NAVAL AVIATION

NEWS

Special Report:

The Bronco After One Year

50th Year of Publication

SEPTEMBER 1969

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NAVAL AVIATION NEWS

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Deputy Chief of Naval Operations (Air)

FEATURES

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COVERS

The front cover picture of an OV-10A Bronco over South Vietnam's Mekong Delta was shot by PHC Arthur Hill. PH1 Robert W. Milton shot the above launch while on an assignment from Atlantic Fleet Combat Camera Group.

NATO ANNIVERSARY

A Marine Corps H-53 Sea Stallion prepares for a dawn launch from the USS Saratoga (CVA-60) in the Atlantic. The occasion, early this summer, was an air and seapower demonstration in recognition of the 20th anniversary of North Atlantic Treaty Organization. U.S., Canadian and Netherlands forces took part.

EDITOR'S CORNER

Tired Blood Cure. Ever wonder what a civilian might think if he had a chance to personally experience cats and traps on a carrier? Earl B. Dowdy, assistant editor of the *Detroit News* gave us his impressions:

One of the greatest thrills man has devised to cure tired blood is to make a tailhook landing on an aircraft carrier. An even greater one is to catapult from it with the speed of a rocket.

. . . We flew out from NAS North Island, 150 miles, to the 90,000-ton nuclear-powered carrier, *USS Enterprise.* The 4.5-acre deck of the *Big E* is the largest in the world. But circling at a height of two miles, it seems like a toy boat in a bathtub.

Just before the final approach, the crew chief of our twin-engine C-1A patrol bomber laced us up with seat and shoulder harness straps as tightly as a saddle on a bucking bronco. "Take off your sunglasses, cap and anything else that might come loose," he shouted.

"Brace your feet and shove yourself back against the seat. And don't undo the belts until the engines are turned off, in case we have to bolt off the deck.

"But don't worry," the teenaged sailor added with a mischievous, Mickey Rooney grin. "We almost always grab the arresting cable the first time around."

No need for the warning to hang on tightly. Our hands were gripped so firmly around the seat that one felt strong enough to tear a telephone book into shreds.

Now the waves beneath us raced by dizzily and seemed to be lapping at the landing gear. The pilot pulled the nose up slightly to drop the tail, gunning the engines. Then, with an ear-splitting roar and one quick bounce over the first cable, we slammed onto the deck as though hitting a brick wall.

The tail jerked up and — BAMM! — our trussed-up bodies strained against the bulky, binding Mae West life jackets. Had it not been for the net of heavy web straps, we would have hurtled through the cockpit window.

It was over, suddenly and, surprisingly, painlessly.

When it was time to leave the *Big E,* we cinched up even tighter, for this would be equivalent to being fired out of a cannon.

There was a half-hour wait on the edge of the deck, our windows looking down on the mile-deep water below, while a squadron of supersonic jets blasted off with their afterburners bellowing fire for maximum power. The roar shook our little plane like a pea in a snare drum. The launch would be even more dangerous for us, with only piston engines and propellers to gain altitude as we dropped off the bow.

Finally the cat director pointed our pilot onto the launching track, and the catapult handlers scrambled beneath the props to hook us up to what has been described as a "hydraulic slingshot."

There was no time left now to back out, even if one would risk the shame, and it was too noisy to say anything, anyway — except the Lord's Prayer, twice for good measure.

At last the cat director raised his baton, waving it in a furious circle overhead to indicate the pilot should rev up his engines to full pitch. Then he dropped it in the signal to cut us loose and . . . WHAM-M-M! . . . out, down and back up we roared as our bodies tore against the seat harness under a pull of gravity which would have hurled an unrestrained object through the fuselage bulkhead.

CRAA-CK . . . came a terrifying sound like a pistol shot, as a sliver of metal whizzed inches past this passenger's head with the force of a bullet, slamming into the after compartment hatch. It was a can opener, apparently forgotten by a mechanic after opening a cold lunch.

By the time a state of relative calm had returned, we were winging back over an azure-blue ocean dotted with playful, jumping porpoises. They brought a chuckle which relaxed the nerves and within a few hours, back at North Island, the two most thrilling events of this writer's career had already begun to seem unreal.

My wife tells me it sounds something like childbirth. "That's pretty frightening, too, but you get over it," she said with the experience of seven trips to the delivery room launching pad.

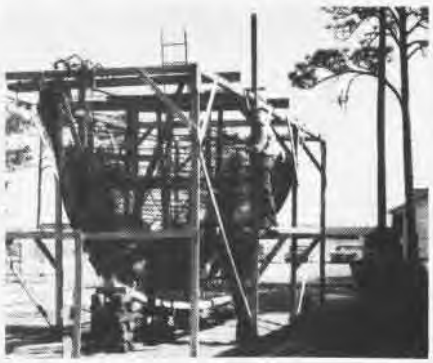
IT FLOATS! Cynics who shook their heads in disbelief when RD3's Zan Ricketson and Dennis Hebert began constructing a concrete sailboat at NAS Glynco may now go to the foot of the class. It floats!

Christened "Serendipity," the 32-foot cutter splashed off on her maiden voyage on a gray, muggy day brightened by a festive inaugural party at the Georgia State Docks in Brunswick. Dubbed "Wild Duck" in her building stages, the cutter was the brainchild of Ricketson, whose interest in sailboats was strengthened during two years at the New York Maritime College and cruises aboard a 60-foot schooner.

Of all steel tubular construction, Serendipity is covered with concrete-plastered steel wire mesh. Included in her colorful construction are gratings from the quarterdecks of the USS *Leyte* and paint from surplus stock.

As bystanders watched with wary eyes while the red and white boat settled into choppy water, Ricketson and Hebert appeared calm. "We knew she'd float all along," they claimed.

—By Kaye Cotton



THE NEW NAVY? *According to an NAS Barber's Point, Hawaii, release, a quartet of "air Waves" posed for this picture to demonstrate the parts they play in Naval Aviation. PH3 Linda Wood is ready to take an A-4 pilot's picture as he returns from a mission; PN3 Terry McConaughy stands by to record another Air Medal in his personnel jacket; HM3 Vivian Rich will check his blood pressure and AC3 Barbara Harrell will close out his flight plan.*

IT'S YOUR AIRPLANE.

INSPECT IT . . . like you were going to buy it for cash – with no guarantee.

START IT . . . like an evening on the town – with a careful look around.

TAXI IT . . . like the aerial tightrope walker . . . when he puts his foot down he knows there's a wire under it.

TAKE IT OFF . . . like you tried to do on your safe-for-solo check; you've learned how since then . . . haven't you?

FLY IT . . . like the first time you drove that red convertible creampuff home from the showroom – kept a good lookout, didn't you?

LAND IT . . . like the last box of eggs on earth was lying loose in the cargo hole.

SHUT IT DOWN . . . like the skipper and CAG were standing out there alongside the taximan, waiting to give you the Pilot of the Month Award.

WRITE IT UP . . . like you were getting paid ten cents a word, not like it was costing you ten cents a word.

—2nd Marine Air Wing

Letters

One Answer

Re Ltjg. James C. Kinney's letter in June *NANews*.

Several nuggets ordered to Fleet Air Reconnaissance Squadron One to fill the right seat of the EA-3B (then A3D-2Q) during the early Sixties were designed as electronics countermeasures aircraft commanders while still jaygees. Some of those who I believe were designated ECAC prior to being promoted to lieutenant were Darrel Troutman, Bob Babbis (now with the reserves), and Bob Kornegay and Jack Leverette (both deceased). I preceded these gents by about a year, being designated ECAC on April 13, 1961.

In another category was Commander Jack Taylor, soon to be X.O. of VQ-2. An ex-AP, he pretty much headed up VQ-1's transition to the EA-3 while still a lieutenant junior grade. He, Chuck Weitrich, Wayne Osgood and I ferried the squadron's first two EA-3's from Whidbey Island to Iwakuni, Japan, on March 5 and 6, 1960.

For information on what was happening in VQ-2 during this time, I suggest you contact LCdr. Stern Bolte, now with RVAH-5.

Ronald K. Blackner
RVAH-7

And Another

As commanding officer of VAH-123, I thank you on behalf of the officers and men for the article that appeared in the June issue of *Naval Aviation News*. The personnel of this squadron give unselfishly of their time, effort and talents. They make VAH-123 the truly "Professional" squadron that it is. It is certainly a tribute to them – and for them – to read about their accomplishments in *Naval Aviation News*.

There was one error I would like to invite your attention to. The article stated VAH-123 graduated 47 pilots in 1968; however, our squadron, in fact, trained and graduated 89 pilots.

I noticed, in the same edition of your magazine, Ltjg. J. C. Kinney's letter, Question of a First. During fiscal year 1969 our squadron was privileged to have ten nuggets undergo training before reporting to fleet squadrons. I am sure each of these nuggets is doing a superb job serving the fleet as an A-3 series plane commander. Although most of these nuggets are assigned to squadrons operating the KA-3B and EKA-3B, some have gone to or are in training for further assignment to RA-3B and EA-3B squadrons.

Again, thanks for honoring VAH-123 on the occasion of its tenth birthday.

D. K. Forbes, Cdr.

Good, but not that Good

VRC-50 appreciates your printing a complimentary article on page three of your May 1969 issue which describes some rather amazing accomplishments. We wish to clarify a few points.

The "unique exercise" mentioned, in which VRC-50 amassed 102 carrier landings while serving six carriers in a mere 13½ hour period, was not really unique. It was just a normal day's carrier-onboard-delivery work which happened to include a carrier qualification period aboard the USS *Coral Sea*.

The article may have given the impression that VRC-50, with four C-2A aircraft, made 102 *trips* between Cubi Point, Philippines, and Yankee Station carriers 750 miles away (in adverse weather conditions no less). We like to think that the service we provide the U.S. Seventh Fleet is the fastest possible and we know the C-2A is the best COD bird flying but that kind of a record is still out of our reach. We'll keep trying!

We regret that the fine publicity afforded by your magazine proved, in this instance, misleading. We will guard against the release of such items in the future.

E. E. Guffey
C. O. of VRC-50

Were you born to fly?

Not everyone is. It takes a blend of brains, drive, and dedication. We're looking for men like this for the Navy Air Team, men who are Doers.

If you measure up, we'll teach you all the skills demanded to handle our sophisticated aircraft. When we're through, you'll have your Wings of Gold and a commission as a Naval Officer. So it works both ways. You get an aeronautical education and a career. And we get another born flyer.

If you're going to be something why not be something special?

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Navy Yard
Washington, D.C. 20390

The Navy

NAVAL AVIATION NEWS

AFTA Course Begins at Memphis

Called a 'Dynamic Avionics Program'

Fifty-two students have begun training in the Advanced First Term Avionics (AFTA) Program recently opened at NATTC Memphis. AFTA is the newest six-year-obligation program.

With a planned staff of about 170 instructors, the course is expected to have a weekly input of 43 students, with almost 1,000 on board when the program is presented on a national recruiting level. Students in the four classes now enrolled were recruited from the avionics fundamentals course.

Lt. J. V. Orlando, course officer, called the 26 weeks of training a "dynamic avionics program."

AFTA will provide advanced avionics training to Navy and Marine Corps first term enlistees who are obligated for six years. Preceded by a 20-week avionics fundamentals course, it will give students additional training in electronics theory, basic and complex circuit analysis, and application of standard test equipment. Upon graduation, the students will be able to perform the technical duties of a PO2.

The course is divided into six weeks of specialized training in either the AQ or AT ratings and 20 weeks of advanced avionics training.

During the specialized phase, AT's study airborne radar and navigation principles while AQ's train in airborne search-and-track radar theory and weapon systems. Upon completion of this phase, the student is automatically advanced to PO3 if he meets all other military requirements.

Avionics maintenance is the theme of the final 20 weeks of advanced training. The theory and techniques taught in the fundamentals course are applied to the actual repair of equipment as performed in the fleet.

THE NAVY *took delivery of its newest A-7, the A-7E light attack aircraft, on July 14 at Ling Temco Vought Aerospace Corporation's Grand Prairie plant. Mr. Forbes Mann, president of LTV's Aeronautics Division, turned the first A-7E over to Commander Marvin Quaid, C.O. of VA-122, NAS Lemoore, Calif. VA-122 is the pilot training squadron for the Pacific Fleet. The newest Corsair was specifically designed for precision air support of front line troops and for tactical zone bombing. It is the first Navy aircraft to use a fully integrated, computer-oriented avionics system for navigation and weapons delivery. The A-7, built in three versions, A, B and D, for the Navy, and one, D, for the Air Force, was first flown in September 1965. The older A-7's accumulated their 200,000th flight-hour the same week.*

Miramar AirOps Sets a Record

3,970 Aircraft Handled by PAR Unit

June was a month of records for NAS Miramar's air operations department. Many cloudy days and the heavy fleet training program resulted in an extremely busy air traffic control situation for the radar air traffic control center (RATCC).

