

Sport

THEORY *of* FLIGHT





Glider pilots exercise their passions in a stare-down with the relentless force of gravity ...

BY STEVE THORPE

IT WAS A TICKLISH MOMENT in the job interview process. I thought I had made a positive impression on my two inquisitors and wanted to see the encounter conclude on a positive note. Cheerfully, I asked if there was anything else in my resume that they were curious about. The silence lengthened, then one of them said, "I see here under hobbies that you fly gliders."

Eager to expound on one of my passions, I answered yes. "Well," he said, looking up at me from the document with the expression one would normally reserve for an unappetizing tissue culture on a microscope slide, "I think anybody who flies without an engine is out of their mind."

You and everybody else, pal. You and everybody else.



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The young golden eagle is annoyed, but only mildly. Although the interloper is big, he's clumsy and seems to lack the skill and grace to be much of a hunter. The big white "bird" shouldn't offer much competition.

Wheeling tightly in the same circle as the eagle, I finally let my breath hiss out. I smile at him. He glares at me. My eyes slip downward to the high, rock-framed trout pond nestled in a place where it can be seen by only me and the eagle. The tight circle of my Schleicher ASW15 sailplane now affords a view south where the mountain ridge stretches blue-gray to the hazy horizon. I snap out of my steep bank, put the nose down and watch the airspeed indicator rise as I tuck in along the Green Mountain ridge and watch the rocks zip past my wingtip.

A dozen of us Michigianians have come to Sugarbush, Vt., for a week to do some ridge and mountain wave flying. It's a refreshing change from the also challenging flatland thermal flying we're all used to in Michigan.

The locals are friendly and appreciate the group and its spending. But if you look quickly enough, you may catch that glance you get back in the Midwest, too. Crazy. Just crazy.

The world is divided into two groups, one very large and one very small: those who don't fly gliders and those who do. Each of the groups do share the belief that the other is nuts. Only a tiny percentage of Americans have a pilot's license, and only a small percentage of pilots are rated for gliders. The passionate — fanatical? — adherents of soaring can't understand why people aren't lined up to do it. The rest of the human race just shakes its collective head.

There is no better way to linger in the sky. There is no better way to know, even be intimate with, the heavens than from the seat of a glider. God, in his wisdom, made the sky before both-ering, perhaps as an afterthought, to make the land. It may be an echo of that sentiment that glider pilots try to know everything there is to know about the sky before they bother with the Earth.

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As hobbies go, soaring is fairly young. Chess has remained basically unchanged for hundreds of years. Riding a horse hasn't changed much in thousands of years. There are soaring pilots alive today who were around when the sport took its first tentative steps.

It was born on the grassy hillsides of Germany during the 1920s and '30s as the nation tried to remain "air-minded" despite the restrictions on powered flight imposed by the Versailles Treaty after World War I. The Germans continue, despite their small, cramped airspace, to be the most enthusiastic glider fliers in the world.

Though it has grown in popularity, soaring remains one of the most uncommon of sports.

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One of the enduring myths about soaring is that it's peaceful and serene. I constantly hear from airport visitors, "Gee, it must really be quiet and relaxing up there." Quiet perhaps, except when I'm mumbling frantically to myself, but almost never relaxing.

One of the members of the Sandhill Soaring Club near Ann Arbor occasionally wears a sweat-shirt bearing the slogan, "GRAVITY. It's the law."



Defying gravity is damn hard work. The pilot is constantly calculating the physical realities of the situation and formulating options. In that respect, it's more like the floor of the New York Stock Exchange than a big, fluffy cloud.

When I began soaring, I was surprised by how many of my old science smarts, some unused for 20 years, were dusted off and put to use again. There is a slide rule in my cockpit. Many soaring pilots have sophisticated and powerful onboard flight computers. A good soaring pilot has a command of math, meteorology, physics, navigation and aerodynamics. You're constantly asking yourself, "How far is it to my next landable field? What is the wind strength and direction? What's the chance of finding usable lift if I go north? South? East? West? Can I make a final glide from here or must I 'fill up' with some additional lift and altitude? Where is controlled airspace that I must either avoid or get a clearance for?"

The cockpit workload tends to vary between medium, intense and overload. Piloting a cross-country trip in the Midwest on a marginal day is like the mental equivalent of working on a chain gang. Maybe a championship chess player is a better analogy, always thinking a dozen moves ahead. It is possible to get bored in a sailplane, but it doesn't happen very often.

