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WHEN I MENTION that I flew helicopters in Vietnam," an American ex-Marine pilot said to me, "the first thing people say is, 'Oh, you flew the Huey.' You've got to explain to them that no, this was a different helicopter."

Boy, was it. Turns out the guy flew the Sikorsky H-34 Seahorse, known in its U.S. Marine Corps guise as the UH-34D. D for deafening, different, draughty, dervish-slash-whirling and just about everything but diminutive or debonair.

The Marines called it the Dog, and its pilots often referred to themselves as Dog drivers. Not because it was one but because no American warrior would dream of calling a weapon by its Government-approved name. Somewhat more irreverently, they also called it the Shuddering Shithouse. To understand the latter, you have to at least ride aboard one, preferably fly it. I've done a little of each, although I've also been told by experienced ex-Marine pilot Mike Leahy that the scatology was originally prompted by the Sikorsky CH-37, an enormous early heavy-lift helo that was powered by two Pratt & Whitney R-2800 radials. "That thing literally shook like a big dog after its bath when you approached for a landing and slowed it to a crawl."

The UH-34D—and the CH-37—represented the end of an era. It was the era of piston-engine, clanking-parts, fling-wing, Rube Goldberg helicopter design sometimes

described as 'a collection of rotating and reciprocating parts all trying furiously to become random in motion.' One example of the 34's archaic complexity: the single main rotorhead, about the size of a cowboy's Stetson hatbox, has what U.S. Army H-34 pilot William Walton recalls was 84 grease nipples. "And they had to be greased after every flight."

It was an era that was about to be coffin-nailed shut by humming turbines, sophisticated rotor systems and unimaginably light materials and devices. Today, a turbine helicopter engine equivalent to the piston-engine H-34's 1,525 hp weighs about 25 per cent of what the ironmongered UH-34D engine did. Indeed, the H-34 soldiered on for another decade as the Westland Wessex, once it was fitted with twinned Rolls-Royce Gnome turboshafts.

The H-34 was basically a bulked-up Sikorsky H-19, a late-1940s design that pioneered a unique powerplant configuration. In pre-turboshaft-engine days, a good place to find reliable, compact, high horsepower was in air-cooled radial engines. The obvious place to put such an engine would have been in the very centre of a helicopter, directly under the rotor hub, low in the airframe for

stability, with a vertical driveshaft. But that would have pretty much filled the cabin, making the machine pointless as a people-hauler.

Sikorsky's solution, in the H-19 and then the H-34, was to stick the radial out in the big Rottweiler nose, with a driveshaft angled up and aft, passing between the flight-crew seats to the transmission and rotor hub at about a 45° angle. This left a boxy, unobstructed area for a cabin. Mounting the heavy engine in the nose also counterbalanced the long tailboom. With the potential of light, compact turbine engines apparent by the time the H-34 first flew, in 1954, the helo was already obsolescent and about to be obsolete.

A war, however, delayed the H-34's retirement ceremonies.

When Vietnam began to heat up, in the early 1960s, it was still a place for professionals—lifers and volunteers, many of them United States Marines. The Marine Corps has typically been at the bottom of our military-equipment food chain, making do with what the favoured armed services

have either cast off or haven't been able to figure out how to use. A classic albeit anomalous example was the F4U Corsair. When U.S. Navy pilots decided the Corsair's bouncy main-gear oleos made them too difficult to land on aircraft carriers, they were sec-

That big engine up front was the equivalent of a lot of armour plate.

*Stephan Wilkinson
flies one big Dog
and meets Vietnam
War crew.*



Above: coming bottom in the U.S. 'military-equipment food chain,' the Marine Corps went to war in Vietnam with a helicopter already regarded as obsolete.

Above right: the H-34's big, dependable Wright Cyclone R-1820 piston engine had already enjoyed an earlier career as the powerplant of the WWII B-17 Flying Fortress.

Right: at night, blue flames from the exhaust made an inviting target for enemy gunfire.

Below right: field modifications—welded-up gun mount and M-60 machine gun.

ended to the Marines—who inadvertently ended up operating one of the great fighters of WWII.