The precision approach radar (PAR) unit, which provides final guidance to pilots during landings, aided 3,970 aircraft, an all-time record for any month. The old record of 3,592 approaches was set last October.

Breaking the old PAR record with approach # 3,593 was a VF-121 student, Ltjg. Jim Hartnett, in an F-4J *Phantom*. The PAR controller was AC1 John Fraley.

Two other records were set in June. San Diego's approach control, located in Miramar's RATCC, established a double record with 21,604 instrument operations during the month, plus a daily high of 250 PAR runs.

Miramar's all weather carrier landing system training unit established a record with 10,000 training approaches. The unit provides indoctrination and training to pilots and controllers in the operation of the newest concept in landing aboard aircraft carriers.

VT-1 Flight 13 Sets a Record

Amasses 100,000 Accident-Free Hours

Flight 13, one of Training Squadron One's four flights, has reached a record in Naval Aviation safety that is difficult to believe and seemingly impossible to accomplish: More than 100,000 accident-free syllabus flight hours flown by instructors and students. VT-1, NAS Saufley Field, flies T-34B's.

The record encompasses almost five years of instruction and training and is equal to more than 11½ years of flight by a single aircraft.

Speaking of the 100,000 flight hours, LCdr. F. J. Moran, Jr., flight leader of Flight 13, said, "The new tally was carried out with an atmosphere of professionalism that is a credit to all concerned. Only through a conscious effort to produce the best students and to adhere strictly to flight training instructions was Flight 13 able to set this record."

Commander J. D. Libey, VT-1 C. O., congratulated LCdr. D. B. Barrigar and student aviator, Ens. J. F. McFillin, Jr., who flew the record hour.

Naval Test Pilot School Expands

Sail Planes Are Added to Curriculum

With the delivery of gliders to the Naval Test Pilot School, NAS Patuxent River, Md., a course on soaring has been added to the curriculum.

The school trains experienced aviators, naval flight officers and engineers as engineering test pilots and test project officers. While there is a certain amount of specialization, both fixed-wing and rotary-wing students are able to fly all the aircraft on board.

The eight-month course of instruction is divided into academic and flight phases. Half of each working day is spent in the classroom studying aerodynamic engineering subjects and the remainder of the day is devoted to test planning and flying test flights in all types of naval airplanes and helicopters.

Qualified naval officers interested in attending the Test Pilot School should submit their applications in accordance with BuPers Instruction 1331.3F.

THE SECRETARY *of the Navy recently announced that the Navy's new S-3A carrier-based, all-weather ASW aircraft will be developed by Lockheed Aircraft Corporation, Burbank, Calif. The $461 million contract calls for production of six R&D aircraft with an option for the Navy to purchase 193 production models. Powered by two GE TF-34 engines, the S-3A will have a range of over 2,000 miles and be capable of speeds in excess of 400 knots. It is scheduled to replace the S-2 Tracker which has been in service for more than 15 years.*

Training Unit Gets Equipment

Will Improve Training for the Fleet

The Aviation Physiological Training Unit at NAS Barber's Point, Hawaii, which trains all Pacific-based military personnel in the use of the low-pressure chamber, night vision and the ejection seat, has added three more training devices to its program: a parachute drop, a helicopter air-sea-land rescue net and a jungle penetrator.

The three-foot parachute drop, simulating a parachute caught in a tree, provides practice in landing techniques and releasement of the fittings.

The rescue net is designed for helicopter rescue of one or two persons, from land or sea. It holds up to 1,400 pounds and can carry more in an emergency. It is so constructed that once a man is in it, he cannot fall out, making it ideal for the movement of unconscious personnel.

The jungle penetrator is used to rescue personnel from dense undergrowth. Two unconscious or conscious people can be strapped on it and are protected by an umbrella-like fiberglass shield during ascent (*NANews*, June 1968, p. 3).

Tailhook Reunion

Captain Hugh J. Tate, C.O. of VRF-32, NAS North Island, chairman of the 13th Annual Tailhook Reunion, has announced a contest in connection with the get-together.

All Tailhookers are invited to submit their most creative, original design for a tailhook insignia patch which "will recognize and emphasize the elite nature of carrier aviation."

The design motif must be symbolic of the "Tailhook Navy." It may be submitted in any size – suitable for reduction to 5x5 inches – and in color or black and white. It should not bear a date.

All designs – more than one may be submitted – must reach the Tailhook Secretary, VRF-32, NAS North Island, San Diego, Calif. 92135, by September 15.

This year's reunion will be held at the International Hotel in Las Vegas, Nev., October 3-5 (*NANews*, July 1969, p. 3).

GRAMPAW PETTIBONE

For Want of a Nail

Two F-4 *Phantom II's* departed a coastal air station IFR for a training mission on top of the overcast, which involved combat formation practice, tail chase and air combat maneuvering. After completing individually controlled climbouts and breaking out on top of the clouds at 13,000 feet, the flight rendezvoused at a pre-arranged bearing and distance from home plate.

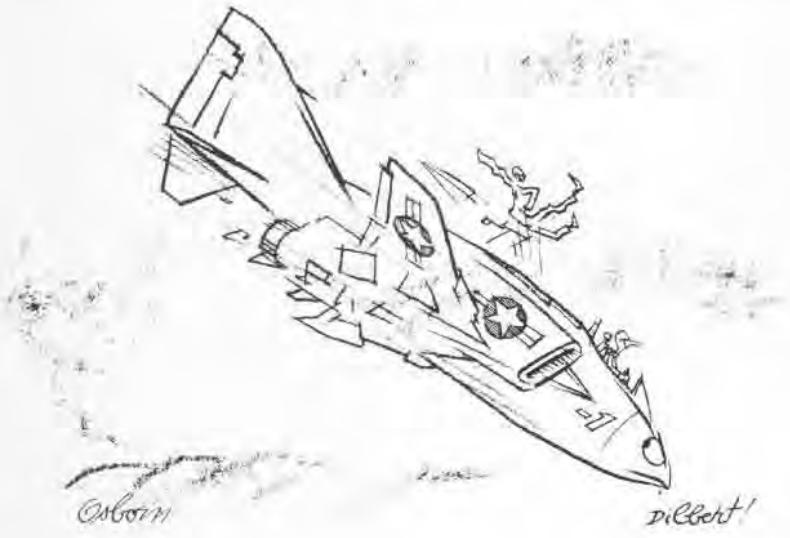
The two crews spent nearly an hour performing various turns and engagements, practiced formations and then broke into separate elements for individual TACAN penetrations to the naval air station. Approach Control put them into holding at separate altitudes and, after three circuits around the pattern, the wingman was cleared to descend for his TACAN approach.

During the penetration, the *Phantom* went into the soup at 13,000 feet. While still outbound, the pilot, a lieutenant, was given a vector by Approach Control and held at 9,000 feet. Reaching 22 miles, still in the clouds, the F-4 was cleared for a penetration turn. Starting his turn, the pilot noted his airspeed decreasing through 220 knots. He immediately lowered the nose of the aircraft, leveled the wings and went to military power. The radar intercept officer (RIO) in the back seat, watching the gyro horizon, yelled, "Your nose is low, pull it up! You're losing altitude." As the airspeed went to zero with the altitude decreasing rapidly, the lieutenant called for the RIO to eject. This the RIO promptly did, without even positioning himself properly in the seat, as the aircraft passed 7,400 feet.

The pilot then took his hands off the stick and pulled the face curtain with both hands. Nothing happened, so he pulled it twice again and then tried the alternate handle without effect. Realizing that he had to fly the airplane or else, he looked at the gyro horizon, leveled his wings, lit the afterburner and pulled back on the stick.

The F-4 broke out into VFR conditions at 13,500 feet msl with an 80° nose-up attitude as the front canopy separated from the aircraft. Executing a wing-over recovery to level flight and regaining control, the pilot noted that his airspeed was still zero. He thereupon turned on the *pitot heat* and regained his airspeed indication. The lieutenant soon found a break in the clouds and returned to the field VFR for a normal landing.

His poor RIO fared not so well. The high-speed ejection caused flail fractures of his left arm; the rocky landing fractured both his knees. He spent a wet cold hour in the brush awaiting helicopter rescue.



Grampaw Pettibone says:

Great balls o' fire! A two-and-half-million-dollar airplane almost lost because two people couldn't bother with the descent checklist. The U.S. Navy has too much at stake to condone this sort'a amateurish operation. Yes, people will make mistakes. That's why we have checklists but we've got to use them. I hope these guys aren't still flyin', cause if they are I sure don't want'a fly with 'em.

Skippin' a checkoff list may save 40 seconds in this world only to precipitate an arrival 40 years too early in the next.

ILLUSTRATED BY Osborn

Brush-off

The twenty-two *Typhoon Hunters* gathered at base ops at 1400 to be briefed on an assigned weather reconnaissance flight through tropical storm *Julie*. The crew had made an investigative flight through the same storm the day before and had found it small but growing.

The plan was to penetrate at low level (1,500 feet msl), then to make a climb-and-ascent sounding in the eye, escaping at the 700-millibar level (10,000 feet). The latest report (six hours prior) showed about 55-knot maximum winds. It looked like a routine flight.

The WC-121N *Super Constellation* lifted off from the Pacific island base at 1658. The storm was sighted at about 200-nm range. After a conference between the aircraft commander (AC), combat information center officer (CICO) and flight meteorologist (Metro) concerning the radar presentation and the characteristics of the storm, they decided to proceed with their previous plan.

At a distance of 70 miles, the AC took a last look at the radar and then took control of the aircraft.

The cabin was checked and the crew briefed. The wind and turbulence became more intense, so the power was increased to 2,600 rpm. The flight engineer was instructed to maintain 190 knots airspeed. Visibility in the darkness varied between zero to a half mile in and out of the clouds.

The CICO gave vectors to bring the aircraft to the storm eye. As they approached, Metro, observing winds of 80 to 90 knots, recommended heading changes to keep the wind off the port wing. At this time, the CICO's primary radar console failed, and it was necessary to move to the secondary scope which had not been set up as a back-up for the penetration. Reorientation of the scope, including a grease pencil sketch of the wall cloud, proceeded with some difficulty, owing to sea return and clutter, but it was accomplished in nine to 12 minutes. Metro visually observed the surface winds at an estimated 100 knots with a drift of over 30 degrees as they continued the search for the wind eye.

The heavy rain and turbulence continued until the surface wind velocity decreased. Shortly, the wind became completely calm, then almost immediately began increasing from the opposite direction. When the wind shifted, Metro recommended a 180-degree turn in whichever direction was best. CICO advised that he had heavy weather to starboard and called for a turn to port, then urged a hard port turn as the wall cloud became visible on the radar.

The pilot rolled the *Willie Victor* into a 20-degree-bank port turn and suddenly encountered the wall cloud turbulence. The first jolt caused the aircraft to vibrate so severely that the AC believed he was experiencing prestall shudder. Maximum power was ordered and set. As the aircraft rolled out on the escape heading, another shock of equal severity caused the airspeed to vary by 50 knots and altitude by 800 feet. The copilot came on the controls with the AC as the large craft became almost uncontrollable.

After about a minute, the turbulence and downpour subsided. The flight steadied down on heading for a climb to 10,000 feet. The third pilot was sent aft to check for injuries and damage.

Fortunately, no one was hurt. However, on his return to the cockpit, the third pilot observed blue sparks flashing in the vicinity of the starboard wing tip. When the over-wing lights were turned on, it was discovered that the starboard wingtip and the tip tank were missing.

The wingtip lights were secured and the other tip tank was emptied. No other difficulties were encountered, but the aircraft required five-degree right aileron and three-degree left rudder trim to maintain level flight. A normal landing was executed upon arrival at home base.

Grampaw Pettibone says:

Brrrr! Never underestimate the fury of a woman scorned! That wild young lady really gave those boys the brush-off. Though procedures were "standard throughout," I get the feelin' these boys may have become a little complacent and lacked adequate respect for a very unpredictable situation.

