

FINAL REPORT

EVALUATION OF A TURTLE EXCLUDER DEVICE (TED) IN THE SCALLOP TRAWL FISHERY OF THE MID-ATLANTIC

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ABSTRACT

An evaluation of the performance of a TED in the scallop trawl fishery of the mid-Atlantic was conducted in July and August of 2006 comparing the catch of the target and bycaught species for two different commonly used types of trawl nets in this region equipped with and without a TED. For both nets, use of a TED resulted in a significant reduction in the total weight of in-shell scallops. The loss was about 8% for the flounder trawl and 7% for the scallop trawl. There was no indication of a change in the size selection in the scallop catch of the TED net, indicating that the loss of scallops is a function of decreased efficiency. Video was able to confirm that scallops were lost from the net out of the TED escape opening, which could explain the difference observed. A difference between the catch of the control and TED net was observed in the field as the total catch increased, and this confirmed by the data analysis. The loss of scallop catch was about 14% or double the overall loss when the scallop catch was over 750 lbs.

Analysis of the effect of the TED on the performance of trawls with respect to fish bycatch produced mixed results that do not follow any consistent pattern. Overall, the flounder net had more bycatch than the scallop net, although bycatch rates with both nets were exceptionally low. The results of this study are limited to a single vessel in a single port, and therefore should be considered a pilot project, and more widespread experiments in other ports and aboard vessels of other sizes should be conducted prior to implementation of regulations requiring the use of TEDs in this fishery.

INTRODUCTION

Sea turtles have been the subject of extensive conservation efforts in the United States over the last few decades, primarily because all five species that inhabit continental U.S. waters are listed as threatened or endangered under the Endangered Species Act of 1973. Given their status, any anthropogenic causes of injury or mortality are of concern to management agencies charged with the responsibility to protect these species. Several commercial fishery gears in the U.S. have been observed by the National Marine Fisheries Service to interact with sea turtles. They include trawl nets, longlines, dredges and pound nets, among others. One fishery that has recently been documented to interact with sea turtles is the scallop trawl fishery off the mid-Atlantic coast. In October 2004, the NEFSC reported three loggerhead sea turtles (*Caretta caretta*) taken in scallop trawl gear (NMFS, 2004). The scallop dredge fishery, which accounts for about 95% of the total scallop fishery in the Northeast region, has also been observed to take loggerhead and Kemp's ridley (*Lepidochelys kempî*) sea turtles in this area. While the extent of the impact of the scallop trawl fishery on sea turtle populations is unknown, the NMFS has decided to take a proactive step to address this issue in a cooperative research effort with scallop trawl fishermen before regulatory action is required.

Turtle Excluder Devices (TEDs) have proven very effective in mitigating sea turtle bycatch in other trawl fisheries, and have been required in all mechanically retrieved otter trawls in the southeastern U.S. shrimp trawl fishery since 1989. TEDs have also been implemented in other U.S. fisheries, such as the summer flounder trawl fishery off North Carolina and Virginia and whelk trawl fishery off the coast of Georgia.

The purpose of this study was to evaluate the performance of a TED in the scallop trawl fishery. Specifically, the goals were to evaluate the effect of the TED on:

1. the catch weight and size distribution of sea scallops in the scallop trawl fishery,
2. other bycatch species in the scallop trawl net,
3. the interaction rate with sea turtles, if possible

BACKGROUND LITERATURE REVIEW

All known species of sea turtles share a similar life history pattern. The generalized model for sea turtle habitat utilization is that hatchlings migrate out to the open waters after leaving their nests on the beach. Their early juvenile period is pelagic and oceanic, and has been dubbed “the lost year” (Carr, 1982) because little is known about the ecology of these animals during this stage. After a period of years, probably 3-10 for loggerheads (Klinger and Musick, 1995) for example, the turtles begin to actively recruit to more demersal and neritic developmental habitats (Musick and Limpus, 1996). This juvenile stage, which is characterized by seasonal migrations to summer and winter foraging grounds, can last until the ages of 15 to 45 years as the animals approach maturity, depending on the species (Musick and Limpus, 1996).

Along the east coast of the U.S., the Chesapeake Bay and surrounding coastal waters serve as a major developmental area for loggerhead and Kemp’s Ridley sea turtles during the summer (Musick, 1988, Lutcavage and Musick, 1985). Although leatherbacks (*Dermochelys coriacea*) essentially remain pelagic, they do move into coastal environments to feed on concentrations of jellyfish and can be found seasonally throughout the waters off the N.E coast (Lazell, 1980, Shoop and Kenney, 1992). In the fall, sea turtles begin to migrate back to the south along the Mid-Atlantic Bight and around Cape Hatteras heading for the warmer waters of their winter feeding grounds (Shoop and Kenney 92, Epperly et al., 1995). It has been suggested that sea turtles travel along fairly consistent migration corridors (Morreale et al., 1996). Considering the fact that several species of turtles inhabit the Mid-Atlantic coast during significant portions of their life history, any fishery activity that would occur in areas where they feed or migrate through is likely to interact with the turtles to some degree.

Although the trawl component of the scallop fishery along the east coast of the U.S. is relatively small (about 5%) compared to dredges (95%), it does constitute a larger percentage of the effort in the mid-Atlantic area, where all the observed turtle interactions for the entire scallop fishery have occurred (NMFS, 2004). The Delmarva Peninsula accounts for about 90% of the total scallop trawl effort (NEFMC, 2005). Much of this

come from vessels fishing under a general category permit which allows for 400 lbs of scallop meat or 50 bushels of in-shell scallops to be landed per day. Total general category scallop landings increased from 400,000 lbs in 1999 to 5.6 million lbs in 2005, of which trawl gear accounts for about 25% (NEFMC, 2005). Observer coverage of the scallop trawl fishery has traditionally been very limited (0.2% in 2001-2003), but coverage in the mid-Atlantic has been significantly increased (primarily in closed areas) in recent years in response to observed turtle takes (NMFS, 2004). The concern is that increased effort in the general category scallop trawl effort over the last few years may likely translate to increases in sea turtle interactions. Until more observer coverage of the scallop trawl fishery is provided, the data needed to produce a reliable assessment of the impact of this fishery on sea turtles is not available.

Sea turtle interactions have also been observed in other trawl fisheries that operate in the same areas as scallop trawls and dredges. From 1995-2004, an average of 616 loggerhead sea turtles are estimated to have been caught with bottom otter trawl gear off the mid-Atlantic coast (Murray, 2006). These fisheries include the summer flounder, squid and croaker fisheries. All of the observed takes of sea turtles during that time in those fisheries were loggerheads, with the exception of 1 leatherback, and 2 unidentified turtles (NMFS, 2004).

Historically, the fishery with the greatest effect on sea turtles is the shrimp fishery off the southeastern U.S. Before the implementation of TED regulations, the National Research Council concluded it to be the leading cause of mortalities in coastal areas for adult and juvenile sea turtles (1990). In their report, they estimated as many as 55,000 loggerhead and Kemp's ridley sea turtles were killed annually during pre-TED shrimping activities. Studies of sea turtle strandings have indicated strong correlations to levels of shrimp fishing effort (Caillouet et al., 1991, Crowder et al., 1995). The proto-typical TED (Turtle Excluder Device) was introduced by the NMFS in 1980. It consisted of a rigid frame holding a series of deflector bars spaced 3-6 inches apart angled 45° towards a trap door (Watson et al., 1986). The TED was placed between the body of the trawl net and the beginning of the codend in an attempt to force out animals or objects that were too large to fit through the rigid grid.

Regulations requiring the use of TEDs for commercial shrimp vessels were first enacted in 1987 (Federal Register, 1987). After several years of fierce debate and legal challenges, TED regulations were fully implemented in Spring 1990. The success of TEDs in shrimp trawling has been well documented. By 1989, NMFS had documented that six different versions of a TED produced at least a 97% reduction in the bycatch of sea turtles when these TEDs were properly installed in a shrimp net (National Research Council 1990). Royle and Crowder (1994) demonstrated a 44% reduction in sea turtle strandings in South Carolina as a result of TED use. It has been concluded that this type of reduction in sea turtle mortality could significantly improve the outlook for the recovery of loggerheads (Crowder et al., 1995). Since the introduction of TED regulations in the late 1980's, the population of Kemp's ridleys has grown by about 11% a year and mortality has been reduced by 50% (Hogan, 2004).

The concepts of TEDs and TED technologies have been incorporated into other fisheries outside the U.S. shrimp fishery. The summer flounder trawl fishery in the vicinity of Cape Hatteras during the winter season was identified as having significant interactions with sea turtles, including the Kemp's ridley in particular (Epperly et al., 1995). TED requirements for this fishery were implemented in 1994 (Federal Register, 1992). Since 1990, the United States has worked extensively with 21 other countries to promote the adoption of regulatory programs that require the reduction of the incidental capture of sea turtles (Hogan, 2004). Governments have initiated research programs into TED technology transfer or have adopted TED regulations for shrimp and other species in countries from Southeast Asia, the Middle East, Central America and Africa (Eayrs, 2004, Shiode and Tokai, 2004). US law has, since that time, also prohibited the importation of shrimp and shrimp products that have been harvested in ways harmful to sea turtles, US Public Law 101-162 (Section 609). Currently there are 16 nations certified for shrimp export to the U.S. Many of the other countries that have implemented TED programs in response to the requirements of Section 609 have had experiences similar to those of the United States. In Australia, research into TEDs for commercial prawn fisheries commenced in the 1990's, and legislation for required use of TEDs in the Queensland east coast trawl fishery was enacted in 1999 (Robbins et al., 1999). Observer reports from the

northern prawn fishery have indicated a 99% reduction in the bycatch of sea turtles in nets that incorporate TEDs (Eayrs, 2004).

Any modification of existing fishing gear has to address the issue of the impact on the target species catch. The National Research Council concluded that while NMFS was under no legal obligation to assess the effectiveness of approved TEDs in retaining shrimp, the TED was of no value to the fishery if it was inefficient (1990). Experimental test data for the NMFS designed TED in the water around Cape Canaveral produced only a 4% reduction in shrimp retention (Federal Register, 1987). A study of several different federally approved TEDs used by commercial shrimp trawlers throughout the southeastern U. S. reported losses of target catch ranging between 1% and 14% (Renaud et al., 1993). However, results for many of the design variations of TEDs in numerous different conditions have revealed that catch efficiency can be highly variable (National Research Council 1990).

There has been substantial research done with TEDs and trawl gear in Australia. The AusTED, used in prawn trawl fisheries, has been documented to show only a 1.4% reduction in target species catch (Robins-Troeger et al., 1995). A recent study of an exclusion grid in the scallop fisheries of western Australia showed no significant effect on the catch of scallops, although a 9% reduction in scallop retention was documented in prawn nets (Kangas and Thomson, 2004). TEDs have also been used in concert with other bycatch reduction devices (BRDs) in Australian trawl fisheries in an attempt to minimize finfish bycatch in addition to sea turtle interactions. These combinations are proving very effective at reducing bycatch, but have also lead to increased loss of target species in prawn trawl fisheries (Courtney et al., 2006). In the Queensland scallop trawl fishery, TEDs and BRDs have been shown to reduce bycatch and undersize scallop catch with no impact on the retention of legal size scallops (Courtney et al., 2006).

METHODS

During the summer of 2006 research into the effect of a Turtle Excluder Device (TED) upon the catch of Atlantic sea scallops by commercial trawl nets was conducted by

the University of Rhode Island in cooperation with NMFS and the FV Captain Dell, owned and operated by Eddie Newman out of Chincoteague VA, who was contracted to perform comparative tows and maintain the fishing gear. URI staff collected and analyzed the data. The Captain Dell tows two nets simultaneously, making an excellent platform to conduct paired comparisons, with one net having a TED installed and the other net used as a control. To minimize any side bias, the TED was switched from side to side on a daily basis. The TEDs used in this experiment were essentially replicates of TEDs used successfully in the whelk fishery, and were constructed by the NMFS Harvesting Systems and Engineering Branch in Pascagoula MS.

Gear

The TED was evaluated using two of the different types of nets commonly used by general category scallop fisherman, also known as “day scalloping”. Beginning on July 9, a matched set of typical flounder nets with a 4:1 taper, 5.5 in mesh, and (55 ft) sweep was used for experimental tows. Due to the loss of one of the nets early on the third day, the vessel was forced to switch to a different set of flounder nets with a (66 ft) sweep. From July 14 through August 1, a total of 35 successful comparative tows over ten days at sea were completed. On August 4, experimental testing began with two brand new 7:1 taper, 6.0 in mesh, and 50 ft sweep scallop nets purchased by NMFS. Through August 27, 14 days and 46 successful tows were completed with these nets. The same 8.0 x 3.3 ft trawl doors were used for the whole evaluation.

The TED used in this study was constructed of aluminum pipe. The dimensions were 48 in along the bottom and 37 in along the top (Figure 1). The height of the TED was 36 in. The bar spacing of the grid was 4 in, except for the series of three large openings 14.5 x 10 in along the bottom. The TED grid was installed in a 3.5 in x 4 mm, braided, double poly extension, 20 meshes long. The TED extension was installed in a top opening configuration between the body of the trawl and the tailbag with two 20 cm (8 in) hard plastic floats were installed on each side of the grid. To minimize chaffing, the portion of the extension around the bottom of the grid was installed with meshes on the inside of the bottom bar of the grid. In addition, a 30.0 x 36.0 x 0.3 in thick rubber mat was installed under the TED along the bottom of the extension. The TED opening consisted of a 28.5 in

forward cut and a 81 in horizontal cut covered by a 102 x 36 in flap constructed of 1.5 in polyethylene webbing. The stretched measurement of the TED opening was 75 in which is larger than the 71 in minimum TED leatherback opening required in the southeastern U.S. shrimp fishery.

Field Work

Before comparative towing using the TED was initiated, one day of calibration towing was completed to investigate any gross difference in performance between the nets on each side of the vessel. Information recorded for each comparative tow included position, time, depth, temperature, and weather. In order to keep the catch of the two nets separate, the crew divided the deck into two bins. The catch from each net was dumped and contained by the bins. On each tow, all in-shell scallops, regardless of size, were collected into bushel baskets by URI staff, the captain, and crew to obtain an estimate of the number of bushels caught by each net. Selected bushels were weighed each day to obtain an average bushel weight. Bushel counts and average bushel weights were used to estimate scallop catch for each net on each tow.

Each bin was divided into an imaginary nine cell grid, and a lottery was conducted before the haul to select one of these cells from each bin to collect a basket sample from. Basket samples were collected by shovel, and approximately one-half to two-thirds of the basket was filled. The purpose of the basket sample was to collect scallops for height-frequency measurements and to characterize the benthic composition of the catch relative to the total catch. Scallops were randomly selected from the basket sample such that approximately 100 individuals were measured from each net on every haul. All fish bycatch was collected into baskets, measured and weighed by species, for every haul that time permitted. All basket samples, weights, counts, and measurements were taken by URI staff.

Underwater video recording of the trawl and the performance of the TED was attempted on several of the tows. A Sony DCR-HC32 digital video camera mounted in an underwater housing was attached to the net in a variety of locations to document scallop loss out of the TED opening, the orientation of the TED during trawling, and other gear aspects related to catch efficiency. Due to the general conditions of light availability at the

depths being trawled (typically 35 fathom) during this study, attempts to obtain video data were limited to mid-day, when the sun was high overhead and maximum amount of light could penetrate to the bottom.

Data Analysis

Data was collected and compiled into Microsoft Excel. In order to test for an effect of the TED on scallop retention and bycatch reduction, catch weights and numbers was compared using paired T tests. A Kolmogorov-Smirnov (K-S) test was used to detect significant shifts in the shell height-frequency distributions between the experimental and control nets (Sokal and Rohlf 1981). A significance level of $p < 0.05$ was used for all statistical tests.

RESULTS

A complete record of the data collected during the course of this study is available in Appendix 1. A chart detailing the positions of experimental tows is given in Figure 2. The data used for analysis comes from a total of 35 successful paired experimental tows were made over ten field days using the flounder net and 46 successful tows using the scallop net. Tows completed on the first two days of sampling with the original set of flounder nets are not included in this analysis. There were a number of tows observed during this experiment that were deemed to be unsuccessful and therefore are not described in this report. Reasons for classifying tows as unsuccessful include known or suspected problems with setting out the gear or performance of the gear during a tow, or the inability to collect data due to constraints of time and space aboard the vessel. Problems with gear performance were very few and usually realized immediately by the captain and crew. There were a number of hauls in which room aboard the deck to separate and sample the catches by treatment became limited because scallops from a previous haul were still on deck. At the point when distinguishing catch from a given tow became impossible, sampling ceased.

Flounder Net

A comparison of the scallop catch from the control net and the net using a TED is shown in Table 1. The mean catch weight of in-shell scallops for the control net was 689 lbs and ranged from 266 to 1396 lbs. The mean catch lbs weight for the TED net was 636 lbs and ranged from 261 to 1111 lbs. There was a significant reduction in the catch weight of scallops with this trawl when using a TED.

It was observed over the course of sampling that it appeared large differences in the catch appeared to show up more when the scallop catch was large. Tows were separated based on the criteria that one net caught at least 750 lbs of scallops in order to explore the effect of increasing catch size on the performance of the TED. The 750 lbs. cutoff point was an arbitrary selection, but appears to be appropriate for this data.

The details of the comparison between the control and TED net when the catch was considered small are shown in Table 2. A total of 21 tows were in this category from this portion of the experiment. The mean catch weight of the two nets was almost identical, and there is no statistical difference between the two gears, with and without a TED. A total of 14 tows fell into the large catch category (Table 3). The mean catch of a control net was 960 lbs., compared to 827 lbs. with a TED net, and there was a significant difference in the mean catch weights.

A comparison of shell height-frequencies of scallops from all tows with the flounder net are shown in Figure 3. The plots appear to be very similar, and a K-S test confirms that there is no difference between the two height frequency distributions (Table 4). Using the same 750 lbs. criteria as described before, shell height-frequencies were plotted and compared for small and large tows (Figs. 4 & 5). Again the K-S test indicates that there is no significant difference in the shell heights of scallops caught using the TED, regardless of the size of the scallop catch observed in this experiment (Tables 5&6).

A total of 16 species of bycatch were identified caught with the flounder net during successful tows. No sea turtles were caught during this portion of the experiment. Data on bycatch was collected for 30 out of the 35 successful tows using the flounder net. Total bycatch weight and percentage of total catch is given in table 7. The control net averaged 19.9 lbs, equal to about 4% bycatch. The TED net averaged about 17.3 lbs, equal to about

3% bycatch. This is a significant difference. When the scallop catch was small (<750 lbs) the results are much the same (Table 8). Large scallop catch tows did not show any significant difference (Table 9).

Monkfish, little skate, and red hake were the most consistent bycatch in terms of number of individuals caught, and monkfish and little skate represent the dominant bycatch by weight. A comparison of the monkfish bycatch with respect to average catch numbers and weight from all tows indicates no significant difference between the control and TED net (Table 10). Additionally, the bycatch of little skate did not show any difference in terms of mean catch weight, but did indicate a significant difference in the average number of individuals caught (Table 11). A comparison of the red hake bycatch revealed a significant difference in both mean catch numbers and weight (Table 12).

Analysis of the performance of the TED with increasing scallop catch size was performed on these species of bycatch in the same manner as previously described. Monkfish catch numbers and weights were not significantly affected by scallop catch size (Tables 13&14). Little skate average catch numbers were significantly less during small scallop catch tows, but equivalent in all other aspects considered here (Tables 15 and 16). Average red hake bycatch revealed a significant difference in catch numbers and weight for small tows, but failed to show the same significance in reduction by using the TED net in large tows (Tables 17 and 18).

Scallop Net

A comparison of the scallop catch weight for all tows from the control net and the net using a TED is shown in Table 19. The catch weight of in-shell scallops ranged from 148 to 1197 lbs. for the control with a mean of 728 lbs. The catch ranged from 207 to 983 lbs. for the TED net with a mean of 677 lbs. There was a significant reduction in the average catch of scallops with this trawl when using a TED.

Tows were also divided into small and large scallop catch tows (< and > 750 lbs in a single net) in the same fashion as previously described. In tows with catch weights less than 750 lbs, the TED net caught 27 lbs. more scallops than the control net, but the difference is not significant (Table 20). In large scallop catch tows, the control net outperformed the TED by a mean of 128 lbs, which is significant (Table 21).

A comparison of shell height-frequencies of scallops from all tows with the scallop net is shown in Figure 6. The plots again appear to be very similar, and a K-S test confirms that there is no difference between the two height-frequency distributions (Table 22). Shell height-frequencies were plotted and compared for small and large tows (Figs. 7 and 8). The K-S test indicates that there is no significant difference in the shell heights of scallops caught using the TED with this net for the range of scallop catch sizes observed in this study (Tables 23 and 24).

A total of 12 species of bycatch were identified caught with the scallop net during successful tows. On August 9, a loggerhead sea turtle was caught in a control net and released alive (see Table 25 for details). Data on bycatch was collected on 36 of the 46 successful tows during this segment of the experiment. Total bycatch weight and percentage of total catch are given in table 26. Both the control and TED nets averaged about 1% bycatch by weight, and were not significantly different from each other. Dividing the tows into small and large scallop catches does not reveal any difference either (Table 27 and 28).

Monkfish, little skate, and red hake were the most consistent and dominant bycaught species caught by the scallop net. A comparison of the monkfish bycatch caught for all tows did indicate a significant difference between the control and TED net in terms of the mean number of individuals caught, but not in the mean catch weight (Table 29). Little skate bycatch was not significantly affected by the use of a TED (Table 30). Red hake bycatch also showed no significant difference between the two treatments (Table 31).

When the tows were separated into small and large scallop catch as described above, the difference in the average number of monkfish is no longer visible (Table 32 and 33). Analysis for both little skate (Table 34 and 35) and red hake (Table 36 and 37) indicates no significant difference between the control and TED nets for either mean catch numbers and mean catch weight within the small or large scallop catch category.

Underwater Video Observations

A total of 7 attempts to collect underwater video footage of the performance of the TED and the net in general were made using the scallop trawl net. Light availability to the depths being fished (35 fathoms) and the sediment cloud produced by contact by the trawl

net on the seafloor did limit the success and quality of the video recorded. It was possible to confirm that scallops did exit out of the escape opening of the TED, and some observations of net performance and the sea floor were documented.

TED performance

The TED used during the first segment of this study on the flounder net was able to hold up to continuous use fairly well, with some routine maintenance from the captain involving mending of the meshes along the bottom of the extension. No major repairs were required. The rubber mat did show signs of extensive wear and tear, and would have been in need of replacement shortly. A new TED was used for the second leg with the scallop net. It performed essentially the same as the first one; however, at some point the captain did install an extra panel of webbing along the bottom of the extension to provide some protection from chaffing. He concluded that this seemed to reduce the mending required to keep the extension intact.

SUMMARY, DISCUSSION AND CONCLUSIONS

The evaluation of the performance of a TED in the scallop trawl fishery of the mid-Atlantic conducted in July and August of 2006 compared the catch of the target species and bycaught species with and without a TED for two different commonly used types of trawl nets in this region. For both nets, using a TED did result in a significant reduction in the total weight of in-shell scallops. The loss was about 8% for the flounder trawl and 7% scallop trawl. There was no indication of a change in the size selection in the scallop catch of the TED net, indicating that the loss of scallops is a function of decreased efficiency. Video was able to confirm that scallops were lost from the net out of the TED escape opening, which could explain the difference observed. A difference between the catch of the control and TED net was observed in the field as the total catch increased, and this was confirmed by the data analysis. The loss of scallop catch was about 14% or double the overall loss, when the scallop catch was over 750 lbs. Although tow times during this study were not standardized, tow lengths were consistently around 2 hours long. This means the size of the catch is directly related to the catch rate with tows over 750 lbs

representing tows with high catch rates. The higher catch loss observed on these tows could be explained by the number of scallops encountering the grid. During these tows, the amount of scallops encountering the grid may have overwhelmed the sorting capacity of the grid causing a temporary blockage which allowed scallops to be lost through the TED opening. This problem could be alleviated by either increasing the sorting capacity of the grid or limiting the amount of scallops encountering the grid at one time. The sorting capacity can be increased by increasing the size of the grid and/or increasing the bar spacing, while adding more extension ahead of the TED may help regulate the flow of scallops through the TED. It is also possible that the weight of the codend filling with catch has an effect on the geometry of the TED in the net. If the top of the grid is pulled back into a flattened orientation relative to the flow of the net, scallops may deflect upwards off the bars instead of going around either side. The opening of the TED could also be pulled down into the flow increasing the possibility that scallops could escape.

Only one sea turtle was encountered in this study, and it was caught in a net that was not incorporating a TED. This is not sufficient to make any conclusions about the ability of the TED to exclude turtles, or the bycatch rate of sea turtles in this fishery. The loggerhead was alive, active, and free of injury when it was brought aboard.

Analysis of the effect of the TED on the performance of trawls with respect to fish bycatch produced mixed results that do not follow any consistent pattern. Overall, the flounder net had more bycatch than the scallop net. This is likely a function of the larger size of the flounder net, reduced funnel and herding effect of the strongly tapered scallop net, and the overhanging square of the flounder net. It may also be related to the seasonal movements of fish in the area as well. It is worth pointing out that these overall bycatch rates are very low compared to many other bottom trawl fisheries. In the flounder net, a slight reduction of bycatch was achieved when using the TED. Any decrease in bycatch, even in a clean fishery, should be considered a benefit. The scallop net had such a low bycatch rate that measurable reductions from any BRD would likely be hard to detect.

The catch of monkfish, a commercially important species along the east coast of the U.S., was found to be significantly different only in terms of number caught when all tows with the scallop net were considered. When the tows were separated by scallop catch size, the difference was not detected by the t-test. The size of monkfish typically caught during

the study was small, and the fish should not have been subject to mechanical selection by the bar spacing of the TED grid. Considering that monkfish are not particularly active swimmers, they would not seem likely to find the escape opening unless they were directed to it.

The bycatch of little skate in terms of number caught was found to be reduced by the TED in the flounder net, but not in the scallop net. Considering the size of this species encountered in this study, it does seem reasonable that the grid would act to prevent some animals from passing through if their orientation was of a flattened disk parallel to the grid. Little skate is not commercially important and the exclusion of this bycatch would be a welcomed benefit. Red hake, a potentially more active fish, showed the same kind of mixed result as the little skate. The bycatch was significantly reduced by number and weight with the TED in the flounder net but not in the scallop net. The size of this species encountered here would not be subject to physical selection by the TED grid, but might be strong enough to actively find the escape opening.

Interestingly enough, none of the analysis for the bycatch species showed that large scallop catch tows showed the same kind of reduction in bycatch that is clearly showed for scallop catch efficiency. This is significant as the National Marine Fisheries Service is considering the use of TEDs in other trawl fisheries that interact with sea turtles. The relatively small amount and size of the bycatch encountered in this study does not appear to lend itself to a thorough analysis of problem, which should be conducted if further applications of TEDs are planned. Additionally, the results of this study while interesting, are limited to a single vessel in a single port, and therefore should be considered a pilot project. Widespread experiments in other ports and aboard vessels of other sizes should be conducted prior to implementation of regulations requiring the use of TEDs in this fishery. It is very important to note that despite the catch losses observed during this study, the 400 lb/50 bushel daily trip limit was still achieved with use of the TED in one net. This leads to a conclusion that the use of TEDs in this fishery would likely have minor economic effects.

