Flying the Mooney is no more complicated than flying any of the other 180-hp airplanes, except that the pilot must remember to put the gear back down before landing. The cowl flaps are fixed open, so the pilot need not worry about that, and the flaps and gear are electrically operated, so there are only lever switches to use for them. Throttle, propeller and mixture controls are just like those on any other aircraft so-equipped and are easy to learn.

The reliable Lycoming 180 makes the Ranger a snap to fly; just give it full throttle and maximum pitch for takeoff and initial climb, then throttle back to 25 inches and 2500 rpm for a cruise climb. Some Mooney fliers prefer to leave it at 2700 rpm and max manifold pressure all the way to cruise altitude for the faster climb rate, and this doesn't seem to affect the Lycoming one way or the other, as it's rated for maximum continuous operation at 2700 rpm. Some pilots use 2700 rpm for cruise; others use 2500 or 2400; any of them will produce 165 mph or more cruise speeds, at 10 gallons per hour on down to 9 gph fuel consumption. Noise is a factor; the Ranger isn't the quietest airplane inside, though front-seat conversations can be carried on at something near normal levels at 2400 rpm cruise speed.

The Mooney is very sensitive to pitch trim, and the new Ranger pilot will find that it keeps accelerating without losing altitude as he rolls in nose-down trim. The accepted procedure for setting up the cruise attitude is to stop climbing at 100-200 feet above the desired altitude, then point the nose down and let the airplane accelerate until its airspeed is just a bit higher than would be normal for cruise. All the while, the pilot should have been rolling in nose-down trim (the trim wheel is on the floor between the seats) until he levels off at the proper altitude and speed. Most of the time it will stay there, but if a gust bumps the plane, it can start a very shallow pitch-up, pitch-down oscillation that needs to be damped out by the pilot. After awhile, a Mooney pilot learns to fly with the steering yoke gripped loosely between thumb and forefinger to apply little corrections as they are needed.

With the Positive Control system, the Mooney Ranger becomes extremely roll-stable. PC, of course, is a wing-leveler, pneumatically operated. While it doesn't have a heading hold, it will keep a Mooney pointed in pretty much the direction selected and is a great help for the instrument pilot. Mooney offers the option of a Pathfinder electrically operated wing leveler and autopilot add-on, and this is probably the best system of all. Its course tracking is dead-accurate and it can be completely switched off if the pilot wants to hand-fly the airplane. It's also easy to override when a pilot wants to make an emergency maneuver like evading a mid-air with a flock of gulls.

Landing a Mooney is little different than any other good performing aircraft. Flaps are moderately effective in reducing stall speed, so half flaps are selected on the downwind (flap speed is a low 100 mph, however) to help hold the aircraft at 85-90 mph. Base should be flown at 80 mph and final at 75 with full flaps out. Crossing the fence at 70 gives plenty of safety, yet lets the Mooney flare out nicely and touch down on its mains. Using lots of trim in the process of letdown makes it all an anticlimactic arrival. The Mooney has adequately powerful brakes so it's easy enough to get a Ranger down and off a 1500-foot runway before its end. However, it takes speed control and that's a pilot function. The Mooney is clean and bleeds off speed slowly, so speed control is a key factor in making good landings.

The only real problem with a Mooney Ranger is finding one for sale. Since the introduction of its new model 201, the factory has concentrated on selling this hot-selling speedster (196 mph cruise on 200 hp) and hasn't had much demand for the more sedate 180-hp Ranger. Last October, for example, the factory built 20 model 201s and only one Ranger. Don Cox, Mooney marketing vice president, says the Ranger definitely will remain available. There may be a few unsold '76 year-models at some of the dealerships, and if so, they're available at good prices.

The Ranger holds its value well over the years, as owners tend to buy and keep them a long time. Then, too, there just aren't so many around that one can be found on every airport sales lot. A good, well-equipped Mooney is just about one of the nicest flying machines a person could own. — *Dennis Shattuck*

COMPARING 180s

Tiger Shows Responsiveness, Speed and Range Among its Best-Rated Sales Features

FEW AIRPLANES have been so aptly named . . . at least on the civilian side of aviation. Grumman American's sporty little Tiger lives up to its name in everything but feline perversity. The Tiger is predictable and precise in its handling while delivering sparkling performance to its pilot.

