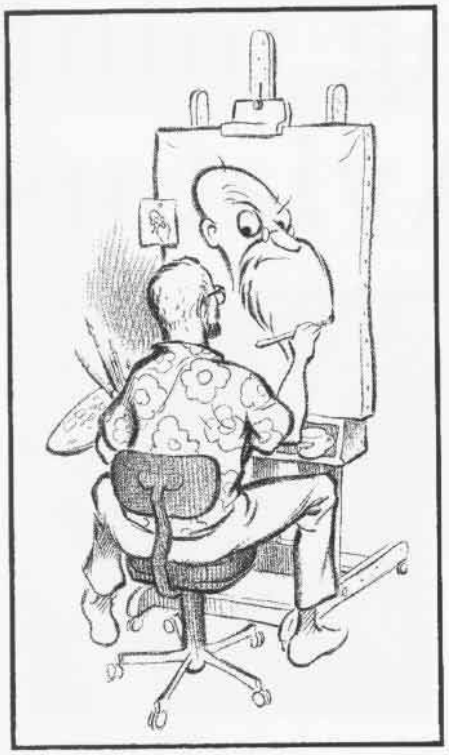
In this issue, Captain Ted Wilbur, USNR (Ret.), takes over as the illustrator of "Grampaw Pettibone," carrying on the heritage of the character's creator, Robert Osborn. Capt. Wilbur served for more than 30 years as a Naval Aviator, combat artist, editor and writer, with wide experience in public affairs. His artwork and articles have appeared in both military and civilian magazines; his paintings hang in the National Air and Space Museum and are part of the Navy's permanent art collection as well as private collections. Capt. Wilbur retired in 1981 as head of the *Naval Aviation News* and Naval Aviation History Office staffs.



Prowler Predicament

The four-man crew of an EA-6B *Prowler* was on a FAM (familiarization) flight, introductory to the squadron's defensive tactics syllabus. The *Prowler* was configured with three drop tanks and two pods. One of the three ECMOs (electronic countermeasures officers) on the flight requested a completely detailed briefing, because it had been over three months since the crew had flown the maneuvers anticipated on the hop. Procedures and techniques for flying FAM/BAM (basic aerial maneuvering) maneuvers were of special interest. These included an acceleration demo, hard-break turns and dynamic zoom. The dynamic zoom maneuver, however, was not authorized for this syllabus flight. It required a defensive tactics instructor in the pilot or right front seat. None of the crew was so qualified.

The dynamic zoom maneuver is commenced at 12,000–15,000 feet with a pushover to accelerate to 450 knots, followed by pulling the nose up and holding a nose-high attitude. Recovery is initiated at 15,000–17,000 feet or 250 knots, whichever comes first. The purpose of the dynamic zoom is to demonstrate correct pilot response to low airspeed, nose-high angle of attack situations and flight characteristics of the EA-6B in less than one-G but not negative-G flight.

During preflight, the pilot suggested to ECMO #1 the possibility of combining several maneuvers into one—the transient wing drop demo, then dynamic zoom to nose-high recovery and to nose-low recovery.

En route to the working area, the *Prowler* performed several maneuvers, which prompted the pilot to comment that the aircraft felt fat like a pig. ECMO #1 concurred. Also, acceleration from 300 to 400 knots, executed by pushing the stick forward to acquire zero-G flight, took 21 vice the normal 12 seconds. ECMO #1 felt the pilot had not imposed sufficient forward stick, but the pilot replied that five units of angle of attack (AOA) was obtained and held.

Reaching the center of the working area, the pilot briefed the crew that he would accelerate to demonstrate a transient wing drop, then make a four-G pull-up into a dynamic zoom, going into the nose-high and then nose-low recoveries.

At 9,000 feet, after reaching .84 Mach, the pilot pulled up. A slight wing drop ensued and the pilot reported the transient wing drop demo complete. As the aircraft passed through 12,000 feet, the pilot reinitiated a four-G pull into the dynamic zoom. With the *Prowler* going through 16,000 feet, ECMO #1 looked down and right to readjust his chart, kneeboard and nav bag, expecting to feel the sensation of a slight negative-G pushover. However, the nose kept going up into the vertical.

ECMO #1 noted the gyro indicating the EA-6B was at 90 degrees nose up, airspeed 250. The pilot pushed the stick forward in a motion which ECMO #1 felt was abrupt. The pilot said he had zero units on the AOA indicator and began adjusting the control column fore and aft, attempting to stabilize the *Prowler* at five units AOA. ECMO #1 did not feel forward stick pressure as the pilot searched for five units AOA.

The control stick felt mushy to the pilot. The aircraft topped out at 22,000 feet. All crew members felt as if the aircraft had stopped in midair, on its tail.

