

STARDUST

Volume 2, No. 5

May, 2001

Star Class Newsletter for the 1st, 2nd and 12th Districts

VINCE BRUN & RICK PETERS WIN SPRING'S

(See pages 4-5 for story and results)

MAY REGATTA SCHEDULE

1st District

*May 13 Captain Morgan (HB)

May 20 Skipper's Choice (BH)

2nd District

May 5-6 West River Spring-WRSC

May 19-20 HDGYC One Design

12th District

May 19-20 Ice Breaker (Sun)

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MYLAR STAR SAILS

From Steve Haarstick, Haarstick Sailmakers, Inc.

Having read some of the comments regarding the potential cost and durability of Mylar laminate Star sails, I am in doubt as to the objectivity of the authors. As very few subjects are 100% black or white, this topic should carefully consider the available data, and conduct controlled on-the-water experiments, before any final decision is made.

Issue 1: Cost

The relative pricing of Star sails made from Mylar laminates versus Dacron sails in part depends on the cost of the cloth used. This cost is equal to the manufacturers' price/yard of the cloth used and the required yardage to cut the sail. However, comparisons between the cost of Dacron fabrics used in current Star sails versus the cost of laminate fabrics is not simply a matter of comparing their relative cost per yard.

The types of Dacron cloth used in Star sails are manufactured in 36" widths, while Laminates come in 54" widths. Moreover, most Dacron fabrics over 3.8 oz are stronger in the "fill" (cross panel direction) than in the "warp" (parallel to the cloth edge). As a result, most current Star sails are made with a combination of radial panels in the head and foot areas only. The body of the sails are laid out as cross cut panels, that is, the cloth is rolled from leech to luff, with the fill threads approximately aligned with the leech of the sail.

The strength advantages of warp versus fill layouts are not as pronounced in Dacron fabrics as they are in laminates. Aside for the differences in panel widths (cutting 36' panels from 54" cloth is not cost effective), it would not be advisable to use the current Dacron panel layouts to build Mylar laminate Star sails.

Because of this basic difference between Dacron and Mylar, the current "cross cut" designs in the body of the Star main would have to be redesigned to use a vertical panel layout if the strength properties of Mylar laminates are to be properly aligned with the major loads in the sail. Mylar laminate Star sails would have to be cut with a vertical or Triradial panel array, similar to offshore sails. This change of panel layout would require completely new designs resulting in development costs that may not be trivial.

A vertical, or Triradial panel layout uses more cloth per square foot of sail than a cross cut panel layout. As long as we allow the use of "Polyester" laminates only (as other classes have done), it is true that these laminates are cheaper than woven Dacron, if we prorate the cost per yard of 54" laminates down to 36" Dacron panel widths. However, it takes more cloth to cut a Triradial paneled sail. To compare the relative cloth cost of a 54" wide laminate sail versus a cross cut 36" wide Dacron, it is necessary to know how many yards of the relative fabrics are necessary to build the same size sail, but with two very different panel layouts. We have some data on Triradial panel cloth costs, as we have been building Triradial paneled Star mains for some time, using 36" Dacron woven cloth. As I am not privy to the exact yardage required to build the other Radial head and foot, with cross cut bodies, I have estimated this yardage. I have listed this data below using either Contender's 3.8 "Polykote", or 3.8 "Pentex Polykote", and compared the cloth cost for a 4.0 oz Pentex laminate:

- 1.) Triradial paneled 3.8 oz "Polykote": from Contender's 2000 price catalogue, the price per yard @ 36" width = \$8.55. Yardage required to cut sail with 36" cloth= 43.5 yds. Total cloth cost = \$372.
- 2.) Triradial paneled 3.8 oz Pentex Polykote: from Contender, price per yard @ 36" width = \$10.25. Same yardage as above, total cloth cost = \$446.
- 3.) Triradial paneled 4.0 oz Pentex Mylar: from Contender, price per yard @ 54" width = \$11.50. However at 54" width, yardage to cut sail drops to 32 yds, Total cloth cost = \$368.
- 4.) Radial head and Foot with Cross Cut body: estimated yards @ 36" cloth= 36.5 yards. Total cloth cost with 3.8 oz "Polykote"= \$312., Same sail with 3.8 Pentex Polykote = \$374.