The Tiger it will be remembered was the outgrowth of American Aviation's four-place Traveler, a four-seater version of its two-seat Trainer and Tr-2. Where the Traveler was a stretching modification using as many existing components as possible, the Tiger was more of a total redesign. And, where the Traveler had a 150-hp Lycoming, the Tiger had 180 hp from a slightly larger Lyc.

Somewhere along the way the rough corners of the Traveler were sanded off and the Tiger emerged as a swift, nimble, delightful creature shaped like an airplane. Where the Traveler was a bit of a sled in the performance department, the Tiger takes a back seat to none. Of the 180-hp planes reviewed here, only the Mooney retractable, which costs 20% more, is faster or has a longer range. But then the Tiger beats it, and the others, on load carrying ability.

The Tiger's secrets of performance — literally retractable speed with its gear hanging out — lie in its smooth bonded construction wing and fuselage. Few rivet or bolt heads mar its Imron-slick finish to create dragging miniature swirls of turbulent air. A light power loading, 13.3 pounds per horsepower, and a heavy wing loading, 17.14 pounds per square foot help, too.

Though a rather conventional airplane in configuration, the Tiger utilizes sandwich panels in its construction and extensive bonding for assembly. Its landing gear is made up of laminated fiberglass blanks that flex to absorb the shocks but do not rebound viciously like spring steel. The most unconventional part of the Tiger's appearance is its one-piece canopy which slides back on tracks to allow entrance and exit, but which slips closed and locked with an easy one-handed touch. The total effect is one of lightness and tightness, a secret revealed by comparing empty weights of the six aircraft reviewed.

Grumman American dealer Joe Geiger of Performance Aircraft, Long Beach and Hayward, California, offered the loan of a Tiger to reacquaint ourselves with the airplane's many virtues. Performance sells Tigers by the dozens to West Coast pilots, finding their particular blend of good performance, crisp handling and long range an ideal match for the aviation needs of western fliers. Geiger also sells Mooneys and Maules, so he covers well the spectrum of single engine performance planes.

Reacquainting oneself with a Tiger is a delightful chore; it's like meeting an old friend with whom you've had many pleasant hours of travel and fun. Its remembering, too, that the Tiger doesn't have nosewheel steering, and that it is light and quickly responsive on the controls.

The lack of nosewheel steering really isn't a problem. A few trips up and down a taxiway familiarizes one with the need to use a touch of toe-braking in the direction one wants to turn at low speed, and a little rudder in that direction at moderate to high speed. Mostly, the Tiger tracks a true line without steering unless a croswind blows it offcourse or there's a severe crown on the taxiway. The nosewheel is fully castering, but the center of pressure is well behind the hinge line and this lets the wheel trail in a straight line. On takeoff and landing rolls the pilot needs only to use the rudder to keep the Tiger on the centerline.

Photos: Dennis Shattuck

Main gear is made of fiberglass laminations; nosegear strut is spring steel tubing. Nosewheel casters for toe-brake steering.

Opened canopy allows large space for boarding or debarking passengers. Tiger can be flown with canopy partially open.

Performance Aircraft president Joe Geiger demonstrates step-out technique for departing pilot. Seat cushion flips up to provide handy step up.

In parking, the Tiger pilot gets to use the taildraggers' favorite trick — stomp on one brake, give it a little blast of propwash and pivot the plane around in its own length. Lack of a steering mechanism saves a few pounds that the Tiger turns into extra performance.

Same thing with the lack of doors. The sliding canopy

mechanism is much lighter than two doors and allows easier access to the rear seats. It slips back far enough that a back-seat passenger can stand straight up and step easily out of the airplane. Getting out of the back seat on some conventional door airplanes can require a yoga-like crouch and duck-waddle out to the wing walk. Besides, the Tiger can be flown with the canopy pushed back part way if the pilot likes that old wind-in-the-hair feeling (be sure to anchor down all charts and papers before you open it in flight however).

The baggage portion of the passenger cabin is readily accessible in flight and, in fact, the rear seats can be folded forward and down to turn the entire expanse from pilot seats aft into a station wagon type of flat deck. It would be a handy place to carry skis, fishing poles or other long sports paraphernalia. There's an outside door for the baggage area, too, for those unwilling to hoist luggage over the top of the back seats. Up to 120 pounds can be carried in the baggage area; more if the folded-flat rear seat area is used for cargo.

