
PLATES XXIII., XXIV., XXX*a*. - "NO BALLAST" CANOE VESPER.

The utility of some ballast and of boats built to carry it is generally admitted when open-water sailing is in question, but there are some locations where a totally different type of boat has come into use, and has found great favor at the expense of the heavier-ballasted craft. This has been the case particularly at Albany, where canoeing is confined to the Hudson River, with occasional excursions to neighboring streams of a similar character. The boats first used by the Mohican C. C. were of the Shadow and similar models as built a few years since, but for some years the club has displayed great activity in the hunt for improvement, and besides the sail and fittings generally known by their name, they have devoted much attention to the question of model. Vesper was designed by Mr. R. W. Gibson in 1885-6, and built by Mr. J. H. Rushton, the hull being lapstrake and very lightly built.

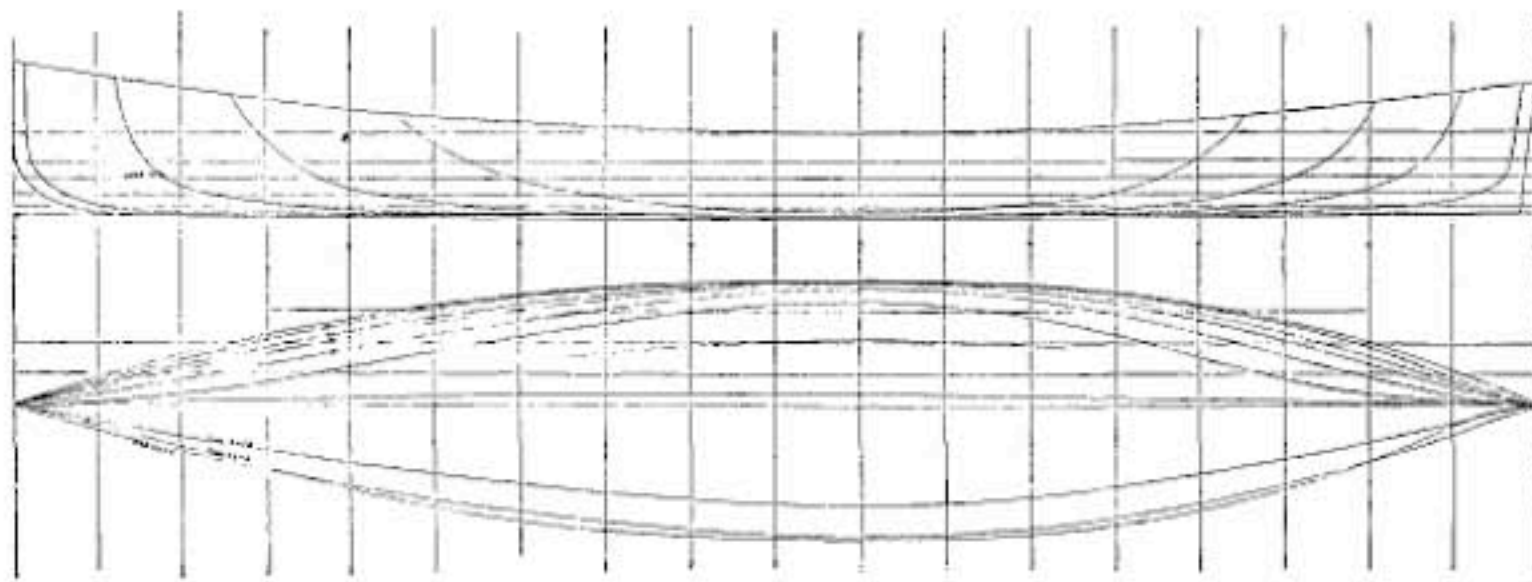
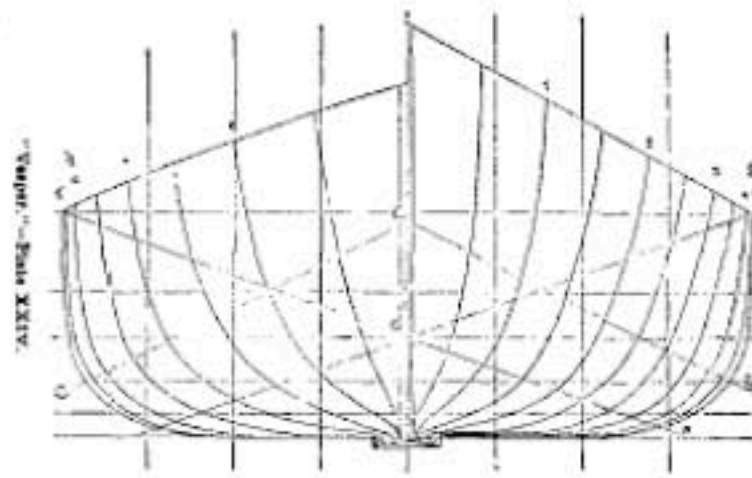