Loss of the radar left the flight literally gropin' in the dark for over ten minutes. Why wasn't the standby radar tuned up? Why was the flight seven knots over recommended turbulence penetration airspeed? Even a slight variation may become critical when you run into extreme conditions. Ol' Gramps wants all the chips in his corner on a mission like this one.

A COMMENTARY
By Ed Heinemann

ATTACK AIRCRAFT

During World War I, the effectiveness of the airplane against ground and sea targets became obvious. One of the first serious exponents of air power was Brigadier General Billy Mitchell. His demonstrations during 1921-23 of an airplane's potential in sinking naval vessels had a lot to do with the recognition of the airplane's changing future.

The potential value of ground attack was demonstrated by the U.S. Army Air Force before WW II with

Art Schoeni

such airplanes as the A-17 and during and after WW II with the A-20 and A-26, now the B-26. The Germans, also recognizing the use of the airplane against military targets, developed the Stuka dive bomber which, as close air support of ground troops, was very effective in the Spanish Civil War and during the early campaigns of WW II.

The U.S. Navy developed the BT* and its successor, the SBD *Dauntless*. The *Dauntless*, which was built during the war years at a peak rate of 21 per day, amply demonstrated the advantage of using the airplane against discrete targets and is credited with stopping the Japanese fleet in the Battle of Midway. The Curtiss SB2C *Helldiver*, which succeeded the SBD, also played an important role in the WW II Pacific campaigns.

The *Dauntless* successors, the AD (now A-1), the A-4 light attack, the A-6 and the A-7, and F-111 – all used in Vietnam – have continued to demonstrate the value of the airplane in this role. Call them what you will – attack, ground support, dive bomber, interdiction, fire suppression, etc. – the fact remains that the use of the airplane against specific military ground targets is a distinct role calling for special characteristics peculiar to

*Dive bombing as practiced by the Navy in WW II can be traced back to Navy fighter/bomber squadrons of the late Twenties. Several Navy dive bombers preceded the BT-1 which was one of the first Navy monoplane dive bombers to reach the fleet.

ATTACK AIRCRAFT

Left: A-4 releases 2,000-lb. bomb on South Vietnamese target. Right: A flight of VA-35 A-1 Skyraiders.

a type generally described as attack aircraft.

The attack aircraft differs considerably from the fighter or interceptor. In the case of the fighter, the principal purpose is generally air superiority over an adversary. Therefore, speed is the dominant requirement, with rate of climb and maneuverability close seconds. The attack aircraft, on the other hand, because it is used against slower surface vehicles and stationary targets, has less need for speed and a greater need for a dive, glide and low-level "contact flying" capability with high bomb loads over long ranges. The attack aircraft also differs from the strategic bomber which usually has greater range and is used for horizontal, high-altitude, area bombing missions.

Fighters have sometimes had to be used for attack purposes in recent years because new attack airplanes haven't been developed and those that were available have been either older types or reworked fighters. The age of attack airplanes can be seen by the *concept dates* as follows:

B-26	1941
A-1	1944
A-4	1952
A-6	1958
F-111	1962
A-7	1964

The design procedure for the early reciprocating engine-powered attack machines was relatively simple. The airplane was laid out with the largest engine available, provided with sufficient strength to pull out of a dive and enough wing area to meet takeoff and landing requirements of the aircraft carrier or short airstrip. As a result, attack aircraft were built to be as fast as possible but usually had a maximum speed somewhat less than that of fighters (Figure 1).

To retain the fighter-attack speed ratio, the attack aircraft of today would have to be fitted with an afterburner. This would either seriously affect its operating radius or more than double its cost.

Vietnam has demonstrated that, in addition to the supersonic fighter bomber, there is still a need for a high, subsonic speed jet attack aircraft. Furthermore, because of the wide variety of bombs and stores that must be carried for attack missions, internal storage for attack aircraft has become impractical. Since even a supersonic design becomes subsonic when carrying the normal complement of external stores, there is no strong argument for an afterburner for the true attack plane. Experience in Korea and Vietnam has proved that handling characteristics, load-carrying capability and range are more important to the ground attack mission than

A-4 over South China Sea packs bombs, rockets and 20mm cannon.

supersonic speeds. Thus it appears that at least another generation of attack airplanes could and should be developed.

The question frequently arises as to whether attack aircraft are needed or whether the mission can be accomplished by fighters. There is no simple answer to the question of fighter versus attack aircraft, but history has shown that the best results are achieved if each is designed with the optimum capability of serving the alternate role.

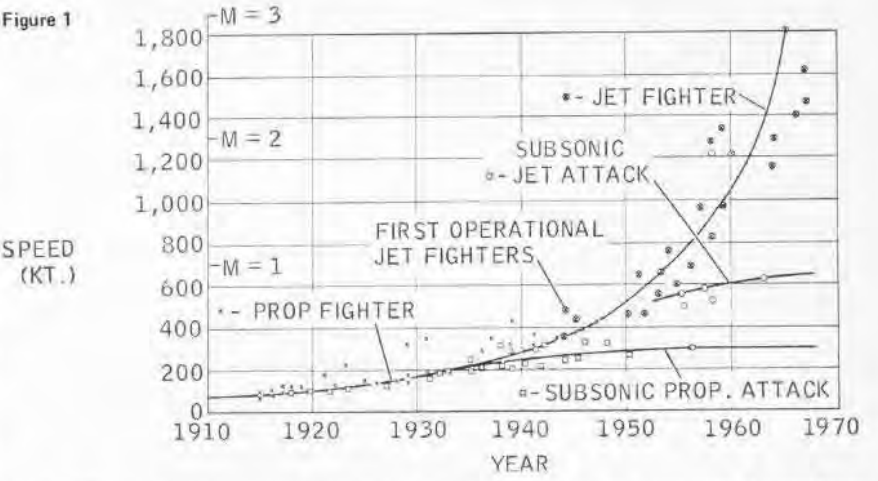
Of course, fighters can perform attack missions, but not as well as true attack planes and vice versa. During the entire history of aviation, experience has shown that the best aircraft is the one designed specifically for the role intended, whether fighter or bomber. Beyond that, alternate capabilities are, of course, desirable but not at the expense of the primary mission.

Less glamorous than its fighter sister, the attack-class aircraft has well demonstrated its value and capability in such actions as WW II, Korea and Vietnam. Attack aviation has a good record; its future can remain good, but only if the uniqueness and importance of its role are understood. Such aircraft must be properly conceived and employed.

Cost, not so important in the past, has recently become a most important design requirement. Figure 2 shows the dramatic increase in the average costs of heavy bomber, medium attack bomber and light attack aircraft. This increase is due to increasing electronic requirements, increased performance and, of course, inflation. In the case of the fighter and heavy bomber, cost is perhaps more easily justified. How-

CONTINUED

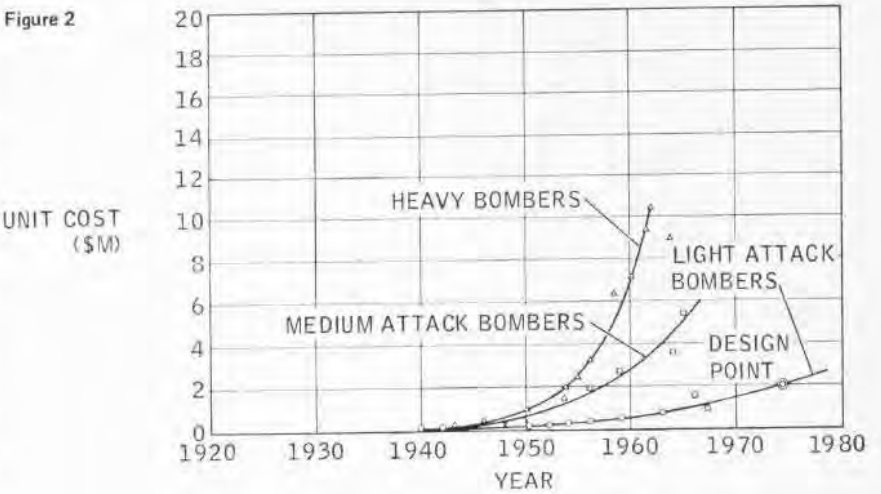
Figure 1



The increase in military aircraft speed with time is naturally quite consistent if aircraft are designed to be competitive. As shown above, the aircraft can be broken into three distinct groups – subsonic propeller attack governed by limits of propeller efficiency, subsonic jet attack limited by the drag rise, especially with external stores, and the clean fighters powered first with propellers and later with after-burning jet engines.

This historical assessment indicates propeller attack has now been replaced by the subsonic jet attack which will continue in the high subsonic range.

Figure 2



Unit cost increase versus time results from three major items – inflation, increased performance requirements, and sophistication or complexity by more demanding requirements.

This historical record shows the increase in unit cost for three basic types – heavy bomber, medium attack bomber and light attack – and shows the great cost advantage of the light attack without afterburner as compared to heavy bomber or medium attack bomber. The design point of $2 million appears reasonable.

ATTACK AIRCRAFT

'. . . ground attack by visual terminal navigation, identification and firing has been very successful in the last three major conflicts.'

Above: Sinister, second rate JU-87 was obsolete by the beginning of the second World War. Several years' successful Stuka operations stemmed from interesting armament packages and effective use as blitzkrieg spearhead. Unusual craft required weather or fighter cover, could not survive direct fighter opposition.
Above right and opposite page: Douglas SBD Dauntless, an evolution of subsidiary Northrop XBT-1, was Navy mainstay for dive-bombing in early WW II Pacific.
Right: Curtiss SB2C Helldiver replaced Dauntless, was bigger, heavier, carried greater bomb load.
Below: Versatile A-26 Invader, fast formidable attack plane whose firepower configurations included .75mm cannon, was redesignated B-26, flew in Korea.

General Dynamics Corp.

ED HEINEMANN

With good reason, Ed Heinemann has often been referred to as "Mr. Attack Aviation." He first became impressed with the possibilities of the use of airplanes against ground targets when he worked on drawings of the Model XA-2 at the Douglas Company in 1926. Equipped with guns in the wings, it was designed to fly close to the ground against ground targets. In 1933 he became project engineer of the XA-16, the prototype of the Air Force A-17 attack type, and, in 1934, he was project engineer of the XBT-1, prototype for the famous WW II SBD *Dauntless*.

His experience includes the direction of the design of the Model DB7 *Boston* for the French and British; the A-20 for the U.S. Air Force; the A-26 for the U.S. Air Force that was fought in more wars than any other attack aircraft (and in one case on both sides); the A-3 *Skywarrior*, heavy carrier-based atomic attack bomber for the U.S. Navy, and its USAF counterpart, the RB-66; the turboprop XA2D *Skyshark*; and the A-4 *Skyhawk* (often referred to as "Heinemann's Hot Rod").

As one of the few designers who has worked on both attack and fighter types at the same time, he was responsible for such fighter aircraft as the F3D *Skyknight* night fighter which saw action in the Korean War, the F4D *Skyray*, and the F5D interceptors.

He also developed for the U.S. Navy the D558-1 *Skystreak* and the D558-2 *Skyrocket* – the latter being the first airplane to fly twice the speed of sound. In 1951, it established an altitude record of 83,500 feet. Ed Heinemann has been a strong advocate of simple, functional design and has consistently produced airplanes considerably lighter and lower in cost than his nearest competitors.

1926 Douglas XA-2

Northrop A-17A

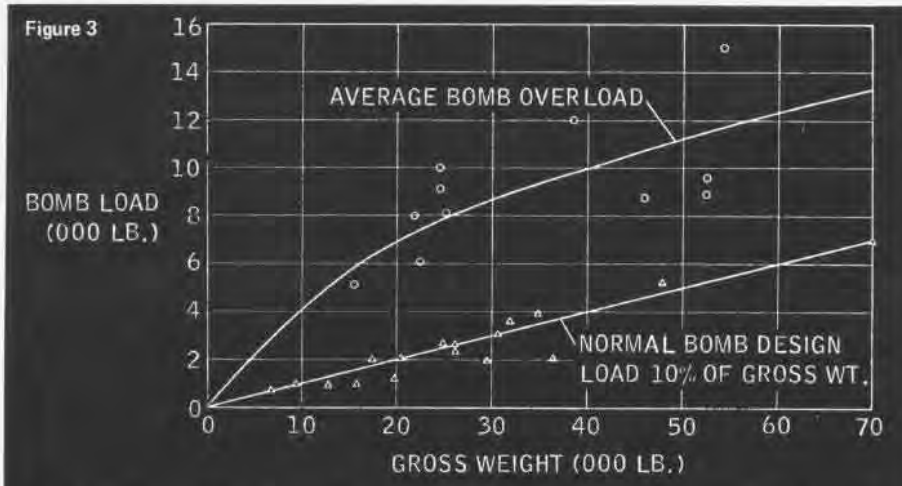
Douglas AD Skyraider (A-1)

1950 XA2D Skyshark

A3D Skywarrior (A-3)

A4D Skyhawk (A-4)

Figure 3



These data indicate that normal bomb design loads have through the history of aviation been in the order of 10% of design gross weight. Overloads in the order of 25% of design gross weight are common but result in the deterioration of strength and performance.