As you can see, there is considerable variation in the relative cloth cost in a Star main depending on cloth used and panel layout. Beyond cloth costs, Triradial mains would require more labor to build, as it takes considerably more time to assemble the panels in a Triradial main than the panels in a cross cut main. (Our current Triradial Star

main has 55 panels in the sail!). If we combine the relative cloth and labor costs, I have estimated below the relative change in the price of the finished sails:

Cross cut Star Main using 3.8 oz Contender Polykote = 1.00.

Triradial Star Main using Pentex Mylar = + 23% = 1.23.

Triradial Star Main using 3.8 Pentex Polykote = + 32% = 1.32.

In short, the most expensive positive sailcloth option and panel layout is currently legal, and allowing the use of Polyester Laminates would not necessarily increase the current cost of sails.

Issue 2: Durability

The second issue of durability is not so clear cut. Durability is dependent on a variety of factors, some of which have nothing to do with the choice of fabric. I have listed what I believe are the most important of these:

1.) The level at which the skipper competes: If you are trying to win the World's, or the Olympics, you will not take any chances on the potential loss of speed with use. I don't think anyone would compete at this level without new sails, regardless of how durable the fabric is.

2.) How the sail is designed: If the cut of the sail is such that any slight loss of strength will begin to show, the durability would not be considered good. For example, if the leech of the main has a very straight exit, any increase of stretch as the fabric ages will show flutter sooner than a design with a tighter exit. If the designer wants the sail to be fastest the first time out of the bag, then any change in stretch will probably have a negative impact on speed. In my opinion, I have not found Star sailors to be very tolerant with any design concepts that require "breaking in" the sail for a few races to reach it's peak performance.

3.) Finally, the most important question: will a laminate sail retain its performance longer than a Dacron sail? Again, there is no simple answer to this. It depends on the type of Dacron or laminate. Even more importantly, it also depends on selecting a batch of fabric that exhibits good retention of strength when flogged.

There is enough variation in stretch properties after flogging between batches of the same style cloth from the same manufacturer, that the relative comparison between Mylar and Dacron fabrics can be misleading. Testing a "poor" batch of Dacron against a "good" batch of Mylar can lead to the conclusion that Mylar is more durable. However, reverse the situation, and the result can be the opposite conclusion!!

The relative stretch of the "new" (unfluttered) fabric versus the stretch after flutter is a reasonable estimate of the fabrics' durability. If the stretch after flutter is a many times higher than the stretch when new, it is fair to say the fabric loses more strength when fluttered and would have a greater change in shape with use. After testing cloth for the

past 30+ years, and without getting into the details of this testing, there is a significant difference in the stretch properties of any type of fabric after it is flogged. Many fabrics loose more than 50% of their initial strength after relatively short periods of severe flogging, and this is not limited to only Dacron cloth. The variation within one type of fabric from the same manufacturer after flutter can be as dramatic as the variations between different fabrics!

If the fabric when fluttered loses more of its strength on the thread line than it does off thread line, this shape change will be different than the opposite case where the fabric loses more strength on the bias. In general, Dacron woven fabrics loose more strength off thread line as they flutter. In general, the opposite is true with Mylar laminates. Many Dacron or Pentex woven fabrics more than double their original stretch at the same test loads at 30 degrees off thread line after flutter.

The only way to determine the relative merits of which type of cloth maintains its performance over a longer period of time is to conduct a CONTROLLED experiment. This requires at least TWO IDENTICALLY CUT SAILS be built. One from Mylar laminates, one from woven Dacron. Both sails would have to use a vertical or Triradial panel layout, or the Mylar laminate would be at a significant disadvantage, as it's strength is in the warp or panel direction. Contender's 3.8 oz Polykote is also stronger in the warp than the fill, and I would suggest this Dacron be used as the Dacron example.