PLATE XXIV.—"Vesper." (See Plan on Plate XXIII.)



The table of offsets is as follows:

Offsets for canoe "Vesper"										
Stations	Heights		Half Breadths							
	Deck	Rab't	Deck	10 in.	6½ in.	4½ in.	2½ in.	1 in.	Keel	Diag. a.b.c.
0	18 ⁴	0	0 ¹	....	....	....	....	....	0 ¹	0 ¹
1	15	0 ⁴	6 ¹	5 ⁵	4 ⁶	4 ¹	2 ⁷	1	0 ⁴	5 ⁵
2	12 ⁴	0 ²	10 ⁵	10 ²	9	8 ²	6 ⁷	4 ⁵	1	9 ⁶
3	11	0	13 ⁴	13 ³	12 ³	11 ⁵	10 ²	8 ³	12	12 ⁶
4	10 ²	....	15	15	14 ⁴	14 ¹	13	11 ³	14	14 ⁷
X	10	....	15 ²	15 ²	15 ²	15	14 ²	12 ⁶	14	15 ⁷
6	10 ²	....	14 ⁶	14 ⁶	14 ³	13 ⁷	13	10 ⁷	13	14 ¹
7	11 ³	0 ¹	12 ³	12 ²	11 ⁴	10 ⁴	8 ⁶	5 ⁷	11	11 ⁴
8	13 ²	0 ²	7 ⁵	7 ¹	6	5	3 ³	1 ³	0 ⁷	6
9	16	0 ⁴	0 ²	....	....	....	....	....	0 ²	0 ²
Foreside stem from station 0			0	0	0 ¹	3 ⁴	7 ¹	14	....	....

The dimensions are:

