

The Aeronaut

Volume IV Issue # 3

1

Official News Letter of the New Hampshire Aviation Society

June 1998

Association Officers

President

Jack Ferns
(603) 271-2551

Vice President

Steve Barado
(603) 666-7181

Treasurer

Helen Cole
(603) 478-3425

Secretary

Chuck Cole

Editor

George Wiggin
(603) 736-4400
PO Box 69
Epsom, N.H. 03234

Directors

Jack Ferns
Steve Barado
Helen Cole
Chuck Cole
Richard Bleakney
Dick Harrington
L Hibbert
J Sargent
Bob Fogg
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Regular Meetings

3rd Saturday at 10:00 AM

Meeting Place

Concord Airport
Concord N.H.
Terminal Building
2nd floor conference room

Calendar of Events

June 20: NH Aviation Historical Society meeting at Manchester Airport, conference room 3rd floor at 10:00AM. This meeting will be followed by a tour of the Airport. We must know how many are planning to attend this meeting. Please call Jack Ferns 271-2551 or George Wiggin 736-4400 by the 17th.

June 27 & 28: 3rd annual Petenpol Fly-in and Lobester Bake, Hampton NH.

July 11 to 17: Greenland Ultralight Fly-in.

July 29 to August 4: EAA Oshkosh Wi.

September 19: Concord Aviation Day, Concord NH

EAA CHAPTER 1085 FLYING BRUNCH-IN



Windsock Village (NH69)
West Ossipee, N.H.

(On New York Sectional)



27 June 98 9:30AM-2PM

RAIN DATE
26 JUNE 98

MONITOR UNICOM 122.8
FOR ADVISORIES

Parking will be
along the West
side of runway
and South taxiway.

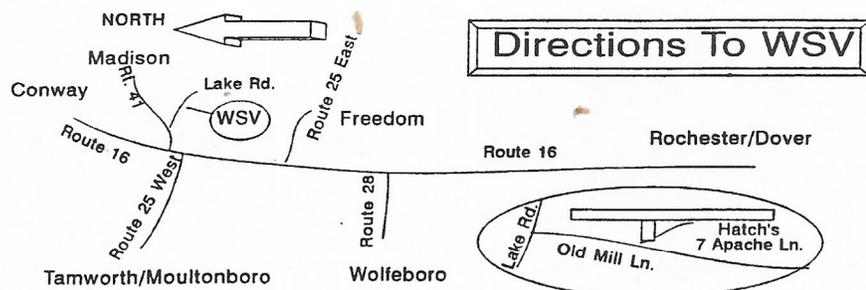


NO FUEL AVAILABLE



Watch for flagmen
they will have hand-
held radios. All come
on 122.8.

Windsock Village is private by invitation. An advance call at 603-539-2722* is required to reserve invitations which are limited. Breakfast starts at 9:00 AM and change over to lunch foods starts about 10:30. Lunch will be supported until 2:00 PM. Tours of hangar/house projects can be coordinated through the owners who have name tags. * ALTERNATE # 603-539-4568



America's First Patented Helicopter Flew —in 1910!

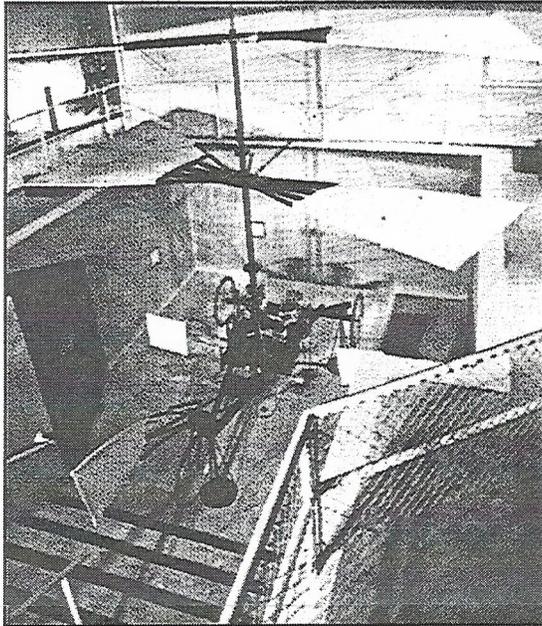
by Kerry Cartier

As I was driving along Interstate 70 through western Kansas, a billboard caught my eye: "The First Helicopter in America, High Plains Museum, Goodland, Kansas."