Table 1. Flounder Net - Scallop catch in pounds

Haul #	control catch	Haul #	TED catch
7141	266.0	7141	325.1
7142	502.4	7142	428.5
7143	401.9	7143	369.4
7144	797.9	7144	709.2
7145	1395.9	7145	902.7
7151	437.8	7151	478.1
7152	504.0	7152	460.8
7153	720.0	7153	650.9
7161	555.0	7161	615.0
7162	570.0	7162	570.0
7163	960.0	7163	750.0
7164	982.1	7164	667.4
7171	625.0	7171	656.3
7172	656.3	7172	562.5
7173	656.3	7173	750.0
7174	834.4	7174	783.8
7251	330.6	7251	416.9
7252	546.3	7252	460.0
7254	431.3	7254	431.3
7255	634.0	7255	699.5
7261	356.3	7261	384.8
7262	855.0	7262	769.5
7263	1234.9	7263	1111.4
7271	370.5	7271	399.0
7272	712.5	7272	655.5
7273	883.5	7273	869.3
7301	585.4	7301	802.8
7302	1048.1	7302	808.4
7303	1115.0	7303	836.3
7311	464.0	7311	493.0
7312	652.5	7312	725.0
7314	638.0	7314	638.0
7315	841.0	7315	754.0
8011	313.2	8011	261.0
8012	1247.0	8012	1058.5

t-Test: Paired Two Sample for Means

	control	TED
Mean	689.26	635.8257
Variance	81488.44	41308.11
Observations	35	35
Pearson Correlation	0.901497	
Hypothesized Mean Difference	0	
df	34	
t Stat	2.343911	
P(T<=t) one-tail	0.012533	
t Critical one-tail	1.690923	
P(T<=t) two-tail	0.025066	
t Critical two-tail	2.032243	

Table 2. Flounder Net - Scallop catch in pounds on small tows less than 750 pounds.

	control		TED
Haul #	catch	Haul #	catch
7141	266.0	7141	325.1
7142	502.4	7142	428.5
7143	401.9	7143	369.4
7151	437.8	7151	478.1
7152	504.0	7152	460.8
7153	720.0	7153	650.9
7161	555.0	7161	615.0
7162	570.0	7162	570.0
7171	625.0	7171	656.3
7172	656.3	7172	562.5
7251	330.6	7251	416.9
7252	546.3	7252	460.0
7254	431.3	7254	431.3
7255	634.0	7255	699.5
7261	356.3	7261	384.8
7271	370.5	7271	399.0
7272	712.5	7272	655.5
7311	464.0	7311	493.0
7312	652.5	7312	725.0
7314	638.0	7314	638.0
8011	313.2	8011	261.0

t-Test: Paired Two Sample for Means

	control	TED
Mean	508.9333	508.6
Variance	18877.82	17498.51
Observations	21	21
Pearson Correlation	0.911955	
Hypothesized Mean Difference	0	
df	20	
t Stat	0.026891	
P(T<=t) one-tail	0.489406	
t Critical one-tail	1.724718	
P(T<=t) two-tail	0.978813	
t Critical two-tail	2.085962	

Table 3. Flounder Net - Scallop catch in pounds on large tows greater than 750 pounds.

	control		TED
Haul #	catch	Haul #	catch
7144	797.9	7144	709.2
7145	1395.9	7145	902.7
7163	960.0	7163	750.0
7164	982.1	7164	667.4
7173	656.3	7173	750.0
7174	834.4	7174	783.8
7262	855.0	7262	769.5
7263	1234.9	7263	1111.4
7273	883.5	7273	869.3
7301	585.4	7301	802.8
7302	1048.1	7302	808.4
7303	1115.0	7303	836.3
7315	841.0	7315	754.0
8012	1247.0	8012	1058.5

t-Test: Paired Two Sample for Means

	control	TED
Mean	959.75	826.6643
Variance	52759.3	15747.72
Observations	14	14
Pearson Correlation	0.646769	
Hypothesized Mean Difference	0	
df	13	
t Stat	2.818168	
P(T<=t) one-tail	0.007258	
t Critical one-tail	1.770932	
P(T<=t) two-tail	0.014516	
t Critical two-tail	2.160368	

Table 4. Flounder Net - KS test for all tows

	K alpha	1.358102		
	D alpha	0.034656		
height	difference		height	difference
82	-0.02447		124	-0.00243
81	-0.02015		109	-0.0024
77	-0.02004		110	-0.00233
78	-0.01904		111	-0.00197
85	-0.0187		56	-0.00176
86	-0.01859		125	-0.00143
79	-0.01716		57	-0.00142
84	-0.01656		135	-0.00099
80	-0.0162		112	-0.00095
76	-0.016		54	-0.00082
83	-0.0157		131	-0.00069
87	-0.01411		134	-0.00067
74	-0.01339		136	-0.00066
75	-0.01324		55	-0.00048
91	-0.01201		133	-0.00034
97	-0.01182		139	-0.00033
95	-0.01175		140	-0.00033
90	-0.01106		141	-0.00033
72	-0.01068		36	-0.00032
92	-0.01058		37	-0.00032
96	-0.01035		38	-0.00032
73	-0.01026		132	-2.8E-05
93	-0.00929		137	-7E-06
70	-0.00824		30	0
98	-0.00779		31	0
89	-0.00734		32	0
69	-0.00733		33	0
121	-0.00709		34	0
94	-0.0068		35	0
66	-0.00678		142	0
104	-0.00653		143	0
105	-0.00649		144	0
99	-0.00642		145	0
106	-0.00612		146	0
67	-0.00611		147	0
71	-0.00592		148	0
107	-0.00574		149	0
100	-0.00573		150	0
88	-0.00556		41	7E-06
68	-0.00542		42	1.4E-05
102	-0.00533		130	0.000278
65	-0.00517		138	0.00032
120	-0.00516		39	0.000331
103	-0.00496		40	0.000331
119	-0.00488		43	0.000345
108	-0.00471		44	0.000348
117	-0.00465		46	0.000355
62	-0.00425		47	0.000373
101	-0.00408		53	0.000467
116	-0.00403		126	0.000539
122	-0.00379		45	0.000676
115	-0.00375		129	0.000916
118	-0.00361		48	0.001038
63	-0.00357		49	0.001052
61	-0.0033		127	0.001215
114	-0.00314		50	0.001393
58	-0.00302		128	0.001556
59	-0.00301		51	0.001724
60	-0.003		52	0.001735
64	-0.00292			
113	-0.00253			
123	-0.00245			

Table 5. Flounder Net - KS test for small tows

	K alpha	1.358102		
	D alpha	0.043725		
height	difference		height	difference
91	-0.01211		72	0.000761
92	-0.01077		70	0.000821
90	-0.00986		84	0.000857
93	-0.00936		59	0.000923
76	-0.00929		107	0.000938
77	-0.00885		88	0.000953
75	-0.0082		104	0.000996
121	-0.00714		42	0.001032
95	-0.00699		39	0.001034
82	-0.00696		40	0.001034
96	-0.006		41	0.001034
89	-0.0055		130	0.001061
120	-0.00505		66	0.001392
119	-0.00452		62	0.001416
97	-0.00399		60	0.001435
78	-0.0033		57	0.001454
79	-0.00287		106	0.001481
94	-0.00273		103	0.001539
74	-0.00244		43	0.001546
118	-0.00243		102	0.001568
117	-0.0024		127	0.001595
81	-0.00207		98	0.001651
122	-0.00198		85	0.001705
86	-0.00159		73	0.001759
123	-0.00148		87	0.001796
116	-0.00135		114	0.001805
134	-0.00103		65	0.001916
139	-0.00052		63	0.001926
140	-0.00052		108	0.001955
141	-0.00052		56	0.001986
135	-0.00051		54	0.002001
133	-0.00051		44	0.002063
131	-0.0005		129	0.002102
125	-0.00046		100	0.002119
115	-0.00028		69	0.002397
30	0		61	0.002464
31	0		105	0.002535
32	0		47	0.002571
33	0		46	0.002578
34	0		45	0.00258
35	0		99	0.002648
36	0		67	0.002943
37	0		64	0.00296
38	0		48	0.003083
142	0		113	0.003385
143	0		68	0.003448
144	0		49	0.003593
145	0		83	0.00364
146	0		128	0.003661
147	0		109	0.004006
148	0		55	0.004066
149	0		53	0.004083
150	0		101	0.004183
136	2.42E-06		71	0.004429
137	2.42E-06		51	0.00462
138	2.42E-06		50	0.004622
132	1.21E-05		111	0.00499
124	6.77E-05		112	0.005482
58	0.000413		110	0.005528
126	0.00057		52	0.005651
80	0.00064			

Table 6. Flounder Net - KS test for large tows

	K alpha	1.358102		
	D alpha	0.056844		
height	difference		height	difference
82	-0.05213		93	-0.00791
85	-0.05111		121	-0.00692
81	-0.04893		122	-0.00682
83	-0.04653		124	-0.00666
86	-0.04523		57	-0.0064
78	-0.04451		53	-0.00566
84	-0.04419		54	-0.00563
80	-0.04299		118	-0.00546
79	-0.03985		119	-0.00536
87	-0.03881		120	-0.0052
77	-0.03784		52	-0.00493
74	-0.03127		123	-0.00412
73	-0.03		50	-0.00411
72	-0.02949		46	-0.00341
76	-0.02641		47	-0.00334
97	-0.02406		49	-0.00328
69	-0.02355		51	-0.00321
70	-0.0232		125	-0.00303
71	-0.02307		44	-0.00255
98	-0.02285		45	-0.00255
67	-0.02133		48	-0.00242
75	-0.0211		128	-0.00198
105	-0.02102		135	-0.00182
99	-0.02097		136	-0.00182
66	-0.02053		41	-0.00172
68	-0.02021		42	-0.00169
95	-0.01878		43	-0.00169
104	-0.01857		129	-0.00105
106	-0.01818		130	-0.00099
100	-0.01813		131	-0.00099
101	-0.0172		36	-0.00086
65	-0.01715		37	-0.00086
96	-0.01674		38	-0.00086
107	-0.01633		39	-0.00086
102	-0.01618		40	-0.00086
103	-0.01523		132	-9.7E-05
108	-0.01522		133	-9.7E-05
110	-0.01502		134	-9.7E-05
88	-0.01448		137	-3.2E-05
62	-0.01391		30	0
111	-0.01324		31	0
61	-0.01315		32	0
63	-0.01292		33	0
64	-0.01289		34	0
94	-0.01261		35	0
109	-0.01254		139	0
113	-0.01215		140	0
112	-0.01139		141	0
114	-0.01123		142	0
90	-0.01109		143	0
60	-0.0106		144	0
91	-0.01016		145	0
59	-0.00977		146	0
115	-0.00932		147	0
58	-0.00891		148	0
92	-0.00887		149	0
89	-0.0085		150	0
116	-0.00836		126	0.000538
117	-0.00826		127	0.000602
55	-0.00821		138	0.00086
56	-0.00818			

Table 7. Flounder net - Total bycatch weight and percentage of total catch

control			TED		
Haul #	total bycatch	% of catch	Haul #	total bycatch	% of catch
7141	27.0	0.09	7141	28.3	0.08
7142	19.3	0.04	7142	18.0	0.04
7143	38.9	0.09	7143	33.8	0.08
7144	18.1	0.02	7144	17.0	0.02
7145	12.8	0.01	7145	11.8	0.01
7151	33.6	0.07	7151	33.0	0.06
7152	51.8	0.09	7152	49.0	0.10
7153	42.0	0.06	7153	46.9	0.07
7161	14.3	0.03	7161	11.1	0.02
7162	21.5	0.04	7162	11.7	0.02
7163	39.23	0.04	7163	26.0	0.03
7164			7164		
7171	25.7	0.04	7171	18.8	0.03
7172			7172		
7173			7173		
7174			7174		
7251	15.8	0.05	7251	16.2	0.04
7252	35.5	0.06	7252	9.6	0.02
7254	18.3	0.04	7254	18.0	0.04
7255	20.0	0.03	7255	18.0	0.03
7261	13.7	0.04	7261	6.6	0.02
7262	11.8	0.01	7262	11.0	0.01
7263	11.8	0.01	7263	13.7	0.01
7271	16.1	0.04	7271	12.2	0.03
7272	16.0	0.02	7272	14.1	0.02
7273	19.0	0.02	7273	19.0	0.02
7301	8.0	0.01	7301	3.8	0.00
7302	16.3	0.02	7302	22.8	0.03
7303	6.4	0.01	7303	7.5	0.01
7311	8.6	0.02	7311	7.5	0.01
7312	8.3	0.01	7312	8.8	0.01
7314	13.4	0.02	7314	15.3	0.02
7315			7315		
8011	13.7	0.04	8011	7.1	0.03
8012	1.9	0.00	8012	3.2	0.00

t-Test: Paired Two Sample for Means

	bycatch weight	
	control	TED
Mean	19.935	17.30833
Variance	140.4126	129.2916
Observations	30	30
Pearson Correlation	0.867218	
Hypothesized Mean Difference	0	
df	29	
t Stat	2.397448	
P(T<=t) one-tail	0.011586	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.023173	
t Critical two-tail	2.045231	

t-Test: Paired Two Sample for Means

	% of catch	
	control	TED
Mean	0.035304	0.03086
Variance	0.000635	0.000573
Observations	30	30
Pearson Correlation	0.913336	
Hypothesized Mean Difference	0	
df	29	
t Stat	2.362336	
P(T<=t) one-tail	0.012543	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.025085	
t Critical two-tail	2.045231	

Table 8. Flounder net - Total bycatch weight and percentage of catch in tows less than 750 pounds

Haul #	total bycatch	% of catch	Haul #	total bycatch	% of catch
7141	27.0	0.09	7141	28.3	0.08
7142	19.3	0.04	7142	18.0	0.04
7143	38.9	0.09	7143	33.8	0.08
7151	33.6	0.07	7151	33.0	0.06
7152	51.8	0.09	7152	49.0	0.10
7153	42.0	0.06	7153	46.9	0.07
7161	14.3	0.03	7161	11.1	0.02
7162	21.5	0.04	7162	11.7	0.02
7171	25.7	0.04	7171	18.8	0.03
7172			7172		
7251	15.8	0.05	7251	16.2	0.04
7252	35.5	0.06	7252	9.6	0.02
7254	18.3	0.04	7254	18.0	0.04
7255	20.0	0.03	7255	18.0	0.03
7261	13.7	0.04	7261	6.6	0.02
7271	16.1	0.04	7271	12.2	0.03
7272	16.0	0.02	7272	14.1	0.02
7311	8.6	0.02	7311	7.5	0.01
7312	8.3	0.01	7312	8.8	0.01
7314	13.4	0.02	7314	15.3	0.02
8011	13.7	0.04	8011	7.1	0.03

t-Test: Paired Two Sample for Means

	bycatch weight	TED
Mean	22.6475	19.1775
Variance	141.886967	158.4396
Observations	20	20
Pearson Correlation	0.8673314	
Hypothesized Mean Difference	0	
df	19	
t Stat	2.44633731	
P(T<=t) one-tail	0.01216734	
t Critical one-tail	1.72913133	
P(T<=t) two-tail	0.02433468	
t Critical two-tail	2.0930247	

t-Test: Paired Two Sample for Means

	% of catch	TED
Mean	0.04543386	0.038219
Variance	0.00059203	0.000656
Observations	20	20
Pearson Correlation	0.90264038	
Hypothesized Mean Difference	0	
df	19	
t Stat	2.90879438	
P(T<=t) one-tail	0.00450148	
t Critical one-tail	1.72913133	
P(T<=t) two-tail	0.00900296	
t Critical two-tail	2.0930247	

Table 9. Flounder net - Total bycatch weight and percentage of catch in tows greater than 750 pounds

Haul #	total bycatch	% catch	Haul #	total bycatch	% catch
7144	18.1	0.02	7144	17.0	0.02
7145	12.8	0.01	7145	11.8	0.01
7163	39.3	0.04	7163	26.0	0.03
7164			7164		
7173			7173		
7174			7174		
7262	11.8	0.01	7262	11.0	0.01
7263	11.8	0.01	7263	13.7	0.01
7273	19.0	0.02	7273	19.0	0.02
7301	8.0	0.01	7301	3.8	0.00
7302	16.3	0.02	7302	22.8	0.03
7303	6.4	0.01	7303	7.5	0.01
7315			7315		
8012	1.9	0.00	8012	3.2	0.00

t-Test: Paired Two Sample for Means

	bycatch weight	
	control	TED
Mean	14.51	13.57
Variance	103.850444	58.83067
Observations	10	10
Pearson Correlation	0.87213211	
Hypothesized Mean Difference	0	
df	9	
t Stat	0.57915923	
P(T<=t) one-tail	0.28834403	
t Critical one-tail	1.83311386	
P(T<=t) two-tail	0.57668806	
t Critical two-tail	2.26215889	

t-Test: Paired Two Sample for Means

	% of catch	
	control	TED
Mean	0.01504398	0.01614
Variance	0.00011297	9.93E-05
Observations	10	10
Pearson Correlation	0.85470224	
Hypothesized Mean Difference	0	
df	9	
t Stat	-0.62060601	
P(T<=t) one-tail	0.2751247	
t Critical one-tail	1.83311386	
P(T<=t) two-tail	0.55024939	
t Critical two-tail	2.26215889	

Table 10. Flounder Net - Monkfish bycatch in pounds

Haul #	control number	weight	Haul #	TED number	weight
7141	9	10.0	7141	8	18.0
7142	5	6.0	7142	11	7.8
7143	10	16.0	7143	6	24.8
7144	5	5.3	7144	6	10.8
7145	3	4.0	7145	9	4.5
7151	5	6.5	7151	6	25.8
7152	5	5.0	7152	5	44.0
7153	5	6.3	7153	7	33.8
7161	2	3.0	7161	2	7.5
7162	5	5.0	7162	2	9.0
7163	6	18.0	7163	4	19.0
7164			7164		
7171	2	3.5	7171	2	14.5
7172			7172		
7173			7173		
7174			7174		
7251	11	10.0	7251	8	9.0
7252	16	33.0	7252	10	2.8
7254	17	11.5	7254	16	10.0
7255	10	10.0	7255	12	9.0
7261	19	8.0	7261	8	1.6
7262	6	4.5	7262	10	7.5
7263	14	5.0	7263	15	4.0
7271	14	12.0	7271	8	6.2
7272	12	9.0	7272	16	3.0
7273	16	12.5	7273	16	7.0
7301	19	7.0	7301	13	0.0
7302	20	14.0	7302	13	11.5
7303	13	4.0	7303	17	1.5
7311	10	6.0	7311	14	3.5
7312	10	2.5	7312	13	0.3
7314	21	8.0	7314	26	0.3
7315			7315		
8011	21	11.5	8011	19	0.1
8012	7	1.5	8012	9	0.5

t-Test: Paired Two Sample for Means

	control	TED
Mean	10.6	10.36667
Variance	35.48966	30.72299
Observations	30	30
Pearson Correlation	0.738728	
Hypothesized Mean Difference	0	
df	29	
t Stat	0.306149	
P(T<=t) one-tail	0.380839	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.761678	
t Critical two-tail	2.045231	

t-Test: Paired Two Sample for Means

	weight	TED
Mean	8.616667	6.833333
Variance	37.86954	10.69109
Observations	30	30
Pearson Correlation	0.19808	
Hypothesized Mean Difference	0	
df	29	
t Stat	1.533158	
P(T<=t) one-tail	0.068038	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.136075	
t Critical two-tail	2.045231	

Table 11. Flounder Net - Little skate bycatch in pounds

Haul #	control number	weight	Haul #	TED number	weight
7141	12	16.8	7141	14	9.8
7142	10	13.3	7142	7	9.8
7143	22	22.8	7143	20	8.3
7144	9	12.5	7144	9	5.5
7145	6	8.0	7145	3	7.3
7151	24	24.8	7151	22	6.8
7152	40	43.8	7152	35	4.5
7153	27	33.5	7153	27	13.0
7161	9	10.0	7161	7	3.3
7162	11	15.0	7162	8	2.0
7163	14	19.5	7163	17	5.5
7164			7164		
7171	22	18.0	7171	14	3.0
7172			7172		
7173			7173		
7174			7174		
7251	8	4.0	7251	11	7.0
7252	1	0.1	7252	5	5.5
7254	12	5.5	7254	15	7.5
7255	12	9.2	7255	9	8.5
7261	6	2.7	7261	2	4.0
7262	10	4.8	7262	7	3.0
7263	15	3.3	7263	6	9.0
7271	6	4.0	7271	8	6.0
7272	9	6.5	7272	4	11.0
7273	11	6.0	7273	9	12.0
7301	3	0.4	7301	0	3.5
7302	4	2.0	7302	10	11.0
7303	6	1.8	7303	3	6.0
7311	6	1.8	7311	3	3.5
7312	7	2.3	7312	2	7.0
7314	4	2.7	7314	1	14.0
7315			7315		
8011	2	1.5	8011	1	6.0
8012	2	0.2	8012	3	2.0

t-Test: Paired Two Sample for Means

	number control	TED
Mean	11	9.4
Variance	73.24138	67.42069
Observations	30	30
Pearson Correlation	0.91616	
Hypothesized Mean Difference	0	
df	29	
t Stat	2.540061	
P(T<=t) one-tail	0.00835	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.0167	
t Critical two-tail	2.045231	

t-Test: Paired Two Sample for Means

	weight control	TED
Mean	9.876667	9.895
Variance	111.5713	111.347
Observations	30	30
Pearson Correlation	0.954926	
Hypothesized Mean Difference	0	
df	29	
t Stat	-0.03168	
P(T<=t) one-tail	0.487473	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.974946	
t Critical two-tail	2.045231	

Table 12. Flounder Net - Red hake bycatch in pounds

Haul #	control number	weight	Haul #	TED number	weight
7141	0	0.0	7141	0	0.0
7142	0	0.0	7142	0	0.0
7143	0	0.0	7143	2	0.3
7144	0	0.0	7144	0	0.0
7145	1	0.3	7145	0	0.0
7151	6	0.8	7151	1	0.2
7152	8	0.8	7152	4	0.0
7153	10	1.3	7153	1	0.2
7161	5	0.8	7161	2	0.3
7162	7	1.0	7162	3	0.5
7163	13	1.5	7163	10	1.3
7164			7164		
7171	22	2.5	7171	12	1.0
7172			7172		
7173			7173		
7174			7174		
7251	3	0.5	7251	1	0.2
7252	1	0.1	7252	6	0.8
7254	8	1.0	7254	2	0.5
7255	3	0.5	7255	5	0.5
7261	20	2.5	7261	7	1.0
7262	17	1.5	7262	4	0.5
7263	24	2.0	7263	3	0.3
7271	1	0.1	7271	0	0.0
7272	2	0.3	7272	1	0.1
7273	3	0.5	7273	0	0.0
7301	1	0.2	7301	1	0.3
7302	0	0.0	7302	0	0.0
7303	1	0.1	7303	0	0.0
7311	0	0.0	7311	0	0.0
7312	4	1.0	7312	3	0.5
7314	10	1.3	7314	6	1.0
7315			7315		
8011	4	0.4	8011	5	0.5
8012	2	0.2	8012	2	0.2

t-Test: Paired Two Sample for Means

	number control	TED
Mean	5.866667	2.7
Variance	48.11954	9.527586
Observations	30	30
Pearson Correlation	0.67124	
Hypothesized Mean Difference	0	
df	29	
t Stat	3.226241	
P(T<=t) one-tail	0.001552	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.003103	
t Critical two-tail	2.045231	

t-Test: Paired Two Sample for Means

	weight control	TED
Mean	0.695	0.331667
Variance	0.533681	0.130773
Observations	30	30
Pearson Correlation	0.696005	
Hypothesized Mean Difference	0	
df	29	
t Stat	3.653405	
P(T<=t) one-tail	0.000508	
t Critical one-tail	1.699127	
P(T<=t) two-tail	0.001016	
t Critical two-tail	2.045231	

Table 13. Flounder Net - Monkfish bycatch in pounds in scallop catch less than 750 pounds.

control			TED		
Haul #	number	weight	Haul #	number	weight
7141	9	10.0	7141	8	9.8
7142	5	6.0	7142	11	9.8
7143	10	16.0	7143	6	8.3
7151	5	6.5	7151	6	6.8
7152	5	5.0	7152	5	4.5
7153	5	6.3	7153	7	13.0
7161	2	3.0	7161	2	3.3
7162	5	5.0	7162	2	2.0
7171	2	3.5	7171	2	3.0
7172			7172		
7251	11	10.0	7251	8	7.0
7252	16	33.0	7252	10	5.5
7254	17	11.5	7254	16	7.5
7255	10	10.0	7255	12	8.5
7261	19	8.0	7261	8	4.0
7271	14	12.0	7271	8	6.0
7272	12	9.0	7272	16	11.0
7311	10	6.0	7311	14	3.5
7312	10	2.5	7312	13	7.0
7314	21	8.0	7314	26	14.0
8011	21	11.5	8011	19	6.0

t-Test: Paired Two Sample for Means

	small tow number	
	control	TED
Mean	10.45	9.95
Variance	35.73421	37.52368
Observations	20	20
Pearson Correlation	0.756674	
Hypothesized Mean Difference	0	
df	19	
t Stat	0.529373	
P(T<=t) one-tail	0.301339	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.602678	
t Critical two-tail	2.093025	

t-Test: Paired Two Sample for Means

	small tow weight	
	control	TED
Mean	9.1375	7.0125
Variance	43.33865	10.89786
Observations	20	20
Pearson Correlation	0.071663	
Hypothesized Mean Difference	0	
df	19	
t Stat	1.329142	
P(T<=t) one-tail	0.099771	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.199542	
t Critical two-tail	2.093025	

Table 14. Flounder Net - Monkfish bycatch in pounds in scallop catches greater than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
7144	5	5.3	7144	6	5.5
7145	3	4.0	7145	9	7.3
7163	6	18.0	7163	4	5.5
7164			7164		
7173			7173		
7174			7174		
7262	6	4.5	7262	10	3.0
7263	14	5.0	7263	15	9.0
7273	16	12.5	7273	16	12.0
7301	19	7.0	7301	13	3.5
7302	20	14.0	7302	13	11.0
7303	13	4.0	7303	17	6.0
7315			7315		
8012	7	1.5	8012	9	2.0

t-Test: Paired Two Sample for Means

	large tow number control	weight TED
Mean	10.9	11.2
Variance	38.76667	18.62222
Observations	10	10
Pearson Correlation	0.732784	
Hypothesized Mean Difference	0	
df	9	
t Stat	-0.22354	
P(T<=t) one-tail	0.414054	
t Critical one-tail	1.833114	
P(T<=t) two-tail	0.828108	
t Critical two-tail	2.262159	

t-Test: Paired Two Sample for Means

	large tow weight control	weight TED
Mean	7.575	6.475
Variance	28.72292	11.22847
Observations	10	10
Pearson Correlation	0.497399	
Hypothesized Mean Difference	0	
df	9	
t Stat	0.740173	
P(T<=t) one-tail	0.239029	
t Critical one-tail	1.833114	
P(T<=t) two-tail	0.478058	
t Critical two-tail	2.262159	

Table 15. Flounder Net -Little skate bycatch in pounds in scallop catches less than 750 pounds

small tow			TED		
Haul #	number	weight	Haul #	number	weight
7141	12	16.8	7141	14	18.0
7142	10	13.3	7142	7	7.8
7143	22	22.8	7143	20	24.8
7151	24	24.8	7151	22	25.8
7152	40	43.8	7152	35	44.0
7153	27	33.5	7153	27	33.8
7161	9	10.0	7161	7	7.5
7162	11	15.0	7162	8	9.0
7171	22	18.0	7171	14	14.5
7172			7172		
7251	8	4.0	7251	11	9.0
7252	1	0.1	7252	5	2.8
7254	12	5.5	7254	15	10.0
7255	12	9.2	7255	9	9.0
7261	6	2.7	7261	2	1.6
7271	6	4.0	7271	8	6.2
7272	9	6.5	7272	4	3.0
7311	6	1.8	7311	3	3.5
7312	7	2.3	7312	2	0.3
7314	4	2.7	7314	1	0.3
8011	2	1.5	8011	1	0.1

t-Test: Paired Two Sample for Means

	small tow number	
	control	TED
Mean	12.5	10.75
Variance	95	85.88158
Observations	20	20
Pearson Correlation	0.944825	
Hypothesized Mean Difference	0	
df	19	
t Stat	2.450806	
P(T<=t) one-tail	0.012054	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.024108	
t Critical two-tail	2.093025	

t-Test: Paired Two Sample for Means

	small tow weight	
	control	TED
Mean	11.895	11.53
Variance	139.7284	144.9875
Observations	20	20
Pearson Correlation	0.968044	
Hypothesized Mean Difference	0	
df	19	
t Stat	0.53977	
P(T<=t) one-tail	0.297813	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.595626	
t Critical two-tail	2.093025	

Table 16. Flounder Net - Little skate bycatch in pounds in large scallop catches greater than 750 pounds

Haul #	control number	weight	Haul #	TED number	weight
7144	9	12.5	7144	9	10.8
7145	6	8.0	7145	3	4.5
7163	14	19.5	7163	17	19.0
7164			7164		
7173			7173		
7174			7174		
7262	10	4.8	7262	7	7.5
7263	15	3.3	7263	6	4.0
7273	11	6.0	7273	9	7.0
7301	3	0.4	7301	0	0.0
7302	4	2.0	7302	10	11.5
7303	6	1.8	7303	3	1.5
7315			7315		
8012	2	0.2	8012	3	0.5

t-Test: Paired Two Sample for Means

	large tow number control	TED
Mean	8	6.7
Variance	20.44444	23.78889
Observations	10	10
Pearson Correlation	0.624747	
Hypothesized Mean Difference	0	
df	9	
t Stat	1.00664	
P(T<=t) one-tail	0.170202	
t Critical one-tail	1.833114	
P(T<=t) two-tail	0.340404	
t Critical two-tail	2.262159	

t-Test: Paired Two Sample for Means

	large tow weight control	TED
Mean	5.84	6.625
Variance	37.36767	34.87847
Observations	10	10
Pearson Correlation	0.833142	
Hypothesized Mean Difference	0	
df	9	
t Stat	-0.71391	
P(T<=t) one-tail	0.246689	
t Critical one-tail	1.833114	
P(T<=t) two-tail	0.493378	
t Critical two-tail	2.262159	

Table 17. Flounder Net - Red hake bycatch in pounds in scallop catches greater than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
7141	0	0.0	7141	0	0.0
7142	0	0.0	7142	0	0.0
7143	0	0.0	7143	2	0.3
7151	6	0.8	7151	1	0.2
7152	8	0.8	7152	4	0.0
7153	10	1.3	7153	1	0.2
7161	5	0.8	7161	2	0.3
7162	7	1.0	7162	3	0.5
7171	22	2.5	7171	12	1.0
7172			7172		
7251	3	0.5	7251	1	0.2
7252	1	0.1	7252	6	0.8
7254	8	1.0	7254	2	0.5
7255	3	0.5	7255	5	0.5
7261	20	2.5	7261	7	1.0
7271	1	0.1	7271	0	0.0
7272	2	0.3	7272	1	0.1
7311	0	0.0	7311	0	0.0
7312	4	1.0	7312	3	0.5
7314	10	1.3	7314	6	1.0
8011	4	0.4	8011	5	0.5

t-Test: Paired Two Sample for Means

	small tow number	
	control	TED
Mean	5.7	3.05
Variance	38.32632	9.418421
Observations	20	20
Pearson Correlation	0.746011	
Hypothesized Mean Difference	0	
df	19	
t Stat	2.69085	
P(T<=t) one-tail	0.007236	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.014472	
t Critical two-tail	2.093025	

t-Test: Paired Two Sample for Means

	small tow weight	
	control	TED
Mean	0.73	0.37
Variance	0.547211	0.122211
Observations	20	20
Pearson Correlation	0.719558	
Hypothesized Mean Difference	0	
df	19	
t Stat	2.952888	
P(T<=t) one-tail	0.004085	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.00817	
t Critical two-tail	2.093025	

Table 18. Flounder Net - Red hake bycatch in pounds in scallop catches greater than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
7144	0	0.0	7144	0	0.0
7145	1	0.3	7145	0	0.0
7163	13	1.5	7163	10	1.3
7164			7164		
7173			7173		
7174			7174		
7262	17	1.5	7262	4	0.5
7263	24	2.0	7263	3	0.3
7273	3	0.5	7273	0	0.0
7301	1	0.2	7301	1	0.3
7302	0	0.0	7302	0	0.0
7303	1	0.1	7303	0	0.0
7315			7315		
8012	2	0.2	8012	2	0.2

t-Test: Paired Two Sample for Means

	large tow number	
	control	TED
Mean	6.2	2
Variance	73.95556	10
Observations	10	10
Pearson Correlation	0.616949	
Hypothesized Mean Difference	0	
df	9	
t Stat	1.870829	
P(T<=t) one-tail	0.047087	
t Critical one-tail	1.833114	
P(T<=t) two-tail	0.094174	
t Critical two-tail	2.262159	

t-Test: Paired Two Sample for Means

	large tow weight	
	control	TED
Mean	0.625	0.255
Variance	0.55625	0.153583
Observations	10	10
Pearson Correlation	0.652426	
Hypothesized Mean Difference	0	
df	9	
t Stat	2.041601	
P(T<=t) one-tail	0.03579	
t Critical one-tail	1.833114	
P(T<=t) two-tail	0.07158	
t Critical two-tail	2.262159	