So their two dozen old UH-34Ds were all that Marine Squadron HMM-362—HMM equals Helicopters, Marine, Medium—had to work with when on 15 April 1962 they landed on an abandoned WWII Japanese fighter strip at Soc Trang, on the Mekong River Delta. The Ugly Angels, as they soon came to be known for their medevac missions, were eventually followed by nine more UH-34D squadrons.

South Vietnam's own air force operated a



Photos mostly by the author



squadron of UH-34Ds handed over by the Marines; Air America, the CIA's covert 'airline' operating in Laos, also relied on the Dog. In fact, though 34s were eventually operated in combat by everybody from the Argentines to the Israelis, Air America's 34s were in combat areas longer than those of any armed forces in the world, including the USMC. "I didn't even know we were owned by the CIA," admits Air America 34 pilot Charles O Davis. "I flew it more than 3,000 hours and never had an engine failure. By today's standards it was archaic, but as far as I'm concerned, the H-34 is the DC-3 of helicopters. When I climbed into that aircraft, it was like putting on a good, comfortable pair of shoes."

By the time the world's media had swarmed the war, in the late 1960s, the chattering rumble of the 34's radial engine had largely been replaced by the waspy whine of the Bell UH-1 Huey. The TV nightly news—and eventually movie theatres as well, thanks in large part to *Apocalypse Now* and its Ride-of-the-Valkyries scene—resonated with the whap-whap-whap of the Huey's wide twin rotor blades, and most of us grew to assume that Vietnam was the Huey's war.

But in the seven years that U.S. Marine UH-34Ds were in-country, they flew as everything but gunships. They carried troops, recon teams, cargo, crates of ammunition that their crew chiefs literally kicked out the door during low passes over beleaguered

landing zones, often-pointless packages and paperwork on what were called 'admin runs'—the Vietnam-helo equivalent of WWII's milk runs—chaplains ('holy helo' trips), bodies and, perhaps most memorably, the wounded. Without the UH-34D's endless medevac shuttles, far more Americans and South Vietnamese would have died.

The Dogs were powered by the same Wright Cyclone R-1820 radial engine used in 1930s American biplane fighters, the B-17 and indeed some DC-3s, and the aircraft had never been intended to do battle against ground troops. H-34s had no guns, no cannons, no rockets—no problem—the Marines welded up mounts for light M-60 machine-guns, one on each side of the aircraft, and installed them in the field... but that was all the recoil that the airframe could take.

The H-34 had been designed to be a carrier-borne U.S. Navy antisubmarine-warfare bird, fighting a relatively neat search-and-detect sonar war at sea. Unfortunately, the aircraft's skin was made of super-light magnesium. Sikorsky had to do something to compensate for that enormous lump of engine in the nose, but the magnesium skin did its best to become powder in the presence of salt water.



World's largest flashbulb

That magnesium was also to become a liability in battle. "On my second day of flying in Vietnam," recalls ex-34D pilot Seppo Hurme, "one of our 34s was shot down, and you could see it from miles away, the magnesium burned so bright. But you never had to worry about ending up a cripple. Between the avgas and the magnesium, you either walked away from a crash or you died." (As ex-HMM-363 pilot Joseph Scholle puts it, "We used to call it the world's largest flashbulb. Get a fire anywhere and drop it in the water is about all you can do.")

Nonetheless, Hurme loved the old Dog. "That big engine up front was the equivalent of a lot of armour plate and gave you more protection than there was in other helicopters. I heard of one guy who took a hit from a 57 mm recoilless rifle that knocked one of the cylinders completely off. The engine kept running—rough, but they still got away. When I transitioned to Hueys, I felt naked."

Hurme had been trained to fly the Dog's replacement—the big turbine-engine, twin-rotor Boeing-Vertol CH-46—for by 1967, when Hurme arrived in Vietnam with HMM-361, the UH-34D was well on its way to an

Top: the rotor head is studded with no less than 84 grease nipples.

Above: steep climb to a cockpit that fitted like 'a comfortable pair of shoes'.

Right and below: Marine artwork—'Ugly Angel' name reflects HMM-362's medevac role.



honourable retirement for the second time. But the 46s soon experienced a series of in-flight failures: they would shed their entire tail and rear-rotor pylon. As Joseph Scholle describes it, "The H-46s would break apart right in front of the stub wings, and become a section of two H-23s." Such gallows humour is typical of helo pilots. American newsman Harry Reasoner once wrote, "Airplane pilots are open, clear-eyed, buoyant extroverts, and helicopter pilots are brooding, introspective anticipators of trouble. They know if some-

thing bad has not happened, it is about to."

