

This to be the year of light, capricious winds and unpredictable currents, of lazy, deep sea swells topped by the slop of a big spectator fleet. It is to be the year of exhausting heat and blinding reflection.

This forecast of conditions expected off Acapulco this month is more likely to be accurate than the forecasts for any Olympic regatta since the war. In general the areas where past Olympics have been sailed have lived up to their billing quite well. The 1948

Games were held at Torbay, England, and although there was variety in the wind strength it is looked back on as a heavy weather series, which means that it was typical of Britain's south coast.

In 1952 light to medium winds were expected at Helsinki and at regatta time the wind turned up medium to brisk, with very little that could be called light. The predominately medium winds made the forecast useful, and

in fact competitors had been warned that the eastern Baltic in summer cannot be relied upon to do what the weathermen say it will do.

The 1956 Games were in Melbourne, Australia. The forecast was for plenty of wind (14-knot average over the previous 10 years) and the prediction was dead on. The wind was from five to eight on two days, from 12 to 22 on four days and screamed up to 45 knots on one eventful day.

Light and Lumpy

Don Trask's Swinging Star had a special mast with low, wide spreaders to keep weight low and reduce pitching moment. He was filth in trials.



For the 1960 Games at Naples the prediction was for light to medium, with big shifts. Instead it was from medium to medium-heavy, with big shifts, and only a couple of times got down into the "light" range.

Then four years ago everyone got into the act with forecasts of what the weather would be like off the east coast of Japan in October. The Japanese themselves, the US. and British navies and lots of ex-servicemen (who really knew far more about the probabilities in the Ginza than on Sagami Bay) all had a stab at predicting the weather. For the most part the forecast was for a wide range of wind strengths, with a good chance of both very light and very heavy conditions for a day or two each, and with the prevailing offshore westerlies demonstrating some remarkable contortions.

And it all came true in the first six of seven race days. Then on the seventh the wind turned around and blew in from the sea at eight to 10 knots, with long, easy shifts instead of short, wild ones, and with a more open and regular sea.

This year all the "experts" say that the only chance of the wind being anything but very light to light would come if a stray hurricane from the Caribbean should hop over the backbone of Central America and continue its journey in the Pacific. This has happened, but rarely.

So the world's top sailors are gathering in Mexico with the greatest array

of light weather paraphernalia ever seen at a regatta. Many are so sure the wind will not get over 15 knots that they are gambling heavily with super-light rigs, with lightweight sailcloth, and light crews.

All the world's top sailmakers have come up with their version of the "Acapulco cut" and have been experimenting with it all season. The feeling is mixed over cloth weights, and whereas some sailmakers have been satisfied with sails made from three-ounce Dacron, others have toyed with that weight (and lighter) and have gone back to the more stable cloths to be found in weights of four and-a-half ounce and up.

By mid-summer Paul Elvström seemed satisfied with the sails he was cutting for his Scandinavian cohorts were using them with great success in Europe. But on this side of the ocean experiments carried out with light cloth by two top makers of Star sails resulted in a return to heavier cloth.