Table 19. Scallop Net - Scallop catch in pounds

Haul #	control catch	Haul #	TED catch
08061	629.1	08061	601.7
08062	968.2	08062	836.9
08063	1039.3	08063	836.9
08064	467.0	08064	640.3
08071	666.0	08071	527.3
08072	582.8	08072	721.5
08073	652.1	08073	710.4
08074	596.6	08074	693.8
08091	856.4	08091	663.0
08092	1049.8	08092	607.8
08093	359.1	08093	414.4
08094	1160.3	08094	814.9
08101	751.4	08101	980.7
08102	856.4	08102	801.1
08103	580.1	08103	745.9
08131	684.0	08131	698.3
08132	997.5	08132	883.5
08133	1197.0	08133	983.3
08161	497.3	08161	469.6
08162	541.5	08162	497.3
08163	1105.0	08163	884.0
08164	994.5	08164	870.2
08181	721.5	08181	804.8
08182	1110.0	08182	777.0
08183	943.5	08183	666.0
08191	777.0	08191	943.5
08192	1026.8	08192	888.0
08193	1012.9	08193	901.9
08222	490.5	08222	504.1
08223	844.8	08223	763.0
08224	899.3	08224	833.9
08225	490.5	08225	490.5
08231	698.3	08231	698.3
08232	741.0	08232	712.5
08233	655.5	08233	627.0
08234	712.5	08234	826.5
08241	603.2	08241	574.2
08242	493.0	08242	681.5
08243	971.5	08243	696.0
08252	391.5	08252	333.5
08253	870.0	08253	812.0
08254	826.5	08254	667.0
08261	147.5	08261	206.5
08262	162.3	08262	206.5
08264	309.8	08264	339.3
08265	354.0	08265	324.5

t-Test: Paired Two Sample for Means

	control	TED
Mean	727.9304	677.4087
Variance	69569.36	38351.3
Observations	46	46
Pearson Correlation	0.825559	
Hypothesized Mean Difference	0	
df	45	
t Stat	2.277555	
P(T<=t) one-tail	0.013778	
t Critical one-tail	1.679427	
P(T<=t) two-tail	0.027555	
t Critical two-tail	2.014103	

Table 20. Scallop Net - Scallop catch in pounds in tows less than 750 pounds

control		TED	
Haul #	catch	Haul #	catch
8061	629.1	8061	601.7
8064	467.0	8064	640.3
8071	666.0	8071	527.3
8072	582.8	8072	721.5
8073	652.1	8073	710.4
8074	596.6	8074	693.8
8093	359.1	8093	414.4
8103	580.1	8103	745.9
8131	684.0	8131	698.3
8161	497.3	8161	469.6
8162	541.5	8162	497.3
8222	490.5	8222	504.1
8225	490.5	8225	490.5
8231	698.3	8231	698.3
8232	741.0	8232	712.5
8233	655.5	8233	627.0
8241	603.2	8241	574.2
8242	493.0	8242	681.5
8252	391.5	8252	333.5
8261	147.5	8261	206.5
8262	162.3	8262	206.5
8264	309.8	8264	339.3
8265	354.0	8265	324.5

t-Test: Paired Two Sample for Means

	small tow control	TED
Mean	512.7261	539.9522
Variance	26490.4	28581.46
Observations	23	23
Pearson Correlation	0.879097	
Hypothesized Mean Difference	0	
df	22	
t Stat	-1.59599	
P(T<=t) one-tail	0.062378	
t Critical one-tail	1.717144	
P(T<=t) two-tail	0.124757	
t Critical two-tail	2.073875	

Table 21. Scallop Net - Scallop catch in pounds on tows greater than 750 pounds

control		TED	
Haul #	catch	Haul #	catch
8062	968.2	8062	836.9
8063	1039.3	8063	836.9
8091	856.4	8091	663.0
8092	1049.8	8092	607.8
8094	1160.3	8094	814.9
8101	751.4	8101	980.7
8102	856.4	8102	801.1
8132	997.5	8132	883.5
8133	1197.0	8133	983.3
8163	1105.0	8163	884.0
8164	994.5	8164	870.2
8181	721.5	8181	804.8
8182	1110.0	8182	777.0
8183	943.5	8183	666.0
8191	777.0	8191	943.5
8192	1026.8	8192	888.0
8193	1012.9	8193	901.9
8223	844.8	8223	763.0
8224	899.3	8224	833.9
8234	712.5	8234	826.5
8243	971.5	8243	696.0
8253	870.0	8253	812.0
8254	826.5	8254	667.0

t-Test: Paired Two Sample for Means

	large tow control	TED
Mean	943.1348	814.8652
Variance	18974.48	10358.13
Observations	23	23
Pearson Correlation	0.084398	
Hypothesized Mean Difference	0	
df	22	
t Stat	3.746084	
P(T<=t) one-tail	0.000559	
t Critical one-tail	1.717144	
P(T<=t) two-tail	0.001118	
t Critical two-tail	2.073875	

Table 22. Scallop Net - KS test for all tows

K alpha 1.358102
D alpha 0.032356

height	difference	height	difference
121	-0.00946	141	0
119	-0.00815	142	0
120	-0.00753	143	0
122	-0.00741	144	0
118	-0.00735	145	0
99	-0.00639	146	0
117	-0.00605	147	0
126	-0.00604	148	0
123	-0.00563	149	0
116	-0.00553	150	0
98	-0.00538	42	1.72E-05
115	-0.00529	43	4.31E-05
127	-0.00512	49	4.79E-05
124	-0.00501	46	0.000138
109	-0.00495	133	0.000193
128	-0.00478	111	0.000333
125	-0.00437	92	0.000506
100	-0.00428	45	0.000662
108	-0.00419	47	0.000774
114	-0.00398	56	0.000827
103	-0.00394	88	0.001195
97	-0.00366	50	0.001531
101	-0.00333	52	0.001643
129	-0.00331	53	0.001712
104	-0.0033	54	0.001799
94	-0.00297	91	0.001833
102	-0.00294	77	0.001877
107	-0.00289	80	0.002008
96	-0.00275	57	0.002023
113	-0.0026	78	0.002429
93	-0.00229	81	0.002474
110	-0.00228	55	0.00274
105	-0.00226	58	0.002956
130	-0.00215	51	0.002998
131	-0.00213	83	0.003602
95	-0.00212	59	0.003872
106	-0.00159	62	0.00407
112	-0.00154	87	0.004146
89	-0.00128	61	0.004272
132	-0.00096	84	0.004361
135	-0.00092	60	0.004491
138	-0.00087	63	0.004732
48	-0.00086	79	0.00474
134	-0.00065	64	0.00481
38	-0.00056	90	0.006149
39	-0.00056	75	0.006364
136	-0.00034	85	0.006415
137	-0.00033	76	0.006662
140	-0.00029	86	0.007901
30	-0.00028	82	0.008187
31	-0.00028	68	0.008208
32	-0.00028	65	0.008912
33	-0.00028	66	0.009269
34	-0.00028	74	0.009656
35	-0.00028	67	0.009678
36	-0.00028	69	0.010109
37	-0.00028	73	0.010387
40	-0.00027	70	0.011223
41	-0.00027	71	0.012844
44	-0.0002	72	0.013632
139	-8.6E-06		

Table 23. Scallop Net - KS test for tows less than 750 pounds

	K alpha	1.358102		
	D alpha	0.048883		
height	difference		height	difference
98	-0.01919		38	-0.00126
99	-0.0176		39	-0.00126
100	-0.01731		40	-0.00126
96	-0.01711		41	-0.00126
101	-0.01638		42	-0.00126
97	-0.01589		77	-0.00092
102	-0.01557		136	-0.00085
103	-0.01531		137	-0.00081
116	-0.01406		140	-0.00067
104	-0.01387		30	-0.00063
118	-0.01376		31	-0.00063
115	-0.0135		32	-0.00063
109	-0.01335		33	-0.00063
117	-0.01332		34	-0.00063
114	-0.01309		35	-0.00063
119	-0.01302		36	-0.00063
121	-0.01273		37	-0.00063
110	-0.01243		43	-0.00052
107	-0.01183		45	-0.00037
108	-0.01165		46	-0.00022
113	-0.01128		139	-3.7E-05
95	-0.01101		63	-1E-05
120	-0.01095		141	0
122	-0.01003		142	0
111	-0.00969		143	0
105	-0.00965		144	0
112	-0.00943		145	0
94	-0.00889		146	0
126	-0.00873		147	0
127	-0.00862		148	0
106	-0.0082		149	0
128	-0.00781		150	0
123	-0.00781		75	0.000528
125	-0.00751		78	0.000592
56	-0.00737		47	0.000627
57	-0.00726		51	0.000662
54	-0.00715		76	0.000895
58	-0.00708		64	0.001433
124	-0.00707		82	0.002007
53	-0.00615		88	0.002027
129	-0.0057		91	0.002375
59	-0.00501		79	0.004103
130	-0.005		81	0.005349
55	-0.00497		80	0.006243
131	-0.00496		68	0.006279
89	-0.00457		71	0.006535
93	-0.00448		65	0.00691
52	-0.0043		66	0.007058
60	-0.00427		83	0.007071
48	-0.00374		70	0.007572
61	-0.00349		69	0.007869
132	-0.00292		84	0.008766
62	-0.00271		67	0.009167
92	-0.00248		72	0.009198
134	-0.00222		90	0.00982
135	-0.00218		74	0.011711
138	-0.00204		87	0.012773
44	-0.0017		73	0.013045
49	-0.00159		86	0.015669
133	-0.00159		85	0.016713
50	-0.00145			

Table 24. Scallop Net - KS test for tows greater than 750 pounds.

	K alpha			
	D alpha			
		1.358102		
		0.043169		
height	difference		height	difference
121	-0.00722		42	0.001015
122	-0.00569		44	0.001025
120	-0.00521		47	0.001044
119	-0.00472		108	0.001106
123	-0.00416		109	0.001125
126	-0.00412		133	0.001503
87	-0.00387		45	0.001533
124	-0.00364		48	0.001566
85	-0.00312		49	0.001571
118	-0.00271		99	0.001786
127	-0.00258		92	0.00206
128	-0.00257		90	0.002445
80	-0.00245		114	0.00275
125	-0.00211		78	0.002903
129	-0.00155		105	0.00301
93	-0.00129		106	0.003049
81	-0.00108		77	0.003482
88	-0.00075		107	0.003586
117	-0.00073		113	0.003751
84	-0.00063		95	0.004082
83	-0.00057		50	0.004114
130	-2.9E-05		79	0.004209
131	-2.4E-05		112	0.004229
135	-4.8E-06		103	0.004441
136	-4.8E-06		104	0.004465
137	-4.8E-06		98	0.004789
30	0		51	0.005129
31	0		110	0.005196
32	0		97	0.005219
33	0		100	0.005354
34	0		101	0.006384
35	0		102	0.006423
36	0		52	0.006652
37	0		96	0.007694
38	0		111	0.007734
39	0		56	0.007735
138	0		74	0.007865
139	0		64	0.007925
140	0		53	0.008195
141	0		73	0.008222
142	0		63	0.008911
143	0		54	0.009215
144	0		55	0.009234
145	0		57	0.009776
146	0		62	0.009882
147	0		68	0.010134
148	0		67	0.010555
149	0		75	0.010626
150	0		76	0.01082
89	0.000114		61	0.010864
86	0.000303		65	0.01099
132	0.000488		58	0.011313
134	0.000498		59	0.011332
40	0.000508		66	0.011517
41	0.000508		82	0.011615
43	0.000512		60	0.011855
46	0.000527		69	0.012228
91	0.000657		70	0.014351
115	0.000758		72	0.017146
116	0.000768		71	0.017967
94	0.000876			

Table 25. Loggerhead sea turtle information

date	8/9/2006		measurements (cm curved)	
haul	1			
lat/long-s	3748.3	7423.6	N-T	74.5
lat/long-e	3751.1	7422.4	N-N	73.5
time s/e	13:19	14:53	W	72.2
weather	NE-15	3 ft		
depth/temp	34-36	80.4		
net	port	control		

Loggerhead sea turtle did not have any visible injuries and was active immediately upon coming aboard. There were no flipper tags attached. It was released and swam away immediately.

Table 26. Scallop net - Total bycatch weight and percentage of total catch

Haul #	control total bycatch	% of catch	Haul #	TED total bycatch	% of catch
08061	4.3	0.01	08061	1.0	0.00
08062	6.0	0.01	08062	8.4	0.01
08063	2.5	0.00	08063	3.5	0.00
08064			08064		
08071	9.0	0.01	08071	2.6	0.00
08072	2.3	0.00	08072	16.3	0.02
08073			08073		
08074	3.7	0.01	08074	4.6	0.01
08091	3.0	0.00	08091	0.9	0.00
08092	7.5	0.01	08092	12.0	0.02
08093	2.9	0.01	08093	5.3	0.01
08094	5.6	0.00	08094	6.8	0.01
08101	12.3	0.02	08101	3.9	0.00
08102	4.5	0.01	08102	1.1	0.00
08103	9.8	0.02	08103	9.6	0.01
08131	7.3	0.01	03131	2.5	0.00
08132	3.8	0.00	08132	6.0	0.01
08133	5.8	0.00	08133	3.9	0.00
08161	8.5	0.02	08161	6.5	0.01
08162	13.0	0.02	08162	5.3	0.01
08163	8.0	0.01	08163	3.0	0.00
08164			08164		
08181	7.1	0.01	08181	1.8	0.00
08182	11.0	0.01	08182	4.4	0.01
08183	12.5	0.01	08183	3.0	0.00
08191	9.0	0.01	08191	7.4	0.01
08192	12.1	0.01	08192	10.5	0.01
08193	4.0	0.00	08193	15.5	0.02
08222	10.3	0.02	08222	8.3	0.02
08223	10.5	0.01	08223	6.5	0.01
08224	11.0	0.01	08224	2.3	0.00
08225			08225		
08231	9.6	0.01	08231	2.3	0.00
08232	2.0	0.00	08232	3.5	0.00
08233	5.3	0.01	08233	5.8	0.01
08234			08234		
08241	9.5	0.02	08241	7.8	0.01
08242	11.0	0.02	08242	9.0	0.01
08243	12.5	0.01	08243	11.2	0.02
08252	17.5	0.04	08252	12.0	0.03
08253			08253		
08254	9.0	0.01	08254	12.0	0.02
08261			08261		
08262			08262		
08264			08264		
08265			08265		

t-Test: Paired Two Sample for Means

	bycatch wt control	TED
Mean	7.86805556	6.275
Variance	14.0750218	16.51621
Observations	36	36
Pearson Correlation	0.15928595	
Hypothesized Mean Difference	0	
df	35	
t Stat	1.88420581	
P(T<=t) one-tail	0.03393241	
t Critical one-tail	1.68957285	
P(T<=t) two-tail	0.06786481	
t Critical two-tail	2.03011041	

t-Test: Paired Two Sample for Means

	control	% of catch TED
Mean	0.011071	0.00939259
Variance	5.96E-05	5.0568E-05
Observations	36	36
Pearson Correlation		0.552606
Hypothesized Mean Difference	0	
df	35	
t Stat	1.431443	
P(T<=t) one-tail	0.080586	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.161173	
t Critical two-tail	2.03011	

Table 27. Scallop net - Total bycatch and percentage of total catch in tows less than 750 pounds

Haul #	control total bycatch	% of catch	Haul #	TED total bycatch	% of catch
08061	4.3	0.01	08061	1.0	0.00
08064			08064		
08071	9.0	0.01	08071	2.6	0.00
08072	2.3	0.00	08072	16.3	0.02
08073			08073		
08074	3.7	0.01	08074	4.6	0.01
08093	2.9	0.01	08093	5.3	0.01
08103	9.8	0.02	08103	9.6	0.01
08131	7.3	0.01	03131	2.5	0.00
08161	8.5	0.02	08161	6.5	0.01
08162	13.0	0.02	08162	5.3	0.01
08222	10.3	0.02	08222	8.3	0.02
08225			08225		
08231	9.6	0.01	08231	2.3	0.00
08232	2.0	0.00	08232	3.5	0.00
08233	5.3	0.01	08233	5.8	0.01
08241	9.5	0.02	08241	7.8	0.01
08242	11.0	0.02	08242	9.0	0.01
08252	17.5	0.04	08252	12.0	0.03
08261			08261		
08262			08262		
08264			08264		
08265			08265		

t-Test: Paired Two Sample for Means

	bycatch weight control	TED
Mean	7.85625	6.384375
Variance	18.2569583	16.18257
Observations	16	16
Pearson Correlation	0.21506263	
Hypothesized Mean Difference	0	
df	15	
t Stat	1.13207919	
P(T<=t) one-tail	0.13768737	
t Critical one-tail	1.75305104	
P(T<=t) two-tail	0.27537474	
t Critical two-tail	2.13145086	

t-Test: Paired Two Sample for Means

	% of catch control	TED
Mean	0.01438233	0.01141345
Variance	9.7748E-05	6.8934E-05
Observations	16	16
Pearson Correlation	0.67757806	
Hypothesized Mean Difference	0	
df	15	
t Stat	1.59489655	
P(T<=t) one-tail	0.06579227	
t Critical one-tail	1.75305104	
P(T<=t) two-tail	0.13158454	
t Critical two-tail	2.13145086	

Table 28. Scallop net - Total bycatch and percentage of total catch in tows greater than 750 pounds

control			TED		
Haul #	total bycatch	% of catch	Haul #	total bycatch	% of catch
08062	6.0	0.01	08062	8.4	0.01
08063	2.5	0.00	08063	3.5	0.00
08091	3.0	0.00	08091	0.9	0.00
08092	7.5	0.01	08092	12.0	0.02
08094	5.6	0.00	08094	6.8	0.01
08101	12.3	0.02	08101	3.9	0.00
08102	4.5	0.01	08102	1.1	0.00
08132	3.8	0.00	08132	6.0	0.01
08133	5.8	0.00	08133	3.9	0.00
08163	8.0	0.01	08163	3.0	0.00
08164			08164		
08181	7.1	0.01	08181	1.8	0.00
08182	11.0	0.01	08182	4.4	0.01
08183	12.5	0.01	08183	3.0	0.00
08191	9.0	0.01	08191	7.4	0.01
08192	12.1	0.01	08192	10.5	0.01
08193	4.0	0.00	08193	15.5	0.02
08223	10.5	0.01	08223	6.5	0.01
08224	11.0	0.01	08224	2.3	0.00
08234			08234		
08243	12.5	0.01	08243	11.2	0.02
08253			08253		
08254	9.0	0.01	08254	12.0	0.02

t-Test: Paired Two Sample for Means

	bycatch weight	
	control	TED
Mean	7.8775	6.1875
Variance	11.5140724	17.63076
Observations	20	20
Pearson Correlation	0.10930304	
Hypothesized Mean Difference	0	
df	19	
t Stat	1.48136917	
P(T<=t) one-tail	0.07745134	
t Critical one-tail	1.72913133	
P(T<=t) two-tail	0.15490267	
t Critical two-tail	2.0930247	

t-Test: Paired Two Sample for Means

	control	TED
Mean	0.00842137	0.007776
Variance	1.5929E-05	3.25E-05
Observations	20	20
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	19	
t Stat	0.43106918	
P(T<=t) one-tail	0.33563456	
t Critical one-tail	1.72913133	
P(T<=t) two-tail	0.67126912	
t Critical two-tail	2.0930247	

Table 29. Scallop Net - Monkfish bycatch in pounds

Haul #	control number	weight	Haul #	TED number	weight
08061	11	3.0	08061	2	0.3
08062	9	1.5	08062	7	2.5
08063	9	2.0	08063	7	1.5
08064			08064		
08071	5	9.0	08071	5	1.3
08072	6	2.0	08072	9	15.0
08073			08073		
08074	6	2.0	08074	3	0.3
08091	4	3.0	08091	6	0.8
08092	5	4.5	08092	13	7.0
08093	2	0.3	08093	2	2.5
08094	6	1.0	08094	13	3.0
08101	4	11.0	08101	9	2.5
08102	6	2.0	08102	3	0.3
08103	9	4.5	08103	12	6.0
08131	4	3.5	08131	11	2.0
08132	7	3.0	08132	6	2.5
08133	10	4.0	08133	5	2.0
08161	11	4.5	08161	7	4.3
08162	13	10.0	08162	6	4.0
08163	9	5.0	08163	7	1.0
08164			08164		
08181	11	6.5	08181	1	0.1
08182	8	6.5	08182	8	3.3
08183	9	3.3	08183	4	1.8
08191	10	4.5	08191	12	6.0
08192	10	6.0	08192	9	5.5
08193	12	3.5	08193	8	14.5
08222	8	6.0	08222	10	7.0
08223	13	7.5	08223	6	2.5
08224	13	10.0	08224	11	2.0
08225			08225		
08231	12	8.0	08231	4	1.5
08232	6	1.0	08232	7	2.5
08233	8	4.3	08233	6	3.5
08234			08234		
08241	12	7.0	08241	10	7.5
08242	9	5.5	08242	2	1.0
08243	16	12.0	08243	14	9.0
08252	23	15.0	08252	15	10.5
08253			08253		
08254	15	6.5	08254	11	9.0
08261			08261		
08262			08262		
08264			08264		
08265			08265		

t-Test: Paired Two Sample for Means

	number control	TED
Mean	9.111111	7.444444
Variance	16.7873	14.0254
Observations	36	36
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	35	
t Stat	2.204793	
P(T<=t) one-tail	0.017067	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.034133	
t Critical two-tail	2.03011	

t-Test: Paired Two Sample for Means

	weight control	TED
Mean	5.243056	4.048611
Variance	11.48745	14.32164
Observations	36	36
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	35	
t Stat	1.586956	
P(T<=t) one-tail	0.060759	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.121517	
t Critical two-tail	2.03011	

Table 30. Scallop Net - Little skate bycatch in pounds

Haul #	control number	weight	Haul #	TED number	weight
08061	1	1.3	08061	1	0.2
08062	0	2.5	08062	0	4.1
08063	0	0.0	08063	0	0.0
08064			08064		
08071	0	0.0	08071	1	0.1
08072	0	0.0	08072	0	0.0
08073			08073		
08074	3	1.5	08074	4	4.0
08091	0	0.0	08091	0	0.0
08092	2	1.3	08092	4	4.5
08093	2	2.3	08093	2	2.0
08094	3	2.1	08094	2	2.5
08101	0	0.0	08101	3	0.4
08102	2	2.0	08102	0	0.0
08103	3	5.0	08103	6	3.1
08131	2	2.3	08131	0	0.0
08132	0	0.0	08132	1	1.5
08133	0	0.0	08133	1	0.1
08161	3	4.0	08161	2	2.3
08162	2	3.0	08162	1	1.3
08163	2	2.0	08163	1	1.5
08164			08164		
08181	0	0.1	08181	2	1.3
08182	4	4.0	08182	1	1.0
08183	9	8.5	08183	1	1.3
08191	3	2.8	08191	1	0.1
08192	6	4.5	08192	3	4.0
08193	0	0.0	08193	0	0.0
08222	3	0.5	08222	1	1.3
08223	2	1.5	08223	2	1.5
08224	0	0.0	08224	0	0.0
08225			08225		
08231	1	1.0	08231	2	0.5
08232	0	0.0	08232	0	0.0
08233	0	0.0	08233	1	1.0
08234			08234		
08241	3	2.3	08241	2	0.3
08242	4	5.5	08242	7	7.5
08243	0	0.0	08243	2	2.0
08252	3	1.5	08252	1	1.5
08253			08253		
08254	1	1.5	08254	3	3.0
08261			08261		
08262			08262		
08264			08264		
08265			08265		

t-Test: Paired Two Sample for Means

	number control	TED
Mean	1.777778	1.611111
Variance	3.949206	2.701587
Observations	36	36
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	35	
t Stat	0.475191	
P(T<=t) one-tail	0.318802	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.637603	
t Critical two-tail	2.03011	

t-Test: Paired Two Sample for Means

	control	weight TED
Mean	1.740278	1.486111
Variance	3.839117	2.898944
Observations	36	36
Pearson Correlation		#N/A
Hypothesized Mean Difference	0	
df	35	
t Stat	0.802499	
P(T<=t) one-tail	0.21384	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.42768	
t Critical two-tail	2.03011	

Table 31. Scallop Net - Red hake bycatch in pounds

Haul #	control number	weight	Haul #	TED number	weight
08061	0	0.0	08061	2	0.3
08062	5	2.0	08062	12	1.5
08063	5	0.5	08063	12	1.3
08064			08064		
08071	0	0.0	08071	5	1.3
08072	2	0.3	08072	5	1.0
08073			08073		
08074	3	0.3	08074	0	0.0
08091	0	0.0	08091	1	0.2
08092	6	0.5	08092	4	0.5
08093	1	0.2	08093	1	0.5
08094	6	0.5	08094	4	1.0
08101	13	1.3	08101	4	0.8
08102	6	0.5	08102	8	0.8
08103	2	0.3	08103	3	0.5
08131	11	1.5	08131	4	0.5
08132	2	0.8	08132	11	2.0
08133	9	1.5	08133	8	1.8
08161	0	0.0	08161	0	0.0
08162	0	0.0	08162	0	0.0
08163	9	0.8	08163	8	0.5
08164			08164		
08181	4	0.4	08181	2	0.2
08182	7	0.5	08182	1	0.2
08183	5	0.8	08183	0	0.0
08191	12	1.5	08191	12	1.3
08192	9	1.0	08192	7	1.0
08193	2	0.5	08193	4	0.5
08222	0	0.0	08222	0	0.0
08223	0	0.0	08223	0	0.0
08224	0	0.0	08224	0	0.0
08225			08225		
08231	1	0.3	08231	0	0.0
08232	0	0.0	08232	0	0.0
08233	0	0.0	08233	0	0.0
08234			08234		
08241	0	0.0	08241	0	0.0
08242	0	0.0	08242	0	0.0
08243	0	0.0	08243	0	0.0
08252	0	0.0	08252	0	0.0
08253			08253		
08254	0	0.0	08254	0	0.0
08261			08261		
08262			08262		
08264			08264		
08265			08265		

t-Test: Paired Two Sample for Means

	number control	TED
Mean	3.777778	3.055556
Variance	24.40635	13.71111
Observations	36	36
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	35	
t Stat	0.992478	
P(T<=t) one-tail	0.163888	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.327777	
t Critical two-tail	2.03011	

t-Test: Paired Two Sample for Means

	weight control	TED
Mean	0.431944	0.479167
Variance	0.291593	0.328768
Observations	36	36
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	35	
t Stat	-0.62041	
P(T<=t) one-tail	0.269504	
t Critical one-tail	1.689573	
P(T<=t) two-tail	0.539007	
t Critical two-tail	2.03011	

Table 32 Scallop Net - Monkfish bycatchin pounds in scallop catches less than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
8061	11	3.0	8061	2	0.3
8064			8064		
8071	5	9.0	8071	5	1.3
8072	6	2.0	8072	9	15.0
8073			8073		
8074	6	2.0	8074	3	0.3
8093	2	0.3	8093	2	2.5
8103	9	4.5	8103	12	6.0
8131	4	3.5	8131	11	2.0
8161	11	4.5	8161	7	4.3
8162	13	10.0	8162	6	4.0
8222	8	6.0	8222	10	7.0
8225			8225		
8231	12	8.0	8231	4	1.5
8232	6	1.0	8232	7	2.5
8233	8	4.3	8233	6	3.5
8241	12	7.0	8241	10	7.5
8242	9	5.5	8242	2	1.0
8252	23	15.0	8252	15	10.5
8261			8261		
8262			8262		
8264			8264		
8265			8265		

t-Test: Paired Two Sample for Means

	small tow number control	TED
Mean	9.0625	6.9375
Variance	23.79583	15.52917
Observations	16	16
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	15	
t Stat	0.944153	
P(T<=t) one-tail	0.180026	
t Critical one-tail	1.753051	
P(T<=t) two-tail	0.360052	
t Critical two-tail	2.131451	

t-Test: Paired Two Sample for Means

	small tow weight control	TED
Mean	5.34375	4.31875
Variance	14.48229	16.39196
Observations	16	16
Pearson Correlation	0.234179	
Hypothesized Mean Difference	0	
df	15	
t Stat	0.842936	
P(T<=t) one-tail	0.206252	
t Critical one-tail	1.753051	
P(T<=t) two-tail	0.412504	
t Critical two-tail	2.131451	

Table 33. Scallop Net - Monkfish bycatch in pounds in scallop catches greater than 750 pounds

Haul #	control number	weight	Haul #	TED number	weight
8062	9	1.5	8062	7	2.5
8063	9	2.0	8063	7	1.5
8091	4	3.0	8091	6	0.8
8092	5	4.5	8092	13	7.0
8094	6	1.0	8094	13	3.0
8101	4	11.0	8101	9	2.5
8102	6	2.0	8102	3	0.3
8132	7	3.0	8132	6	2.5
8133	10	4.0	8133	5	2.0
8163	9	5.0	8163	7	1.0
8164			8164		
8181	11	6.5	8181	1	0.1
8182	8	6.5	8182	8	3.3
8183	9	3.3	8183	4	1.8
8191	10	4.5	8191	12	6.0
8192	10	6.0	8192	9	5.5
8193	12	3.5	8193	8	14.5
8223	13	7.5	8223	6	2.5
8224	13	10.0	8224	11	2.0
8234			8234		
8243	16	12.0	8243	14	9.0
8253			8253		
8254	15	6.5	8254	11	9.0

t-Test: Paired Two Sample for Means

	large tow number control	TED
Mean	9.3	8
Variance	11.58947	12.42105
Observations	20	20
Pearson Correlation	0.179854	
Hypothesized Mean Difference	0	
df	19	
t Stat	1.310036	
P(T<=t) one-tail	0.102901	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.205802	
t Critical two-tail	2.093025	

t-Test: Paired Two Sample for Means

	large tow weight control	TED
Mean	5.1625	3.8325
Variance	9.712336	13.33034
Observations	20	20
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	19	
t Stat	1.370071	
P(T<=t) one-tail	0.093319	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.186638	
t Critical two-tail	2.093025	

Table 34. Scallop Net - Little skate bycatch in pounds in scallop catches less than 750 pounds