The accidents led to the CH-46's grounding, and the Marines turned back to the faithful UH-34D. Says Scholle, "Everybody wanted to go into Hueys and gunships, and when I got assigned to 34s, I thought, 'Aw, jeez, 34s, the Shuddering Shithouse.' But the part I grew to like was its reliability. We'd get more time out of our engines than the Hueys were getting. All that red-clay sand used to get sucked into their intakes and eat the turbine blades alive. We had an air cleaner, basically, like you have on a Pontiac. Take it out, bang it on the ground, rinse it in avgas and you're back in business."

Scholle also knew of a 34's nine-cylinder Wright suddenly transitioning to an eight. "A friend of mine was doing a recon insert (dropping off a squad of Marines) way up by the Laotian border. It turned bad and he had to go back in and pick the guys right up again, and he took a lot of fire. He said the aircraft felt a little sluggish and when they landed to let the recon team off, there was no oil on the dipstick. So the crew chief emptied the spare five-gallon can into the tank, put the

If something bad has not happened, it is about to.

guy in our squadron in Germany reached down to adjust his long underwear or something and hooked his arm under the collective by accident. The engine beat itself to death. Broke its mounts and fell right out onto the ramp."

For all their size, 34s were surprisingly nimble. "It was an extremely manoeuvrable aircraft," says one ex-Marine pilot who flew it for almost a year. "You could get into and out of landing zones where no other helos could go, but the bad news was that once there, we pilots were sitting thirteen feet up in the air, and the bad guys were in a prone position, laying on the ground flat as they could or hiding behind a tree, firing back at you. You were a sitting duck in a hot LZ."

Rod Carlson remembers that. He was another re-routed CH-46 pilot, sent to HMM-361 to instead fly Dogs. Carlson drew his first night-time medevac mission soon after arriving at Marble Mountain, the helicopter strip at Da Nang, flying with aircraft commander Captain Ron Sabin. Marines who were expected to die in the field before daybreak were flown out, but it was a fearsomely

The landing zone was hot—under fire—so Sabin told the grunts on the ground to mark its centre with a small strobe.

"The standard procedure was to spiral down directly over the LZ, in order to present the smallest target for the shortest time. In daylight, this approach was dangerous. At night, I was sure it was impossible."

Carlson remembers that, "Sabin bottomed the collective, screwed back on the throttle, dropped the nose and spiralled down like a duck with a shot wing. After five complete revolutions, he straightened out, and the strobe was dead ahead. I could feel him raising the nose to slow our forward movement and twisting on full power to stop the descent."

Sabin manoeuvred to put the strobe between the helicopter and the waiting Marines, but the light kept moving; the Marine carrying it had mounted it on his helmet, figuring that would make it a better beacon, and now he realised Sabin might try to land on top of him. "Ron landed with his side toward the shooting, so the exhaust stacks wouldn't be a target, and we picked up our guy. I remember as we headed back toward Marble Mountain, Sabin got on the intercom and asked the corpsman down in the cabin, 'How's he doing?'

The medic said, 'I've got my hand inside his chest, but he'll make it.'

Before his first night aloft was out, Carlson and Sabin

would do it seven more times, a typical shift for a ready-when-you-are Dog.

Ron Ferrell was also a corpsman on UH-34Ds, and what he—and many a pilot—particularly appreciated about the Dog was that it had big, fat wheels and tyres on long-stroke oleo struts. "We were lifting off under fire one day," Ferrell says, "and the pilot took a hit in the head just as we took off. We were nose-down, tail-up, and he had the rotors cranked up to full rpm. And then boom, we set right back down. We probably dropped a good ten feet. I watched those struts go damn near to the ground and then spring back up. Hueys just had skids, and if that'd happened in a Huey in anything but an absolutely level attitude, you'd have pitched over."

"The co-pilot got control and we took off again but it was frustrating. There's a bulkhead at the forward end of the cabin and above that is where the pilots sit, and you can't get up there from the cabin. All I could see of the pilot was his feet, his hand hanging down, and there was blood running down the bulkhead. And I couldn't do a thing about it."