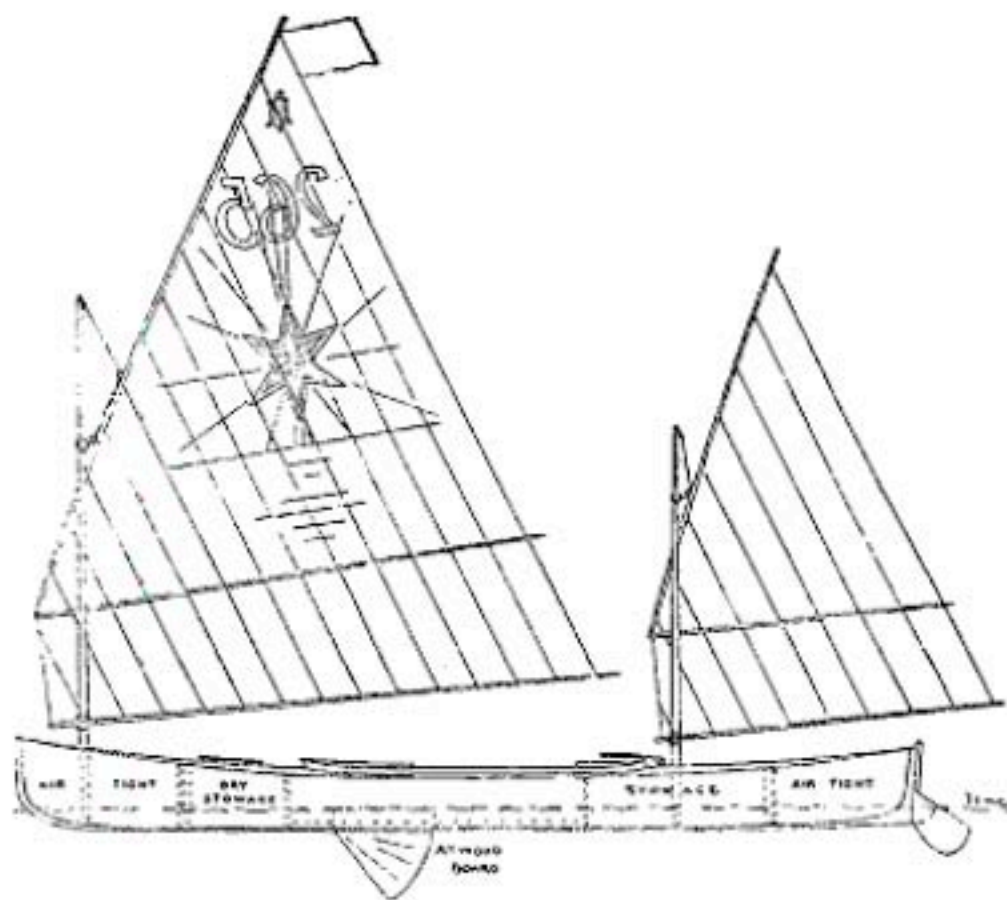
Length over all
Beam, extreme

15 ft. 6-3/4 in.
30-1/2 in.

l.w.l	30 in.
Draft, excluding keelson	4-1/2 in.
including keelson	5 in.
Freeboard, bow	14 in.
amidships	5-1/2 in.
stern	11-1/2 in.
Sheer, bow	8-1/2 in.
stern	6 in.
Rake, sternpost	2 in.
Crown of deck	2 in.

Diameter of mast tubes 1-3/4 in., 1-7/8 in. tapered to about 1 in.

The rig shown in Plate XXIII., has the ordinary Mohican sails, rigged as shown in detail in Plate XVII.



Sail Plan of "Vesper."

PLATES XXV. AND XXVI. - NOTUS RACING AND CRUISING CANOE.

After a season's use of Vesper, Mr. Gibson sold her and made a new design embodying some improvements, and in 1887 Notus was built. She is a 16x30 canoe, much like Vesper, her 6 in. waterline being the same; but she is cut away more under water forward, giving a slightly hollow entrance, to improve her performance in rough water. The same long, fine bow and full stern already tested by Mr. Gibson have been retained, but the extremely broad and long floor is modified. Notus having about 10 in. flat and an elliptical form of midship section, leading into the turn of the bilge, which gives remarkable strength. The stability is not perceptibly diminished by this slight rounding, and it probably assists turning, which Notus does with the greatest ease. The canoe was built by Charles Piepenbrink, of Albany, under Mr. Gibson's personal supervision, and is a remarkably fine piece of work. She is a smoothskin, with only three planks to a side, the ribs spaced 6 in. and fastened with brass screws from the inside. A few screws were required from the outside, but they are 12 in. apart, leaving the bottom absolutely smooth. The planking and decks are of white pine, and the trimmings of maple and mahogany, two narrow beads along each side. The board is of sheet brass, 30x13x1/16 in., dropping through a low trunk. There are four bulkheads, with a low hatch in the fore deck.