ATTACK AIRCRAFT

CONTINUED

ever, one of the great advantages of a ground attack aircraft is its ability to permit visual identification of ground targets, allowing it to operate with less highly complex avionics and less expensive propulsion systems than the fighter; hence, it can cost considerably less.

The finer characteristics of design are too numerous to mention in this brief summary, but it is believed the following points based upon recent combat experience are worth considering:

1. Attack aircraft have served a distinct purpose against discrete ground military targets and will, no doubt, continue to do so for at least the next generation of aircraft.

2. Subsonic non-afterburner aircraft have performed the attack mission with a high degree of accuracy, effectiveness and safety.

3. Fighters can be employed as ground attack aircraft, but their use in this role usually compromises them as fighters and results in greater operating cost.

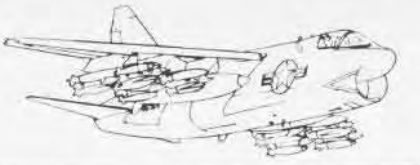
4. Until improved engines become available, the economics of ground attack aviation are definitely in favor of high subsonic performance without afterburner.

5. Experience in Vietnam has shown that supersonic fighters can make one pass at a high subsonic attack airplane, but from then on the subsonic attack airplane can maneuver inside the fighter's turning radius and thus avoid the second pass.

As to the configuration or arrangement of the next generation of attack aircraft, the single-engine aircraft without afterburner appears both desirable and economical. It would be a single-place aircraft with space either for a second man, when used in a training or special mission capacity, or for storage of ammunition, fuel or other equipment when used as a single-place. It would be designed for a 3,000-pound bomb load with overload provisions for 6,000 pounds of bombs or alternate weapons of similar weight. Of course, greater overloads would be possible but are not recommended. After all, the average design bomb load of all bombers in the history of aviation has been only 10% of the designed gross weight (Figure 3).

Such an aircraft could be built for a design takeoff gross weight of approximately 25,000 pounds at a price in the realm of $2 million, depending, of course, upon avionics which have become an appreciable percentage of the total cost of an aircraft during recent years (Figure 2).

In summary, the question appears to be whether or not ground support and attack aircraft will survive and whether they should be built in the future. There are those, on the one hand, who have strong convictions that the fighter can amply perform the attack role and replace the attack aircraft heretofore designed with that role as its primary mission and objective. There are those, on the other hand, who believe that in attack avia-



tion, only properly designed attack aircraft can do a thorough job of destroying military targets with high efficiency at a minimum cost.

It is generally believed that at least another generation of subsonic attack aircraft employing the latest engine technology should be under development. However, great care must be taken to avoid over-sophistication of electronic equipment. The need to prolong the era of subsonic attack aircraft is further substantiated when one considers the wide inventory of armament which, when carried in the conventional underwing position, makes it impossible to fly supersonically anyway.

The need for this airplane is real, and it would be most useful to all services, especially the Navy, for carrier-based applications against naval and military land targets.

Regardless of the design approach, it must be said that the principle of ground attack by visual terminal navigation, identification and firing has been very successful in the last three major conflicts. The outstanding records of success achieved by attack pilots are legendary. No praise does justice to the "attack boys" who have proved the principle against the most heavily defended military targets, supporting ground troops and prime military targets.

VT-21 First With TA-4J's

Photographic Report by
AN Murray Judson

One of the inaugural flights of TA-4J's touches down at Kingsville (above). RAdm.Turner leaves flight line after bringing TA-4J to VT-21.

Training Squadron 21 looks like an attack squadron now. The Navy and Marine Corps student pilots fly the new advanced TA-4J, a two-seat training version of the A-4 *Skyhawk* attack bomber.

Early this summer, Rear Admiral F. C. Turner, CNA-VanTra; his chief of staff, Captain F. T. Stephens; Captain M. E. Stewart, training officer; and Commander K. D. Kugler, VT-21 C.O., made the inaugural flight at NAS Kingsville, Texas. An hour later, the first training flight was launched.

RAdm. Turner said the TA-4J *Skyhawks* are a big step forward because they approximate fleet jets.

The *Skyhawks* are capable of performing all phases of advanced jet training, including weapons delivery and carrier landings. The trainers have power steering for taxying ease, automatic pilot and spoilers for improved landing characteristics. By 1970, all advanced jet training squadrons will have TA-4J's.

A line crewman directs the first flight of TA-4J's (upper right). Ramp crewmen secure the new jets procured for the Naval Advanced Air Training Command.

GOLDEN EAGLES

By Clarke Van Vleet
Assistant Historian, DCNO(Air)

A flock of rare "diurnal birds of prey, noted for their strength, size, graceful figure, keeness of vision, and powers of flight" was sighted late in June at one of the world's greatest test "sanctuaries." Thought to be almost extinct, 46 American Golden Eagles (*aquila chrysaetos canadensis*) surprised and fascinated personnel of the Naval Air Test Center, Patuxent River, Md., when they descended on the 6,400 acre tract. Not since the Mattapony Indians of the Algonquin tribe hunted the area have so many majestic birds been seen circling, perching or roosting at Patuxent.

Known for their yearly migratory and flocking habits, these regal, but diminishing and, thus, revered symbols of American strength, gathered at NATC June 26-29 for the 13th annual reunion of their organization, The Early and Pioneer Naval Aviators Association, better known as *The Golden Eagles*, although sometimes they refer to themselves as being of another genus of the family *Falconidae – The Bald Eagles.*

PIONEERS *Lewis and Palmer compare modern panel to dashboardless days, above. Adm. A.W. Fitch, 86, was oldest member present, below left. Below right is early enlisted pilot, Pat Byrne.*

Balding, hoary and a bit tattered of feather they are, for their average age is 71 years. These old flyers were the pioneers of U.S. Naval Aviation before, during and between the two Great Wars – particularly during WW I. Of the association's 190 members, only 46 could make this year's reunion. They meet annually at any naval air installation that wishes to host them.

All have a claim to fame! Space permits citing only a few examples of the kind of Pioneer that gathered at Patuxent this year – the man who 37 years ago, commanded the first U.S. aircraft carrier, USS *Langley*, another who set the international speed record (259.47 mph) back in 1923, two members of the first class for dirigible pilots held 52 years ago, two of Navy's old enlisted pilots, a pioneer advocate of launching airplanes from airships, two aviators of Navy's 1928 Sea Hawks Exhibition Flying Team, the man who first stepped from an airplane at the South Pole, the Marine Naval Aviator who at 64 undertook underwater demolition training and graduated second in his class, the executive officer of the jeep carrier that captured the first German ship in WW II, the Marine who led his planes off CVE-1 at Guadalcanal, etc., etc., etc.

Appropriately, these famous Naval Aviators were hosted by another – the Commander of NATC Patuxent, Rear Admiral H.L. Miller, who, early in his career, trained Jimmy Doolittle's pilots to fly the B-25 off the carrier *Hornet* for the historic 16-plane raid over Tokyo.

During their three-day stay at Patuxent, the *Golden Eagles* attended demonstrations and briefings on the TC-7 catapult, the Mark 2 Mod 2 bridle arrester, the Gatling gun that shoots 1,300 rounds per minute, the procedures of flight testing, the experiments connected with search and rescue and the fleet operations of VP-49. The *Eagles* inspected the 17 different types of aircraft at the center.

The Pioneer Aviators also had some comments of their own! During the catapult of a Douglas A-4E *Skyhawk* at 160 knots, when many of the Pioneers merely tuned off their hearing

aids, one old *Eagle* was heard to scream, "And I thought our Curtiss N-9's were noisy when we got them up to 60 knots." After inspecting the panel of a Grumman A-6 *Intruder*, another old-timer remarked, "It's all buttons! When I used to look between my legs I saw the Annapolis Lighthouse." Upon pressing the trigger of the Gatling from which 400 rounds spurted, the veteran who pressed it asked, "How much did those three seconds cost the government?"

Back at the lounge, where retired *aquila chrysaetos canadensis* now generally tend to prey, reminiscing became the order of the day – how one of them shot down his own plane (while in it) during WW I; how another made the first night carrier landing (by mistake); how one had transferred into Naval Aviation in 1915 because the battleship on which he was serving ran out of food at sea and bought from a passing schooner its cargo of 10,000 watermelons, the crew's only diet for the next three weeks. Then, there was the story about the colleagues of one who had presented him with fur-lined "long johns" before he took off on a polar flight; another who, returning from ASW blimp patrol in WW I, refused, only because of the weather, to drop off a crewman at a town en route, where the guy had a date that night (later the guy married the gal); how, back in the Twenties, two non-aviators piled into the versatile N-9, each thinking the other was a pilot – and took off.

There was the 1913 story of the patrol boat's fox terrier whose barks attracted the crew's attention and led them to an unconscious aviator (John Towers) who had previously tied himself to the flotsam of his plane and the story about putting in an airstrip at a dry, sandy spot in Texas where it hadn't rained for ten years. Suddenly a cloud burst arrived, causing a local farmer to faint. The only thing that would bring him to was a bucket of sand in his face. (The above stories confirmed, except the last.)

Before the reunion closed, the *Eagles* settled down to business, electing new officers, passing resolutions, and presenting to Vice Admiral Robert B. Pirie, USN (Ret.), guest speaker at the final night's banquet, a donation of $500 to aid the current drive to raise funds for the Naval Aviation Museum.

So went the 13th annual reunion of the Early Pioneers, who might also be termed Naval Air "Hall of Famers," because from these "Kings of Birds" hatched the developments of today's Naval Aviation. We wonder what air installation will be lucky enough to host them next year!

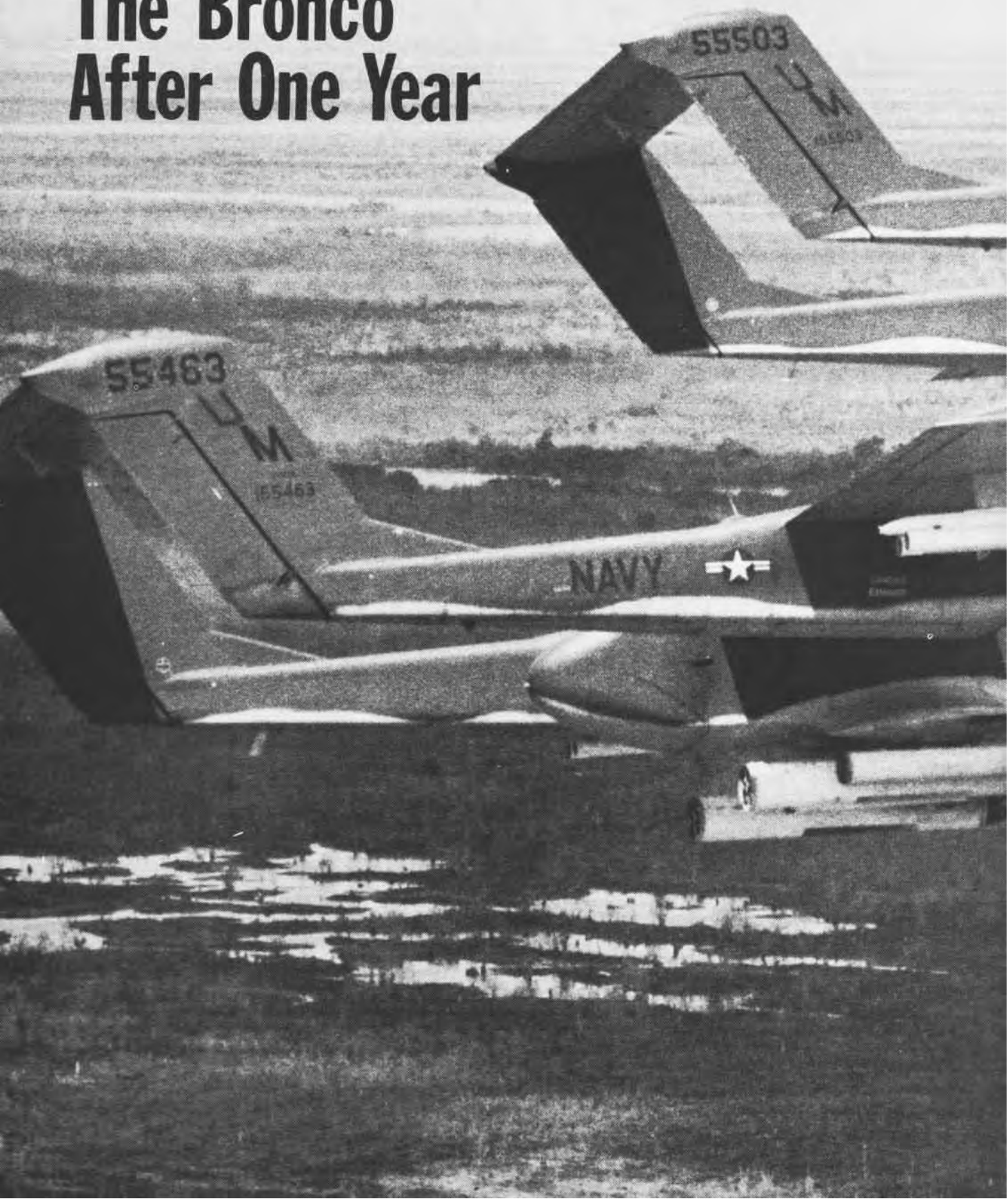
AT NATC *Patuxent River, expert explains new 1,300 rounds-per-minute machine gun to aquila chrysaetos canadensis, left to right, Harold Rowen, Charles Wood and D. W. Tomlinson.*