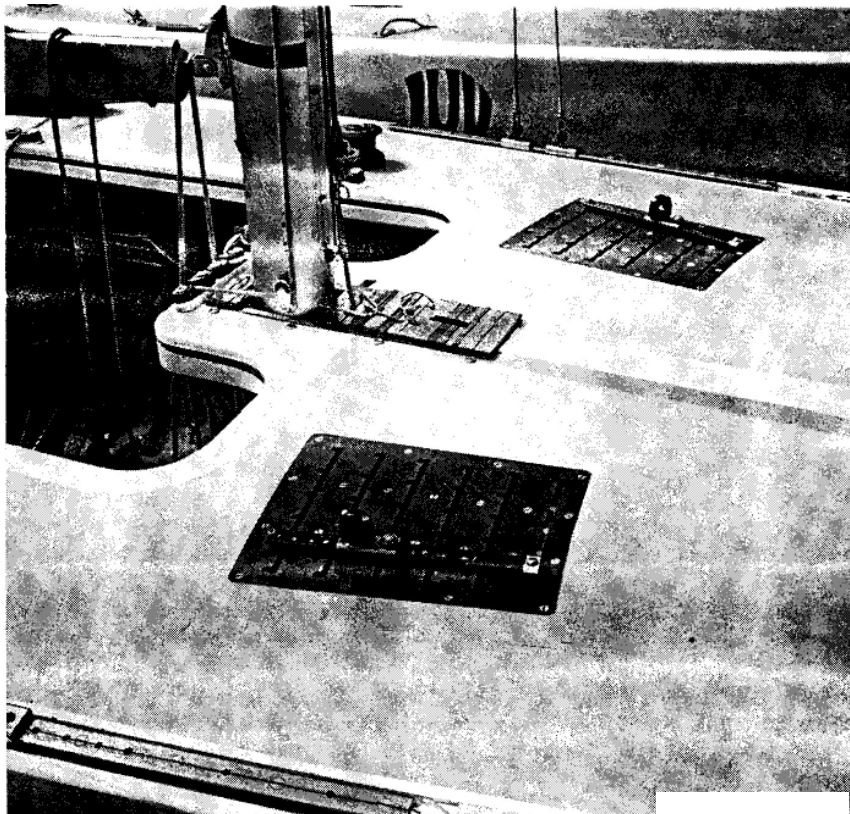
In one such case the lightweight sail looked the equal of its heavier counterpart, but simply did not make the boat go quite as fast except in the very worst combination of light wind and confused slop. And even then the light sail was only the equal of the heavier one, not the master of it.

The two big reasons for moving towards light cloth for Acapulco a light sail will fill more easily than a heavier one, and (b) the light material results in less weight aloft and therefore a lower moment of inertia, thus cutting down on pitch a roll

The "moment of inertia" problem with which designers and the more aware skippers have been so concerned in the past few years is particularly evident in the type of sea expected off Acapulco.

When the lumps on the water are further apart than one boatlength, performance will be greatly increased if weight can be reduced in a yacht's extremities. These, of course, include the rig, the ends of the hull, and even the appendages below the water. The further a fitting or a piece of structure is from the boat's center of gravity the more important it is to have it as light as possible.

With this in mind designers and builders have taken some giant steps down the road to low moments of



Gerry Driscoll's Ramona, above, and Lowell North's Luv, below were launched only a short time before the 5.5 trials. Ramona had this impressive jib lead which allowed a great range of settings. The consul, below, on Luv is similar to the control tower in North's

conditions are, (a)

inertia. The last two 12-Meter challenges for the America's Cup have provided many ideas. Most of the new 5.5-Meters (the only development class in the Games) have Intrepid-like bows and chopped off sterns. Ernie Fay of Houston did well in the U.S. trials with a self-designed boat that had a front end which could only be described as a canoe bow. The veteran campaigner pointed out that this feature of his new *Sundance* saved 11 pounds right in the forward end of the boat. A plus factor was that by carrying the boat's tumblehome forward into the canoe how the boat had a better aerodynamic shape for reduced windage.

Time ran out on a very radical 5.5-Meter designed by Jerry Milgram with optimum use of tank testing, wind tunnel and computer. It was a long way from being the prettiest boat ever designed to the class rule and, perhaps fortunately for the class, it did not perform. John Marshall and his crew worked valiantly, up to the day before the trials, to get the *Pregnant Whale* cranked up, but she was not competitive.

Lowell North and Al Cassel developed different but similarly con-

ceived hydraulically actuated tilting mast devices. Lowell's consisted of a hand pump, pressure accumulator, two pistons and assorted plumbing and gauges. The mast steps on a curved 'thwartships track and pivots at the partner. Al's entire rig was set up in a box-like structure which was tilted in the boat by hydraulic means. These contrivances were used to tilt the rig to windward which is supposed to reduce the heeling moment of the rig. There was considerable discussion within the 5.5-Meter class regarding the legality of these devices, however no one protested. Since neither boat will go to Acapulco, there will probably not be any determination until the technical committee meets in November.