Haul #	control number	weight	Haul #	TED number	weight
8061	1	1.3	8061	1	0.2
8064			8064		
8071	0	0.0	8071	1	0.1
8072	0	0.0	8072	0	0.0
8073			8073		
8074	3	1.5	8074	4	4.0
8093	2	2.3	8093	2	2.0
8103	3	5.0	8103	6	3.1
8131	2	2.3	8131	0	0.0
8161	3	4.0	8161	2	2.3
8162	2	3.0	8162	1	1.3
8222	3	0.5	8222	1	1.3
8225			8225		
8231	1	1.0	8231	2	0.5
8232	0	0.0	8232	0	0.0
8233	0	0.0	8233	1	1.0
8241	3	2.3	8241	2	0.3
8242	4	5.5	8242	7	7.5
8252	3	1.5	8252	1	1.5
8261			8261		
8262			8262		
8264			8264		
8265			8265		

t-Test: Paired Two Sample for Means

	small tow number	
	control	TED
Mean	1.875	1.9375
Variance	1.85	4.195833
Observations	16	16
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	15	
t Stat	-0.08462	
P(T<=t) one-tail	0.466843	
t Critical one-tail	1.753051	
P(T<=t) two-tail	0.933686	
t Critical two-tail	2.131451	

t-Test: Paired Two Sample for Means

	small tow weight	
	control	TED
Mean	1.871875	1.553125
Variance	3.102656	3.93649
Observations	16	16
Pearson Correlation	0.713612	
Hypothesized Mean Difference	0	
df	15	
t Stat	0.890218	
P(T<=t) one-tail	0.193702	
t Critical one-tail	1.753051	
P(T<=t) two-tail	0.387404	
t Critical two-tail	2.131451	

Table 35. Scallop Net - Little skate bycatch in pounds in scallop catches greater than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
8062	4	2.5	8062	5	4.1
8063	0	0.0	8063	0	0.0
8091	0	0.0	8091	0	0.0
8092	2	1.3	8092	4	4.5
8094	3	2.1	8094	2	2.5
8101	0	0.0	8101	3	0.4
8102	2	2.0	8102	0	0.0
8132	0	0.0	8132	1	1.5
8133	0	0.0	8133	1	0.1
8163	2	2.0	8163	1	1.5
8164			8164		
8181	0	0.1	8181	2	1.3
8182	4	4.0	8182	1	1.0
8183	9	8.5	8183	1	1.3
8191	3	2.8	8191	1	0.1
8192	6	4.5	8192	3	4.0
8193	0	0.0	8193	0	0.0
8223	2	1.5	8223	2	1.5
8224	0	0.0	8224	0	0.0
8234			8234		
8243	0	0.0	8243	2	2.0
8253			8253		
8254	1	1.5	8254	3	3.0

t-Test: Paired Two Sample for Means

	large tow control	number TED
Mean	1.9	1.6
Variance	5.884211	2.042105
Observations	20	20
Pearson Correlation	0.245968	
Hypothesized Mean Difference	0	
df	19	
t Stat	0.537903	
P(T<=t) one-tail	0.298444	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.596889	
t Critical two-tail	2.093025	

t-Test: Paired Two Sample for Means

	large tow control	weight TED
Mean	1.635	1.4325
Variance	4.596342	2.225599
Observations	20	20
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	19	
t Stat	0.403933	
P(T<=t) one-tail	0.345386	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.690772	
t Critical two-tail	2.093025	

Table 36. Scallop Net - Red hake bycatchin pounds in scallop catches less than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
8061	0	0.0	8061	2	0.3
8064			8064		
8071	0	0.0	8071	5	1.3
8072	2	0.3	8072	5	1.0
8073			8073		
8074	3	0.3	8074	0	0.0
8093	1	0.2	8093	1	0.5
8103	2	0.3	8103	3	0.5
8131	11	1.5	8131	4	0.5
8161	0	0.0	8161	0	0.0
8162	0	0.0	8162	0	0.0
8222	0	0.0	8222	0	0.0
8225			8225		
8231	1	0.3	8231	0	0.0
8232	0	0.0	8232	0	0.0
8233	0	0.0	8233	0	0.0
8241	0	0.0	8241	0	0.0
8242	0	0.0	8242	0	0.0
8252	0	0.0	8252	0	0.0
8261			8261		
8262			8262		
8264			8264		
8265			8265		

t-Test: Paired Two Sample for Means

	small tow number control	small tow number TED
Mean	1.25	1.25
Variance	7.666667	3.666667
Observations	16	16
Pearson Correlation	#N/A	
Hypothesized Mean Difference	0	
df	15	
t Stat	0	
P(T<=t) one-tail	0.5	
t Critical one-tail	1.753051	
P(T<=t) two-tail	1	
t Critical two-tail	2.131451	

t-Test: Paired Two Sample for Means

	small tow weight control	small tow weight TED
Mean	0.16875	0.25
Variance	0.139625	0.158333
Observations	16	16
Pearson Correlation	0.235397	
Hypothesized Mean Difference	0	
df	15	
t Stat	-0.6807	
P(T<=t) one-tail	0.253217	
t Critical one-tail	1.753051	
P(T<=t) two-tail	0.506434	
t Critical two-tail	2.131451	

Table 37. Scallop Net - Red hake bycatch in pounds in scallop catches greater than 750 pounds.

Haul #	control number	weight	Haul #	TED number	weight
8062	21	2.0	8062	4	1.5
8063	5	0.5	8063	12	1.3
8091	0	0.0	8091	1	0.2
8092	6	0.5	8092	4	0.5
8094	6	0.5	8094	4	1.0
8101	13	1.3	8101	4	0.8
8102	6	0.5	8102	8	0.8
8132	2	0.8	8132	11	2.0
8133	9	1.5	8133	8	1.8
8163	9	0.8	8163	8	0.5
8164			8164		
8181	4	0.4	8181	2	0.2
8182	7	0.5	8182	1	0.2
8183	5	0.8	8183	0	0.0
8191	12	1.5	8191	12	1.3
8192	9	1.0	8192	7	1.0
8193	2	0.5	8193	4	0.5
8223	0	0.0	8223	0	0.0
8224	0	0.0	8224	0	0.0
8234			8234		
8243	0	0.0	8243	0	0.0
8253			8253		
8254	0	0.0	8254	0	0.0

t-Test: Paired Two Sample for Means

	large tow number control	large tow weight TED
Mean	5.8	4.5
Variance	29.22105	17.42105
Observations	20	20
Pearson Correlation	0.38723	
Hypothesized Mean Difference	0	
df	19	
t Stat	1.07647	
P(T<=t) one-tail	0.147598	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.295196	
t Critical two-tail	2.093025	

t-Test: Paired Two Sample for Means

	large tow number control	large tow weight TED
Mean	0.6425	0.6625
Variance	0.321914	0.40102
Observations	20	20
Pearson Correlation	0.724277	
Hypothesized Mean Difference	0	
df	19	
t Stat	-0.19877	
P(T<=t) one-tail	0.422275	
t Critical one-tail	1.729131	
P(T<=t) two-tail	0.844551	
t Critical two-tail	2.093025	

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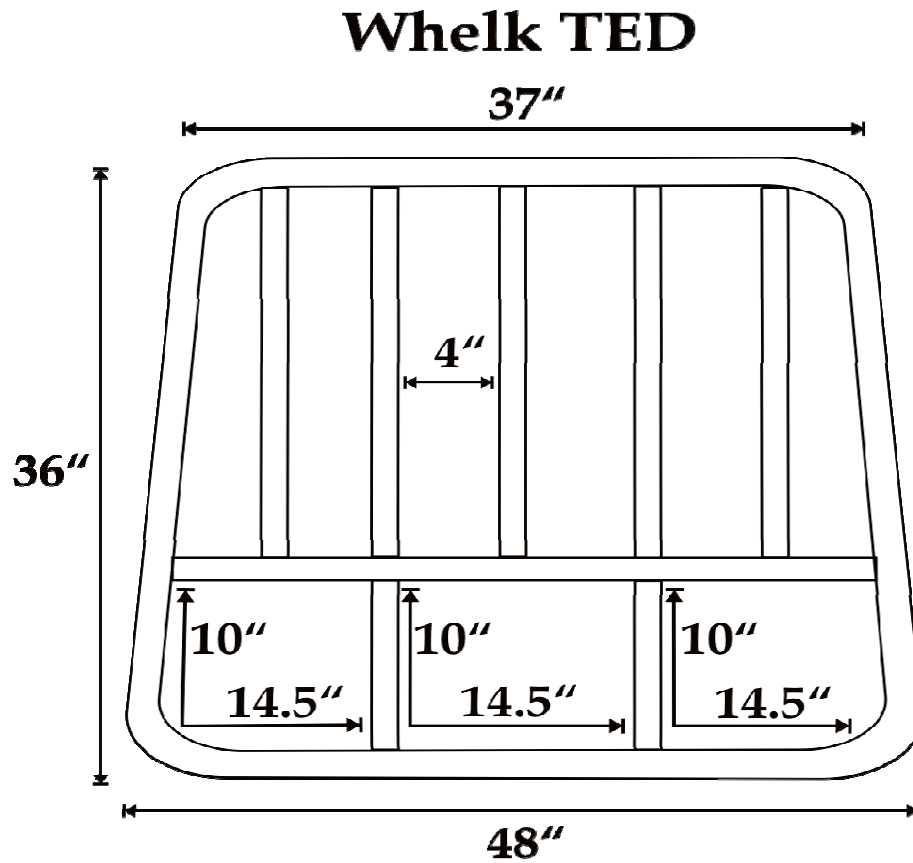
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Figure 1. Diagram of TED grid used in comparative towing.



Construction:

- Outer Frame* = 1 1/4" aluminum pipe (i.d.)
- Interior Bars* = 3/4" aluminum pipe (i.d.)

Installation:

- Extension* = 3 1/2", braided, 4mm, double poly (100m x 20m)
- Exit Hole Cut* = 28 1/2" x 81"
- Flap* = 1 1/2" poly, 102" x 36"
- Flotation* = (2) 8" hard plastic
- Fishing Angle* = 48 degrees, top opening configuration

Figure 2. Location of comparative tows

Figure 3. Flounder net scallop height-frequency from all tows

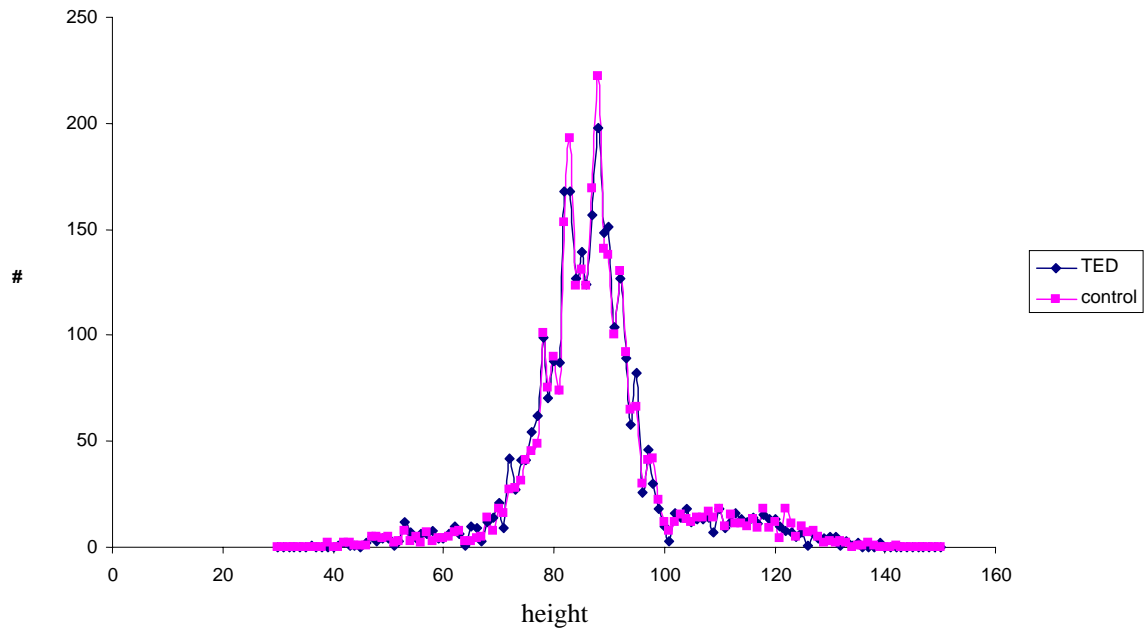


Figure 4. Flounder net scallop height-frequency from tows less than 750 pounds

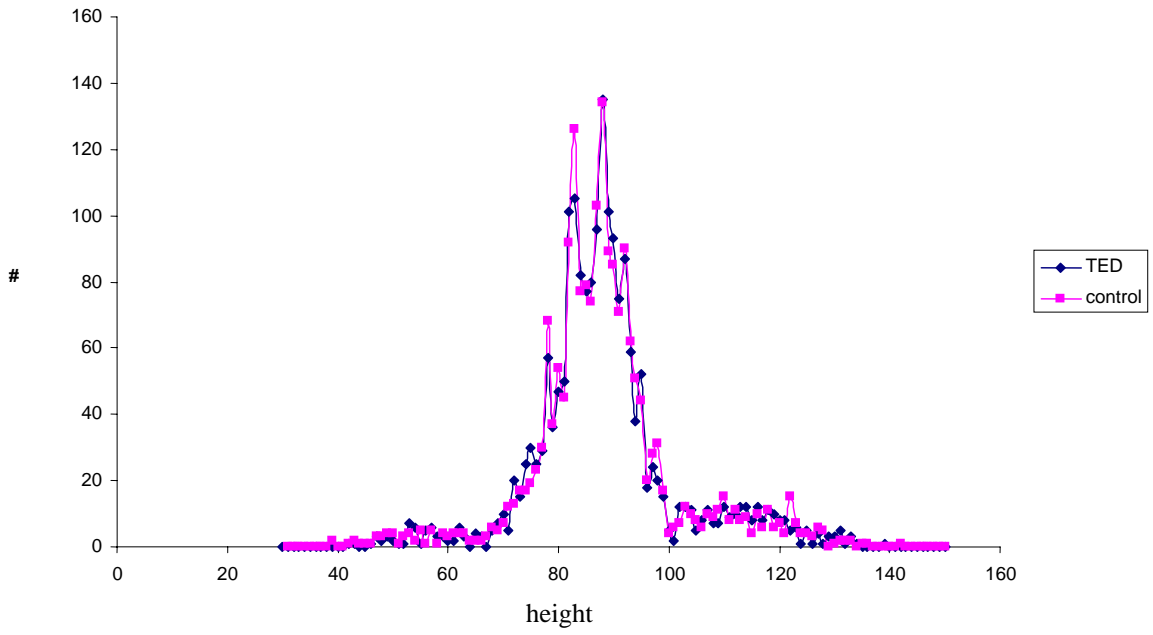


Figure 5. Flounder net scallop height-frequency from tows greater than 750 pounds.

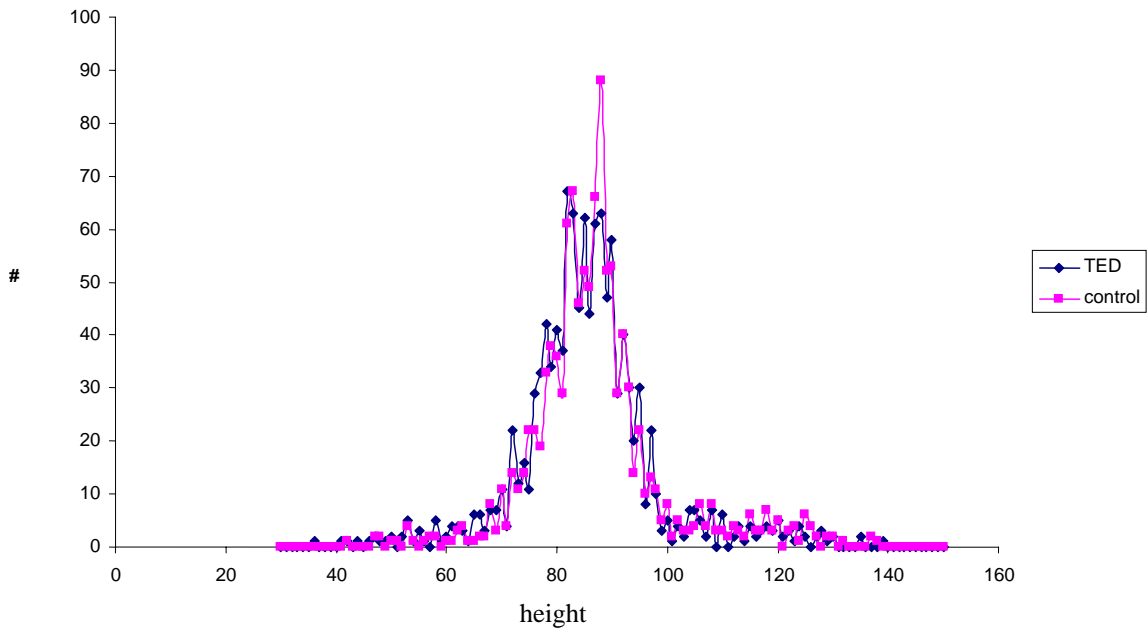


Figure 6. Scallop net scallop height-frequency from all tows

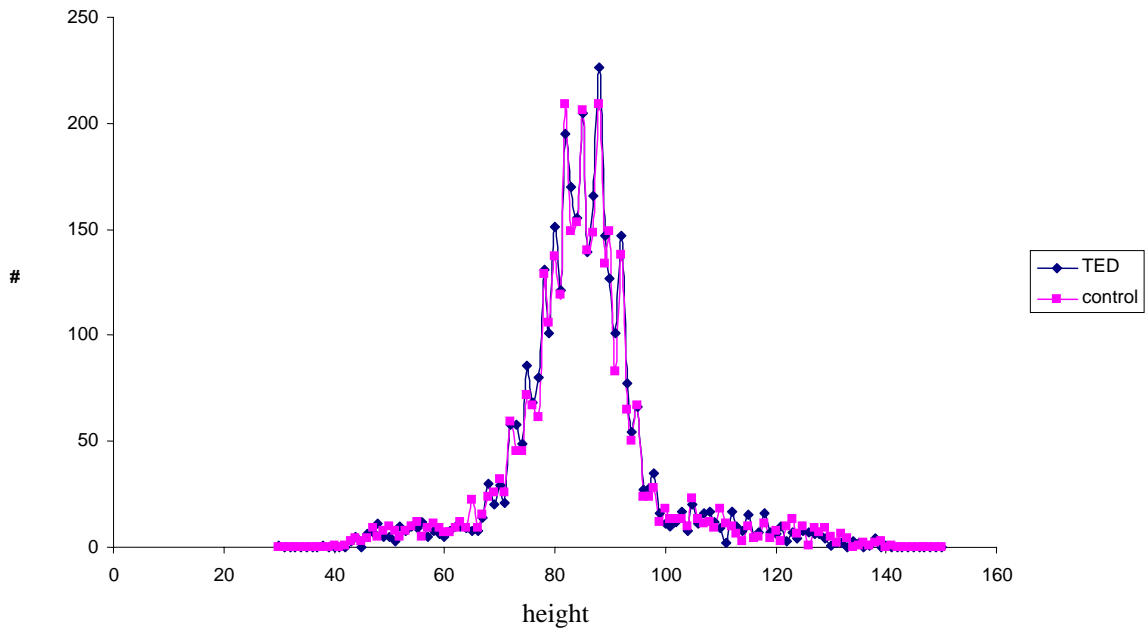


Figure 7. Scallop net scallop height frequency from small tows

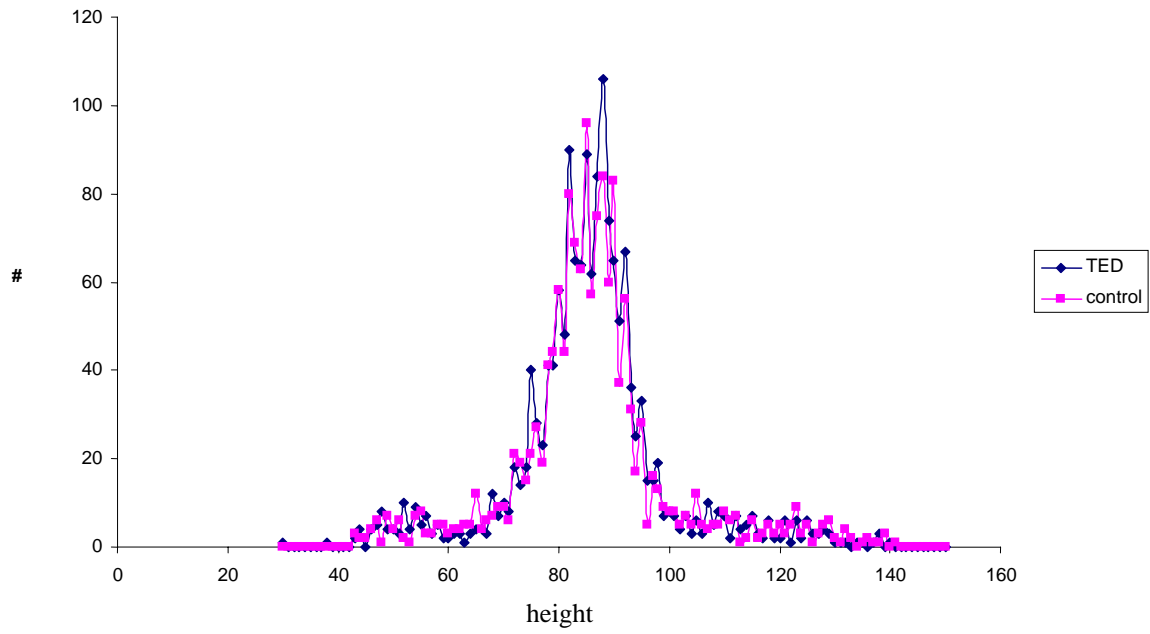
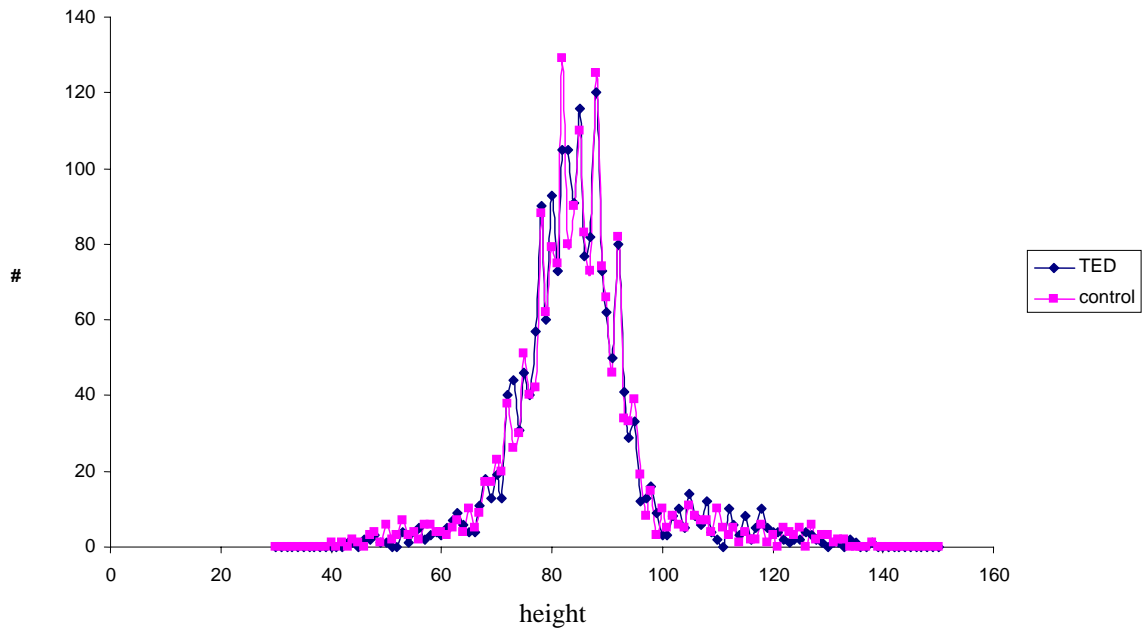


Figure 8. Scallop net scallop height-frequency from tows greater than 750 pounds.



Appendix 1

Key to Data Sheet Appendix

Date / Type of Net

haul	1		haul	1	basket sample	
lat/long-s	°N	°W		port net		starboard net
lat/long-e	°N	°W		control net		net using a TED
time s/e	eastern standard time		scall	lbs. of scallops	scall	lbs. of scallops
weather	wind direction-speed	wave height	sponge	lbs. of sponge	sponge	lbs. of sponge
depth/temp	fathoms	°F surface temperature	crab	lbs. of crab	shell	lbs. of empty shells
	port net	starboard net	shell	lbs. of empty shells	star	lbs. of starfish
	control net	net using a TED	star	lbs. of starfish	crab	lbs. of crab
bushels	bushel count	bushel count	clam	lbs. of clam	clam	lbs. of clam
ave wt	lbs. of one bushel	lbs. of one bushel	snail	lbs. of snail	snail	lbs. of snail
scall cat	total lbs. of scallops	total lbs. of scallops	other	lbs of unidentified	other	lbs of unidentified
sam wt	lbs. of scallops measured for length	frequency from each net		total weight of basket		total weight of basket

	port net		starboard net	monk	species	monk
scallop	control net	scallop	net using a TED	21	lengths (cm)	36
height (mm)	Frequency	height (mm)	Frequency	18		18
57	1	41	1	16		21
61	1	47	1	17		21
68	1	48	1	16		19
69	1	50	1	17		16
70	5	52	1	19		16
71	1	61	1	22		21
72	2	65	1	25		19
74	1	67	1			
76	3	68	1	2.50	total weight in lbs.	2.00
77	2	69	2			
78	2	70	2			
79	6	72	4			
80	3	73	1			

Notes

It is important to remember that the TED alternated between the port side and starboard side net on a daily basis for the most part.

Data for fish composition represents total catch of fish for each net.

All finfish lengths are forked lengths. Skate size given as disk width. Dogfish given as total length.

American lobster given as carapace length. Loligo squid given as mantle length.

Where needed, fish composition lengths and total weights have been compressed to fit on page.

Abbreviations

scall – scallop
con – control net

monk – monkfish
4-spot – fourspot flounder
N. sea rob – northern sea robin
chain dog – chain dogfish
loligo – loligo squid
b. sea bass – black sea bass
smth dog – smooth dogfish
windowpane, windowpn, wp – windowpane flounder
sil hake – silver hake

sam wt – sample weight
TED – net using a TED

am lob – American lobster
eel – unidentified eel
loggerhead – loggerhead sea turtle
mahi – mahi mahi (dolphin fish)
rosette sk – rosette skate
clearnose – clearnose skate

July 9 Flounder Net Calibration

haul	1		haul	2	
lat/long-s	3739.4	7438.1	lat/long-s	3739.5	7437.8
lat/long-e	3739.4	7438.0	lat/long-e	3739.4	7436.7
time s/e	10:31	12:20	time s/e	12:52	14:57
weather	SW-10	2	weather	SSW-15	2
depth/temp	31-33	73.9	depth/temp	31-33	73.9
	port	star		port	star
	con	con		con	con
bushels	4.0	3.2	bushels	4.8	4.7
ave wt	59.5	59.5	ave wt	63.4	63.4
scall. catch	238.0	190.5	scall. catch	304.3	298.0
sam weighth			sam weighth	12.0	10.0

	port		star		port		
Ht.	star	Ht.	Frequency	Ht.	Frequency	Ht.	Frequency
58	1	67	1	47	1	74	2
60	1	75	1	60	1	78	1
66	1	80	1	75	1	79	4
77	1	81	1	77	2	80	1
82	1	84	2	79	1	81	2
83	1	85	2	80	1	82	1
86	2	86	1	81	4	83	2
88	2	87	5	83	3	85	3
89	2	88	4	84	1	86	2
90	2	89	2	85	5	87	2
91	3	90	5	86	5	88	8
92	9	91	4	87	3	89	5
93	1	92	4	88	5	90	5
94	4	93	6	89	7	91	6
95	8	94	2	90	4	92	4
96	3	95	3	91	5	93	2
97	4	96	3	92	2	94	9
98	6	97	3	93	4	95	3
99	5	98	5	94	4	96	3
100	3	99	2	95	4	99	1
101	3	100	3	96	2	117	1
102	1	101	5	98	3	120	1
104	3	102	1	99	1		
107	1	104	1	100	1		
110	1	116	2	133	1		
113	1	117	1				
116	1	121	1				
120	2	126	1				
121	1	134	1				
132	1						
133	1						

July 9 Flounder Net Calibration

haul	3	
lat/long-s	3741.4	7431.0
lat/long-e	3745.8	7429.7
time -s/e	15:54	17:55
weather	SSW-15	2
depth/temp	31-32	73.8
	port	star
	con	con
bushels	11.5	10.5
ave. wt	60.5	60.5
scall. cat	695.8	635.3
sam wt	14.5	9.3

haul	4	
lat/long-s	3746.0	7429.5
lat/long-e	3745.5	7429.9
time-s/e	18:13	20:40
weather	SSW-15	3
depth/temp	31-32	73.8
	port	star
	con	con
bushels	12.0	11.0
ave wt	61.1	61.1
scall. cat	733.2	672.1

Ht.	port Frequency	Ht.	star Frequency
53	1	78	1
57	1	79	2
59	1	80	1
61	1	81	1
62	2	82	3
72	1	83	1
73	1	84	3
75	1	85	2
76	2	86	1
77	3	87	3
78	2	88	4
79	3	89	4
80	1	90	3
81	4	91	2
82	6	92	3
83	9	93	2
84	2	94	1
85	5	95	2
86	7	96	3
87	1	97	2
88	5	112	1
89	3	113	1
90	6	115	1
91	9	116	1
92	7	117	1
93	3	122	1
95	1		
96	2		
97	1		
99	1		
123	1		
135	1		
140	1		

haul	5	
lat/long-s	3745.6	7429.5
lat/long-e	3749.1	7427.9
time-s/e	21:01	23:17
weather	SSW-15	3
depth/tem	31-32	73.8
	port	star
	con	con
bushels	13.0	11.5
ave wt	61.1	61.1
scall. cat	794.3	702.7

