	100.0

Species: OFFSHORE HAKE (Merluccius albidus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	9,763	99.2	0.1	0.0	0.0	0.7	0.0	100.0
39 Other fleets filtered out						33,390	100.0	0.0	0.0	0.0	0.0	0.0	100.0
					Total	43,153	99.8	0.0	0.0	0.0	0.2	0.0	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: RED HAKE (Urophycis chuss)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	133,218	85.6	14.4	0.0	0.0	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	991,351	85.9	7.2	5.8	0.0	0.0	1.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	238,375	97.2	1.5	1.1	0.0	0.1	0.0	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	43,657	96.6	3.4	0.0	0.0	0.0	0.0	100.0
35	Scallop Dredge	AA	LIM	NE	all	51,007	94.0	0.0	5.9	0.2	0.0	0.0	100.0
39	Scallop Dredge	OPEN	LIM	NE	all	92,291	96.3	0.0	3.7	0.0	0.0	0.0	100.0
49	Pots and Traps, Lobster	OPEN	all	NE	all	63,341	76.7	0.0	23.3	0.0	0.0	0.0	100.0
	33 Other fleets filtered out					57,120	95.7	0.3	3.1	0.0	0.9	0.0	100.0
					Total	1,670,360	88.6	5.7	5.0	0.0	0.0	0.6	100.0

Species: SILVER HAKE (Merluccius bilinearis)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	1,133,910	84.2	4.4	5.4	0.0	5.8	0.2	100.0
8	Otter Trawl	OPEN	all	NE	lg	552,466	98.1	0.4	1.0	0.0	0.5	0.0	100.0
	38 Other fleets filtered out					304,014	93.1	0.5	0.9	0.0	5.5	0.1	100.0
					Total	1,990,390	89.4	2.7	3.5	0.0	4.3	0.2	100.0

Species: ATLANTIC MACKEREL (Scomber scombrus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
	40 Other fleets filtered out					86,480	67.2	0.0	0.4	0.0	5.6	26.8	100.0
					Total	86,480	67.2	0.0	0.4	0.0	5.6	26.8	100.0

See text for fleet abbreviations.

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 23 individual species that compose the 14 species groups, based on July 2014 through June 2015 data.

Species: BUTTERFISH (Peprilus triacanthus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	649,260	92.8	3.0	0.0	0.0	0.0	4.2	100.0
7	Otter Trawl	OPEN	all	NE	sm	1,108,161	92.5	6.4	0.0	0.0	0.4	0.7	100.0
38 Other fleets filtered out						126,063	96.5	1.9	1.6	0.0	0.0	0.0	100.0
					Total	1,883,484	92.9	4.9	0.1	0.0	0.2	1.8	100.0

Species: NORTHERN SHORTFIN SQUID (Illex illecebrosus)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	184,363	70.8	0.5	3.4	0.0	25.3	0.0	100.0
39 Other fleets filtered out						286,692	74.2	3.2	1.1	0.0	0.0	21.4	100.0
					Total	471,054	72.9	2.1	2.0	0.0	9.9	13.0	100.0

Species: LONGFIN INSHORE SQUID (Doryteuthis [Amerigo] pealeii)

Fleet							Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
40 Other fleets filtered out						299,076	88.9	3.7	1.5	0.0	3.5	2.4	100.0
					Total	299,076	88.9	3.7	1.5	0.0	3.5	2.4	100.0

See text for fleet abbreviations.

Appendix Table 4. Fleet abbreviations used in Figures 1A, 1B, 2, and 3. Fleets that were filtered out through the importance filter and fleets designated as in need of pilot coverage have been aggregated into "Other fleets."

