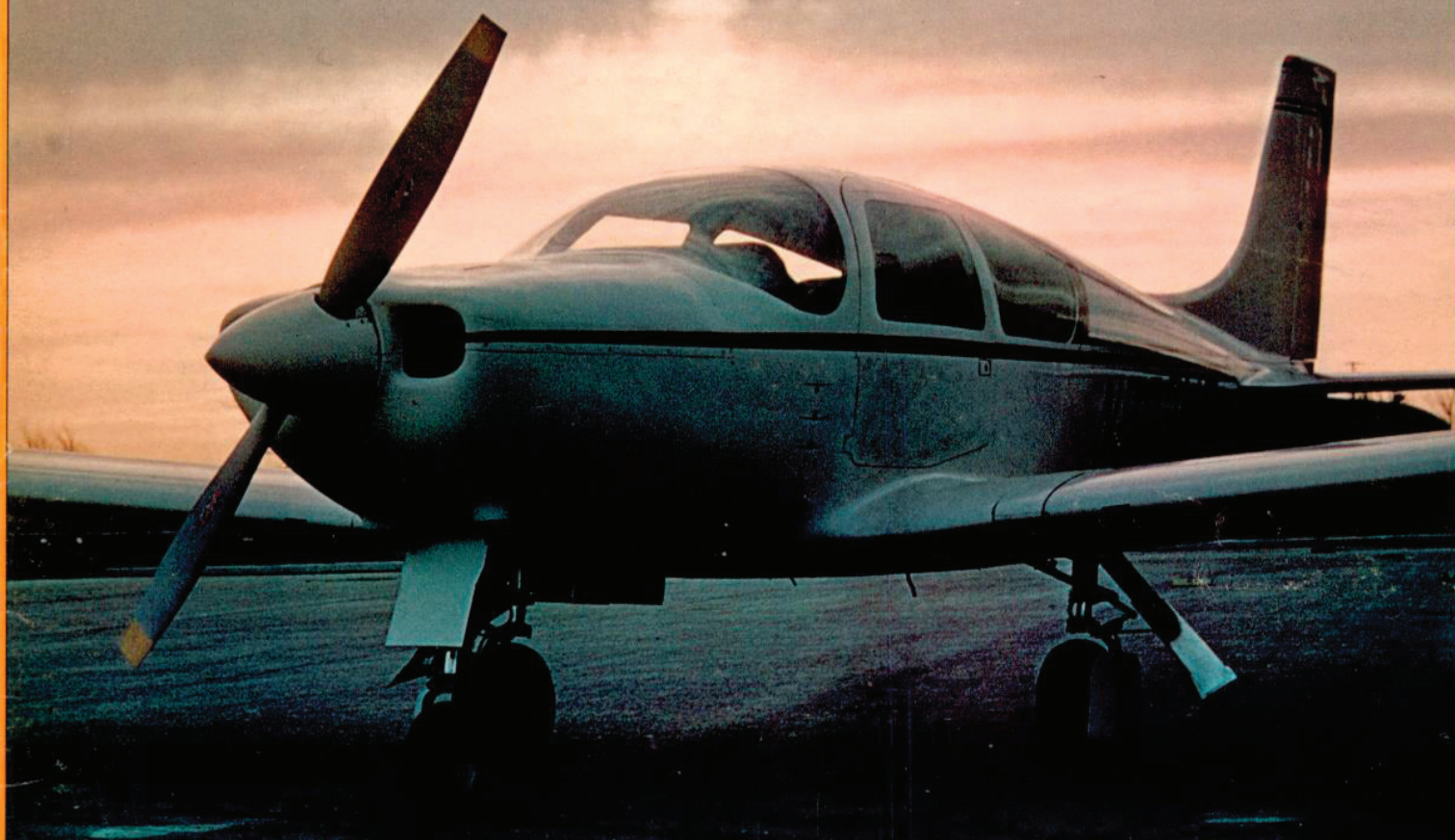


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pilot report:

Thurston Teal

A rarity among amphibians, it's a puller, and it's "cheap."

photos and text by Richard B. Weeghman

FROM THE SHIVERING SHORES of Maine it came, to show its stuff against winter winds that reduced an already modest cross-country speed to that of an earnest Canada Goose.

