NAVAL AVIATION

NEWS

Training Command Update

MARCH 1977

AVIATION TRAINING FORM

STAGE

HOP

AIRCRAFT

SQUADRON (VT/HT)

SYLLABUS

JULIAN DATE

FLIGHT DURATION (Hours/tenths)

TIME

INSTRUCTOR'S SSN

INSTRUCTOR CHANGE

TRANSACTION INFORMATION

COMMENTS

ITEM

#3 GOT WAY SUCKED ON THE ROLL AND NEVER GOT BACK INTO POSITION

#6 LONG NOSE TO TAIL MOST OF THE TIME.

#8 TENDED TO GET ACCUTE RIGHT AT FIRST BUT CORRECTED IMMEDIATELY. EXCELLENT BEARING AND CLOSURE CONTROL THEREAFTER.

#10 SMOOTH AND IN POSITION FROM DIRTY-UP ALL THE WAY TO MISSED APPROACH.

#15 EXTREMELY WELL VERSED IN ALL EMERGENCIES

LT (W.B. Wood) / W.B. WOOD JR

MASKEW, RODNEY M. ENS

DUAL
WEAT

MISS

1. T
ation
2. Sa
landin

CONDUCT

1. Ind
2. Intr
kts maxi
3. Intr
4. Intec
5. Intro
6. Night
wing.
7. Config
signals.
8. Full fl
(3 minimum)

SAFETY OF FL

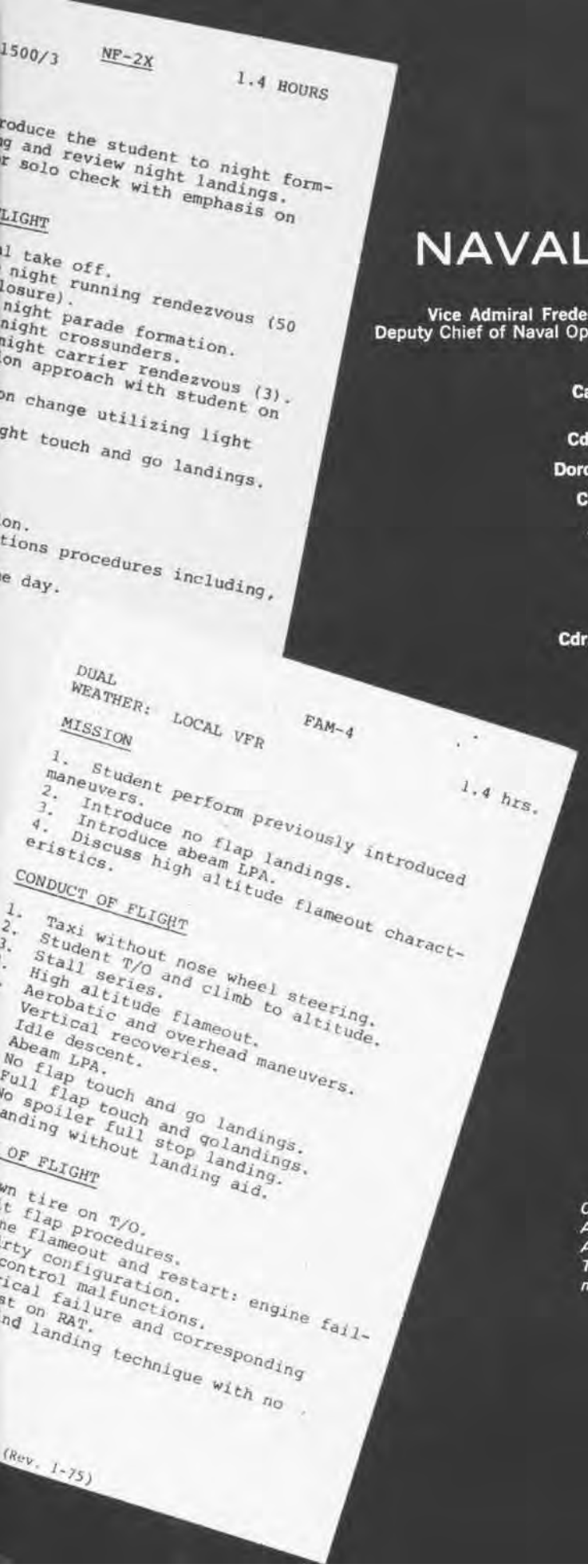
1. Midair co
2. Lost comm
HEFOE signals
3. Emergency

142/220 (Rev. 1-

S

1.
2.
3.
ure
4.
5. E
systen
6. Cr
spoiler
7. EOD.