The preflight inspection for the Tiger is about as simple as one would expect for a Cessna 150. Basically, the pilot checks fuel, oil and to see if its all hanging together. Inside, the only thing different is a fuel boost pump, which should be on for starting and takeoff. With pump on and one rapid stroke on the throttle the engine fires right off, even hot. When it's really cold, the pilot might want to use the primer, but most of the time the engine will start after a few pumps on the throttle (which has an acceleration pump that sprays extra fuel into the carburetor throat, just like on the family car). After checking the oil and fuel pressure and temperature and magnetos, everything is set for the takeoff.

Opening the throttle smoothly and briskly causes the Tiger to leap down the runway like its namesake. A bit of back pressure on the yoke will get the nosewheel off the ground at about 45 mph, and the Tiger will fly off nicely at about 65; trimmed to 80-90 mph in full-throttle climb, it zings upward at a nice rate. With two people on board, the test Tiger recorded 1000 fpm consistently, well over the factory's quoted figure of 850 fpm for a full gross load. But then, Tiger pilots learn to look at the factory "book" as a base rather than an optimum; Tigers and other Grumman American Aircraft quite frequently exceed their quoted performance figures.

A sea level run at full throttle demonstrated quickly that this particular one would also match or exceed its quoted 170 mph top speed. A less frantic run at 3000 feet and 2500 rpm pulled out a nice 160 mph cruise — just what the book said it should be, only at a lower than optimum altitude. No doubt at around 7500 feet it would have been another 2-3 mph faster.

A Tiger flown nearly a year earlier had demonstrated this; where the factory said it should do 160 mph on 75% power at optimum altitude of 6500 feet, this one was doing 158 on 60% power at 9500 feet. With a Tiger, one obviously gets the performance he paid for.

Grumman American Tiger has a shimmering finish in Imron polyurethane paint. Big decal tiger provides instant identification.

While some of the Grumman Americans have been criticized for their landing characteristics, the Tiger really can't be faulted unless the inattentive pilot lets the airspeed build up on final. Properly flown in a normal pattern, a Tiger can be landed on the same spot every time around. The Tiger has electrically operated flaps that drop the stall speed from 65 to 61 mph. While they are effective to a point, they don't provide a Cessna-like float-it-down landing approach. If the pilot drops half flaps on downwind, to maintain about 80 mph, then drops full flaps on final to hold 70-72 mph, he'll find a nicely controllable rate of sink that will let him get the Tiger right onto the numbers. A few engine revs, plus or minus, maintains whatever glide angle he chooses.

Even in the slower speeds of approach, the Tiger shows deft aileron control. Roll response is rapid but not twitchy, unless the previous plane flown was one of those fat-winged, straight-ahead trainers. A dab of aileron here and there keeps the Tiger straight and level through the roughest of ground chop. At cruise speed, this roll control is equally impressive to the point where the pilot starts thinking to himself, "I bet it'd do nifty rolls." We have it on good authority the Tiger rolls as swiftly and neatly as any aerobatic airplane, though it is not certificated for such maneuvers.

The Tiger has perhaps the nicest control balance of any lightplane built today. No one axis of motion/response is stronger than any other. Ailerons, elevators, rudder all respond to about the same degree to the same amount of input effort. The rudder is effective at low speeds on takeoff and landing, but in cruise condition is hardly needed. The elevators respond quickly for attitude changes and, while it is easy to overpower the airplane into a balloon during the landing flare, it is just as easy to fly it smoothly with a gentle touch. With a little help from the trim wheel, the elevators become quickly mastered on the landing approach and the flare becomes more of a thought than a conscious action.

The single radio equipped Tiger lists for $27,915 this year (up $3000 over the original, 1975 price) which puts it in close competition with other 180-hp planes from a cost standpoint. According to *Aircraft Price Digest*, a Tiger buyer could expect up to 34% depreciation in the first two years (based upon resales of 1975 Tigers), which may or may not truly reflect the going price of a clean, used Tiger. There's some buyer apprehension about honeycomb panels and bonded construction, but six years of practical experience with the Trainer version have not revealed any significant weakness in the system. In the long run, the Tiger should depreciate less than its peers once the general aviation public finds out about its outstanding performance and good maintenance record. — *Dennis Shattuck*

COMPARING 180s

Piper Archer II Gets High Marks for Cabin Comfort, Good Performance Balance

WHEN PIPER'S LONG awaited 180-hp Warrior, the Archer II, was introduced last year, the aviation community sighed with relief. Ever since the bent-wing Warrior's debut, folks had been awaiting for the obvious next move, stuffing the 180-hp O-360 under the Warrior's bonnet. So it was with a sense of hearing the other shoe drop, that we aviation writers scurried aboard the Archer II to make our evaluations when it was unveiled.