The first helicopter in the U.S.? In Kansas? You've got to be kidding! If I remembered correctly, the first helicopter was invented by Sikorski, and it flew in 1938. But... then what's in Kansas?

The High Plains Museum, 18th and Cherry Streets in Goodland, bills itself as the "Home of America's First Patented Helicopter." In this small but professional museum are parts—rotor shafts—from this early helicopter. Mrs. Rose Lindgren, a member of the museum staff, showed me the museum's pride and joy, a 100 percent scale replica of the helicopter, built in 1976 by Harold Norton of Brewster, Kansas. By pressing a button, I was able to start an electric motor which turned the helicopter blades at 6 rpm.

With its two motorcycle engines and contra-rotating rotor blades, this Kansas helicopter looked like nothing I had ever seen. Norton built his replica from measurements and drawings from U.S. Patent No. 1,028,781 and a copy of the only known photograph of the helicopter. The patent application was filed on March 18, 1910. 1910 was just seven years after the Wright brothers flew in 1903.



This replica of a 1910 helicopter sits in a museum in Goodland, Kansas.

The patent was granted June 4, 1912.

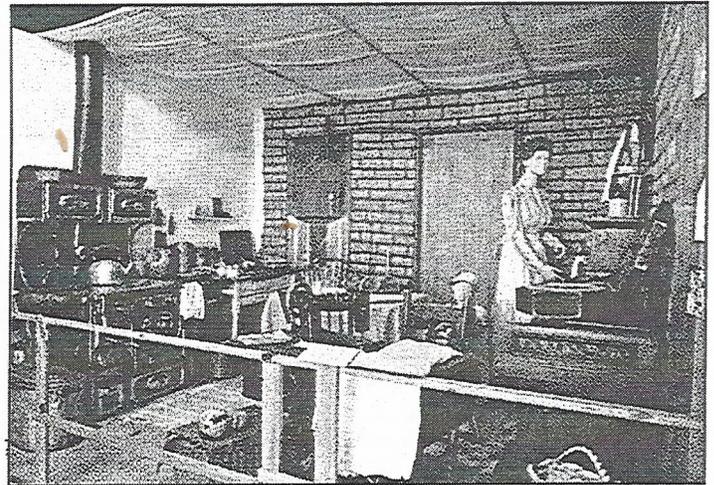
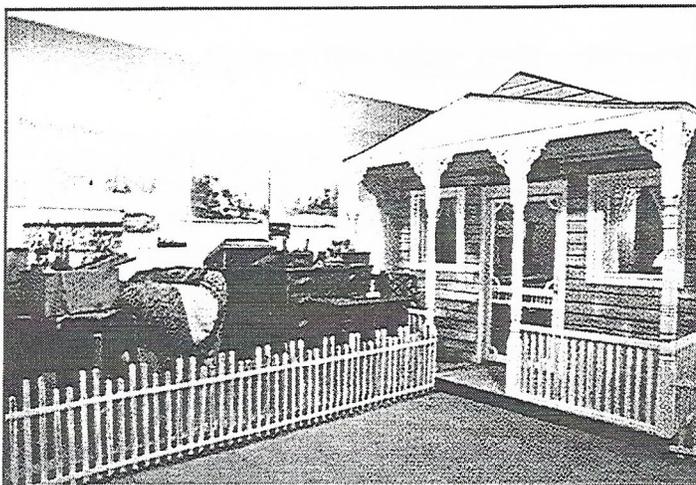
I was looking at a full-scale replica of the first patented helicopter in the U.S., which was invented by a pair of Rock Island Railroad machinists named William J. Purvis and Charles A. Wilson. Their patent "relates to flying machines of the helicoptre type." (That's "helicoptre," not "helicopter" as spelled today.) Looking at the patent documents, I realized that they had used counter-rotating rotors to counteract the torque of a single rotor, as did Louis Breuget's helicopter

design in 1937.