NASMER P-1542



1500/3 NF-2X 1.4 HOURS

roduce the student to night form-
g and review night landings.
r solo check with emphasis on

LIGHT

l take off.
night running rendezvous (50
losure).
night parade formation.
night crossunders.
night carrier rendezvous (3).
on approach with student on

on change utilizing light

ght touch and go landings.

on.
tions procedures including,
e day.

DUAL
WEATHER: LOCAL VFR FAM-4 1.4 hrs.

MISSION

1. Student perform previously introduced maneuvers.
2. Introduce no flap landings.
3. Introduce abeam LPA.
4. Discuss high altitude flameout characteristics.

CONDUCT OF FLIGHT

1. Taxi without nose wheel steering.
2. Student T/O and climb to altitude.
3. Stall series.
. High altitude flameout.
Aerobatic and overhead maneuvers.
Vertical recoveries.
Idle descent.
Abeam LPA.
No flap touch and go landings.
Full flap touch and golandings.
o spoiler full stop landing.
anding without landing aid.

OF FLIGHT

wn tire on T/O.
t flap procedures.
e flameout and restart: engine fail-
rty configuration.
control malfunctions.
ical failure and corresponding
t on RAT.
nd landing technique with no

(Rev. 1-75)

NAVAL AVIATION NEWS

FIFTY-NINTH YEAR OF PUBLICATION

COVERS — JOC Bill Bearden photographed AOCs at Pensacola, front, as well as Vice Admiral Turner in his Pentagon office, back. This composition of aviation training command forms was created by Charles Cooney.

PEOPLE PLANES AND PLACES

Individual honors: Ens. Richard Evans, VR-24 Det, has received the Daedalian's Orville Wright achievement award as the outstanding graduate of the naval flight training program from January 1 to June 30, 1976.

LCdr. W. Winston Copeland, Jr., VF-151, is the recipient of Grumman's Topcat of the Year Award for 1976. The award is given to the Naval Aviator who has made the most significant contribution to fighter naval aviation during the preceding year.

Lt. Harry L. Smith captained the *Nimrod* crew that won the RAF Fincastle Trophy in ASW competition last October 300 miles off the coast of Scotland in the North Atlantic. Lt. Smith has been an exchange officer with the RAF for two years. In the annual competition, teams from New Zealand, Canada, Australia and the United Kingdom each fly a day and night sortie.

Frank W. Fasano is the recipient of the largest amount ever paid by the Naval Air Technical Services Facility for a beneficial suggestion award. Cdr. John G. Wurth, C.O., presented him with a check for $1,785 for his suggestion, which will eliminate redundant microfilming within the Navy and will save NavAirSysCom well over $600,000.

JFK's AC1 Joe D. Huey has been selected as the winner of the Vice Admiral Robert B. Pirie award as air traffic controller of 1976.

Records: VP-22 completed 23 years of accident-free flying on November 19, 1976. This represents over 188,000 flying hours in SP-2Es and P-3s and more than 70 million statute miles flown.

VAW-121 marked its 10th year of accident-free operations in December, 16,850 flight hours. The squadron recently transitioned from E-1B *Tracers* to E-2C *Hawkeyes*.

Lt. Rich Jaeger, OinC of HSL-34's Det 1 aboard USS *Truett* (FF-1095), recently made his 1,000th shipboard helo landing.

Winners of the Noel Davis Trophy for the period July 1, 1974, to September 30, 1976, are reserve squadrons VR-52, Willow Grove, and Dets Detroit and Washington, D.C.; VAW-78, Norfolk; VC-12, Oceana; and VFP-306, Washington, D.C. Winners for the second consecutive time are VP-62, Jacksonville; VAQ-208 and VA-304, Alameda; and HS-74, South Weymouth. VF-301, Miramar, won the trophy for the third consecutive time.

The 1976 Sheldon Clark Naval Air Reserve Trophy, presented by the Navy League for the highest level of combat readiness, was won by Commander Reserve Patrol Wing, Atlantic.

Among the Atlantic Fleet winners of Battle Es for 1976 are VP-5, VA-82, VAW-125 and VF-142. *Nimitz*, currently on her first Med deployment, was also awarded a Battle E as the Atlantic Fleet's best operational aircraft carrier.

Changes of command:

VA-127: Cdr. Ronald L. Waters relieved Cdr. Arvin R. Chauncey.

VP-56: Cdr. Roger F. Donodeo relieved Cdr. James E. McNulla III.

HMH-777: Maj. James J. Brady relieved Lt. Col. James D. Lott.

VA-56: Cdr. Robert E. Smith relieved Cdr. Gary L. Starbird.

