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The Newsletter of the Helicopter Conservancy, Ltd.

FIVE BY FIVE

A MESSAGE FROM THE PRESIDENT

One of my earliest memories is of a family trip to the beach. I remember the warmth of the sand between my toes, the blue sky overhead and the roar of the surf as it broke on the Pacific coast. The year was 1969. I was oblivious to the war in Southeast Asia then in full swing; I knew nothing of the tumultuous events here at home. In fact, I was just old enough to walk and, using this newfound ability, slipped away from my parents to go explore this exciting and unfamiliar place.

I toddled over to get a better look at the waves and a school of small fish I had spotted swimming in the shallows. I had never seen either before and was driven by an intense curiosity to know more about them. The next events unfolded very quickly. As I stooped down to look at the fish, I was caught by a wave and dragged under. I remember choking on water as it went into my nose and a sensation like fire in my lungs; I was dimly aware of an ebbing strength in my limbs as I was pulled out by the return current, then nothing.

When the world returned to focus, I was lying on the beach, coughing up seawater while a group of concerned adults pressed around. Fortunately for me, a family friend only a few years older than I had seen what was happening and fished me out in the nick of time. I'll never forget her quick-thinking action or the debt of gratitude that I still feel to this day.

As it happened, an opportunity to pay that debt forward arose many years later when another drowning boy needed rescuing and I

was able to intervene. So my own rescuer ultimately saved not just one life that day back in 1969 but two.

Helicopters are well known for their important role in rescue work, a role that dates back to the early machines of the 1940s. With their ability to get in and out of tight spots, helicopters are ideally suited for this task.

Their crews are equally at home in this mission and have earned a reputation for remaining cool under pressure, often facing extraordinary personal risk to deliver their charges—all in a day's work.

In this issue, we cover a particularly dramatic helicopter rescue of 242 people by National Guardsman that took place on the West Coast amidst last summer's wildfires. We also take a peek at new artwork gracing a helicopter of a Navy search and rescue squadron. Finally, we'll look at rescuers of another kind: an aircraft restoration team in Austria working to save the remains of the last example of a pioneering helicopter from the 1940s.

I hope you find their stories inspiring, and thank you for reading.

Kenneth Eward
President

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Cover photo: a MH-60S Seahawk of US Navy Squadron HSC-3, equipped for fire-fighting duties, flies through heavy smoke near Camp Pendleton in May of 2014, when a rash of wildfires erupted in California's San Diego County. Wildfires along the Pacific Coast have gotten worse in recent decades, fueled by drought and unusually hot summer temperatures. Helicopters are increasingly relied upon for fire detection, deployment of firefighters, water dumps and rescue. (Mass Communication Specialist 1st Class Joan E. Jennings/USN)

The appearance of U.S. Department of Defense (DoD) visual information does not imply or constitute DoD endorsement.

AROUND THE HANGAR

It's been said that Wisconsin has only two seasons: sledding season and the three or four months of the year when the sledding isn't so good. We're now well into the critical warmer months and have been busy on a number of projects in the hangar.

Virtual Reality Helicopter Simulator

Imagine you're a civilian contractor taking a routine helicopter flight in one of the contested regions of the world the US often finds itself involved in. The blast of the wind through the open doorway tousles your hair as you gaze out at the landscape rushing past below, the slipstream not quite swift enough to drive out the faint lingering smell of jet fuel, transmission oil and sweat. As the thrumming vibrations of the rotors and drive system work their way through your body, the radio comes alive: an allied pilot has crashed in the area and your ride is being diverted to look for survivors. It's not far, and as you approach the wreckage, you can see the downed airman waving. He seems to be ok. Just then, a stream of tracers flashes past; you hear and feel bullets impact the hull. Your pilot jinks, and your heart leaps into your throat. Down below, an insurgent "technical" is racing out toward the downed airman from a concealing wadi. Your pilot has to decide whether to risk a quick extraction or wait for reinforcements. Without hesitating, he drops the collective and plunges in . . .

Work continues on our helicopter flight simulator and we can now release a few details. The simulator models the iconic UH-1H Huey, a helicopter that began its career in Vietnam and is still flown today in updated models. Our sim is being constructed from an actual Huey fuselage and will include virtual reality (VR) stations at several crew and passenger positions. The VR headsets will immerse participants in a simulated flight that engages all the senses (including taste, as in "taste of excitement"). You can also try your hand at flying the aircraft.