My glider partner, Paul Gunn, got bored flying our ASW15 high in the mountain wave at Sugarbush in Vermont. Once you get into the wave, you're often motionless over the ground as your airspeed matches up with the wind speed. It's a matter of holding your position over the ground and going up, up, up. The most interesting cock-

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AND AERODYNAMICS.



pit gauge becomes the oxygen flow meter. Paul finally got so bored, he banked hard and dived and went over to the eastern side of the valley to fly the ridge, close to the ground. Those rocks whizzing past your wingtip at high speed keep you from dozing off.

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I wear my trusty parachute, although I don't think I'd ever have the guts to use it. Like a surprisingly large number of pilots, I'm afraid of heights.

One of the best pilots in the Sandhill Soaring Club visited the southwest with his wife. At the Grand Canyon, she kept calling to him, "Oh, honey. It's so beautiful! Come and look!" "This is close enough!" he replied, cringing 50 feet back from the rim. This same pilot will casually eat a banana on a cross-country flight while nearly upside down a mile up. Go figure.

The Soaring Society of America requires parachutes in competitions because of the danger of mid-air collisions, and most high-performance gliders, including mine, have seats specially designed to be used with the chute. When I told one club member that I doubted I could jump from the aircraft, he was coldly unsympathetic. "If you ever look out and the wing is gone, you'll jump." I hope he's right.

Is flying gliders safe? It depends on how safe you want to be. The oft-repeated cliché that "the drive to the airport is the most dangerous part of the trip" simply isn't true. It's impossible to do the things you do at the speed you do them in a glider without incurring risk. I do believe, however, that gliding can be as safe as you make it. Once you subtract the number of injuries and fatalities that resulted when pilots "stretched the envelope," doing something they knew was more risky, the numbers drop to a reasonable level. As a longtime power pilot, I can honestly say that I feel just as safe flying my glider as I do when flying a powered aircraft.

Please ignore the fact that glider pioneer Otto Lilienthal died in a pile of sticks and fabric after a crash while the Wright brothers both died in bed.

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As important as stick and rudder skills and precise control of the aircraft are to soaring, they take a back seat to knowledge and understanding of the atmosphere.

With a big, throbbing aircraft engine, a pilot can bludgeon his way through the sky like a hulking prizefighter. Soaring is more like judo, using the strength and energy of your sparring partner to gracefully add to your own moves. The glider pilot becomes attuned to the nuances and subtleties of the atmosphere. Every cloud is a street sign and every bump of turbulence an omen.

Because solar heating of the Earth's surface plays such a big role in lift, you become very conscious of the terrain below and how it's interacting with the wind and sun. After awhile, you sense you can feel the Earth breathing. Someone once asked me to sum up soaring in one sentence.

I thought for a moment and said, "It's like slow dancing with Mother Nature."

Finding lift and exploiting it is the main job of the soaring pilot. We are not a proud breed when it comes to what we'll settle for. Last fall, I had dropped below 1,000 feet, miles from my club field, and was hoping to scrape my way home. It wasn't looking good and I was starting to think I would soon be *aux taches*, or "with the cows," as our European glider cousins say when they have to land in a farmer's field.

Ahead, I saw a wispy plume of smoke rising. It was some noble soul burning a huge pile of leaves. I began circling. Half a knot up on the variometer instrument that measures lift ... one knot up ... half a knot up. Slim pickings, but lift is lift, and I was slowly adding 50 feet here, 50 feet there. "Throw some more leaves on the fire!" I shouted through the tiny window in my Plexiglas canopy.

They couldn't hear me, of course. It was like trying to hail a cab from the top of the RenCen. Although my cockpit got as smoky as a bar at closing time, I finally clawed my way to 1,400 feet and just made it back to the field.

Maybe I'll get to know the cows some other day. ■

Thorpe lives in Brighton, has been a pilot for more than 20 years and has flown gliders for five years. Crazy or not, he got the job.

JOIN THE CLUB

There are several soaring clubs in Michigan and one commercial operation. Clubs run primarily on volunteer labor and on a non-profit basis. They generally allow you to fly for less money (some have free instructors for members) and provide camaraderie. But, like any club, they sometimes are inefficient or downright stormy. Training can proceed in fits and starts, or sometimes not at all, if a key person like an instructor is a no-show.

Commercial operations, on the other hand, tend to be efficiently run, but generally are more costly in the long run. It's a thing of beauty to watch glider launches at a well-run commercial operation on a booming soaring day. Imagine an aircraft carrier with a grass deck. Commercial operations also allow you to budget training costs more accurately and usually offer all-inclusive training packages that allow you to know, nearly to the penny, what it will cost to get that coveted pilot's license.

