

Skipjack Design

A Model Based on Historical Proportions



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<https://msuweb.montclair.edu/~lebelp/SkipjackSailboatDesignerR2022.xlsx>

<https://msuweb.montclair.edu/~lebelp/PLBSkipjackDesignDocument.pdf>

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From a fleet that once numbered over a thousand boats in the first decade of the twentieth century, registered Chesapeake Bay working skipjacks now are estimated at no more than two dozen. For their unique design and heritage, public and private partnerships are working to preserve the skipjack for generations to come. With an overview of the skipjack heritage, we present here a simple design model to illustrate the elegant proportions of the Chesapeake Bay

The decline of the Chesapeake Bay skipjack fleet can be traced to several factors. One is that through a combination of disease and overharvesting, oysters are far less plentiful than they once were. In the early decades of the twentieth century, it was not uncommon to harvest over ten million bushels a year, a rate once achieved as recently as the 1970's. Average oyster harvests today rarely go beyond 200,000 bushels a year.

A second factor in the decline of the skipjack has been the rise of motorized dredge boats. Skipjacks historically undertook dredging only under sail. Later, motorized davit boats were used to push skipjacks to the oyster beds, given that the low draft of skipjacks did not leave a lot of room for inboard engines.

Third, maintenance costs of skipjacks have risen dramatically over the years. Sails, masts, and planking have become increasingly expensive to maintain. When oyster harvests went into decline, skipjack owners found it difficult to stay in business. As a result, many skipjacks would spend their final days coming apart at the seams in some tidal marsh

To preserve skipjacks as working sailboats, several steps have been undertaken over the years. One is that the Maryland Department of Natural Resources has applied restrictions on the overall oyster harvest to conserve and replenish stocks. Within restrictions, skipjacks have been given privileged days when they could dredge under sail among the oyster beds of the Bay. While this has provided some incentive to conserve the skipjack fleet, it still has been difficult ~~as overall oyster stocks have been in decline~~.

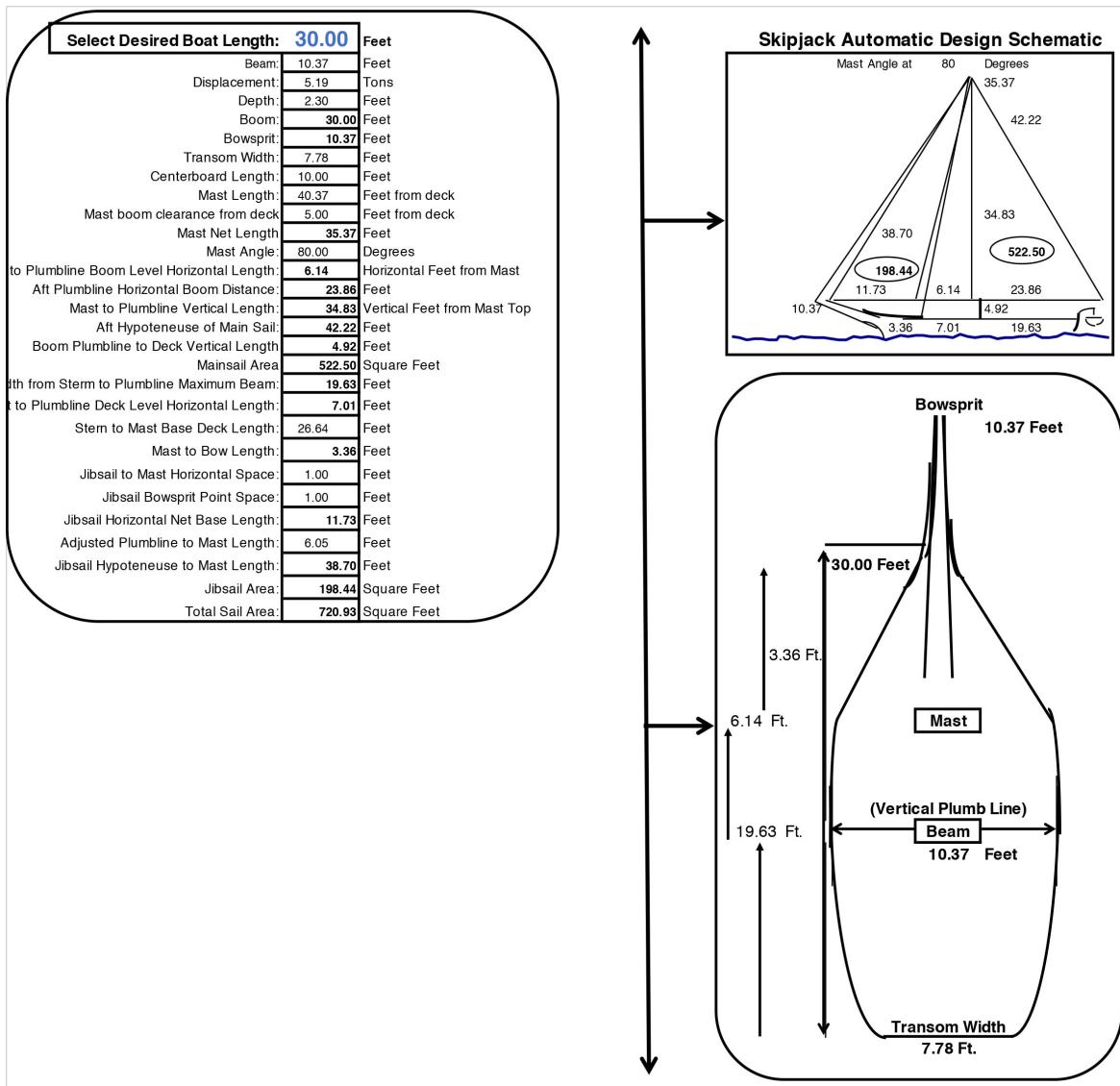
Second, the State of Maryland declared the skipjack as an official boat in 1986. As such, this does not make a huge difference in the fortunes of skipjacks but it does play a promotional role. What has made more of a difference is that faced with declining stocks, some skipjack owners have begun sailing charters on the Bay, leaving behind the oyster harvest trade in favor of recreational sailing.

More significantly, starting in 1960, Wenona skipjack captain Art Daniels (1921-2017) helped to organize the annual Labor Day skipjack races. Labor Day marks the official beginning of the oyster harvesting season. Having a race among the registered skipjacks draws visitors from far and wide. It draws interest on restoration and preservation of the skipjacks in designated ports such as Scotts Cove Marine in Chance, Maryland, among other sites. Volunteers have worked with specialists to restore several skipjacks to working order, especially as knowledge of skipjack lore has expanded. The Skipjack Heritage Museum in Chance, Maryland, begun in 2007, now houses a growing collection of images, artifacts, and history of the skipjacks.

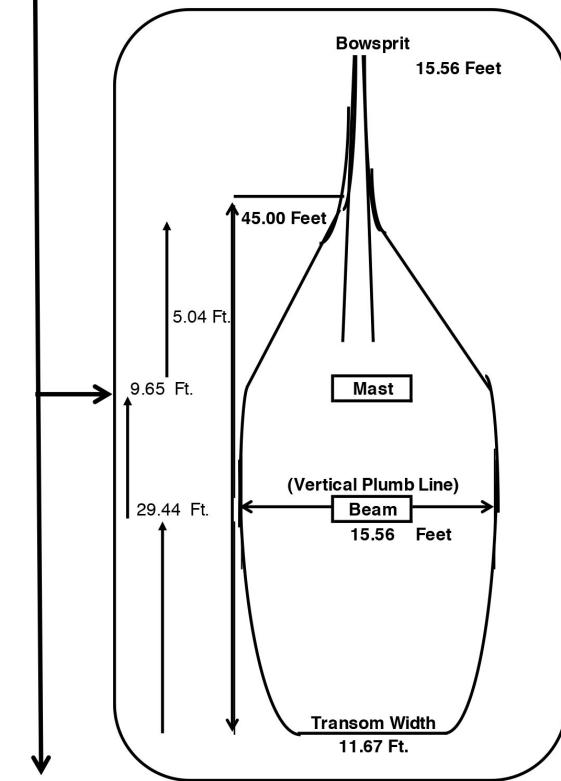
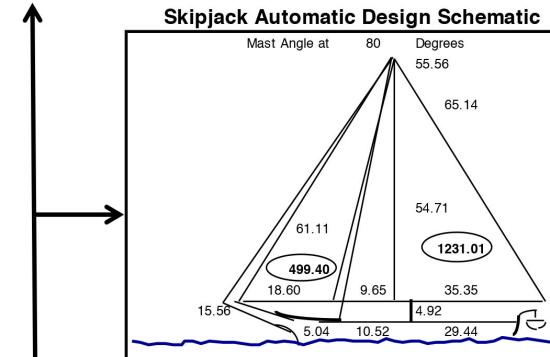
Information on the museum can be found at: <https://skipjackheritage.com>

In the pages that follow, drawing on historical data on skipjack proportions, a simple spreadsheet model illustrates how the proportions of a skipjack change with a change in the length of the boat. The key source of information for the proportions used in the model derive from Pat Vojtech's 1993 book, Chesapeake Bay Skipjacks (Centreville, Md. Tidewater Publishers). While any individual skipjack may vary one from another to some degree, by using mean, or average, values, what the document is intended to show is how proportions vary with the length of a boat. Small-scale model boat builders no doubt have their own faithful images in mind when they craft a miniature skipjack. The proportional model shown here is meant to complement the artistry that local crafts workers so ably display in their own creations.

This following simulations are derived by selecting a value in the cell "Boat Design Length" from which all of the design proportions are found to the right. No effort has been made to derive the materials cost of a given design, given tha the last known traditional skipack was the Herman Krenz in 1959, and for which no current data are readily available. The program also does not break out more detailed specifications such as ribbing and centerboard proportions, though a good description can be found in Vojtech's 1993 book. For some proportions, estimates have been taken from Janet Mauch's *Sailboat Guide* (1991 edition), data from which are included along with the historical data published in Vojtech's 1993 book. A functioning spreadsheet model on which this is based can be downloaded at: <https://msciweb.montclair.edu/~lhehn/SkipjackSailboatDesignerR2022.xlsx>

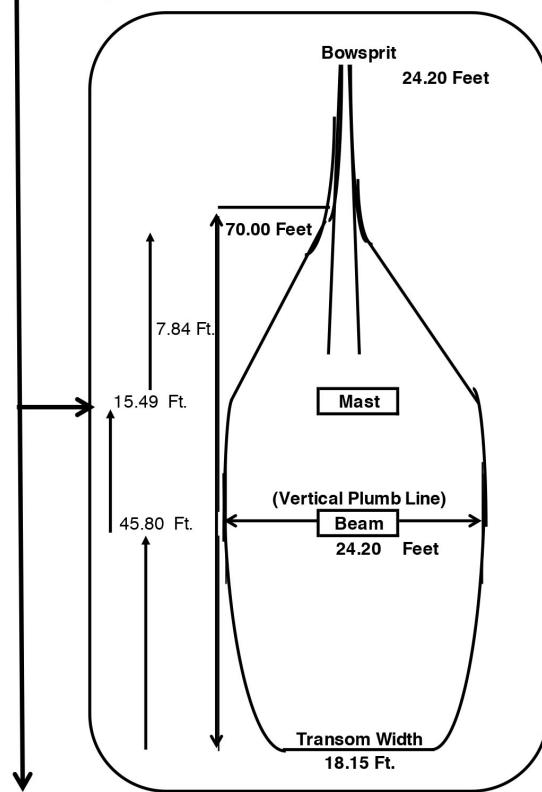
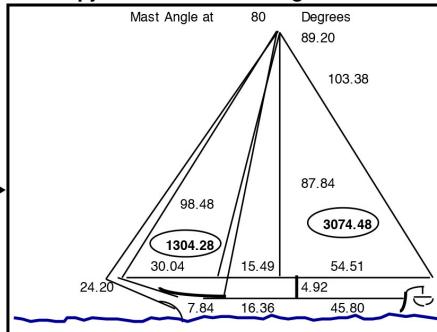


Select Desired Boat Length: 45.00 Feet	
Beam:	15.56 Feet
Displacement:	7.78 Tons
Depth:	3.44 Feet
Boom:	45.00 Feet
Bowsprit:	15.56 Feet
Transom Width:	11.67 Feet
Centerboard Length:	15.00 Feet
Mast Length:	60.56 Feet from deck
Mast boom clearance from deck:	5.00 Feet from deck
Mast Net Length:	55.56 Feet
Mast Angle:	80.00 Degrees
to Plumbline Boom Level Horizontal Length:	9.65 Horizontal Feet from Mast
Aft Plumbline Horizontal Boom Distance:	35.35 Feet
Mast to Plumbline Vertical Length:	54.71 Vertical Feet from Mast Top
Aft Hypoteneuse of Main Sail:	65.14 Feet
Boom Plumbline to Deck Vertical Length:	4.92 Feet
Mainsail Area:	1231.01 Square Feet
Width from Stern to Plumbline Maximum Beam:	29.44 Feet
to Plumbline Deck Level Horizontal Length:	10.52 Feet
Stem to Mast Base Deck Length:	39.96 Feet
Mast to Bow Length:	5.04 Feet
Jibsail to Mast Horizontal Space:	1.00 Feet
Jibsail Bowsprit Point Space:	1.00 Feet
Jibsail Horizontal Net Base Length:	18.60 Feet
Adjusted Plumbline to Mast Length:	9.56 Feet
Jibsail Hypotenuse to Mast Length:	61.11 Feet
Jibsail Area:	499.40 Square Feet
Total Sail Area:	1730.41 Square Feet