John Downing, an HMM-361 UH-34D pilot in-country, remembers that the big landing gear made it easier to get into a tight LZ. "You could stand it up and put the tailwheel on the

ground, haul back on the cyclic and get it about 40° nose-high, just put the tailwheel on the ground and it'd stop on a dime. That got me in trouble when I transitioned to the Huey, because you definitely don't want to do that in a UH-1. The first thing that hits is the tail stinger, next is the tailrotor."

Joe Scholle also loved that landing gear. "If you look at

where the main-gear struts attach to the fuselage, they're basically holding up the transmission deck, because you don't want that thing coming down through the cabin. So if you land real hard and bounce, you're bouncing off the point of main structural strength in the aircraft. You try bouncing a Huey, hit tail-



cap back on and said let's go. They flew back to Da Nang and the crew chief opened the clamshell (nose) doors and said, 'Cap, you gotta see this.' One entire cylinder was missing, the piston was missing, the rod was missing, it was just a hole in the side of the block. They came all the way back from the Laotian border with it that way."

Nor were engine parts the only thing the Dog could do without. "It was one of the few helicopters that would fly with an inoperative tailrotor," says Scholle. (A helicopter's tailrotor is intended in large part to oppose the innate desire of the fuselage to rotate rapidly around and counter to the main rotorshaft.) "A 34 has an awful lot of side area, and as long as you're doing 45 knots, it swings around into about a 45° crab and stays there. It's weird, but you can fly it."

One problem with the big Wright radial was that it was easy to over-speed the engine, particularly with the rotors disengaged. Without a prop to drive, the engine in effect had no flywheel to stabilise its acceleration. Army aviator William C Walton remembers, "One

dangerous undertaking. Carlson and Sabin waited for a summons in the squadron ready room. Carlson recalls, "With the red lights on to preserve our night vision, everything was the colour of clotted blood."

When the phone rang, Sabin and Carlson sprinted to their 34 and fired it up. "A constant blue-white flame from the exhaust stacks extended past my window like a huge blowtorch. Once we were airborne, Sabin flipped off the light switches overhead, and except for the flame, everything vanished in total darkness. I felt as though I were in free fall. Everything I needed to fly was gone—airspeed, altimeter, rotor and engine rpms, manifold pressure, horizon."

Below them, Carlson says, "Lights blinked like the small farms we flew over during night training hops from Pensacola. But each was the muzzle flash of a gun being fired at us."

It was one of the few helicopters that would fly with an inoperative tailrotor.

Left: the very separate cabin compartment—all crewmen could see of the pilots was their feet.



first and you're probably going to nose over. But with the 34, if you had to do a night medevac, it was the best way to find the ground, with the tailwheel. It was like a hen in a nest, putting her butt down on the eggs."

Extremely sensitive

H-34s were the first helicopters to get a true stability-augmentation system—a kind of primitive autopilot that did its best to counter a helo's innate desire to do anything but fly straight-and-level. "It was called the ASE system, automatic stabilisation equipment, and it gave the aircraft a little more of a stabilised feel," one pilot remembers. "But there were many occasions when it wasn't operating, so you flew without it." Well, you did if you were a sharp stick-and-rotor guy.

With the ASE off, the aircraft was extremely sensitive to the touch. "All you had to do is think about doing something, and you've already done it," one pilot remembers. It took a fair amount of co-ordination to manually adjust the rpm and pitch simultaneously with a motorcycle-grip throttle on the collective while working the cyclic stick and rudder pedals at the same time. "You could over-speed it quite easily if, say, you were going into a hot LZ, taking fire. "You had to listen to the rpm, the sound of the engine and the rotor-blades, without looking at the gauges. When I went back and flew a UH-34D again a year ago, after having flown a lot of fixed-wing military and commercial aircraft in the intervening 33 years, I knew how the barnstormers felt in the 1920s, listening to the sound of the wind in the wires and feeling the slipstream on their cheeks."

The Dog that he flew is one of two still operating in a coat of flat Marine green. It is

owned not by Uncle Sam but by that very same Huey gunner, James Moriarty, now a wealthy Houston, Texas lawyer who loves the Corps enough to have spent an unconscionable amount of his own money restoring the 40-year-old Dog so that he can operate it as a living, breathing, shuddering, fluttering, flying Marine memorial.