You can not make a valid conclusion but simply sailing around with a Mylar suit of sails that are different in design and panel layout to their Dacron counterparts. Two suits of sails must be built as per above. These two suits of sails must be always be used together, under identical conditions, for identical periods of time, and most importantly, equally flogged when the wind is over 15 knots!! It's not important if the test sails are competitive with current sails. What is important is how the differences that develop in their sail shapes with use affect their relative speed over the course of a season's sailing.

This type of objective experiment is necessary to remove the current misleading and sometimes erroneous conclusions now being proposed.

Finally, it would be possible is increase the racing life of Star sails by simply allowing transverse battens in both main and jib. As the class has adopted the use of a transverse top batten in the main, this step alone has enhanced the durability of the sail. A 2nd transverse batten, or even more would further enhance durability - for both Mylar and Dacron fabrics. Ditto for the Jib, which does not yet allow a transverse top batten- this should have been adopted at the same time as the main.

I think there is enough justification for laminates to go ahead with a controlled experiment. One that is objective, and unbiased.

I hope this information helps.

Historic All-Time Star Class Rankings: 1922 - 2000

compiled by Larry Whipple

There are two criteria which allow a person to make the list:

a.) winning a Gold, Silver or Bronze Olympic Medal.

b.) finishing in top six in a World's Championship.

This is a partial list. For a complete list contact the editor.

Rank	Name	Fleet/Fleets	Points				
1	Lowell North	SDB	710	44	Roberto Benamati	Gar	130
2	Mark Reynolds	SDB	675	44	Timir Pinegin	Mosc	130
3	Bill Buchan	PS	660	44	Willi Kuhweide	KF	130
4	Agostino Straulino	SVT	615	52	Bill Ficker	NH	120
5	Torben Grael	Gua	520	52	Donald Bever	CLE/SLE	120
6	Alexander Hagen	Glu	460	52	Enrico Chieffi	PDV	120
7	Robert Lippincott	WJ	420	52	Eric Doyle	SDB	120
8	Harry Nye	SLM	380	52	Robert White	WSFB	120
9	Tom Blackaller	WSFB	370	58	Achim Griese	KF	105
10	Carlos de Cardenas	FdeH	335	59	Alan Adler	GuB	100
11	Durward Knowles	N	330	59	Arthur Deacon	WLIS	100
12	Adrian Iselin	WLIS	320	59	Gerald Driscoll	SDB	100
13	Ding Schoonmaker	FIS/BisB	300	59	Eddie Fink	LB	100
14	Dick Stearns	WH	285	59	Graham Johnson	CB	100
14	Pelle Petterson	Kat	285	59	James Allsopp	CB	100
16	Hook Beardslee	NH	260	59	Jack Robinson	WLIS	100
17	Dennis Conner	SDB	250	59	Prentice Edrington	NOG	100
17	Paul Cayard	WSFB/SDB	250	59	Stig Wennerstrom	Kat/Ons	100
17	Walter von Hütschler	HF/RdJ	250	59	Tito Nordio	FdiT	100
20	Skip Etchells	WLIS/CLIS	220	69	Hans Wallen	Kat	95
20	George Fleitz	LAH	220	70	David Forbes	Pit	90
22	Malin Burham	SDB	200	70	Myron Lehman	NH	90
23	Ben Comstock	NB	210	70	M. McIntyre	GBR	90
23	Hilary Smart	CLIS/CA	210	70	Peter Bischoff	GER	90
25	Antonio Gorostegui	Lar	200	70	Valentin Mankin	Mosc	90
25	Buddy Melges	SLM	200	75	Andy Menkart	BH/WS	80
25	Ed Adams	CA/NB	200	75	Benny Andersen	DF	80
25	Paul Elvstrom	DF	200	75	Harold Halsted	MorB	80
25	Jack Price	BisB	200	75	John Arms	CLIS	80
30	Colin Beashel	SY	190	75	Mats Johansson	Vin	80
31	Duarte Bello	CP	170	75	William Picken	GSB	80
31	Giorgio Gorla	LdC	170	81	Hubert Raudaschl	SMA	75
31	Don Edler	NH	170	82	Alvaro DeCardenas	Mar	70
34	James Cowie	LAH	160	82	Albino Fravezzi	SG	70
34	William Inslee	WLIS/GrB	160	82	Barton Beek	LAH	70
34	Gilbert Gray	NOG	160	82	Uwe von Bellow	HF	70
34	Joe Duplin	BH	160	86	Ian Walker	SO	65
37	Joe Londrigan	LS	150	87	Adrian Mass	Hol	60
37	Peter Wright	SLM	150	87	Don Trask	WSFB	60
37	Vince Brun	SDB	150	87	Fred Bedford	CLIS	60
37	William Hubbard	NH	150	87	Gary Comer	JP/SLM	60
43	Glenn Waterhouse	WSFB/ESFB	140	87	John McAleese	WSFB	60
44	Arthur Knapp	WLIS	130	93	C. Pflug	MorB	50
44	Carl Buchan	PS	130	93	Chick Rollins	Mis/SDB	50
44	Herbert Williams	SLM	130	93	D. Starring	CLIS	50
44	Joseph Watkins	CLIS	130	93	E. Thorne	GSB	50
44	Milton Wegeforth	SDB	130	93	G. Phillips	EB	50
				93	Albert Debarge	FdeP	50
				93	Alan Holt	Shil/PS	50
				93	H. Wylie	EB	50
				93	Jeorg Bruder	Gua	50
				93	Jorge DeCardenas	Mar	50
				93	Larry Whipple	PS	50
				93	Steven Bakker	Hol	50
				93	Sune Carlsson	RS	50