Select Desired Boat Length:	70.00	Feet
Beam:	24.20	Feet
Displacement:	12.10	Tons
Depth:	5.36	Feet
Boom:	70.00	Feet
Bowsprit:	24.20	Feet
Transom Width:	18.15	Feet
Centerboard Length:	23.33	Feet
Mast Length:	94.20	Feet from deck
Mast boom clearance from deck:	5.00	Feet from deck
Mast Net Length:	89.20	Feet
Mast Angle:	80.00	Degrees
to Plumpline Boom Level Horizontal Length:	15.49	Horizontal Feet from Mast
Aft Plumpline Horizontal Boom Distance:	54.51	Feet
Mast to Plumpline Vertical Length:	87.84	Vertical Feet from Mast Top
Aft Hypotenuse of Main Sail:	103.38	Feet
Boom Plumpline to Deck Vertical Length:	4.92	Feet
Mainsail Area:	3074.48	Square Feet
Width from Stern to Plumpline Maximum Beam:	45.80	Feet
to Plumpline Deck Level Horizontal Length:	16.36	Feet
Stern to Mast Base Deck Length:	62.16	Feet
Mast to Bow Length:	7.84	Feet
Jibsail to Mast Horizontal Space:	1.00	Feet
Jibsail Bowsprit Point Space:	1.00	Feet
Jibsail Horizontal Net Base Length:	30.04	Feet
Adjusted Plumpline to Mast Length:	15.40	Feet
Jibsail Hypotenuse to Mast Length:	98.48	Feet
Jibsail Area:	1304.28	Square Feet
Total Sail Area:	4378.76	Square Feet

Skipjack Automatic Design Schematic



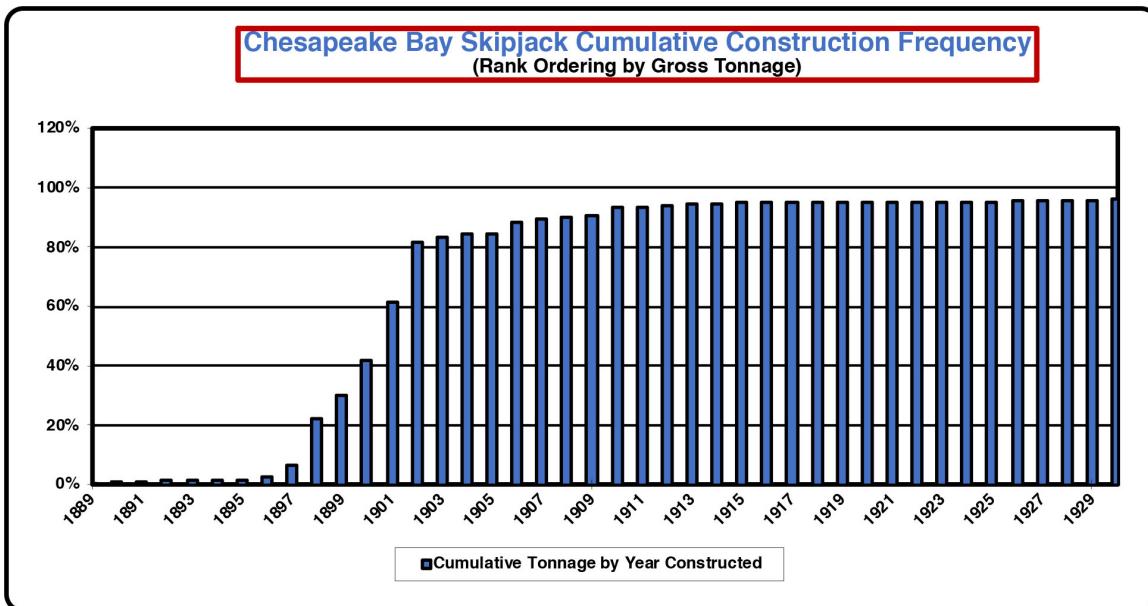
Listed below is a summary table that has been used in the construction of the skipjack design model. All proportions are approximate, but have been linked as much as possible to the historical data proportions reported in the annex to Pat Vojtech's 1993 book, *Chesapeake Bay Skipjacks*.

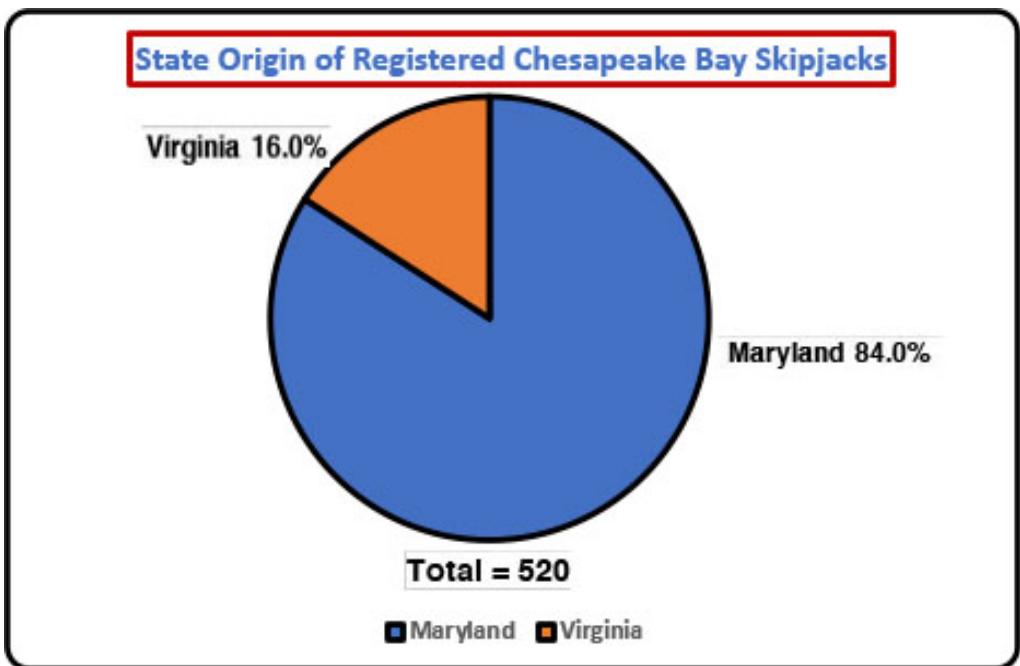
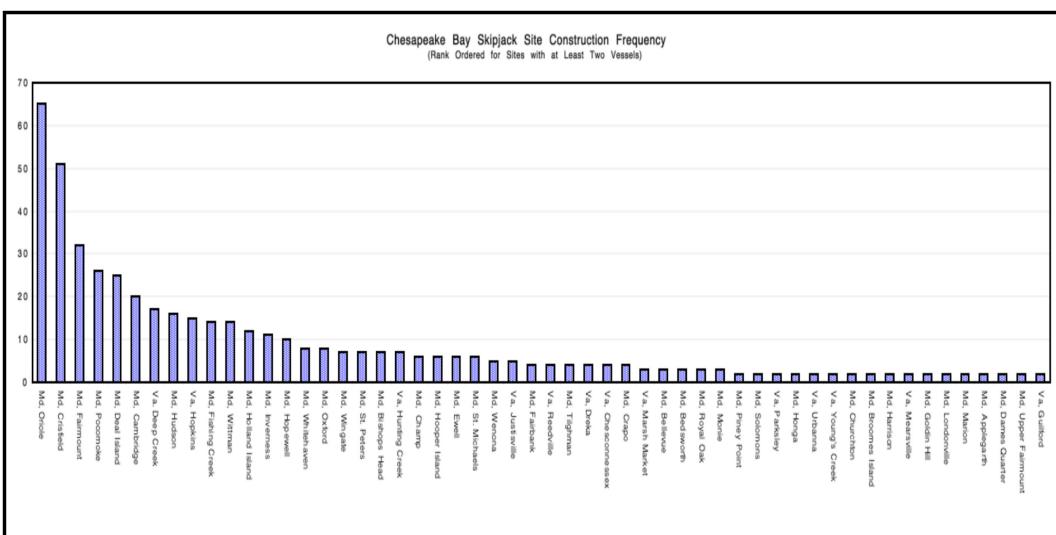
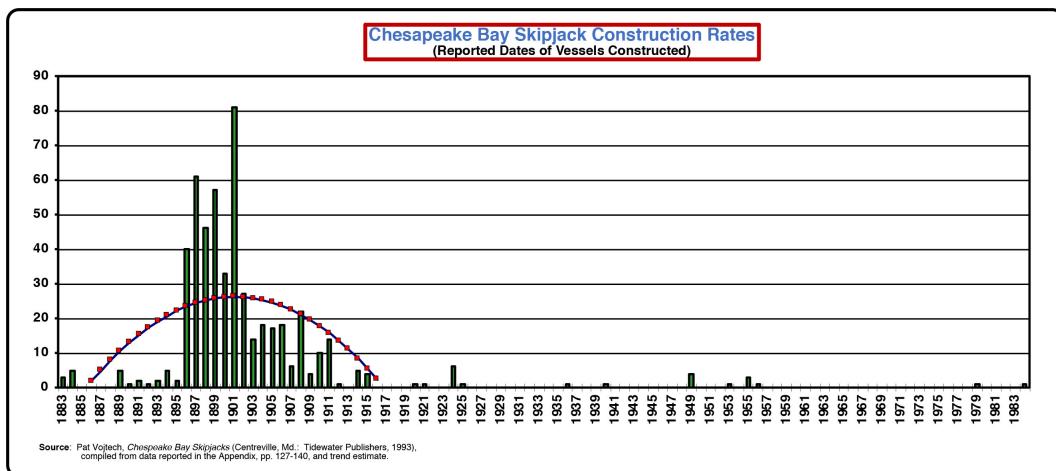
Chesapeake Bay Skipjack Proportions Descriptive Statistics					
Mean GT	Mean NT	Mean LOA	Mean B	Mean Draft	Mean Date
8.73	7.75	41.59	14.24	3.28	1903
Stdev GT	Stdev NT	Stdev LOA	Stdev B	Stdev Draft	Stdev Date
5.11	4.24	4.99	1.60	0.61	10.22
Median GT	Median NT	Median LOA	Median B	Median Draft	Median Date
7.00	7.00	40.50	14.00	3.10	1901
Max GT	Max NT	Max LOA	Max B	Max Draft	Max Date
45.00	45.00	60.00	22.00	5.80	1984
Min GT	Min NT	Min LOA	Min B	Min Draft	Min Date
5.00	5.00	27.10	8.80	2.10	1883

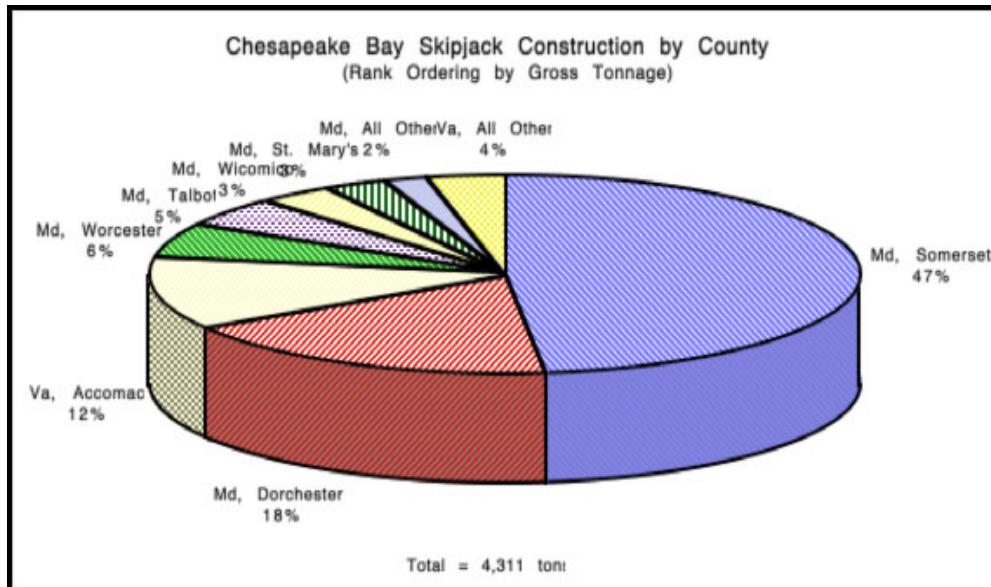
Database Proportions (adapted and extended from: Pat Vojtech, *Chesapeake Bay Skipjacks* (Centreville, Md.: Tidewater Publishers, 1993), p. 19):

Mean Gross Tonnage to Mean Length Ratio	0.2099
Median Gross Tonnage to Median Length Ratio	0.1728
Mean Net Tonnage to Mean Length Ratio	0.1864
Median Net Tonnage to Median Length Ratio	0.1728
Mean Gross Tonnage to Mean Beam Ratio	0.6128
Median Gross Tonnage to Median Beam Ratio	0.5000
Mean Net Tonnage to Mean Beam Ratio	0.5442
Median Net Tonnage to Beam Ratio	0.5000
Length:	1.0000 Numeraire base reference, in feet of deck length
Beam:	0.3457 Feet relative to deck length
Displacement:	0.1728 Tons per Deck Length of Boat
Mast Height:	1.3457 Length plus Beam
Boom:	1.0000 Deck Length of boat
Bowsprit:	0.3457 Length of Beam
Transom Width:	0.7500 of Beam Length
Centerboard Length:	0.3333 Length of deck
Mast Length:	1.3457 Boat length on deck plus boat
Mast Angle:	80 Degrees, with top plumb line
Beam to Length Position Ratio:	0.6543 Length minus the Beam, measured from the transom
Depth to Length Ratio:	0.0765 (Estimated from database)
o of Jibsail Mast Length to Mainsail Mast Length	0.7624 (Estimated from photographs)
Mast to Boom Deck Clearance:	3.6000 (Estimated Feet)
Lowest Deck Height to Length Ratio:	0.1500 (Estimated)
Bow Height to Lowest Deck Height Ratio:	1.3000 (Estimated)
	0.3425 Mean Beam to Mean Length Ratio
	0.3457 Median Beam to Median Length Ratio
	0.0789 Mean Depth to Mean Length Ratio
	0.0765 Median Depth to Median Length Ratio
	0.0789 Mean Depth to Mean Length Ratio
	0.0765 Median Depth to Median Length Ratio
	0.7654 Jibsail Height to Mainsail Height Ratio
	1.0000 Jibsail to Mast Horizontal Space, in feet
	1.0000 Jibsail Bowsprit Point Space

From Pat Vojtech's 1993 book, I generated some stylized patterns regarding the dates, location, and frequency of skipjack construction. Here are a few graphs to illustrate how important skipjack construction was to the State of Maryland in general and to the Eastern Shore of Maryland in particular.