The ride will be exciting, but the real strength of the sim lies in our focus on designing realistic missions like the scenario above, using ad-

vice from veteran helicopter aircrew to give visitors a better understanding of what they do for a living. Stay tuned on this channel for updates.

Helicopter Conservancy Membership

This spring we introduced our new membership program. Members receive a subscription to the print version of *Hoverfly* and a limited edition helicopter art print of *Iroquois Still Life*, signed by the artist. Members can also tour our museum workshop and receive a 10% discount on T-shirts and other merchandise. This is a great way to show your support! Please visit our website for details:

HelicopterConservancy.org



Iroquois Still Life

Funeral Service for Chris Daly

Services for Chris Daly will be held July 10 at Shepherd of the Hills Lutheran Church, 6869 Wildwood Rd, West Bend, WI. The Daly family invites all who knew Chris to come. Visitation will be from noon to 1:45 PM, with service to follow at 2:00 PM and a light lunch afterward.

FIRESTORM



A DARING RESCUE IS LAUNCHED DURING THE
LARGEST SINGLE WILDFIRE IN CALIFORNIA HISTORY

By Les' Melnyk

The fire began early in the evening of Friday, September 4, 2020 in the forested Upper San Joaquin River Watershed, an hour's drive northeast of Fresno. Vacationers had already begun to gather at the local lakes to spend the Labor Day weekend, drawn by the idyllic rugged scenery and the opportunity to escape the worst of the summer heat predicted in the weather forecast—some of the hottest and driest September weather on record. The fire spread quickly, propelled by strong winds. In its path were thousands of people attempting to escape, among them some 1,000 at Mammoth Pool Reservoir.

Cal Fire—formally the California Department of Forestry and Fire Protection—is the third-largest fire department in the United States. It is arguably one of the most experienced and best equipped agencies for handling wildfires. In addition to its extensive ground assets, it boasts a fleet of some 50 fixed wing aircraft and helicopters, the largest aerial firefighting force in the world. Yet, as with many wildfires, the Creek Fire was advancing too rapidly to be contained by a single organization, even with the participation of local and federal respond-

ers, so the National Guard was called in. As the Creek Fire raged out of control, the stage was set for one of the more harrowing and audacious feats in rotary-wing aviation history.

Crews from the California Army National Guard's 40th Combat Aviation Brigade (CAB) arrived to assist firefighters in battling the fast-moving Creek Fire shortly after it broke out, but the wildfire raced through the dry brush of the Sierra National Forest and nearby areas, defying all attempts at containment. In many cases campers, hikers and residents were cut off by the advancing walls of flame. This was the situation as the sun was setting on Sept. 5, when a 40th CAB UH-60M Black Hawk piloted by Chief Warrant Officer 5 Kipp Goding and a CH-47 Chinook piloted by Chief Warrant Officer 5 Joseph Rosamond were called to rescue more than 200 civilians trapped at a campground near Mammoth Pool Reservoir.

Flying in the dark through heavy smoke, intense flames and winds of 22-30 knots, the crews struggled to see where they were going. But they found they could see better after putting on their night vision goggles. According to Rosamond, "We could make out the terrain

Above: A UH-60M Black Hawk helicopter descends through a firestorm surrounding Mammoth Pool Reservoir to evacuate people trapped by the flames on the night of September 5, 2020. The crews of this helicopter and a CH-47F Chinook made three sorties each, rescuing a total of 242 persons. (California National Guard)