It was a signal event: the debut of a promising new amphibian at the end of a long shakedown migration to the promised land of waterfowl—Florida. What's more, this was no crudely fashioned prototype, but production model number two, completely certificated, radiant in tangerine and Coolwhip colors, with nary a scratch on its unbeached belly.

Yes, the Thurston Teal has arrived. At least it has survived the development stage, has crystallized into a form acceptable to the FAA and is now ready for sale—which is more than many another fanciful design can boast.

What's fanciful about amphibians? Little, perhaps, except that while every sporting pilot lusts to have one, rarely does anybody bother to build them. For the big manufacturers, leery of tackling

any but sure things, the amphibian has too many hang-ups. Somehow, it's always expensive to buy and operate, and after taking the shirt off your back, it usually rewards you with lackluster performance, in return.

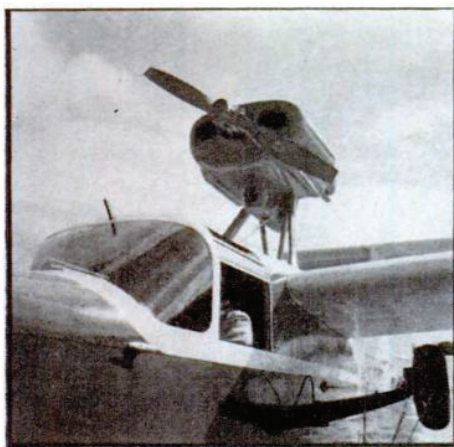
At this point, the plucky builder of an amphibian has no recourse but to single out and play up some one outstanding virtue, since when viewed all together the amphibian's list of recommendations is usually rather drab. Somehow, the nautical aspects generally come in for most attention, and the Teal is no exception. The builders don't claim dazzling speed or load-carrying ability or keen ground handling. They just call it a dandy little winged waterbug that can also tolerate runways.

The Thurston Aircraft Corporation of Sanford, Maine also is able to offer the craft as a bargain, since it is the cheapest amphibian still in production. That is, provided you regard \$17,150 as a bargain, and provided you recognize there is only



Thurston Teal

The newest of the waterbugs comes in tailwheel configuration, or as a seaplane, if you wish.



one other competitor—the Lake LA-4 at \$29,950 (and its sister ship, the Lake Buccaneer at \$32,950).

Nice thing about the Teal, though, is that it's free of pretensions. It seats two—no more—and will accept just 60 pounds of baggage. It's not, then, a half-baked four-placer, and doesn't pretend to carry vast loads of moose or muskellunge in a cavernous cabin that will over-gross in a wink. Furthermore, David Thurston, head of the company (and designer of the Colonial Skimmer, which evolved into the Lake), is the first to tell you not to hold your breath waiting for a four-place version. If they *did* come up with anything larger, says he, it would be a substantially bigger aircraft, maybe even a six-placer, perhaps powered by a turboprop.

So you'll have to be satisfied with the Teal—small, stubby and plank-sided though it may be. Feel free to equate angularity with economy, however, and this may be the guiding principle of the Teal. There is no nosewheel, since this would have introduced all the complexities of a retraction mechanism into the boat hull. Also, the main gear does not retract within streamlined fairings; it merely swivels back up out of the way for water operations.

There's not even a hydraulic gear-operating mechanism. The pilot heaves a lever between the seats, and this works a pneumatic cylinder that lowers and raises both the main gear and the tailwheel. Yes, the Teal is a tail-dragger. There's nothing wrong with that, provided you keep alert during takeoff and landing. As you sit in the cockpit gaug-

ing the three-point attitude, you'll notice the Teal's rather shallow pitch position. The designers didn't want to make the main gear longer than necessary; the result is that it's a bit shorter than ideal for full-stall landings. Citabria pilots will recognize the probable effect of this characteristic: occasional tailwheel-first landings, with the main gear plunking down a fraction of a second later.

The Citabria-like heel-brake system on the prototype Teal (September 1968 FLYING), has, however, been abandoned in favor of toe brakes, and the tail wheel steers with the rudder pedals, simplifying ground handling somewhat. Probably the oddest characteristic of the Teal's landing gear is that you may as well leave it down in cruise flight, since the airplane is slightly faster that way. This is because the main gear strut presents a thin edge to the wind in the down position, but splays out its broad side in the breeze when rotated to the up position. This produces a smidgen more drag and cuts a few miles per hour.