These figures have been derived from the following list of registered Chesapeake Bay Skipjacks as reported in Vojtech (1993):

	Name	Gross Tons	Net Tons	Length	Beam	Depth	Date Built	Place Built
1.	A. Phillips	7.0	7.0	37.5	14.4	2.6	1899	Md, Fishing Creek
2.	A. Wesley	5.0	5.0	36.0	13.0	3.0	1896	Md, Fairmount
3.	A.C. Marshall	5.0	5.0	39.0	13.7	2.8	1896	Md, James
4.	A.E. Andrews	10.0	5.0	41.7	14.8	3.2	1889	Md, Cambridge
5.	A.M. Townsend	7.0	7.0	41.7	13.5	3.2	1894	Md, Fairmount
6.	Ada	8.0	6.0	41.0	13.5	3.5	1901	Va, Exmore
7.	Ada Bozman	6.0	6.0	38.5	14.5	3.0	1901	Md, Oriole
8.	Ada Mae	9.0	9.0	32.6	12.0	2.3	1915	NC, Rose Bay
9.	Addie Branford	7.0	7.0	42.1	14.2	3.4	1898	Md, Inverness
10.	Addranet	6.0	6.0	40.0	12.8	3.0	1899	Md, Oriole
11.	Adell Phoebus	9.0	8.0	43.0	14.2	3.0	1908	Md, Oriole
12.	Adith	6.0	6.0	37.3	13.6	2.7	1901	Md, Crapo
13.	Admiral Dewey	8.0	8.0	41.2	14.3	3.5	1898	Md, Crisfield
14.	Alabama	6.0	6.0	39.0	13.7	3.0	1904	Va, Hunting Creek
15.	Albatross	10.0	10.0	40.0	15.8	2.7	1899	Md, Cambridge
16.	Albert Parks	6.0	6.0	40.0	13.7	3.0	1897	Md, Wingate
17.	Aldeen	5.0	5.0	35.0	12.0	3.4	1899	Md, Crisfield
18.	Aleta	7.0	5.0	39.5	13.0	3.3	1898	Md, Pocomoke
19.	Alex	10.0	10.0	45.7	15.2	2.9	1900	Md, Winchester
20.	Alfred J. Lewis	7.0	5.0	41.5	13.5	2.5	1905	Va, Hopkins
21.	Alice V. Tawes	6.0	6.0	39.4	13.9	3.4	1897	Md, Crisfield
22.	Allen	8.0	8.0	41.0	14.2	3.4	1900	Md, Baltimore
23.	Alma	6.0	6.0	38.3	14.3	2.8	1898	Md, Fishing Creek
24.	America	9.0	7.0	39.1	14.1	3.3	1921	Md, Crisfield
25.	Amy Goldstrom	8.0	8.0	43.0	14.5	3.2	1901	Md, Deal Island
26.	Amy Mister	30.0	25.0	57.0	19.7	5.6	1914	Md, Oriole
27.	Andrews Brother	9.0	9.0	45.0	15.3	3.3	1897	Md, Crapo
28.	Anna May Rich	15.0	11.0	50.8	16.1	4.0	1908	Md, Oriole
29.	Annette	6.0	6.0	34.2	12.6	2.7	1902	Md, Golden Hill
30.	Annie	7.0	7.0	38.3	13.2	3.2	1897	Md, Whitehaven
31.	Annie Bennett	10.0	10.0	46.6	15.8	3.6	1898	Md, Inverness
32.	Annie F	7.0	7.0	36.0	14.1	3.6	1902	Md, Ewell
33.	Annie Gertrude	11.0	11.0	42.0	16.4	4.1	1902	Va, Hopkins
34.	Annie James	6.0	5.0	37.3	11.9	3.1	1894	Md, Crisfield
35.	Annie Lee	13.0	7.0	43.0	15.4	3.5	1912	Va, Youngs Creek
36.	Annie M	10.0	7.0	46.0	15.0	3.7	1903	Va, Messongo

37.	Annie W	8.0	8.0	42.4	14.6	3.0	1906	Va, Deep Creek
38.	Annie White	5.0	5.0	38.0	12.9	3.0	1901	Md, Oriole
39.	Annie E. Todd	6.0	6.0	41.7	13.9	2.9	1897	Md, Bishops Head
40.	Apollo	34.0	23.0	55.8	19.8	5.5	1914	Md, Solomons
41.	Arlington	9.0	7.0	45.6	14.7	2.8	1901	Va, Hopkins
42.	Arнета S. Robinson	6.0	5.0	36.2	11.8	2.9	1905	Md, Oriole
43.	Augusta	7.0	6.0	39.0	13.0	2.9	1904	Va, Hopkins
44.	Avery Gordon	11.0	8.0	49.0	16.0	3.9	1900	Va, Hopkins
45.	B. Phillips	7.0	7.0	39.0	14.5	2.8	1899	Md, Fishing Creek
46.	B.F. Sulender	8.0	8.0	44.3	14.5	3.0	1897	Md, Bishops Head
47.	Bena	10.0	10.0	44.0	15.1	3.6	1897	Md, Wittman
48.	Ben Hur	10.0	8.0	48.5	15.9	3.3	1906	Md, Champ
49.	Benjamin F	5.0	5.0	35.0	12.7	3.0	1899	Md, Fairmount
50.	Bernice J	8.0	8.0	40.6	14.5	3.3	1904	Va, Accomack Co.
51.	Bertha M. Dean	5.0	5.0	36.0	13.5	2.6	1897	Md, Fishing Creek
52.	Bessie & Loleta	7.0	6.0	40.3	14.1	3.6	1905	Md, Crisfield
53.	Bessie May	9.0	6.0	41.3	14.4	3.3	1896	Md, Sharptown
54.	Betty A	9.0	7.0	44.6	15.0	3.1	1901	Va, Marsh Market
55.	Betty Smith	6.0	6.0	37.0	12.6	3.2	1904	Md, Oriole
56.	Black Hawk	8.0	8.0	40.0	13.9	2.7	1908	Md, Hudson
57.	Bray	7.0	6.0	41.9	14.4	2.9	1906	Va, Deep Creek
58.	Bye	8.0	8.0	45.0	13.3	2.8	1901	Md, Rock Hall
59.	C. Corbin	6.0	5.0	40.0	12.3	3.0	1904	Va, Sanford
60.	C.A. Parks	5.0	5.0	36.9	12.6	3.0	1904	Md, Fairmount
61.	C.E. Spencer	6.0	6.0	40.0	13.6	2.8	1898	Md, Oriole
62.	C.F. Bosman	9.0	9.0	43.9	15.4	3.7	1901	Md, Pocomoke
63.	C.F. Richardson	9.0	9.0	43.0	15.4	3.5	1900	Md, Pocomoke
64.	C.L. Marie	7.0	7.0	40.0	15.1	2.9	1902	Md, Wittman
65.	C.W. Crockett	9.0	9.0	45.0	15.8	3.9	1902	Md, Pocomoke
66.	C.W. Roamer	7.0	5.0	44.0	12.0	3.0	1902	Va, Dreka
67.	Caleb Jones	7.0	5.0	44.1	16.5	2.5	1953	Va, Reedville
68.	Calvert	7.0	7.0	36.0	14.5	2.6	1901	Md, Cambridge
69.	Cannon	5.0	5.0	35.6	12.9	2.3	1900	Md, Cambridge
70.	Carrie Marie	8.0	8.0	39.6	14.3	3.1	1896	Md, Wittman
71.	Carrie Price	7.0	7.0	39.5	14.3	3.5	1897	Md, Holland Island
72.	Carroll T	7.0	7.0	37.5	14.5	3.6	1897	Md, Fairmount
73.	Carroll Todd	6.0	6.0	39.7	12.9	3.0	1897	Md, Holland Island
74.	Catharine Bundy	13.0	12.0	38.0	12.0	3.2	1898	Va, Urbanna
75.	Catharine E. Shores	10.0	9.0	52.5	14.2	3.2	1892	Md, Oriole
76.	Catherine	12.0	12.0	49.5	15.5	4.2	1901	Md, Pocomoke
77.	Cecrops	7.0	7.0	36.5	13.6	2.7	1900	Md, Hooper Island
78.	Celia	7.0	7.0	33.5	12.8	3.4	1899	Md, Claiborne
79.	Charlotte	7.0	7.0	42.0	13.7	2.9	1901	Md, Hudson
80.	Charles B. Mason	8.0	6.0	40.0	14.0	3.0	1900	Va, Hopkins
81.	City of Crisfield	10.0	10.0	44.7	15.8	3.7	1949	Va, Reedville
82.	Clara Dunnock	11.0	10.0	44.3	14.5	4.0	1901	Md, Golden Hill
83.	Clarence Crockett	9.0	7.0	44.6	14.7	3.0	1908	Va, Deep Creek
84.	Claudia	5.0	5.0	36.0	11.6	2.7	1900	Md, Wittman
85.	Claud W. Somers	8.0	6.0	42.6	14.0	3.0	1911	Va, Young's Creek
86.	Cliford Oscar	15.0	12.0	49.8	16.7	4.0	1908	Md, Deal Island
87.	Columbia	7.0	7.0	49.5	14.5	3.4	1899	Md, Fairmount
88.	Columbia	9.0	6.0	45.0	15.0	3.0	1900	Md, Pocomoke
89.	Columbia	6.0	6.0	39.3	13.9	3.7	1901	Va, Hunting Creek
90.	Connie Francis	45.0	45.0	56.0	21.0	4.3	1984	Md, Piney Point
91.	Cordie S	7.0	6.0	43.0	14.0	3.0	1908	Va, Cashville
92.	Creston W. Ford	6.0	6.0	38.0	14.0	3.3	1904	Md, Fairmount
93.	D.W. White	6.0	6.0	38.4	12.3	3.2	1898	Md, Deal Island
94.	Daisy M. Tall	10.0	9.0	42.2	15.3	3.3	1889	Md, Madison
95.	Danville	7.0	7.0	38.1	13.7	2.9	1901	Md, Hudson
96.	Dee of St. Mary's	25.0	25.0	55.0	18.5	3.9	1979	Md, Piney Point
97.	Defender	6.0	6.0	35.4	13.4	3.0	1895	Md, Poplar Island

98.	Defiance	7.0	7.0	40.0	12.6	2.6	1908	Md, Fairbank
99.	Della Griffin	5.0	5.0	37.5	12.8	3.0	1899	Md, Holland Island
100.	Della May	7.0	6.0	37.3	13.7	3.0	1894	Md, Fairmount
101.	Delma W	6.0	6.0	39.8	13.3	2.8	1904	Md, Oriole
102.	Dewey	6.0	6.0	42.8	13.7	2.8	1898	Md, Deal Island
103.	Donna Forester	24.0	18.0	55.0	18.3	5.2	1911	Md, Oriole
104.	Dora Hall	7.0	5.0	39.0	13.3	3.1	1896	Md, Fairmount
105.	Dorothy	10.0	8.0	47.8	15.7	3.6	1905	Md, Deal Island
106.	Dunnock	7.0	7.0	41.8	14.9	3.0	1898	Md, Hooper Island
107.	E.C. Collier	19.0	14.0	52.0	17.9	4.3	1910	Md, Deal Island
108.	E.C.Lily	9.0	6.0	44.6	14.8	3.0	1900	Va, Marsh Market
109.	E.M. Hubbard	8.0	8.0	41.0	13.5	2.9	1898	Md, Hudson
110.	E.S. Croswell	10.0	10.0	41.7	14.8	3.8	1898	Md, Fairmount
111.	E.T. Riggan	6.0	6.0	38.0	13.5	2.8	1898	Md, Crisfield
112.	Eagle	9.0	9.0	38.6	14.8	3.4	1924	Md, Crisfield
113.	Earl	5.0	5.0	36.1	13.5	2.3	1899	Md, Cambridge
114.	Eben	27.0	21.0	54.3	18.7	5.2	1911	Md, Oriole
115.	Eddie Collier	9.0	9.0	46.4	15.2	3.6	1902	Md, Deal Island
116.	Eddie Lee	8.0	6.0	44.0	13.0	3.4	1902	Va, Dreka
117.	Edgar W	6.0	5.0	34.5	12.1	2.6	1908	Va, Saxis
118.	Edith C	6.0	6.0	39.6	13.5	2.8	1906	Va, Deep Creek
119.	Edith Creighton	6.0	6.0	39.0	13.7	2.8	1897	Md, Fishing Creek
120.	Edith L. Leonard	10.0	9.0	42.5	14.8	3.3	1889	Md, Cambridge
121.	Edith M. Clarke	14.0	14.0	53.0	16.5	4.2	1898	Md, Inverness
122.	Edna G. Croswell	6.0	5.0	37.5	13.4	3.2	1904	Md, Oriole
123.	Edna J	6.0	6.0	37.0	13.6	3.2	1899	Md, Fairmount
124.	Edna J. Cox	6.0	6.0	37.4	13.7	2.8	1897	Md, Fairmount
125.	Edward McDaniel	6.0	6.0	38.9	14.8	3.7	1901	Md, Oriole
126.	Effie B	7.0	7.0	40.3	13.5	3.4	1900	Md, Oriole
127.	Effie K	9.0	7.0	40.3	14.5	3.0	1896	Md, Fairmount
128.	Effie May	7.0	5.0	41.0	14.0	3.0	1900	Va, Chesconnessex
129.	Elbert	6.0	6.0	34.6	13.1	3.0	1901	Md, Oxford
130.	Eldora	8.0	7.0	42.3	14.4	2.9	1906	Va, Deep Creek
131.	Eleanor	6.0	5.0	37.2	13.1	2.9	1901	Md, Oxford
132.	Eliza T	7.0	6.0	42.0	13.3	3.0	1902	Va, Justisville
133.	Ella Frances	8.0	6.0	43.0	14.0	3.5		Va, Hopkins
134.	Ella M. Todd	6.0	6.0	39.5	13.0	3.3	1900	Md, Oriole
135.	Ella Wilson	7.0	7.0	41.0	14.1	3.8	1901	Md, Oriole
136.	Elmer C	6.0	6.0	35.0	12.2	2.8	1902	Md, Oxford
137.	Elmer W. Somers	25.0	18.0	48.3	16.9	5.2	1920	Md, Honga
138.	Eloise	24.0	20.0	54.0	18.8	4.9	1911	Md, Oriole
139.	Elsie	8.0	8.0	40.3	14.4	3.6	1901	Md, Wittman
140.	Elsie E	8.0	8.0	41.0	14.5	4.0	1900	Md, Hopewell
141.	Elsworth	8.0	8.0	39.9	14.3	3.1	1901	Md, Hudson
142.	Elvira C	7.0	7.0	41.3	14.1	3.0	1906	Va, Deep Creek
143.	Emerson	11.0	8.0	42.6	14.2	3.4	1902	Md, Broomes Island
144.	Emily	8.0	5.0	42.9	14.2	2.7	1896	Md, Royal Oak
145.	Emma			38.0	12.5	3.0	1901	Md, Oriole
146.	Emma B			52.0	17.0	4.0	1901	Md, Wittman
147.	Emma Frances	7.0	7.0	41.0	14.0	2.8	1898	Md, Hooper Island
148.	Emma M. Bradshaw	6.0	6.0	38.0	11.6	3.3	1898	Md, Crisfield
149.	Emma May	7.0	7.0	41.8	14.1	3.6	1901	Md, Oriole
150.	Emma Newbill	9.0	6.0	38.2	13.7	2.9	1900	Md, Crisfield
151.	Eretha Jackson	14.0	14.0	46.4	17.5	4.1	1902	Md, Whitehaven
152.	Eretha Murray	7.0	7.0	44.8	14.6	3.0	1897	Md, Mount Vernon
153.	Ernestine	5.0	5.0	36.0	12.6	2.9	1897	Md, Hopewell
154.	Ernie	6.0	6.0	37.2	14.5	3.0	1901	Md, Cambridge
155.	Esther F	10.0		39.5	13.3	3.8		Md, Fairmount
156.	Esther Hur	10.0	8.0	48.5	15.8	3.3	1906	Md, Champ
157.	Esther W	30.0	25.0	55.6	20.1	5.5	1914	Md, Oriole
158.	Ethel	7.0	7.0	38.5	13.4	3.6	1891	Md, Pocomoke