The Archer II faces some tough competition in the 180-hp market. Over at brand C, they have the Cardinal, and now the Hawk XP. Beech is still turning out the very comfortable Sundowner. Mooney will build a Ranger retractable on order, though it's harder to come by these days. And at Grumman, they have the super-slick Tiger.

So, to survive and prosper in this market, the Archer II has to have some real appeal for the potential customer. Appeal it has, since the model now is back-ordered for months. What does the Archer do that is so great? The answer is nothing and everything. Actually, the Archer combines desirable qualities like those of the other types in a nice comfortable mix that is thoroughly familiar to Piper flyers. It really has no single outstanding characteristic, but a combination of traits that make it a winner.

First of all, the Archer was designed as the archetypal family airplane. It is large enough to accommodate four adults nicely; it will carry lots of baggage and full fuel, and travel long distances at good speeds. It is essentially economical to operate, requires only normal maintenance and has a list of luxury options (including air conditioning) second to none.

Secondly, it is the logical follow-on from the Cruiser and/or Warrior in which the Piper Flite Center student gained his license. The cockpit is the same, the controls are the same, and the seating is the same — the only difference is that the Archer is more sprightly with 30 additional horsepower, and it handles a bunch better than the Cruiser because of the new wing.

The Archer is the second model to appear out of Vero Beach with the bent wing. The Warrior came first. The Archer wing was made stronger than the Warrior's with the addition of a heavier spar, and an additional rib in the leading edge. It also featured hinged ailerons in place of the Warrior's aerodynamically-balanced aileron. But all those differences are a thing of the past. The Warrior has been upgraded and both planes are identical now except for the powerplant, and cowling details.

The numbers have been improved a bit as well. The '77 model's useful is now 1160 pounds, up 100 pounds from the 1975 Archer; 1160 pounds means that you have 860 pounds to play with after fuel (50 gallons). Figure about 100 pounds for avionics and goodies, and that leaves you some 860 pounds for folks and baggage — and you. Four FAA 170-pound people will leave you about 80 pounds for luggage, which won't even begin to strain the baggage compartment's capacity — it's 200 pounds.

Piper Archer has long history in the field, but continues to be improved. Performance is good and load-carrying excellent.

Cruise is up by 3 mph to 144 mph at 75%, and the 65% range has improved by almost 100 miles to 846 miles with no reserves, or at 55% you can fly 905 miles.

Recently at Vero Beach, Florida, home of the Cherokees, I renewed my acquaintanceship with the newest Archer. The first thing you notice on seeing the Archer II on the ramp, is the span. This new wing is 35 feet, tip-to-tip, and you know that's a lot of wing — three feet more to be exact. The wing is tapered both in this leading and trailing edges — from just outboard of the fuel cell to the tips. The outer one-third of the leading edge features a slight cuff for low speed control. The new tail, the same as on the Warrior, is wider and more massive looking than last year's. Otherwise, everything else remains just about the same.

Mounting up, I found getting aboard hasn't improved one whit. You still squat on the wing and dive into the far corner of the cockpit. Once in, untangle yourself and get reasonably settled in the left seat. I guess this situation will never be rectified unless Piper either adapts a left door, or a sliding canopy; neither development is imminent.

Taxiing with the new Piper direct steering is very low in effort, which makes it very easy to steer accurately. Keep an eye open for the wingtips — they're a long way out there.

The books says the best rate of climb is 88 mph, which yields 740 feet per minute, but 95 mph will give you better visibility over the nose and still provide an impressive 500 fpm.

Leveled out in cruise configuration at 2450 rpm (75% power) the Archer will continue to accelerate for some time. At 5000 feet I was able to nail 143 mph with ease, and a full speed turned up 145-146 mph on the clock — close enough to the published figures of 144 mph (75%) and 147 mph (top speed).