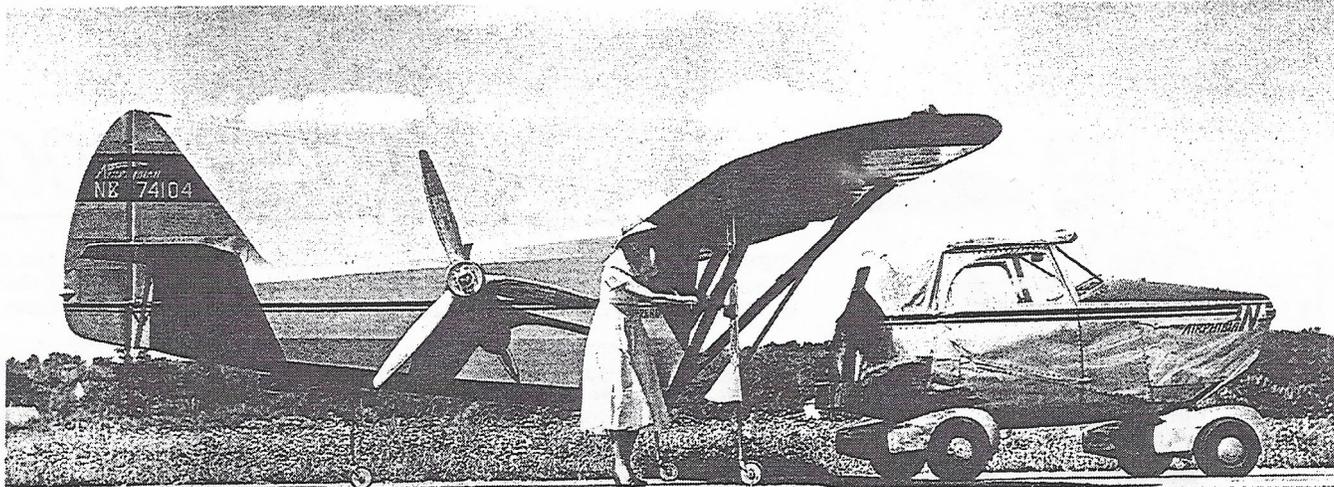
The rotor shaft for the top rotor went through the center of the shaft for the bottom rotor. The helicoptre's undercarriage had beveled gears on the bottoms of the rotor shafts, which were turned by two seven-horsepower Curtiss motorcycle engines. (The replica appears to have old Harley-Davidson engines.) The original Curtiss engines were twin-cylinder engines manufactured by Glenn H. Curtiss of Hammondsport, N. Y. In the early years of aviation, his engines were used on experimental aircraft, including powered balloons. This is the same Curtiss whose Curtiss pusher won the 1909 Gordon Bennett Race in Rheims, France, with a speed of 47.06 miles per hour.

The fixed-pitch rotor blades had five wooden spars joined together with wood to make trapezoid-shaped blades that were covered with fabric. Lifting loads were handled with wires attached to the bottoms of the blades, then to a fixture on the rotor shaft.

The inventors planned to divert propwash from the lower rotor blades for lateral control. They had two paddles, mounted vertically, on either side of the undercarriage. By changing the angle of these paddles, they planned to divert airflow forward or backward, causing the helicoptre to move accordingly. Side-to-side motion was to be controlled with



Museum miniature displays show life back in 1910 when William Purvis and Charles Wilson built their helicopter.



Here's What It Was!

Readers flew to the task answering last issue's "What in the World Is It?" photo puzzler.

LAST ISSUE, we asked readers for help in identifying the mysterious vehicle shown at right. (We knew it was some sort of auto/airplane combination but hoped to find out what *kind*.)

Reaction to that request indicates that *Reminisce* readers do, indeed, love a puzzle—to date we have received over 900 responses!

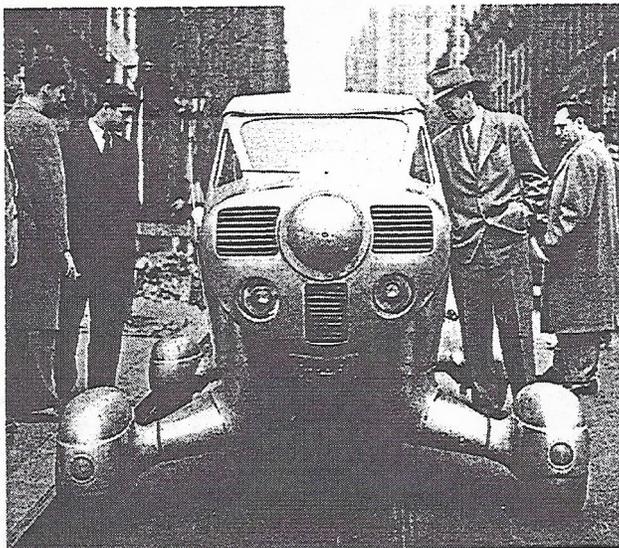
Answers varied from an "Airmobile" to an "Aerocoar", a "Flying Automobile", a "1946 Model 118 ConvAirCar", a "Waterman Aeromobile", a "Messerschmidt" and a "Stout Scarab Skycar".