HSL-34: Cdr. S. L. Stevens relieved Cdr. R. L. Johnson.

Enterprise: Capt. James W. Austin relieved Capt. Carol C. Smith, Jr.

VF-301: Cdr. Robert C. Hulse relieved Cdr. Thomas W. Rodgers.

CVW-6: Cdr. Ronald F. Ball relieved Cdr. Clarence E. Armstrong.

VA-105: Cdr. Franklin H. Saunders relieved Cdr. John E. Carpenter.

ComHelWingRes: Cdr. Melvin E. Taunt relieved Cdr. Paul E. Caine.

Naval Aviation NEWS did you know?

Command Histories

The Naval Aviation Historian says it's time for submission of annual histories in compliance with OpNavInst 5750.12B. He reminds all hands that those day-to-day happenings that seem dull and routine at times are very much a part of Naval Aviation and are needed for the record. The Aviation History Unit wants to know what the routine is and how it's carried on. Pictures help. Command histories are used by functional commands as background information for current studies involving plans, policies and programs. They are also used to verify unit and personal awards and in compiling official Navy histories.

Your history is due March 1.

All-Weather Lubricant

A synthetic, all-weather weapon lubricant has been developed by Robert N. Bolster, a Naval Research Laboratory chemist. It promises to meet the severe demands of Navy's rapid-fire aircraft machine guns. Bolster says that the guns require a high-performance lubricant for protection against high-bearing loads and a harsh working environment. The guns must function reliably at temperatures as low as −65 degrees F, although they may reach very high temperatures during firing.

Bolster explains that rain or condensation, because of rapid altitude changes, may wash off the lubricant and subsequent freezing may then immobilize the mechanism. Exposure to the marine environment aboard carriers may cause corrosion if the semifluid grease film lacks adequate protective ability.

Steel test specimens coated with the new lubricant and exposed to salt spray for 14 days were almost completely protected from rust. Resistance to icing was tested by exposing a cold gun to warm humid air and then cooling it to −65 degrees F. The gun fired at an acceptable rate, the first time it was fired under those conditions.

Bolster feels that use of the lubricant would improve the reliability and all-weather performance of aircraft weapons exposed to adverse conditions, and reduce corrosion damage and maintenance requirements.

Navy/AF Training

The first combined class of Naval Flight Officers and Air Force Navigators was graduated on December 16, 1976, at Mather AFB, Calif. An interservice review had determined that the consolidation of Navy and Air Force navigator training would be beneficial and save more than $1 million annually.

Nine Navy ensigns graduated with 31 Air Force officers in the first class. They entered the undergraduate navigator training course last July. They received six months of Air Force instruction on celestial and global navigation, procedures and operations. There was also a one-week fleet indoctrination course given by Navy instructors.

Rear Admiral Burton H. Shepherd, Chief of Naval Air Training, was guest speaker at the graduation ceremony and presented Navy NFO wings to the ensigns and Air Force navigator wings to the Air Force officers.

Under the new program, all Navy, Marine Corps and Coast Guard navigation training is being conducted at Mather. Naval Air Training Unit, Mather was officially established October 10, 1976, and navigation training squadron VT-29 was decommissioned on December 31.

grampaw pettibone

Mid Air

Two A-7 pilots were scheduled for a practice bombing flight. The brief, preflight and departure were without incident.

While proceeding to the target area, the flight switched radio frequencies from departure to target control. The leader was advised by the target that the bombing mission had been cancelled and his flight was to orbit a destroyer pending further instructions. Target control gave them a vector of 180 degrees at 90 miles. The *Corsairs* proceeded on course, and set up a 14,000-foot orbit when overhead the destroyer.

While holding, the flight switched to squadron tactical frequency and discussed operations for the remainder of the mission. They decided to drop their practice load and proceed with the secondary mission, air combat maneuvering.

The flight was at 250 kias with a port orbit, still at 14,000, in a loose cruise disposition. The wingman was on the starboard side. The A-7s commenced some mild maneuvering, which consisted of shallow wingovers. The leader was able to maintain visual contact with his wingman through his first maneuver. But halfway through the second, he lost sight of him and consequently leveled his wings.

In approximately a wings level attitude, slightly nose up, the leader experienced a violent yaw to the right as his aircraft went out of control. It stabilized about 30 degrees nose down with 120 degrees starboard angle of bank. He regained control, rolled level and pulled the nose to the horizon.

The wingman states that he had been flying a fluid cruise formation, maneuvering back and forth as necessary to maintain position. He added that the maneuvers did not exceed 80 degrees angle of bank, 20 degrees nose up or more than two Gs. When the leader leveled his wings, the wingman was at the lead's 4:30 position, right wing up with nose 10 degrees higher than the lead aircraft.