Handling is the Archer's main claim to fame. The controls are well harmonized, with a good positive feet at all speeds. The feedback from the controls lets you know what's happening all the time, and as speed increases or slows, the controls get a bit heavier or lighter in response. The Archer II is a good flying airplane, a pilot's delight.

I tried out a few commercial maneuvers for fun, and the Archer was well mannered throughout. Chandelles were undramatic, as the II just took them in stride. Lazy eights and "energetic eights" were equally fun, but the wing-overs that made the Archer shine. No uncertainty, no aileron grab — just a fine smooth maneuver. Stalls are just a mild bobble at about 60 mph — easily handled and very predictable.

Heading back to Vero Beach for landing, I encountered one of the local thunderstorms with associated turbulence. The Archer rode the bumps well, and as I circled for several minutes — waiting for the storm to move off the airport, I had no problems with keeping the plane in hand.

Downwind can be flown at 100 mph and as you make your power reduction, pull on the first notch (15°) of flap with the manual handle. Base should be flown at 90, and the second notch (30°) of flap can be lowered. Final at 75 to 80 mph is just about right, and with this new wing the final notch (40°) of flap can put down with impunity.

The Archer II pays off gently in the flare, like the Cessna 172; a far cry from the old Cherokees that flew 'til they quit. The new wing will mean much to old Cherokee fans who are all too familiar with the now-or-never routine the older Indians pulled on us. The cuff keeps the stall at bay, while the Archer settles down on the wheels. All very nice and ladylike; you'll love it.

So take a demo ride in the Archer II when one comes to town. It will reward you with good looks, a comfortable interior and super-nice flying characteristics. If you're looking for a roomy, fast, four-place family plane — the Archer II has a lot going for it. Not the least of which is that it is a Piper — and these days that means a lot. — *Bill Rice*

Comparative Performance: 180-hp Airplanes

	Beech C-23 Sundowner	Cessna 177B Cardinal	Cessna Hawk XP	Grumman American AA5B Tiger	Mooney M20C Ranger	Piper 181 Archer II
Prices:						
New, base, FOB factory	$28,300	$32,600	$29,950	$27,915	$32,680	$25,610
External Dimensions:						
Wingspan, ft.	32.75	35.5	35.8	31.5	35.0	35.0
Wing area, sq. ft.	146	174	174	140	167	170
Length overall, ft.	25.75	27.25	27.17	22.0	23.17	23.8
Height overall, ft.	8.25	8.79	8.58	8.0	8.33	7.3
Wheel track, ft.	11.8	8.29	8.29	8.25	9.06	10.3
Wheelbase, ft.	6.3	n.a.	n.a.	5.33	n.a.	6.7
Weights and Loadings:						
Gross weight, standard, lb.	2450	2500	2550	2400	2575	2550
Empty weight, standard, lb.	1477	1533	1549	1294	1525	1416
Useful load, lb.	978	967	1001	1106	1050	1134
Payload, full std. fuel, lb.	636	667	689	790	726	834
Payload, full opt. fuel, lb.	—	601	—	—	—	—
Fuel capacity, std., gal.	57	50	52	52.6	52	50
Fuel capacity, opt., gal.	—	61	—	—	—	—
Baggage area capacity, lb.	270	120	120	120	120	200
Seats	4	4	4	4	4	4
Wing loading, lb./sq. ft.	16.78	14.4	14.7	17.14	15.4	15.0
Power loading, lb./hp	13.61	13.9	13.1	13.33	14.3	14.26
Power Units:						
Engine manufacturer	Lycoming	Lycoming	Continental	Lycoming	Lycoming	Lycoming
Model	O-360-A4K	O-360-A1F6D	IO-360-K	O-360-A4K	O-360-A1D	O-360-A3A
Output, hp at rpm	180 at 2700	180 at 2700	195 at 2600	180 at 2700	180 at 2700	180 at 2700
Carburetion	carb.	carb.	fuel inj.	carb.	carb.	carb.
Recommended TBO, hours	2000	2000	1500	2000	2000	2000
Propellers:						
Manufacturer	Hartzell	McCauley	McCauley	McCauley	Hartzell	Hartzell
Type	fixed	const. spd.	const. spd.	fixed	const. spd.	fixed
Diameter, inches	76	76	76	73	74	74
Performance:						
Maximum speed, s.l., mph	138	160	154	170	176	147
Cruise speed, 75% power, mph	134	150	151	160	172	144
Fuel consumption, gph	10.9	9.5	11.0	10.9	9.4	10.5
Fuel mileage, mpg	12.29	15.78	13.72	14.75	18.3	13.71
Range, no reserve, s.m.	528	615	558	752	822	644
Range, opt. fuel, s.m.	—	776	—	—	—	—
Economy cruise, 55% power, mph	99	111	116	138	140	125
Fuel consumption, gph	8.6	8.6	8.3	8.6	7.8	7.8
Fuel mileage, mpg	11.51	12.91	13.98	16.05	17.95	16.03
Range, no reserve, s.m.	616	707	684	755	930	630
Range, opt. fuel, s.m.	—	897	—	—	—	—
Stall, clean, mph	63	63	61	65	67	64
Stall, full flaps and gear, mph	59	53	53	61	57	56
1.3 Vso approach speed, mph	78	69	69	84	74	73
Rate of climb, S.L. gross, fpm	792	840	870	850	860	740
Service ceiling, ft.	12,600	14,600	17,000	13,800	19,500	13,650
Take off ground roll, ft.	1130	750	850	865	815	870
Over 50-ft. obstacle, ft.	1955	1400	1360	1550	1395	1625
Landing ground roll, ft.	703	600	620	410	595	925
Over 50-ft. obstacle, ft.	1484	1220	1270	1120	1550	1390
Depreciation Factors:						
% depreciation, 2 years	34.94	31.01	26.62*	34.30	33.25	31.96
% depreciation, 5 years	45.46	38.86	38.59	n.a.	34.66	31.71
% depreciation, 10 years	48.47	50.79**	45.18	n.a.	37.81	35.00

