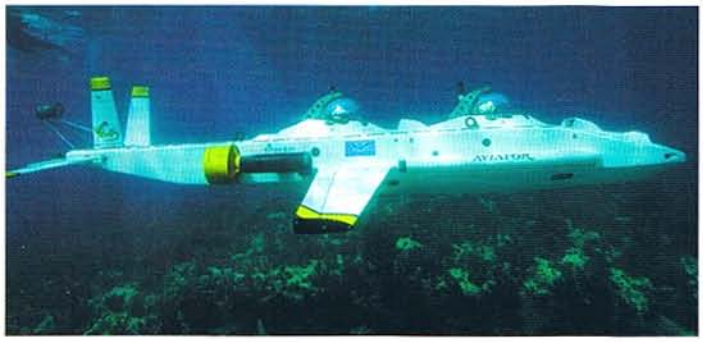
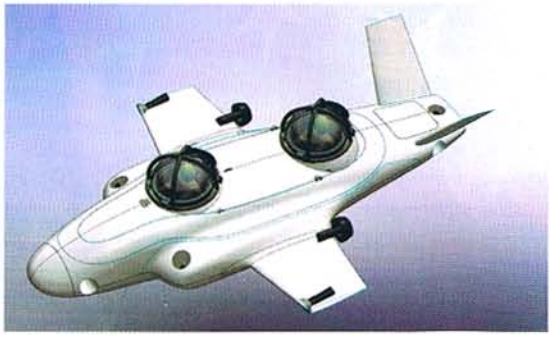
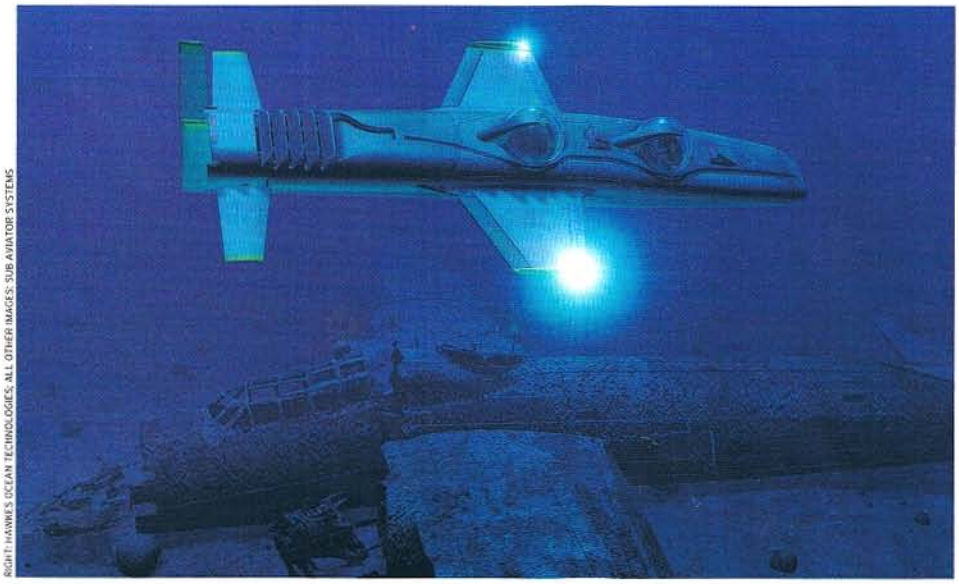
BRIEFING

Flying Underwater

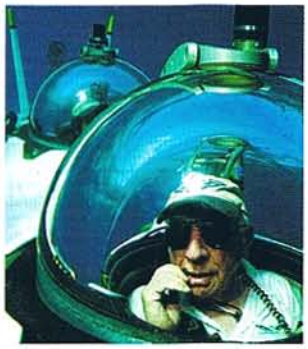






RIGHT: HAWKES OCEAN TECHNOLOGIES; ALL OTHER IMAGES: SUB AVIATOR SYSTEMS

Above left and below: The S.A.S. Aviator explores a reef during sea trials. The Aviator is an experimental precursor to the Orcasub, above. Left: In an artist's rendering, the H.O.T. Super Falcon overflies a wreck.



"Down, down, and away" is the call for a new breed of aviators who want to explore the wild blue yonder of the oceans. Imagine banking around wrecks and sharks, or pushing a joystick and rudders to pitch and roll near coral instead of clouds.

Two companies currently offer custom-built production models of personal submersibles with wings, tail fins, ailerons and propellers so pilots can "fly" underwater using aviation principles of lift and drag. Venture capitalist Tom Perkins commissioned Hawkes Ocean Technologies (H.O.T) to build its Deep Flight Super Falcon for him to use with his yacht. Sub Aviator Systems (S.A.S.), which partnered with undersea innovator Phil Nuytten, is awaiting orders for the Orcasub, with its Lloyds-approved parts and the capability to hover like a helicopter. With price tags ranging from $1.7 to $2.2 million, both the Falcon and Orcasub promise to be quieter, faster and more maneuverable than traditional submersibles, which use ballast and are more analogous to an airship or hot air balloon.

Aviation adventurer Steve Fossett wanted to add to his world records by solo flying to the "lowest elevation" in the ocean with the Deep Flight Challenger, specially designed to withstand the pressures of extreme depth. Graham Hawkes' invention was being taken from drawing board to reality when Fossett disappeared last year.

Both S.A.S (subaviators.com) and H.O.T. (deepflight.com) also offer underwater flight training in tropical locations. "You don't need to know how to swim or fly" to participate in an ocean flight school, says Karen Hawkes, Graham's wife and partner. "You just need a sense of adventure."

"We can't know who will be the Charles Lindbergh or Amelia Earhart of this century," says S.A.S. co-founder and managing director John Jo Lewis, "but their flight paths on this planet may well follow a course beneath the waves."

Lisa Sonne

MYSTERY SHIP ANSWER

The Fairchild XBQ-3 was a prototype unmanned assault drone based on the twin-engine AT-21 bomber crew trainer. Designed for use as an "aerial torpedo," it was intended to carry 4,000 pounds of high explosives and be directed to its target via radio commands from a control aircraft. Powered by two Ranger V-770 engines, the XBQ-3 first flew (with onboard pilots) in July 1944, but the program was canceled later that year.