



An introduction  
to float flying

# A Sponge, Twin Canoes and Wings

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■ Hang around sailboats long enough and some summer night at anchor, at peace, during quiet talk in the cockpit, you'll hear the weekend sailor muse, "Boy, I'd love to chuck it all. Sell the house, the car—everything. Pack Sue and the kids aboard and just sail away."

There's a strikingly similar refrain among pilots. Saturday again, probably an overcast afternoon with the conferees gathered around a greasy table in an airport eatery. Speaks the Comanche driver, "Boy, I'd love to chuck it all. Get a 185 on floats and head north." His comrades nod their amens.

All sailboats today are escape machines, so talk of "just sailing away" is the natural end of function.

Airplanes are different. They can all provide ethereal escape, but as a practical matter they're all prisoners of airports. You just can't go where the airports aren't. Can't, that is, unless your airplane floats.

This old earth is lousy with water and if your airplane can land on the stuff, it can wander the world.

Pilots, natural born peripatetics, know this. Yet there are few (about 18,000) seaplane-rated pilots within the U.S. Further evidence of the impracticality of adventure, no doubt.

Still, if you hope to someday escape for days or for decades, learn to fly floats today. It's easy, it really is.

Possibly the greatest difficulty a licensed pilot will encounter in obtaining a seaplane rating is coordinating lodging, schooling, and transportation with good weather. There aren't many schools that offer seaplane training so you might have to travel some distance to win your water wings.

The few schools contacted by the PILOT agreed that a licensed pilot can be made ready for his sea rating flight test (no written is required) after 5-10 hours of flight training. The training is usually spread over two or three days so different wind and water conditions can be experienced. Figure spending from \$150 to \$300 for the instruction, aircraft rental and flight test.

Equipment familiarization is simple. After all, a floatplane is like any



other plane with the obvious exception that it has large aluminum logs where the wheels should be. Preflight is standard until you get down to inspecting those logs; that's when you reach for your sponge.

I think the true character of float flying is best reflected in the carriage of a sponge. Common sense tells you that, when working in a water environment, your machinery is apt to get wet. The lowly 97¢ sponge, unsophisticated as it may be, relieves the wetness admirably.

Common sense and simplicity prevail throughout this business of setting down on and taking off from water. There's nothing arcane or complex about it. The problems and perils of water flying become immediately obvious even to a non-flier. The solutions come almost as quickly.

Example: Condensation or seepage can cause water to accumulate within the floats' several bulkheads. Problem: water is heavy and, thus, this accumulation could reduce your useful load and impede takeoff. Peril: too much water will cause the aircraft to sink. Solution: inspect each bulkhead during preflight. If there's a lot of water, use a hand-operated bilge pump and check for leaks. If there's a little water, get out the sponge.

Example: There's a strong wind blowing, you're taxiing very quickly "on the step" downwind and must make a 180-degree turn into the wind. Problem: the strong wind, combined with centrifugal force and the aircraft's high speed can make the plane very unstable during the turn. Peril: the upwind float and wing could rise during the turn, burying the downwind float and dipping the downwind wingtip into the water. This could cause the airplane to flip onto its back and sink with you still inside. Solution: slow down.

Example: Your late afternoon departure means you'll arrive at your Lake Idyll destination after nightfall. Problem: it will be difficult, perhaps impossible, to spot the sandbars, water debris, boats, pilings, power lines and rocks that are contained in or surround Lake Idyll. In fact, it may be impossible to determine where the lake is or

to judge your height above it. Peril: unexpected contact with any of the above could kill you. Solution: do not attempt water landings at night. Leave your starting point earlier or wait until morning to depart so you'll arrive at Idyll in daylight. If you should get caught in the air when darkness falls, land on the grass infield of an airport. The floats can take it.

Says Jay J. Frey, an Edo spokesman and author of *How to Fly Floats*, "In float flying, 99% of the time it's a matter of common sense."

So, sponge in hand and sneakers (de rigueur) on, I padded down to the river where a J3, tethered and chained, sat half beached on the muddy bank.

Bob Gilfert, long time lord of Sunbury, Pa.'s lush island airport, performed the introductions.

"Ever fly a J3 before?"

"Well, a Super Cub."

"Okay, we won't have to go over that then."

So much for ground school. Then, "Now take these pliers and loosen the tops of the bulkheads on the floats. If you see any water in them use the sponge." I looked, the compartments—there were six in each float—were dry.

Next we cast off lines and swung the aircraft around until its nose pointed toward the stream. I climbed into the front seat and Gilfert stepped gingerly forward on the muddy slick starboard pontoon. A shot of prime, crack the throttle and switches on. Gilfert gripped a cabin brace with one hand and reached for the prop with the other. He pulled and the 85-hp Continental awakened.

As Gilfert scrambled into the rear seat, an important floatplane flaw evinced—there are no brakes. There was a water rudder, a paddle, even an anchor, but no brakes. Like a boat, a floatplane is always in motion if the sea or the wind so dictate.

Before the outset Gilfert had cautioned, "water is only soft for the first four inches. After that it's hard as dirt."

Now, he demonstrated. Full throttle and back on the stick. The unseen float tips raised well out of the water as the aircraft began to "plow." As speed increased, Gilfert relaxed back pressure and the craft sped along with most of the float area riding atop the water. We

were taxiing on the step, so called because the aircraft hydroplanes on the center, or "step," section of the floats.

