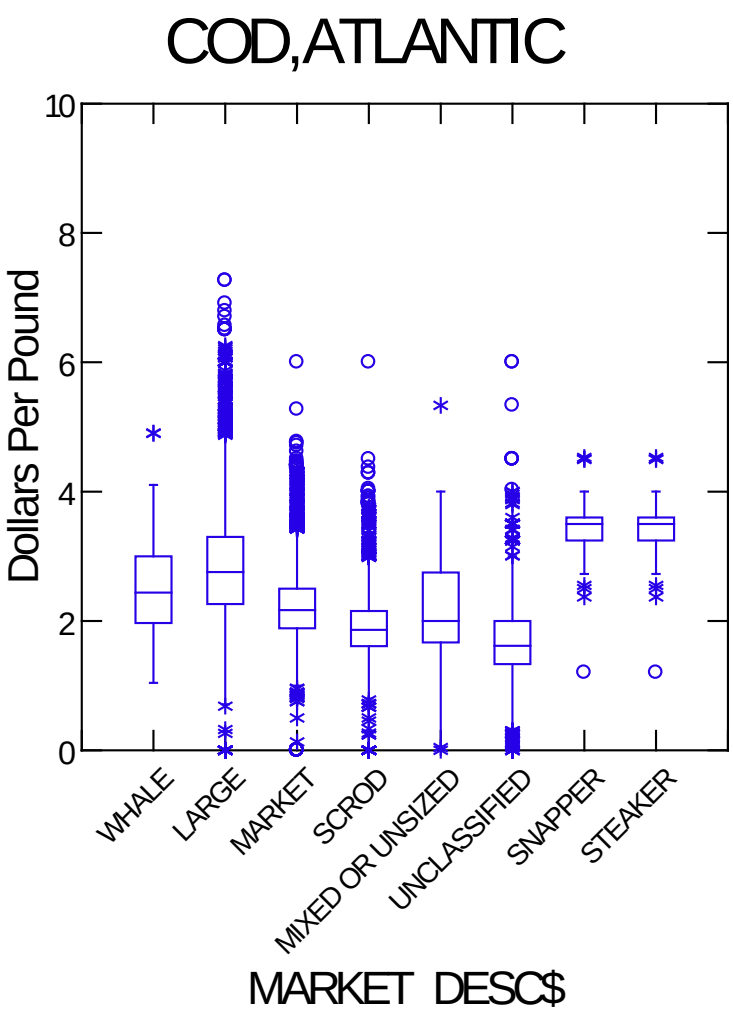
If minimum size restrictions are eliminated it is possible that the selectivity pattern may change for some or all species. This would depend, in part, on whether fishermen can make higher profits by targeting smaller fish. Whether this will occur depends on several factors, including whether there is a price differential for a species that is based on size, whether it is easy to target smaller fish, and the relative abundance of different size fish. If fishermen can catch smaller fish more quickly (reducing operating costs) then a change in selectivity is more likely.

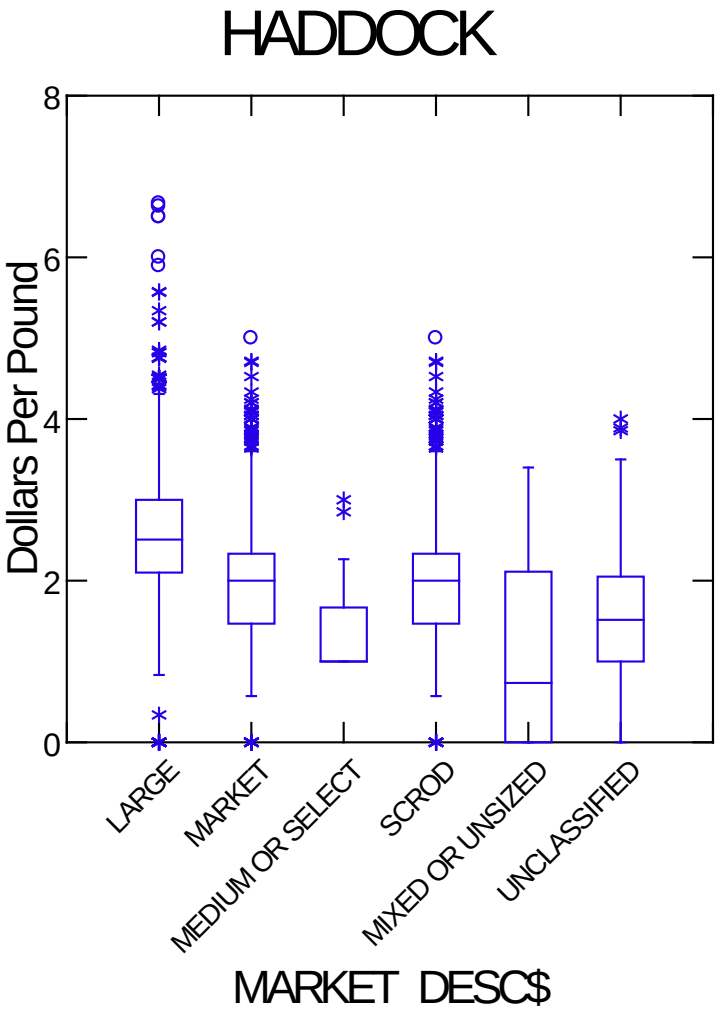
Price differential: If the price difference between large and small fish is large, then targeting small fish will only be profitable if the increased catch rates reduce operating costs sufficiently to outweigh the premium for larger fish. If the difference is small or non-existent it is more likely that small fish will be targeted since generally they are more abundant. 2011 dealer prices were examined for seven groundfish species. Prices are only available for fish that presumably met minimum size requirements; it is not clear if these prices reflect the price that may be received for smaller fish.