*Hawk XP data based upon Cessna Skyhawk performance. **Cardinal was introduced in 1968.

Island-Hopping in Tahiti

by J.R. WILLIAMS

GENERAL AVIATION is alive and well in the Society Islands. This small group of islands known to most people by the name of the largest, Tahiti, lies at 17½° south of the Equator. Some 2700 miles southeast of Hawaii, it is only 8½ hours from Los Angeles via jet liner service by Pan American or UTA.

I visit there each year and on my last two visits I looked into the aspects of general aviation for PRIVATE PILOT. I found it to be on a scale with the islands themselves, small, but active.

To understand the size of the Societies, we can compare them with our widely known Hawaiian Islands. A look at an aeronautical chart of both the Society and Hawaiian groups would show them to be similar in make-up, although the islands in the South Pacific are much smaller. So is the population. Whereas the Hawaiian Islands have a population of 850,000, the Societies have about 100,000. In Hawaii, 750,000 live on the island of Oahu; in the south, about 75,000 are on Tahiti. So, when compared with Hawaii, the number of general aviation aircraft in Tahiti are proportionate to the population.

The cost for the flying French citizen is slightly higher than for an American in the United States, though the licensing requirements are similar. The main reason that costs for flying are only slightly higher, where everything else is almost double American figures, is because the French government subsidizes the flying clubs. That is why 10 of the 12 non-commercial general aviation aircraft in the Societies are owned between the two flying clubs.

It is quite possible, though a little expensive, for an American pilot vacationing in Tahiti to spend a few hours flying around these beautiful islands. No matter what rating he holds in the United States, the highest he can receive in Tahiti is a Private. This is because almost all commercial endeavors in French Polynesia are reserved primarily for French citizens.