Many of those car/plane combinations actually did exist, and some still fly today. But none of them is the craft shown in the photograph.

Many readers sent copies of aviation reference works or copies of articles from *Life* and *The Saturday Evening Post* that positively identify the vehicle as a Fulton Airphibian.

It's not surprising that readers had such a wide array of guesses. The first "roadable" car/plane was designed in 1918, and aviation buffs have tinkered with the idea ever since.

The Fulton Airphibian was built just after World War II in Danbury, Connecticut by Robert Edison Fulton Jr. (above), a descendant of the man who invented the steamboat.



Archive Photos



WHAT IT IS. The grounded airplane we asked readers to identify last issue (above, in the '40s) is the Airphibian, built by Robert Edison Fulton Jr. (left, today).

ever built. Today the only assembled Airphibian is owned by the Smithsonian Institution in Washington.

That may change soon, though—Robert Fulton (now in his late 80s) and his son are restoring an Airphibian near his home in Newton, Connecticut. If all goes well, by the time you read this, they'll have exhibited and flown the resurrected Airphibian at the national convention of the Experimental Aircraft Association in Oshkosh, Wisconsin in August.

We recently spoke with Robert, and he told us he would welcome any inquiries regarding this one-of-a-kind vehicle. Interested parties may contact him at 58 Orchard Hill Rd., Newton CT 06470.

Fulton's plane could reach a cruising speed of 110 mph. Once landed, its wings, propeller and rear fuselage detached (see photo above), leaving an aluminum-bodied convertible coupe that could be driven on the highway like any other car.

The idea behind the Airphibian (and other planes like it) was that people could fly to an airport near their jobs, then drive the rest of the way to work.

Some readers expressed doubts about that idea. John Pavlik of Thousand Oaks, California says, "Thank heavens it never came to pass—the thought of California's crazed drivers *flying* to work is truly scary!"

The Airphibian never went into mass production, and only half a dozen prototypes were