159.	Ethel			45.0	14.0	3.3	1897	Md, Royal Oak
160.	Ethel and Lydia	16.0	12.0	40.8	14.9	4.4	1925	Va, Onancock
161.	Ethel E			36.2	13.7	3.0	1896	Md, Oxford
162.	Ethel Lewis	8.0	6.0	42.5	14.0	3.0	1906	Va, Chesconnessex
163.	Ethelyn Dryden	9.0	9.0	45.0	15.5	3.9	1901	Md, Pocomoke
164.	Etna	6.0	6.0	38.0	13.8	3.0	1905	Md, Crisfield
165.	Etta	7.0	7.0	38.5	14.0	2.7	1901	Md, Cambridge
166.	Etta and Acie	5.0	5.0	37.8	13.5	3.0	1897	Md, Wingate
167.	Etta Burdis	12.0	9.0	42.5	14.8	3.9	1900	Md, Pocomoke
168.	Etta Lee	7.0	5.0	39.5	13.0	3.0	1896	Md, Crisfield
169.	Eunice S	5.0	5.0	35.7	12.5	2.8	1897	Md, Hopewell
170.	Eva	7.0	7.0	39.1	12.9	3.1	1883	Md, Cambridge
171.	Evelyn	7.0	7.0	39.2	15.2	2.8	1901	Md, Wittman
172.	Ewell	6.0	6.0	40.0	13.0	2.5	1901	Md, Cambridge
173.	Ewing Bradshaw	7.0	7.0	38.0	13.0	3.2	1897	Md, Crisfield
174.	F.C. Carpenter	9.0	9.0	46.0	15.9	3.9	1901	Md, Deal Island
175.	F.C. Lewis, Jr.	6.0	6.0	39.0	14.6	3.0	1907	Va, Hopkins
176.	F.F. Carpenter	9.0	9.0	46.0	15.9	3.9	1901	Md, Deal Island
177.	Fannie F. Bradshaw	6.0	6.0	36.7	12.4	3.2	1898	Md, Ewell
178.	Daugherty, Fannie L.	8.0	8.0	41.3	15.0	3.6	1904	Md, Crisfield
179.	Father and Son	7.0	7.0	38.6	13.0	3.2	1897	Md, Crisfield
180.	Father and Son	6.0	6.0	38.7	13.5	2.8	1897	Md, Toddville
181.	Fay	7.0	6.0	42.0	14.0	3.0	1906	Va, Deep Creek
182.	Fitzhugh Lee	5.0	5.0	37.6	13.0	3.0	1898	Md, Crisfield
183.	Fletcher J. Barnes	6.0	5.0	41.0	13.2	2.6	1901	Va, Hopkins
184.	Flora A. Price	23.0	18.0	56.2	18.4	4.8	1910	Md, Champ
185.	Flora B	7.0	6.0	39.5	13.2	3.0	1904	Md, Fairmount
186.	Flora Ellen	10.0	6.0	42.5	15.0	3.8	1899	Md, Pocomoke
187.	Florence	8.0	7.0	37.2	14.1	3.2	1914	Md, Fishing Creek
188.	Florence & Julia	10.0	6.0	41.7	14.4	3.5	1899	Md, Churchton
189.	Florence Louise	40.0	33.0	58.1	19.6	5.5	1924	Md, Crisfield
190.	Florence May	8.0	5.0	35.0	13.3	2.8	1898	Md, Hooper Island
191.	Four Brothers	7.0	7.0	41.6	14.0	3.0	1906	Md, Deep Creek
192.	Franklin	7.0	7.0	38.7	13.4	2.7	1901	Md, Hudson
193.	Freddie	7.0	7.0	38.6	13.1	2.8	1901	Md, Hudson
194.	Freddie L. Bennett	8.0	8.0	42.0	14.5	3.2	1899	Md, Inverness
195.	Fulton T. Mister	20.0		52.8	18.1	4.5	1910	Md, Deal Island
196.	G.A. Anderson	7.0		43.5	14.3	2.9	1908	Md, Bishops Head
197.	G.C. Bradshaw	8.0	8.0	42.0	13.9	3.3	1898	Md, Ewell
198.	G.C. Williams	8.0	8.0	41.3	14.7	4.2	1901	Md, Crisfield
199.	G.C. Vatra	8.0	8.0	39.9	13.8	3.1	1908	Md, Wenona
200.	G.M. K. Meek	6.0	6.0	40.5	13.4	3.2	1900	Md, St. Peters
201.	Geneva May	15.0	11.0	49.8	16.6	3.9	1908	Md, Wenona
202.	George L. Hardester	7.0	7.0	42.6	14.7	3.6	1901	Md, Oriole
203.	George Smith	6.0	5.0	39.0	12.0	3.0	1902	Va, Hopkins
204.	George W. Collier	9.0	9.0	45.5	15.2	3.5	1900	Md, Deal Island
205.	Georgia & Inez	6.0	6.0	36.0	13.4	2.9	1897	Md, Fairmount
206.	Georgie	7.0	7.0	40.5	14.0	2.8	1901	Md, Hudson
207.	Gertie E. Collier	7.0	7.0	38.0	13.5	3.0	1899	Md, Deal Island
208.	Gertrude Wands	8.0	8.0	42.6	14.3	3.4	1899	Md, Inverness
209.	Gladys	8.0	8.0	36.8	14.0	2.7	1896	Md, Royal Oak
210.	Gladys	11.0	7.0	50.0	15.6	3.6	1900	Md, Pocomoke
211.	Gladys	5.0	5.0	36.8	13.4	2.1	1901	Md, Cambridge
212.	Gladys	7.0	5.0	41.5	13.3	3.1	1903	Va, Justisville
213.	Gladys Melba	15.0	10.0	43.4	15.6	3.7	1924	Md, Crisfield
214.	Gladys White	5.0	5.0	37.8	12.0	2.7	1896	Md, Deal Island
215.	Gloucester	10.0	10.0	42.5	14.2	3.5	1899	Md, Hudson
216.	Grace	14.0	9.0	39.0	14.0	3.5	1903	Va, Urbanna
217.	Gracie Leonard	10.0	6.0	41.7	14.8	3.2	1889	Md, Cambridge
218.	Gussie	6.0	6.0	39.5	13.4	2.8	1899	Md, Oriole
219.	Guy	5.0	5.0	36.2	11.3	2.7	1894	Md, Marion

220.	H.C. Townsend	5.0	5.0	39.2	11.9	2.7	1898	Md, Upper Fairmount
221.	H.G. Alexander	10.0	8.0	47.5	16.0	3.6	1907	Md, Wenona
222.	H.M. Krentz	9.0		44.3	15.6	4.9	1955	Va, Harryhogan
223.	Hambleton	7.0	7.0	38.1	13.9	2.6	1901	Md, St. Michaels
224.	Harry Anderson	8.0	8.0	44.3	15.2	3.1	1899	Md, Deal Island
225.	Harry D. Cook	8.0	8.0	41.4	14.7	3.4	1902	Md, Oriole
226.	Harry F. Albaugh	24.0	19.0	56.4	18.4	4.8	1910	Md, Champ
227.	Harry Ford	9.0	8.0	41.0	15.7	4.4	1901	Md, Crisfield
228.	Harvey A. Parks	8.0	8.0	42.1	16.0	2.8	1899	Md, Holland Island
229.	Hattie C. Laird	13.0	9.0	46.0	15.0	3.2	1905	Md, Pocomoke
230.	Hattie E. Travers	7.0	7.0	41.0	14.0	2.8	1898	Md, Hooper Island
231.	Hattie Lloyd	11.0	11.0	48.0	16.0	3.5	1897	Md, Whitehaven
232.	Helen			41.0	13.0	3.0	1901	Md, Bellevue
233.	Helen	6.0	6.0	38.6	13.3	2.3	1901	Md, St. Michaels
234.	Helen Barnes	8.0	8.0	41.5	14.4	3.8	1900	Md, Hopewell
235.	Helen Louise	7.0	6.0	37.2	12.7	3.0	1910	Md, Londonville
236.	Helen Roe	6.0	6.0	37.0	13.0	2.8	1902	Md, Bellevue
237.	Helen Virginia	10.0	10.0	43.2	15.6	2.2	1949	Md, Crisfield
238.	Henry B	7.0	7.0	36.1	14.2	2.7	1901	Md, Cambridge
239.	Hilda	5.0	5.0	35.3	11.9	2.8	1904	Md, Crisfield
240.	Hilda D	6.0	6.0	38.5	13.0	3.3	1899	Md, Oriole
241.	Hilda M. Willing	8.0	6.0	40.0	14.0	3.1	1905	Md, Oriole
242.	Hobart	5.0	5.0	38.7	14.4	2.6	1901	Md, Fishing Creek
243.	Howard	10.0	8.0	45.0	15.3	3.1	1909	Va, Deep Creek
244.	Ida Bedsworth	7.0	7.0	39.5	14.5	3.7		Md, Oriole
245.	Ida C			27.1	8.8	2.6	1896	Md, Oriole
246.	Ida May			40.0	14.0	3.6	1896	Md, Oxford
247.	Ida May	10.0	7.0	42.2	14.4	3.3	1906	Va, Deep Creek
248.	Ida V. Beauchamp	7.0	7.0	38.6	13.3	3.0	1899	Md, Oriole
249.	Ira T. Croswell	10.0	8.0	48.0	15.7	3.7	1907	Md, Oriole
250.	Irene and Ruth	8.0	8.0	41.0	14.7	3.4	1899	Md, Fairmount
251.	Isidore Shores	7.0	7.0	42.3	14.0	3.3	1897	Md, Chance
252.	Iva	5.0	5.0	35.8	12.8	2.8	1902	Va, Hunting Creek
253.	Iva Pearl	6.0	6.0	38.5	14.3	3.0	1899	Md, Elliott
254.	J.B. Vetra	15.0	12.0	50.0	16.6	4.0	1908	Md, Wenona
255.	J.T. Tyler	7.0	7.0	35.5	13.0	3.2	1898	Md, Ewell
256.	J.W. Walker	7.0	7.0	42.0	14.4	4.0	1901	Md, Oriole
257.	Jacob T. Bradshaw	7.0	7.0	36.9	13.8	3.6	1898	Md, Ewell
258.	James Edson	6.0	5.0	39.0	13.0	2.9	1903	Va, Hopkins
259.	James H. Cullen	6.0	6.0	38.6	12.6	3.4	1903	Md, Crisfield
260.	Jessie Price	15.0	12.0	50.9	16.3	4.3	1908	Md, Oriole
261.	John F. Mitchell	8.0	8.0	41.0	14.8	3.6	1898	Md, Crisfield
262.	John L. Thomas	5.0	5.0	37.6	12.0	3.0	1897	Md, Holland Island
263.	John S. Harvey	5.0	5.0	34.5	12.9	2.9	1898	Va, Guilford
264.	John W. Dize	5.0	5.0	48.0	12.3	2.6	1896	Md, Crisfield
265.	John W. Parker	6.0	6.0	38.3	14.3	3.0	1901	Md, Fishing Creek
266.	Joy Parks	17.0		46.4	15.5	4.0	1936	Va, Parksley
267.	Judy	7.0	5.0	37.7	13.1	3.0	1895	Md, Hopewell
268.	Kathleen	6.0	6.0	37.4	14.0	3.3	1901	Md, Fishing Creek
269.	Kathryn	12.0	12.0	50.0	16.8	4.2	1901	Md, Crisfield
270.	Katie	28.0	21.0	56.3	18.8	5.4	1911	Md, Oriole
271.	Katie and Edith	9.0	6.0	46.0	15.0	3.7	1896	Md, Whitehaven
272.	Katie Cannon	6.0	6.0	37.5	14.0	3.2	1901	Md, Fishing Creek
273.	Katie May	6.0	6.0	41.5	13.0	2.8	1900	Md, Bishops Head
274.	Katie Rowe	28.0	21.0	55.3	18.8	5.4	1911	Md, Oriole
275.	Klondike	7.0	7.0	41.5	13.5	3.0	1897	Md, Pocomoke
276.	Lady Eleanor	27.0	22.0	58.0	22.0	5.2	1915	Md, Oriole
277.	Lady Katie	8.0	8.0	46.2	16.7	3.3	1956	Md, Wingate
278.	Laura J. Barkley	6.0	6.0	37.0	13.9	3.0		Md, Fishing Creek
279.	Laura M. Evans	10.0	8.0	42.7	15.3	3.6	1911	Md, Crisfield
280.	Lelia Gunby	6.0	6.0	39.1	13.4	2.9	1898	Md, Crisfield