July 10 Flounder Net Comparative Tows

haul	1	
lat/long-s	3741.6	7430.6
lat/long-e	3742.9	7429.2
time s/e	14:24	16:06
weather	SSW-10	2
depth/temp	31-33	74.8
	port	star
	TED	con
bushels	14.5	14.5
ave wt	60.6	60.6
scall cat	878.7	878.7
sam wt	11.5	10.3

haul	1		
	port		star
	TED		con
scallop	29.50	scall	31.00
sponge	2.25	sponge	1.75
shell	0.75	shell	0.50
crab	0.75	starfish	0.50
other	0.25	other	0.25
total	33.50		34.00

	port		star
	TED		con
Ht.	Frequency	Ht.	Frequency
45	1	43	1
65	1	46	1
71	1	50	1
72	1	71	3
73	1	72	1
74	1	73	2
75	1	74	2
77	3	76	1
78	6	77	6
79	3	78	8
80	4	79	8
81	3	80	2
82	6	81	6
83	9	82	2
84	3	83	2
85	5	84	6
86	4	85	3
87	3	86	5
88	6	87	3
89	6	88	6
90	5	89	4
91	3	92	1
93	1	93	1
95	1	101	1
96	1	105	1
108	1	134	1

species	monk	monk
	length	length
	32	33
	30	35
	37	30
	37	16
	15	18
	17	27
	40	16
	15	18
	17	
	38	wt
	26	5.25
	31	
	34	little skate
	18	26
	20	25
	19	26
		24
	wt	
	14.00	4.75
		4-spot
		6
		.10

July 10 Flounder Net Comparative Tow

haul 2
 lat/long-s 3743.5 7430.8
 lat/long-e 3743.6 7431.1
 time s/e 16:46 18:38
 weather SW-10 2
 depth/temp 31-33 74.8
 port star
 TED con
 bushels 10.5 11.0
 ave wt 60.6 60.6
 scall cat 636.3 666.6
 sam wt 14.8 15.0

haul 2
 port
 TED
 scall 24.5 scall 28.00
 shell 1.50 shell 2.25
 sponge 0.25 sponge 2.50
 clam 1.00 starfish 0.25
 snail 0.25 crab 0.50
 27.50 33.50

Ht.	port TED Frequency	Ht.	star con Frequency
45	1	48	1
51	1	62	1
54	1	70	1
56	1	73	1
59	1	75	1
60	1	79	2
61	1	81	3
62	1	82	1
63	1	83	1
67	1	84	7
70	1	85	4
74	2	86	8
75	3	87	5
76	1	88	9
78	5	89	4
80	3	90	6
81	7	91	3
82	4	92	2
83	4	93	2
84	3	94	2
85	5	96	2
86	6	97	3
87	2	98	1
88	7	102	1
89	5	108	1
90	4	110	1
91	5	112	1
92	1	125	1
93	3	128	1
94	2	132	1
95	3	138	1
97	1	139	1
98	1		
99	1		
105	1		
109	1		
110	1		
112	1		
123	1		
124	1		

little skate
 f
 27
 26
 26
 27
 26
 27
 28
 25
 27
 26
 26
 22
 18.50
 27
 27
 red hake
 29
 21
 26
 26
 0.50
 25
 28
 monk
 15
 35
 9
 14
 1.50
 19.00
 chain dogfish
 f 41
 33
 0.50
 24
 34
 loligo
 35
 23
 34
 37
 0.25
 27
 32
 32
 32
 12.75

July 10 Flounder Net Comparative Tow

haul 3
 lat/long-s 3743.6 7430.8
 lat/long-e 3744.3 7430.9
 time s/e 18:58 21:07
 weather SW-10 2
 depth/temp 32-33 74.8
 port star
 TED con
 bushels 13.3 19.0
 ave wt 60.6 60.6
 scall cat 803.0 1151.4
 sam wt 13.8 15.0

haul 3
 port star
 TED con
 scall 28.00 scall 26.5
 shell 1.50 shell 2.50
 sponge 1.50 crab 0.25
 starfish 1.25 sponge 0.10
 crab 0.25 starfish 0.10
 32.50 29.45

Ht.	Frequency	Ht.	Frequency
34	1	46	1
53	1	48	1
63	1	49	1
68	1	53	1
71	1	69	1
74	1	76	1
79	1	77	1
80	2	78	4
81	1	79	4
82	2	80	2
84	3	81	5
85	1	82	4
86	7	83	3
87	6	84	4
88	6	85	1
89	10	86	7
90	4	87	5
91	2	88	8
92	1	89	8
93	4	90	8
94	7	91	4
95	3	92	5
97	2	93	2
99	1	94	4
100	1	95	1
105	1	96	3
110	1	97	1
114	1	98	2
118	1	106	1
120	1	113	1
121	1	122	2
130	1	129	1

little skate f	little skate f
28	25
25	26
28	26
27	27
28	28
25	26
27	28
	28
9.00	29
	26
m	28
25	29
29	29
	29
2.75	28
	23
monk	12
33	
34	22.75
20	
20	m
32	28
	26
4.25	26
	26
red hake	26
27	
17	5.25
0.75	monk
	25
4-spot	28
22	32
	18
0.30	29
	29
	18
N. sea rob	34
24	
0.25	6.00

July 14 Flounder Net Comparative Tow

haul 1
 lat/long-s 3744.0 7431.1
 lat/long-e 3743.1 7431.4
 time s/e 11:35 13:32
 weather SSW-10 3
 depth/temp 30-32 76.8
 port star
 con TED
 bushels 4.5 5.5
 ave wt 59.1 59.1
 scall cat 266.0 325.1
 sam wt 15.0 16.8

haul 1
 port control star
 control TED
 scall 29.00 scall 29.00
 shell 2.75 shell 3.75
 sponge 1.50 sponge 0.25
 star 1.25 star 0.10
 crab 0.50 crab 0.10
 other 0.10 other 0.25
 clam 0.30 33.45
 35.40

Ht.	port con Frequency	Ht.	star TED Frequency
72	1	46	1
76	1	69	1
78	2	74	1
79	2	77	1
81	2	78	1
82	3	79	1
83	8	80	2
84	5	81	1
85	3	82	6
86	10	83	8
87	8	84	10
88	14	85	7
89	5	86	5
90	2	87	4
91	1	88	9
92	3	89	4
93	4	90	5
94	6	91	7
95	3	92	1
98	5	93	3
99	1	95	2
104	1	96	1
110	1	97	3
112	1	98	1
118	1	99	1
119	1	112	1
122	1	116	2
128	1	117	1
		118	2
		121	1
		127	1
		129	1
		130	1
		133	1

species	monk	little skate m
	33	28
	22	
	27	
	35	1.25
	27	
	36	f
	33	28
	33	28
	34	27
		27
	10.00	28
		26
	little skate	27
	m	27
	26	26
	28	26
		26
	2.75	27
		26
	f	10
	28	
	28	16.75
	28	
	25	N. sea rob
	27	23
	28	
	28	0.50
	27	
	27	monk
	27	33
		31
	14.00	32
		31
	4-spot	33
	19	34
		29
	0.25	31
		9.75

July 14 Flounder Net Comparative Tow

haul 2
 lat/long-s 3743.1 7434.1
 lat/long-e 3744.3 7430.4
 time s/e 13:55 15:53
 weather SSW-10 3
 depth/temp 31-32 77.2
 port star
 con TED
 bushels 8.5 7.3
 ave wt 59.1 59.1
 scall cat 502.4 428.5
 sam wt 14.8 17.5

haul 2
 port
 con
 scall 25.25
 shell 5.00
 sponge 1.75
 crab 0.50
 32.50
 scall
 sponge
 shell
 star
 33.75
 2.50
 1.00
 0.25
 37.50

Ht.	port con Frequency	Ht.	star TED Frequency
48	2	47	1
49	2	53	1
51	1	66	1
52	2	70	1
55	1	72	1
71	1	73	1
76	2	74	1
77	3	75	3
78	5	77	3
79	1	78	1
80	1	79	2
81	1	80	1
82	3	81	1
83	4	82	4
85	4	83	6
86	2	84	2
87	5	85	3
88	7	86	2
89	5	87	9
90	7	88	14
91	2	89	4
92	3	90	5
93	4	91	4
94	2	92	5
95	5	93	3
96	3	94	3
99	2	95	5
102	1	96	2
103	1	98	1
104	1	101	1
109	1	103	1
111	1	105	1
119	1	107	1
125	1	109	1
132	1	115	1
		117	1
		119	1
		125	1
		128	1

little skate f	monk
29	29
16	33
27	18
28	20
25	33
26	18
27	31
27	16
28	33
29	26
25	30
13.25	9.75
monk	little skate
30	f
32	25
30	26
35	24
37	28
	27
6.00	
	7.00
	m
	19
	14
	0.75
	4-spot
	26
	0.25
	N. sea rob
	22
	0.25

July 14 Flounder Net Comparative Tow

haul 3
 lat/long-s 3744.4 7430.1
 lat/long-e 3741.8 7431.3
 time s/e 16:12 18:20
 weather SSW-10 3
 depth/temp 31-32 77.2
 port star
 con TED
 bushels 6.8 6.3
 ave wt 59.1 59.1
 scall cat 401.9 369.4
 sam wt 14.5 15.8

haul 3
 port
 con
 scall 23.75
 shell 3.00
 sponge 2.75
 crab 1.00
 other 0.25
 clam 0.50
 31.25
 scall 23.75
 sponge 9.50
 shell 0.75
 crab 1.50
 star 0.50
 other 1.00
 37.00

Ht.	port con Frequency	Ht.	star TED Frequency
59	1	48	1
63	1	53	1
67	1	57	1
76	1	58	1
77	3	63	1
78	4	74	2
80	5	76	2
81	5	77	3
82	2	78	5
83	7	79	5
84	9	81	2
85	3	82	5
86	4	83	3
87	2	84	5
88	2	85	2
89	10	86	7
91	4	87	2
92	3	88	5
93	1	89	6
94	1	90	3
95	1	91	5
97	2	92	2
98	1	94	4
99	1	97	1
108	1	99	1
110	1	108	1
114	1	112	1
115	1	113	1
116	1	115	1
122	2	118	1
123	1	120	1
124	1	121	2
127	1	127	1
		131	2
		139	1

little skate m	little skate f
27	25
27	26
	27
2.25	27
	27
f	25
24	27
27	18
28	27
25	27
26	28
27	28
25	25
27	26
25	27
27	27
25	27
27	27
28	25
26	
28	23.75
11	
26	m
18	24
14	
27	1.00
20.50	monk
	34
monk	30
55	33
37	33
35	30
30	38
20	
27	8.25
29	
43	N. sea rob
33	22
34	24
16.00	0.50
lookdown	red hake
12	19
	17
0.15	
	0.25

July 14 Flounder Net Comparative Tow

haul 4
 lat/long-s 3741.5 7431.2
 lat/long-e 3742.1 7431.1
 time s/e 18:40 20:46
 weather SSW-5 3
 depth/temp 31-32 77.0
 port star
 con TED
 bushels 13.5 12.0
 ave wt 59.1 59.1
 scall cat 797.9 709.2
 sam wt 16.5 17.0

haul 4
 port star
 con TED
 scall 31.75 scall 24.50
 sponge 2.50 sponge 6.00
 crab 0.25 crab 0.50
 star 0.25 shell 0.25
 shell 0.15 star 0.30
 34.90 31.55

Ht.	port con Frequency	Ht.	Frequency
66	1	36	1
74	1	42	1
75	1	49	1
76	2	53	2
77	2	55	1
78	1	56	1
79	1	59	1
81	2	60	1
82	5	61	1
83	2	65	1
84	2	66	1
85	3	70	2
86	6	72	1
87	6	75	2
88	7	76	2
89	8	77	5
90	6	79	2
91	4	80	5
92	6	81	5
93	5	82	6
95	3	83	8
96	1	84	5
97	2	85	7
98	1	86	3
99	3	87	7
108	1	88	9
115	2	89	7
117	1	90	4
118	1	91	2
122	1	92	1
125	1	93	6
126	1	94	3
127	1	95	1
137	1	96	2
		97	2
		98	2
		104	1
		113	1
		115	1
		118	1
		120	1
		127	1
		128	1

little skate f	little skate f
27	26
27	27
27	29
28	26
27	26
29	12
26	28 9.00
9.75	m
	24
m	23
27	
27	1.75
2.75	monk
	34
monk	33
29	15
21	33
36	26
34	16
29	
	5.50
5.25	
	loligo
loligo	26
18	
	0.50
0.30	
	b. sea bass
	21
	0.25

July 14 Flounder Net Comparative Tow

				July 14 Flounder Net Comparative Tow			
haul		5		haul		5	
lat/long-s	3741.8	lat/long-e	7431.2	port	27	star	27
time s/e	21:07	weather	SSW-5	con	27	TED	28
depth/temp	31-32	port	77	scall	157.50	scall	145.00
bushels	26.0	con	TED	other	15.50	other	16.00
ave wt	59.0	star	77	little skate		little skate	
scall cat	1395.9	TED	77	f	29	f	27
sam wt	18.0	Frequency	77	27	27	28	28
		Ht.	77	23	23	3.25	3.25
		42	1	27	27	m	m
		47	1	26	26	25	25
		54	1	6.50	6.50	1.25	1.25
		73	1	m	m	monk	monk
		75	3	26	26	29	29
		76	3	1.50	1.50	30	30
		77	3	33	33	20	20
		79	6	32	32	18	18
		80	4	33	33	31	31
		81	7	4.00	4.00	35	35
		82	7	red hake	red hake	31	31
		83	10	24	24	7.25	7.25
		84	5	0.30	0.30		
		85	2	loligo	loligo		
		86	6	16	16		
		87	10	0.20	0.20		
		88	11	4-spot	4-spot		
		89	6	24	24		
		90	10	0.25	0.25		
		91	6				
		92	2				
		93	3				
		94	3				
		95	1				
		96	1				
		111	1				
		112	1				
		113	1				
		117	1				
		122	1				
		123	1				
		129	1				

July 15 Flounder Net Comparative Tow

haul	2			2		
lat/long-s	3748.6	7427.3		port		star
lat/long-e	3748.0	7427.6		TED		con
time s/e	16:02	17:59		scall	26.50	scall
weather	variable	2		crab	0.50	sponge
depth/temp	32-33	79.7		shell	1.75	shell
	port	star		sponge	3.25	star
	TED	con		star	0.50	crab
bushels	8.0	8.8			32.50	
ave wt	57.6	57.6				
scall cat	460.8	504.0				
sam wt	14.0	15.5				
				monk		monk
				19		32
				33		35
				31		25
				32		34
				33		19
					4.50	5.00
				little skate		loligo
				f		22
				26		20
				26		20
				27		
				28		0.75
				26		
				27		red hake
				26		17
				12		17
				27		13
				26		16
				25		14
				26		15
				17		14
				28		15
				28		
				25		0.75
				27		
				27		4-spot
				24		19
				27		37
				26		22
				26		
				28		1.50
				27		
				28		little skate
				27		m
				29		14
				26		17
				28		18
						15
				37.25		29
						27
				m		27
				27		28
				25		11
				27		
				15		7.00
				27		
				26		f
						25
				6.75		26
						27
				windowpane		26
				26		14
				.50		28

Ht.	port TED Frequency	Ht.	star con Frequency
42	1	39	1
49	1	42	1
53	1	43	1
56	1	45	1
62	1	46	1
65	1	47	1
68	1	49	1
73	1	50	1
74	1	57	1
76	1	62	2
77	2	68	1
78	1	69	1
79	1	70	1
80	2	73	1
81	1	76	1
82	6	77	2
83	2	78	2
84	4	79	5
85	2	80	4
86	6	81	4
87	3	82	8
88	5	83	7
89	2	84	8
90	10	85	5
91	3	86	5
92	2	87	5
93	4	88	1
94	1	89	3
95	5	90	2
97	2	91	6
98	1	92	3
99	1	93	1
102	3	94	1
107	1	95	2
114	2	96	3
120	1	97	5
122	1	98	6
131	1	99	2
		112	1
		113	1
		121	1

July 15 Flounder Net Comparative Tow
Haul 2 cont

	17
	25
red hake	26
15	26
18	25
21	26
16	26
	24
0.75	27
	26
	27
	26
	27
	26
	27
	25
	27
	22
	27
	26
	26
	29
	27
	26
	27
	36.75

July 15 Flounder Net Comparative Tow

haul	3							
lat/long-s	3747.6	7427.5			port		star	
lat/long-e	3748.8	7426.1			TED		con	
time s/e	18:22	20:26			scall	35.25	scall	27.5
weather	variable	2			star	0.75	sponge	5.50
depth/temp	32-33	77.5			shell	1.25	crab	1.25
	port	star			sponge	1.00	shell	2.50
	TED	con				38.25	star	0.50
bushels	11.3	12.5					other	0.25
ave wt	57.6	57.6						37.50
scall cat	650.9	720.0						
sam wt	18.5	13.8						

Ht.	port TED Frequency	Ht.	star con Frequency	little skate f	little skate f	
65	1	60	1	26	27	
72	1	71	1	12	28	
73	3	74	1	12	26	
75	2	75	1	27	27	
77	1	77	3	27	28	
78	3	78	4	28	28	
79	2	80	1	28	18	
80	1	81	1	26	25	
81	1	82	3	28	25	
82	7	83	4	27	25	
83	3	84	2	27	26	
84	2	85	2	25	26	
85	3	86	2	28	27	
86	5	87	4	27	26	
87	2	88	7	27	26	
88	8	89	1	28	28	
89	4	90	5	26	26	
90	7	91	2	25	26	
91	2	92	4	26	27	
92	2	94	2	27	27	
93	5	95	2	26	17	
94	2	96	1			
95	2	97	4	28.50	29.75	
96	4	98	2			
97	5	99	1	m	m	
98	1	100	1	25	27	
103	1	101	1	28	26	
104	1	103	2	26	11	
106	3	105	1	26	19	
107	1	106	2			
111	1	107	3	5.25	3.75	
112	1	112	1			
114	3	114	1	monk	monk	
117	1	117	1	31	33	
118	1	119	1	31	19	
119	1	123	1	36	37	
120	2	128	1	38	31	
121	1			31	32	
123	1			51		loligo
125	1			35	6.25	12
133	1					
				13.00	red hake	0.25
					22	
				red hake	16	4-spot
				17	17	19
					16	12
				0.15	17	
					19	.75
					21	
					18	
					17	
					17	1.25

July 16 Flounder Net Comparative Tow

haul 1
 lat/long-s 3746.7 7428.7
 lat/long-e 3748.7 7426.9
 time s/e 14:37 16:42
 weather NNE-10 2
 depth/temp 31-33 78.3
 port star
 TED con
 bushels 10.3 9.3
 ave wt 60.0 60.0
 scall cat 615.0 555.0
 sam wt 14.8 15.0

Haul 1
 port star
 TED con
 scall 31.00 scall 28.25
 sponge 3.75 sponge 0.75
 crab 0.25 shell 0.50
 shell 0.25 star 0.10
 35.25 29.60

Ht.	port TED Frequency	Ht.	star con Frequency
59	1	39	1
62	3	48	1
71	1	50	2
74	2	53	1
75	2	57	1
76	2	59	2
77	1	61	1
78	3	69	2
79	3	74	1
80	3	75	1
81	1	76	1
82	1	77	1
83	4	78	4
84	3	79	2
85	2	80	2
86	4	81	1
87	8	82	2
88	10	83	6
89	7	84	7
90	4	85	5
91	3	86	3
92	3	87	7
93	5	88	6
94	4	89	3
95	3	90	2
98	2	91	4
102	2	92	4
103	1	93	2
108	2	94	1
110	2	95	1
112	1	97	1
113	1	98	2
117	1	99	1
120	1	102	1
		103	1
		107	1
		109	1
		112	1
		116	1
		117	1
		123	1
		125	1
		127	2
		136	1

species	little skate f	little skate f
	25	29
	27	26
	26	17
	15	27
	26	26
	26	25
	28	28
		27
	7.50	17
	monk	10.00
	38	
	35	monk
		35
	3.25	18
	red hake	3.00
	14	
	16	red hake
		17
	.30	15
		19
		16
		14
		0.75
		loligo
		16
		9
		0.50

July 16 Flounder Net Comparative Tow

haul 3
 lat/long-s 3747.1 7428.3
 lat/long-e 3748.5 7427.0
 time s/e 19:31 21:43
 weather NE-10 2
 depth/temp 31-33 77.5
 port star
 TED con
 bushels 12.5 16.0
 ave wt 60.0 60.0
 scall cat 750.0 960.0
 sam wt 16.0 14.0

haul 3
 port star
 TED con
 scall 30.00 scall 32.00
 sponge 1.50 crab 0.75
 shell 0.50 sponge 2.00
 star 0.50 shell 0.50
 crab 0.25 35.25
 32.75

Ht.	port TED Frequency	Ht.	star con Frequency
44	1	47	1
46	1	60	1
50	1	63	1
52	1	67	1
53	1	68	1
70	1	74	1
72	2	77	1
74	1	78	2
76	1	79	5
77	1	81	3
78	1	82	3
79	3	83	5
80	2	84	3
81	3	85	1
83	1	86	6
84	4	87	2
85	4	88	9
86	6	89	1
87	3	90	3
88	3	91	5
89	8	92	5
90	5	93	5
92	6	94	5
93	5	95	4
94	3	96	1
95	3	97	1
96	2	98	2
97	3	99	1
98	1	102	1
100	1	103	1
104	1	106	1
108	1	114	1
110	2	118	1
112	1	120	1
120	2	123	1
123	1	129	1
128	1		
130	1		
139	1		

little skate f	monk
26	35
26	28
25	30
27	32
26	62
29	30
25	18.00
26	
28	little skate
27	f
12	24
27	26
28	20
26	27
	27
17.00	28
	26
m	11
16	
28	18.50
12	
	m
2.00	12
	11
monk	13
36	16
38	17
25	12
18	
	1.00
5.50	
	butterfish
4-spot	13
18	
	0.25
0.20	
	red hake
red hake	16
16	16
16	12
15	17
17	26
15	15
15	17
14	16
16	17
14	16
15	17
	17
1.25	16
	1.50

July 16 Flounder Net Comparative Tow

haul	4			4	
lat/long-s	3748.6	7427.0		port	
	star				
lat/long-e	3749.1	7426.5		TED	
	con				
time s/e	22:10	23:30		scall	99.00
101.0					scall
weather	NE-10	2		other	9.00
	14.0				other
depth/temp	32-34	77.5			
	port	star			
	TED	con			
bushels	13.0	20.0			
ave wt	55.8	55.8			
scall cat	667.4	982.1			
sam wt	15.0	14.0			
				No fish measured	

	port TED	Ht.	star con
Ht.	Frequency	Ht.	Frequency
58	2	62	1
69	1	73	1
75	1	75	1
77	3	78	1
78	2	80	1
79	1	81	1
80	2	82	4
81	3	83	1
82	6	84	6
83	4	85	4
84	3	86	3
85	6	87	6
86	6	88	8
87	3	89	4
88	8	90	6
89	5	91	3
90	7	92	5
91	6	93	1
92	4	94	1
93	2	96	3
94	1	97	2
95	4	98	3
96	1	104	1
100	1	106	1
104	1	108	3
107	1	109	1
115	1	112	1
116	1	116	1
118	1	119	1
121	1	120	2
125	1		
135	1		

July 17 Flounder Net Comparative Tow

haul	2		haul	2		
lat/long-s	3751.7	7426.2		port		star
lat/long-e	3748.6	7426.9		con		TED
time s/e	19:33	21:27	scall	26.00	scall	24.50
weather	WSW-5	1	sponge	2.00	sponge	4.00
depth/temp	32-33	79.5	crab	0.30	star	2.00
	port	star	star	1.50	crab	0.50
	con	TED	other	0.50	shell	1.50
bushels	10.5	9.0		30.30	other	0.20
ave wt	62.5	62.5				32.70
scall cat	656.3	562.5				
sam wt	15.5	14.0				

Ht.	port con Frequency	Ht.	star TED Frequency
55	1	51	1
58	1	54	1
60	1	57	2
68	1	59	1
71	2	65	1
72	1	69	1
73	2	72	1
74	1	74	1
75	1	78	1
76	2	79	1
77	1	80	1
78	3	81	1
80	4	82	5
82	3	83	5
83	4	84	4
84	1	85	4
85	3	86	2
86	3	87	4
87	5	88	7
88	7	89	2
89	1	90	2
90	5	91	7
91	2	92	6
92	7	93	2
93	7	94	1
94	2	95	1
95	2	97	1
96	2	99	1
97	3	102	1
99	2	103	1
105	1	113	1
106	1	114	1
107	1	118	2
113	1	119	2
117	1	124	1
120	1	130	1
122	1		
123	1		

July 17 Flounder Net Comparative Tow

haul 3
 lat/long-s 3748.9 7426.7
 lat/long-e 3749.8 7426.6
 time s/e 21:49 23:40
 weather WSW-5 1
 depth/temp 32-33 79.5
 port star
 con TED
 bushels 10.5 12.0
 ave wt 62.5 62.5
 scall cat 656.3 750.0
 sam wt 14.0 14.0

haul 3
 port
 con
 star
 TED
 scall 26.00
 sponge 4.00
 shell 0.75
 crab 0.25
 star 0.20
 scall 26.50
 sponge 1.00
 star 0.75
 crab 0.50
 shell 1.00
 31.20 29.75

Ht.	port con Frequency	Ht.	star TED Frequency
53	1	54	1
56	1	62	1
76	2	73	2
78	1	74	1
80	2	75	1
82	2	76	1
83	4	77	1
84	2	78	1
85	5	80	4
86	4	82	3
87	6	83	5
88	6	84	2
89	1	85	6
90	4	86	6
91	2	87	8
93	4	88	6
94	3	89	4
95	1	90	1
97	2	91	1
103	1	92	6
104	2	93	1
106	1	94	2
108	1	95	5
109	1	96	2
112	1	97	1
113	2	102	2
114	1	109	1
115	1	110	1
118	1	111	1
122	1	112	1
126	1	115	1
127	1	123	1
		126	1
		127	1

haul 4
 lat/long-s 3749.6 7426.6
 lat/long-e 3749.9 7426.6
 time s/e 0:02 2:00
 weather WSW-5 1
 depth/temp 32-33 79.5
 port star
 con TED
 bushels 16.5 15.5
 ave wt 58.8 58.8
 scall cat 834.4 783.8

July 25 Flounder Net Comparative Tow

haul 1
 lat/long-s 3750.4 7425.4
 lat/long-e 3752.4 7423.7
 time s/e 12:51 14:56
 weather ESE-15 3
 depth/temp 32-34 77.0
 port star
 TED con
 bushels 7.3 5.8
 ave wt 57.5 57.5
 scall cat 416.9 330.6
 sam wt 16.0 13.0

haul 1
 port star
 TED con
 scall 31.50 scall 24.00
 star 0.75 sponge 4.00
 crab 0.30 star 2.00
 shell 1.00 shell 1.00
 sponge 0.25 other 0.25
 33.80 31.25

little skate
 m little skate
 24 m
 27 21
 17 10
 25 11
 16 25

Ht.	port TED Frequency	Ht.	star con Frequency
49	1	63	1
54	1	75	1
65	1	76	1
68	1	78	2
72	1	79	1
74	1	80	1
75	3	81	1
76	2	82	3
78	2	83	7
79	1	84	2
80	2	85	1
81	4	86	2
82	7	87	4
83	6	88	5
84	1	89	3
85	2	90	3
86	5	91	3
87	4	92	3
88	9	93	3
89	7	94	3
90	3	95	5
91	3	96	1
92	5	97	1
93	3	98	2
94	3	99	1
95	1	101	1
96	1	107	1
98	1	109	2
99	1	112	1
103	1	116	1
108	2	122	1
110	1	128	2
113	1	131	1
115	2	142	1
116	1		
117	1		
119	1		
120	1		

4.00
 f
 26 25
 26 22
 16 11
 16 26
 26
 25 2.50
 15

monk
 17
 16
 38
 18 14
 34 34
 20 35
 17 51
 31 18
 39 14
 35 13
 30 18

7.00 10.00
 red hake
 16 loligo
 0.15 14
 11
 17

1.00
 4-spot
 20

0.25

red hake
 17
 16
 15
 0.50

July 25 Comparative Tow

haul 2
 lat/long-s 3752.3 7423.4
 lat/long-e 3752.3 7224.3
 time s/e 15:17 17:20
 weather ESE-15 3
 depth/temp 32-34 77.0
 port star
 TED con
 bushels 8.0 9.5
 ave wt 57.5 57.5
 scall cat 460.0 546.3
 sam wt 13.0 13.5

haul 2
 port
 TED
 scall 27.50 scall 31.00
 crab 1.00 shell 1.00
 star 0.75 sponge 0.25
 shell 0.50 crab 0.25
 sponge 0.75 32.50
 30.50

monk
 22 82
 19 20
 33 18
 32 19
 19 28
 17 28
 17 31
 21 35
 32 13
 17 19
 18
 5.50 16
 20
 little skate 34
 f 17
 29 17
 9
 27 33.00
 2.50 loligo
 23
 m 13
 11 18
 11
 1.00
 0.25
 4-spot am lob
 19 ~90 mm
 17 1.00
 0.30 little skate
 m
 loligo 11
 16
 0.10
 0.30
 red hake 4-spot
 22
 16
 13 0.25
 15
 16 red hake
 15 14
 15
 0.10
 0.75

Ht.	port TED Frequency	Ht.	star con Frequency
68	1	71	1
70	1	73	2
72	1	75	1
74	1	78	1
75	2	79	3
76	1	80	3
78	4	81	2
80	2	82	5
81	5	83	6
82	5	84	4
83	4	85	7
84	4	86	7
85	3	87	6
86	2	88	5
87	4	89	2
88	4	90	7
89	1	91	5
90	2	92	4
91	1	93	7
92	3	94	4
93	3	95	1
94	1	96	1
95	2	98	2
97	1	102	1
98	2	107	1
99	1	111	1
104	2	114	1
106	1	120	2
109	1	122	1
110	1		
111	1		
117	1		
121	1		
122	1		
129	1		
131	1		

July 25 Flounder Net Comparative Tow

haul	4		haul	4		
lat/long-s	3751.6	7424.7	port			star
lat/long-e	3752.5	7423.8	TED			con
time s/e	20:28	22:06	scall	31.50	scall	28.00
weather	SE-15	3	star	1.50	star	1.00
depth/temp	32-34	76.5	sponge	0.50	sponge	1.00
	port	star		33.50	crab	0.50
	TED	con				30.50
bushels	7.5	7.5				
ave wt	57.5	57.5				
scall cat	431.3	431.3		little skate		monk
sam wt	14.0	14.0		f		34