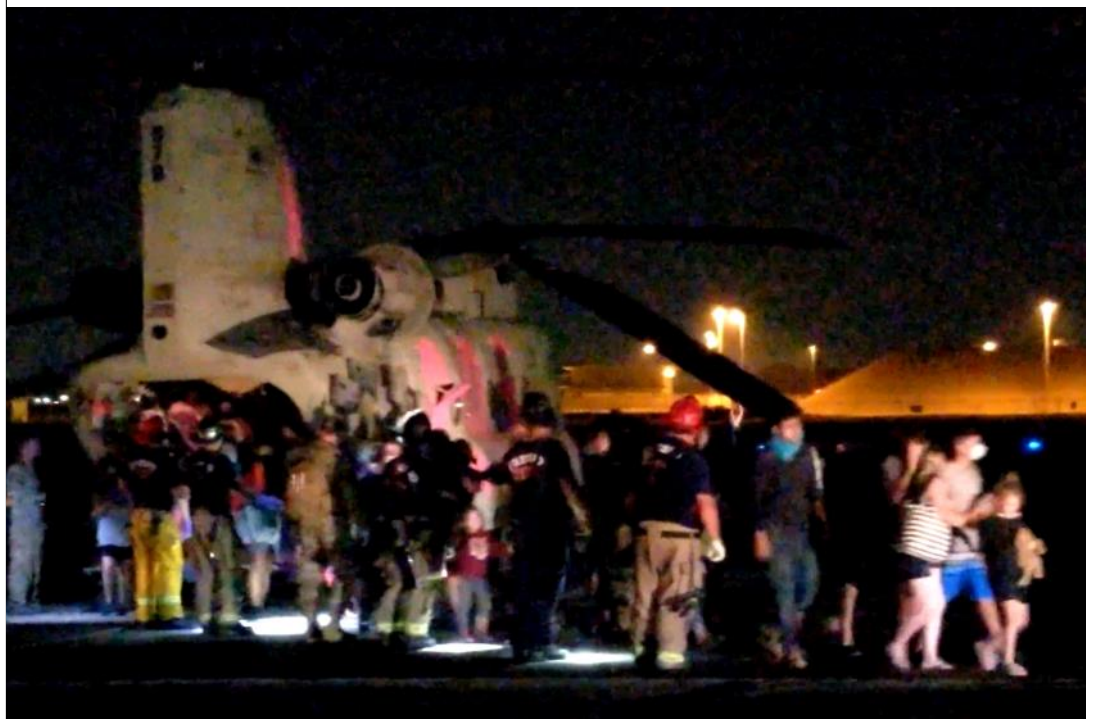
Residents and weekenders are transported to safety by CH-47F Chinook. On one flight, more than 100 evacuees were crammed together onboard this helicopter, which was designed to carry only 33 troops. (California National Guard)

The flying was intense, and the crews were given several opportunities to turn back and await more favorable conditions. "The conditions were pretty extreme," said Rosamond. "There were points along the route where we were just about ready to say 'that's enough.' But right about that decision point, the visibility would get a little bit better." The night vision goggles and their ability to detect the glimmer of embers and hot spots on the ground were key. "Those night vision goggles allowed us to keep on going, one ridge further, just get in there and get everyone out," said Goding. Together, pilots and aircrew insisted on pressing on. "All of us here have families. We tried the best we can, with our families in mind. We wanted to get the families safe, and get them back together again," said Sgt. Cameron Powell, the flight engineer aboard the Chinook.

The impromptu pickup zone at the campground was only 50-75 feet from the flames. "Every piece of vegetation as far as you could see around that lake was on fire," said Goding. The crews prioritized women, children and the injured on the first lifts, packing in people well beyond normal capacity. While a Chinook might comfortably carry 33

a whole lot better, even through the smoke, because of the embers that were on the terrain that we wouldn't normally be able to see."

"We were quickly running out of time, and given the severity of some of those injuries, they were running out of time as well."



Evacuees depart the Chinook after being landed safely at the Army National Guard aviation facility in Fresno, CA. (Master Sgt. Charles Vaughn/California National Guard)

people in its cargo area on a typical flight, more than 100 people were jammed together during one evacuation flight alone according to a California Guard account of the rescue. “We were quickly running out of time, and given the severity of some of those injuries, they were running out of time as well,” said Rosamond. “We decided to pack as many people in as we could do so, and at that point our performance limitations were very, very close to the maximum capabilities of the aircraft.” Space was so tight, the crew simply left the back ramp down and secured additional passengers to it as they flew to the Fresno Army National Guard aviation facility and safety.