93	S. Potter	SMB/LAH	50
93	Vincent Hoesch	CMB	50

2001 STAR WESTERN HEMISPHERE SPRING CHAMPIONSHIP by Bill Allen

The 2001 Star Spring Championship returned to one of the most popular venues, the Nassau Yacht Club in the Bahamas. Twenty-eight competitors from eight countries arrived expecting the beautiful and challenging conditions.

The Nassau Yacht Club has hosted numerous top-level Star regattas over the past several decades, including the World's in 1985 and numerous Silver Star events. In fact, the Western Hemisphere Spring Championship used to be held in Nassau every other year (most of the competitors would probably vote to return to this tradition!). Regatta Chairman Craig Symonette, ably assisted by local sailors Jimmie and Lori Lowe, Andrew Higgs, and a host of dedicated and very competent volunteers made this a truly outstanding event. Most successful events are the result of extensive involvement by the entire host club, and this was no exception.

I know I speak for all competitors and guests in expressing appreciation to Sir Durward Knowles for his inspirational leadership of the star class, not only in Nassau but around the World as well. I know I felt it an honor to sail in his home waters. I'm sure the participation of top government officials in the regatta was in large part due to the respect of Sir Durward.

After a relatively uneventful measurement process (aside from a few dieting crews) the racing got underway on Saturday. The tune-up race, for the Harry Knowles trophy, was cancelled due to heavy winds. The trophy was therefore given to the winner of the first race.

Nassau is blessed with weather conditions ideal for star racing. Warm temperatures (air and water) and winds from 10-18 knots made for excellent and close racing. The wind tended to shift 15-20 degrees, so getting in phase was of paramount importance, particularly right after the start.

FIRST RACE

The regatta schedule called for 2 races on opening day. Race one got underway after one general recall in winds of 10-14 knots. Class newcomers from Sweden Fredrik Loof and Christian Finnsgard led the fleet after getting in phase in the right-middle. Those that went left suffered and in a balanced fleet, never could come back. Vince Brun and Rick Peters rounded second, with George Szabo and John Gochberg third. Vince passed George on the second beat as the Swedes extended their lead by playing the shifts expertly, winning the race comfortably. It's great to see new blood from other classes come into the Star. Fredrik is a three time Finn Gold Cup winner so no doubt will be a force in the class in the future.