GOLDEN EAGLES *Raymond L. Atwood, left, and A. G. MacDonald muse and marvel.*

H. J. BROW, *center above, established the Navy's first world speed record in 1923.*

Special Report:

The Bronco After One Year



After one year of operational flying, the OV-10A *Bronco* has made an impressive mark, at least among the men who fly them, although certain critics said the airplane should never fly. (*NANews*, September 1968, pp. 24-25).

Originally conceived and described to the Bureau of Weapons by two Marine officers in June 1961 as a light STOL/LARA airplane for use in situations such as Vietnam (where it is now heavily employed), the OV-10A has reached the pinnacle of its success. At this writing the Marine Corps inventory shows 96 *Broncos* (with 18 on loan to the Navy). The Air Force has 152.

Production has stopped except for 18 OV-10B models scheduled for delivery to West Germany beginning [illegible] next year. The Germans plan to use the tandem-seated aircraft for target towing.

The Marines were first to employ the *Bronco* in Vietnam. Presently two Marine Corps squadrons — VMO-2 and VMO-6 — use the twin turboprop planes for forward air control, visual reconnaissance and helicopter escort in I Corps. In the United States, the OV-10A is used by VMO-1, MCAS New River, N.C.; HML-267, a training squadron at Camp Pendleton, Calif.; and in two Marine Reserve squadrons.

Most of the Air Force *Broncos* are located in Vietnam where they function in forward air control capacities. Others are based at Eglin Air Force Base, Fla.

The Navy's OV-10A's are operating in the Mekong Delta region of Vietnam and in a VS-41 detachment at NAS North Island (pp. 26-33).

The tri-service pilots who fly them have nothing but praise for the stubby-winged *Bronco*. Their combat record is excellent, according to OV-10 project managers. They are flown an average of 80 hours per plane each month and require only minimum maintenance.

One year after their introduction into the fleet, *NANews* presents a representative segment of the operating OV-10A *Broncos*. Even before their "trial by fire," however, a perceptive Marine Corps officer last year summed up what seems to be the feeling of OV-10A pilots today: "The *Bronco* is one helluva fine airplane for its mission."

The Bronco...

CARRIER QUALIFICATIONS

By Major J. M. Dye, USMC, and Mr. J. M. Rebel

The small, twin-boomed, prop-driven airplane known as the OV-10A is no longer a stranger in the sky. Some pilots have not only "fammed" in the aircraft but have accumulated many hours, some in combat. For this group, the name *Bronco* may seem misplaced, for a more gentle, easier to fly airplane would be hard to imagine. However, the name is particularly appropriate if you have seen the airplane traverse the takeoff and landing obstacle course set up by the Naval Air Test Center (NATC) at Webster Field, Md. The results of these torture tests reflect the ability of the OV-10A to absorb the punishment of operations in rough terrain. Not as well known is the fact that a pilot and engineering team from NATC have also demonstrated another facet of the airplane's ability – carrier landings and launches without the aid of catapults and arresting gear.

It may seem like a big step from an unprepared field to a modern aircraft carrier, but the OV-10A is a very versatile airplane. The story began in August 1968 when the senior member of the Board of Inspection and Survey (BIS) at Patuxent River requested that NATC examine the feasibility of operating the OV-10A from carriers. BIS has the responsibility for inspecting and evaluating all new ships and aircraft prior to introduction in the fleet. The board, in a sense, acts as the government's final inspector to assure that the Navy receives a product which performs up to the specifications and guarantees of the contract. The contract for the *Bronco* required that it be capable of operating from an LPH-4-class carrier; BIS asked NATC to prove that this could be done. Since extended carrier operations were not envisioned at the time, the actual test requirement was limited to a very simple configuration – sponsons with guns and an external fuel tank on the centerline station.

Landing aboard a carrier had to be accomplished much as on a field: brakes and reverse thrust. Carrier takeoff would be a free deck launch.

The airplane used in the tests was modified to include instrumentation and recording equipment which measured and recorded performance parameters, such as altitude, speed, pitch, yaw, roll or power settings. These parameters were used to determine handbook data and to verify visual observations made during tests.

When the Carrier Suitability Branch at NATC starts testing a new airplane, the first thing it must determine is the Minimum Speed that the machine can be flown in the landing and takeoff configuration and still have Acceptable Flying Qualities (MSAFQ). In the case of the *Bronco*, the evaluation was made for no flap, half flap and full flap configurations, with either one engine or two engines running. It was no surprise when the data indicated that MSAFQ with both engines was considerably lower than that for single engine control (MSE). (MSE speed is the speed at which loss of control occurs with one engine at military, one feathered.) Since the wing of the airplane is largely bathed in the airflow from the props, the elimination of one engine allows the affected wing to stall at a higher indicated airspeed than the other wing, causing a roll, yaw and pitch downward. For safety, subsequent landing and takeoff tests were limited to airspeeds above MSE.

When the NATC team began the evaluation to determine an optimum carrier recovery technique for the *Bronco*, the paramount thought was to

land and stop as quickly as possible in order to avoid any chance of dribbling off the deck. The ground work for these tests had been built up over a period of years; it was the responsibility of NATC to confirm the data obtained by contractor and NavAirSysCom analyses, Navy Preliminary Evaluation teams and Naval Air Engineering Center feasibility studies. The team designed a series of tests to measure stopping distances with various gross weights, flap settings and pilot techniques. A wet carrier deck was simulated by flooding the SATS runway and performing full stop landings with this less-than-desirable braking surface.

These landing tests resulted in the decision that the airplane could be brought aboard safely by using a normal mirror approach. The configuration decided upon was full (40°) flaps and the MSE airspeed for a particular gross weight. In addition, the technique called for achieving full reverse thrust at touchdown, followed by maximum braking. To have the necessary reverse thrust at touchdown, the sequence was initiated while airborne – just prior to touchdown – upon receiving the "cut" signal from the landing signal officer (LSO). Directional control on rollout was maintained by nosewheel steering and differential braking. The stopping distances measured when this technique was used ranged from less than 400 feet with light weights with a 20-knot wind over the deck to more than 700 feet with heavy weights and no wind. These distances are comfortably short of the distance available on an actual flight deck. A word of caution: this technique involves the best efforts of a highly qualified pilot and an LSO using optimum speeds and a Fresnel lens for glide path and touchdown point control. Attempting to judge airplane height from inside the airplane and initiating thrust reversal without an LSO would be courting disaster, owing to the high sink rate.

What goes up must come down was tested in reverse. Once the team was assured that the *Bronco* could make it aboard the carrier, the next requirement was to get it off again without the use of a dockside crane. Pilot techniques and airplane configurations were evaluated to determine the optimum flap setting and rotation point needed to achieve the shortest run. As with the landing tests, lift-off speeds above MSE were a safety requirement. One of the more interesting techniques tried was commencing the takeoff roll with flaps up to reduce drag, then dropping the flaps to the full down position at 30 knots prior to the desired lift-off point. Although the method was promising, it was discarded for the carrier trials, again because of overall safety requirements. (With further refinement through testing, it could become a useful tool in tight situations.) The final outcome of the shore-based takeoff tests showed takeoff runs from 400 to 1,000 feet, again depending on weight and wind. The best method appeared to be a no gimmick 20° flap takeoff with rotation about five knots prior to the desired lift-off speed.

Last, but not least, emergency procedures were evaluated. These included such possibilities as brake failure, inability to obtain reverse thrust and wave-off characteristics. It was determined that it was not feasible to recover the airplane aboard a carrier without reverse thrust on both engines and with both brakes working as advertised unless a barricade or some other means of halting the aircraft was provided. Tests for wave-off performance were considered particularly important in establishing pilot techniques in the event of engine failure at low airspeeds and altitudes in the landing pattern. In all cases, with one engine or two engines turning, it was determined that the best wave-off technique was to apply full power while arresting the rate of descent by adjusting the pitch attitude. Then, the pilot had to raise the landing gear as soon as possible and the flaps as airspeed allowed. Again a word of caution, if the airplane is below MSE speed and an engine is lost, the application of full power on the good engine will result in an uncontrollable pitching, roll and yaw into the bad engine. To either fly away or execute a safe landing, the aircraft must stay above the MSE speeds for the gross weight and flap configuration. Get below that speed and the loss of an engine means probable loss of the airplane and crew.

The proof of the tests was the actual carrier work conducted aboard USS *John F. Kennedy* (CVA-67). Although there is quite a difference between the overall size of the *Kennedy* and an LPH-4-class ship, the NATC team used only the angled deck which is actually some 50 feet shorter than the axial deck of an LPH. Only a limited amount of deck time could be taken for the OV-10A trials, and only an abbreviated program was conducted. With the flight deck cleared to provide margin for error and the cross-deck pendants removed (locked brakes crossing the pendants almost insures a blown tire), the ship headed into the wind to provide the necessary headwind for extremely slow closing speeds.

The time had come to put the *Bronco* to the real test. Flying out from its shore base, it appeared behind the ship looking rather small and insignificant. All eyes focused aft as the aircraft slowly churned into view, its twin props droning on with a steady hum. The first three passes were touch-and-go landings "on-speed and on-target." At last the word was passed, "This is it." Again the touchdown was right on the money, reverse thrust was initiated right at touchdown, and the 10,000-lb. airplane came to a quick and sudden stop in the area where the number four arresting cable was strung.

The airplane taxied to the far aft end of the deck and began its takeoff run. Lift-off was accomplished without any excessive effort well before the end of the available deck.

The remaining tests seemed almost anti-climactic, but three more touch-and-go's, another landing, and finally a takeoff and bingo to the beach were accomplished.

No tailhook, no catapult gear! The *Bronco* had demonstrated once again that it is one of the more versatile of the new airplanes in the inventory.

The Bronco

By PHC John Gorman

...In VS-41: Replacement Pilot Training

Pickle at 2,400 feet and 240 knots, then pull up straight ahead. Make the first shot count. Charlie won't give you a second chance," said LCdr. J.M. "Mick" Herring, officer-in-charge of VS-41 Detachment Yuma, as he briefed five pilots for an afternoon gunnery exercise at the target area in the desolate Arizona desert. Charlie is the Viet Cong.

The replacement pilots were in their 13th week of a 16-week course in preparation for deployment to VAL-4 in Vietnam. The three-week weapons training at Yuma is the last phase of VS-41's curriculum in which replacement pilots learn the ins and outs of the OV-10A *Bronco*.

When VAL-4 deployed to Vietnam in March, four *Broncos* were transferred to VS-41 at NAS North Island, and the ASW squadron was assigned the responsibility of training pilots for VAL-4.

The OV-10A replacement program begins at NAS North Island with one week of maintenance systems familiarization and one week of VS-41 ground school. Then the pilots begin a ten-week flight syllabus, progressing through four familiarization flights, one instrument and one solo flight. The remaining familiarization program includes nine hours of instruments, nine hours of formation flying and 13.5 hours of navigation.

