

John Moody 1943 -

PERSONAL: Born January 15, 1943, in Lorain, Ohio; son of Edward M. (self-employed in school photography business) and Florence (Messmore) Moody; married Vicki L. Wooster; children: James E., Krisan L., Daniel A. Education: Attended Cedarville College, Ohio State University, Cleveland State University, and Marquette University.

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OCCUPATION: Mechanical engineer.

CAREER: Worked as a clerk for Texaco Oil Co. and in direct sales; Square D (manufacturing firm), Cleveland, Ohio, designer, 1967-69; P & H (heavy-equipment manufacturing firm), Milwaukee, Wis., 1969-76, began as designer, became development engineer; designer and builder of ultralight aircraft, part time, 1974-76; Ultralight Flying Machines of Wisconsin, Milwaukee, president and development engineer, 1976-84; Custom Compactors (manufacturer of trash compactors and bailing equipment), Tampa, Fla., director of research and development, 1984 -.

SIDELIGHTS: On March 15, 1975, above a frozen lake southwest of Milwaukee, John Moody, then a thirty-two-year-old engineer, made aviation history by flying a device that looked a little like a noseless and tailless biplane about thirty feet above the ice. As beginnings go, it was a rather inauspicious start of a new form of aviation. But the history of aeronautics is full of inauspicious beginnings that developed into great things. The experience of the Wright brothers, two little-known bicycle makers, along the desolate North Carolina coast is probably the best example of this.

By purely technical standards, it is not easy to define exactly where Moody fits into aviation history. He was not the first person to pilot a hang glider. He was not even the first person to fly a hang glider that had independent propulsion. A Californian named Bill Bennett had earlier strapped a power pack onto his back and



Courtesy of John Moody.

had managed to extend his hang glider's long graceful glides by a few thousand feet or so. But Moody was the first person to develop a powered hang glider that could be launched from flat terrain, without benefit of wind, with the pilot merely running along with it until it became airborne. In a sense, what he did was make it possible for man to fly almost like a bird. A Popular Science writer put it this way: "If you have ever dreamed, as everyone has, of leaping into the air, circling and soaring like a hawk, and landing on your feet as lightly as thistledown, then John Moody's Ultralight Flying Machine (a hang glider with a motor) may be for you."

John Moody's contribution to aviation is now universally known as the ultralight, and, in a way, it represents a revolution in the philosophy of aeronautics. Almost from its inception, aviation has been basically a business. And it only took a few short years for this enterprise to be taken from inventor-adventurers like the Wright brothers and turned over to governments and

businesses to be used for military and commercial purposes. Even today, private planes are expensive enough that relatively few people can afford them for purely recreational purposes. But Moody ushered in the era of the recreational flying machine. Indeed, ultralights are often called ARVs, or air recreational vehicles. In a sense, they are the airborne cousins of snowmobiles, dirt bikes, and all-terrain vehicles.

It was an innovation that was a long time coming. For years, the dream of recreational flight had occupied the thoughts of backyard tinkerers and inventors. One sign of this is the fact that magazines like *Popular Science* and *Popular Mechanics* had long carried articles on do-it-yourself airplanes, known as homebuilts. But these, too, could be expensive, and their pilots had to comply with a whole series of Federal Aviation Administration (FAA) regulations. They certainly did not offer the freedom that ultralights would: the ability to store your plane

in a garage and carry it to your take-off point in the back of a station wagon, to feel the wind in your face and along your body, to maneuver in spaces small enough to almost challenge the birds themselves.

Moody's involvement with hang gliders and ultralights came as a result of his speculation about the possibility of human muscle-powered flight. During the early seventies, then an engineer with a Milwaukee manufacturing company, Moody wondered what it would take to win the £50,000 Kremer Prize. This award, eventually won by the now-famous Gossamer Condor, was put up by a British industrialist; it was to be given to the first person to build a human-powered aircraft that could navigate a figure-eight course around two pylons a half mile apart.

To help him understand flight, Moody wanted to fly-or at least glide-himself, and so he took up hang gliding.



John Moody takes off in his Easyriser ultralight aircraft. Courtesy of John Moody.

But he ran into trouble almost immediately. The topography of Wisconsin was not very well suited to hang gliding. In an article in *Sport Aviation* magazine, Moody described his problem humorously: "A hill that looks usable a mile away, invariably, when you get up to it, has six fences across its face, a resident herd of ten bulls who have not seen a cow in six months, and has 150 acres of briars at its base." To the serious flyer, the problem was not a joke; Moody and others did not enjoy traveling hundreds of miles to hang glide, only to find the weather conditions unsuitable.

Once again, necessity gave birth to invention. During the winter of 1974-75, Moody put a ten-horsepower go-cart engine on an Icarus II hang glider. The entire package weighed only ninety pounds, including about three quarters of fuel. It could be flown under power for about thirty minutes and actually could spend much more than that amount of time aloft, because the pilot could cut off the engine and soar as high as 2,000 feet—heights most hang glider pilots could only dream of.

To the laymen who witnessed Moody's early flights, the ultralight must have seemed a strange bird indeed. From a distance, it looked like a box kite or a mutilated biplane. Up close, one could see that the pilot sat between the wings with his legs pulled up. *Popular Science* writer E.F. Lindsey once witnessed a take-off. Moody ran with the ninety-pound device suspended on his lower back, starting with a heavy jog and ending with a kind of tiptoed prance as the ultralight became airborne. Then he climbed at the rate of perhaps 125 feet per minute, eventually levelling off at 1000 feet or so above the ground. This was the fun part, according to Moody. "Once you get to altitude and turn the motor off," he told Lindsey, "with the sky unfolding around you, and with the air whispering past wings so close they seem extensions of your arms, there is really nothing like the thrill."