SECOND RACE

The second race provided more beautiful sailing conditions, with winds 10-15 from the East. A significant shift right at the start favored the boats on the left and gold medallists Mark Reynolds and Magnus Liljedahl played the left-middle and rounded first. John MacCausland and Sean Delaney were second, with Peter Bromby and local sailor Miles Pritchard third. These three remained at the top, with Bromby / Pritchard passing MacCausland / Delaney for second. World's Champion Paul Cayard and Gold medallist Hal Haenel finished fourth in both races to remain in good shape for the series. The fleet enjoyed a beautiful sail home over the crystal clear waters. It was nice to enjoy the scenery after the intensity of the racing.

THIRD RACE

Two more races were scheduled for the second day. Three former world's champions, Reynolds / Liljedahl, Brun / Peters and Cayard / Haenel fought it out in the third race, with Vince getting the gun as Paul fell out of the boat surfing down a wave at the finish. Hal wondered about the strange course they were taking and looked back to see no one in the back. Paul, these boats are a little more confining the AC boats! Reynolds / Liljedahl were second. Bromby / Pritchard finished fifth to continue in contention.

FOURTH RACE

In slightly more wind, still from the east, Brun / Peters and Cayard / Haenel fought it out in the fourth race, with Vince getting the gun. John Virtue with Brian Terhaar up front sailed an excellent race to finish third, with Joe Zambella and Peter Costa fourth. Bromby / Pritchard broke a shroud and couldn't sail, hampering their chances in the regatta.

FIFTH RACE

The schedule was revised to sail another doubleheader, finishing the regatta on Monday, in three days. This turned out to be a good call, because the wind uncharacteristically died on Tuesday. The fifth race was sailed in 10-15 knots, again with significant shifts. Several boats still had a chance to win the championship so the racing was exciting. Bromby / Pritchard went left and led at the first mark, closely followed by Allen / Burgess and Reynolds / Liljedahl. On the second beat, the wind went left, and MacCausland / Delaney took advantage to get the gun. Larry Whipple and Mark Strube sailed a strong second beat to finish second, with Bromby / Pritchard third.

Local sailor Mark Holowesko, with brother Billy crewing sailed their best race of the week to finish 4th. Brun / Peters

finished 5th to cement their lead in the regatta.

FINAL RACE

The last race was sailed in the lightest air of the series. Brun / Peters were leading the regatta but Cayard and Bromby both had a chance to win, and several series positions were contested. Again, playing the left middle paid off and Reynolds / Liljedahl rounded first, followed by Brun / Peters and Bromby / Pritchard. Reynolds extended his lead to win the race, while Bromby / Pritchard moved up to second. Loof / Finnsgard finished third in the race and a very respectable 6th in their first Star championship regatta. Brun / Peters concentrated on covering Cayard / Haenel and won the regatta by 5 points. Cayard / Haenel were second and Bromby / Pritchard 3rd. Complete results are found below.

The social events were highlighted by a reception at Government House with the minister of tourism and head of the Bahamas Olympic Federation in attendance.