The six weeks at North Island are followed by three weeks of weapons training, normally at MCAS Yuma. Each pilot gets 21.5 hours of weapon delivery techniques. Then he goes back to North Island for six hours of tactics, tying the previous training into a comprehensive package.

After *Bronco* training, the pilots have four more weeks of formal school before deploying to Vietnam: three weeks of survival, escape and resistance, counterinsurgency, and self-protection, followed by a week in Vallejo, Calif., for a PBR orientation course.

Initially, three VS-41 pilots – LCdr. Herring, Lt. S. F. Chappell and Lt. D. D. Davis – were qualified as instructors in the *Bronco*. They designed the format for the VAL-4 replacement pilot program.

In April, the three pilots began training three additional VS-41 pilots. When the first nine replacement students arrived in mid-May, VS-41 had six qualified instructors, with more than 1,400 hours total in the *Bronco*.

Lt. F. W. Lynch, VS-41 instructor, and Commander V. W. Klein, prospective executive officer of VAL-4, flew

BRONCO *instructors and student replacement pilots check details for training flight, top left. Line crewmen, far left, direct pilots on taxiway. A plane captain helps instructor strap in, at left, and another instructor briefs students for a weapons training flight.*

VS-41 PLANE *captains check a Bronco for discrepancies following a training flight at MCAS Yuma, top. Lt. F. W. Lynch, instructor pilot, and Commander V. W. Klein, prospective VAL-4 executive officer, return from a training hop. The black stetsons have been adopted by VS-41 Bronco pilots as a squadron symbol. At right, a last-minute check.*

the first training flight May 26. Since that flight, the syllabus has been slightly modified several times in accordance with recommendations from VAL-4 pilots in Vietnam.

VS-41 also trains most of the enlisted men ordered to VAL-4. Their training course varies from eight to 15 weeks, depending upon their experience level and rate. They receive formal classroom study and on-the-job training.

ADC Harold Sneed, training chief, says, "The can-do spirit among maintenance and support personnel in the VS-41 program is among the highest in the Navy. Since the initiation of our replacement pilot training program, we have had 95 percent availability of aircraft at all times.

"And I'll tell you one thing," he continues, "if these 120° afternoon temperatures on the runways at Yuma don't prepare these pilots and men for Vietnam, nothing will."

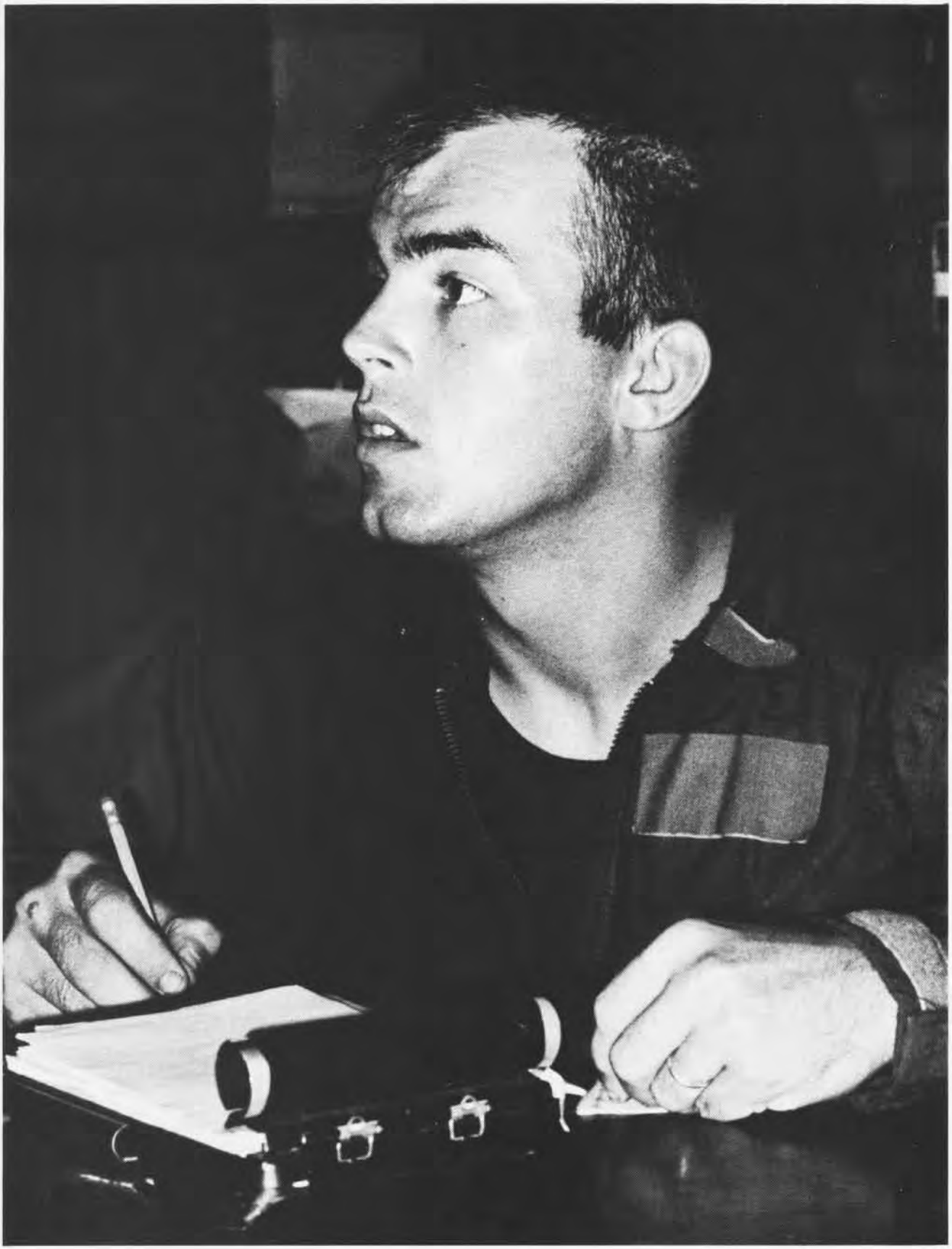

55462
RA
OV-10A
155462
55470
RA
NAVY

By PHC Arthur Hill

...and in Vietnam

A new word has been added to the Navy lexicon in Vietnam — *Bronco.* Navy units operating in the Mekong Delta gained added muscle this spring with the arrival of the twin-engined OV-10A *Broncos.* The two-seated aircraft are designed to fill the performance gap between jets, which are too fast for some warfare situations, and helicopters, which are slower and more vulnerable to ground fire. The versatile *Broncos* came to Vietnam with the Navy's newest aviation unit, Light Attack Squadron Four. VAL-4, the only Navy squadron to fly the OV-10A in Southeast Asia, was commissioned late last year in San Diego, Calif. Now an important part of the "brownwater Navy," the squadron operates from two airfields in the Delta, providing direct support for U. S. and Vietnamese Navy Riverine operations. To the brownwater sailors, the *Bronco* and VAL-4 are welcome additions.

A Bronco pilot is briefed.



A Bronco returns to Binh Thuy after an early morning mission. At right, VAL-4 mechanics hold a maintenance check on an OV-10A. An aviation machinist's mate, far right, strains to turn an OV-10A propeller.

"The Bronco is One Helluva Fine Airplane for its Mission."

ON PATROL

with the Fleet Air Wings

Maritime Air Exchange

The officers and men of VP-30, NAS Patuxent River, Md., recently participated in a maritime air exchange visit with Canadian Armed Forces 449 Squadron at Greenwood, Nova Scotia. The RAF Maritime Operational Training Unit (MOTU) also took part in the exchange visit.

Commander R. L. Sewell, VP-30 X.O., and Squadron Leader F. F. Wimble, MOTU, led the aircrews who were the guests of 449 Squadron. Lieutenant Colonel C. E. Rushton leads 449.

The tripartite ASW symposium discussed new concepts and ideas and common problems frequently encountered in ASW aircrew training. Also included were the presentation of the British *Nimrod*, the four-engine ASW jet-powered aircraft which will soon be introduced in the RAF, and a tour of 449 training facilities, including a new training complex, an *Argus* flight simulator and a tactical flight simulator.

On Canadian Armed Forces Day, VP-30 held a static display of the P-3.

Meritorious Unit Commendation

VP-9, home-ported at NAS Moffett Field, Calif., recently received the Meritorious Unit Commendation for its achievements while deployed to Adak, Alaska, during the first half of 1968.

Rear Admiral W. T. Rapp, Commander Patrol Forces Seventh Fleet, presided at the ceremony which included a change of command; Commander Roger G. Booth accepted the award before he turned his command over to Commander Lawrence Phillips, Jr.

While stationed at the Aleutian outpost, VP-9 performed an astonishing variety of missions: ice and ocean patrols, foreign fishing surveillance, flights in support of oceanographic research, innumerable training flights and a number of SAR's and medevacs.

The squadron's performance prompted Rear Admiral D. M. White, Commander Alaskan Sea Frontier, to say of the deployment, "Your operations have provided the most successful and profitable deployment I have had the pleasure to observe."

Currently deployed to NS Sangley Point, R.P., VP-9 is attempting to duplicate its performance.

VP-40 Ends Deployment

VP-40, led by Commander Gilbert F. Murphy, returned to Moffett Field, Calif., from Iwakuni, Japan, in August. Friends, relatives and loved ones were on hand as the P-3's with the bright yellow and white Marlin on their tails taxied toward the line and the long awaited stand down.

For six months, VP-40's aircrews and ground support personnel, operating as a unit of Fleet Air Wing Six, flew nearly 2,000,000 miles of ocean surveillance in addition to periodic *Market Time* patrols off the South Vietnamese coast. Ready-alert capabilities for both operational and SAR contingencies were also maintained.

Training does not end during deployment: six Alfa crews were qualified.

An All Hands Effort

Patrol squadrons throughout the Navy strive to attain Alpha designation for their combat aircrews. It is thoroughly understood by the crew members that many hours of training and study are required before actually flying the aircraft on submarine exercises and that receipt of the Alpha designation is recognition for that effort. What is not often recognized or heralded are the efforts of ground support personnel in the quest for Alpha designation.

VP-48 recently deployed to Adak, Alaska, with many new pilots and crew members needing submarine qualifications. Submarine services were made available and flight crews with maintenance personnel were repositioned to take advantage of those services. Maintenance personnel turned-to in the finest traditions of the Navy, spending nights as well as days on the flight line to insure that the aircraft were ASW ready. Lockheed representatives sent to assist technically, rolled up their sleeves and worked side by side with the crew and maintenance personnel. The long hours of work, exacting by its nature, did not cease until the job was done.

The results: 11 Alpha designated aircrews – where there were none. The VP-48 teamwork demonstrated in the efforts to establish an ASW readiness posture was truly an all hands effort.

P-3 Arrives at Whidbey

July 1 marked a new era in aviation at NAS Whidbey Island, Wash., when the first two P-3's arrived. The lead plane was flown by Commander J. O. Coleman, commanding officer of VP-1. VP-1 is the first patrol squadron at Whidbey to begin the transition to the P-3 *Orion*.

Captain E. J. Winter, Commander Fleet Air, Whidbey/Commander Fleet Air Wing Four, met the two P-3's and officially acknowledged the beginning of the transition from P-2 *Neptunes* to the *Orions*.

The first VP-1 class of pilots, NFO's and crew members finished their training at Moffett Field in June.

VP-8 TIGERS *are shown in action on their recent deployment. A crew member prepares to cover the engine intake of a P-3, upper left, as another crew member opens an engine for inspection, upper right. A line man directs an Orion on its way to a ten-hour surveillance patrol, above, while another attaches grounding wire to a P-3, center right. Still another stands ready with a fire extinguisher as a squadron sub-hunter prepares to taxi.*

at Sea with the Carriers

PACIFIC FLEET

Kitty Hawk (CVA-63)

Lieutenant General Michael S. Davison, Deputy Commander in Chief, U.S. Army, Pacific, and Admiral Feng Chi-Chung, Commander in Chief, Republic of China Navy, were recent guests of Vice Admiral William F. Bringle, Com-7thFlt, and Vice Admiral Maurice F. Weisner, Commander Task Force 77. *Kitty Hawk* is Adm. Weisner's flagship.

A carrier chaplain gets around. If you don't believe it, just ask Lt. John R. Daly, Jr., CHC. Chaplain Daly recently completed his 100th helo flight aboard the *Hawk* — good for a Centurion mark.

Every Sunday, while at sea, arrangements are made to provide religious services to the destroyers accompanying the *Hawk*. Via the "holy helo," Chaplain Daly has accumulated 40 flight hours since 1967, while holding services on 31 different ships.

