



# ACCENT ON SPEED

The Santa Cruz Ultra Lights



BY ERIC HOFFMAN

**B**efore motorized ocean travel, cultures flourished or perished depending on the competitive advantage of their sailing craft. For centuries mankind's genius has gone into improving sailing vessels. You would think the state of the art would be perfected by now. However, in Monterey Bay's northernmost port of call, Santa Cruz, there is a revolution in yacht design that well may be the most innovative force

brought to the art in the last 100 years. That force is Ultra Light Displacement Boats, known as ULDBs among yachtsmen. Stated simply, the design below the waterline is not unlike a surfboard with a ballast, i.e., a minimum draft hull with a heavily ballasted keel. Where traditionally designed yachts have a great deal of their bulk below the waterline, the idea behind the ULDBs is to reduce friction by minimizing the amount of boat touching water while maximizing the amount of sail the boat can handle. The result is the world's fastest mono-hulled sailboats. ULDBs' founding fathers, George Olson, Ron Moore, and Bill Lee have been joined

LEFT: The Olson 30 Jewel catches the wind.

ABOVE: Weekend sailors test the winds off Santa Cruz. (Photograph by Bruce Ashley.)



by commercial boat builders Bob Thomsen and John Josephs. All have contributed to catapulting Santa Cruz into the spotlight of yachting circles around the world. Each has taken a somewhat different approach with the concept of ULDBs and each can point to accomplishments and innovations that have brought him national or international recognition. Bill Lee's 67-foot sloop, *Merlin*, the current Transpac record holder (Los Angeles to Honolulu, 2,225 miles), crossed the Pacific in eight days, eleven hours and one minute, shaving a whopping 22 hours off legendary *Windward Passage's* time.

Though the history of the coming together of ULDBs and Santa Cruz can be ferreted out, the reasons behind the phenomenon are harder to explain. Santa Cruz's social climate may have played a part. Santa Cruz

is a community that accepts openness and irreverence. The sixties, with the questioning of just about anything traditional, molded the main personalities. There are similarities among the boat builders. None fits the blue-blazer image associated with the upper echelons of sailing. Most feel correctly dressed in shorts and a T-shirt. Two, George Olson and Ron Moore, built surfboards before arriving at sailboats. Significantly, they all like to talk about and experience speed, and have little regard for yachting

*TOP: Mark Earl at work on a Thomsen custom hull.*

*LEFT: A Josephs Wilderness Yacht cuts through the sea.*

*BOTTOM: Olson 30s skim across Monterey Bay.*

Photo by Dennis Noonan

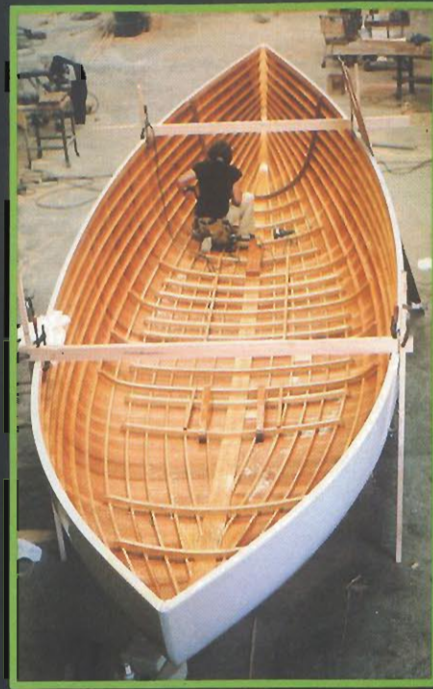


Photo by Eric Hoffman

rules that attempt to govern design. George Olson's idea of relaxation is racing his landsailer at speeds near 100 mph in the Nevada desert, while Ron and his brother John used to build unlimited dragsters. The origins, then, lie somewhere in the social climate, the quest for speed and irreverence towards tradition.

Whatever the catalyst, the starting date seems to be 1970 when the 505 World Championships were held in Santa Cruz. A 505 is an extremely fast, small, monohulled sailboat that requires an acrobatic crew to keep it upright. A 505 sailor stands on the hull precariously suspended over the water on a trapeze as the boat teeters on the brink. Ron and John Moore were building 505s and that year one of their boats was the first American-built 505 to win a World Championship Race. 505s have European origins and, until the Moores, all major records belonged to European manufacturers. The Moores'

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success was due to the fine craftsmanship that is essential to building a light boat and an innovation called honeycombing. Moore borrowed the idea from the aero-space industry. By sandwiching foam between two layers of fiberglass, less weight and greater rigidity are achieved. Obviously, less weight is always desirable and so is greater rigidity which decreases distortions to the hull that occur when the boat is stressed.