Ht.	port TED Frequency	Ht.	star con Frequency		
56	1	60	1	14	39
58	1	61	1	15	19
76	1	74	1	16	21
77	1	75	1	13	20
78	2	76	2	26	20
80	1	77	1	28	26
81	2	78	2	27	19
82	2	80	1	25	28
83	5	81	2	12	29
84	2	82	7	11	18
85	2	83	2	29	18
86	2	85	1		16
87	4	86	5	8.00	27
88	5	87	4		32
89	5	88	4	m	19
90	6	89	2	11	15
91	6	90	5	27	
92	7	91	6	17	11.50
93	2	92	4	20	
94	3	93	3		little skate
95	4	95	3	2.00	m
96	1	98	1		12
98	1	101	1	monk	11
99	2	103	1	18	13
104	1	108	1	18	14
105	2	110	3	21	
106	1	111	1	30	0.50
107	3	113	3	18	
110	1	114	2	20	f
115	1	117	1	17	27
118	1	121	1	17	27
123	1	122	1	36	16
133	1	123	1	36	28
		125	1	17	24
		131	1	18	13
				16	11
				18	17
				28	
				18	5.00
				7.50	loligo
					16
				red hake	
				20	0.25
				26	
					red
				0.50	25
					15
					16
					16
					17
					18
					19
					16

hake

1.0

July 26 Flounder Net Comparative Tow

haul	1			haul	1		
lat/long-s	3750.8	7425.7			port		star
lat/long-e	3751.5	7424.9			con		TED
time s/e	15:30	17:36		scall	25.50	scall	27.00
weather	SE-10	2		star	0.50	star	0.50
depth/temp	32-34	77.9		sponge	0.50	sponge	1.00
	port	star		shell	1.00	shell	1.00
	con	TED		crab	0.30	crab	1.00
bushels	6.3	6.8			27.80		30.50
ave wt	57.0	57.0					
scall cat	356.3	384.8			monk		monk
sam wt	14.0	16.0			20		35
					19		21
					16		21
	port		star		18		17
	con		TED		17		17
Ht.	Frequency	Ht.	Frequency		22		23
62	1	47	1		18		15
66	1	72	1		17		16
72	4	73	1		17		
76	1	74	2		17		4.00
78	2	75	1		32		
79	2	76	1		15		little skate
80	2	78	1		22		f
81	1	79	1		16		27
82	6	80	1		18		
83	3	81	5		14		1.50
84	4	82	2		20		
85	3	83	6		19		m
86	2	84	2		20		9
87	8	85	3				
88	6	86	4		8.00		0.10
89	4	87	3				
90	5	88	6		little skate		red hake
91	4	89	6		f		17
92	6	90	6		25		16
93	1	91	4		11		15
95	2	92	4		27		17
96	1	93	1		11		15
97	2	94	3				18
98	2	95	6		2.50		15
100	1	96	1				
104	2	97	1		m		1.00
108	2	99	1		11		
110	1	103	1		11		
111	1	107	1		0.20		
118	1	109	1				
122	1	110	2		loligo		
127	1	114	1		14		
130	1	116	2		24		
		119	1				
		121	1		0.50		
		122	1				
		129	1		red hake		
		134	1		17		
					14		
					17		
					16		
					16		
					17		
					20		
					15		
					15		
					16		
					15		
					14		
					2.50		
					14		

July 26 Flounder Net Comparative Tow

haul 2
 lat/long-s 3751.3 7424.9
 lat/long-e 3749.1 7424.6
 time s/e 17:58 20:00
 weather SE-10 2
 depth/temp 32-34 77.5
 port star
 con TED
 bushels 15.0 13.5
 ave wt 57.0 57.0
 scall cat 855.0 769.5
 sam wt 14.0 16.0

haul 2
 port star
 con TED
 scall 28.50 scall 33.00
 sponge 1.25 sponge 2.00
 crab 0.50 clam 0.50
 shell 1.00 crab 0.75
 star 0.25 star 0.75
 31.50 37.00

little skate monk
 f 18

26 16
 27 19
 25 18
 10 18
 11 17
 27 14
 9 18
 30
 17

m 3.00

12
 17 little skate
 12 f

28
 28
 26
 27
 18
 36 13
 31 16

19
 14 7.50
 14

red hake
 16

4.50 15
 loligo 14

18 16
 14
 18 0.50
 13

1.00

red hake
 16
 16
 16
 15
 14
 17
 17
 17
 15
 15
 13
 15
 16
 13
 14
 15
 13

1.50

Ht.	port con Frequency	Ht.	star TED Frequency
48	1	58	1
57	1	62	1
64	1	70	1
72	1	71	1
73	1	72	3
74	3	74	3
75	3	75	1
78	3	76	3
79	5	77	6
80	7	78	7
81	2	79	5
82	7	80	4
83	1	81	5
84	4	82	11
85	5	83	7
86	2	84	5
87	4	85	8
88	9	86	7
89	3	87	2
90	7	88	6
91	3	89	2
92	3	90	2
93	1	91	3
95	3	92	2
98	1	94	1
100	2	95	1
104	1	97	1
105	1	104	1
106	1	105	1
108	1	108	1
124	1	113	2
		116	1
		117	1
		124	1

July 26 Flounder Net Comparative Tow

haul	3		haul	3	star
lat/long-s	3749.1	7424.7	port		TED
lat/long-e	3750.2	7425.1	con		
time s/e	20:20	22:22			
weather	SE-10	2			
depth/temp	32-34	77.5			
	port	star			
	con	TED			
bushels	25.0	22.5			
ave wt	55.5	55.5			
scall cat	1234.9	1111.4	little skate		little
skate					
sam wt	12.5	19.0		f	m
				25	20
				10	9
				12	12
	port	star	red hake	12	
Ht.	con	TED	15	12	0.50
48	Frequency	Frequency	15	12	
51	1	54	19	11	f
53	1	60	14		25
58	1	62	15	2.00	27
62	1	63	16		24
68	2	67	19	m	
70	3	68	18	10	3.50
71	1	69	18	12	
73	2	71	18	13	monk
74	1	72	14	16	36
75	2	73	15	13	19
76	2	74	16	11	19
77	2	76	13	11	18
78	4	77	15	16	33
79	4	78	16		18
80	6	79	14	1.25	16
81	1	80	16		35
82	4	81	14	monk	19
83	8	82	16	22	34
84	1	83	16	20	17
85	7	84	13	18	15
86	1	85	15	21	19
87	6	86	15	23	19
88	6	87		20	21
89	6	88	2.00	19	
90	1	89		14	9.00
91	2	90		17	
92	1	91		14	4-spot
93	4	92		34	20
94	1	93		18	20
96	1	94		20	
97	1	95		15	0.30
105	1	97			
109	1	98		5.00	eel
122	1	100			22
127	1	101		4-spot	
		102		17	0.10
		110		19	
		124		17	red hake
				17	16
				18	15
				21	14
				1.50	0.30

July 27 Flounder Net Comparative Tow

haul	1		haul	1		
lat/long-s	3750.2	7425.0	port		star	
lat/long-e	3749.2	7425.2	TED		con	
time s/e	16:17	18:19	scall	30.00	scall	30.00
weather	SSE-20	4	sponge	1.00	star	0.20
depth/temp	32-34	77.9	crab	0.25	shell	1.25
	port	star	shell	1.00	sponge	0.75
	TED	con	star	0.20		32.20
bushels	7.0	6.5		32.45		
ave wt	57.0	57.0				
scall cat	399.0	370.5			little skate	little
skate						
sam wt	16.5	13.0			f	m
					26	20
					26	20
					29	25
					27	11
					11	
Ht.	port	Ht.	star			
	TED		con			
	Frequency		Frequency			
54	1	73	3			
57	1	74	2			
60	2	75	1			
69	1	77	4			f
72	5	78	8		6.00	26
73	1	79	4			13
74	5	81	2	m		
75	4	82	6	10		1.50
76	1	83	8		0.15	monk
77	2	84	6			33
78	3	85	2	monk		29
79	4	86	3	22		19
80	6	87	3	18		34
81	2	88	6	34		31
82	9	89	4	28		24
84	6	90	4	16		38
85	5	93	1	19		38
86	6	94	1	21		30
87	1	96	1	38		18
88	7	97	1			20
89	5	98	2	6.00		18
90	2	99	1			16
91	3	103	1			19
92	5	112	1			
93	2	115	1			12.00
94	2	116	1			
95	2	117	1			
97	1	118	1			red hake
100	1	124	1			14
103	1	128	1			
104	1					0.10
106	1					
107	1					
108	1					
113	2					
115	2					
122	1					

July 27 Flounder Net Comparative Tow

haul 2
 lat/long-s 3749.3 7425.2
 lat/long-e 3748.4 7425.1
 time s/e 18:43 20:57
 weather SE-20 4
 depth/temp 32-34 77.9
 port star
 TED con
 bushels 11.5 12.5
 ave wt 57.0 57.0
 scall cat 655.5 712.5
 sam wt 14.5 16.5

haul 2
 port star
 TED con 35.00
 scall scall
 sponge sponge 2.00
 crab crab 1.50
 shell shell 0.25
 snail crab 0.75
 star star 0.20 39.50
 36.20

Ht.	port TED Frequency	Ht.	star con Frequency
49	1	50	1
53	1	63	1
69	1	66	1
70	1	68	1
71	1	69	1
72	1	70	1
74	1	71	3
75	2	72	1
76	1	73	3
77	2	74	1
78	6	75	2
79	2	76	1
80	5	77	3
81	2	78	4
82	7	79	2
83	4	80	4
84	4	81	6
85	4	82	2
86	2	83	10
87	5	84	5
88	8	85	2
89	3	86	3
90	8	87	5
91	3	88	4
92	1	89	10
93	1	90	4
94	2	91	1
95	2	92	4
96	1	93	3
97	1	94	1
98	1	95	1
99	1	98	1
101	1	100	1
105	2	101	1
109	1	102	1
110	1	103	1
112	1	111	1
118	1	118	1
		120	1
		122	1
		127	1
		133	1

monk	monk
27	32
32	31
18	26
31	18
21	20
21	21
14	20
35	34
21	32
19	21
21	16
29	17
37	
18	9.00
19	
31	little skate
	f
11.00	26
	13
little skate	29
f	27
10	27
25	
	6.00
1.50	
	m
m	12
26	13
16	13
	12
1.50	
	0.50
red hake	
16	4-spot
	19
0.10	
	0.25
	red hake
	15
	16
	0.25

July 30 Flounder Net Comparative Tow

haul 1
 lat/long-s 3750.5 7424.4
 lat/long-e 3747.6 7423.9
 time s/e 12:07 14:07
 weather W-10 2
 depth/temp 33-36 79.0
 port star
 con TED
 bushels 10.5 14.4
 ave wt 55.8 55.8
 scall cat 585.4 802.8
 sam wt 15.0 14.0

haul 1
 port star
 con TED
 scall 30.00 scall 29.50
 shell 1.00 shell 2.00
 sponge 0.75 star 0.25
 crab 0.25 sponge 0.25
 star 0.25 star 32.00
 32.25

Ht.	port con Frequency	Ht.	star TED Frequency
53	1	61	1
56	1	63	1
62	1	64	1
63	2	66	4
65	1	71	1
68	2	72	3
70	1	73	2
71	1	74	1
72	5	75	2
73	2	76	6
74	3	77	3
75	4	78	5
76	4	79	3
77	1	80	2
78	3	81	2
79	2	82	4
80	3	83	5
81	4	84	6
82	11	85	5
83	9	87	4
84	4	88	1
85	6	89	1
86	4	90	3
87	5	91	2
88	8	92	4
89	3	93	1
90	2	94	2
92	4	95	4
94	1	97	1
97	2	103	1
100	1	104	2
102	1	105	2
106	1	106	3
107	1	108	1
108	1	115	2
110	1	118	1
112	1		
115	1		
116	1		
130	1		

little skate
 m 20
 9 20
 15 18
 20 20
 0.30 21
 15 15
 f 19
 10 16
 16 16
 0.10 14
 16 16
 monk 34
 30 19
 19 19
 29 3.50
 21 21
 20 20
 15 15
 18 18
 17 17
 20 20
 19 19
 29 29
 27 27
 20 20
 16 16
 18 18
 19 19
 17 17
 17 17
 7.00 7.00
 4-spot 4-spot
 19 19
 18 18
 0.40 0.40
 red hake red hake
 14 14
 0.15 0.15

July 30 Flounder Net Comparative Tow

haul	2			haul	2		
lat/long-s	3747.9	7424.1		port		star	
lat/long-e	3747.5	7425.6		con		TED	
time s/e	14:32	16:44		scall	28.00	scall	31.00
weather	W-10	2		sponge	1.50	shell	0.50
depth/temp	33-34	79.5		crab	1.00	star	0.25
	port	star		shell	0.50	sponge	0.50
	con	TED		star	0.50		32.25
bushels	18.8	14.5			31.50		
ave wt	55.8	55.8					
scall cat	1048.1	808.4		monk		little	
skate							
sam wt	13.5	15.5		16		m	
				34		10	
				23		25	
				18			
	port		star	17		1.50	
	con		TED	15			
Ht.	Frequency	Ht.	Frequency	32		f	
58	1	55	1	30		28	
66	1	58	1	19		26	
67	1	65	1	19		27	
68	2	68	4	15		27	
69	1	69	2	22		26	
70	1	70	3	19		27	
72	3	71	1	22		28	
73	2	72	3	37		11	
74	1	73	2	20			
75	2	74	3	33		10.00	
76	5	76	4	30			
77	4	77	8	18		monk	
78	6	78	7	20		26	
79	3	79	4			27	
80	5	80	8	14.00		16	
81	2	81	3			22	
82	2	82	13	little skate		17	
83	8	83	9	m		31	
84	4	84	5	12		23	
85	1	85	11	13		23	
86	3	86	2	11		22	
87	1	87	5			27	
88	2	88	6	0.50		35	
89	3	89	4			29	
90	3	90	2	f		19	
95	1	91	1	26			
98	1	92	1			11.00	
100	1	93	2				
101	1	95	2	1.50			
106	1	98	1			loligo	
110	1	100	1	loligo		16	
115	1	117	1	15			
118	3	119	1			0.30	
119	1	124	1	0.30			
123	2	128	1				
125	1						
130	1						
137	1						

July 30 Flounder Net Comparative Tow

haul 3
 lat/long-s 3747.7 7425.6
 lat/long-e 3748.8 7424.9
 time s/e 17:06 19:06
 weather W-10 2
 depth/temp 33-34 79.5
 port star
 con TED
 bushels 20.0 15.0
 ave wt 55.8 55.8
 scall cat 1115.0 836.3

haul 3
 port
 con
 scall 27.00 scall 31.00
 sponge 2.50 sponge 3.00
 crab 1.00 shell 0.50
 star 0.75 crab 0.50
 shell 0.50 snail 0.75
 other 0.50 star 0.50
 32.25 36.25

Ht.	port con Frequency	Ht.	star TED Frequency
51	1	61	1
63	1	65	2
69	1	67	1
71	1	68	1
72	2	70	1
73	1	72	2
74	2	74	1
75	3	76	2
76	2	77	1
77	2	78	2
78	9	79	4
79	2	80	2
80	3	81	5
81	4	82	7
82	9	83	4
83	9	84	8
84	5	85	3
85	5	86	5
86	4	87	7
87	4	88	3
88	8	89	1
89	5	90	3
90	4	91	1
91	2	92	3
92	1	93	3
93	4	94	1
94	1	95	2
95	1	96	1
96	1	97	1
97	1	100	1
102	1	102	2
103	1	105	2
107	1	118	1
108	1	119	2
115	1	124	1
116	1	127	1
119	1	130	1
125	1		
126	1		

little skate
 m 22
 10 21
 24 19
 11 20
 25
 28
 21
 f 20
 9 29
 11 17
 17 21
 21
 0.50 22
 23
 monk 16
 17 23
 18 19
 36
 17 6.00
 20
 20
 19 little skate
 f 26
 23 11
 31 12
 20 18
 18 1.50
 30
 4.00
 red hake
 14
 0.10
 loligo
 20
 0.50

July 31 Flounder Net Comparative Tow

haul 1
 lat/long-s 3749.7 7425.6
 lat/long-e 3745.7 7425.7
 time s/e 14:37 16:30
 weather N-5 1
 depth/temp 32-35 81.3
 port star
 TED con
 bushels 8.5 8.0
 ave wt 58.0 58.0
 scall cat 493.0 464.0
 sam wt 13.5 13.0

haul 1
 port star
 TED con
 scall 30.00 scall 27.00
 shell 0.75 sponge 1.50
 crab 0.75 crab 0.50
 star 0.50 shell 1.00
 sponge 2.00 star 0.50
 34.00 30.50

monk monk
 34 23
 24 25
 17 33
 19 20
 33 22
 19 21
 25 37
 20 22
 21 15
 20 16
 14
 20 6.00
 22
 21 little skate
 m
 3.50 11
 12
 little skate 11
 f
 25 0.30
 26
 26 f
 25
 3.50 11
 12
 4-spot
 18 1.50
 0.20 4-spot
 21
 loligo 20
 13
 0.25 0.50
 loligo
 13
 0.25

Ht.	port TED Frequency	Ht.	star con Frequency
56	1	43	1
62	1	47	1
69	2	57	1
70	1	61	2
71	2	70	2
72	3	72	1
73	1	73	2
74	1	74	1
75	1	75	2
76	4	76	1
77	1	77	2
78	4	78	6
79	1	79	3
80	4	80	2
81	7	81	1
82	5	82	6
83	3	83	9
84	6	84	3
85	3	85	4
86	4	86	4
87	3	87	7
88	7	88	3
89	3	89	7
90	2	90	5
91	1	91	2
92	9	92	3
93	3	93	1
94	1	94	2
95	1	95	2
97	1	99	1
99	1	103	1
100	1	104	2
104	1	107	1
106	1	111	1
109	1	114	1
111	1		
112	1		
113	1		
114	1		
116	2		
123	1		

July 31 Flounder Net Comparative Tow

haul 2
 lat/long-s 3745.7 7425.7
 lat/long-e 3749.8 7425.0
 time s/e 16:59 18:52
 weather N-5 1
 depth/temp 32-35 81.3
 port star
 TED con
 bushels 12.5 11.3
 ave wt 58.0 58.0
 scall cat 725.0 652.5
 sam wt 12.0 14.0

haul 2
 port star
 TED con
 scall 28.00 scall 29.00
 sponge 3.00 sponge 2.00
 star 0.25 shell 1.00
 crab 0.75 star 0.25
 shell 1.00 crab 0.50
 33.00 clam 0.50
 other 0.25
 monk 33.50

Ht.	port TED Frequency	Ht.	star con Frequency
54	1	44	1
62	1	47	1
63	1	49	1
66	1	55	1
72	1	59	1
74	2	62	1
75	3	68	1
76	2	70	2
77	2	71	2
78	3	72	4
79	2	73	1
80	6	75	1
81	2	76	1
82	5	77	4
83	4	78	2
84	8	79	2
85	6	80	5
86	4	81	2
87	2	82	4
88	6	83	8
89	1	84	4
91	4	85	4
92	2	86	3
93	1	87	4
94	1	88	10
95	1	89	6
96	1	90	4
103	1	91	4
105	2	92	3
108	1	93	1
116	1	94	2
120	1	95	1
		97	1
		99	1
		100	1
		101	1
		118	1
		120	1
		122	1
		125	1
		126	1

32 little skate
 17 f
 16 27
 29 17
 22 11
 29 11
 30 13
 21
 22 2.00
 14
 15 m
 19 14
 12
 7.00 0.25
 little skate
 f monk
 13 29
 10 18
 22
 0.25 16
 19
 loligo 22
 20 19
 14 15
 15 23
 17
 1.00 2.50
 red hake
 18 loligo
 17 18
 17 22
 15
 0.50 11
 11
 1.50
 red hake
 19
 15
 20
 18
 1.00
 4-spot
 36
 1.00

July 31 Flounder Net Comparative Tow

haul	5	
lat/long-s	3751.4	7424.9
lat/long-e	3752.0	7423.7
time s/e	0:05	2:24
weather	N-5	1
depth/temp	32-34	80.0
	port	star
	TED	con
bushels	13.0	14.5
ave wt	58.0	58.0
scall cat	754.0	841.0
sam wt	12.5	15.0

haul	5	
	port	star
	TED	con
scall	28.00	scall 31.00
sponge	2.00	sponge 1.50
crab	0.50	crab 0.50
star	1.00	star 0.50
shell	0.25	shell 0.75
	31.75	34.25

No fish measured

Ht.	port TED Frequency	Ht.	star con Frequency
58	1	50	1
75	1	53	1
77	3	74	1
78	2	76	1
79	1	78	1
82	1	79	1
83	1	80	2
85	3	82	1
86	2	83	2
87	2	84	2
88	3	85	6
89	2	86	6
90	6	87	10
91	3	88	4
92	2	89	6
93	5	90	7
94	1	91	2
95	4	92	1
96	1	93	3
97	6	94	2
98	1	95	4
99	2	97	1
103	1	98	2
105	1	104	1
106	1	106	2
108	1	118	1
110	2	125	2
113	1	126	1
117	1	129	1
120	1	138	1
121	1		
135	1		

August 1 Flounder Net Comparative Tow

haul 1
 lat/long-s 3749.7 7425.6
 lat/long-e 3751.5 7424.6
 time s/e 19:23 21:15
 weather WSW-10 2
 depth/temp 33-34 80.9
 port star
 con TED
 bushels 5.4 4.5
 ave wt 58.0 58.0
 scall cat 313.2 261.0
 sam wt 14.0 13.0

haul 1
 port star
 con TED
 scall 29.00 scall 27.00
 sponge 2.00 crab 0.75
 crab 1.50 sponge 1.00
 star 0.50 shell 0.25
 shell 0.25 star 0.25
 33.25 29.25

Ht.	port con Frequency	Ht.	star TED Frequency
53	1	48	1
65	1	50	1
68	1	53	1
74	1	75	3
75	3	76	1
78	3	78	3
79	3	79	2
80	5	80	2
81	3	81	5
83	7	82	6
84	1	83	7
85	6	84	2
86	2	85	3
88	6	86	2
89	3	87	1
90	2	88	6
91	5	89	3
92	6	90	4
93	4	91	5
94	6	92	4
95	1	93	2
96	1	95	3
101	1	96	2
103	1	97	2
105	2	98	2
110	1	110	1
111	1	111	1
116	1	113	1
119	1	114	1
122	1	116	1
123	1	122	1
124	1	123	1
		127	1
		132	1

monk monk
 22 20
 21 22
 19 32
 16 19
 22 18
 24 18
 35 36
 31 19
 18 19
 21 16
 15 21
 20 18
 34 21
 30 22
 20 19
 38 18
 18 19
 17 20
 20 14
 22
 21 6.00
 11.50 red hake
 17
 red hake 17
 18 18
 14 15
 14 17
 13
 0.50
 0.40
 loligo
 little skate 15
 f 16
 24
 13 0.50
 1.50 little skate
 m 12
 loligo 10
 8 0.10
 0.25

August 1 Flounder Net Comparative Tow

haul	2	
lat/long-s	3750.4	7423.6
lat/long-e	3747.9	7424.4
time s/e	21:43	22:57
weather	WSW-15	2
depth/temp	33-35	80.9
	port	star
	con	TED
bushels	21.5	18.3
ave wt	58.0	58.0
scall cat	1247.0	1058.5
sam wt	16.5	13.5

haul	2		
	port		star
	con		TED
scall	30.00	scall	33.00
sponge	2.50	sponge	0.25
crab	1.00	shell	0.25
shell	1.00	star	0.25
star	0.50	crab	0.25
	35.00		34.00

Ht.	port con Frequency	Ht.	star TED Frequency
57	1	41	1
61	1	47	1
68	1	48	1
69	1	50	1
70	5	52	1
71	1	61	1
72	2	65	1
74	1	67	1
76	3	68	1
77	2	69	2
78	2	70	2
79	6	72	4
80	3	73	1
82	6	74	4
83	7	75	3
84	7	76	7
85	6	77	2
86	5	78	3
87	7	79	4
88	7	80	6
89	4	81	7
90	1	82	4
92	5	83	5
93	4	84	1
95	2	85	3
96	1	86	5
97	2	87	7
98	1	88	2
100	1	89	5
101	1	90	4
102	1	91	1
103	1	92	4
105	2	93	1
106	1	94	3
107	1	95	1
108	1	96	1
109	1	97	3
111	1	99	1
112	1	102	1
113	1	108	1
114	1	110	1
115	1	112	1
117	1		

monk	monk
21	36
18	18
16	21
17	21
16	19
17	16
19	16
	21
1.50	19
little skate	2.00
f	
10	little skate
	f
0.10	14
	9
m	
10	0.25
0.10	m
	17
red hake	
18	0.25
15	
	loligo
0.20	22
	0.50
	red hake
	13
	15
	0.20

August 4
Scallop Net Calibration

	1		2			3		
haul	3748.7	7423.8	haul	3750.9	7423.4	haul	3748.4	7423.6
lat/long-s	3750.8	7423.3	lat/long-s	3749.3	7423.7	lat/long-s	3751.1	7423.2
lat/long-e	12:07	13:05	lat/long-e	13:25	14:52	lat/long-e	16:08	17:27
time s/e	SW-10	3	weather	SW-10	3	weather	SW-10	3
weather	33-35	83.3	depth/temp	33-35	83.3	depth/temp	33-35	83.3
depth/temp	port	star	port	star		port	star	
	con	con	con	con		con	con	star
								con
bushels	11.8	13.8	bushels	9.3	8.0	bushels	16.3	13.3
ave wt	54.1	54.1	ave wt	56.0	56.0	ave wt	54.1	54.1
scall cat	546.7	699.2	scall cat	518.0	448.0	scall cat	758.4	676.4
sam wt			sam wt			sam wt		
lengths			lengths			lengths		

shoveled

picked through

calibration - no samples
taken today

shoveled everything

	4		5		
haul	3750.3	7423.4	haul	3748.3	7423.7
lat/long-s	3748.4	7423.9	lat/long-s	3749.8	7423.6
lat/long-e	19:01	20:37	lat/long-e	20:53	21:42
time s/e	SW-10	3	weather	SW-10	3
weather	33-35	83.3	depth/temp	33-35	83.3
depth/temp	port	star	port	star	
	con	con	con	con	
bushels	15.0	13.5	bushels		
ave wt	54.1	54.1	ave wt		
scall cat	697.9	686.5	scall cat		
sam wt			sam wt		
lengths			lengths		

shoveled

no data

August 6 Scallop Net Comparative Tow

haul	1	
lat/long-s	3748.9	7423.9
lat/long-e	3751.8	7422.9
time s/e	11:57	13:27
weather	E-5	1
depth/temp	33-35	82.4
	port	star
	con	TED
bushels	11.5	11.0
ave wt	54.7	54.7
scall cat	629.1	601.7
sam wt	14.0	14.5

haul	1		
	port		star
	con		TED
scall	26.00	scall	29.00
shell	3.00	shell	2.00
star	0.25	crab	1.00
crab	0.50	sponge	0.50
sponge	0.25	star	0.25
	30.00		32.75

Ht.	port con Frequency	Ht.	star TED Frequency
65	1	63	1
69	2	66	1
72	4	68	3
75	1	70	1
76	4	72	2
77	2	73	1
79	2	74	1
80	3	75	7
81	4	76	4
82	7	77	3
83	5	78	2
84	3	80	8
85	3	81	4
86	5	82	4
87	2	83	3
88	4	84	6
89	4	85	5
90	4	86	1
91	2	87	5
92	4	88	5
93	3	89	6
94	1	90	3
95	3	91	7
97	1	92	2
99	1	93	2
100	2	94	2
101	1	95	1
107	1	99	1
108	1	100	1
115	1	103	2
123	1	107	1
129	1	114	1
		125	1

little skate f	25	monk	15
			16
	1.25		0.30
monk		red hake	
			14
			16
			0.25
		little skate	
		f	
			13
			0.15
		loligo	
			12
			0.25
	3.00		

August 6 Scallop Net Comparative Tow

haul 2
 lat/long-s 3752.0 7423.0
 lat/long-e 3749.5 7422.9
 time s/e 13:42 15:02
 weather E-5 1
 depth/temp 33-35 82.4
 port star
 con TED
 bushels 17.7 15.3
 ave wt 54.7 54.7
 scall cat 968.2 836.9
 sam wt 15.0 15.0

haul 2
 port star
 con TED
 scall 26.50 scall 30.00
 sponge 1.00 sponge 1.00
 crab 1.50 crab 1.00
 star 0.25 star 0.25
 shell 1.00 shell 1.00
 30.25 33.25

Ht.	port con Frequency	Ht.	star TED Frequency
58	1	53	1
64	1	59	2
66	1	69	1
67	1	71	1
69	1	72	1
70	2	73	1
71	2	74	2
72	2	75	1
73	2	76	1
74	5	77	3
75	3	78	3
77	1	79	2
78	3	80	5
79	4	81	6
80	2	82	4
81	3	83	6
82	4	84	8
83	7	85	3
84	4	86	2
85	1	87	8
86	3	88	8
87	8	89	5
88	11	90	3
89	2	91	1
90	4	92	4
91	2	93	5
92	5	95	5
93	5	96	2
94	4	97	2
95	2	100	1
96	1	102	1
97	1	104	1
100	1	105	1
107	1	106	1
108	1	108	2
109	1	109	2
113	1	112	1
114	1	118	1
		121	2

monk
 21
 20
 22
 18
 20
 23
 1.50
 little skate
 f
 9
 0.10
 27
 26
 10
 2.50
 18
 red hake
 15
 17
 14
 14
 15
 18
 17
 15
 14
 16
 19
 19
 18
 18
 16
 14
 14
 2.00

little skate
 f
 25
 26
 27
 11
 4.00
 m
 9
 monk
 21
 35
 20
 18
 2.50
 red hake
 23
 25
 27
 24
 1.50
 loligo
 13
 0.30

August 6 Scallop Net Comparative Tow

haul 3
 lat/long-s 3748.1 7423.9
 lat/long-e 3751.7 7423.0
 time s/e 17:16 18:58
 weather E-5 1
 depth/temp 33-36 82.9
 port star
 con TED
 bushels 19 15.3
 ave wt 54.7 54.7
 scall cat 1039.3 836.9
 sam wt 15.0 14.5

haul 3
 port star
 con TED
 scall 31.00 scall 32.00
 shell 3.00 sponge 0.75
 sponge 1.00 crab 1.50
 crab 1.50 shell 1.50
 star 0.25 star 0.25
 36.75 36.00

monk monk

35 23

22 18

16 16

16 17

19 18

18 20

16 17

17 1.50

15

2.00 loligo

red hake 13

20 13

17 14

14 0.75

15

17 red hake

0.50 14

15

15

16

16

16

18

15

16

19

18

12

1.25

port star
 con TED
 Frequency Frequency

Ht.	port con Frequency	Ht.	star TED Frequency
55	1	60	1
60	1	62	1
68	3	65	1
70	1	67	2
72	1	69	1
73	2	70	1
74	1	72	1
75	2	73	5
76	1	74	2
77	2	75	4
78	5	76	3
79	3	77	3
80	5	78	5
81	5	79	6
82	8	80	7
83	5	81	2
84	4	82	7
85	3	83	7
86	4	84	2
87	3	85	15
88	6	86	4
89	8	87	5
90	1	88	9
91	1	89	5
92	2	90	1
93	2	91	3
94	2	93	3
95	3	94	1
96	1	96	1
98	3	98	2
100	1	99	1
105	1	103	1
107	1	106	1
108	1	107	1
109	1		
113	1		
115	1		
124	1		
133	1		