281.	Lena Louise	7.0	7.0	39.5	13.8	4.0	1899	Md, Fairmount
282.	Lena May	5.0	5.0	36.0	13.4	2.6	1898	Md, Hopewell
283.	Lena Rose	16.0	10.0	42.8	15.1	4.2	1924	Va, Parksley
284.	Lena Schroder	5.0	5.0	36.8	11.8	2.8	1903	Md, Oriole
285.	Lenora	8.0	6.0	41.3	14.3	3.0	1907	Va, Deep Creek
286.	Leonard	7.0		38.4	12.5	3.1	1908	Md, Oriole
287.	Lieutenant	6.0	6.0	35.8	12.0	2.8	1910	Md, Bedsworth
288.	Lillian	7.0	7.0	41.6	13.0	2.8	1898	Md, Whitehaven
289.	Lillian	8.0	8.0	40.1	14.5	3.1	1901	Md, St. Michaels
290.	Lillian & Carrie	9.0	6.0	39.6	15.0	3.8	1899	Va, Hopkins
291.	Lillian & Earl	10.0	7.0	43.4	15.0	4.0	1911	Md, Inverness
292.	Lillian & Elva	5.0	5.0	38.3	13.2	2.5	1897	Md, Crapo
293.	Lillie	10.0	9.0	45.2	14.2	3.7	1883	Md, Tilghman
294.	Lillie E. Shores	14.0	10.0	51.8	16.6	3.3	1908	Md, Oriole
295.	Lillie G. Spicer	7.0	7.0	38.2	15.0	3.1	1903	Md, Taylors Island
296.	Lillie Lewis	7.0	7.0	41.0	13.6	3.2	1898	Md, Crisfield
297.	Lillie R. Parker	7.0	7.0	40.0	14.6	2.6	1898	Md, Hooper Island
298.	Lina	7.0	6.0	43.0	14.6	3.0	1910	Va, Deep Creek
299.	Lizzzie	5.0	5.0	30.5	11.8	3.0	1896	Md, Cambridge
300.	Lizzie B	7.0	7.0	37.2	14.0	3.7	1897	Md, Fairmount
301.	Lizzie S. Johnson	8.0	6.0	43.2	14.0	3.4	1896	Md, Pocomoke
302.	Lloyd Cox	6.0	6.0	37.8	13.2	2.6	1898	Md, Upper Fairmount
303.	Lockwood	6.0	6.0	36.7	12.4	2.9	1902	Md, Oxford
304.	Lois	6.0		36.6	13.4	2.6	1901	Md, Oxford
305.	Lois S	9.0	6.0	45.8	15.3	3.2	1900	Md, Pocomoke
306.	Lola	9.0	7.0	42.0	14.0	3.5	1904	Va, Mearsville
307.	Lola	8.0	5.0	40.5	13.4	3.2	1896	Md, Inverness
308.	Lorraine Rose	10.0		44.3	15.4	3.8	1949	Va, Reedville
309.	Lottie	8.0	6.0	38.6	12.3	3.5	1899	Md, Oriole
310.	Lottie Bell	20.0	14.0	53.0	18.0	4.0	1910	Md, Deal Island
311.	Louise	8.0	8.0	41.0	14.3	4.0	1900	Md, Hopewell
312.	Louise Miles	6.0		40.0	12.6	3.0	1899	Md, Crab Island
313.	Lucy	8.0		39.3	13.7	3.6	1901	Md, Cacaway Point
314.	Lucy M. Tyler	7.0	5.0	36.0	13.2	2.8	1906	Md, Honga
315.	Lucy V	10.0		44.0	15.1	3.9	1897	Md, Wittman
316.	Lula and Emma	9.0	6.0	44.5	15.4	3.8	1900	Md, Pocomoke
317.	Lula Bell	7.0	6.0	40.0	13.4	3.0	1902	Va, Justisville
318.	Lydia Iola	9.0	6.0	40.4	13.8	3.5	1905	Md, Crisfield
319.	Mabel	6.0	6.0	38.2	13.7	2.6	1900	Md, Cambridge
320.	Mabel Somers	5.0	5.0	36.5	12.0	3.0	1896	Md, Crisfield
321.	Maggie	7.0	6.0	43.0	13.5	3.0	1901	Va, Hopkins
322.	Maggie Florence	6.0	6.0	39.5	13.3	2.9	1902	Va, Hopkins
323.	Maggie Lee	10.0	8.0	51.0	16.0	3.8	1903	Md, Pocomoke
324.	Maggie Lee	5.0		36.6	11.6	2.9	1908	Md, Inverness
325.	Maggie Ruth	7.0	6.0	39.0	13.5	3.0	1903	Va, Chesconnessex
326.	Mamie A. Mister	24.0	19.0	56.2	18.4	4.8	1910	Md, Champ
327.	Manie B. Bradshaw	9.0	9.0	47.0	15.8	3.1	1897	Md, Hopewell
328.	March Gale	6.0	5.0	38.0	12.2	2.7	1906	Va, Hunting Creek
329.	Marcie	7.0		39.6	14.0	2.8	1901	Md, Oxford
330.	Marcus	7.0		42.0	14.3	3.4	1899	Md, Fairmount
331.	Margarete	15.0	15.0	49.6	15.8	4.6	1901	Md, Pocomoke
332.	Margie S	6.0		37.6	12.8	3.2	1902	Md, Monie
333.	Marie	8.0	5.0	41.7	13.5	3.2	1896	Md, Inverness
334.	Marie Somers	7.0	7.0	40.1	13.7	3.0	1897	Md, Crisfield
335.	Martha Lewis	8.0		46.2	16.7	3.3	1955	Md, Wingate
336.	Martha M. Lewis	6.0	6.0	38.8	14.1	2.5	1897	Md, Wingate
337.	Mary and Inez	11.0	8.0	46.0	15.6	4.6	1899	Md, Pocomoke
338.	Mary and Susan	6.0	6.0	40.0	14.3	2.8	1897	Md, Holland Island
339.	Mary and Susie	8.0	8.0	42.0	14.8	3.4	1896	Md, Cabin Creek
340.	Mary C	7.0	6.0	40.3	13.2	3.4	1897	Md, Crisfield
341.	Mary E	6.0	5.0	39.0	13.0	2.6	1901	Va, Hopkins

342.	Mary E. Cranston	8.0	7.0	43.3	14.3	3.0	1906	Va, Deep Creek
343.	Mary E. Tyler	8.0		42.6	14.5	2.8	1898	Md, Fishing Creek
344.	Mary Elizabeth	10.0	10.0	41.9	15.6	2.8	1889	Md, Cambridge
345.	Mary F. Croswell	15.0	11.0	51.9	16.5	3.4	1908	Md, Oriole
346.	Mary Gunby	7.0	5.0	38.7	13.0	3.2	1897	Md, Crisfield
347.	Mary Hazel	8.0		40.0	13.7	3.1	1896	Md, Wittman
348.	Mary I. Wroldsen	7.0	5.0	38.4	14.6	3.2	1897	Md, Fairmount
349.	Mary M. Clark	10.0		45.5	16.5	3.9	1903	Md, Whitehaven
350.	Mary S	7.0		40.0	14.1	2.7	1901	Md, Wittman
351.	Mary Sue	8.0		42.4	14.6	3.0	1906	Va, Deep Creek
352.	Mary V	8.0	8.0	40.7	14.4	3.5	1896	Md, Fairbank
353.	Mary W. Somers	9.0		41.9	14.0	3.4	1904	Va, Mearsville
354.	Mattie A. Walston	7.0	7.0	39.6	13.8	3.0	1897	Md, Crisfield
355.	Mattie Croswell	7.0	7.0	42.0	13.5	3.6	1899	Md, Oriole
356.	Mattie L. Tyler	5.0	5.0	35.5	12.6	2.6	1899	Md, Pocomoke
357.	Maud	8.0	8.0	41.0	14.4	3.7	1902	Md, Monie
358.	Maud Bennett	10.0	5.0	43.7	14.9	3.6	1896	Md, Crisfield
359.	May Flower	6.0	5.0	40.0	12.5	4.2	1897	Va, Tappahannock
360.	Melissa Lawrence	10.0	10.0	48.0	15.5	4.2	1901	Md, Oriole
361.	Melson	7.0	7.0	39.0	13.4	3.2	1901	Md, St. Peters
362.	Merl	5.0		35.0	12.6	3.1	1898	Md, Hopewell
363.	Micah A. Parks	7.0	7.0	40.0	13.7	3.0	1894	Md, Fairmount
364.	Mildred B	8.0	8.0	42.5	14.4	3.9	1902	Md, Oriole
365.	Mildred Bennett	8.0		42.2	14.2	3.3	1899	Md, Fairmount
366.	Millard	5.0	5.0	37.0	12.4	2.8	1897	Md, Crisfield
367.	Milton F. Yeakel	7.0	7.0	42.0	14.2	3.3	1901	Md, St. Peters
368.	Minnie	5.0	5.0	36.5	12.9	2.1	1893	Md, Crisfield
369.	Minnie	6.0	6.0	36.7	11.6	3.1	1896	Md, Smith Island
370.	Minnie Blanche	5.0	5.0	38.0	13.0	2.8	1903	Md, Whitehaven
371.	Minnie M. Thompson	8.0	8.0	42.8	14.0	3.5	1900	Md, Kent Island
372.	Minnie May	7.0	6.0	40.6	13.3	3.3	1896	Md, Oriole
373.	Minnie V	10.0	8.0	45.3	15.7	3.0	1906	Md, Wenona
374.	Mollie A	6.0		40.0	13.6	3.0	1897	Md, Holland Island
375.	Mollie E	6.0	6.0	41.5	14.0	2.8	1899	Md, Holland Island
376.	Montrose	7.0	7.0	40.0	13.5	3.0	1899	Md, Oriole
377.	Morning Herald	7.0	7.0	39.5	14.0	3.2	1899	Md, Fairmount
378.	Morrison C	7.0		38.4	13.8	2.7	1908	Md, Thomas
379.	Myrtle	8.0		40.2	14.5	2.9	1908	Md, Hudson
380.	Myrtle Virginia	6.0	5.0	40.0	13.0	2.8	1903	Va, Chesconnessex
381.	Nellie L. Byrd	22.0	18.0	53.6	16.7	4.8	1911	Md, Oriole
382.	Nellie Somers	8.0	6.0	42.0	14.4	3.0	1911	Va, Hunting Creek
383.	Nellie White	7.0	7.0	40.0	14.1	3.5	1901	Md, St. Peters
384.	Nodie North			43.0	14.5	3.5	1896	Md, Tilghman Island
385.	Nora	6.0		36.9	13.2	3.0	1899	Md, Bozman
386.	Norma K	30.0	24.0	58.7	19.8	5.2	1915	Md, Whitehaven
387.	Oceanic	6.0		37.4	13.3	3.0	1897	Md, Fairmount
388.	Oceanic	6.0		45.6	14.4	3.1	1897	Md, Applegarth
389.	Olive M	5.0	5.0	37.8	11.7	2.7	1898	Md, Oriole
390.	Oliver	5.0	5.0	36.4	12.3	2.8	1900	Md, Crisfield
391.	Omar J. Croswell	9.0	7.0	44.6	14.9	3.3	1905	Md, Oriole
392.	Omoo			46.0	16.0	2.9	1905	Md, Shadyside
393.	Onward	9.0	9.0	42.0	14.5	3.7	1896	Md, Harrison
394.	Oregon	10.0		43.0	13.9	3.2	1898	Md, Hudson
395.	P.H. Tawes	10.0	10.0	44.0	15.1	3.6	1897	Md, Wittman
396.	Page & Donald	7.0	7.0	40.3	14.0	3.0	1897	Md, Holland Island
397.	Pauline	6.0	6.0	40.0	13.5	2.7	1898	Md, Deal Island
398.	Percy E. Shores	7.0	7.0	45.0	15.4	3.4	1901	Md, Deal Island
399.	Phyllis	10.0	8.0	45.6	15.5	3.4	1908	Md, Oriole
400.	Quick Time	5.0	5.0	39.5	12.2	2.8	1907	Va, Deep Creek
401.	R.A. Meredith	10.0	7.0	39.2	13.8	3.9	1911	Md, Rumbley
402.	R.J. Allen	12.0	12.0	46.0	15.8	4.6	1902	Md, Oriole