Row	Fleet Gear Type	Access Area	Trip Category	Region	Mesh Group	Fleet Abbreviation
1	Longline	OPEN	all	MA	all	LL MA (Row 1)
2	Longline	OPEN	all	NE	all	LL NE (Row 2)
3	Hand Line	OPEN	all	MA	all	HL MA (Row 3)
4	Hand Line	OPEN	all	NE	all	HL NE (Row 4)
5	Otter Trawl	OPEN	all	MA	sm	OT sm MA (Row 5)
6	Otter Trawl	OPEN	all	MA	lg	OT lg MA (Row 6)
7	Otter Trawl	OPEN	all	NE	sm	OT sm NE (Row 7)
8	Otter Trawl	OPEN	all	NE	lg	OT lg NE (Row 8)
9	Scallop Trawl	AA	GEN	MA	all	SCT AA GEN MA (Row 9)
10	Scallop Trawl	AA	LIM	MA	all	SCT AA LIM MA (Row 10)
11	Scallop Trawl	OPEN	GEN	MA	all	SCT OPEN GEN MA (Row 11)
12	Scallop Trawl	OPEN	LIM	MA	all	SCT OPEN LIM MA (Row 12)
13	Otter Trawl, Twin	OPEN	all	MA	all	OTT MA (Row 13)
14	Otter Trawl, Twin	OPEN	all	NE	all	OTT NE (Row 14)
15	Otter Trawl, Ruhle	OPEN	all	MA	lg	OTR lg MA (Row 15)
16	Otter Trawl, Ruhle	OPEN	all	NE	sm	OTR sm NE (Row 16)
17	Otter Trawl, Ruhle	OPEN	all	NE	lg	OTR lg NE (Row 17)
18	Otter Trawl, Haddock Separator	OPEN	all	NE	sm	OTH sm NE (Row 18)
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	OTH lg NE (Row 19)
20	Shrimp Trawl	OPEN	all	MA	all	SHT MA (Row 20)
21	Shrimp Trawl	OPEN	all	NE	all	SHT NE (Row 21)
22	Floating Trap	OPEN	all	MA	all	FT MA (Row 22)
23	Floating Trap	OPEN	all	NE	all	FT NE (Row 23)
24	Sink, Anchor, Drift Gillnet	OPEN	all	MA	sm	GN sm MA (Row 24)
25	Sink, Anchor, Drift Gillnet	OPEN	all	MA	lg	GN lg MA (Row 25)
26	Sink, Anchor, Drift Gillnet	OPEN	all	MA	xlg	GN xlg MA (Row 26)
27	Sink, Anchor, Drift Gillnet	OPEN	all	NE	sm	GN sm NE (Row 27)
28	Sink, Anchor, Drift Gillnet	OPEN	all	NE	lg	GN lg NE (Row 28)
29	Sink, Anchor, Drift Gillnet	OPEN	all	NE	xlg	GN xlg NE (Row 29)
30	Purse Seine	OPEN	all	MA	all	PS MA (Row 30)
31	Purse Seine	OPEN	all	NE	all	PS NE (Row 31)
32	Scallop Dredge	AA	GEN	MA	all	SCD AA GEN MA (Row 32)
33	Scallop Dredge	AA	GEN	NE	all	SCD AA GEN NE (Row 33)
34	Scallop Dredge	AA	LIM	MA	all	SCD AA LIM MA (Row 34)
35	Scallop Dredge	AA	LIM	NE	all	SCD AA LIM NE (Row 35)
36	Scallop Dredge	OPEN	GEN	MA	all	SCD OPEN GEN MA (Row 36)
37	Scallop Dredge	OPEN	GEN	NE	all	SCD OPEN GEN NE (Row 37)
38	Scallop Dredge	OPEN	LIM	MA	all	SCD OPEN LIM MA (Row 38)
39	Scallop Dredge	OPEN	LIM	NE	all	SCD OPEN LIM NE (Row 39)
40	Danish Seine	OPEN	all	MA	all	DS MA (Row 40)
41	Mid-water Paired & Single Trawl	OPEN	all	MA	all	MWT MA (Row 41)
42	Mid-water Paired & Single Trawl	OPEN	all	NE	all	MWT NE (Row 42)
43	Pots and Traps, Fish	OPEN	all	MA	all	FPT MA (Row 43)
44	Pots and Traps, Fish	OPEN	all	NE	all	FPT NE (Row 44)
45	Pots and Traps, Conch	OPEN	all	MA	all	CPT MA (Row 45)
46	Pots and Traps, Conch	OPEN	all	NE	all	CPT NE (Row 46)
47	Pots and Traps, Hagfish	OPEN	all	NE	all	HPT NE (Row 47)
48	Pots and Traps, Lobster	OPEN	all	MA	all	LPT MA (Row 48)
49	Pots and Traps, Lobster	OPEN	all	NE	all	LPT NE (Row 49)

See text for fleet abbreviations.

