

Sail Away

North Carolina Boatbuilder Frank Meldau Creates The "Perfect" Design

Pondering the plight of artists in a pickle — a Van Gogh voluntarily crossing the bar after hundreds of paintings produce a single sale; a Gauguin expiring of syphilis in pagan poverty, his work rejected — moistens the eyes of all sensitive mortals, with whom the *Spectator* audience abounds. Yet the tragedy of the popularly unrecognized but talented artist is the accepted common fate of the skilled craftsman, one of whom is Frank Meldau, who exercises his talent at IFG (International Fiberglass) on South Miami Boulevard between the Research Triangle Park and Durham.

Those in the fiberglass trade, however, know Frank well, as Carrboro designer Diane Gillis discovered two years ago when she was looking for someone to embody her plans for the Play Port in Terminal A at the Raleigh-Durham Airport and followed up on references to IFG. "It was a pretty loose situation," Diane says of the bedroom-size play-area airplane mock-up. "Frank had to really put a lot into it to make the curved fuselage and wings meet the space because there was really no way that I could dimension it on a drawing. It was a very custom job."

Wallace Kuralt, the proprietor of the Intimate Bookshop chain in Chapel Hill, Raleigh, Winston-Salem and elsewhere, has engaged Frank often to execute his personal designs — oversized sham books, computer stands, a copper-toned inside awning for his Charlotte store. "He's a remarkable craftsman," Wallace asserts. "He is great doing whatever. Just the touch and feel of everything he does is *so* right."

To create an object from fiberglass, Frank first creates a "plug," a true-size rendition of the final product, from which he takes a mold. "I use anything for a plug. I can make it out of bubble gum," Frank explains, "just as long as I get the shape." For the Play Port, urethane, plastic and random odds and ends went into the plug.

Frank refined the draftsmanship necessary to his craft in engineering courses taken at the University of New Mexico during a 1951-1954 hitch in the U.S. Air Force and applied that education in the Special Weapons Command at Kirkland Air Force Base draw-



PHOTO BY STEVE WILSON

Symbiotic sailors: Frank and Rhoda Meldau of IFG have been partners in life and work since they met as students at UNC-Chapel Hill.

ing plans and "exploding-view" technical illustrations to be used to place brackets on aircraft to carry nuclear weapons. While at Kirkland, Frank had two adventures that altered the course of his life, one temporarily, the other permanently. Attending a dinosaur dig in Sand Bluff, Colorado, convinced him he wanted to be a paleontologist, and a 30-day leave sailing with a friend's family in the Gulf of Mexico exposed him to a totally strange sailing vessel, a 46-foot catamaran cut from Hawaiian logs.

From his grammar school days in Raleigh, sailing had been his favorite sport, appropriate since he had been born in August 1931 aboard a sailing yacht off Charleston, S.C. Although the bulky Hawaiian double-hull was poorly designed, its speed led Frank to think, "What is true for that large boat can be true for a smaller boat — a 16-foot or a 20-foot boat would do the same thing."

Consequently, he began to draw designs based on that odd-looking catamaran — the word is from Sri Lanka, meaning "to lash two

trees together" — and began building the first of many experimental boats in 1957 while attending the University of North Carolina at Chapel Hill in pursuit of a degree in geography and geology. But with that degree in

by Jim Vickers

hand in 1960, he realized that the only livelihood available through applied paleontology was teaching, and a career in the classroom had zero appeal.

His dream of building a world-class racing catamaran had captivating appeal, but it came to life haltingly in a heavy, unwieldy 24-foot cabin cruiser constructed from plywood and fiberglass. To generate the cash needed to keep his experiments going, he remained at UNC after graduation working in the engineering department. His key assignment was to construct a three-dimensional scale model

of the campus to show planners who could not read topographical maps why some seemingly open spaces on campus were in fact undesirable or impossible building sites.

He originally planned to build a 13-by-15-foot model capturing campus geography with 4000 contour lines and depicting buildings with crude, solidly painted blocks, but when administrators saw a sample section, they insisted that the buildings be authentic recreations, complete with windows capable of illumination from bulbs within them. By the time he completed it in October 1961, Frank had used original blueprints to build the miniature buildings, installed 2000 trees — including a replica of the Davie Poplar — and lined streets and parking lots with tiny cars. Today the updated model, minus the button-operated lights, is stage center in the rotunda of the Morehead Planetarium.

During that period, Frank built his catamarans at night, first on the second floor of the old Carrboro schoolhouse, now the Carrboro Town Hall, then in a rented shop on South Mangum Street in Durham. A 21-foot fiberglass-and-plywood model cut the weight of the 24-foot cruiser in half. He also met Rhoda Blanton, a dramatic arts major at UNC, during a coffee break at the Carolina Coffee Shop, and the subsequent marriage added a partner-for-life in boat building and sailing.