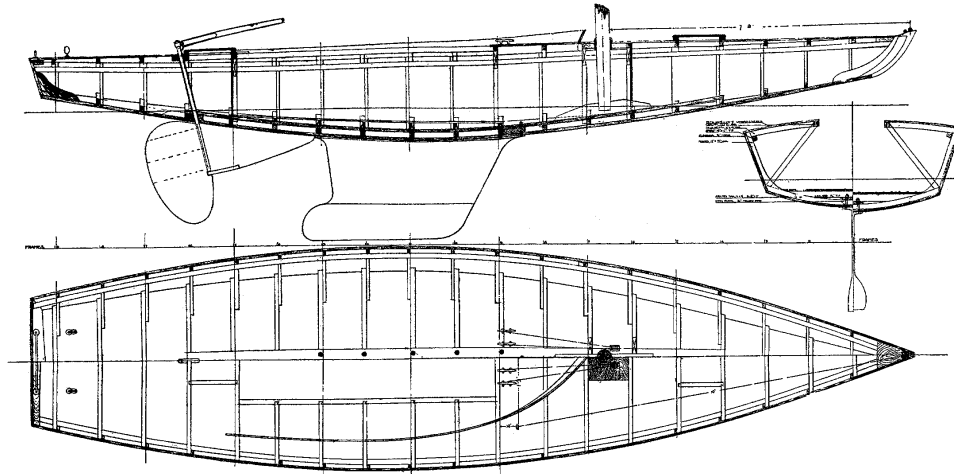
AWARDS DINNER

The awards dinner was a great party in the Nassau Yacht Club tradition. Vince Brun won both the Silver Star and Masters trophy, giving renewed hope to those of us eligible for AARP. Congratulations to Vince and to Rick Peters who won his first Silver Star

Special thanks go to all those who helped put on this outstanding regatta. Unfortunately, they are too numerous to mention individually. Thanks to Commodore Ivy French and all the volunteers at the club. PRO Percy Knowles ran a flawless series, and Julie Hahnke did a great job as chief of the jury. The competitors and class deeply appreciate all the hard work that goes into running a continental championship. We all look forward to coming back and enjoying the beautiful weather and wonderful hospitality in Nassau.

2001 STAR WESTERN HEMISPHERE SPRING CHAMPIONSHIP APRIL 7-10, 2001

Boat#	Skipper	Crew	Fleet	R1	R2	R3	R4	R5	R6	Points
7956	Vincent Brun	Rick Peters	SDB	2	7	1	1	5	4	13
8045	Paul Cayard	Hal Haenel	WSFB	4	4	3	2	12	5	18
7988	Peter Bromby	Myles Pritchard	BER	7	2	5	dnf	3	2	19
7829	Mark Reynolds	Magnus Liljedahl	SDB	12	1	2	11	7	1	22
8024	John MacCausland	Sean Delaney	CR	5	3	8	13	1	8	25
7650	Fredrik Loof	Christian Finnsgard	Bk	1	16	7	9	6	3	26
8044	Larry Whipple	Mark Strube	PS	17	11	4	5	2	16	38
8041	John Virtue	Brian Terhaar	NH	14	5	12	3	8	11	39
7902	Mark Holowesko	William Holowesko	N	13	9	11	12	4	10	46
7972	Peter Vessella	Brian Fatih	WSFB	9	13	18	6	11	7	46
7963	Jock Kohlhas	Chris Eld	BisB	21	6	19	8	10	15	58
7911	James Lowe	Andrew Higgs	N	16	8	10	10	15	20	59
7986	Bill Allen	Rick Burgess	WH	10	14	17	14	9	13	60
7595	Carlo Loos	Christian Nehammer	CBM	8	10	24	16	13	21	68
7979	George Szabo III	John Gochberg	SDB	3	18	dnf	dns	14	6	69
7894	Kevin McNeil	Rod Emmett	AN	20	12	6	17	20	17	72
8000	Riccardo Simoneschi	Paolo Busolo	FdiG	dsq	17	13	15	18	9	72
7950	Joe Zambella	Peter Costa	BH	24	26	14	4	19	14	75
7824	Henry Colie	Kevin Murphy	LH	15	22	22	7	16	22	82
8020	Philipp Rotermund	Tim Kraemer	Glu	18	15	20	21	17	12	82
8003	Rod Monster	Kai Bjorn	Isol	11	19	9	dns	dns	dns	95
8011	Robert Van Wagnen	John Hunger	BisB	19	24	16	18	23	19	95
7312	Ingvar Krook	Verus Thelander	AR	6	23	26	19	dnf	dns	102
7512	Robert Teitge	Adam Korejsza	DR	23	27	15	20	21	23	102
7471	John Bainton	William Christenson	NB	22	20	21	23	25	25	111
7957	Claude Bonanni	Arthur Anosov	TaB	dsq	25	23	22	24	18	112
7782	Kurt Larson	Robert Carlson	BH	25	21	25	dnf	22	24	117