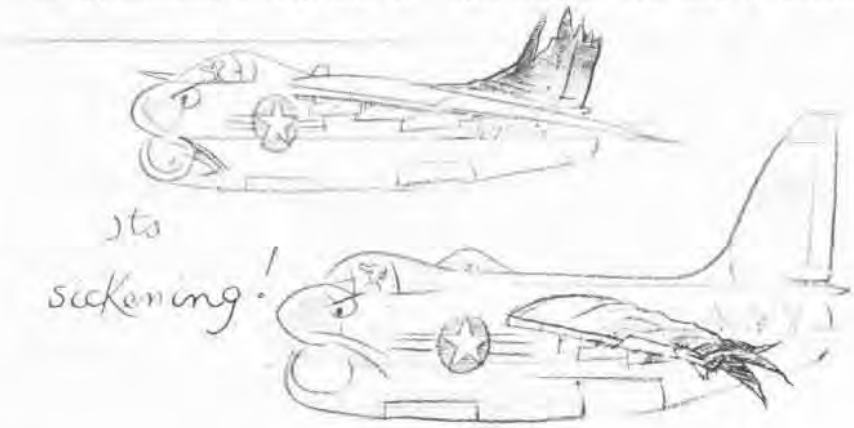
The wingman had angled off and believed he had enough airspeed to safely complete a roll over the top of the lead aircraft. At the top of the roll, he felt a shudder which he stated was very similar to flying through jet wash. After the wingman stabilized his own aircraft, he rejoined the leader. At this time he observed structural damage to the vertical stabilizer of the lead *Corsair*. He also noted slight damage to his own port wing.

After slow flight checks at altitude, both *Corsairs* returned to home plate. The leader's aircraft sustained substantial damage, the wingman's minor.

Grampaw Pettibone says:

Great horned toadies! Looks to me like the wingman didn't do too well. He executed an unbriefed maneuver with insufficient airspeed and separation on the other machine! That's *not smart!* I've said it before. There is a fine line between being aggressive and foolhardy. The wingman didn't know the difference.

I was not surprised to hear that the wingman had pulled this maneuver on other occasions. This type of unprofessionalism and showmanship bothers me no end!



Instrument Takeoff

A PV-1 crashed into the water near the end of the runway, following a night takeoff. The surviving pilot stated that the engine and instruments had functioned satisfactorily during the takeoff run.

After becoming airborne, the pilot commenced a normal climb on instruments. Noting that the gyro horizon indicated the plane was in a nose-high right turn, the pilot raised the right wing and lowered the nose slightly. When the horizon failed to indicate this correction, the pilot assumed the instrument was inoperative.

He immediately referred to the turn

ILLUSTRATED BY Osborn

and bank indicator which showed the plane to be in a left turn. The pilot stopped the turn by reference to this instrument, then raised the nose as he saw the airspeed starting to increase. At this instant he struck the water.

Accepting the fact that the gyro horizon had failed, the accident board was still of the opinion that the pilot was too dependent on the horizon as the main attitude instrument. Members of the board recommended that all pilots be cautioned against placing full dependence on the artificial horizon, particularly during critical maneuvers. They pointed out that at such times the full use of *all* rate and attitude instruments is essential.

The board also reminded that it was necessary to maintain a constant power setting for a longer period on instrument takeoff than at other times since power is basically connected with maintaining the correct flight attitude.

Grampaw Pettibone says:

All instrument and would-be instrument pilots will do well to take heed of the sound advice handed out by this board.

The number of accidents which occur immediately after takeoff makes me wonder whether some of them might not be due to *pilot-caused* instrument failures. For example, do you know that it takes approximately five minutes at four inches of vacuum for a gyro horizon to build up to speed so that it will register correctly? Before that, it will act sluggish and fail to indicate the correct attitude of the plane — *just like the one in this accident!*

Also, do you know how to properly test your instruments on the ground, so you will know *before* you get in the air whether they will indicate correctly? Better be darn *sure* you do before your next instrument flight! (June 1945)

Oops!

Three crews were scheduled for a tactics flight, two in F-4s, the third in an F-14. After a complete briefing, the aircraft were preflighted. Start, takeoff and departure to the ops area were uneventful.

In the ops area, the three planes conducted two ACM engagements without incident. The aircraft then joined in a V formation with the F-14 as lead, one *Phantom* on the port wing and the other on the starboard side. Approaching the runway, about two miles out at the 2,000-foot break altitude, the F-14's wings were swept back to 68 degrees so that a tighter formation might be flown.