Appendix Table 4, continued. Fleet abbreviations used in Figures 1A, 1B, 2, and 3. Fleets that were filtered out through the importance filter and fleets designated as in need of pilot coverage have been aggregated into "Other fleets."

Row	Fleet Gear Type	Access Area	Trip Category	Region	Mesh Group	Fleet Abbreviation
50	Pots and Traps, Crab	OPEN	all	MA	all	CRPT MA (Row 50)
51	Pots and Traps, Crab	OPEN	all	NE	all	CRPT NE (Row 51)
52	Beam Trawl	OPEN	all	MA	all	BT MA (Row 52)
53	Beam Trawl	OPEN	all	NE	all	BT NE (Row 53)
54	Dredge, Other	OPEN	all	MA	all	DRO MA (Row 54)
55	Ocean Quahog/Surfclam Dredge	OPEN	all	MA	all	CDR MA (Row 55)
56	Ocean Quahog/Surfclam Dredge	OPEN	all	NE	all	CDR NE (Row 56)
57	Mid-water Paired & Single Trawl	AA	all	NE	all	MWT AA NE (Row 57)
	Other fleets filtered out					Other fleets

APPENDIX: EQUATIONS USED IN DISCARD ESTIMATION AND SAMPLE SIZE ANALYSES

Total discarded pounds for species *j* is defined as:

$$(1) \quad \hat{D}_j = \sum_{h=1}^{Q} K_h r_{c,j}$$

where

$$(2) \quad r_{c,j} = \frac{\sum_{h=1}^{Q} N_h \sum_{i=1}^{n_h} \frac{d_{jih}}{n_h}}{\sum_{h=1}^{Q} N_h \sum_{i=1}^{n_h} \frac{k_{ih}}{n_h}}$$

Where $\hat{D}_j$ is total discarded pounds for species *j*; K_h is vessel trip report (VTR) total kept pounds of all species in stratum *h*; $r_{c,j}$ is the combined ratio of species *j*; d_{jih} is discards of species *j* from trip *i* in stratum *h*; k_{ih} is kept pounds of all species on trip *i* in stratum *h*; N_h is the number of VTR trips in stratum *h*; n_h is the number of observed trips in stratum *h*. A stratum represents a fleet (i.e., gear type, access area, trip category, region, mesh group combination). In Eq. 2 the summation over strata *h* = 1 to *Q* is over calendar quarters, and the other strata values are held constant. Equation 3 (below) requires a more explicit definition of the stratum designation since the summation over quarter relies on an annual average ratio defined in Eq. 2.

Variance of $\hat{D}_j$ for species *j* is defined as:

$$(3) \quad V(\hat{D}_j) = \sum_{q=1}^{4} K_{qh}^2 \left(\frac{N_{qh} - n_{qh}}{n_{qh} N_{qh}} \right) \frac{1}{\left(\frac{\sum_{i=1}^{n_{qh}} k_{iqh}}{n_{qh}} \right)^2} \left[\frac{\sum_{i=1}^{n_{qh}} \left(d_{jiqh}^2 + (r_{c,j})^2 k_{iqh}^2 - 2 r_{c,j}\, d_{jiqh} k_{iqh} \right)}{n_{qh} - 1} \right]$$

where $\hat{D}_j$ is total discarded pounds for species *j*; K_{qh} is VTR total kept pounds of all species in quarter *q* and stratum *h*; $r_{c,j}$ is the combined ratio of species *j* ; d_{jiqh} is discards of species *j* from trip *i* in quarter *q* and stratum *h*; k_{iqh} is kept pounds of all species on trip *i* in quarter *q* and stratum *h*; N_{qh} is the number of VTR trips in quarter *q* and stratum *h*; n_{qh} is the number of observed trips in quarter *q* and stratum *h*.

Standard Error of the discard estimate is defined as:

$$(4) \quad SE(\hat{D}_j) = \sqrt{V(\hat{D}_j)}$$

Coefficient of variation (CV) of $\hat{D}_j$ is defined as:

$$(5) \quad CV(\hat{D}_j) = \frac{\sqrt{V(\hat{D}_j)}}{\hat{D}_j}$$

The number of sea days and trips needed to achieve a 30% coefficient of variation (CV) is derived based on the variance of the total discards using the combined ratio method and the d/k discard ratio (Eq. 3).