August 6 Scallop Net Comparative Tow

haul	4	
lat/long-s	3751.8	7423.1
lat/long-e	3749.2	7423.8
time s/e	19:20	20:43
weather	E-5	1
depth/temp	33-36	82.9
	port	star
	con	TED
bushels	10.0	13.3
ave wt	54.3	54.3
scall cat	467.0	640.3
sam wt		
lengths	no data	

August 7 Scallop Net Comparative Tow

haul	1	
lat/long-s	3751.1	7423.6
lat/long-e	3748.7	7423.2
time s/e	12:38	14:09
weather	W-15	3
depth/temp	34-36	81.3
	port	star
	TED	con
bushels	9.5	12.0
ave wt	55.5	55.5
scall cat	527.3	666.0
sam wt	13.0	12.0

haul	1		
	port		star
	TED		con
scall	29.00	scall	24.00
shell	2.00	sponge	0.25
sponge	0.25	crab	0.25
star	0.10	shell	3.00
crab	1.50	star	0.25
	32.85		27.75
	monk		monk
	35		40
	16		18
	19		25
	20		20
	17		56

Ht.	port Frequency	Ht.	star Frequency
64	1	63	1
65	1	67	1
68	1	69	1
70	2	70	2
71	1	72	2
72	1	73	2
74	4	74	2
75	2	75	3
77	3	76	1
78	4	77	1
79	3	78	5
80	7	79	5
81	6	80	5
82	8	81	2
83	5	82	3
84	3	83	5
85	5	84	1
86	3	85	6
87	8	86	2
88	1	87	2
89	4	88	3
90	5	89	1
91	2	90	5
92	1	91	1
93	1	92	5
95	3	94	1
97	1	97	3
98	1	100	1
107	1	101	1
108	1	106	1
109	1	110	1
113	1	115	1
115	2	123	1
121	1	131	1

1.25	9.00
red hake	
22	
16	
14	
12	
12	
0.75	
little skate	
f	
10	
0.10	

August 7 Scallop Net Comparative Tow

haul 2
 lat/long-s 3748.6 7423.7
 lat/long-e 3751.7 7423.0
 time s/e 14:29 16:15
 weather W-15 3
 depth/temp 34-36 81.3
 port star
 TED con
 bushels 13.0 10.5
 ave wt 55.5 55.5
 scall cat 721.5 582.8
 sam wt 14.0 13.0

haul 2
 port star
 TED con
 scall 29.00 scall 27.50
 shell 3.50 shell 1.00
 crab 1.25 sponge 2.00
 sponge 0.75 crab 0.50
 star 0.50 star 0.75
 35.00 31.75

monk monk
 27 33
 26 18
 19 19
 33 17
 31 17
 18 19

Ht.	port TED Frequency	Ht.	star con Frequency
53	1	55	1
55	1	56	1
67	1	58	1
68	1	65	1
72	2	66	2
73	3	68	2
74	1	70	1
75	3	72	2
76	2	73	2
77	1	74	2
78	2	75	4
79	2	76	1
80	3	77	2
81	1	78	6
82	6	79	3
83	3	80	5
84	1	81	5
85	5	82	3
86	5	83	1
87	2	84	4
88	6	85	10
89	2	86	3
90	3	87	4
91	3	88	7
92	3	89	3
93	1	90	6
94	1	91	3
96	1	92	1
97	2	93	2
99	1	94	1
100	1	95	2
102	1	97	1
107	1	99	2
108	1	104	1
112	1	112	1
114	1		
115	2		
116	2		
118	1		
121	1		
125	1		

64 2.00
 16
 15.00 red hake
 16
 15
 red hake
 30 0.25
 15
 14
 15
 16
 1.00
 loligo
 18
 0.30

August 7 Scallop Net Comparative Tow

haul 3
 lat/long-s 3751.8 7423.1
 lat/long-e 3748.1 7423.8
 time s/e 16:37 18:28
 weather W-20 3
 depth/temp 34-36 81.3
 port star
 TED con
 bushels 12.8 11.8
 ave wt 55.5 55.5
 scall cat 710.4 652.1
 sam wt 14.0 14.5

haul 3
 port star
 TED con
 scall 31.00 scall 31.00
 shell 1.00 shell 3.00
 crab 1.50 sponge 0.50
 star 0.50 crab 0.50
 other 0.50 star 0.25
 34.50 35.25

no fish data

Ht.	port TED Frequency	Ht.	star con Frequency
60	1	59	1
61	1	62	1
69	2	68	1
70	1	72	1
71	2	73	5
72	1	74	2
73	1	75	1
74	1	76	1
75	6	77	3
76	2	78	5
77	1	80	2
78	4	81	5
79	6	82	4
80	6	83	5
81	6	84	4
82	9	85	6
83	7	86	4
85	4	87	7
86	2	89	2
87	3	90	5
88	2	92	3
89	4	93	1
90	7	95	2
91	1	98	2
92	3	102	1
93	2	103	1
94	1	105	2
95	1	106	2
96	1	108	1
97	2	110	1
98	1	114	1
100	1	115	1
103	1	116	1
104	1	117	1
105	1	120	1
108	1	123	1
113	1	130	1
119	1	132	1
124	1		
125	1		
137	1		

August 7 Scallop Net Comparative Tow

haul	4	
lat/long-s	3748.3	7423.7
lat/long-e	3752.1	7423.0
time s/e	18:56	20:42
weather	W-20	3
depth/temp	34-36	81.3
	port	star
	TED	con
bushels	12.5	10.8
ave wt	55.5	55.5
scall cat	693.8	596.6
sam wt	12.5	12.5

haul	4		
	port		star
	TED		con
scall	27.50	scall	28.00
shell	1.75	shell	2.00
crab	1.00	crab	1.00
star	0.25	sponge	1.00
sponge	0.50	star	0.25
	31.00		32.25

little skate		little skate
f		f
27		25
27		
27		1.25
26		

Ht.	port TED Frequency	Ht.	star con Frequency
58	1	56	1
62	1	69	1
64	1	70	3
66	1	74	1
67	1	78	5
68	1	79	2
69	1	81	3
70	2	83	1
71	2	84	4
72	2	85	1
74	2	86	5
75	3	87	6
76	4	88	3
77	1	89	6
78	2	90	10
79	2	91	1
80	2	92	1
81	4	93	1
82	3	94	1
83	7	95	1
84	1	97	1
85	1	103	1
86	4	105	1
87	7	108	1
88	8	109	2
89	5	111	2
90	4	112	1
91	1	121	1
92	4	128	1
93	1	136	1
94	3		
96	1		
97	1		
98	5		
100	1		
101	2		
105	1		
107	1		
110	1		
112	1		

4.00		m
		11
		10
monk		
21		0.20
15		
18		monk
		18
0.30		16
		21
loligo		18
16		18
		22
0.30		
		2.00
		red hake
		17
		16
		17
		0.25

August 9 Scallop Net Comparative Tow

haul	1	
lat/long-s	3748.3	7423.6
lat/long-e	3751.1	7422.4
time s/e	13:19	14:53
weather	NE-15	3
depth/temp	34-36	80.4
	port	star
	con	TED
bushels	15.5	12.0
ave wt	55.3	55.3
scall cat	856.4	663.0
sam wt	13.5	14.0

haul	1		
	port		star
	con		TED
scall	32.00	scall	27.50
crab	1.00	shell	2.00
shell	1.25	sponge	1.25
sponge	0.50	star	0.25
star	0.25	crab	3.50
	35.00		34.50

monk	monk
36	18
31	21
25	18
22	19
	16
	15

Ht.	port con Frequency	Ht.	star TED Frequency
64	1	63	1
68	1	68	1
69	2	69	1
70	1	70	1
71	1	71	1
73	1	72	2
74	2	73	2
75	2	74	3
76	2	75	5
77	1	76	2
78	3	77	7
79	2	78	6
81	5	79	4
82	8	80	5
83	2	81	3
84	1	82	4
85	2	83	9
86	7	84	6
87	4	85	6
88	7	86	2
89	7	87	5
90	4	88	2
91	1	89	1
92	1	90	1
93	2	91	2
95	3	92	6
98	2	93	3
102	2	94	1
106	2	95	1
107	1	98	1
113	1	106	1
118	1	112	1
123	1	115	1
127	1	118	1
		124	1

	loggerhead	0.75
N-T	74.5	
N-N	73.5	red hake
W	72.2	18
	all curved measurements	0.15

August 9 Scallop Net Comparative Tow

haul 2
 lat/long-s 3751.1 7422.8
 lat/long-e 3749.4 7423.1
 time s/e 15:19 17:10
 weather NE-15 3
 depth/temp 33-36 80.4
 port star
 con TED
 bushels 19.0 11.0
 ave wt 55.3 55.3
 scall cat 1049.8 607.8
 sam wt 13.0 12.5

haul 2
 port
 con
 scall 28.00 scall 29.00
 sponge 2.00 shell 1.00
 star 0.50 crab 0.75
 crab 0.50 sponge 0.50
 shell 1.00 other 0.25
 32.00 31.50

monk
 34
 19
 39
 15
 4.50
 4.50

Ht.	port con Frequency	Ht.	star TED Frequency
54	1	61	1
61	1	63	2
65	1	69	1
68	1	70	1
70	3	72	3
71	2	73	4
72	2	74	2
73	4	75	1
74	2	76	2
75	5	77	3
76	3	78	2
77	3	79	4
78	5	80	3
79	2	81	6
80	3	82	4
81	5	83	2
82	7	84	2
83	1	85	6
84	4	86	1
85	4	87	2
86	4	88	6
87	3	89	4
88	6	91	3
89	1	92	2
90	2	93	2
91	2	94	2
92	6	95	2
93	3	97	1
94	3	101	1
95	2	102	1
96	3	103	2
101	1	106	1
105	1	108	1
112	1	109	1
122	1	112	1
		121	1
		126	1

mahi
 26
 0.50
 little skate
 f
 27
 11
 1.25
 chain dog
 f
 30
 0.50
 7.00
 loligo
 16
 0.25
 red hake
 15
 16
 18
 18
 14
 16
 0.50

star
 TED
 29.00
 1.00
 0.75
 0.50
 0.25
 31.50
 little skate
 f
 26
 26
 26
 26
 4.50
 4.50
 monk
 19
 32
 39
 18
 22
 17
 23
 18
 18
 33
 20
 20
 13
 7.00
 red hake
 17
 18
 17
 17
 0.50

August 9 Scallop Net Comparative Tow

haul 3
 lat/long-s 3749.4 7423.5
 lat/long-e 3752.9 7422.8
 time s/e 17:46 19:24
 weather NE-10 3
 depth/temp 33-36 80.4
 port star
 con TED
 bushels 6.5 7.5
 ave wt 55.3 55.3
 scall cat 359.1 414.4
 sam wt 13.5 13.0

haul 3
 port star
 con TED
 scall 28.50 scall 30.00
 shell 3.00 crab 1.00
 sponge 1.00 shell 1.50
 star 0.50 sponge 1.00
 crab 0.75 star 0.50
 33.75 34.00
 monk monk
 18 37
 21 19

Ht.	port con Frequency	Ht.	star TED Frequency
53	1	63	1
62	1	69	1
69	2	70	3
71	1	71	1
72	1	73	1
75	1	75	3
76	1	76	2
77	4	77	2
78	1	78	4
79	2	79	2
81	1	80	2
82	2	81	2
83	3	82	4
84	4	83	7
85	5	85	6
86	2	86	4
87	1	87	3
88	4	88	3
89	4	89	5
90	3	90	3
91	3	91	2
92	2	92	4
93	3	93	1
95	2	94	3
96	1	95	2
100	1	99	1
102	2	100	1
105	1	107	1
107	1	114	2
110	2	115	1
111	1	119	1
113	1	128	1
116	1	134	1
127	1		
128	1		
130	2		

star 0.25 2.50
 red hake little skate
 18 f
 24
 0.15 25
 loligo 2.00
 13
 red hake
 0.25 27
 little skate 0.50
 f
 24 4-spot
 26 19
 22
 2.25 0.30

August 9 Scallop Net Comparative Tow

haul 4
 lat/long-s 3752.1 7422.6
 lat/long-e 3748.7 7423.0
 time s/e 19:51 21:28
 weather NE-10 3
 depth/temp 33-36 80.4
 port star
 con TED
 bushels 21.0 14.8
 ave wt 55.3 55.3
 scall cat 1160.3 814.9
 sam wt 12.5 13.0

haul 4
 port star
 con TED
 scall 24.00 scall 29.00
 sponge 1.50 shell 1.00
 crab 1.50 crab 1.50
 shell 3.00 sponge 0.50
 star 0.50 star 0.25
 30.50 32.25

little skate monk
 f 18
 26 18
 25 14
 9 36
 18
 2.00 19
 25
 m 23
 11 20
 16
 0.10 18
 21
 21
 red hake
 16
 17 3.00
 20
 16 red hake
 15 20
 18 23
 28
 0.50 16
 monk 1.00
 22
 19 loligo
 20 12
 19
 22 0.25
 19
 little skate
 f
 1.00 27
 4-spot 27
 33
 2.50
 1.00
 chain dog
 m
 36
 1.00

Ht.	port con Frequency	Ht.	star TED Frequency
61	1	67	1
62	1	68	3
70	3	70	1
71	3	71	2
73	2	72	4
75	1	73	5
76	2	75	3
77	4	76	3
78	3	77	3
79	5	78	10
80	6	79	2
81	6	80	2
82	3	81	5
83	2	82	8
84	4	83	7
85	8	84	7
86	1	85	3
87	4	86	3
88	2	87	1
89	2	88	4
90	1	89	3
91	5	90	1
92	3	91	1
94	1	92	4
95	1	93	1
101	1	95	1
104	1	99	1
105	1	101	1
112	1	102	1
118	2	104	1
120	1	105	2
122	1	108	2
133	1	109	1
		117	1
		118	2
		119	1

August 10 Scallop Net Comparative Tow

haul 1
 lat/long-s 3747.9 7423.2
 lat/long-e 3750.7 7422.5
 time s/e 14:00 15:22
 weather SE-10 1
 depth/temp 34-36 80.4
 port star
 TED con
 bushels 17.8 13.6
 ave wt 55.3 55.3
 scall cat 980.7 751.4
 sam wt 13.0 13.5

haul 1
 port star
 TED con
 scall 30.00 scall 26.50
 shell 1.50 shell 1.25
 sponge 0.75 sponge 1.00
 crab 1.00 crab 0.50
 star 0.50 star 0.50
 33.75 29.75

Ht.	port TED Frequency	Ht.	star con Frequency
63	1	42	1
65	2	53	1
68	1	62	1
69	3	63	2
71	1	65	1
72	5	66	1
74	3	69	2
75	6	71	1
76	2	73	2
77	3	74	1
78	5	75	3
79	4	76	1
80	6	77	2
81	2	78	1
82	7	80	2
83	5	81	5
84	3	82	8
85	4	83	6
86	2	84	7
87	3	85	4
88	6	86	6
89	1	87	2
90	2	88	1
91	2	89	1
92	1	90	1
94	1	91	1
95	1	92	1
96	1	93	1
98	1	94	1
99	1	95	1
103	1	97	1
104	1	101	1
108	2	105	1
115	1	106	1
118	2	107	1
125	1	108	1
		110	1
		112	1
		115	1
		116	1
		117	1
		118	1
		125	1

monk	monk
31	69
17	23
22	30
20	22
18	
19	11.00
21	
17	red hake
22	19
	15
2.50	18
	17
little skate	16
m	17
12	17
11	19
	17
0.25	18
	16
f	16
11	16
0.10	1.25
red hake	
18	
23	
16	
21	
0.75	
loligo	
12	
0.25	

August 10 Scallop Net Comparative Tow

haul 2
 lat/long-s 3750.5 7422.6
 lat/long-e 3750.2 7422.5
 time s/e 15:49 17:25
 weather SE-10 1
 depth/temp 34-36 80.4
 port star
 TED con
 bushels 14.5 15.5
 ave wt 55.3 55.3
 scall cat 801.1 856.4
 sam wt 13.5 14.0

haul 2
 port star
 TED con
 scall 32.00 scall 25.50
 shell 1.50 shell 2.00
 sponge 0.50 sponge 3.00
 crab 1.00 crab 1.00
 star 0.50 star 0.50
 35.50 32.00
 monk little skate
 13 f
 15 25
 19 27

Ht.	port TED Frequency	Ht.	star con Frequency
44	1	69	2
46	1	72	2
60	1	74	2
63	1	75	2
64	2	76	3
65	1	77	1
66	1	78	5
68	2	79	2
71	1	80	3
73	1	82	4
74	1	83	4
75	3	84	3
76	1	85	10
77	3	86	1
78	3	87	3
79	1	88	3
80	8	89	5
81	2	91	4
82	5	92	7
83	6	93	4
84	6	94	1
85	5	95	1
86	2	96	2
87	5	97	2
88	1	103	1
89	4	110	1
90	3	115	2
91	1	123	1
92	7		
93	3		
95	1		
98	1		
103	2		
105	3		
107	1		
108	1		
112	3		
113	1		
115	1		
118	1		
123	1		
124	1		

0.30 2.00
 red hake monk
 16 27
 17 20
 18 20
 15 20
 18 34
 17 22
 17
 17 2.00
 0.75 red hake
 21
 15
 15
 16
 0.50

August 10 Scallop Net Comparative Tow

haul 3
 lat/long-s 3750.1 7422.3
 lat/long-e 3751.2 7422.5
 time s/e 17:55 19:41
 weather SE-10 1
 depth/temp 34-36 80.4
 port star
 TED con
 bushels 13.5 10.5
 ave wt 55.3 55.3
 scall cat 745.9 580.1
 sam wt 15.0 12.0

haul 3
 port
 TED
 scall 31.00 scall 26.00
 shell 2.00 sponge 1.50
 crab 0.75 star 0.50
 sponge 1.00 shell 2.00
 star 0.25 crab 0.75
 35.00 30.75

little skate monk

Ht.	port TED Frequency	Ht.	star con Frequency
51	1	59	1
66	1	63	1
69	1	64	1
72	3	65	3
73	2	68	1
74	2	71	2
76	1	72	3
77	2	74	1
78	6	75	3
79	2	76	4
80	2	77	1
81	2	79	3
82	10	80	1
83	1	81	1
84	8	83	3
85	4	84	5
86	1	85	5
87	7	86	1
88	13	87	3
89	4	88	6
90	2	89	2
91	1	90	3
92	2	91	3
93	4	92	3
95	2	93	1
101	1	94	1
102	1	96	2
105	1	97	1
107	1	104	1
108	1	105	1
109	1	115	1
110	1	120	1
118	1	124	1
120	1	125	1
123	1	127	1
127	1	128	1
128	1		
129	1		
130	1		

f 20
 16 17
 28 19
 17 33
 10 22
 12 18
 13 20
 3.00 28
 15
 m 4.50
 11
 0.10 red hake
 16
 16
 monk
 21 0.25
 20
 31 little skate
 20 f
 21 25
 33 27
 18 28
 18
 21 5.00
 15
 21
 22
 6.00
 red hake
 19
 17
 20
 0.50

August 13 Scallop Net Comparative Tow

haul 1
 lat/long-s 3750.3 7422.9
 lat/long-e 3750.8 7422.5
 time s/e 12:24 13:56
 weather N-10 2
 depth/temp 33-35 78.3
 port star
 con TED
 bushels 12.0 12.3
 ave wt 57.0 57.0
 scall cat 684.0 698.3
 sam wt 13.0 13.0

haul 1
 port
 con
 scall 25.00 scall 28.00
 star 0.25 sponge 1.00
 shell 0.50 crab 0.75
 sponge 0.75 star 0.25
 crab 0.50 shell 1.00
 27.00 31.00

red hake monk

16 17

17 22

16 18

26 19

21 18

18 21

16 21

16 17

18 19

15 17

19 20

1.50 2.00

monk red hake

41 21

24 19

22 17

20 17

3.50 0.50

little skate

f

24

27

2.25

Ht.	port con Frequency	Ht.	star TED Frequency
48	1	71	1
60	1	72	1
62	1	73	1
63	1	74	1
64	1	75	3
65	4	76	5
67	1	77	4
68	3	78	2
69	1	79	4
70	1	80	2
71	1	81	4
72	1	82	9
73	4	83	3
74	2	84	5
75	3	85	4
76	3	86	5
77	2	87	5
78	3	88	6
79	4	89	3
80	1	91	3
81	8	92	2
82	6	93	3
83	8	94	4
84	3	95	4
85	11	96	1
86	3	97	2
87	1	98	1
88	3	99	1
89	1	104	1
90	4	106	1
92	5	110	1
93	1	119	1
94	2	126	1
97	1		
98	2		
99	1		
101	1		
102	1		
103	1		
104	1		
105	1		
108	1		
111	1		
118	1		

August 13 Scallop Net Comparative Tow

haul 2
 lat/long-s 3750.8 7422.6
 lat/long-e 3750.9 7422.7
 time s/e 14:17 16:16
 weather N-10 2
 depth/temp 33-35 78.3
 port star
 con TED
 bushels 17.5 15.5
 ave wt 57.0 57.0
 scall cat 997.5 883.5
 sam wt 14.0 13.0

haul 2
 port
 con
 scall 25.00 scall 26.00
 shell 2.00 shell 1.50
 sponge 2.00 sponge 2.50
 crab 0.50 crab 0.50
 star 0.50 star 1.00
 30.00 31.50

monk
 20
 23
 17
 21
 23
 32
 17
 monk
 32
 24

3.00
 22
 23
 21
 15
 2.50

0.75
 red hake
 19
 27
 2.50
 red hake
 18
 17
 18
 26
 25
 22
 19
 17
 15
 15
 17

2.00

Ht.	port con Frequency	Ht.	star TED Frequency
60	1	62	1
63	1	64	1
67	1	67	1
68	2	68	2
70	1	69	2
73	1	70	2
74	3	72	1
75	6	73	2
77	3	74	2
78	5	75	2
80	3	76	5
81	5	78	6
82	3	79	4
83	4	80	6
84	6	81	3
85	3	83	2
86	3	84	3
87	3	85	5
88	6	86	4
89	4	87	11
90	4	88	9
91	3	89	3
92	5	90	5
94	2	91	2
95	1	92	1
99	2	93	1
102	1	98	3
106	1	99	1
108	1	102	1
111	1	113	1
120	1	117	1
127	1		

August 13 Scallop Net Comparative Tow

haul 3
 lat/long-s 3751.0 7422.6
 lat/long-e 3750.6 7422.5
 time s/e 16:40 18:35
 weather N-10 2
 depth/temp 33-35 78.3
 port star
 con TED
 bushels 21.0 17.3
 ave wt 57.0 57.0
 scall cat 1197.0 983.3
 sam wt 16.5 13.0

haul 3
 port star
 con TED
 scall 30.00 scall 31.00
 sponge 1.00 shell 1.50
 star 0.50 sponge 0.50
 crab 1.50 crab 0.50
 shell 1.00 star 0.25
 34.00 33.75

Ht.	port con Frequency	Ht.	star TED Frequency
50	1	56	1
53	1	60	1
63	1	63	1
65	2	69	2
68	4	70	3
69	3	71	1
70	1	72	2
72	3	73	4
73	5	75	2
74	1	76	4
75	4	77	1
76	4	78	3
77	2	79	7
78	13	80	5
79	5	81	4
80	9	82	8
81	5	83	3
82	9	84	4
83	6	85	7
84	3	86	8
85	10	87	2
86	4	88	6
87	5	89	7
88	9	90	3
89	4	91	3
90	3	92	3
91	2	93	3
92	5	94	2
93	2	95	2
95	3	96	2
97	1	98	1
101	1	105	1
102	1	127	1
103	1	134	1
109	2		
122	1		

monk
 22 23
 34 26
 35 20
 16 18
 22 18
 31 18
 22 20
 17 21
 20
 18 1.75
 4.00 monk
 28
 red hake 24
 16 21
 16 17
 16 21
 21
 17 2.00
 16
 16 little skate
 16 m
 15 10
 1.50 0.10

haul 4
 lat/long-s 3750.7 7422.3
 lat/long-e 3750.0 7422.7
 time s/e 19:00 20:43
 weather
 depth/temp no data

video taken

August 16 Scallop Net Comparative Tow

haul	1	
lat/long-s	3749.9	7422.9
lat/long-e	3750.5	7422.7
time s/e	12:57	14:50
weather	E-15	4
depth/temp	33-35	77.7
	port	star
	TED	con
bushels	8.5	9.0
ave wt	55.3	55.3
scall cat	469.6	497.3
sam wt	14.5	13.0

haul	1		
	port		star
	TED		con
scall	31.00	scall	27.50
shell	0.75	shell	1.00
crab	0.50	star	0.50
star	0.25	sponge	0.25
	32.50	crab	0.75
			30.00

little skate		monk
f		19
27		21
23		20

2.25		31
		20
		23

monk		21
24		21
30		20
21		21
19		18

22		
22		4.50
35		

4.25		little skate
		f
		28
		24
		30

		4.00
--	--	------

Ht.	port TED Frequency	Ht.	star con Frequency
54	1	60	1
56	1	66	1
65	1	69	1
70	1	70	2
71	1	72	2
72	3	73	2
74	2	75	3
75	5	76	4
77	2	77	1
79	3	79	5
80	2	80	4
82	4	82	6
83	6	83	8
84	5	84	4
85	8	85	4
86	4	86	8
87	7	87	4
88	5	88	4
89	8	89	2
90	4	90	5
91	2	91	1
92	4	92	3
93	3	93	3
94	2	94	3
95	4	95	3
96	2	97	1
98	3	99	1
101	2	100	1
107	1	101	1
108	1	102	1
109	1	106	1
115	1	111	1
121	1	123	1
125	1	125	1

August 16 Scallop Net Comparative Tow

haul 2
 lat/long-s 3750.4 7422.9
 lat/long-e 3752.7 7422.6
 time s/e 15:10 17:08
 weather E-15 4
 depth/temp 33-35 77.7
 port star
 TED con
 bushels 9.0 9.8
 ave wt 55.3 55.3
 scall cat 497.3 541.5
 sam wt 12.5 15.0

haul 2
 port star
 TED con
 scall 25.00 scall 24.50
 crab 0.50 crab 2.00
 star 0.25 shell 1.00
 shell 0.75 sponge 1.50
 sponge 0.75 star 0.50
 27.25 29.50

little skate monk
 f 20
 25 35
 23 23
 1.25 33
 25 25
 monk 37
 31 32
 26 20
 23 22
 24 23
 19 20
 31 18
 20
 4.00 10.00

Ht.	port TED Frequency	Ht.	star con Frequency
46	1	51	1
55	1	55	1
57	1	62	1
65	1	64	1
69	2	67	2
70	2	69	3
72	1	72	2
73	2	73	2
74	3	74	1
75	2	75	3
76	3	76	3
78	5	77	2
79	4	78	4
80	3	79	3
81	4	80	8
82	6	81	6
83	5	82	1
84	7	83	6
85	2	84	5
86	2	85	4
87	5	86	4
88	4	87	3
89	1	88	6
90	2	89	5
92	3	90	4
93	3	91	3
94	2	92	4
95	1	95	1
97	1	97	1
100	1	102	1
101	1	105	1
105	1	110	1
112	2	120	1
125	1	122	1
128	1	129	1
		138	1

little skate
 m 27
 2.00
 f 22
 1.00

August 16 Scallop Net Comparative Tow

haul 3
 lat/long-s 3752.8 7422.6
 lat/long-e 3751.2 7422.4
 time s/e 17:27 19:29
 weather E-15 4
 depth/temp 33-35 77.7
 port star
 TED con
 bushels 16.0 20.0
 ave wt 55.3 55.3
 scall cat 884.0 1105.0
 sam wt 13.0 14.0

haul 3
 port star
 TED con
 scall 28.00 scall 31.00
 sponge 0.50 sponge 2.00
 star 1.00 shell 0.50
 shell 0.50 crab 1.50
 crab 1.00 star 0.25
 31.00 35.25

Ht.	port TED Frequency	Ht.	star con Frequency
68	2	58	1
69	1	63	1
70	1	65	1
71	1	67	1
72	1	68	1
73	3	69	1
74	2	70	1
75	2	71	2
76	1	72	7
77	2	73	2
78	3	74	3
80	6	75	2
81	3	76	3
82	4	77	1
83	4	78	7
84	6	79	5
85	4	80	3
86	4	81	2
87	4	82	11
88	4	84	5
89	1	85	9
90	4	86	6
91	1	88	9
92	3	89	2
93	2	90	3
94	1	91	3
95	2	92	3
96	1	94	2
97	1	96	2
103	1	98	3
104	1	108	1
112	1	110	1
115	1	132	1
120	1		
122	1		
126	1		
127	2		

monk monk
 23 33
 23 20
 19 22
 24 32
 15 25
 19 23
 18 21
 20
 17
 red hake 5.00
 19
 17 little skate
 15 f
 13 25
 19 26
 16
 17 2.00
 18
 0.50 loligo
 16
 little skate 0.25
 f
 28 red hake
 17
 17
 18
 16
 16
 16
 16
 17
 0.75

August 16 Scallop Net Comparative Tow

haul	4	
lat/long-s	3751.2	7422.4
lat/long-e	3750.8	7422.1
time s/e	19:55	21:38
weather	E-20	4
depth/temp	33-35	77.7
	port	star
	TED	con
bushels	15.8	18.0
ave wt	55.3	55.3
scall cat	870.2	994.5