LCdr. Robert V. Ballada, VA-105, counted arrested landing #98,000 when he brought his A-7 aboard *Kitty Hawk*.

Kitty Hawk is due for an extensive yard period in Bremerton, Wash., when she finishes her fourth combat cruise in WestPac.

Ticonderoga (CVA-14)

On October 1, *Tico* will shift her home port from San Diego to Long Beach. The move involves overhauling and reconfiguring CVA-14 as an ASW carrier. Following conversion, she will remain at Long Beach to replace *Hornet* (CVS-12) which will begin deactivation in March 1970.

Now deployed, Captain Richard Fowler's ship is due home this month.

Kearsarge (CVS-33)

When an S-2E *Tracker*, piloted by LCdr. Paul D. Piche of VS-29, with Commander Alfred N. Fowler, CVS-33 X.O., as copilot, left the deck of the CVS, they marked the ship's 70,000th catapult shot since 1962. The combined total of 42,580 shots off the starboard cat and 27,420 off the port cat were all completed without a mishap. *Kearsarge*, commanded by Captain Leonard M. Nearman, is currently deployed to the Tonkin Gulf.

Constellation (CVA-64)

The Chief of Naval Operations, Admiral Thomas H. Moorer, has awarded the Meritorious Unit Commendation to CVA-64 and CVW-14 for outstanding service in the Tonkin Gulf from June 14, 1968, to January 23, 1969.

As Admiral Moorer made the presentation to Captain J. S. Christiansen, *Connie* C.O., he said, "Participating in sustained strike operations against North Vietnamese lines of communication and efforts to support the insurgency in the Republic of Vietnam, USS *Constellation* and embarked Attack Carrier Air Wing 14 inflicted extensive damage and destruction upon heavily defended military and logistic installations and supply lines and seriously impeded the flow of men and material to the south."

There were 3,258 guests on board the carrier when she got underway from the North Island pier and headed into the blue Pacific on a dependents' day cruise. According to Ens. M. E. Thompson, the carrier's PAO, the combination of guests and 4,745 officers and men may be a record for the number of people embarked at one time on a Navy ship.

When Ltjg. Michael P. Hamilton, VA-97, snared the arresting cable in an A-7A he counted arrested landing #94,000. Almost a month later, Lt. Greg Eden, VA-85, brought his A-6 in for #96,000.

WHEN OKINAWA VISITED OKINAWA, SHE TIED UP AT WHITE BEACH

CVW-4 PHANTOMS AND SKYHAWKS FLY BY USS KENNEDY DURING A DEPENDENTS' AND GUEST CRUISE OFF NAPLES

Enterprise (CVAN-65)

When *Enterprise* returned to NAS Alameda after completing her fourth combat cruise, CVW-9 had recorded 3,779 missions with 4,351 tons of ordnance expended against the enemy.

After off-loading her air group, CVAN-65 proceeded to Norfolk and the Newport News Naval Shipyard and Drydock Co. for the first replacement of her nuclear fuel core.

Hornet (CVS-12)

CVS-12 was primary recovery ship for *Apollo 11*. Need we say more?

ATLANTIC FLEET

America (CVA-66)

In drydock at the Norfolk Naval Shipyard, *America* became a classroom for 300 underclassmen from the U.S. Naval Academy. The midshipmen toured the carrier to get a firsthand look at a dry-docked carrier.

Independence (CVA-62)

While *Lexington* is in Boston for repairs, instructors and student aviators from VT-4, NAS Pensacola, are carqualing from *Independence*. In one two-day period, 41 student aviators were qualified.

John F. Kennedy (CVA-67)

CVA-67, on her maiden deployment to the Med, hosted more than 800 Navy personnel and their dependents and selected members of NATO staffs assigned to the Naples area on dependents' day. During the seven-hour cruise, visitors were given demonstrations of the carrier's abilities in the air and on the sea, and a firepower demonstration by CVW-1.

LCdr. Henry D. Lesesne, VA-81, made CVA-67's 10,000th arrested landing in an A-4C *Skyhawk*. The landing came just eight months after Commander Hal Marr made the carrier's first arrested landing, October 22, 1968. Earlier the same day, LCdr. Lesesne counted his 100th *Kennedy* landing.

Captain Earl Yates is skipper of the Navy's newest attack carrier.

Shangri-La (CVA-38)

When *Shangri-La* returned to Mayport, Fla., she had completed her seventh consecutive tour with the Sixth Fleet in the Med.

Operational highlight of the cruise was her participation in Exercise *Dawn Patrol*. During this five-nation NATO exercise, the carrier made headlines when she was "shadowed" by units of the Soviet fleet and by Egyptian *Badger* aircraft. The shadowing continued for several days as *Shang* launched and recovered aircraft.

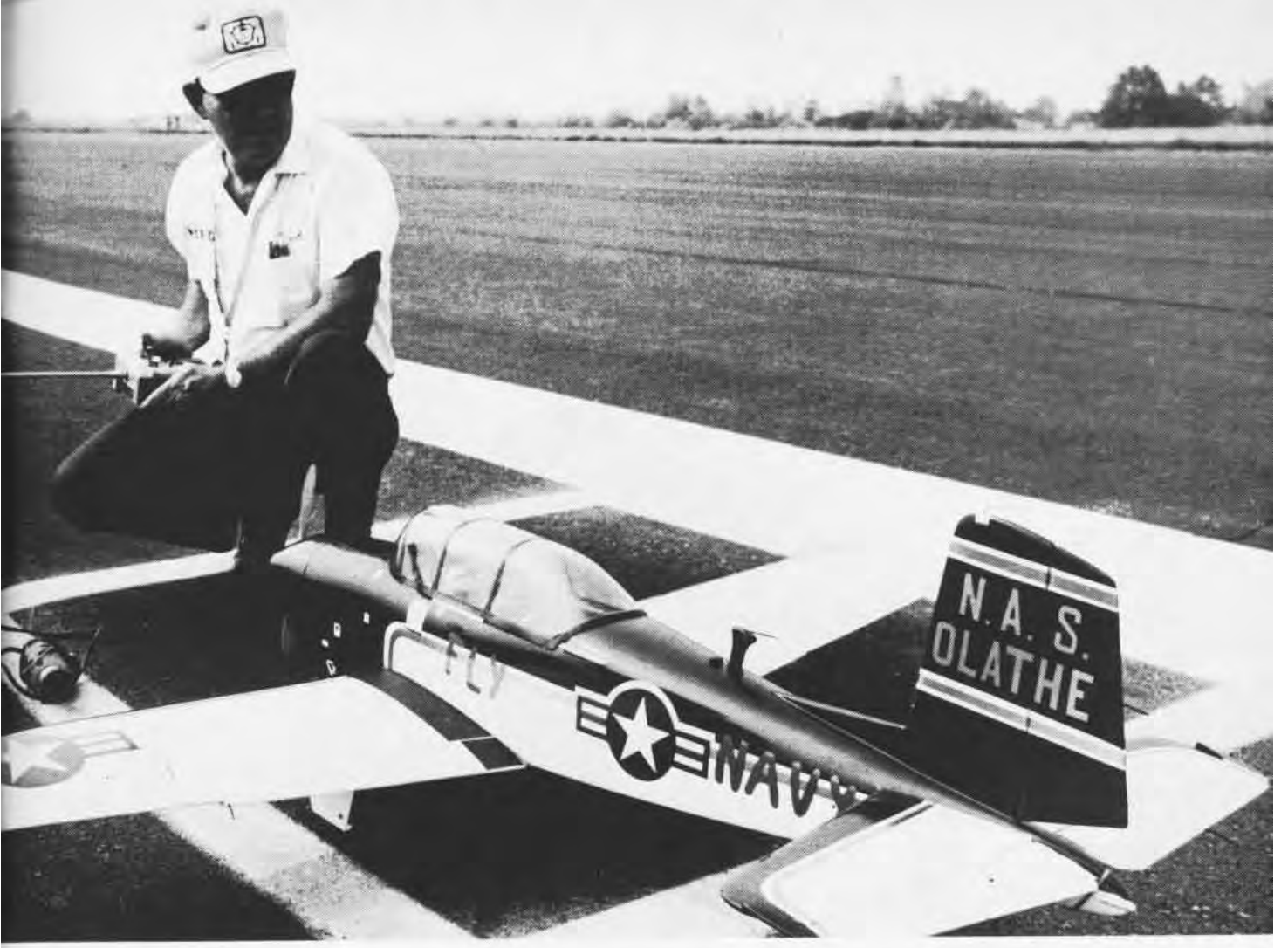
THE SELECTED AIR RESERVE

Naval Aviation News visited the Nationals at NAS Willow Grove this year, hoping to present a selection of model Navy planes. There were surprisingly few. Those few, however, were finely designed and constructed, a pleasure to view, particularly in the radio-control scale class. A Naval Air Reserve T-34 Mentor, built by Bud Atkinson of Kansas City, Mo., won fourth place in the R/C competition. Dave Platt, who last year swept the R/C scale event with his Douglas Dauntless SBD, was at Willow Grove with a fine model of a German Folke-Wulf 190 and his SBD (p. 43). But generally, Navy models were scarce, and so were Navy participants. AM1 Roger Barrett of VFP-63, NAS Miramar, below right, was one of the few Navy contestants at the meet. Hopefully, at NAS Glenview next year, there will be more Navy participation . . . and airplanes.

THE 1969 NATS

By JOC James Johnston

DR. LINTON KEITH, *a Santa Clara, Calif., dentist, left, talks with Dave Platt about his Avro Lancaster MK-1. Dr. Keith worked on the four-engine, 16-pound model for two years. It has a 76½-inch wing span. He won the Sterling Award for best scale R/C model.*



BUD ATKINSON, *top, with his Naval Air Reserve T-34 Mentor. Walt Glenser, below left, and Bill Bertrand, entered the 1918 Fokker D-7 in the radio-controlled scale event.*

AM1 ROGER BARRETT *of VFP-63, NAS Miramar, starts his engine for the control-line stunt event at NAS Willow Grove. He was one of the few Navy men who were contestants in the National Model Airplane Championships. Barrett, in his tenth year of competition, has been building models for 20 years. He hopes to organize a Navy-sponsored model team.*

THE 1969 NATS

ONE OF THE MANY NAVY OFFICIALS

The 1969 Nationals are over. The 1,600 contestants, an estimated 200,000 spectators and more than 800 Navy men who supported the meet, have returned to normalcy and home – to wait for next year's contest.

Despite adverse weather, lack of lodging facilities and the inevitable crashes, the week of July 14-20 at NAS Willow Grove, Pa., was, from all indications, successful.

Temperatures hovered in the mid-nineties with high humidity percentages throughout the 38th Annual Model Airplane Championships. But most complaints were from the contestants whose model engines were affected by the heat: they said it made their engines run lean. A late-week thunderstorm offered only temporary relief.

Motels in the Willow Grove area were booked solid. Proprietors said they had had reservations for the weekend since March. Although the Navy billeted some of the contestants, and as many as 100 families camped in small trailers and tents on the naval air station complex, late arriving spectators and contestants were turned away from local motels. Some drove as far as 30 miles from Willow Grove to find lodging.

The 1,600 contestants at this year's meet came from all 50 states, Canada, South America, Mexico and Australia. Some were eliminated the first day but stayed to see the finals and other events. Practically all vocations were represented, including servicemen from the Navy, Army and Air Force. There were airline pilots, doctors, lawyers, mechanics, hobby shop owners and model designers, to name a few.

For some, the Willow Grove meet was their first national competition. Others have been building and flying models for more than 25 years. The age group ranged from seven to seventy, but all were enthusiastic about the hobby and the championships.

The week was fun, serious fun. A carnival-like atmosphere prevailed at Willow Grove, but contestants were up with the sun and worked late into the night, preparing their airplanes for the competitions.

Most of the old hands were philosophical about their losses in crashes, perhaps with some difficulty because they often spend large sums and months or years designing and building their airplanes. But some of the younger contestants didn't even try to conceal their feelings when they lost a model; they just let the tears come.

All the losses were not caused by crashes. At least one contestant in a free-flight event chased his plane westward by automobile until it was out of sight and still climbing on air currents. The satisfaction of creating a model of such endurance and then losing it results in mixed emotions.