From Eq. 3, let

$$(6) \quad \hat{S}^2_{jqh} = \left[\frac{\sum_{i=1}^{n_{qh}} \left(d^2_{jiqh} + (r_{c,jh})^2 k^2_{iqh} - 2 r_{c,j}\ d_{jiqh} k_{iqh} \right)}{n_{qh} - 1} \right] \quad \text{and}$$

$$(7) \quad \delta_{qh} = \frac{n_{qh}}{\sum_{q=1}^{4} n_{qh}}$$

where δ_{qh} is the fraction of the trips in quarter q in stratum h; $r_{c,jh}$ is the combined annual ratio of species j in stratum h; d_{jiqh} is discards of species j from trip i in stratum h in quarter q; k_{iqh} is kept pounds of all species on trip i in stratum h in quarter q; and n_{qh} is the number of observed trips in stratum h in quarter q. The $r_{c,jh}$ in Eq. 6 is defined in Eq. 2 where the summation is over quarters within a given stratum defined by gear, region, access area, trip type, and so forth.

The number of trips necessary to achieve a 30% CV based on the variance of the composite annual total discards for species group j in stratum h is defined as:

$$(8) \quad \hat{T}D_{30\,jh} = \frac{\sum_{q=1}^{4} \left(\frac{K^2_{qh}}{\bar{k}^2_{qh}} \hat{S}^2_{jqh} \frac{1}{\delta_{qh}} \right)}{(0.09)\hat{D}_{jh}{}^2 + \frac{\sum_{q=1}^{4} \frac{K^2_{qh}}{\bar{k}^2_{qh}} \hat{S}^2_{jqh}}{N_h}}$$

where $0.09 = 0.30^2$, the square of the 30% CV, the given precision level.

The number of sea days necessary to achieve a 30% CV based on the variance of the composite annual total discards for species group j in stratum h is defined as:

$$(9) \quad \hat{S}D_{30\,jh} = \hat{T}D_{30\,jh} * \overline{DA_h}$$

where $\overline{DA_h}$ is the weighted average trip length of VTR trips in stratum *h* (weighted by the number of VTR trips in each quarter).

When total discards could not be estimated because of little or no observer coverage (no data) or when total discards are zero (no variance), sample size was determined by pilot coverage, where 2% of the quarterly VTR trips for a fleet were multiplied by the quarterly mean VTR trip length.

(10) $\hat{S}_{30,jhq} = \hat{T}_{hq} * \overline{DA_{hq}}$

where $\hat{T}_{hq}$ is 2% of the VTR trips in stratum *h* and quarter *q*, and 3 <= $\hat{T}_{hq}$ <= 100 trips; $\overline{DA_{hq}}$ is the average trip length of VTR trips in stratum *h* and quarter *q*. If there were less than 3 VTR trips in stratum *h* and quarter *q*, then pilot coverage was set to zero for that stratum and quarter. The quarterly trips and sea days were then summed for annual number of trips and sea days.

The achieved precision resulting from the number of funded sea days can be derived by converting funded sea days into funded trips. The number of funded trips, $\hat{T}F_h$ for stratum *h* is defined as:

(11) $\hat{T}F_h = \hat{S}F_h / \overline{DA_h}$

where $\hat{S}F_h$ is the number of funded sea days in stratum *h* and $\overline{DA_h}$ is the weighted average trip length of VTR trips in stratum *h* (weighted by the number of VTR trips in each quarter).

The achieved coefficient of variation (CV) of $\hat{D}_j$ is based on the variance of the composite annual total discards for species group *j* in stratum *h* and the number of funded trips in stratum *h* and rewriting Eq. 8.

From Eq. 8, let

(12) $$CV(\hat{D}_{jh}) = \sqrt{\frac{\sum_{q=1}^{4}\left(\frac{K_{qh}^2}{\bar{k}_{qh}^2}\hat{S}_{jqh}^2\frac{1}{\delta_{qh}}\right) - \hat{T}F_h\left[\frac{\sum_{q=1}^{4}\left(\frac{K_{qh}^2}{\bar{k}_{qh}^2}\hat{S}_{jqh}^2\right)}{N_h}\right]}{\hat{T}F_h * \hat{D}_{jh}^{\,2}}}$$

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