About the time of the 505 World Championship, George Olson decided to build *Grendel*, a 24-foot sloop with the ULDB concept in mind. Actually, George and Wayne Kocher were building close to identical racers except Wayne's boat burned in a fire before completion. *Grendel* was entered in the competitive MORA Season Races in San Francisco Bay and won easily.

During the 1970 505 races, watching the sleek 505s slip in and out of the harbor was Bill Lee, a young mechanical engineer. He was struck by the speed of the 505. He wanted to build an ocean racing version but realized hanging from trapezes and constantly scrambling to balance a boat just wouldn't cut it on an ocean racer. A year after the 505 World Championships, and six months after *Grendel*, Bill launched *Magic*. *Magic* ran away from everything it raced in Monterey Bay that year. The ULDBs were born and the founding fathers began to share ideas.





And the ideas began to flow.

Ron Moore borrowed *Grendel's* mold from George Olson. Together they decided *Grendel* could be improved if she were wider at the beam. Ron and George bent the mold by wedging a two by four into the mold, grunting and pushing until two more feet were added to the beam. The result was *Summertime*, the prototype of the now proven and popular Moore 24. The boat has been in production ten years and can be found from St. Petersburg to Seattle. The boat can surf at over 20 knots (before ULDBs a fast sailboat would hit 14 knots.) In ten years the boat's hull has not changed but

Moore, known as a stickler for detail, has masterfully set up the hardware to make the boat entirely sailable from the cockpit. For a small boat it has performed remarkably well. It has won several offshore races and in 1975 in the now infamous Santa Cruz to Santa Barbara Race, marred by two deaths and several demastings, a Moore 24 arrived in Santa Barbara hours before any competition. Moore, whose carefree and likeable style has made him a Santa Cruz personality, explains how his line of boats almost never were: "In the early days we didn't think George Olson and other guys would amount to much. It was all sort of a

backyard recreational thing—a hobby. For a while we debated putting four wheels on George's mold, lighting it on fire and pushing it off a cliff, sorta like Vikings. I'm glad we didn't."

Lee hooked up with Art Beihl, a Berkeley physicist; and in a short time, they took the ULDB concept to ocean racers. Phenomenally, their first boat, 36-foot *Witchcraft*, won the Los Angeles to Matzatlan race. The next year (1973) Olson and Lee combined talents and built *Panache* and *Chutzpah* with the hope of winning the most prestigious race in the Pacific, the Los Angeles to Honolulu Transpac. *Chutzpah* won and

*Panache* came in second. To prove it was no fluke, *Chutzpah* did it again in 1975. Ultra lights had arrived, but not without controversy.

Committees that oversee yacht racing became worried about light designs making a mockery of traditional boats. Heavy handicaps were assigned to ULDBs. Handicaps are an attempt to reduce a sailboat race to the skill of the crews and not the advantage of the boat. Theoretically, a heavily handicapped boat could finish considerably before a slower boat—but lose because of the formula set up by the handicappers. Bill Lee sums up his feelings on

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handicaps. "To me fast is fun. I'd rather get there first and relax. I enjoy sailing fast more than receiving a trophy."

Some critics of ULDBs questioned their seaworthiness. *Chutzpah* was fast but, if upended, it would probably not right itself—an essential feature in a seaworthy sailboat. Lee had put 30 percent of the *Chutzpah's* weight in the keel and relied on a wide beam to stabilize the craft. Also the boat was very fast downwind but had some trouble going into the weather.

Changes were made. The ensuing boats were narrower with 50 percent of the weight in the keel. The changes resulted in a boat that has proven to be as seaworthy as any other sailboat and comparably as fast into the weather as ultra lights had been with downwind competition.

Adhering to the principle, "Once you have the winning design, the bigger the boat, the faster you go," in 1977 Lee launched his now famous *Merlin*, a 67-foot sloop that has 1,850 square feet of sail. The boat has a narrow 12-foot beam, and relatively flat bottom with a heavily ballasted keel.

Knowing of *Merlin's* design, a southern Californian yachtsman, Harry Moloscho, built *Drifter*, which was two feet wider, two feet taller and two feet longer. Loyal Santa Cruz yachtsmen were enraged, feeling that Bill's winning idea for the '77 Transpac had been kidnapped.