A steady breeze had stirred the Susquehanna to a mild chop which the J3 traversed with the delicacy of a rivet gun. The aluminum floats literally pounded the wavelets and caused the aircraft and occupants to shudder. There are no bungees, no shock absorbers between the floats and the fuselage. Water is indeed hard and continued high-speed operation under such conditions is inadvisable.

Such a pounding can loosen the bracing wires that crisscross between the floats, and taut wires are all important for they keep the pontoons in place.

Upon reaching an indicated airspeed of 45 mph, the Cub lifted itself from the water. I'd heard the phrase "unstuck" used to describe a floatplane takeoff and it's really quite appropriate. Just as the aircraft leaves the water, there's a very discernible burst of speed, a lightness not unlike what a runner might experience after sprinting through mud and then coming upon hard, dry gravel.

Once airborne, you can forget you're dragging two canoes below your belly. The floats have no effect whatsoever upon the aircraft's flying characteristics; you can't even see them unless you peer straight down the side.

Actually, the gawky floatplane hardware alters the aircraft's performance and specifications very little.

A complete float attachment for a Cessna 185, for example, weighs about 425 lb., but it replaces land gear that weighs almost half that figure. So, the aircraft's useful load is reduced only 225 lb. The Cub's floats reduced its useful load by 150 lb.

Also, Frey said the big floats usually reduce cruise speed by about 12% but they decrease stall speed as well and tend to dampen in-flight porpoising.

Turns, slow flight, stalls are all pretty standard so there's little challenge to flying a floatplane. The skill comes to play once those two pontoons contact the water.

During the first day of flying, landings (or is it waterings?) were a peculiar experience, but not difficult. Gilfert trains his seaplane students on the north side of the island. Here the Sus-



quehanna is about 100 yards wide and there's a mile-long stretch free of any rocks, wires, shallows or pilings and where no boats ventured during my three visits there. An excellent runway.

After flying a normal pattern and watching for wheeled planes taking off from the island's lovely 3,400-foot grass strip, we reduced power to 1,500 rpm and held airspeed at 50 mph. This combination gave us a gentle enough rate of descent (about 150 fpm is best) to fly right onto the waves.

When the surface is ragged, as it was on the first day, perception of surface height is easy. When you near the surface under such conditions, come back on the stick a touch and add a little power just before touchdown. When you hit, cut the power completely and haul the stick all the way back.

It's a somewhat different story when the water's glassy smooth. That's when your eyes lie. They'll tell you you're about to touch when you're still 20 ft. high, or they'll say "Keep coming down," when you're milliseconds from a very big splash.

The key to successful glassy water landings is the 150-fpm descent and gauging height by watching the shoreline, boats, docks—almost anything other than the water itself.

A successful touchdown in glassy water is delightful, probably the most satisfying sensation in float flying. Initial contact is almost imperceptible but as more of the float settles in, speed is slowed considerably. Then the forward sections touch and the aircraft seems to halt completely. An instant later a large wave breaks out from the floats and the aircraft gently bobs in its own wake.

Rough-water landings lack that panache. They generate a lot of pounding and smacking and a general feeling of abuse. If the water is too rough, a landing should not be attempted. Find some sheltered water and put down there.

After the first outing, Gilfert relinquished teaching chores to his son-in-law, Bob Hayhurst, an Allegheny Airlines pilot.

Bob demonstrated, and I copied, slow taxiing maneuvers with the single water rudder in both the "down" and "up" positions. The small size of that little plate belies its effectiveness.



Bob Gilfert artfully demonstrates the proper technique for squeezing water from a sponge, all part of the floatplaner's regimen.

Floatplanes behave like stupendous weather vanes and that little rudder at least gives the pilot a fighting chance to turn the craft around in the wind. Without the rudder, a 180-degree turn away from even a moderate wind requires lots of power and lots of room. Lacking either, you might not be able to turn the aircraft around. If that should happen, no cause for alarm. Just pull back the throttle to idle and let the wind push you backwards to your destination.

Gilfert's dock had not been set up, so we had to satisfy ourselves with practicing docking maneuvers around a little buoy. This certainly saved the pontoon tips from further marring of their well-flattened points, but it also prevented me from learning firsthand that most nettlesome and practical of floatplane chores—putting into a dock gently, regardless of winds, and without smacking a wingtip or chewing the stern of a hapless Chris Craft.

Another novel course in the floatplane curriculum was Paddling (ineffective) & Anchoring (very effective). There was also a brief discourse on what to do when your worst fears are realized. The discourse was one word:

swim.

Bob lastly demonstrated various take-offs, basically designed for smooth-water departures. Floatplanes are sometimes reluctant to leave their watery field when the surface and winds are calm and the load is heavy, so you have to help. Either race around in a circle and lift off when you hit your own wake, or step taxi in a slip so one float's out of the water, thus reducing drag considerably.

It's all easy and fun.

During the takeoff and step taxiing practice we ignored the usual, time-consuming pattern flying that's required of landplane students. Our runway was the Susquehanna River and we could take off and land and take off and land without turning at all. Just follow the river. I suppose if we had wanted to, we could have done most of the training flying straight ahead. I would have had my rating by the time I reached Oneonta, N.Y.

As it was, we never strayed three miles from Sunbury, but after three days there I was FAA certified to wander. I got my water wings. Now, "heading north" on floats is a possibility, not a daydream. □