Moriarty takes his YL-42—the call letters of a fatally crashed HMM-362 Ugly Angels bird—to air shows all over the United States. It hasn't been restored to compulsive museum standards but renovated to the condition of a hard-working UH-34D just as it might have looked parked on the ramp at Soc Trang or Marble Mountain waiting to insert a recon team, fly a medevac or resupply a squad in desperate need of ammo. The cabin is cluttered with toolboxes and spares, the slightly askew clamshell nose doors are safetied closed with a bungee cord just as was often done in Vietnam, there's a small puddle of red hydraulic fluid on the cabin floor and even an M-60—deactivated, of course—on its swivel mount in the main door.

Ex-corpsman Ron Ferrell wonders what it would be like to ride an H-34 again, 35 years later. "If I could get back into one, I'd do it in a heartbeat, if only to hear the sound and smell the exhaust. But it still wouldn't be quite right. It's like watching a movie. Even if it's realistic, you see it and hear it... and that's it. You can't smell it, you can't feel the heat, the exhaust, the concussion of the explosions, hear real people who are really hurt, smell the machine, smell the cordite, the vegetation, the blood sera. You can't get that by just going out to the airport and getting a ride. I'd love it, but it wouldn't be the same."

Mike Leahy served as a gunner even

I paid \$45,000 for it, figured we'd fill it with gas and fly away.

Above: fully kitted out, owner Jim Moriarty at the controls. He takes operating 'a forty-year-old aircraft with parts just looking for an opportunity to break' quite seriously.

Right: fixed-wing pilot Wilkinson found all his experience virtually negated when he took the 34D's stick. Owner Moriarty reckoned he'd have lasted about forty seconds, left to his own devices.

Lower right: the H-34 was originally designed to be a carrier-borne U.S. Navy sub-hunter, so the main rotor and tail could be folded, as seen here.

though he was a major and a rated helicopter pilot. As a watercolorist and the executive officer of the U. S. Marines' combat-art programme, he decided that the best vantage point from which to view scenes he could later paint was from the door of a Dog—but that meant he had to work, not just ride. "As a fully functioning crew member of a UH-34D, I also sometimes had to load KIAs into our chopper for the doleful trip back to Da Nang," Leahy recalls. "We once were so full that I had to hold the upper part of a body bag in my lap, as I manned my M-60 on take-off, and I could feel the trooper's still-warm torso. It was one of the most moving situations I ever went through."

George Twardzik was an HMM-163 'Angry Eyes' door gunner, a squadron so named for the glaring samurai eyeballs painted on their UH-34D's clamshell nose doors. Twardzik remembers the day in March of 1966 when "we received a frantic call from an Army Special Forces unit of about 220 who were under siege in the A Shau Valley from an enemy

force estimated at 3,000 men. An Army helo sped in to assist them and was promptly shot down. It was decided the risks were too great and that all units should stay away from the A Chau outpost. For three days, we could hear the troopers begging over the radio for medevacs, ammo and water."

Finally, Twardzik's squadron skipper could take no more. He strode to his 34, turned to the anxiously watching pilots and aircrew and announced that he was going for a ride and if anyone wanted to join him, he wouldn't stop them.

The entire squadron fired up and headed for A Chau.

Unfortunately, the skipper and three other 34s in the first wave were immediately blown out of the sky. Since it was too late in the day to do any more, the surviving 34s returned to Phu Bai to regroup. First thing the next morning, the Angry Eyes returned to the LZ like angry hornets and began pulling out soldiers.

Twardzik remembers that during one extract, his aircraft was taking fire from a .50-calibre machine gun, and eventually, it found them. Twardzik took a ricochet squarely on his flak jacket, and during lift-off, the impact blew him out of the door and into space. "My gunner's safety belt was hooked to a D-ring on the deck, and when it reached the end of its travel, it snapped me right back into the cabin."