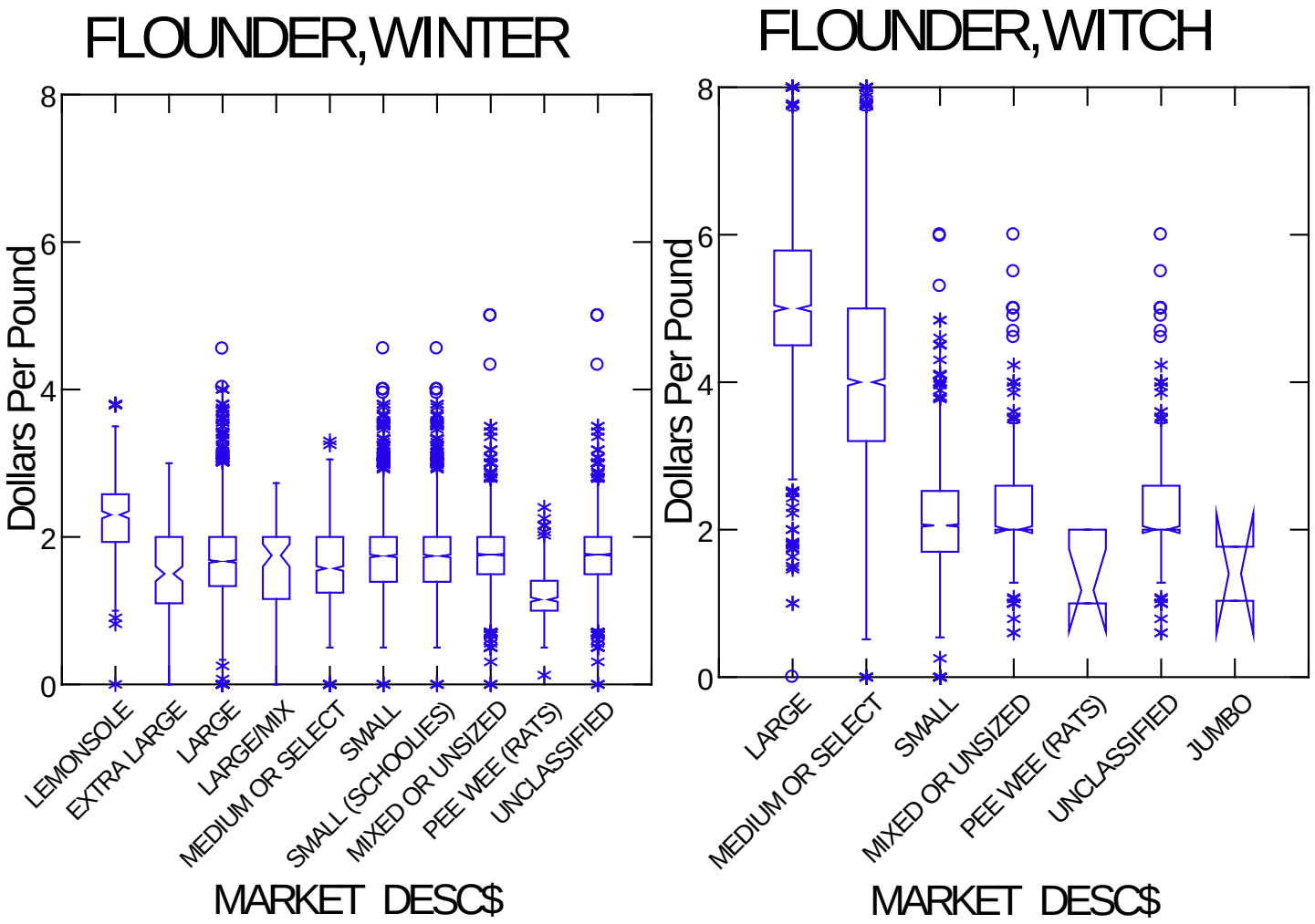
Each documented sale to a dealer was treated as a price observation, and box plots were created for each species by reported market category. Cod, haddock, plaice, witch flounder, white hake, and redfish generally show increasing price per pound as size increases. There are some exceptions, however – for example, market and scrod haddock had similar prices in 2011, whale cod prices were generally lower than large cod, and redfish prices were similar for all market sizes except large. Yellowtail flounder prices were generally similar for all market categories. Winter flounder prices were similar at all categories with the exception of lemon sole. Halibut prices were similar for all market categories.