Responding to an announcement for a boat show to accompany the grand opening of Tarrytown Mall in Rocky Mount, Frank and Rhoda gambled a \$100 entry fee to display an 18-foot catamaran, believing the event offered the most logical and economical opportunity to put their idea before an expectant public.

"We thought we would surely sell something, but we didn't," Rhoda says in recounting their stark disappointment. "People would come up to the boat and ask, 'Does it fly?' or 'Where do you sit?'"

"Some even thought it was an ice-boat," Frank adds.

Later, Ed McKnight, a UNC colleague, bought the boat-show prototype.

A dozen experimental catamarans, trimarans and outriggers preceded Frank's 1962 discovery of the "perfect" design — a 16-foot, 275-pound, two-sail catamaran with a cantilevered bow that would sail closer into the wind than any boat he had ever piloted. Rhoda suggested they name the craft Isotope and they gained a sale before the first boat was built. Hallam Walker, a French professor at Duke, invited Frank to the Duke Sailing Club to speak on catamarans and multi-hull boats and was so impressed by the talk that he ordered a boat that existed only in the imagination of its creator.

Evicted from the South Mangum Street shop by urban renewal enforcers, Frank moved into a quonset hut on the site now occupied by the Kroger store on Hillsborough Road in Durham and for a brief period took on as a partner Homer Athas, the brother of Chapel Hill novelist Daphne Athas. "But



By the early 1970s, IFG had sold hundreds of catamarans, 200 or so in North Carolina, including some 75 to sailors in the Triangle area, even one — an Isotope — sold by a Livonia, New York, dealer to an astronaut, Bill Anders, who orbited the moon aboard Apollo 8 on Christmas Eve 1968.

Homer had wanderlust," Frank recalls, and he soon moved on.

Exposure at boat shows as far distant as Annapolis and Chicago and favorable testimonials from owners shortly generated enough orders from individual buyers and a dozen dealers to keep Frank and a small crew busy during the warm months producing Isotopes and a smaller 14-foot version named the Cheshire Cat, both basically constructed from twelve layers of fiberglass painted or rolled into molds.

Because the laws of physics give large sailboats an advantage over smaller boats, a handicap system is necessary if craft of different sizes are to race competitively. The United States Sailing Association studied the Isotope's specifications and initially gave it a Portsmouth handicap of ".82," meaning that the distance an Isotope would cover in 82 minutes would theoretically take 90 minutes for a boat rated at ".90" to cover. Then, as results from races in regattas around the nation accumulated, the USSA began to lower the rating, until it reached ".74," the lowest rating for a 16' catamaran in the world to this day. In time, the Cheshire Cat earned the low-



PHOTO COURTESY OF IFG

Frank Meldau aboard one of his nationally acclaimed catamarans in the Carolina Sailing Club's Governor's Cup Regatta at Kerr Lake. (The regatta will be held this year on June 19 and 20.)

est rating of all 14' catamarans.

Last week, local sailor Debra King spoke of her experience, adding to IFG's file of blurbs: "I have had an Isotope for nearly 10 years now. I learned to sail on an Isotope, and I think it is an especially good boat for this area and particularly for female sailors. It's very light in weight. I can actually with another woman take it on and off a trailer. Also, it's very, very much easier to sail; it doesn't take nearly as much manhandling and it's much more responsive than some of the other catamarans that you see. On a typically light-wind day at Jordan Lake it will outdistance a Hobie just consistently, almost with little regard to how good the sailor is."

By the late 1960s, after IFG moved to its current home on Miami Boulevard, hundreds

of Isotopes and Cheshire Cats were collecting trophies by the scores, and all were precise copies of the original, a factor appreciated by critic Tom Tober in *Southern Boating Magazine*: "So in Isotope and Cheshire we have that rare thing — a virtually handmade, affordable, high-tech, high-performance boat."

"When I designed my boat," Frank says, "my goal was not to build all kinds of boats. I was after a class boat, class meaning something like the Thistle, the boat used to establish the Portsmouth handicap system, which is a boat still sailing today. That's the reason I only built two lengths, 14-foot and 16-foot."