403.	R.L. Miles	8.0	5.0	39.9	13.1	3.3	1896	Md, Oriole
404.	Ralph T. Webster			47.7	15.3	3.5	1905	Md, Oriole
405.	Rasa Augusta	10.0	8.0	47.6	15.3	3.5	1905	Md, Oriole
406.	Raymond C	5.0		36.5	12.6	2.8	1899	Md, Oriole
407.	Raymond S	6.0		40.8	13.5	2.4	1901	Md, Tilghman
408.	Reba May	6.0	6.0	39.0	13.6	3.3	1899	Md, Crisfield
409.	Reliance	6.0		38.8	13.2	3.6	1903	Va, Leemont
410.	Reliance	7.0		41.0	14.3	2.7	1904	Md, Fishing Creek
411.	Rena B	7.0	7.0	38.0	14.7	3.0	1899	Md, Fairmount
412.	Reta May	6.0	6.0	40.0	12.7	3.2	1897	Md, Deal Island
413.	Rew Brothers	6.0		41.5	14.6	3.2	1907	Va, Justisville
414.	Rhoda M. Parker	6.0	6.0	37.6	14.3	2.7	1901	Md, Fishing Creek
415.	Ringgold Brothers	29.0	22.0	56.0	19.2	5.3	1911	Md, Oriole
416.	River View	6.0	6.0	41.0	13.1	2.4	1897	Md, Bishops Head
417.	Roamer	10.0	6.0	41.7	14.1	3.7	1899	Md, Churchton
418.	Robert L. Tawes	9.0		45.6	15.6	4.0	1901	Md, Pocomoke
419.	Robert L. Webster	35.0	29.0	60.0	20.3	5.8	1915	Md, Oriole
420.	Robert W. Cole	25.0	20.0	54.7	18.3	5.1	1911	Md, Oriole
421.	Roland B. French	6.0	6.0	35.5	12.9	3.0	1899	Md, Fairmount
422.	Rona C. Hammond	9.0	9.0	40.9	15.3	4.1	1901	Md, Bedsworth
423.	Roosevelt	6.0		36.0	14.0	2.5	1901	Md, Cambridge
424.	Rosa Augusta	10.0	8.0	47.6	15.3	3.5	1905	Md, St. Peters
425.	Rose E. Chelton	8.0	8.0	42.0	14.2	3.3	1899	Md, Londonville
426.	Rosie Parks	8.0	8.0	46.2	16.7	3.3	1955	Md, Wingate
427.	Rowena	6.0		33.6	12.2	2.5	1901	Md, St. Michaels
428.	Ruby	6.0	6.0	37.8	12.3	2.5	1897	Md, Hudson
429.	Ruby G. Ford	9.0	5.0	45.0	15.6	2.6	1891	Md, Fairmount
430.	Russell & Alice	16.0	12.0	49.4	15.7	4.2	1908	Md, Oriole
431.	Ruth	8.0		39.0	13.7	3.2	1896	Md, Fairbank
432.	Ruth	8.0	8.0	43.2	14.5	3.7	1901	Md, Oriole
433.	Ruth	7.0	5.0	39.0	14.0	3.0	1906	Va, Deep Creek
434.	Ruth A. Thomas	30.0	25.0	56.4	19.7	5.6	1914	Md, Oriole
435.	Ruth C	6.0	6.0	37.0	13.6	3.2	1899	Md, Fairmount
436.	S.A. Holland	10.0	9.0	50.0	14.7	3.3	1893	Md, Marion
437.	S. Bozman							
438.	S. Kirk	10.0	8.0	45.0	14.2	3.5	1901	Va, Dreka
439.	S.F. Smith	6.0	6.0	40.0	13.7	2.8	1897	Md, Dames Quarter
440.	S.H. Tolley	8.0	7.0	42.0	15.3	2.7	1909	Md, Fishing Creek
441.	S.J. Bennett	7.0		43.0	15.3	3.2	1903	Md, Inverness
442.	Sadie			40.0	11.9	3.5	1900	Md, St. Michaels
443.	Sadie D							
444.	Sadie Francis	15.0	12.0	49.8	16.6	3.9	1905	Md, Deal Island
445.	Saginaw	7.0	5.0	37.9	13.2	3.0	1896	Md, Crisfield
446.	Sallie Mitchell	5.0	5.0	35.5	12.1	3.2	1898	Md, Crisfield
447.	Sarah Taylor	5.0	5.0	34.0	13.4	2.7	1899	Md, Dames Quarter
448.	Schley	7.0	7.0	36.3	14.1	2.6	1900	Md, Cambridge
449.	Seabright	8.0	6.0	41.3	13.6	3.2	1896	Md, Oriole
450.	Seagull	17.0		46.6	15.9	4.3	1924	Md, Crisfield
451.	Sea King	6.0	6.0	39.5	12.5	2.8	1897	Md, Hudson
452.	Sea King	5.0	5.0	34.7	11.5	3.0	1898	Md, Crisfield
453.	Seth T. Bozman	5.0	5.0	37.0	12.7	2.9	1902	Md, Monie
454.	Shamrock	6.0		37.5	13.8	3.0	1899	Md, Fairmount
455.	Shamrock	5.0	5.0	37.5	13.3	3.0	1901	Va, Hunting Creek
456.	Sigsbee	9.0		47.0	15.8	3.8	1901	Md, Deal Island
457.	Silverine	5.0			12.6	3.2	1897	Md, Solomons
458.	Silver Spray	9.0	5.0	40.8	13.9	3.7	1896	Md, Crisfield
459.	Somerset	9.0		44.9	15.7	3.5	1949	Va, Reedville
460.	Stanley Norman	10.0		47.5	15.3	4.0	1902	Md, Salisbury
461.	Star	9.0		38.4	14.4	3.2	1924	Md, Crisfield
462.	Stella	9.0		40.1	13.6	3.5	1900	Md, Bellevue
463.	Stella	7.0	6.0	38.5	13.3	2.8	1906	Va, Deep Creek

464.	Susan May	10.0		46.0	15.9	3.6	1901	Md, Pocomoke
465.	Susie Dryden	9.0	9.0	45.3	15.9	4.0	1901	Md, Pocomoke
466.	Susie Lee	7.0	7.0	41.5	13.8	3.0	1899	Md, Holland Island
467.	Thelma	13.0	8.0	45.5	16.1	4.1	1905	Md, Fairbank
468.	Thelma	5.0	5.0	35.7	12.2	2.5	1909	Md, Bedsworth
469.	Thelma G. Roberts	6.0		45.3	14.0	2.7	1897	Md, Applegarth
470.	Thomas Clyde	27.0	21.0	54.5	18.2	5.3	1911	Md, Oriole
471.	Thomas S. Price	6.0	6.0	41.5	14.0	2.8	1899	Md, Holland Island
472.	Three Partners	7.0	7.0	38.0	13.9	3.5	1899	Md, Pocomoke
473.	Three Sisters	7.0	5.0	38.2	12.8	3.3	1896	Md, Crisfield
474.	Triumph	7.0		39.4	13.8	2.9	1901	Md, Hudson
475.	Two Sisters	8.0		43.1	14.5	3.5	1896	Md, Tilghman
476.	Upshur Q	7.0	6.0	38.5	13.8	3.0	1905	Va, Justisville
477.	Valkyrie	7.0		39.0	13.7	3.0	1896	Md, Wittman
478.	Vera	7.0	5.0	38.5	13.1	3.1	1896	Md, St. Peters
479.	Vera D	6.0	6.0	38.2	13.4	2.7	1897	Md, Hopewell
480.	Vernon Daniel	23.0	18.0	56.2	18.4	4.8	1910	Md, Champ
481.	Victor	9.0	7.0	46.0	15.0	3.0	1901	Va, Hopkins
482.	Viola	8.0	6.0	39.5	12.9	3.2	1900	Md, Broomes Island
483.	Viola	5.0	5.0	36.5	12.2	2.7	1904	Md, Fairmount
484.	Violet E	8.0		39.4	13.4	3.1	1896	Md, Wittman
485.	Violet W	5.0	5.0	37.0	11.8	2.6	1899	Md, Oriole
486.	Virell	5.0	5.0	35.0	12.6	2.8	1898	Md, Oriole
487.	Virgie	9.0	6.0	47.0	14.0	3.0	1899	Md, Pocomoke
488.	Virgil G. Dean	6.0		40.5	13.7	2.7	1897	Md, Bishops Head
489.	Virginia	6.0		36.3	13.9	2.2	1901	Md, Cambridge
490.	Virginia	10.0		41.7	15.7	3.5	1901	Md, St. Michaels
491.	Virginia	6.0	6.0	39.0	13.2	2.7	1905	Va, Deep Creek
492.	Virginia W	8.0		44.0	14.4	3.7	1902	Md, Oriole
493.	Virginia W	5.0	5.0	37.5	13.5	3.3	1904	Va, Guilford
494.	W.J. Bradshaw	7.0	7.0	39.0	13.0	3.5	1897	Md, Crisfield
495.	W.O. Livingston	6.0	6.0	41.0	13.9	3.2	1898	Md, Deal Island
496.	W.S. Schley	5.0	5.0	38.2	12.7	3.0	1898	Md, Capitola
497.	W.S. Schley	7.0	6.0	45.0	14.0	3.0	1898	Md, Pocomoke
498.	Wallace S	6.0	6.0	39.0	11.7	2.6	1890	Md, Crisfield
499.	Walter A. Venable	9.0	9.0	43.0	15.0	3.5	1897	Md, Harrison
500.	Walton L. Taylor	12.0	8.0	55.0	16.0	3.0	1904	Va, Marsh Market
501.	Wanda	9.0		43.8	15.2	3.6	1897	Md, Wittman
502.	Water Lily	6.0	6.0	37.8	13.0	2.6	1897	Va, Saxis Island
503.	Water Lily	7.0		38.8	14.7	3.1	1897	Md, Crapo
504.	Wheatley	7.0		41.0	13.6	2.8	1900	Md, Hudson
505.	Whites Yacht	7.0		40.5	13.2	3.4	1899	Md, Deal Island
506.	Wilber	5.0	5.0	38.0	12.4	2.9	1897	Md, Ewell
507.	Willard	6.0		36.0	12.9	2.8	1901	Md, Hudson
508.	William E. Earl	5.0	5.0	37.2	13.4	2.6	1897	Md, Bishops Head
509.	William E. Parks	6.0	6.0	36.6	14.0	3.5	1898	Md, Fairmount
510.	William F. King	7.0	6.0	41.6	13.0	3.0	1902	Va, Hunting Creek
511.	William J	5.0	5.0	40.5	12.8	3.0	1899	Md, Allen
512.	William J. Pell	8.0	5.0	40.0	13.0	3.6	1909	Md, Crisfield
513.	William L. Webster	6.0	6.0	41.5	13.4	3.0	1899	Md, Deal Island
514.	William McKinley	5.0	5.0	35.6	12.2	2.6	1897	Md, Crisfield
515.	William R	8.0	8.0	40.5	13.9	2.6	1896	Md, Cambridge
516.	William R	7.0	7.0	39.5	15.0	3.0	1899	Md, Holland Island
517.	William S. White	8.0		42.5	14.8	3.4	1901	Md, Deal Island
518.	Willie & Edward	10.0	7.0	35.9	13.9	2.9	1898	Va, Hampton
519.	Willie L. Bennett	8.0		42.6	14.8	3.4	1899	Md, Inverness
520.	Wilma A. Florence	9.0	6.0	45.5	14.5	3.2	1900	Va, Dreka
521.	Wilma Lee	20.0		46.8	16.2	4.5	1940	Md, Wingate
522.	Wilmer T	9.0	7.0	39.0	13.7	3.5	1901	Va, Kings Point
523.	Wilton V	5.0	5.0	35.0	12.0	2.5	1896	Md, St. Peters
524.	Wm & Jessie	6.0	6.0	40.2	14.5	2.8	1898	Va, Hopeside

525.	Yttria	10.0	9.0	45.5	14.1	3.7	1883	Md, Tilghman
526.	Zella	13.0	9.0	49.3		3.4	1908	Md, Deal Island
527.	Zola	7.0	7.0	39.5	13.9	3.4	1899	Md, Fairmount

From Janet Mauch's Sailboat Gide, the following data were used to derive some proportions in the spreadsheet model:

Recreational Sailboat Proportions P.O. Box 24, Ortega Station, Jacksonville, Florida 32210)

	LOA	LWL	Beam	Draft	Disp. (tons)	Ballast (tons)	Sail Area, (sq.ft.)
Mean:	39.13	31.69	12.01	5.05	10.57	4.13	761.52
Median:	37.8	30.1	11.9	5	8.64	3.5	672
Std. Dev.:	9.55	7.73	2.29	1.31	8.13	3.19	389.72
C.Variation:	0.24	0.24	0.19	0.26	0.77	0.77	0.51
Max.:	85.9	67.7	29.3	11.6	69.75	28.5	2928
Min.:	20	18	7.11	1.11	0.5	0.4	212
Mode:	36	30	10	5	8.5	2	524
Number:	344						