There is a compromise approach that some (including me) have followed. If you plan on joining a club anyway, start out with their training scheme and see how well you progress. It's a good, cheap way to get started and make those first tentative steps skyward. When you hit an obstacle or slowdown, switch to the commercial approach and finish it up neatly.

Plan on spending between \$1,200 and \$2,000 getting your Private Pilot Glider license. — S. Thorpe



MICHIGAN SOARING CLUBS

Adrian Soaring Club
Lenawee County Airport,
Adrian; 517-265-3828
<http://acro.harvard.edu/ASC/ASC.html>

Alpena Soaring Club
Ossineke County,
517-727-2587

Kittyhawk Soaring Club
Rossettie Airport,
Manchester; 313-428-8455

Marshall Soaring Club
Brooks Field, Marshall;
616-781-3996

Northwest Soaring Club
Frankfort Airport,
Frankfort; 616-352-9160

Sandhill Soaring Club
Richmond Field, Gregory;
313-761-1132, 248-644-2448
misc@umich.edu

Vultures Soaring Club
Marlette Airport,
Marlette; 248-975-6016
<http://www.geocities.com/CapeCanaveral/6260/index.html>

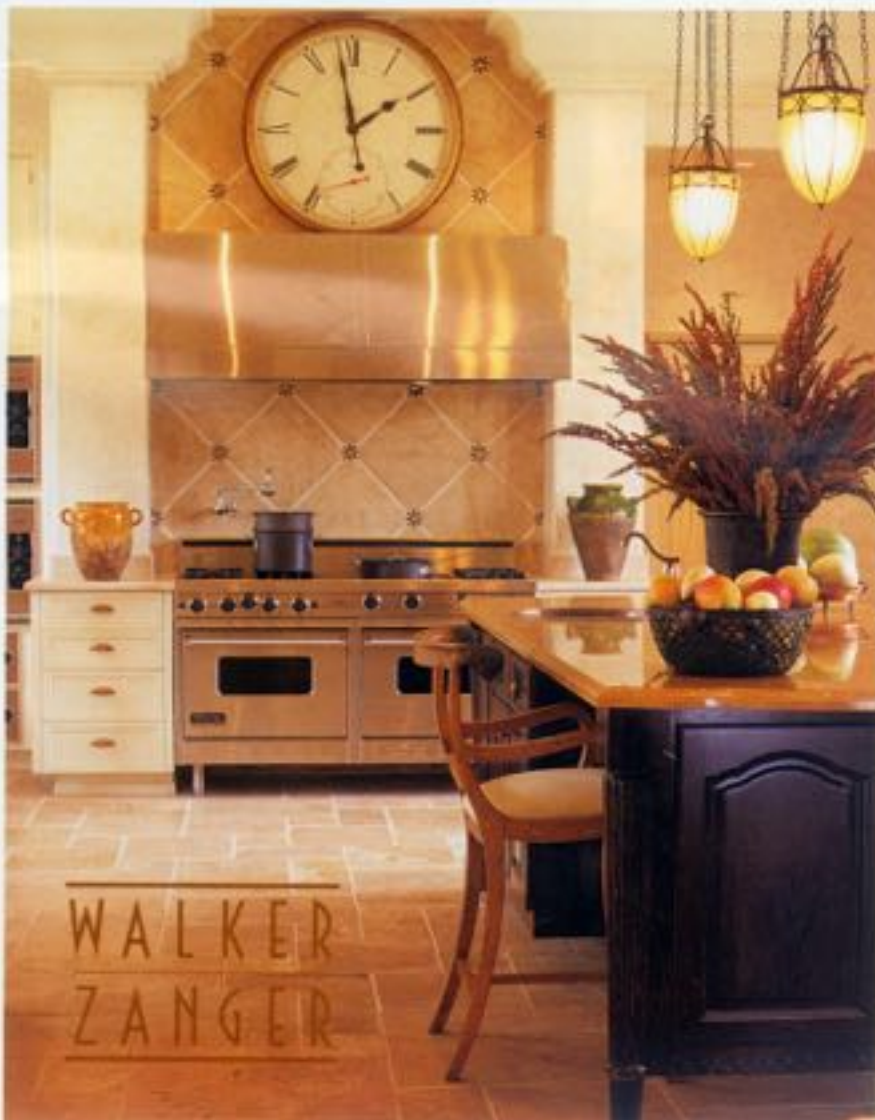
COMMERCIAL

Benz Aviation
Ionia County Airport,
Ionia; 616-527-9070

MORE INFO

The Soaring Society of America
P.O. Box 2100, Hobbs, NM
88241-2100; 505-392-1177
<http://www.ssa.org>

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