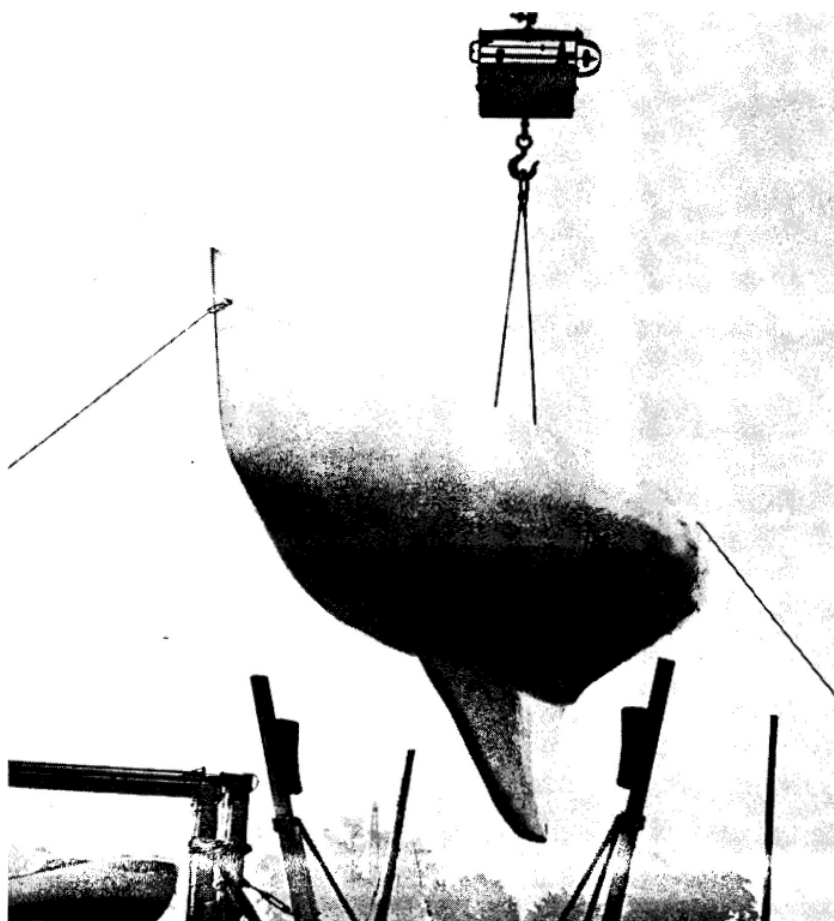
Gardner Cox had no strategy or special preparation for Acapulco. Rather, he concentrated for nearly four years in winning the trials in Newport Beach. Gardner's boat is not new-it's a three-year-old *Chance* design-and it doesn't have any of the bumps, kickers, chines and other light weather performance devices that characterize all the new 5.5's. Gardner's boat neverthe-

less *has* a reputation as a good light weather boat, and his preparation consisted of working with what he had, selecting sails and refining equipment. His strategy worked, winning for him and his crew selection as the U.S. 5.5-Meter Olympic representatives.

Although a "one-design" the *Star* is in some respects a very open class. Sail size and shape is governed, and spars must be of solid wood. But the restrictions pretty well end there. Masts can be as light as an owner dares have them and may be rigged any way he pleases.

In August, Paul Elvström admitted to O-D&OY that he had a mast so light he was afraid to step it until he got to Acapulco. There were Americans from the east and center part of the country who sailed their area eliminations with one rig and then changed to a lighter one for the final trials at San Diego where conditions are Acapulco-like, but not so much so.

In an effort to keep rig weight low one top U.S. *Star* contender had a special mast made with the spreaders about three feet lower than on a normal spar. He could reach them when standing on the deck.



Notable among the boats designed specifically for light weather was this 5.5 owned by Ben Gilbert. Nicknamed the Pregnant Whale, the craft was conceived with extensive use of a computer by MIT professor Gerry Milgram. However the boat was completed so late in the season that it was not shipped west to the trials. Note the nearly perpendicular stem and the many flat spots on the underbody.