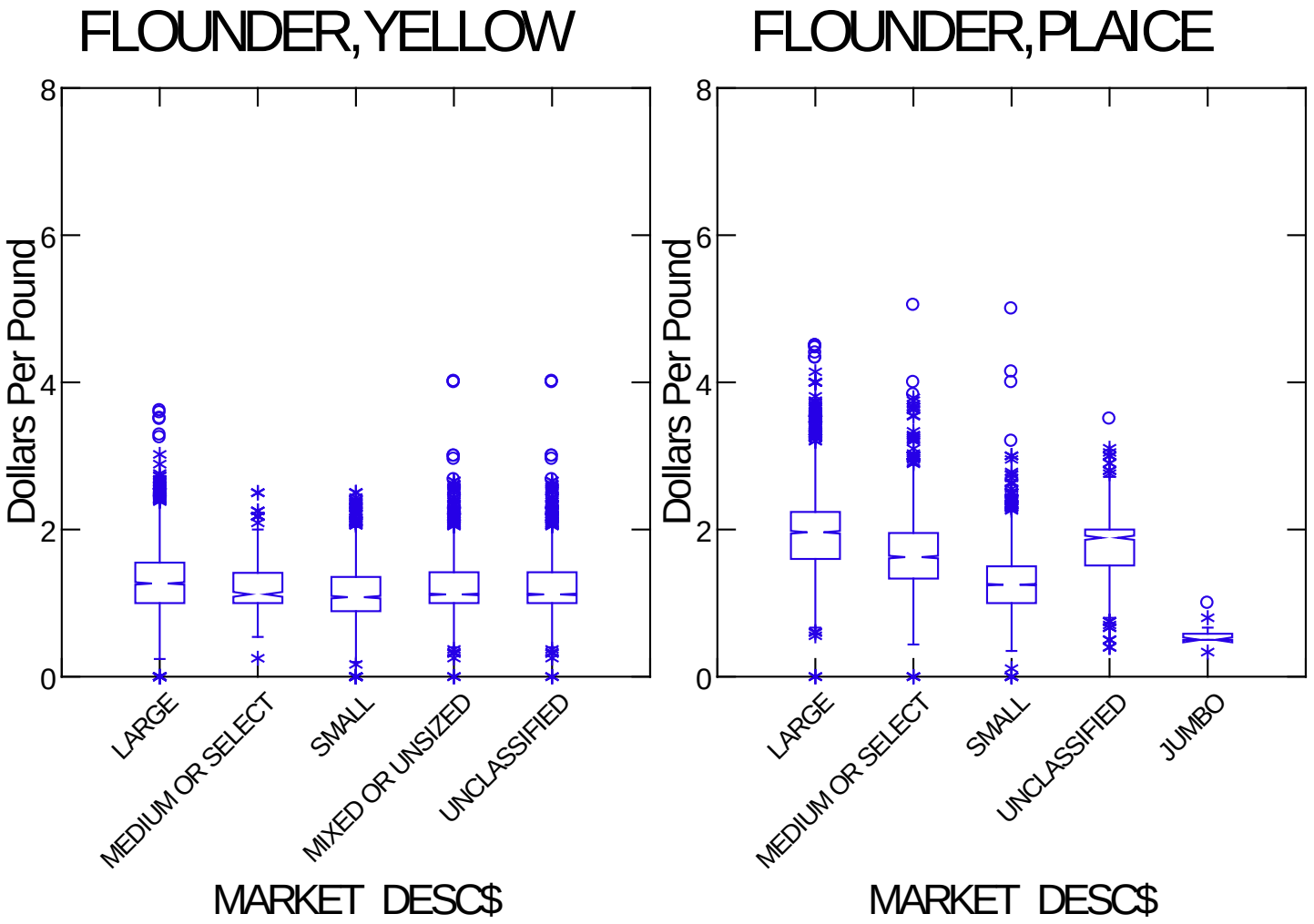
Ease of targeting: The ability to target smaller fish depends on a number of factors – relative abundance, spatial and temporal distribution of different sizes, and whether fishing practices need to be revised. Otter trawls can potentially change the number of small fish they catch simply by changing from diamond to square mesh. While there are numerous factors that affect selectivity, including time and area fished; this is one that is easily observed. 2011 observer data (NEFOP) was queried to determine the length-frequency of species catch with diamond and square mesh (without regard to mesh size). As can be seen in the accompanying plots, changing the type of mesh towed can change the size of fish caught for yellowtail flounder, winter flounder, and haddock. It appears to do little to affect the size of witch flounder and plaice that are caught.