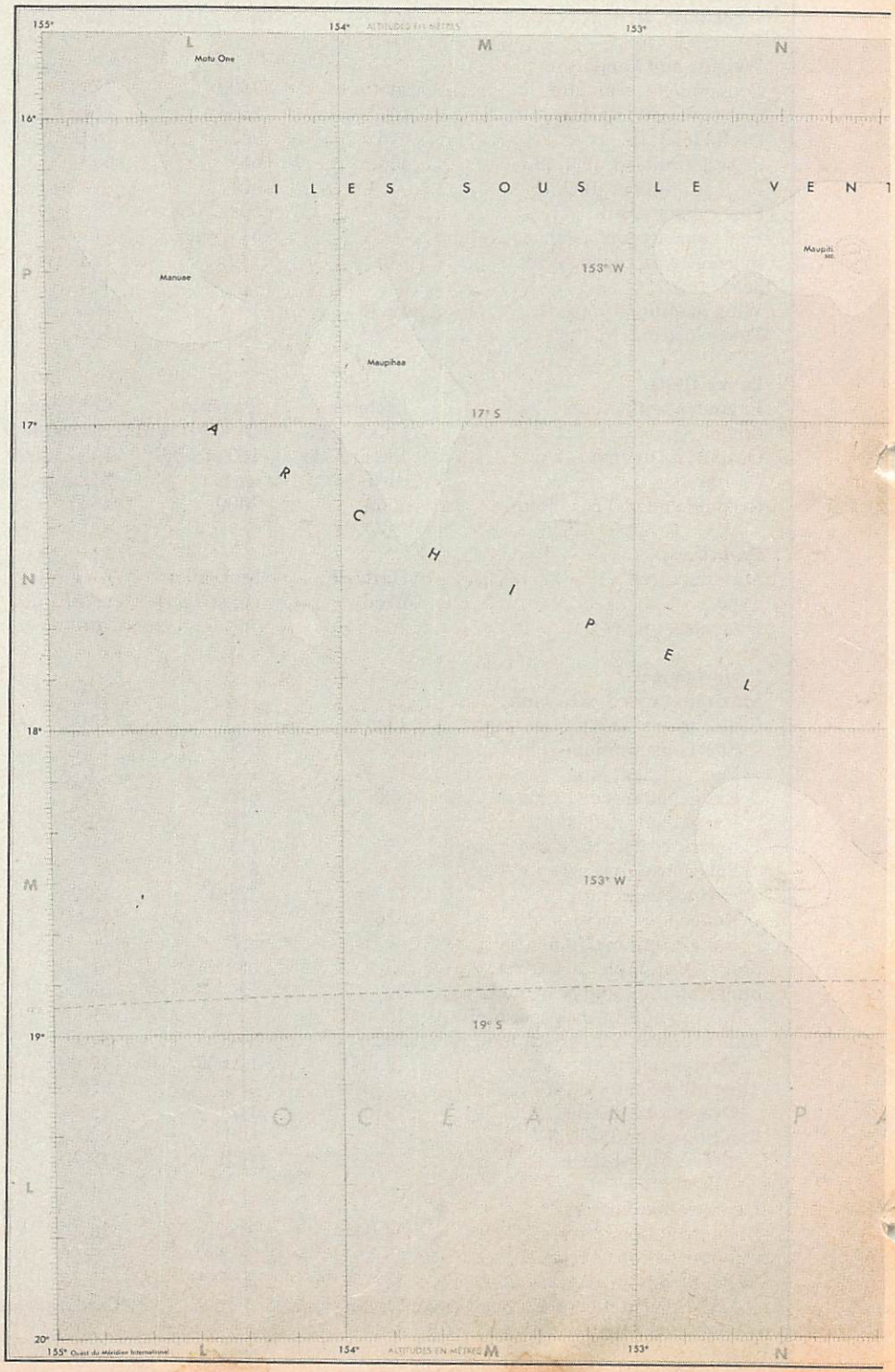
The only light aircraft available for rent in Tahiti are at the two flying clubs, so membership is required. This is possible on a monthly basis, at 500 francs (about $7.50 U.S.) per month.

It is a simple matter to pick up your license. You merely take your American certificate to the airport at Faaa, use a rental car, take a cab for about $5.00 U.S., or ride one of the frequent, colorful trucks for only $.75 U.S.

At the airport you go to the office of civil aviation, and ask for Mr. Rivier, or his superior, Mr. Clement. Both are quite pleasant and speak fluent English.

Upon the presentation of a valid American pilot certificate and medical, you will receive a letter of authorization to fly in French Polynesia that is valid for a period of 15 days. Once you have this letter, you must register for membership at one of the two nearby flying clubs where you receive a checkout from the chief pilot. You pay only for the aircraft cost, the chief pilots' time is gratis.

Flying in the Societies is a new experience in color. The winds are usually light trades, and the colors of the lagoons are impossible to describe. The water is so clear that you can see 50 feet down with clarity. The surf pounding against the outer reef that surrounds the islands looks like a necklace of pearls. Outside the reef the water is deep blue capped with white wavelets. The mountains are



French aerial chart shows only a few landing places in the Society Islands (all altitudes are in meters).