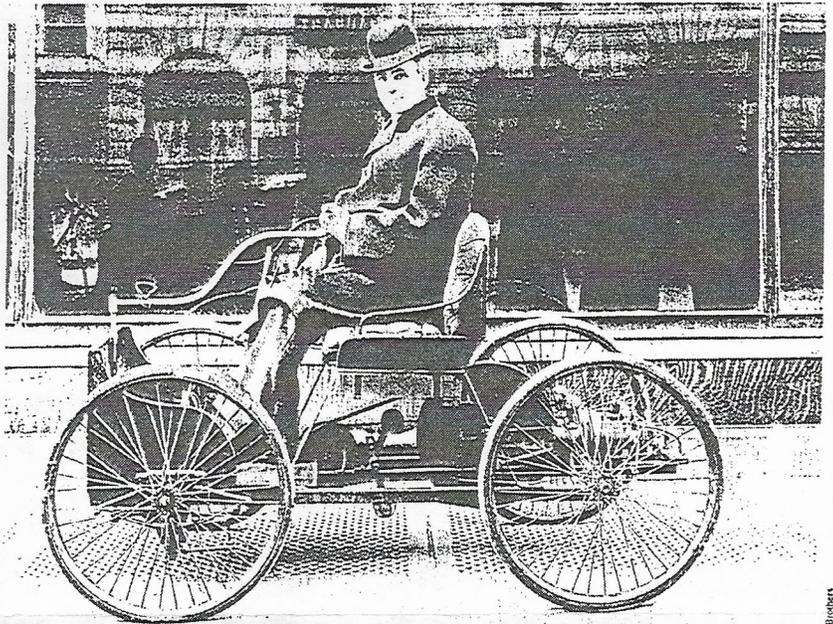
Early 1900s



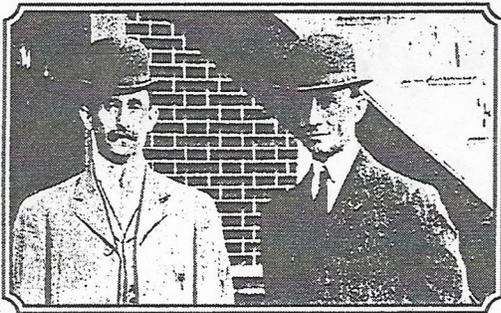
Frederick W. Vinton

"MY DAD raved about Eddie Rickenbacker (above). He told us of his career as a World War I ace and chauffeur to General Pershing—and how his plane later went down in the Pacific in 1942 and he survived in a life raft." —Estelle Barbalato, Grand Island, N.Y.

"HENRY FORD (below) was someone my father admired. Although we never had a Model T, Dad bought one of Ford's first tractors ('A superior machine,' he said). Our favorite song then was *Henry Made a Lady Out of Lizzie*." —Belle Brown, Bristol, Conn.

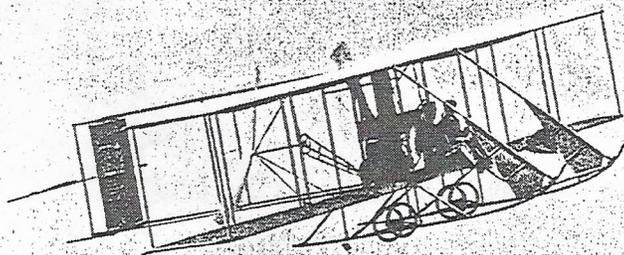


Brown Brothers



Ewing Galloway

"THESE PHOTOGRAPHS of the Wright brothers, at left and taking off on one of their flights below, remind me how the male members of our family would discuss their foresight and perseverance. Meanwhile, the women would just shudder and say, 'You will never, ever get me up in a plane!'" —Estelle Barbalato of Grand Island, New York



Brown Brothers

a rudder-like device over the rear wheel.

But did it fly? Here's the story, from the information the museum provides to visitors who come to view the 1910 helicopter:

"In 1909 two Rock Island machinists, William J. Purvis and Charles A. Wilson, began building what they hoped would become the Purvis-Wilson Flying Machine.

"By Thanksgiving of that year, the helicoptre was being stored in a square tower near the train yard's water tank. It was a curiosity to many with its long central shaft and twin sets of blades. Even without the two 7 horsepower gasoline engines needed to lift it skyward, the craft weighed in at 400 pounds.

"Due to lack of funds to purchase the necessary engines, the Goodland Aviation Company was created. \$30,000 worth of stock was issued to finance this last large expenditure. Enough stock was purchased to supply the missing parts.