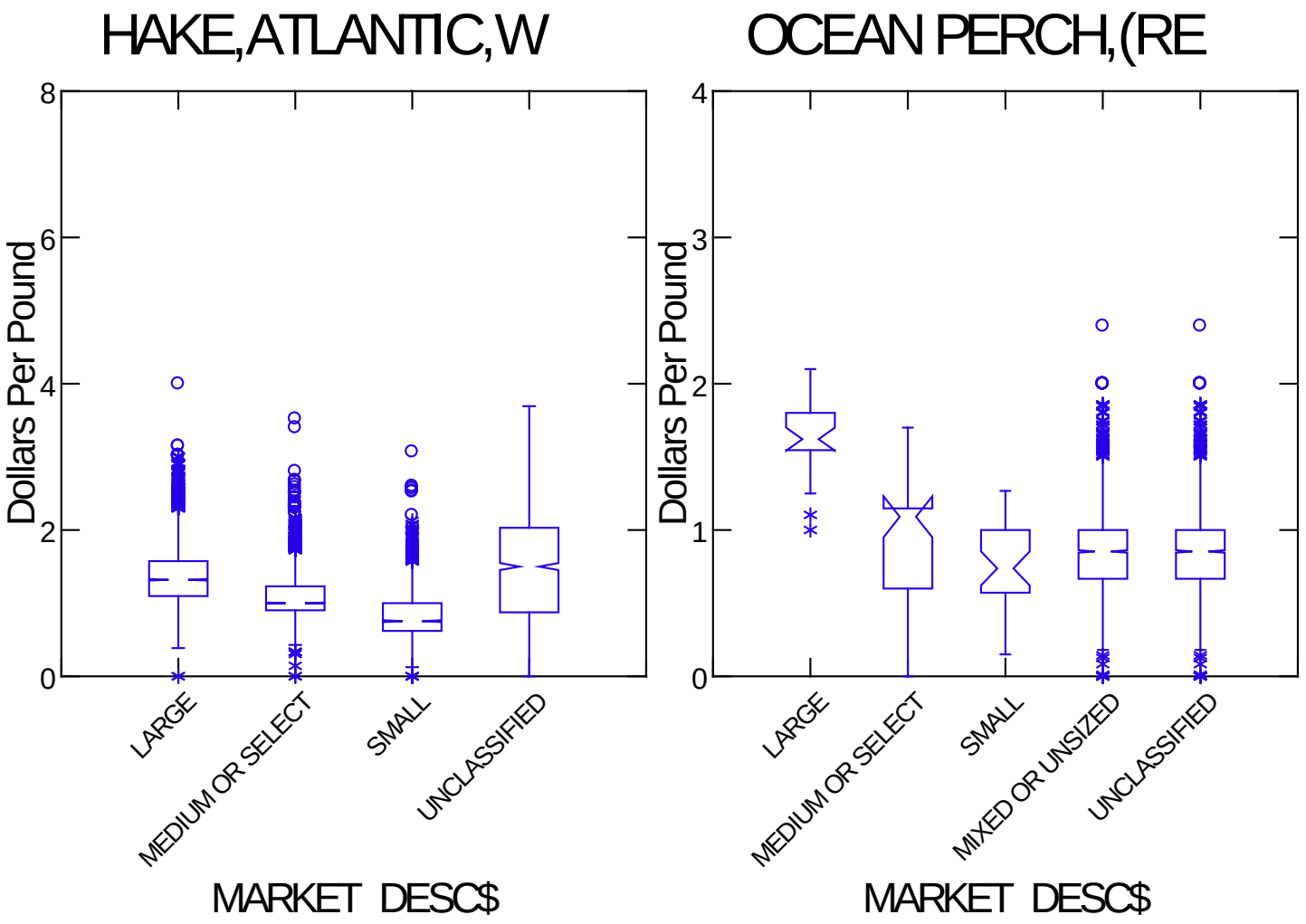
Based on these analyses, it would appear more probable that eliminating the minimum size could lead to a change in selectivity for yellowtail flounder and winter flounder than for other stocks. There is little price differential between the current sizes landed and simply changing the type of cod-end used can modify the size of fish caught. A change may be less likely to occur for cod because of the price differential between large and small fish.

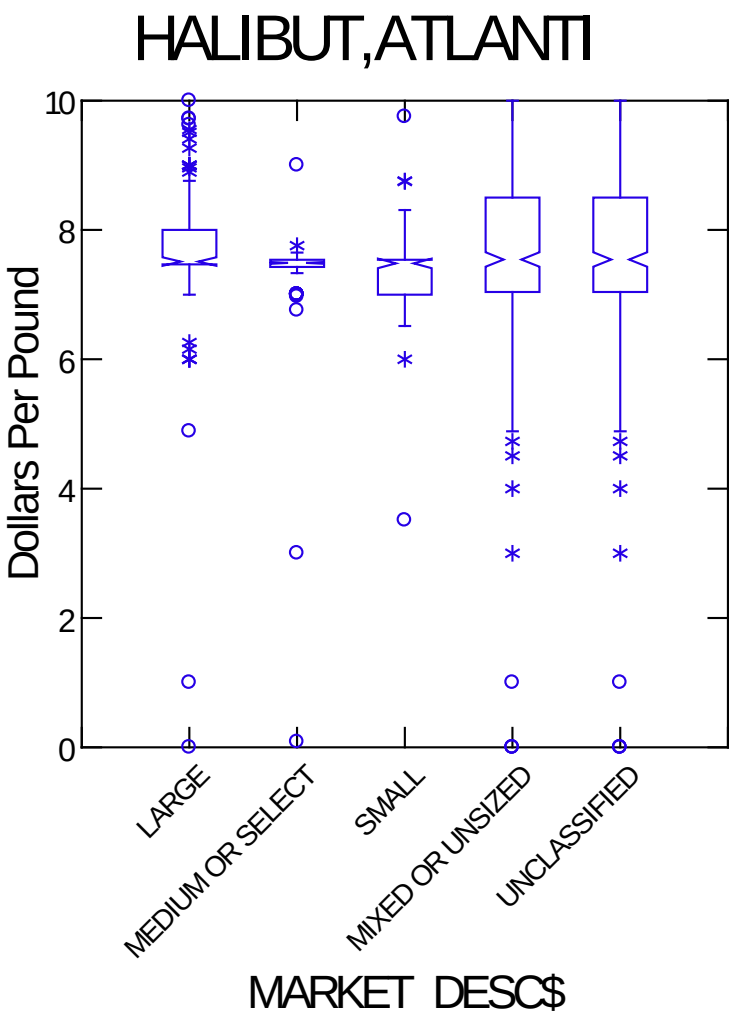

COD,ATLANTIC
Dollars Per Pound
0
2
4
6
8
10
WHALE
LARGE
MARKET
SCROD
MIXED OR UNSIZED
UNCLASSIFIED
SNAPPER
STEAKER
MARKET DESC$