	LOA	LWL	Beam	Draft	Disp.	Ballast	Sail Area	
1.	Allied Contessa 36	36	27.6	11	4.6	14,400	5,000	604
2.	Allied Mistress 39	38.73	29.5	12	4.6	20,800	5,600	700
3.	Allied 42' XL-2	41.09	30.1	11.6	4.2	19,000	7,100	762
4.	Allmand 31	30.9	27.8	11.4	3.1	11,100	4,300	485
5.	Allmand 35 Tri-Cabin	34.9	29.7	11.8	4.2	15,100	4,300	550
6.	Bayfield 32	32	23.3	10.6	3.9	9,600	4,000	525
7.	Beneteau Oceanis 390	38.4	33.3	12.1	5.5	14,300	5,180	843
8.	Beneteau First 41S5	41.4	33.7	12.9	7.2	16,800		799
9.	Beneteau First 42	43.8	36.3	13.2	7.3	18,600	8,700	
10.	Beneteau Oceanis 430	42.9	36.1	13.1	6	19,800	7,055	1,013
11.	Beneteau 456	46.7	39.4	14.1	7.11	22,000	10,560	
12.	Beneteau Oceanis 500	50.3	44.6	15.7	6	28,660	10,800	1,371
13.	Beneteau First 51	51.2	43.1	14.1	5.9	28,659	14,329	1,180
14.	Brewer 42 (12.8)	42	33.8	13.6	4.6	23,850	9,000	867
15.	Bristol 32	32.1	22	9.5	4.8	10,800	3,300	464
16.	Bristol 35	34.8	23.9	10	5	12,500	5,200	531
17.	Bristol 41.1	41.13	33.4	12.11	4.6	26,530	10,500	830
18.	Bristol 45.5	45.3	37.2	13.2	4.11	34,660	15,000	1,125
19.	Bristol 47.7	47.4	37.3	13.2	4.11	34,660	15,000	1,125
20.	Bristol 51.1	51.1	42	15.2	5.4	43,700	19,500	1,220
21.	Bristol 54.4	54.5	45.6	15.6	5.4	54,000	20,500	1,520
22.	Bristol 72	71.8		18.1	6.1	14,000	44,000	2,244
23.	C&C 30	30	24.9	10	5	7,900	3,650	459
24.	C&C 33	32.1	26.5	10.6	5.6			514
25.	C&C 38	37.7	29.7	12	6.1	14,700		671
26.	C&C 41	40.9	33.4	12.11	7	17,500	7,980	812
27.	C&C 44	44.1	35.3	13.3	8.6	22,500		909
28.	CS 34	33.6	27.8	11.3	4.6	10,500	2,600	533
29.	CS 36 Merlin	36.3	29.2	11.6	6.8	13,000	5,590	605
30.	CS 40	39.3	32.8	12.8	6.1	17,000	7,200	766
31.	CSY 33	33.4	25	10.6	4.11	13,500	5,000	480
32.	CSY 37	37.3	29.2	12	6	19,689	8,000	610
33.	SY 44 Mid Cockpit Cutter	44	36.4	13.4	6.6	37,000	14,000	1,060
34.	SY 44 Pilot House Ketch	44	36.4	13.4	6.6	38,000	14,000	949
35.	CT 35	34.6	26.9	11.2	4.1	16,900	5,500	747
36.	CT 41	40.8	32.6	12.2	6	27,500	9,000	790
37.	Cabo Rico 38	41	38	29.3	11.6	20,000	7,800	750
38.	Cal 29	29	24	9.3	4.6	8,000	3,350	434
39.	Cal 31	31.6	25.8	10	5	9,170	3,600	490
40.	Cal 33	33	27.6	11.4	4.8	10,000	4,330	553
41.	Cal 34	33.3	26	10	5	9,500	3,750	515
42.	Cal 35	35	28.9	11.3	6	13,000	5,200	607
43.	Caliber 28	27.6	24.4	10.1	4	7,200	3,100	428
44.	Caliber 33	32.6	29.6	11.4	4.6	11,400	5,500	525

45.	Caliber 38	38	32	12.8	5	22,000	9,500	700
46.	Cape Dory 25	24.1	18	7.3	3.3	3,850	1,500	264
47.	Cape Dory 28	28.12	22.2	8.1	4	9,000	3,500	404
48.	Cape Dory 30	30.2	22.1	9	4.2	10,000	4,000	437
49.	Cape Dory 33	33.5	24.6	10.3	4.1	13,300	5,500	546
50.	Cape Dory 36	36.1	27	10.8	5	16,100	6,050	622
51.	Cape Dory 45	45.3	33.6	13	6.3	24,000	9,400	936
52.	Catalina 22	21.6	19.4	7.8	1.8	2,490	800	212
53.	Catalina 25	25	22.2	8	2.1	4,550	1,900	270
54.	Catalina 27	26.1	21.9	8.1	4	5,650	2,650	340
55.	Catalina 30	29.1	25	10.1	5.3	10,200	4,200	446
56.	Centurion 38	37.6	31.7	12.5	4.6	19,730	6,950	982
57.	Centurion 40	39.7	32.9	13.5	5.3	21,111	8,000	1,105
58.	Centurion 45MS	44.2	34.1	13.6	6.3	29,000	9,200	
59.	Challenger 35	34.8	30	11.6	4.6	13,800	4,200	526
60.	Challenger 40	39.1	34	12.1	6	28,800	7,200	670
61.	Cheoy Lee 35	34.1	27.1	11.2	5.4	14,300	5,200	565
62.	Cheoy Lee Pedrick 41	40.1	32.6	12.8	4.4	23,000	9,000	785
63.	y Lee 43 L/R Motorsailer	42.9		13.2	5	34,000		832
64.	Cheoy Lee 44	43.9	37.8	13.3	6	27,200	11,400	880
65.	Cherubini 44	50.1	44	12	4.1	28,000	12,000	1,133
66.	Cherubini 48	56.8	44	13	5	37,000	16,900	1,218
67.	Columbia 29	28.7	23.2	10	4.8	8,000	3,500	424
68.	Columbia 43	43.9	32.8	12.4	7	22,200	10,300	852
69.	Columbia 45	45.3	34.8	12.4	7.3	25,000	10,300	694
70.	Contest 27	27.5	21.8	9	4.5	5,730	2,468	408
71.	Contest 33	32.8	25.1	10.4	5.3	9,370	4,740	438
72.	Contest 38	38	27.8	11.3	6.6	16,850	7,280	648
73.	Contest 40	39.9	27.8	11.3	6.6	17,190	7,280	676
74.	Contest 46	46	36.9	13.1	5.9	27,000	10,400	1,153
75.	Coronado 35	35.3	27.6	10.1	5.6	15,260	5,960	503
76.	Coronado 41	40.6	31.8	11.3	4.1	20,700	9,700	661
77.	Coronado 45	45.3	34.6	12.4	4.11	5,000	12,300	
78.	Deerfoot 58	58.1	53.1	13.6	5.8	39,000		1,130
79.	Deerfoot 61	61.6	56.3	14.5	6.3	45,000	15,300	1,150
80.	Deerfoot 73 Pilot House	73.2	66.6	14.8	7	74,500		1,610
81.	Downeaster 32	35.6	25.1	11	4.9	17,000	5,500	593
82.	Downeaster 38	41.9	29	11.1	4.11	19,500	8,000	761
83.	Downeaster 45	50.6	35.9	14	5.11	39,000	12,000	1,114
84.	Endeavour 32	32	25.3	9.9	3.6	11,700	5,300	470
85.	Endeavour 33	32.7	27.6	11.6	4.6	11,350	4,600	540
86.	Endeavour 35	35.5	29.6	12.2	4.11	13,250	5,630	671
87.	Endeavour 37	37.5	30	11.7	4.6	20,000	8,000	580
88.	Endeavour 38 Center Cockpit	38.3	32	12.6	4.11	17,600	8,800	704
89.	Endeavour 40	40	32	13	5	25,000	9,000	789
90.	Endeavour 42	42.3	33.4	13	5	25,000	9,000	788
91.	Endeavour 43	43	35	14	5.5	33,000	12,000	1,035
92.	Endeavour 51	51	42.3	15	5	37,500	17,300	1,238
93.	Ericson 30	29.1	25.3	10.5	4	8,900	4,000	452
94.	Ericson 31	30.1	23.1	10.5	4.11	11,400	4,500	458
95.	Ericson 35	34.8	25.1	10	4.11	11,600	5,000	533
96.	Ericson 36	35.7	29	11	6.3	11,600	5,230	598
97.	Ericson 38	37.8	30.6	12	4.11	14,900	6,300	709
98.	Ericson 39	39	30	11.4	5.11	19,000	9,500	739
99.	Ericson 46	45.1	35	13.3	7.2	31,500	16,500	1,064
100.	Fisher 25	25.3	21	9.4	3.9	10,400	4,000	390
101.	Fisher 30	30	25	9.6	4.3	15,200	8,000	330
102.	Fisher 34	34.4	29.1	11.3	4.9	25,000	10,150	845
103.	Fisher 37	37	32.6	12	5.3	32,000	14,000	1,171
104.	Freedom 32	31.6	25.5	10.9	4.9	7,660	3,150	468
105.	Freedom 38	37.1	30.7	12.6	4	14,370	6,500	685

106.	Freedom 45	44.6	34.5	13.6	4.11	22,992	9,500	873
107.	Frers 33	33.3	26.6	11.3	6.3	9,400	4,000	560
108.	Frers 38	38.6	30.1	12.9	7.4	14,100	6,300	735
109.	Frers 41	40.6	31.6	13.1	7.3	15,950	6,600	773
110.	Frers Offshore 41	40.6	32	13.1	6.6	17,500	7,200	773
111.	Frers 45	45	35	13.11	6.6	23,500	9,600	976
112.	Frers Competition 45	45	35	13.11	8.3	22,000	9,600	1,040
113.	Fuji 32	31.6	24.9	9.1	3.8	13,115	4,635	471
114.	Fuji 35	34.7	26	10	5	16,302	5,960	630
115.	Fuji 45	45	33	12.8	5.6	30,500	8,750	997
116.	Fuji 45 MK11	45	33.9	12.8	5.6	30,500	8,750	955
117.	Grampian 26	26	21.9	8.4	3.6	5,600	2,600	325
118.	Grampian 30	29.9	25.6	9.6	3.3	8,600	3,870	390
119.	Grampian 34	33.7	26.5	10	5	12,000		522
120.	Grampian 2-34	33.9	28	10	5	12,000		521
121.	Gulf 27 Pilot House	27.2	22.6	9.4	5.2	6,900		350
122.	Gulf 29 Pilot House	28.8	23.6	9.4	4	7,500	3,200	375
123.	Gulf 32 Pilot House	32	25	10	4.6	15,000		555
124.	Gulf 39 Pilot House	38.1	33.6	12	5	17,500		694
125.	Gulfstar 41	41.1	33	12	5		8,000	669
126.	Gulfstar 43 Mark II	42.7	33	11.1	5	23,000	8,000	691
127.	Gulfstar 44	44.8	35.6	13.2	5.6	26,000	8,500	800
128.	Gulfstar 47 Sailmaster	47.5	40.6	13.1	5.6	38,000	10,500	873
129.	Gulfstar 50 Mark II	50	39.8	13.8	6	35,000	10,500	895
130.	Hans Christian 38T	37.1	33	12.4	6	26,500	9,800	791
131.	Hans Christian 41T	40		13.3	5.5	35,000		
132.	Hans Christian 43T	42.7	36.1	13.1	6	31,500	12,300	1,036
133.	Hans Christian 48T	47.1	41.3	13.7	5.6	36,000	14,700	1,387
134.	Americana 29	29	25	10	5.6	6,800	3,400	398
135.	Americana 30	29.1	28.8	10.6	3.8	10,000	5,000	515
136.	Americana 34	34	28.8	10.6	5.9	9,600	4,500	508
137.	West Indies 36	36.5	32	12	4.11	17,000	7,500	685
138.	West Indies 38	38	32.6	12	4.2	20,000	7,500	685
139.	Hinckley Pilot 35	35.9	25	9.6	5	13,500	4,200	554
140.	Hinckley Bermuda 40	40.9	28.1	11.9	4.3	20,000	6,500	727
141.	Hinckley Competition 42	41.8	31.5	12.6	7.2	21,500	8,500	911
142.	Sou'Wester 42	42.9	31.3	12.6	5.9	24,000	8,500	818
143.	Sou'Wester 43	43.1	31.3	12.6	5	24,000	8,500	818
144.	Sou'Wester 51	51.3	37.6	14	5.1	40,000	14,600	1,135
145.	Sou'Wester 59	59.3	44.2	15.6	6.6	23,250		1,548
146.	Hunter 22	22.3	18.4	7.11	1.11	3,200	1,300	220
147.	Hunter 25	25	20.2	8	2.11	4,400	2,000	256
148.	Hunter 27	27.2	22	9.3	3.3	7,000	3,200	362
149.	Hunter 30	29.1	25.9	10.1	4	9,700	4,000	473
150.	Hunter 36	35.1	29.6	11.1	4.11	13,500	6,000	621
151.	Hunter Legend 37	37	30	11.1	4	17,800	7,150	710
152.	Hunter 40	39.7	32.6	13.5	5	17,900	8,400	787
153.	Hunter 54	53.1	43.6	11.4	6	20,500	8,200	803
154.	Intrepid 28	28	24.6	9.6	4.1	7,500	3,100	356
155.	Intrepid 35	35.1	28.1	10.2	5.6	13,600	6,250	557
156.	Irwin 10.4	25.4	21.1	10.4	2.9	7,000	2,000	325
157.	Irwin Citation 30	30	26.1	10.2	4	10,400	4,300	545
158.	Irwin 37 Center Cockpit	37	30	11.6	4	22,000	6,700	602
159.	Irwin Citation 39	39.9	31.2	12.2	4.3	16,890	7,000	897
160.	Irwin 40 MKII/Citation 40	39.9	31.2	12.2	4.3	16,890	7,000	778
161.	Irwin Avanti 42	42.6	35.1	13.4	4.4	26,000	8,000	852
162.	Irwin 42	42.6	35.1	13.4	4.6	29,000	12,000	900
163.	Irwin 44	44.3	36	13.4	4.4	30,500	12,000	1,075
164.	Irwin Windward 44	43.4	36.4	13.4	4.4	30,000		864
165.	Irwin 46	45.6	37.7	13.6	4.8	33,000	12,000	1,049
166.	Irwin 52	52	44	15.4	6	55,000	16,100	1,356