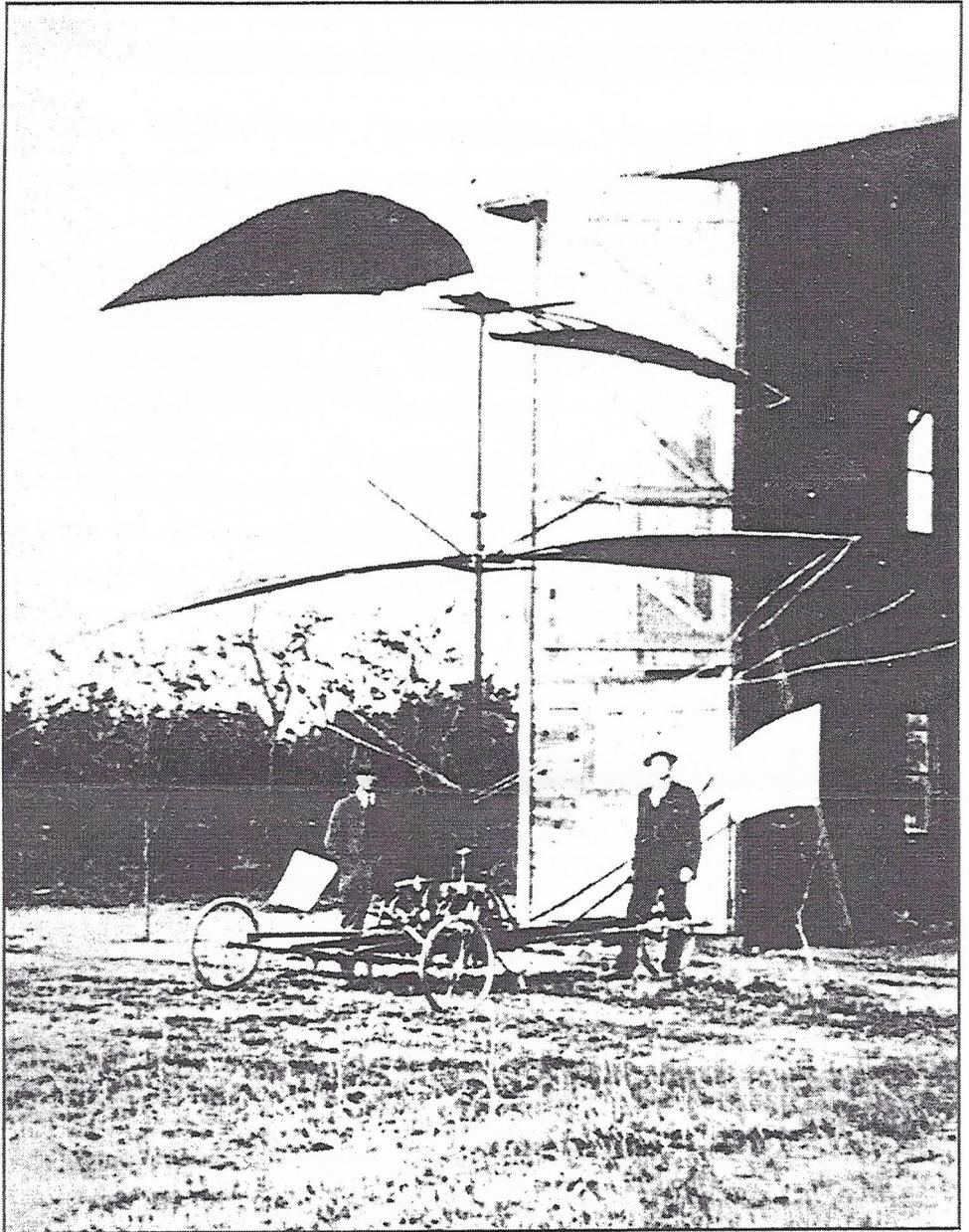
"There are two versions of the helicoptre's attempt at flight. One account says the June 1910 flight ended in failure because the two front-mounted Curtiss engines were too heavy for the craft's frame. During its flight a guy wire broke and the machine crashed.

"The alternate version reports that as the craft rose with the grace of a 'crippled praying mantis,' a sudden gust of wind propelled it into the water tower, destroying the water tower and the flying machine.

"Either of these versions was enough to discourage company stockholders, and although a patent was applied for on March 18, 1910, the helicoptre never flew again. Purvis and Wilson left town shortly after their invention's demise."

For \$2.50, the museum sells a delightful little book, "The Short Happy Life of the Kansas Flying Machine," by Mary Collett Farris. The book has a fictionalized account of the helicoptre's first flight, copies of the patent drawings, patent documentation, a photograph of the helicoptre, and a photograph of one of the original engines.

It's easy to look at the 1910 helicoptre from almost 80 years in the future and



In this 80-year-old photo, William Purvis and Charles Wilson pose with their helicopter.

predict that 14 horsepower wouldn't lift a 400-pound machine, the weight of two engines and a pilot. It's easy to look at the guy wires bracing the rotor blades and predict that the wires would break before the rotor blades achieved enough lift to fly. It's easy to predict that if it somehow did get off the ground, the 1910 helicoptre would be almost uncontrollable.

What is not easy to see from 80 years in the future is the kind of vision that led two railroad machinists to create, design, build and attempt to fly a helicoptre in 1910! If Purvis and Wilson lived to read about Sikorski's testing of the first con-

trollable helicoptre in 1938, I can almost hear them saying, "See! I told them it would fly!"

I can imagine how pleased they would be to see members of today's Popular Rotorcraft Association flying our helicopters and gyroplanes—even if we've forgotten the pioneering helicoptre efforts of Purvis and Wilson so long ago. 