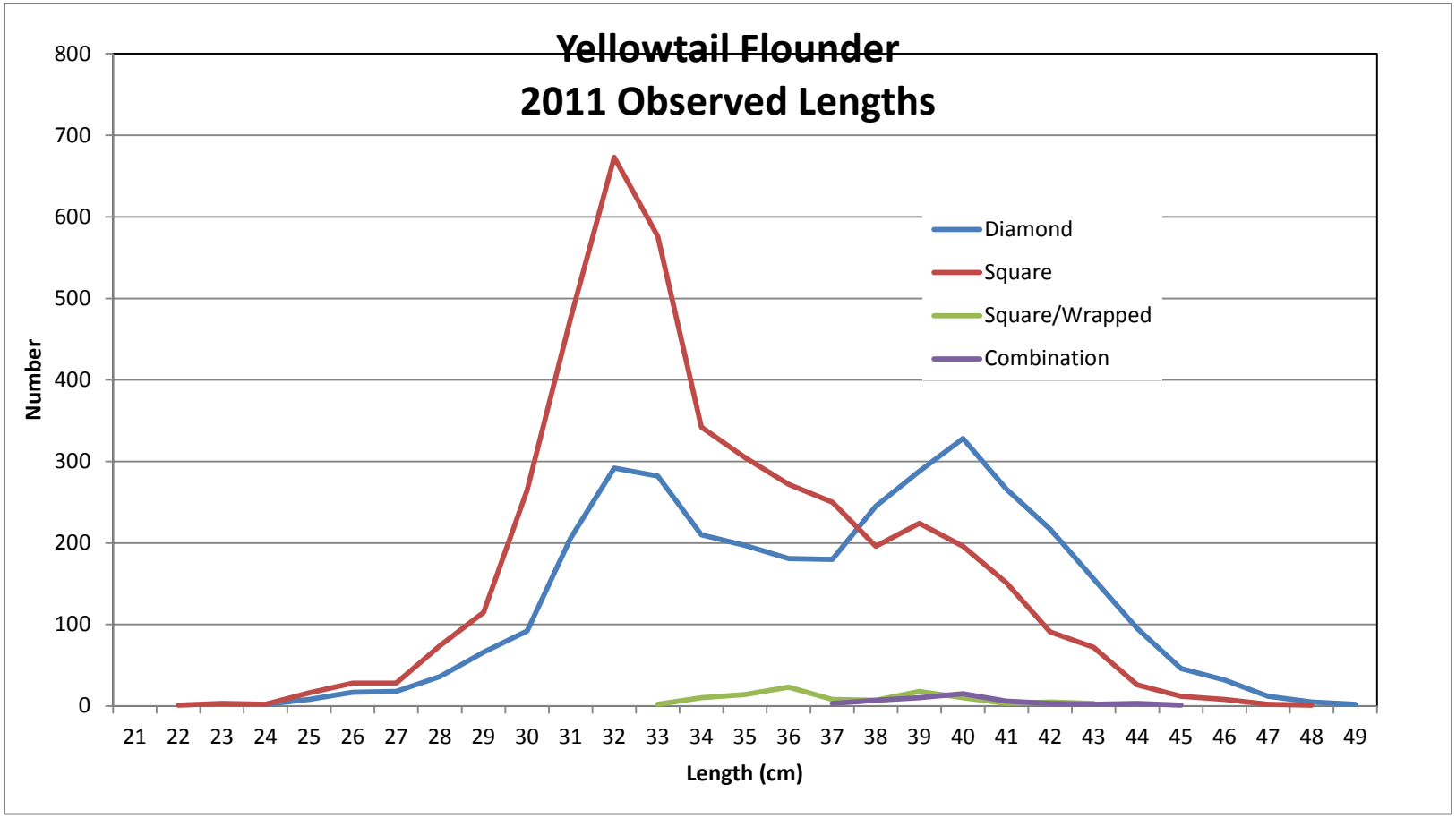

HADDOCK
Dollars Per Pound
0
2
4
6
8
LARGE
MARKET
MEDIUM OR SELECT
SCROD
MIXED OR UNSIZED
UNCLASSIFIED
MARKET DESC$

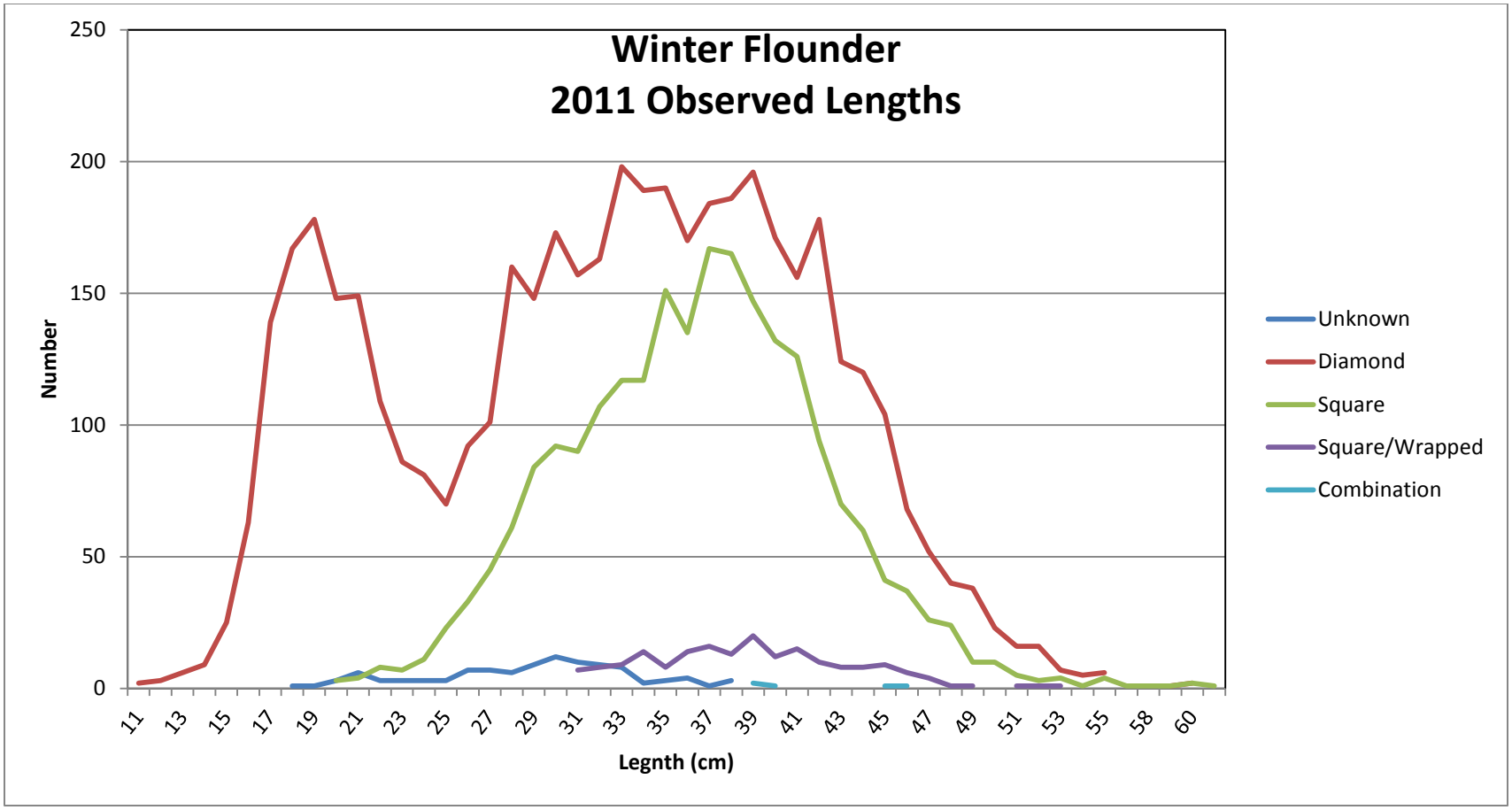

FLOUNDER,WINTER
Dollars Per Pound
0
2
4
6
8
LEMONSOLE
EXTRA LARGE
LARGE
LARGE/MIX
MEDIUM OR SELECT
SMALL
SMALL (SCHOOLIES)
MIXED OR UNSIZED
PEE WEE (RATS)
UNCLASSIFIED
MARKET DESC$
FLOUNDER,WITCH
Dollars Per Pound
0
2
4
6
8
LARGE
MEDIUM OR SELECT
SMALL
MIXED OR UNSIZED
PEE WEE (RATS)
UNCLASSIFIED
JUMBO
MARKET DESC$