The 1977 Transpac was one of the most exciting in history. After 2,175 miles, *Merlin* and *Drifter* were neck and neck—two beautiful yachts streaking across the Pacific at a speed near 20 knots. *Merlin* beat *Drifter* by 17 minutes. *Merlin's* record of eight days, 11 hours and one minute is truly an incredible accomplishment.

Since *Merlin's* feat, Santa Cruz has been spotlighted as a yachting center. There have

been some changes. Bill Lee is now producing fifty-foot ocean racers that offer proportionally more cabin space than their big sister, *Merlin*. His fifties have been a dominant force in every race they've entered. The 1981 Transpac will have eight entered. Ron Moore's 24 is perhaps the most polished of the light boats, having been in production ten years. Because the boat can be easily transported, last year's Moore Nationals were held in Lake Tahoe.

George Olson combined his designing and building talents with Alan Whirtanen and businesswoman Ln Neale to form Pacific Boats. With craftsmanship that rivals Moore's, they are now producing Olson

30s like hot cakes—one every three days—and they only build if they have an order.

In the same league with the founding fathers but with a separate history is Bob Thomsen, the former manager of the prestigious Duncan Marine in Taiwan. Seven years ago he founded C.B. Marine in Santa Cruz and for a time employed George Olson. Thomsen builds immaculately crafted masterpieces from Port Orford Cedar, one of the best boat-building woods in the United States. His custom boats offer the best of everything: design, craftsmanship, and performance. Before a boat is built,

Gary Mull of Alameda or Bruce Farr of New Zealand, two of the world's top yacht designers, the client, and Bob sit down and talk through the boat. Bob explains, "Our clients are usually professional people who've owned other boats. They come to us with a dream boat in mind." Thomsen's way of doing things has his cross-town competitors watching. He uses wood which is often lighter and always stiffer than fiberglass per square foot. Bob: "It's a superior material. The only restraint is finding skilled craftsmen to work with it." Often Thomsen's creations are somewhere between a true ULDB and a traditional deep draft boat. They're usually roomy inside because of more space below the waterline, but, because of their light construction, they still travel fast. *Timberwolf*, one of Bob's 38-footers, finished first in its class and third overall in a San Francisco to Maui Transpac. It was beaten by a bigger Bill Lee 50 and a Swan 55, a light boat from San Francisco.

On the west side of Santa Cruz is another force to be reckoned with, John Josephs of



Photograph on left by Robert V. Siler, above by Ralph W. Cooke III.





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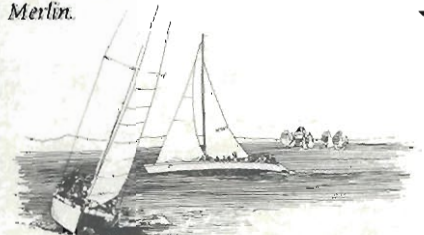


Wilderness Yachts—his father made violins, his grandfather designed the first hydroplanes used by Evinrude. John builds two boats, the Wilderness 21 and a Wilderness 40. The Wilderness 21 became well known when local sailor Amy Boyer entered the highly competitive Single Handed Trans-Atlantic Race for Small Boats. The race is a showcase for most European manufacturers. Amy was the first woman to finish and the eleventh to finish over all. In the 1980 TransPac for Small Boats she finished third overall and was the first woman across the finish line.

John's emphasis is on speed, but his approach is somewhat different from others. He looks for ways to make his boats stronger and lighter than the competition. With a lighter overall boat he can add a deeper draft hull which means more cabin depth while maintaining ULDB speed. Unlike most ULDBs that sacrifice cabin depth for speed, his forty-footer has over six feet of headroom. John borrows from the aerospace industry. He uses uni-directional fiberglass which is expensive but stronger than standard fiberglass. He also uses Klegecell, a lightweight foam, between layers of fiberglass to reduce weight while maintaining strength.

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Ten years ago Santa Cruz was just another yacht harbor whose most distinguishing feature was the Army Corps of Engineers' inability to keep the channel open. Today the silting problem continues, but silted-in or not, the creative energy from Santa Cruz's boatbuilders has overflowed around the globe. The change is probably most evident in Santa Cruz's traditional Wednesday night races. In the early seventies, the race participants would often cast a disdainful eye on the mavericks who ignored the rules, while flirting with speed. Today, the grumbling has stopped, and many of the grumblers can be seen chasing *Merlin* around the course in their own ULDBs—that is, if they haven't finagled a ride on *Merlin*.



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