A moment later, the aircraft experienced a slight back slide sensation nearing 18,000 feet. Subsequently, the *Prowler* fell off to the left with AOA at 30 units and shortly thereafter took a quick slice down through the horizon.

The pilot neutralized the controls but the nose continued downward and the aircraft began to turn. Although the *Prowler* presumably was in a post-stall gyration, the pilot activated the spin recovery switch and began spin recovery techniques. Crew members felt alternating positive and negative Gs.

The nose now seemed to move at will, the turn being rapid and rather violent. The pilot could not gain control of the *Prowler*. Airspeed slowed to 150 knots with the EA-6B heading downward, the nose 80 degrees below the horizon. Nose movement pinned the pilot and ECMO #1 to the left and slightly up out of their seats.

Approaching 11,000 feet, the pilot grabbed his lower ejection handle and initiated the ejection sequence—without verbal or hand-signal warnings to the crew.

ECMO #1, expecting ejection at 10,000 feet, was caught leaning left as he went out, amputating the five fingers of his left hand as he struck the canopy bow. ECMO #2 also struck the canopy, suffering deep bruises. Other crewmen had cuts and abrasions. All four ejections were otherwise successful.

The aircraft fell to the earth nose down, turning most of the way, before exploding on impact.

Grampaw Pettibone says:

Great Jumpin' Jehoshaphat! What a waste of a perfectly fine flyin' machine!

These folks weren't supposed to do a dynamic zoom to begin with. Secondly, the briefing on the maneuver wasn't specific enough. Parameters weren't covered properly. The maneuver begins at 60 degrees nose up, not vertical, as the pilot had thought. On top of that, none of the crew knew the dynamic zoom maneuver was *not* part of the FAM. All three ECMOs failed to ask for details of the maneuver and all assumed the pilot was familiar with procedures.

By not stopping nose movement at the 60-degree point on the pull-up, the pilot introduced that old demon "trouble" to the flight. The pilot also failed to maintain constant forward control stick pressure during the crew's initial recovery attempt.

The crew was experiencing a post-stall gyration not a spin. They started anti-spin procedures too soon.

About that ejection ... the pilot didn't give notice that he was punching out. Injuries might have been minimized had he done so.

Bad show all around. Bottom line: brief better, fly better. You owe it to the aircraft as much as to yourselves.

Hot Stick, Hot Switch

An SH-2F Seasprite pilot returned to sea duty after an instructor tour in the FRS (fleet readiness squadron). He described himself, albeit facetiously, as "Joe Hot-Stick Aviator" because he had become extremely proficient in the SH-2F during his instructor tour. He looked forward with great confidence to his assignment as Det Officer in Charge aboard ship. Moreover, his three junior pilots and two aircrewmen had been his students at the FRS. He felt "bulletproof."

At sea, he was tasked to VERTREP (vertical replenishment) a canned torpedo from a supply ship without a landing area to his home plate. Although he had not executed a VERTREP in two years, he had no reservations about same.

Approaching the ship, the crew conducted the HOIST/HIFR (helicopter in-flight refueling)/VERTREP checklist, emphasizing hoisting. The hoist-cable-cut switch was set in the armed position. (The switch's opposite position is VERTREP sling-drop-power.) The hoist was lowered to deliver the cargo pendant for the torpedo can.

The supply ship crew had attached an H-46 helicopter pendant to the load, which was too large for the SH-2F's cargo hook, but the evolution began nonetheless.

The aircrewman in the *Seasprite* lay flat on his stomach with his head out the door to witness the cargo hookup. The deck crew tried to jam the oversized pendant onto the small hook. Observing this, the aircrewman called for "load release" to prevent the pendant from jamming the helo's hook. The pilot quickly punched the sling-drop button to release the VERTREP load. He had forgotten that he had left it in the hoist-cable-cut position.

The hoist hook and a small amount of cable narrowly missed striking the prone aircrewman on the head as they separated from the hoist boom—which is normal when the cable-cut is selected and the button depressed. The pilot then released VERTREP load from the cargo hook using the manual release.

Grampaw Pettibone says:

Another near miss!

This "ace" pilot failed to complete the HOIST/HIFR/VERTREP checklist the second time after completing the first evolution (hoisting). Prior to the second evolution (VERTREP), he failed to change the position of the cable-cut/sling-drop power switch.

Had the hook and section of cable whacked the aircrewman on the noggin, they mighta had a very serious customer in the nearest sick bay. Or worse.

Checklists are the roots to success in Naval Air. They can also be the roots of disaster if you don't use 'em properly.

(A tip of Gramps' cloth helmet to LCdr. Ken Taylor for contributing this story.)