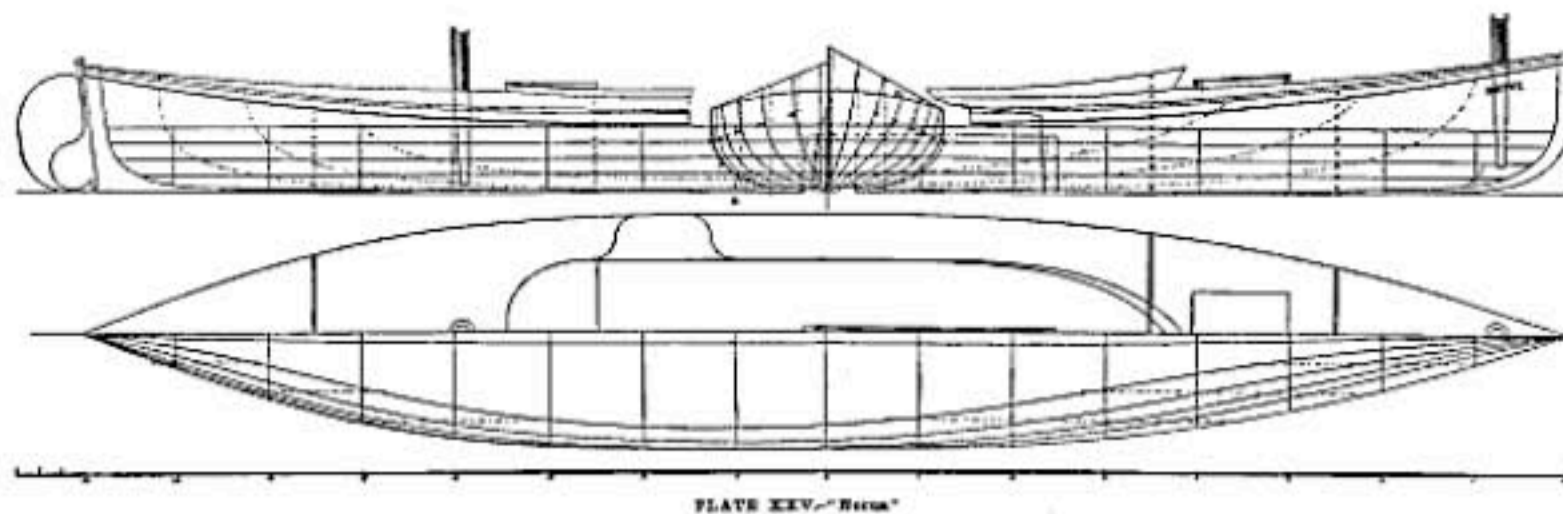


PLATE XXV—"Notus"

The table of offsets is as follows:

Offsets for Canoe "Notus"								
Stations	Heights		Half-Breadths					
	Rabbit	Deck	Deck	8 in.	6 in.	4 in.	2 in.	Keel
0	....	18	0 ¹	0 ¹	....	....	....	....
1	1	15 ⁵	3 ⁷	2 ⁵	2	1 ³	0 ⁶	0 ²
2	0 ³	14 ³	7 ⁷	5 ³	4 ³	3 ²	1 ⁷	0 ⁴
3	0 ²	12 ⁷	9 ⁷	8 ²	7	5 ³	3 ²	0 ⁷
4	0	11 ⁶	11 ⁷	10 ⁵	9 ³	7 ⁶	5 ¹	1 ¹
5	0	10 ⁷	13 ⁴	12 ⁵	11 ⁵	9 ⁷	7 ²	1 ⁴
6	0	10 ³	14 ³	13 ⁷	13 ¹	11 ⁶	9 ²	1 ⁴
7	0	10	14 ⁶	14 ⁵	14 ²	13 ¹	10 ⁷	1 ⁴
8	0	10	14 ⁷	14 ⁷	14 ⁶	13 ⁷	12	1 ⁴
X	0	10	15	15	14 ⁷	14 ¹	12 ³	1 ⁴
10	0	10 ¹	14 ⁷	14 ⁷	14 ⁶	13 ⁷	12 ¹	1 ⁴
11	0	10 ²	14 ⁴	14 ³	14 ¹	13 ¹	11 ²	1 ⁴
12	0	10 ⁶	13 ⁴	13 ²	12 ⁶	11 ⁵	9 ⁴	1 ³
13	0 ¹	11 ⁴	11 ⁴	11 ¹	10 ⁴	9 ³	7	1 ¹
14	0 ²	12 ⁵	8 ³	7 ⁷	7 ³	6 ²	4 ²	1
15	0 ⁶	14 ²	4 ³	4	3 ⁵	2 ⁶	1 ⁵	0 ⁴
16	....	16	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹	0 ¹

The dimensions of Notus are:

Length over all	16 ft.
Beam	30 in.
Depth	10 in.
Sheer at bow	8 in.
at stern	9 in.
Fore side of stem to bulkheads,	2 ft. 6 in., 5 ft., 10 ft. 6 in., 13 ft. 6 in.
mainmast	9 in.
Fore side of stem to mizenmast	11 ft. 10 in.
board, fore end	5 ft. 8 in.
after end	8 ft. 2 in.

coaming, fore end
after end

4 ft. 3 in.
11 ft. 6 in.