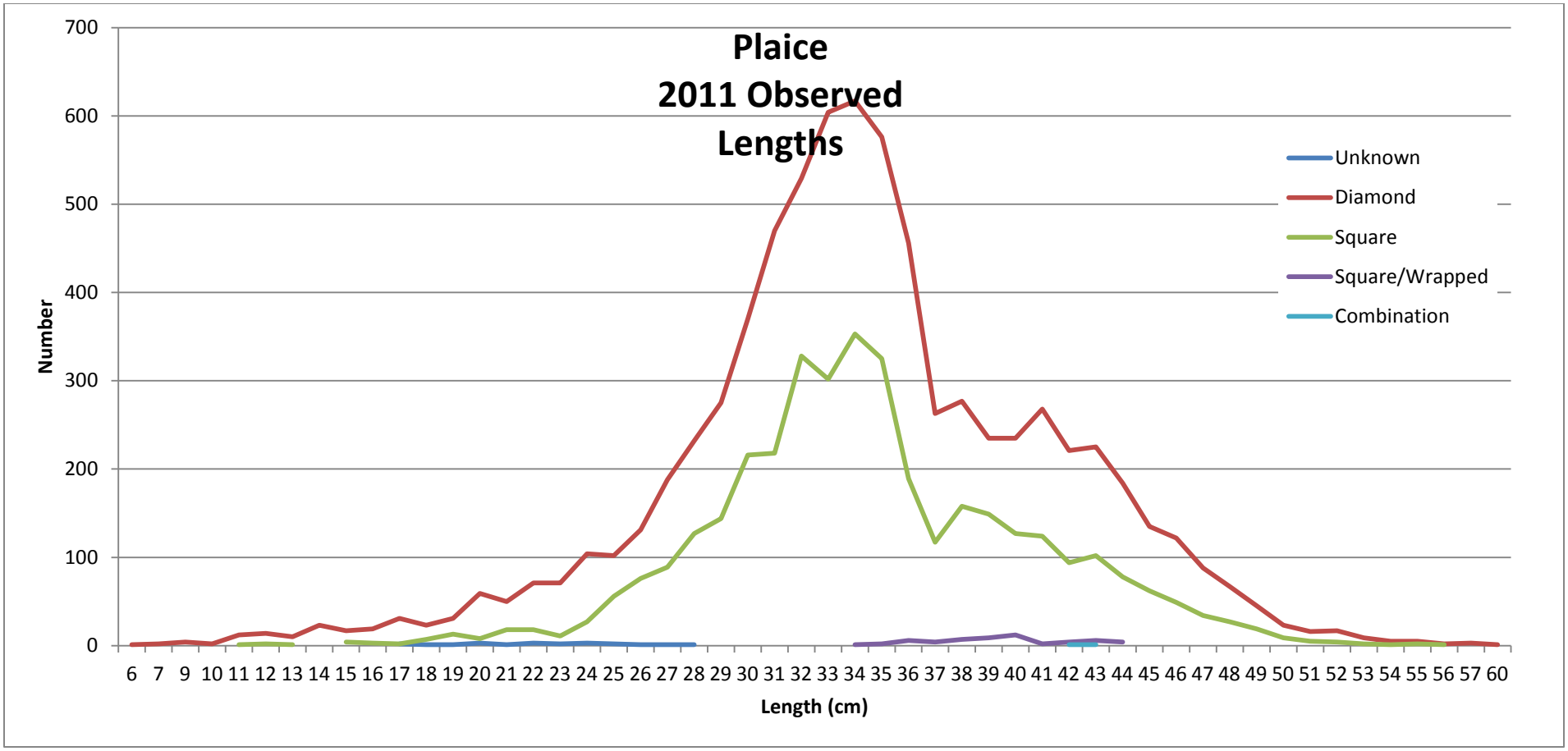

FLOUNDER, YELLOW
Dollars Per Pound
0
2
4
6
8
LARGE
MEDIUM OR SELECT
SMALL
MIXED OR UNSIZED
UNCLASSIFIED
MARKET DESC$
FLOUNDER, PLAICE
Dollars Per Pound
0
2
4
6
8
LARGE
MEDIUM OR SELECT
SMALL
UNCLASSIFIED
JUMBO
MARKET DESC$

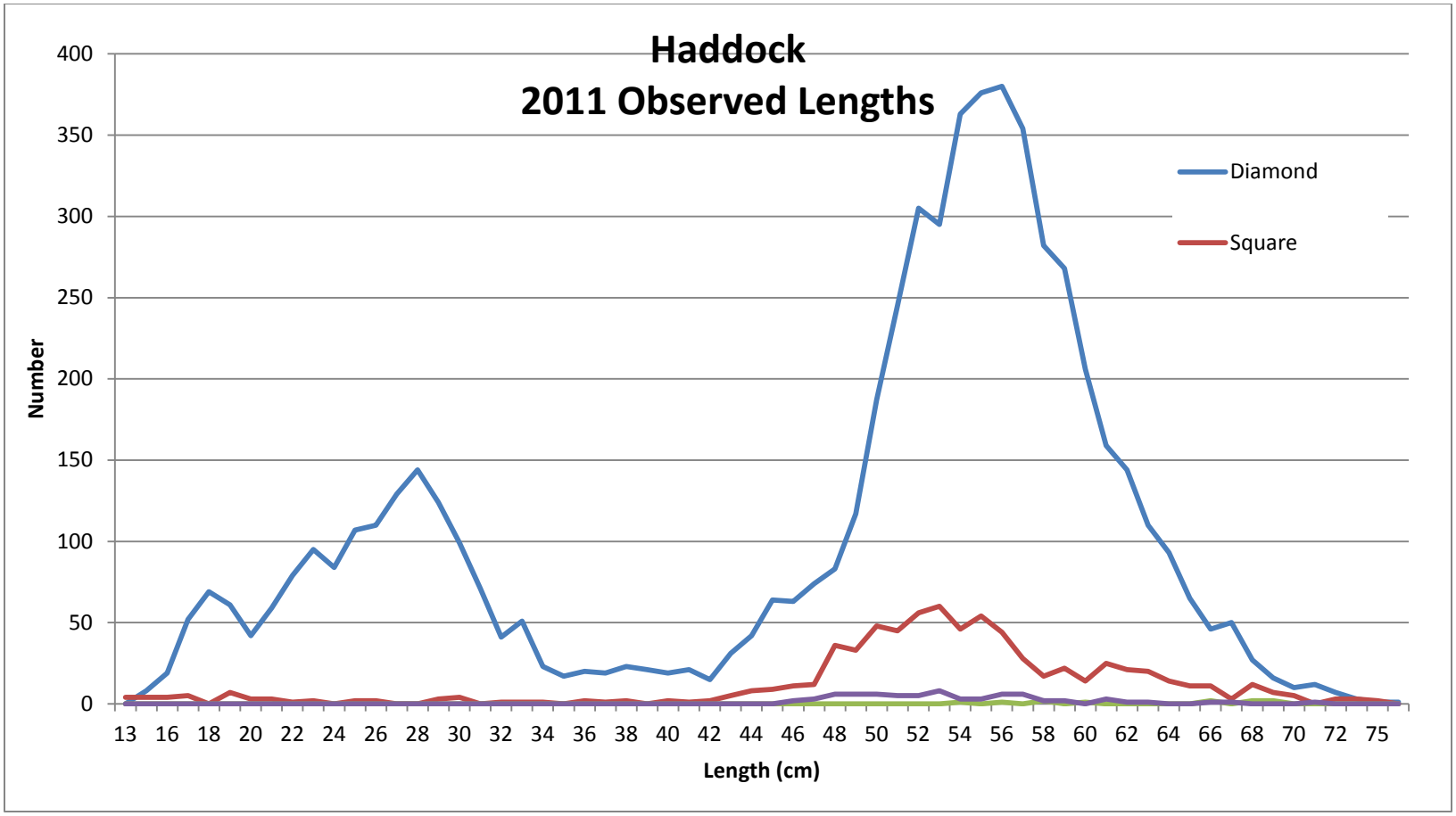

HAKE,ATLANTIC,W
Dollars Per Pound
0
2
4
6
8
LARGE
MEDIUM OR SELECT
SMALL
UNCLASSIFIED
MARKET DESC$
OCEAN PERCH,(RE
Dollars Per Pound
0
1
2
3
4
LARGE
MEDIUM OR SELECT
SMALL
MIXED OR UNSIZED
UNCLASSIFIED
MARKET DESC$