Another round ignited the ever-present five-gallon can of spare engine oil. The pilot autorotated down into a clearing, and they pitched the flaming can out and extinguished the remains of the fire. With the engine restarted and the rotors re-engaged, "we took off, dragging the main gear through the trees as we headed back to Phu Bai. I got out of

the 34 to view the damage, and the aircraft was literally sieved with bullet holes." The Angry Eyes nonetheless managed to save every one of the HMM-163 aircrew who'd gone down the day before, as well as 190 of the 220 soldiers.

Back to life

Jim Moriarty's personal 34 was originally manufactured for the U. S. Navy, as an HSS-1N ASW bird. He found it corroding in a New England farm field and bought it without realising what he was in for but intent on bringing back to life a likeness of a real Vietnam-era aircraft. "To say I knew absolutely nothing about the business of aircraft restoration is being too kind. I paid \$45,000 for it, figured we'd fill it with gas and fly away. What did I know?"

Certainly Moriarty himself wouldn't fly it away, since he had never flown a helicopter, but in any event the hulk was trucked to a restoration shop in Tucson, Arizona and the job began. "I had no reason to believe that it was anything I could ever fly," he admits. "This is one huge, powerful, noisy, intimidating machine."

Moriarty soon added a rotary-wing rating to his pilot's licence, learning to fly helos in a little two-seat Hiller. "If you can fly an under-powered little Hiller, you can do aerobatics in an H-34, it's so powerful."

He wouldn't have been the first pilot to do aerobatics in a 34. "Oh yeah, they were manoeuvrable," laughs Joe Scholle. "I remember a guy did a couple of rolls and then looped it, for the benefit of the A-4 and F-4 pilots sitting on the beach at Chu Lai, in

late '67. Of course, you don't get a real circle out of it, it looks more like a backward nine. But the 34 was pretty forgiving."

Forgiving enough to allow even me, a fixed-wing-only pilot, to take cyclic in hand—if only to learn just how hard it is to fly a helicopter?

It was, for Houston, a frigid day—high 40°s F—when I showed up to go for a ride with Moriarty. "We've got 120-grade oil in it, and it was about the consistency of lard when I got out here this morning," Jim complained. "Took me \$500 worth of preheat to get it to this point." The Wright groaned through a few turns, and one cylinder fired as Moriarty flailed from starter to mag switch to primer to throttle. Again, a single pop. Again. Finally,

the engine broke into the classic radial-engine start-up lope. Chuff chuff chuff... clatter clatter... is it gonna die? Chuff chuff... clatter clatter... pop fart pop pop pop... Katump! Katump

katump katump... Nope! It's gonna run!

Moriarty is quick to deprecate the fact that he's a rich lawyer and pilot ("meaning I'm above real work," he laughs), but he takes quite seriously the task of operating "a forty-year-old aircraft with parts just looking for an opportunity to break." He prepared for flying the Dog in part by attending a week-long North American T-28 Trojan ground school, since T-28s use the same engine the UH-34D does, and it was also a good opportunity to check out the warbird world. (For readers who might be interested, the T-28 school is at Darton International, San Marcos, California.)

"One of the things my instructor told me was that if you plan to fly a complex, old aircraft safely, you'd better be willing to get your hands dirty and learn to work on it yourself. I thought this was bullshit. I can afford all the mechanics that I want. But he was right and I was wrong. You need to know it backward and forward."

Big talk? No. On the first leg of our day's flying, we got a bright-red engine chip light just as YL-42 shuddered into a hover to touch down at our first en route stop. In less time than it takes to negotiate the drive-thru at a McDonald's, Moriarty had the clamshells open, a canvas tool bag spread beside him, the safety wire cut and the chip detector unbolted from the crankcase. Followed by two quarts of hot, black oil. Moriarty may not be the only big-time lawyer in Houston with dirty fingernails, but he's probably the only one to earn them lying on his back under a Wright Cyclone.

He could as easily have summoned a mechanic—we had landed at a busy General Aviation airport just outside Houston—but Moriarty preferred to do it himself. He points out a single hint of metal the thickness of a strand of fine steel wool that has bridged the detector's electrified gap. It is almost certainly a stray sliver from the valve job the engine has just undergone, and I can't help but think of the little Porsche 911 race-car engine I have just rebuilt. After running the car for thirty minutes on jacks and then cutting the oil filter open, I found enough post-overhaul trash to cover a fingernail.