The sails were devised by Mr. Gibson, and are made of bleached muslin in one width, the edges being bound with wide tape. The battens fit in pockets in the usual manner. The spars are very light, the masts 2 in. square at deck, tapering to 3/4 in. diameter at head, the main boom 1-1/8 in. diameter, battens 1/2 in. thick. The dimensions of sails and spars are:

	Main.	Mizen.
Mast, deck to head	13 ft. 9 in.	11 ft. 4 in.
Sail, on foot	9 ft.	6 ft. 9 in.
along first batten	8 ft. 8 in.	6 ft. 6 in.
along second batten	8 ft.	
luff	13 ft.	10 ft. 6 in.
leech, total	14 ft. 7 in.	11 ft. 8 in.
leech, above batten	10 ft. 3 in.	9 ft. 6 in.
spacing of battens, fore end,	1 ft. 11 in.	1 ft. 11 in.
after end,	2 ft. 1-1/2 in.	2 ft. 1-1/2 in.
area, square feet	69 ft.	39 ft.

The first reef leaves 52 ft. in main and 26 ft. in mizen, the second reef leaves 35 ft. in main. The mizen can be stepped forward and a storm mizen added. The luff of the mainsail is roached 4 in. in 13 ft. and the luff of the mizen in the same proportion. The usual reef gear is added. The sails are hoisted by halliards and lowered with downhauls. the attachment to the mast being by a lacing, as shown. This lacing (Plate XXIX. a) is similar to the ordinary hammock or netting stitch, the loop or mesh loosening as soon as the halliard is cast off, but as the latter is hauled taut the meshes lengthen and draw the luff closely to the mast. It has been suggested that a few small beads on the lacing near each knot would make the sail run easier in hoisting and lowering. In the fall of 1887 Notus was sold to Mr. R. W. Bailey, Pittsburgh C. C.

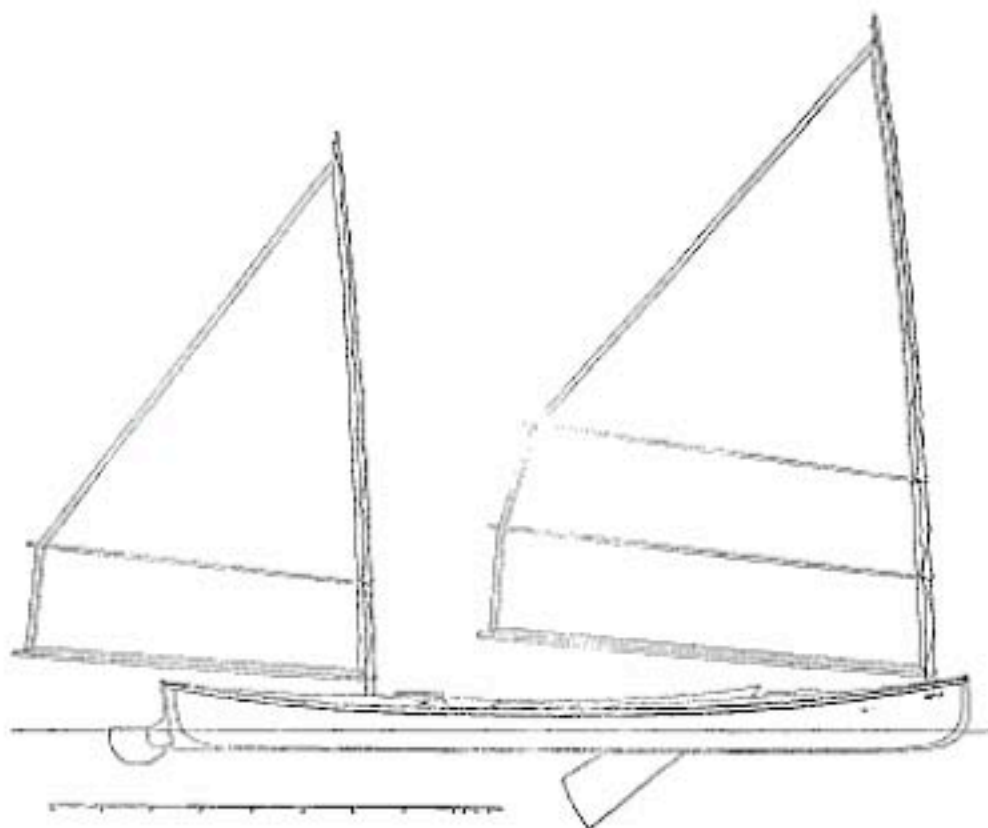


PLATE XXVI - Sail Plan of "Notus"