Activity at IFG has always ranged far beyond boat building, particularly in the winter months. In 1972, when managers of the Mint Museum in Charlotte chose to end constant repair due to flaking from its emblem, a 12-foot gold-leafed plaster eagle, Chapel Hill artist and UNC art professor Dick Kinnaird brought the eagle to IFG where he restored it and with Frank's help reproduced it in fiberglass, a task requiring 37 separate molds. A few weeks ago, Frank discovered an old mold for an original sculpture Kinnaird had created

during the period they worked on the eagle. With a few rubs of a cleaning cloth, the mold was again in pristine condition, unaffected by weathering more than a quarter of a century in the undergrowth that owns the back lot of IFG.

Robert Howard, a UNC art professor whose sculptures commanded fees of \$50,000 and more in the 1960s and 1970s, also worked at IFG, creating one enormous sculpture, the 24-by-13-by-10-foot *Untitled 1967-1968*, that brought a price of \$10,000. Last week Howard recalled that Frank "was such a helpful person. He just helped me a lot, and he helped my students a lot, sometimes even hiring them. He's just an all-round great guy."

The Triangle area's most renowned artist in the medium of fiberglass, Bob Gaston, is famous in the region for the *Pig in the Sky* atop Crook's Corner Restaurant in Chapel Hill (a replica sits in Frank's backyard), his scattered trademark rhino heads, the dancing couple at Pyewacket Restaurant, the angel leaning outward from the roof of the ArtsCenter in Carrboro (as though she is unsure of her financial standing) and sculptures at the zoo in Asheboro and other sites. Now living in New Orleans, Bob traces his ability in fiberglass to the days he worked with Frank, of whom he says, "There's nobody else in the world quite like him."

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To fill out those winter months, Frank took on contract jobs from individuals and companies, reproducing in fiberglass anything a customer could design or describe. He made 300- and 500-gallon aquarium tanks for the Marine Resources Centers at Fort Fisher, Manteo and Atlantic Beach; built the 36-foot center hull for trimarans assembled by a company in Wilmington; customized automobile parts and complete automobile bodies; designed a prototype portable dog kennel for the U.S. Army; devised the maroon road signs in the Research Triangle Park and at Raleigh-Durham Airport; molded life-raft containers which RPR Industries of Apex delivered to the Navy, the Coast Guard and private buyers, and constructed thousands of other unique items.

As sailors, Frank and Rhoda have shelves of trophies won racing the Isotope and the Cheshire Cat. Each year the Carolina Sailing Club sponsors the Governor's Cup Regatta at Kerr Lake, one of the largest inland-water regattas in the United States. To be held this year on June 19-20, the Governor's Cup races include craft ranging from cruising boats to

PHOTO BY STEVE WILSON

sail boards seeking the most prized trophy in North Carolina sailing, a trophy the Isotope has won five times, with Frank Meldau at the tiller in 1982. A past commodore of the Carolina Sailing Club, Frank himself sponsors the Isotope National Championship.

The sailboat market peaked in 1982, when IFG employed 25 workers at a plant between Raleigh and Durham, but fiberglass boats are seemingly eternal. Consequently, used Isotopes and Cheshire Cats are widely available, and remain the lowest handicapped boats in their classes, further cutting into sales in a declining market.

As general manager of IFG, Rhoda is steering efforts to increase the output of Isotopes. IFG has sold rights to an Indonesian firm to build and sell the boat in its region and Rhoda is advertising a package in the *Commerce News Daily*, a publication subscribed to by all embassies in the United States, she hopes will "build an international market for the Isotope." If successful, she will accompany shipments of Isotopes overseas and assist in organizing sailing socials and regattas.

Another ambition is to lure the Leeds Mitchell Perpetual Trophy race from Narragansett Bay, Rhode Island, to either New Bern or Oriental. For 30 years, Leeds Mitchell has sponsored the North American Solo Championship, an international event in which 10 championship sailors from Canada,



Frank Meldau at work in his shop in Research Triangle Park: "When I designed my boat, my goal was not to build all kinds of boats. I was after a class boat...."

the United States, Mexico and the Atlantic islands race identical boats. "It would be wonderful for the sport of sailing in North Carolina, and many people still don't view racing as a competitive sport," she says. It has already provided a wonderful opportunity to wax up the molds to make the 11 Isotopes that will be used in the race this year.

Most promising of all, the Isotope may have a future in the Olympic games, either indirectly or directly. The fast Isotope is now the ideal training vessel to prepare for sailing the Olympic class catamaran, the 20-foot Tornado, and should the Olympic committee decide to add single-handed catamaran competition to the two-man Tornado competition, the Isotope is the logical selection.

Dr. J.B. Hadler, professor of naval architecture and dean of the Webb Institute on Long Island, owns an Isotope and a Tornado. He is using the Isotope to teach his grandchildren to sail. They may be gaining an inside tack on the A.D. 2000 Olympics. ■

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