Jim and JT Nelson, his crew chief, indulge in yet more helicopter gallows humour. You can't be around a fling-wing pilot very long without hearing that, "Helicopters don't actually fly, they just beat the air into submission." Or that, "If something hasn't broken on a helicopter, it simply means it's about to." Or, "Never fly in anything that has wings travelling faster than the fuselage."

I chose to fly rather than drive, even though the wings were obviously whirling about my

A guy did a couple of rolls and then looped it.



David Davies

head as I glanced up through the cockpit Plexiglas. It was disquieting to see that huge, complex mechanism spinning around at a rate that seemed at the same time too slow to hold us aloft yet quite fast enough to be dangerous. It was the equivalent of somehow being able to watch an airplane's main spar working, bending, twisting, wearing... which, of course, we fixed-wing folk never get the opportunity to do, thank you very much.

"Rwaaarrwaaar, waarwar. Rrrrwar," Moriarty yelled into the headset intercom. Between my aviation-heightened deafness and the hysteria of a Cyclone-engine helo cockpit, it was all I could do to figure out that he was saying, "Take the stick. Try it."

After a decade of flying a Falco, I had finally learned some fingertip control delicacy, though it took a while to overcome the brutishness instilled by a lifetime of Cessnas, Pipers, Beeches and Mooneys. But would that apply to a 1,525 hp, 13,300 lb gross, cargo aircraft? Well, I took the stick.

Mistake.

The world assumes that the pyramid of aviation proficiency rises from a broad base of ordinary lightplane pilots up through bigger and faster airplanes to a pointy summit upon which sit... well, people who fly pointy-nose airplanes. Jets. 747s. Concorde. Tom Cruise Tomcats. F-15s and Tornados. They're wrong. The most tactilely-skilled pilots in the world, in terms of hand/eye co-ordination and the physical touch to guide a heavier-than-air machine through the sky, are helicopter pilots.

I quickly learned that, through the simple act of trying to keep the aircraft straight and level. Helicopters want to diverge. They are by tradition and temperament unstable. Push a trimmed airplane's stick and it resists, insisting upon returning you to level flight. Push a helo's cyclic and the damn thing is hell-bent to



about forty seconds to live." He's right. At best, I'd have been able—with great, constant effort—to maintain 500 feet and an east-bound heading until we ran out of gas.

Moriarty has logged over 400 hours in YL-42. He and JT fly in full Marine flight suits, complete with flight-crew wings and HMM-362 squadron patches and insignia. Moriarty also straps on a loaded survival vest before clambering way up into the cockpit. Uh oh, middle-aged men playing boy soldiers, I initially think, but in fact it's because of Moriarty's respect for the tradition, history and sacrifice that his YL-42 represents. "One of the rules of the aircraft," he says, "is that when you fly or crew it, you wear the uniform. Not because I think it's fun but because I want to honour the people who flew them. I will not fly this aircraft in shorts or jeans or tennis shoes."

Left: today, crew chief James Nelson (left) and owner-pilot Moriarty fly in full Marine flight suits in honour of the pilots who flew the H-34 in the Vietnam war.

Last year, 20,000 people must have clambered through and around YL-42 at various U.S. air shows. "At first," says Moriarty, "I wondered, should I put a rope around it, only let certain people get close to it? But I

bunt. Pull it back a bit, as you of course do, and you are immediately in a world of pilot-induced oscillations. If a well-trimmed airplane is equivalent to a train running on tracks, a helicopter is a unicycle. And an unstable old 1950s piston-engine helo is like riding a unicycle while balancing a broomstick on your chin. With a kitchen table atop it.

"With all your hours and ratings and fixed-wing experience," Moriarty later said, "if I'd had a heart attack up there, you'd have had

decided no, that wasn't going to be its mission. You see kids up in the cockpit, their feet can't even reach the floor, and you can tell they imagine themselves as people someday willing to fight for their country, as people who want to care for and protect others. They need to be able to touch that dream. I want people to crawl all over that aircraft, I want them to know that brave men flew them. And that this aircraft still flies."

It sure does, Sarge.

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Above: and we called it Wessex... The H-34 served on in British hands as a Westland product, fitted with twinned Rolls-Royce Gnome turboshaft engines.

Photo: R. M. M.