167.	Irwin 54	57.2	44	15.4	5.6	46,000	16,000	1,422
168.	Irwin 61	61.3	48.4	16.2	6	57,000	19,000	1,663
169.	Irwin 65	64.8	54	17.4	5.9	78,500	23,000	2,178
170.	Irwin 81	81.3	66.7	20.3	6.6	112,000	38,000	2,928
171.	Islander Bahama 30	29.11	24.7	10	4	8,322	3,222	449
172.	Islander Freeport 36	35.9	27.6	12	5.3	17,000	6,300	660
173.	Islander 36	31	28.3	11.2	4.9	13,600	5,600	575
174.	Islander Freeport 41	41	32.6	13.2	5	22,000	6,000	
175.	Islander 48	47.6		13.1	5.1	29,125	11,000	1,004
176.	Island Packet 27	30	24.3	10.6	3.8	8,000	3,000	405
177.	Island Packet 31	34.4	27.9	11.6	4	11,000	4,500	531
178.	Island Packet 32	35	28.7	11.6	4.4	12,900	5,950	654
179.	Island Packet 35	38	30	12	4.6	17,500	8,000	640
180.	Island Packet 38	41.6	33	12.8	4	19,000	7,600	735
181.	Island Trader 29	28.6	21.6	9.1	4	9,750	2,200	373
182.	Island Trader 35	34.1		11.3	4.5	12,041	4,000	
183.	Island Trader 37	37	27.1	11.1	4.7	18,600	5,000	567
184.	Island Trader 40	39.4	34.3	13.4	4.9	34,500		462
185.	Island Trader 46	45.6	39.9	15.2	5.6	48,360	8,500	642
186.	Island Trader 51	50.1	39.7	14.1	6.2	52,000		1,250
187.	J-27	27.5	23	8.5	4.9	3,800	1,530	364
188.	J-28	28.6		10	3.11	7,900	3,000	
189.	J-29	29.5	25	11	5.6	6,000	2,100	450
190.	J-33	33.5	28	11	6.2	8,000	3,100	561
191.	J-35	35.5	30	11.8	6.9	10,000	4,400	632
192.	J-35C	35.2	30	11.1	4.9	11,800	4,300	621
193.	J-44	44.9	38.7	13.7	6	22,000	9,000	1,046
194.	J-60	60	50.2	16.2	7	36,000	18,000	1,803
195.	Krogen 38 Cutter	38.2	32.1	12.8	3.2	24,000	7,000	858
196.	Lancer 28	27.8	23.1	8	2.1	5,200	2,600	
197.	Lancer 29 MK III	28.8	23.6	10	4.2	7,800	3,000	
198.	Lancer 30	29.6	22.9	10	5.2	8,000	2,800	360
199.	Lancer 36	36.2	28.4	11	5.11	10,500	4,000	528
200.	Lancer 42	42.7	35.3	13.9	4.11	21,000	7,000	961
201.	Lancer 44	44.2	35.3	13.9	4.11	23,000	7,000	889
202.	Liberty 458	45.8	40.4	12.11	6.4	30,500	11,000	1,177
203.	Little Harbor Custom 48	48.2	38.4	14.6	4.6	42,924	18,000	1,100
204.	Little Harbor 58	58.8	47.9	16.2	4.1	56,720	23,000	1,508
205.	Little Harbor 63	63.1	49.8	17.3	6	65,000	27,000	1,750
206.	Little Harbor Custom 75	74.8	56.3	19.8	6	139,500	57,000	2,560
207.	Mariner 28	28.2	22.9	9.5	3.6	7,450	2,650	360
208.	Mariner 36	36	30.1	11.6	5	17,250	5,650	595
209.	Mariner 36 Pilothouse	36	30.1	11.6	5	18,250	5,650	595
210.	Mariner 47	47	37.1	13.1	6	32,000	13,000	1,022
211.	Morris 36	36.3	29.6	11.7	4.6	15,600	6,500	657
212.	Morris 44	44	34.6	12.9	5.9	22,500	8,280	879
213.	Morgan Out Island 33	33	27.6	11.1	3.11	14,500	5,000	525
214.	Morgan 38	38.4	30.6	12	5	17,000	6,800	668
215.	Morgan Out Island 41	41.3	34	13.1	4.2	27,000	9,000	774
216.	Morgan Classic 41	41.3	34	13.1	4.1	23,000	8,500	781
217.	Morgan 45	45	39.3	13.6	5.6	30,000	8,300	900
218.	Morgan Out Island 51	51.6	43	15	5.6	48,000	14,000	1,258
219.	Nautical 56	55.9	44.5	15.7	5.6	51,000	14,000	1,323
220.	Nautical 60	59.6	44.5	15.7	5.6	52,000	14,000	1,323
221.	Nautical 62	61.6	45.6	15.7	5.1	55,000	17,000	1,596
222.	Nauticat 33	33.2	28.3	10.8	4.1	15,180	5,291	638
223.	Nauticat 36	35.5	30.1	10.1	5.3	17,640	6,600	822
224.	Nauticat 38	37.6	30.4	11.2	5.11	24,200	6,835	806
225.	Nauticat 40	39.4	32.9	13.1	5.8	30,865	9,480	
226.	Nauticat 43	42.8	32.1	13.1	6.3	35,280	10,143	1,023
227.	Nauticat 44	43.4	37.9	12.2	5.11	39,700	12,100	1,140

228.	Nauticat 52	51.2	39.7	15	7.2	59,400	16,720	
229.	Newport 28 II	28	23.6	9.9	4	7,000		
230.	Newport 30 III	30.6	26.6	10.8	4	8,500		425
231.	Newport 33	33	27	10.1	4	9,500		465
232.	Newport 38 Pilot House	38.4	33.6	12	5.2	15,500		692
233.	Newport 41 MKIII	41	32.3	11.3	6.3	18,000	8,215	750
234.	Nordic Custom 40	39.8	32.6	12.5	5.6	18,000	7,091	756
235.	Nordic Sceptre 41	41	36	12.8	4.9	21,500	8,700	774
236.	Nordic Custom 44	43.1	35.5	12.11	5.11	23,500	9,340	907
237.	Nordic 45	45.4	35.6	12.11	4.1	25,000	9,340	923
238.	Norseman 447	44.7	37.6	13	5.4	28,000	12,000	937
239.	Northstar 1500	35.6	26	10.4	5.1	11,086	5,400	498
240.	Northstar 80/20	39.7	31	13.4	4.9	24,000	9,500	786
241.	O'Day 28	28.3	22.1	10.3	3.3	7,300	2,500	370
242.	O'Day 30	29.1	25.5	10.9	4.11	10,150	4,000	441
243.	O'Day 31	30.1	25.7	10.9	4	10,100	3,800	436
244.	O'Day 34	34	28.9	11.3	4.5	11,500	4,650	524
245.	O'Day 35	34.11	28.9	11.3	4.5	11,500	4,650	524
246.	O'Day 37	37	30.4	11.2	5	1,000	6,000	594
247.	O'Day 39	38.7	33.6	12.7	4.11	18,000	6,600	681
248.	Offshore 33	33.1	26.1	11	3	13,500	5,000	500
249.	Tanton Offshore 43	43.2	37.7	13.1	4.1	20,216	9,000	794
250.	Pacific Flicka 20	20	18.2	8	3.3	6,000	1,750	250
251.	Pacific Seacraft 25	24.6	21	8	3.4	5,700	1,750	250
252.	Pacific Orion 27 Mark II	27.4	22.2	9.3	4	10,000	3,500	428
253.	Pacific Crealock 34	34.1	26.2	10	4.1	12,000	4,700	534
254.	Pacific Crealock 37	36.1	27.9	10.1	5.4	16,000	6,200	619
255.	Panda 34	33.9	28.3	11	5.5	6,900	5,800	630
256.	Panda 38	37.7	31.6	12	5.9	19,000	6,600	704
257.	Pearson 323	32.3	27.6	10.3	4.5	12,000	4,500	478
258.	Pearson 33	32.11	25.1	10	4	10,900	4,200	492
259.	Pearson 35	35	25	10	3.9	13,000	5,400	550
260.	Pearson 36	36.5	30	11.5	4.6	17,700	7,300	615
261.	Pearson 365	36.5	30	11.5	5.6	17,700	7,300	599
262.	Pearson 37	36.1	30.1	11.1	6.6	12,800	5,400	639
263.	Pearson 39	39.3	30	11.8	4.7	17,000	7,300	673
264.	Pearson 424	42.4	33.8	13	5.3	21,000	7,634	719
265.	Pearson 43	42.9	31.3	11.9	6.3	21,300	9,150	831
266.	Pearson 530	53.7	45	14.11	6.1	43,000	14,125	1,232
267.	S-2	28	22.6	9.6	3.11	7,600	3,000	400
268.	S2-30 9.2A	29.11	25	10.3	3.11	9,800	4,000	468
269.	S2-34 10.3	33.9	28	11.4	4.11	10,500	4,350	553
270.	S2-36 11.OA	36	28.3	11.11	4.8	15,000	6,000	625
271.	S2-36 11.OC	36	28.3	11.1	4.8	15,000	6,000	632
272.	Sabre 34	34.2	28.3	11.2	4	11,700	4,800	540
273.	Sabre 36	36	29.4	11.3	4.2	13,500	5,700	610
274.	Sabre 38	38.8	31.5	12.4	4.1	17,300	7,000	689
275.	Sabre 42	41.9	34	12.8	4.9	19,200	8,200	755
276.	Santana 26	26.2	21.1	7.11	3.3	4,150	1,767	324
277.	Santana 37	37.8	30	11.8	5.7	15,000	6,600	627
278.	Santana 39	39	31	11.8	5.7	18,000	6,600	600
279.	Schucker 436MS	40	33.4	14	3.2	26,000	7,000	595
280.	Schucker 437	40	33.4	14	3.2	26,000	7,000	460
281.	Schucker 440MS	40	33.4	14	3.2	26,000	7,000	680
282.	Seafarer 26	25.9	22.3	8.3	3.9	4,600	1,775	269
283.	Seafarer 30	29.1	25.7	10	4.9	7,520	3,450	389
284.	Seafarer 37	36.8	31.3	11.9	5	16,500	6,675	650
285.	Sequin 40	37.5	31.3	12.3	2.17	17,200	8,000	719
286.	Sequin 49	49	38.3	15.6	3.1	41,200	19,000	1,286
287.	Hood-Lyman 55	54.1	45.9	16	8.9	52,000	20,000	
288.	Shannon 50	50.1	42.9	14.3	5.8	39,000	15,500	1,227

289.	Shannon 38	37.9	30.1	11.6	5	18,500		751
290.	Aegean 51	50.11	42.9	14.3	5.8	39,500	15,500	1,227
291.	Sea Sprite 27	27.11	20	8.1	4.2	7,600	3,200	340
292.	Sea Sprite 30	30.2	22	9.6	4.9	10,000	4,100	425
293.	Southern Cross 32	32.3	25.5	10.9	4.11	11,391	4,357	524
294.	Sea Sprite 34	33.1	24	10.3	5	12,800	5,000	524
295.	Southern Cross 35	35.3	28	11.5	4.11	17,710	5,750	632
296.	Southern Cross 39	38.7	31	12.1	5.4	21,000	7,676	835
297.	Swan 36	36.6	29.9	11.1	6.9	12,600	5,600	
298.	Swan 43	42.1	34.2	13.2	8	23,400	9,000	
299.	Swan 44	43.1	34.7	13.8	6.1	24,500	7,700	
300.	Swan 46	47.2	37.1	14.6	5.6	3,100	11,400	1,250
301.	Swan 53	52.8	42.5	15.6	7.9	44,100	18,500	1,708
302.	Swan 59	58.1	48.2	16.5	7.2	60,000	20,300	2,148
303.	Swan 61	60.6	48.2	16.5	10.3	61,000	20,300	2,148
304.	Swan 65	64.6	47	16.4	9.6	7,000	30,600	
305.	Swan 651	65.7	55.2	17.5	7.2	79,300	31,700	2,668
306.	Swan 86	85.9	67.7	20.4	11.2	110,000	44,000	
307.	Tartan 3000	29.11	25.3	10.1	4.1	7,950	3,830	441
308.	Tartan 33	33.8	28.1	10.1	4.5	10,000	4,400	531
309.	Tartan Ten	33	27	9.3	5.1	6,700	3,300	481
310.	Tartan 34	34.5	28.1	10.1	4.5	10,000	4,400	536
311.	Tartan 37	37.3	28.6	11.9	4.2	15,500	7,500	625
312.	Tartan 41	40.7	32.5	12.3	6.4	17,850	9,200	725
313.	Tartan 42	41.98	33.33	12.25	4.92	20,750	9,072	750
314.	Tartan 46	46.8	37.8	14	7.6	28,500	13,400	1,053
315.	Trintella 38	38	29.6	12.2	6.3	21,000	8,800	928
316.	Trintella 42	42.4	34.9	13.1	6.4	23,841	9,713	1,146
317.	Trintella 44	44	35	13	7	34,000	12,000	1,256
318.	US 27	27	23.3	9.6	3.5	6,250	2,024	313
319.	US 30	29.1	25	10.3	3.9	7,000	2,850	381
320.	US33	32.1	26.6	10.6	5.5	9,300	4,600	493
321.	US 35	35.3	28.6	12	5.1	13,250	5,250	561
322.	US 42	41.6	32.6	14	6.7	24,000	10,500	723
323.	Valiant 32	32.1	26	10.5	4.6	11,800	4,700	524
324.	Valiant 37	37	31.7	11.5	4.9	17,000	6,600	667
325.	Valiant 40	39.1	34	12.4	5.3	22,500	7,700	772
326.	Valiant 40 PilotHouse	39.1	34	12.4	5.3	22,500	7,700	753
327.	Valiant 47	47	40	13.1	5.2	3,000	11,000	1,100
328.	Vancouver 27	27	22.1	8.8	4.6	8,960	3,465	356
329.	Vancouver 32	32	27.6	10.7	4.9	14,000		
330.	Watkins 25	24.11	21	8	2.6	3,800	1,600	265
331.	Watkins 27	27	23.8	10	3.8	7,500	3,500	347
332.	Watkins 29	28.1	24	10.4	4	8,800	3,900	385
333.	Watkins 32	32.6	26.7	10.2	4	10,800	5,500	470
334.	Watkins 33	33.1	26	10.2	4	11,200	5,500	470
335.	Watkins 36C	36	29.4	10.6	4.6	17,000	6,000	526
336.	Wellington 47	46.1	38.8	13.6	4.1	45,000	11,000	1,110
337.	Westsail 32	32	27.6	11	5	19,500	7,000	753
338.	Westsail 42	42.1	33.4	13	5.8	31,500	11,000	961
339.	Westsail 43	42.11	33.4	13	5.8	31,500	11,000	1,281
340.	Westwind 38	37.11	33	12	4.11	19,200	7,500	703
341.	Westwind Vagabond 42	41.8	34	12.1	5.6	28,500	9,200	871
342.	Alberg 30	30.3	21.8	8.9	4.3	9,000	3,300	410
343.	Alberg 38	37.2	26.6	10.2	5.6	16,800	6,500	646
344.	Whitby 42	42	32.8	13	5	23,500		875