Moody maintains that ultralights are far safer than hang gliders. For one thing, he says, hang gliders usually take off from great heights. The ultralight, by contrast, takes off slowly and steadily from the ground, and at any point in the take-off, the pilot can settle back to earth comfortably. For another thing, the cliffs, hilltops and mountainsides that hang gliders frequently use for take-off, often have very rugged terrain—and sometimes wa-

ter-at their bases. Landing in such spots is tricky, to say the least. But the ultralight pilot can choose the landing site that suits him. In all, these differences are said to make ultralights a great deal safer to use.

With the help of an instruction book entitled *Stick and Rudder*, by Wolfgang Langewiesche, Moody taught himself to fly—something he believed most people were capable of. "A person can teach himself to fly if he is of average intelligence and exercises extreme caution," he wrote in an article in the February, 1976, issue of *Sport Aviation*. That was Moody the rugged individualist. Since that time, he has tempered his earlier opinion and now recommends that any ultralight pilot take formal flight training from an FAA licensed instructor.

Like Moody, the FAA has modified its view over the years and now takes a more lenient stance toward ultralight craft than it originally did. But in the early days, Moody found himself frequently at odds with the FAA. When he first started flying his Icarus II, he discovered that federal authorities considered ultralights to be planes, not hang gliders, and took steps to regulate them as full-fledged aircraft. Moody regarded this as an intrusion of the federal bureaucracy. Had he had sufficient funds, he would have taken the FAA to court. Instead, he grudgingly registered as a student pilot and kept the required student log during his early flying period. But he rallied against the FAA policy whenever he got a chance. In the *Sport Aviation* article, he said: "The vast majority of pilots interested in this type of aircraft will be interested in only relatively low-altitude local sport flying as far away from other air traffic as possible. Who wants to be flying between twenty and fifty miles per hour in the traffic pattern of an airport?" As for the flight instruction, Moody wrote, "I would like to meet the FAA licensed instructor who is genuinely experienced and competent to instruct using a powered tailless hang glider."

While he was dueling with the FAA, Moody's ultralight hobby was rapidly becoming a business. One of his early attempts to promote his new product is destined to go down in aviation history as a classic publicity stunt. In 1976, he contacted Lindsey, a regular contributor to *Popular Science*, and offered to demonstrate the ultralight by landing the craft in a vacant lot across the street from the writer's house. The initial response of Lindsey and his editors was cool. "My commercial avia-

tion background told me that bird-like flight with so little horsepower was unlikely at best,” Lindsey wrote. Moody, though, was able to quiet Lindsey’s fears, in part by citing some of the powered ultralight’s advantages over hand gliders. Finally, Lindsey and the editors consented to Moody’s demonstration. In the subsequent *Popular Science* article, Lindsey described the event: “Moody left his local airport after work one evening, flew about twenty miles, landed and refueled at another airport, and appeared over my house at about 2,000 feet, sounding like a chainsaw in orbit and circling with the grace and freedom of an eagle.” Minutes later, he made his landing in front of the writer’s home.

Needless to say, the article created a windfall for the young engineer. All of a sudden his part-time business was too much for him to handle, so he began manufacturing and marketing ultralights full time. Soon he stopped using the *Icarus II* hang glider as the basis for his ultralight and started employing another model, dubbed the *Easy Riser*. It featured an improved airfoil, stronger spars, and easier assembly.

During the seventies, Moody was a frequent performer at airshows. Once he covered 101 miles without refueling, setting a new record. Another time, he narrowly averted catastrophe when he flipped his ultralight and succeeded in righting it just fifty feet above the ground. The novelty of the ultralight, and Moody’s exploits, made photographs of him and his machines a common sight in magazines and books. But eventually other, bigger, companies entered the field, and ultralights gradually became more complex, heavier, and were fitted with more sophisticated control systems and landing gear. “They’ve probably become easier to fly and more forgiving of errors” than the early models, Moody told CN. But new ultralights now run between \$5,000 and \$10,000, and, to the dismay of Moody and other enthusiasts, that cost is prohibitive to the citizen-pilot for whom the ultralights were originally intended. A combination of factors, including increased competition from larger manufacturers and a number of lawsuits, forced Moody out of the ultralight business by 1984.

John Moody is now director of research and development for a manufacturer of trash compactors and bailing equipment in Tampa, Florida, but he harbors few regrets about his experience with ultralights. His place

in aviation history is assured. Luis Marden, in a *National Geographic* article, proclaims Moody “the Orville Wright of the new era” in aviation. Moody told CN that he still thinks about breaking new ground in the field of aeronautics and often returns to his dreams about human-powered flight. But he insists that his ideas have little in common with the Rube Goldbergstyle contraptions of popular conception. Rather, he thinks of the flight of birds and envisions mechanical systems wherein “the movement of lifting surfaces provides the propulsion.”

If Moody ever does return to aeronautics he may once again surprise the aviation industry with a still more simple, even lighter aircraft. Ultralight builder John Lasko told Marden that the designer’s goal is “to reduce human flight to its essence,” to get as close as possible to flying like a bird, rather than flying inside a machine. Moody sees his own pioneer contribution to this effort in the most basic terms. As he commented to Marden, “I didn’t mean to reinvent the airplane, I wanted to fly and have fun.”

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