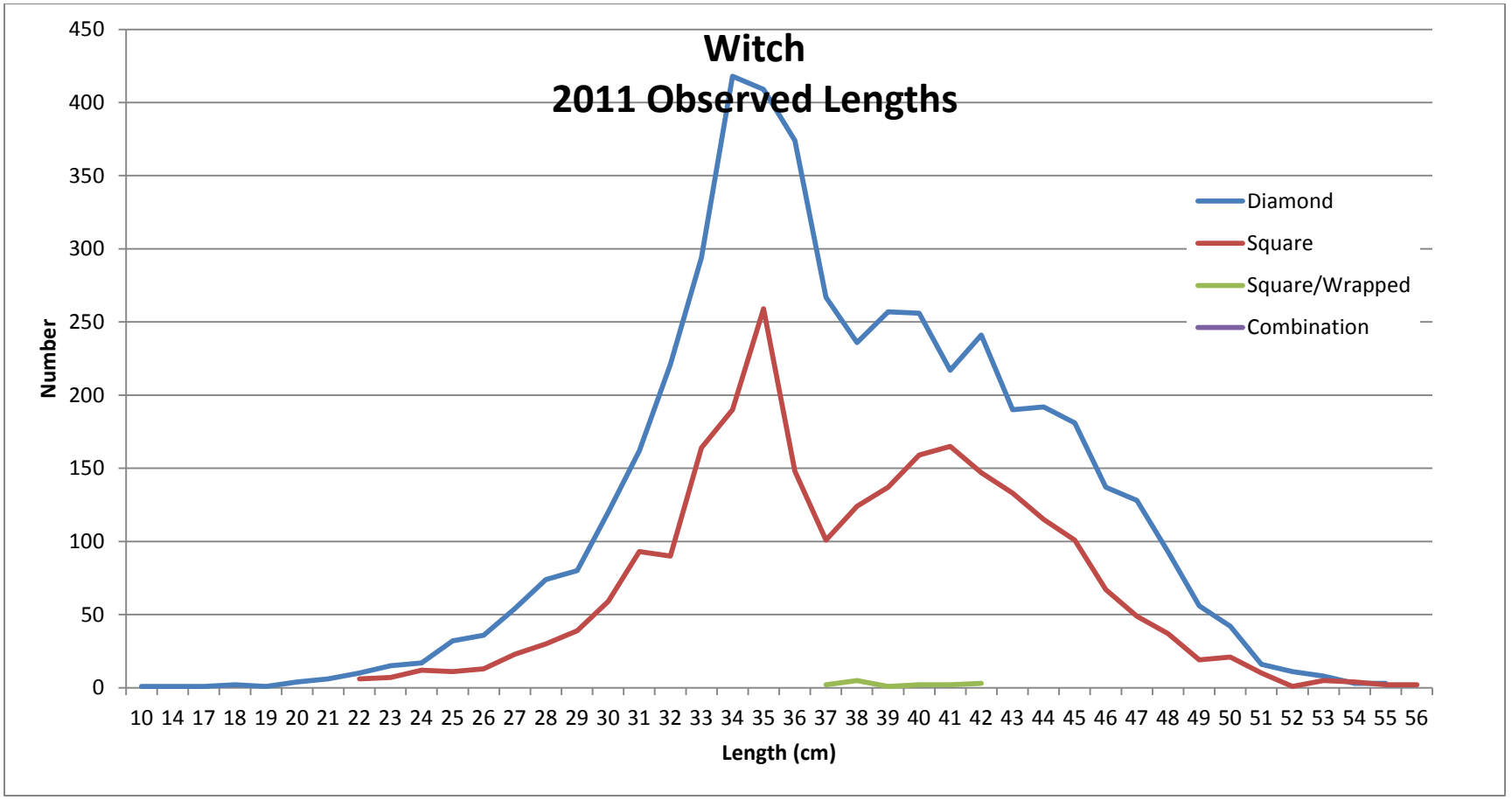

HALIBUT,ATLANTI
Dollars Per Pound
10
8
6
4
2
0
LARGE
MEDIUM OR SELECT
SMALL
MIXED OR UNSIZED
UNCLASSIFIED
MARKET DESC$


Yellowtail Flounder
2011 Observed Lengths
Number
800
700
600
500
400
300
200
100
0
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
Length (cm)
Diamond
Square
Square/Wrapped
Combination


Winter Flounder
2011 Observed Lengths
Number
250
200
150
100
50
0
11
13
15
17
19
21
23
25
27
29
31
33
35
37
39
41
43
45
47
49
51
53
55
58
60
Legnth (cm)
Unknown
Diamond
Square
Square/Wrapped
Combination


Plaice
2011 Observed
Lengths
Number
Length (cm)
Unknown
Diamond
Square
Square/Wrapped
Combination
700
600
500
400
300
200
100
0
6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 60


Haddock
2011 Observed Lengths
Number
400
350
300
250
200
150
100
50
0
13 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 75
Length (cm)
Diamond
Square


Witch
2011 Observed Lengths
Number
Length (cm)
Diamond
Square
Square/Wrapped
Combination
0
50
100
150
200
250
300
350
400
450
10 14 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56