The competition is fierce and, while flying for points, the modelers get down to business and do their best to win. Winning and losing, however, are taken with amazingly good sportsmanship. The modelers appreciate well designed flying models, regardless of ownership. If a crash-damaged plane can be repaired, they offer their equipment and assistance. But only during the competitive trials does a serious atmosphere prevail; the rest of the time the site resembles an immense hobby shop.

The National Model Airplane Championships started in 1923. Although this year's event was booked as the 38th annual, it was the 29th annual national meet sanctioned by the Academy of Model Aeronautics. The first official event was held at the 1923 National Air Races in St. Louis and sanctioned by the National Aeronautic Association, of which the Academy is an outgrowth and supporting division.

The Nationals have grown from one event, which drew 27 contestants in 1923, to the 35-event program at NAS Willow Grove. Since its organization in 1936, the Academy has sponsored the national meets. No meets were held during the WW II years of 1942-45.

This year was the 21st annual meet supported by the Selected Air Reserve. The Navy became involved with the Nationals in 1948 when the Model Airplane Championships had grown to large proportions, and it was becoming difficult for the AMA to find a space large enough to hold the event. Academy officials approached the Navy

TOM KERR, AN AMA OFFICIAL IN THE RUBBER BAND-POWERED DELTA DART EVENT, HELPS A WEARY CONTESTANT

for assistance. NAS Olathe, Kans., had just closed down a large school command and was converting to a naval air reserve station. Here was a huge airfield only limitedly employed, the AMA was prospecting for a large open space for the championships; thus the Naval Air Reserve became host for the National Model Airplane Championships.

The Nats have been held at the Naval Air Stations at Glenview, Ill.; Los Alamitos, Calif.; Dallas, Texas; Olathe, Kans.; and Willow Grove. The rotation enables modelers in all parts of the country to participate at one time or another.

Planning alone makes the Nationals a major production on the part of the Selected Air Reserve, and already requirements for next year's meet at NAS Glenview are under study.

In January, AMA and Navy officials met in Washington to begin final preparations for the meet at Willow Grove.

Two weeks before the contests, TAR's from the 18 Selected Air Reserve stations around the country and some Reservists on two-weeks active training duty began arriving at the air station to support the air show. By

A COMFORTING HAND *for one who is too young, even for the Delta Dart event, top left. Navy officials, above, monitor radio-control channels. A Navy wife, left, sells NAS Willow Grove pennants and other souvenirs for charity. In the background is Navy-wife operated refreshment stand. A control-line stunt modeler, far left, goes through his paces for a panel of Navy judges.*

THE 1969 NATS

July 14, a total of more than 800 Navy men were organized and ready to help. Most of them were Willow Grove personnel – reserve and regular – who served in various capacities: as judges and tabulators for the model events, information booth attendants, traffic directors, administrative assistants, drivers on a two-car transport that was pulled by a yellow equipment JP-5 and, of course, as official hosts. Some of the men wandered among the crowd explaining the Navy aircraft on display, directing visitors and helping youngsters build their models, particularly in the Delta Dart rubber band-powered competition.

In addition, photographers and journalists from the 18 reserve stations established a command information bureau and photographer-writer teams to crank out upwards of 15 press releases a day. Navy men worked an average of 12 hours daily, in some cases 16 hours.

Two days prior to the first events, Navy judges were briefed and instructed in the AMA scoring system. An official at Willow Grove said most of the judges had worked at the contests before and some are active model enthusiasts. In the TAR program, where Navy men rotate between area stations, most have had a good deal of contest judging experience and look forward to the duty just as the modelers eagerly anticipate the meets.

Willow Grove operations, except for those required in support of the meet, were suspended for the week. Some of the long, wide runways became super highways upon which contestants and spectators drove to the spreadout areas of the events, while other runways were used for the radio-controlled (RC) models. (The scale RC models, which so precisely resemble their full size counterparts, appeared especially fascinating as they swooped in on their final approaches, wheels down and locked, to land on a runway where the big ones land routinely.)

For the benefit of the contestants and the spectators, the Navy Department flew in its latest aircraft for exhibition on the final two days of the meet. They included a P-3 *Orion,* an A-6 *Intruder,* an F-8 *Crusader,* an A-4 *Skyhawk,* and the S-2 *Trackers* and other aircraft normally assigned to Willow Grove. In addition, the air station has an array of WW II aircraft from the U.S., Japan and Germany which were on display.

To facilitate conducting the Nationals, Navy and Marine Corps Reserve Units, the Air Force Reserve and the Pennsylvania National Guard changed their training schedules for the period. Navy wives from the enlisted, chiefs and officers clubs operated refreshment and souvenir stands. The receipts were donated to charity.

The Navy's primary interest in model aircraft activity is to promote increased awareness of aviation among the youth of America. Most of today's Navy and Marine Corps Aviators gained initial exposure to aeronautics through model airplane building, and a good many of today's Navy pilots and airmen are former participants in the National Championships and similar competitions.

One former Nationals participant, a man who took a fifth place in the first Navy-hosted meet at Olathe in 1948 and later became a Navy pilot who was shot down in Korea and highly decorated for his combat missions, was honored by the contestants at this year's meet. They sent the following telegram to him:

"On this historic flight, that will live forever in the pages of history, we, the contestants at the model airplane meets, extend to you our best wishes on your brave and wonderful exploration of a new frontier that will open the way to new careers and untold horizons for the youngsters of America.

"Your example of what America means to all of us and to the world, makes us proud of you and the other astronauts in the manned space program.

"As a former model airplane builder and contestant at the Nats, we applaud your endeavors and wish you God speed."

The telegram was addressed to *Apollo 11* Commander Neil Armstrong, who won that 1948 award, and astronauts Buzz Aldrin and Michael Collins as they sped toward the moon.

The modelers watched the progress of the *Apollo 11* mission closely when they were not directly involved with the competition, and some of them left before the finals in order to be home in time to watch the historic moon walk.

The radio-control competition captured the largest audience of all the events, particularly in the pylon races and scale competition. Patterned after the Goodyear racers, the pylon planes fly over a ten-lap, quarter-mile course at speeds between 100 and 120 mph.

But in all of the events, contestants and spectators alike were enthusiastic about *good* flights, sympathetic to failures and crashes. A spirit of sportsmanship and camaraderie was apparent.

Everyone has settled back into a routine after the Willow Grove meet. The modelers have gone back to homes and jobs. They will build more models and compete in the some 500 weekend events sanctioned by the AMA year around, preparing for next year at NAS Glenview. The spectators have gone too, perhaps some new model airplane enthusiasts among them, and the Navy men have settled back into the Selected Air Reserve program.

One radio-control contestant may have summed up the "it's all in serious fun" attitude of the entire 26,000 AMA membership when after watching one of his expensive models crash, he remarked, "Well, I'm glad this is an avocation and not a vocation."

CONTESTANT & FREE-FLIGHT MODEL

PLATT WITH HIS R/C FOCKE-WULF 190

PLATT'S WINNER LAST YEAR, THE DOUGLAS DAUNTLESS SBD R/C SCALE

London-born Dave Platt, who at last year's Nationals attracted a great deal of attention with an unprecedented perfect score for his radio-controlled scale SBD Douglas *Dauntless,* was a crowd pleaser again this year with a German Focke-Wulf 190 scale RC model. This was his second year of United States competition.

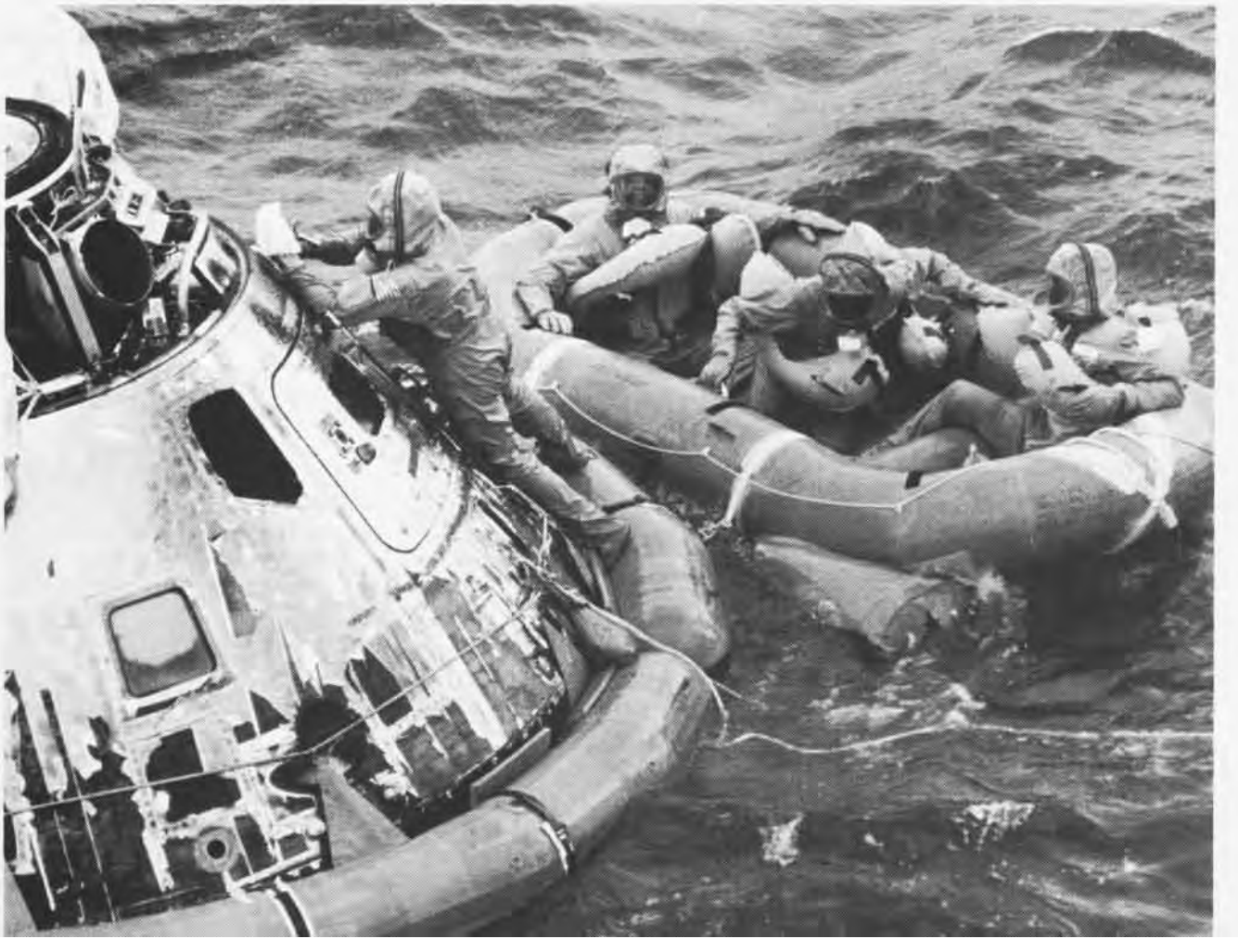
Two years ago, after Dave had won the British Nats with a beautiful Navy T-28, the owner of a Chicago model firm went to England to offer Platt a job as a model designer. At the time, he was self-employed in London, building models for anyone with the money.

"The job sounded very interesting, but took a great deal of consideration; going to another country was quite a change of jobs," Platt said.

His main interests are in World War II models, but he builds all kinds. He recently completed several models for *Battle of Britain,* a major British motion picture.

He planned to begin work on an airplane for next year's meet soon after returning to Chicago. It will be a control-line scale model of the Navy A-1 *Skyraider.* Platt said he completed five years of research on the *Skyraider* just before leaving for Willow Grove and will keep the model as near to scale as possible, right down to the last rivet. We believe he will.

For the third time in eight months, Helicopter Antisubmarine Squadron Four, NAS Imperial Beach, Calif., participated in Apollo recoveries when it picked up the Apollo 11 crew after their splashdown in the Pacific on July 24. Commander Donald S. Jones led his squadron through the months of extensive training that culminated in the recovery by a squadron SH-3D. HS-4 is scheduled for a WestPac deployment aboard CVS-20 this fall.




USS HORNET

NEXT MONTH:

Summer is the season for air shows around the United States and overseas. Naval Aviation News looks at a sampling of what goes into these shows – the planes and the people that draw spectators from miles around.

One of the busiest flight teams anywhere, the Blue Angels, performs at many of these air shows, staying on the road ten months annually. Naval Aviation News goes behind the scenes for an in-depth study of a side of the Blue Angels rarely seen by the millions of spectators who thrill to their performance – the hard job of training and maintenance that keeps them flying day after day.

NAVAL AVIATION NEWS