“It was really emotional, very emotional,” said Black Hawk crew chief Warrant Officer Ge Xiong. “I had hands-on with the rescues. Just seeing their faces and emotions, their tears of joy, tears of fear, and then the gratitude. I received a lot of hugs and thank yous.” Both pilots agreed that the Creek Fire rescue missions were among the most dangerous they had encountered in their decades of flying, including combat deployments. “We get occasionally shot at overseas doing missions, but that comes and goes very quick, and you don’t really have time to do anything else, you’re just happy you didn’t get hit and continue the mission,” said Black Hawk pilot Goding. “Here, the stress and the added workload of going in and out of that fire every time was definitely by far the toughest flying that I’ve ever done, and I’ve been flying for 25 years and in the Army for 34 years.”



Chief Warrant Officer 5 Joseph Rosamond poses on the boarding step of the CH-47F he piloted during the rescue mission. (Staff Sgt. Ryan Sheldon/US Army National Guard)

Through the early hours of the night until about 1:30 the next morning, the Black Hawk and Chinook crews each made a total of three extraction flights. In all, the Guardsmen rescued 242 people. For their actions that night, all seven members of both flight crews received the Distinguished Flying Cross, customarily bestowed, according to the 1926 congressional act that established it, “for heroism or extraordinary achievement while participating in an aerial flight.” Since completing their work at the Creek Fire, the pilots and crews who conducted the daring rescue have returned to more customary and “safer” duties. The 40th Combat Aviation Brigade is currently deployed overseas to the Middle East, where they are

providing support to US and allied forces stationed in the region. 🚁

Les’ Melnyk is a retired US Army colonel and historian, currently working as Chief of Public Affairs & Outreach for the National Cemetery Administration, Department of Veterans Affairs. He also serves on the Helicopter Conservancy board of directors.

The quotes used in this article are taken from the recording of a Sept. 7, 2020 National Guard Bureau news conference at which the involved aircrew were present to answer reporters’ questions.

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THE LAST DRAGON

A RELIC FROM THE EARLY
DAYS OF ROTARY-WING
AVIATION COMES TO LIGHT



By Wolfgang Falch

The call came in the fall of 2012. I was at my workshop outside Innsbruck, Austria and the caller's voice sounded familiar—a man named Hans who had previously visited my shop. What he said got my attention: "I've found the remains of a Dragon near my vacation hut on the Eppzirler Alp and thought that, given your line of work, the news would be of interest." It certainly was. Hans' "dragon" was, he claimed, the wreckage of a Focke-Achgelis Fa 223 *Drache*, or Dragon in English, an early helicopter built in Germany during the Second World War. But as far as I knew, of the handful of examples that were completed, nothing of them still survived.

The Fa 223 was the brainchild of legendary aircraft designer Henrich Focke, who had in the mid-1930s designed the twin-rotor Focke-Wulf Fw 61, the world's first practical helicopter. The *Drache* was a direct descendent of the Fw 61, larger in scale and built to Wehrmacht specifications as a general purpose utility transport. It was impressive for its day, having a top speed of about 110 mph, range of 200 miles and it could carry more than a ton of cargo. By some accounts, it was the first helicopter in the world to enter mass production, but destruction of the assembly line during an Allied bombing raid in 1942 ended the prospect of full-scale manufacture. Yet a number of pre-production aircraft were completed and

pressed into military service during the war.

As a specialist in recovering and restoring World War II aircraft, I was skeptical of Hans' story, but determined to see for myself what he had found. I knew that wartime testing of the Fa 223 had taken place not far to the north, near Mittenwald (Henrich Focke himself being present for these trials). I had also heard that one aircraft taking part in these trials, prototype V16, remained in the area at war's end and was purposely set afire by its pilot to prevent capture by the Allies. Could Hans have found V16?

Though located only a few miles away from my workshop, the site Hans indicated was in a remote area, requiring a special access permit, which I soon obtained. With permit and directions in hand, I gathered my team and we drove to the Eppzirler to see what we would find. We took a narrow trail that wound a sinuous route along the mountainside, and at one point found a creek barring our path. We had no option but to ford it in our SUV—probably not a situation its designers at Mazda had envisioned.