In water operations, the Teal pilot is presented with another consideration, since the tailwheel and its accompanying water rudder are coupled with the main gear. So, when he wishes to lower the water rudder for low-speed water taxi, he must drop the main gear as well. This may offer the beneficial side effect of providing a couple of underwater anti-reef bumpers, but it might provide interesting moments over shallow, marshy lake bottoms or in docking maneuvers.

Once nosed into a dock or beach, the pilot and passengers are confronted

by another problem: how to dismount. The procedure, which demands some agility and nonskid shoes, requires you to step from the seat over the windshield onto a glossy nose deck, then vault to shore. Remounting promises more adventure.

Off and skimming over the waves, however, the Teal appears to be in its element. The impression from the cockpit is one of sitting inside an oversized pontoon with wings and a canopy. The seats are mounted close to the floor—your legs are almost straight out—and the little craft rides low enough in the water to give you the sensation of aquaplaning on your B.V.D.s. Great fun. The canopy is an unobstructed, broad plank of Plexiglas. This, coupled with a stub nose, makes for marvelous visibility, aside from the usual unavoidable froth of spray on the windshield from a choppy sea.

Once airborne—and it lifts off in a respectable 650 feet, according to company figures—you have something that approaches the Citabria (again) in flying qualities. Lateral stick forces (there is no control wheel) are rather heavy, especially for so small an airplane, and despite the use of little adverse yaw diminishers on the outer edges of the ailerons, this bird takes a lot of rudder to coordinate turns.

The aircraft behaves nicely in a power-on stall situation such as you might encounter trying to climb out too abruptly. The worst it does is rumble and wallow and mush, even with the stick full back, thanks to limited elevator travel.

From a glide, the aircraft stalls at a

pleasant 54 mph with negligible aerodynamic warning—no buffet, just the insistent horn caterwauling in your ear. However, it does nothing menacing or startling in the break.

According to Thurston, an outsized chunk of tail added to the leading edge of the dorsal fin has eliminated the squirreliness sometimes associated with high-mounted engines having prop discs that tend to blank the flow of air over the tail in a gliding approach to a landing.

Skiping from one pond to another, the Teal seems best suited for short hops, since the airspeed generated by the 150-hp Lycoming will not top 105 mph or so at a 75-percent power cruise. The bird is a comfortable one to fly, though, with plenty of room inside, a rather muted sound level and delightful side windows that you can slide up in flight (10 inches worth, at any rate).

The aircraft shares other little oddities of amphibians, like overhead engine controls and the necessity of adding an optional gas heater in the nose if you intend to fly in the winter.

The Teal, then, has a kind of teddy-bear charm, even down to the soft leather on its padded black panda nose. It has no illusions of grandeur; it merely seeks to fill all those trout ponds in the dreams of pilots everywhere.

At \$17,150, it does indeed fill a big void below \$30,000, where up till now nothing of its genre existed. As fate would have it, this places it knee-deep in Musketeers, Cherokees, Skyhawks and Larks—all of which outperform it unmercifully.

Except on water. ✚



Thurston Teal TSC-1A

Manufacturer's specifications

Engine	150-hp Lycoming O-320-A313
Propeller	Hartzell constant-speed
Wing span	32 ft.
Length	23 ft. 7 in.
Height	8 ft. 11 in.
Wing area	157 sq.ft.
Wing loading	12.1 lb./sq.ft.
Seats	2
Empty weight	1,300 lbs.
Useful load	600 lbs.
Gross weight	1,900 lbs.
Baggage capacity	60 lbs.

Performance

Takeoff distance land	400 ft.
Takeoff distance water	650 ft.
Rate of climb	800 fpm
Maximum speed	125 mph
Cruise speed (75% power)	108 mph
Range (at max cruise)	295 sm
Stall speed (clean)	54 mph

Basic price: \$17,150

Landing distance land	350 ft.
Landing distance water	450 ft.

Flight characteristics

Control response (cruise)	Heavy
Hands-off stability	Okay
Stall recovery	Okay
Runway handling	Tailwheel

Pilot utility

Visibility	Great
Seat adjustment & comfort	Good
Accessibility of switches, etc.	Overhead

Cabin comfort

Entry-exit ease	Tricky
Ventilation (in flight)	Good
Ventilation (during taxi)	Good
Noise level	Not bad

Quality

Interior finish	Good
Exterior finish	Good