Construction Plan of Star One-Design Class. Dimensions: 22.7 Ft. O. A., 15.4 Ft. W. L., 5.8 Ft. Breadth, 3.4 Ft. Draught, Sail Area 280 Sq. Ft., Ballast 830 Lb. on Keel

ONE-DESIGN CLASSES

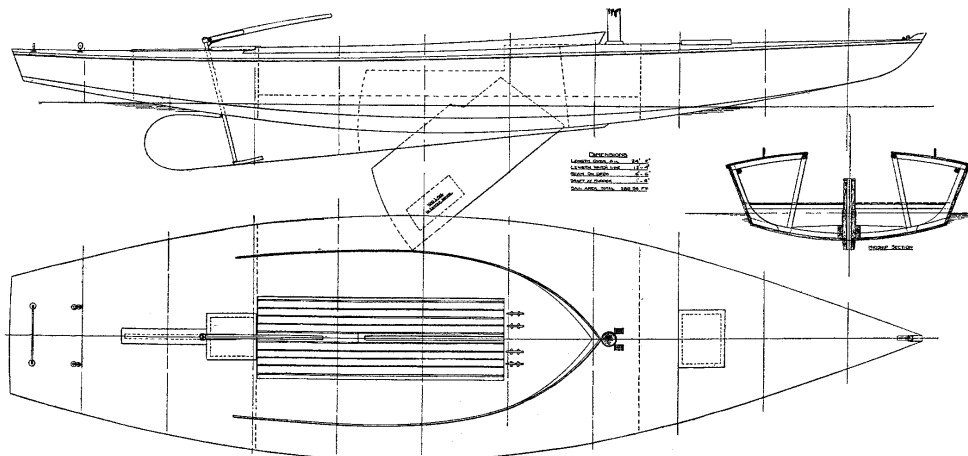
(Text and drawings form RUDDER, December, 1911)

POPULARITY of one-design classes seems to be on the increase, and there are several new classes proposed for next season; one, a class of small schooners. Several of the most prominent classes racing on Long Island Sound were designed by Mr. William Gardner, of New York, and on the following pages are given drawings of a number of these boats as well as the drawings of two proposed classes. One of the most popular classes ever raced on the Sound in the small-boat division are the "Bug" boats, which were designed and built in the Spring of 1906. These boats are 19 feet over all, and cost complete only \$125. Fourteen of these were built for members of the Manhasset Bay, Larchmont, Horse Shoe Harbor, Huguenot, and New Rochelle Y.C.

This year designs for a new class similar to the old, but 3 feet 7 inches longer over all, and known as "Star" boats, was gotten out and the boats cost complete \$250. Fifteen of these were built for members of the American Y.C., six for various members of the Manhasset Bay, New Rochelle, Larchmont, and Horse Shoe Harbor Y.Cs., and ten for members of the Nahant Y.C. of Nahant, Mass. Both the "Star" and "Bug" classes were described by Mr. Thornton Smith in the January, 1911, issue.

All of the old boats as well as all of the new, except ten for the Nahant Dory Club, were built by Isaac Smith, of Port Washington, L.I. The ten for the Nahant Club were built by Richard T. Green & Co., of Chelsea, Mass.

A class similar to the new "Star" boats, except that they are 1.7 feet longer, a foot wider, and of the center-board type, has been designed with a view to placing the class on Gravesend Bay. It is proposed that members of the various clubs in the Gravesend Bay Association build to this class, and if the proposed plans are carried out, the class will be a great addition to racing on the Bay.



Proposed Gravesend Bay One-Design Class. Dimensions: 24 Ft. O. A., 15.4 Ft. W. L., 6.8 Ft. Breadth, 1.8 Ft. Draught Sail Area 280 Sq. Ft. Ballast 100 Lb on Centerboard