Arriving on the scene, we were greeted by a tangle of corroded steel tubing lying half-buried in the loose scree covering the mountainside. It did not at first look promising, but

Above: Fa 223 *Drache* prototype V16 undergoes trials in the Alps near Mittenwald, Germany in late 1944. The Focke-Achgelis Fa 223 was the world's first medium lift helicopter and was considerably advanced for its time. (Courtesy of the Helicopter Museum Bückeburg)

as we began digging to expose more of the airframe, I recognized the unique construction details that could belong to but one aircraft in the world. I was looking at the remains of a *Drache* cockpit. As we examined the wreck site, other debris became apparent: more structural tubing, an engine cylinder head poking from between the rocks, and numerous smaller parts. In talking further with Hans, I learned that the site had been visited periodically after the Second World War, including a previous, abortive attempt to recover this historic aircraft in 1981. On this occasion, an Austrian recovery team had been led to the site by V16's former pilot, Carl Bode, who had been involved in the Fa 223 program from the beginning as a Focke-Achgelis test pilot. Hans shared with me photos from this expedition showing Bode, his wife, and members of the recovery team. I now knew we were indeed looking at the remains of Fa 223 V16, the last of its kind.

After photographing the parts in situ, we transported them back to our workshop. We had saved the wreck in time, for a year later, an avalanche buried the entire site under several meters of rock and mud. Yet afterward, I



The wreck of Fa 223 V16 as it appeared in the 1950s. Landslides later buried much of the remains. (Courtesy of the author)



Excavation of the cockpit section in 2012. The airframe is upside down, with nose gear pointing up. (Courtesy of the author)

received another call from Hans. He had begun to excavate the ruins of his hut and discovered even more of V16, including the tail section of the fuselage with rudder still attached!

Though now largely forgotten, the *Drache* holds an important place in helicopter history. Not only was it the first helicopter planned for mass production, but its performance and cargo capacity would not be surpassed by another helicopter until the 1950s. It also pioneered the concept of transporting cargo by sling loading, a technique that would not be attempted again by helicopter for many years. In many ways, the *Drache* was well ahead of its time. We are rebuilding this historic aircraft for display in our museum at the Reutte-Höfen Airfield, located only a few miles from where it was recovered. Our aim is to integrate as many of the original parts into the reconstruction as possible, making up the balance with newly-built replica parts. We are currently gathering technical drawings, photographs and other historical documents—and searching for additional surviving original parts. 🐛

Wolfgang Falch is CEO of Sandy Air Corp. of Pfaffenhofen, Austria. If you have Fa 223 parts or documents that you would like to contribute to this restoration effort, please contact him at: office@sandyair.com. Special thanks to Airbus Corporate Heritage and the Helicopter Museum Bückeburg for providing photographs and other archival materials for this article. To read more about the Fa 223, see "Across the Channel in a Nazi Helicopter" in the June/July issue of [Air & Space/Smithsonian Magazine](#).

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SHORT FINAL



A search and rescue MH-60S Seahawk of the NAS Lemoore SAR "Wranglers" sports Meder's new artwork. Appropriately, it's been given the callsign "Lasso." (Courtesy Shayne Meder)

Occasionally in real life, as in the movies, heroes do ride off into the sunset. But sometimes they fly. Pictured above is the latest masterpiece by aviation artist Shayne Meder, painted on a Sikorsky MH-60S Seahawk. Meder has been brushing her colorful brand of artwork onto aircraft for 33 years. A retired Air Force master sergeant, Meder began painting and restoring aircraft while stationed at Castle Air Force Base in the 1990s. She has continued this work ever since. Her *art volant* can be seen in museums across the USA and on the flight lines of several active military bases.

Her latest project is for the "Wranglers," a Navy search and rescue unit based at Naval Air Station Lemoore, located south of Fresno in California's San Joaquin Valley. While their official purpose is to support fighter squadrons flying F/A-18s and F-35s out of NAS Lemoore, the Wranglers also respond to general

calls for help throughout the Valley and High Sierra. They were one of many units working around the clock to evacuate people caught in the path of last September's Creek Fire (see related story on p. 3).

The Wranglers asked only that Meder's design include a cowboy and scenery from Yosemite, where many of their missions are flown. Her imagination took it from there. Reflecting on this assignment, Meder feels particularly honored to serve this unit: "Their motto is 'So others may live' and it touches my heart knowing what they do."

See more of Shayne Meder's work on Facebook at [@flygirlpainter](https://www.facebook.com/flygirlpainter) or on her website: www.flygirlpainters.com. You can learn more about the Wranglers on their Facebook page: [@lemooresar](https://www.facebook.com/lemooresar).

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