August 18 Scallop Net Comparative Tow

haul	1	
lat/long-s	3750.5	7422.7
lat/long-e	3752.2	7422.1
time s/e	12:42	14:28
weather	E-10	3
depth/temp	33-36	77.9
	port	star
	con	TED
bushels	13.0	14.5
ave wt	55.5	55.5
scall cat	721.5	804.8
sam wt	13.0	14.0

haul	1		
	port		star
	con		TED
scall	27.00	scall	26.00
shell	1.00	sponge	1.00
crab	2.00	crab	0.25
star	2.00	star	0.25
sponge	1.00	shell	1.00
	33.00		28.50

	port	Ht.	star
	con		TED
Ht.	Frequency		Frequency
48	1	57	1
60	1	66	2
62	1	67	2
64	1	70	1
69	1	72	1
70	1	73	2
72	3	74	1
74	1	78	3
75	2	79	1
76	3	80	1
77	1	81	4
78	1	82	4
79	1	83	6
80	2	84	4
81	3	85	2
82	4	86	3
83	5	87	1
84	4	88	7
85	6	89	4
86	5	90	3
87	3	91	4
88	5	92	6
89	4	93	2
90	3	94	2
91	2	95	1
92	3	97	2
93	1	98	1
94	5	99	2
95	2	105	1
102	1	107	2
103	1	108	1
104	1	110	2
105	1	113	2
106	1	116	1
108	2	117	1
110	1	119	1
118	1	120	1
119	1	122	1
122	1	126	1
130	1	129	1

	loligo	4-spot
	12	22
	0.15	0.25
	little skate	red hake
	f	15
	12	16
	0.10	0.20
	monk	monk
	15	14
	20	
	24	0.10
	19	
	18	little skate
	14	f
	16	26
	39	18
	33	
	25	1.25
	14	
	6.50	
	red hake	
	16	
	19	
	18	
	15	
	0.35	

August 18 Scallop Net Comparative Tow

haul	2	
lat/long-s	3752.3	7422.3
lat/long-e	3750.4	7422.4
time s/e	14:54	16:53
weather	E-10	3
depth/temp	33-36	77.9
	port	star
	con	TED
bushels	20.0	14.0
ave wt	55.5	55.5
scall cat	1110.0	777.0
sam wt	14.0	13.5

haul	2		
	port		star
	con		TED
scall	30.00	scall	27.00
shell	0.75	shell	2.00
star	0.25	star	0.25
sponge	0.25	sponge	0.25
crab	0.25	crab	0.50
	31.50		30.00

	port		star
	con		TED
Ht.	Frequency	Ht.	Frequency
60	1	59	1
65	3	62	2
66	1	66	1
67	2	67	2
68	2	68	2
69	1	70	1
70	4	72	3
71	3	73	5
72	4	74	4
74	2	75	1
75	2	76	1
76	1	77	5
77	4	78	4
78	6	79	6
79	3	80	5
80	7	81	3
81	4	82	5
82	11	83	5
83	4	84	6
84	2	85	7
85	5	86	5
86	6	87	4
87	2	88	8
88	8	89	3
89	2	90	6
90	3	94	3
91	2	95	1
92	3	97	1
93	1	98	2
95	3	99	1
96	1	102	2
98	1	105	1
100	1	115	1
102	1		
107	1		
111	1		
125	1		

	red hake	monk
	15	28
	14	28
	18	22
	17	29
	19	18
	16	18
	16	22
		15
	0.50	
		3.25
	little skate	
	f	little skate
	26	f
	28	26
	15	
	27	1.00
	3.50	red hake
		18
	m	
	21	0.15
	0.50	
	monk	
	17	
	32	
	20	
	20	
	21	
	21	
	11	
	43	
	6.50	

August 18 Scallop Net Comparative Tow

haul	3	
lat/long-s	3750.1	7422.8
lat/long-e	3751.9	7422.1
time s/e	17:12	19:14
weather	E-15	3
depth/temp	33-36	77.9
	port	star
	con	TED
bushels	17.0	12.0
ave wt	55.5	55.5
scall cat	943.5	666.0
sam wt	14.5	15.0

haul	3		
	port		star
	con		TED
scall	29.00	scall	28.00
shell	1.25	shell	1.00
star	0.50	star	0.75
crab	0.50	sponge	0.25
sponge	0.25	crab	0.50
	31.50		30.50

Ht.	port con Frequency	Ht.	star TED Frequency
47	1	64	1
48	1	70	1
50	1	71	2
56	1	72	2
62	1	73	1
67	1	75	1
69	2	76	1
70	2	77	3
71	1	78	1
72	1	79	2
74	1	80	4
75	5	81	4
76	2	82	4
78	5	83	5
79	7	84	4
80	3	85	1
81	5	86	5
82	5	87	2
83	2	88	6
84	2	89	2
85	3	90	3
86	3	91	2
87	4	92	9
88	7	93	5
89	6	94	1
90	2	95	2
91	3	96	2
92	3	97	3
94	2	98	1
95	4	103	1
96	1	104	1
97	1	105	1
99	1	106	1
100	2	114	1
103	2	115	2
104	1	117	1
105	1	118	1
106	2	119	1
107	1	131	1
110	1		
124	1		

little skate f	18
	20
	22
	20
	25
	26
	26
	25
	28
	27
	6.00
	26
	little skate f
	1.25
	27
	15
	27
	2.50
	monk
	20
	25
	20
	22
	19
	19
	18
	18
	17
	3.25
	red hake
	20
	15
	17
	16
	18
	0.75

August 19 Scallop Net Comparative Tow

haul 2
 lat/long-s 3750.7 7422.7
 lat/long-e 3751.8 7422.0
 time s/e 15:50 17:43
 weather ESE-5 2
 depth/temp 33-36 79.0
 port star
 TED con
 bushels 16.0 18.5
 ave wt 55.5 55.5
 scall cat 888.0 1026.8
 sam wt 12.5 14.0

haul 2
 port star
 TED con
 scall 31.00 scall 32.00
 shell 2.00 sponge 0.50
 crab 0.50 crab 0.50
 star 0.50 shell 1.00
 sponge 0.50 star 0.50
 snail 1.00 34.50
 35.50

Ht.	port TED Frequency	Ht.	star con Frequency
61	1	65	2
67	1	67	2
68	1	68	1
70	1	72	4
72	2	73	1
74	2	74	1
75	2	75	4
76	1	77	2
77	4	78	5
78	8	79	1
79	2	80	5
80	3	81	1
81	1	82	7
82	3	83	7
83	5	84	1
84	2	85	7
85	8	86	5
86	6	87	1
87	1	88	3
88	3	89	4
89	2	90	5
90	4	91	1
91	4	92	2
92	2	93	1
93	4	95	1
95	3	96	1
108	2	100	2
120	1	104	1
128	1	113	1
		122	1
		123	1
		125	1
		127	1
		129	1
		131	1

monk 22
 21 25
 star 22
 con 20
 20 20
 21 20
 20 17
 16 17
 19 16
 14
 5.50
 6.00
 little skate
 f 4-spot
 25 31
 27
 28 0.30
 4.00
 little skate
 f
 red hake 27
 24 27
 20 26
 19
 17 3.00
 18
 18 m
 19 27
 15
 1.00 12
 1.50
 red hake
 16
 28
 16
 17
 18
 19
 23
 17
 16
 1.00
 loligo
 21
 0.30

August 19 Scallop Net Comparative Tow

haul	3	
lat/long-s	3751.8	7422.0
lat/long-e	3752.6	7422.0
time s/e	18:07	19:57
weather	SE-10	2
depth/temp	33-36	79.0
	port	star
	TED	con
bushels	16.3	18.3
ave wt	55.5	55.5
scall cat	901.9	1012.9
sam wt	13.0	13.5

haul	3		
	port		star
	TED		con
scall	28.50	scall	26.00
star	0.25	shell	0.75
shell	0.50	crab	0.25
sponge	0.25	star	0.50
crab	0.25	sponge	0.50
	29.75		28.00

4-spot		red hake
35		29
		18

star	0.50	
con		0.50

Ht.	port TED Frequency	Ht.	star con Frequency
56	1	67	1
61	1	68	1
63	1	70	2
64	1	71	3
67	1	72	3
68	1	73	1
70	1	74	3
71	1	75	1
72	6	76	2
73	5	77	2
74	1	78	7
75	4	79	8
76	6	80	4
77	1	81	4
78	4	82	6
79	2	83	4
80	3	84	4
81	2	85	5
82	6	86	5
83	6	87	3
84	6	88	9
85	8	89	1
86	1	90	4
87	3	91	1
88	3	92	6
89	3	94	2
90	1	95	3
91	3	96	1
92	6	100	1
95	2	103	1
97	1	105	1
102	1		
103	2		
105	1		
106	2		
120	1		

monk		monk
22		21
20		21
23		23
36		22
31		22
19		20
23		19
69		18
		17
14.50		17
		21
red hake		23
24		15
18		
18		3.50
17		

0.50

August 22 Scallop Net Comparative Tow

haul 2
 lat/long-s 3727.7 7438.1
 lat/long-e 3725.4 7439.0
 time s/e 11:37 12:50
 weather W-5 1
 depth/temp 30-31 79.9
 port star
 con TED
 bushels 9.0 9.25
 ave wt 54.5 54.5
 scall cat 490.5 504.1
 sam wt 13.0 13.0

haul 2
 port
 con
 scall 26.00 scall 29.00
 star 0.25 sponge 2.00
 shell 0.75 crab 0.50
 sponge 0.50 shell 0.50
 crab 0.50 32.00
 28.00

Ht.	port con Frequency	Ht.	star TED Frequency
43	2	38	1
45	1	49	1
46	2	52	2
49	1	56	1
54	2	57	1
58	2	58	1
65	1	65	1
72	2	75	1
74	1	76	1
76	1	77	1
78	1	78	1
80	4	79	1
81	1	80	2
82	7	81	4
83	4	82	1
84	4	83	2
85	5	84	3
86	4	85	7
87	6	86	7
88	4	87	3
89	4	88	11
90	4	89	4
91	3	90	6
92	3	91	5
93	4	92	7
94	2	93	1
95	4	94	2
105	2	95	4
107	2	96	2
110	1	97	1
141	1	98	3
		103	1

rosette sk
 f
 19
 19
 20
 20
 27
 1.50
 23
 23
 m
 21
 19
 22
 22
 7.00
 1.50
 little skate
 f
 27
 1.25
 0.50
 monk
 33
 23
 26
 20
 27
 22
 23
 25
 6.00
 little skate
 f
 20
 11
 0.50
 m
 19
 0.50
 clearnose
 m
 17
 0.25

August 22 Scallop Net Comparative Tow

haul	3	
lat/long-s	3725.9	7438.4
lat/long-e	3726.5	7438.9
time s/e	13:10	14:55
weather	W-5	1
depth/temp	30-32	80.4
	port	star
	con	TED
bushels	15.5	14.0
ave wt	54.5	54.5
scall cat	844.8	763.0
sam wt	13.0	15.0

haul	3		
	port		star
	con		TED
scall	28.00	scall	31.00
shell	3.50	star	0.50
crab	0.50	shell	2.00
sponge	0.50	crab	0.50
	32.50	sponge	0.25
			34.25

Ht.	port con Frequency	Ht.	star TED Frequency
44	1	53	1
45	1	55	2
47	1	56	1
49	1	58	1
52	1	59	1
53	2	62	2
56	1	72	3
58	2	74	1
59	1	75	1
72	2	77	2
76	1	78	2
79	3	80	6
81	2	81	7
82	12	82	6
83	3	83	2
84	11	84	1
85	5	85	7
86	4	86	5
87	4	87	7
88	9	88	12
89	5	89	2
90	4	90	8
91	1	91	6
92	3	92	6
93	1	93	3
94	4	94	5
96	1	95	2
97	1	96	2
98	2	98	1
101	1	100	1
105	1	101	1
127	1	132	1

monk		rosette sk
34		m
27		23
24		20
29		
29		1.00
22		
23		monk
25		27
22		23
17		21
31		21
23		18
24		23
7.50		2.50
little skate		chain dog
m		m
25		38
15		38
1.50		1.50
rosette sk		little skate
m		f
20		28
21		
1.50		1.50

August 22 Scallop Net Comparative Tow

haul 4
 lat/long-s 3727.4 7438.1
 lat/long-e 3725.9 7439.0
 time s/e 17:01 18:29
 weather calm 1
 depth/temp 30-32 80.4
 port star
 con TED
 bushels 16.5 15.3
 ave wt 54.5 54.5
 scall cat 899.3 833.9
 sam wt 13.5 13.5

haul 4
 port star
 con TED
 scall 26.00 scall 27.00
 sponge 3.75 sponge 2.00
 star 0.50 crab 0.75
 shell 2.00 star 0.50
 crab 0.75 shell 1.00
 33.00 31.25

chain dog monk
 f 27
 38 24

Ht.	port con Frequency	Ht.	star TED Frequency
47	1	48	1
58	1	53	1
66	1	54	1
75	1	55	1
76	3	56	1
78	1	57	1
79	1	74	2
80	7	75	2
81	1	76	2
82	6	77	2
83	4	78	3
84	9	79	4
85	7	80	2
86	6	81	3
87	4	82	3
88	3	83	9
89	2	84	3
90	6	85	9
91	2	86	6
92	6	87	3
93	3	88	4
95	2	89	8
96	2	90	3
98	2	91	4
106	1	92	4
110	2	94	3
111	2	95	1
123	1	96	1
125	1	99	1
		105	1
		113	1

0.75 25
 18
 monk 28
 22 26
 25 19
 22 24
 22 24
 33 17
 22
 41
 25
 20 4-spot
 22 21
 24
 30 0.25
 24
 10.00
 4-spot
 21
 0.25

haul 5
 lat/long-s 3726.1 7438.9
 lat/long-e 3728.0 7437.7
 time s/e 18:49 19:50
 weather calm 1
 depth/temp 30-32 80.4
 port star
 con TED
 bushels 9.0 9.0
 ave wt 54.5 54.5
 scall cat 490.5 490.5

August 23 Scallop Net Comparative Tow

haul 1
 lat/long-s 3725.9 7439.7
 lat/long-e 3727.5 7438.3
 time s/e 9:55 11:25
 weather calm 1
 depth/temp 30-33 81.3
 port star
 TED con
 bushels 12.3 12.3
 ave wt 57.0 57.0
 scall cat 698.3 698.3
 sam wt 14.0 12.5

haul 1
 port star
 TED con
 scall 30.00 scall 31.00
 shell 0.25 star 0.25
 crab 0.50 shell 0.25
 star 0.25 crab 1.00
 sponge 0.50 sponge 2.00
 31.50 34.50

Ht.	port TED Frequency	Ht.	star con Frequency
44	1	43	1
46	1	44	1
47	1	45	1
48	2	46	1
49	2	47	1
52	3	50	1
54	1	52	1
59	2	53	1
60	1	55	1
62	1	58	1
68	3	59	1
70	1	61	1
72	2	67	1
74	1	71	1
75	3	74	1
76	3	76	1
78	3	78	3
79	4	79	4
80	2	80	4
81	2	81	2
82	2	82	7
83	3	83	1
84	3	84	4
85	11	85	5
86	7	86	2
88	10	87	5
89	7	88	4
90	3	89	6
91	4	90	5
92	3	91	3
95	2	92	2
96	2	93	3
99	1	94	1
109	1	100	1
117	1	101	1
131	1	103	1
		112	2
		118	1
		119	1
		130	1

monk 23 monk 28
 22 24
 25 30
 23 22
 24 21
 21 23
 25 25
 19 21
 13 18
 22 22
 8.00 8.00
 4-spot 18 loligo 17
 0.25 0.30
 red hake 23
 0.30 0.30
 little skate f 27
 1.00 1.00

August 23 Scallop Net Comparative Tow

haul	2	
lat/long-s	3727.6	7437.9
lat/long-e	3725.3	7439.5
time s/e	11:45	13:17
weather	calm	1
depth/temp	30-33	81.3
	port	star
	TED	con
bushels	12.5	13.0
ave wt	57.0	57.0
scall cat	712.5	741.0
sam wt	13.0	12.5

haul	2		
	port		star
	TED		con
scall	28.00	scall	21.00
snail	0.75	shell	5.00
shell	0.50	crab	0.50
sponge	0.50	sponge	0.50
	29.75	star	0.25
			27.25

Ht.	port TED Frequency	Ht.	star con Frequency
44	2	49	1
46	2	54	1
48	2	55	2
50	1	57	1
53	1	59	1
54	3	63	1
55	1	72	1
56	1	73	1
58	1	74	1
64	1	76	2
67	1	78	1
68	1	79	1
71	1	80	6
77	3	81	1
78	4	82	4
79	3	83	4
80	4	84	6
81	2	85	4
82	4	86	4
83	1	87	6
84	6	88	6
85	7	89	1
86	3	90	3
87	7	91	4
88	6	92	3
89	2	93	1
90	2	94	1
91	3	95	2
92	3	96	1
93	2	100	1
95	2	101	1
96	1	104	1
100	1	107	1
111	1	129	1
123	1	132	1
128	1	139	1
129	1		

monk		rosette sk
23		m
23		20
22		
22		0.50
19		
21		f
24		19
2.50		0.50
chain dog		monk
f		22
37		24
		22
		23
1.00		16
		22
		1.00

haul 3
 lat/long-s 3726.1 7438.7
 lat/long-e 3728.4 7437.5
 time s/e 15:39 16:43
 weather S-5 1
 depth/temp 30-33 81.3
 port star
 TED con
 bushels 11.0 11.5
 ave wt 57.0 57.0
 scall cat 627.0 655.5
 sam wt 13.5 14.0

haul 3
 port star
 TED con
 scall 25.00 scall 31.00
 shell 0.50 crab 1.75
 crab 0.50 shell 0.50
 star 0.25 star 0.25
 sponge 0.25 sponge 0.50
 26.50 34.00

Ht.	port TED Frequency	Ht.	star con Frequency
47	1	46	1
50	1	47	2
51	1	49	2
52	1	51	1
56	1	54	1
73	1	57	1
75	1	58	1
76	1	60	1
78	2	61	1
79	1	66	1
80	3	71	1
81	3	73	1
82	4	74	1
83	5	76	1
84	3	78	2
85	6	79	4
86	2	80	6
87	6	82	5
88	4	83	7
89	7	84	3
90	3	85	10
91	3	86	3
92	3	87	4
93	1	88	5
94	1	89	6
98	1	90	6
99	1	91	5
100	1	92	3
106	1	93	2
109	1	94	2
113	1	95	3
114	1	97	2
121	2	99	1
129	1	100	1
134	1	101	1
		104	1

monk
 37 25
 24 21
 23 24
 26 15
 25 25
 22 39
 3.50 19
 20
 rosette sk 4.25
 f
 16 loligo
 20
 0.50
 0.50
 little skate
 f rosette sk
 23 f
 18
 1.00
 0.50
 loligo
 20
 0.50
 4-spot
 22
 0.30

haul 4
 lat/long-s 3728.4 7437.5
 lat/long-e 3725.4 7439.5
 time s/e 17:02 18:44
 weather S-5 1
 depth/temp 30-33 81.3
 port star
 TED con
 bushels 14.5 12.5
 ave wt 57.0 57.0
 scall cat 826.5 712.5

haul	1	
lat/long-s	3728.1	7437.4
lat/long-e	3724.9	7440.4
time s/e	14:27	16:12
weather	SW-5	1
depth/temp	31-33	80.4
	port	star
	con	TED
bushels	10.4	9.9
ave wt	58.0	58.0
scall cat	603.2	574.2
sam wt	14.0	15.0

haul	1		
	port		star
	con		TED
scall	27.00	scall	26.00
shell	2.00	shell	1.50
crab	0.25	sponge	1.50
star	0.25	crab	0.50
sponge	1.50	star	0.50
	31.00		30.00

Ht.	port con Frequency	Ht.	star TED Frequency
44	1	30	1
47	1	43	1
49	1	48	2
51	2	50	1
63	1	51	1
65	1	52	2
77	1	54	3
80	2	55	2
81	3	56	2
82	12	58	1
83	1	61	1
84	5	62	1
85	4	66	1
86	3	73	1
87	5	75	2
88	9	77	1
89	3	78	2
90	7	79	2
91	3	80	4
92	2	81	1
97	2	82	9
103	1	83	6
105	1	84	8
106	1	85	8
109	1	86	6
121	2	87	4
127	1	88	6
129	1	89	3
133	1	90	8
		91	6
		92	3
		93	4
		94	3
		95	1
		96	1
		118	1

monk	monk
21	31
26	24
38	25
24	23
24	27
27	22
23	26
20	23
22	20
24	22
27	
25	7.50
7.00	little skate
	f
little skate	16
m	
21	0.25
20	
	m
1.50	16
f	0.25
22	
0.75	
4-spot	
18	
0.25	

August 24 Scallop Net Comparative Tow

haul 2
 lat/long-s 3725.1 7440.7
 lat/long-e 3726.6 7438.4
 time s/e 16:37 17:37
 weather SW-5 1
 depth/temp 31-33 80.4
 port star
 con TED
 bushels 8.5 11.8
 ave wt 58.0 58.0
 scall cat 493.0 681.5
 skate
 sam wt 11.5 13.5

haul 2
 port star
 con TED
 scall 25.00 scall 20.00
 sponge 3.00 shell 3.00
 star 0.25 sponge 1.00
 crab 0.75 crab 0.50
 shell 1.50 24.50
 30.50

little skate little

f f
 28 26
 27 22
 24 23
 27 27
 4.00 20
 17
 m 29
 28
 7.50
 1.50
 monk
 monk 26
 22 22
 26
 23 1.00
 21
 22 4-spot
 23 19
 23 20
 25
 35 0.50
 5.50

Ht.	port con Frequency	Ht.	star TED Frequency
47	1	43	1
49	1	47	3
50	1	48	2
51	1	49	1
54	2	53	1
55	2	57	1
61	1	68	1
65	1	75	1
76	1	76	2
77	2	77	1
78	5	78	2
79	4	79	3
80	4	80	1
82	8	81	2
83	2	82	5
84	2	83	3
85	8	85	5
86	4	86	4
87	7	87	5
88	3	88	7
89	3	89	5
90	3	90	3
91	1	91	2
92	3	92	5
93	1	93	1
94	1	94	2
95	2	95	4
99	1	97	1
103	1	99	2
109	1	102	1
110	2	109	1
		111	1
		115	2
		124	1
		138	1

August 24 Scallop Net Comparative Tow

haul 3
 lat/long-s 3726.8 7438.2
 lat/long-e 3725.4 7439.2
 time s/e 17:55 20:01
 weather N-10 2
 depth/temp 31-33 80.4
 port star
 con TED
 bushels 16.8 12.0
 ave wt 58.0 58.0
 scall cat 971.5 696.0
 sam wt 14.0 11.5

haul 3
 port star
 con TED
 scall 30.00 scall 24.00
 star 0.25 star 0.50
 sponge 1.00 shell 1.00
 crab 0.75 crab 0.50
 shell 1.00 sponge 0.25
 33.00 26.25

rosette sk little skate
 m f
 16 21

port star
 con TED
 Frequency Frequency
 0.50 1.00

Ht.	port con Frequency	Ht.	star TED Frequency	monk	m
40	1	43	1	23	20
44	1	47	1	27	
50	2	48	1	39	1.00
51	1	53	1	26	
53	1	62	1	22	monk
54	1	68	1	21	26
61	1	73	1	38	20
63	1	74	1	23	23
68	1	75	1	24	23
71	1	76	1	23	22
72	1	77	3	27	23
73	2	78	4	27	21
74	2	79	4	23	22
75	2	80	2	25	24
76	1	81	1	19	26
77	5	82	3	22	22
78	6	83	1		34
79	3	84	6	12.00	32
80	6	85	1		23
81	7	86	6		
82	4	87	2		9.00
83	6	88	4		
84	4	89	2		4-spot
85	7	90	3		18
87	6	91	1		
88	10	92	4		0.15
89	4	93	1		
90	5	94	2		
91	4	95	1		
92	4	98	1		
93	1	108	1		
94	1	112	1		
95	1	116	1		
96	1	117	1		
98	1	118	1		
120	1	126	1		
132	1	135	1		
138	1				

August 25 Scallop Net Comparative Tow

haul 2
 lat/long-s 3728.4 7437.9
 lat/long-e 3725.0 7440.5
 time s/e 15:41 17:30
 weather SW-15 3
 depth/temp 30-33 78.6
 port star
 TED con
 bushels 5.8 6.8
 ave wt 58.0 58.0
 scall cat 333.5 391.5
 sam wt 12.0 12.5

haul 2
 port star
 TED con
 scall 20.00 scall 22.00
 shell 2.00 shell 2.00
 sponge 2.00 sponge 0.25
 crab 0.50 crab 0.50
 star 0.50 star 0.25
 25.00 25.00

Ht.	port TED Frequency	Ht.	star con Frequency
44	1	47	1
50	1	49	1
52	2	50	2
53	1	51	1
54	1	52	1
56	1	54	1
58	1	56	1
61	1	57	1
68	1	59	1
73	2	61	1
80	6	62	1
81	2	64	2
82	3	67	1
83	3	71	1
84	5	72	1
85	2	77	1
86	3	78	1
87	4	79	3
88	5	80	3
89	2	81	2
90	4	82	3
91	4	83	1
92	8	84	4
93	1	85	2
94	1	86	1
97	1	87	2
100	1	88	10
101	1	89	2
104	1	90	1
109	1	92	4
110	1	93	3
114	1	95	1
121	1	96	1
140	1	97	1
		98	1
		99	1
		103	1
		111	1
		115	1
		117	1
		119	1
		122	1
		125	1
		127	1
		129	1

monk monk
 23 23
 27 25
 24 34
 23 20
 23 36
 30 26
 33 24
 26 21
 28 25
 27 22
 25 23
 25 24
 27 20
 27 19
 38 22
 24
 10.50 32
 20
 little skate 27
 m 23
 26 27
 24
 1.50 27
 15.00
 little skate
 m 14
 18
 0.50
 f
 25
 1.00
 rosette sk
 m 19
 0.50
 windowpn
 25
 0.50

haul 3
 lat/long-s 3724.9 7440.3
 lat/long-e 3726.7 7438.0
 time s/e 17:53 19:21
 weather SW-15 3
 depth/temp 30-33 78.6

August 25 Scallop Net Comparative Tow

port star
 TED con
 bushels 14.0 15.0
 ave wt 58.0 58.0
 scall cat 812.0 870 .0

August 25 Scallop Net Comparative Tow

haul 4
 lat/long-s 3726.7 7437.9
 lat/long-e 3725.3 7439.6
 time s/e 19:46 21:38
 weather SW-15 3
 depth/temp 30-33 78.6
 port star
 TED con
 bushels 11.5 14.3
 ave wt 58.0 58.0
 scall cat 667.0 826.5
 sam wt 14.0 14.0

haul 4
 port star
 TED con
 scall 34.00 scall 26.00
 shell 1.50 star 0.50
 star 0.50 crab 0.50
 crab 0.50 shell 2.00
 36.50 sponge 1.50
 30.50

Ht.	port TED Frequency	Ht.	star con Frequency
46	1	48	2
47	1	50	2
48	1	51	1
49	1	52	2
50	1	53	1
55	1	54	1
56	1	55	3
58	1	57	6
61	1	58	1
68	1	59	3
71	1	64	1
72	3	70	1
73	2	72	1
74	1	75	1
75	2	76	3
76	1	77	2
77	2	78	4
78	4	79	4
80	4	80	5
81	5	81	3
82	8	82	2
83	4	83	3
84	5	84	6
85	5	85	3
87	7	86	3
88	10	87	6
89	6	88	3
90	3	89	3
91	2	90	4
92	3	91	3
94	1	92	5
95	1	93	2
98	1	94	1
105	1	95	3
112	1	97	1
113	1	100	1
118	1	117	1
119	1	124	1
121	1	125	1
		127	1
		129	1

little skate monk
 f 23
 29 24
 27 18
 16 23
 24 24
 26 24
 monk 22
 22 19
 23 24
 27 24
 33 23
 24 23
 22 25
 27 19
 27
 22 6.50
 37
 31
 9.00
 37
 0.75
 little skate
 m 27
 1.50
 4-spot
 22
 .25

August 26 Scallop Net Comparative Tow

haul 1
 lat/long-s 3728.3 7442.1
 lat/long-e 3726.8 7431.1
 time s/e 15:29 16:45
 weather SSW-5 2
 depth/temp 32-34 79.5
 port star
 con TED
 bushels 2.5 3.5
 ave wt 59.0 59.0
 scall cat 147.5 206.5
 sam wt 29.0 25.0

haul 2
 lat/long-s 3726.9 7443.1
 lat/long-e 3728.6 7442.0
 time s/e 17:07 17:57
 weather SSW-5 2
 depth/temp 32-34 79.5
 port star
 con TED
 bushels 2.8 3.5
 ave wt 59.0 59.0
 scall cat 162.3 206.5
 sam wt 11.0 10.0

Ht.	port con Frequency	Ht.	star TED Frequency	Ht.	port con Frequency	Ht.	star TED
55	1	69	1	82	1	75	1
77	1	79	1	83	2	81	1
79	1	80	1	85	1	82	1
81	1	82	2	88	3	83	1
82	3	83	1	89	4	85	3
83	5	85	2	90	2	87	1
84	2	86	3	91	1	88	4
85	7	87	5	92	2	89	2
86	1	88	3	93	2	90	1
87	8	89	5	96	1	92	6
88	4	90	5	100	1	93	1
89	5	91	4	101	1	95	2
90	6	92	5	110	2	96	2
91	3	93	5	112	1	97	2
92	5	94	1	116	1	98	1
93	3	95	2	117	1	102	1
95	4	96	1	122	3	106	1
97	1	97	1	123	2	107	3
98	8	98	3	124	1	112	2
99	1	103	3	125	1	116	1
102	1	105	2	126	1	125	1
105	3	107	1	136	1	132	1
108	1	109	1	137	1		
109	1	110	3	139	1		
111	1	112	1				
112	2	113	1				
113	1	114	1				
114	1	117	1				
115	1	118	3				
118	3	120	1				
119	1	122	1				
120	2	123	4				
123	3	126	2				
124	1	127	2				
125	1	128	1				
128	3	135	1				
129	1	138	2				
132	2						
133	1						
135	1						
139	1						

August 26 Scallop Net Comparative Tow

haul	4	
lat/long-s	3731.3	7440.7
lat/long-e	3728.6	7442.9
time s/e	19:51	21:08
weather	SSW-5	2
depth/temp	32-34	79.5
	port	star
	con	TED
bushels	5.3	5.8
ave wt	59.0	59.0
scall cat	309.8	339.3

haul	5	
lat/long-s	3728.6	7442.4
lat/long-e	3727.0	7442.6
time s/e	21:27	23:05
weather	SSW-5	2
depth/temp	32-34	79.5
	port	star
	con	TED
bushels	6.0	5.5
ave wt	59.0	59.0
scall cat	354.0	324.5