The kiss-off signal was given by the *Tomcat* pilot and a left turn was begun by the F-4 on the port side. As the left side *Phantom* broke, a mild jarring sensation was felt. The outer wing panel of the F-4 had contacted the left stabilator of the F-14. The planes separated and the crews assessed the damage. The F-4 had lost an outer portion of the right wing. The *Phantom* was slowed and its gear lowered. The pilot reported to the tower that he had lost part of his starboard wing and would be making an extended downwind to a no-flaps approach and landing.

An uneventful no-flaps landing, with only slightly increased stick forces to the left, followed. The F-14 also made a no-flaps landing without incident, followed by the remaining F-4.

Grampaw Pettibone says:

Great gallopin' ghosts! Who's in charge here?! With all the talent in this group who would have guessed such an outcome?

After all the *mastications* were in on this and all the charges and countercharges were made, it boiled down to the conclusion that the pilot misjudged his distance from the F-14.

Corrective action, by the way, is not to cease dissimilar formation flying but rather to cease dissimilar aircraft from running into each other in formation! We were lucky this time! Nuff said!

Training command aircraft include Skyhawks, above. On opposite page, top, T-34Bs are succeeded by Cayustons, first two production models of which are shown in flight. T-38s, middle left, are shown as they phasing out. At far right is T-39 Sabreliner.

Training Command Update

By Commander Rosario Rausa

Bronson . . . Eight Able . . . Cabaniss . . . Silverhill . . . Faircloth.

The names have echoed through the ready rooms of Naval Aviation for more than a generation. They are but several of the 30 landing strips — runways of asphalt or concrete or even sod — where countless instructors and students have made countless touchdowns and takeoffs in the aircraft of the Naval Air Training Command.

In a way, these fields are symbolic of the command. They have served the Navy well since the early years of World War II and, like the command, they have been updated and refurbished to meet the growing needs of naval flight training.

More than 1,900 men and women travel the challenging road to Naval/Marine Aviator and Flight Officer wings each year. As in the years when Yellow Perils *plied the skies, those who aspire to golden wings today get the very best flight instruction available anywhere in the world.*

In this issue Naval Aviation News *presents a look at the Naval Air Training Command. This is not an in-depth review. It is impossible to fairly feature all squadrons and units. Primarily, the following articles are offered as an abbreviated update on what's happening at the U.S. Navy's university of the air.*

NIFTS is the Navy Integrated Flight Training System. It's new and represents the first major revision in the instructional sequence in 20 years. NIFTS planning began three years ago and generally involves a rearrangement and streamlining of the flight and ground training program so that more cost effective instruction is achieved. Important to NIFTS are the T-34C and the T-44A, a pair of modern, superbly equipped aircraft which will complement those already in use.

Expected to be operational in the near future, the T-34C will replace the T-28s now flown in primary. Successor to the B version of the *Mentor*, the T-34C has all the maneu-

verability of the T-28 plus a host of other features.

"The T-34C," says Captain Doug Payne, Commander, Training Air Wing Five, at NAS Whiting Field, "is an easier aircraft to learn how to fly in comparison with the T-28. And NIFTS is a really evolutionary change in the way we've taught our students in the past."

Depending on the pipelines, now called strike, formerly VA/VF, maritime, formerly VS/VP, and helo, students will fly as much as 90 hours in the T-34C. They will learn the basic flying techniques plus formation, aerobatics, night flying and instruments in the economical two-seater.

"The efficiency and power of the C's turbine engine, in addition to its other assets," says Capt. Payne, "will permit higher flight hours per month per aircraft and make management of the student flow very cost effective."

The new *Mentor* will be powered by a United Aircraft of Canada Limited PT6A-25 which produces a torque-limited 400 shaft horsepower. It will have a ceiling of 20,000 feet. Syllabus hops will normally be flown in the altitude structure below 18,000 feet.

Maritime students will undergo advanced training in the T-44. While the S-3 *Viking* is viewed as a quantum jump from the S-2 *Tracker*, the T-44 is considered a similarly positive departure from the training command's venerable TS-2As and US-2Bs. Soon to be flying at NAS Corpus Christi's Training Air Wing Four, the T-44, like the T-34, is manufactured by Beech. It is expected to serve as the ideal training vehicle for the flyers who will graduate to P-3 *Orions*, E-2 *Hawkeyes*, C-130s and the like.

Captain Bob Colvin, Commander, Training Air Wing Four, is very high on the T-44. A veteran ASW pilot with 3,000 S-2 hours in his log books, he asserts, "It has good handling characteristics and will be a safe training platform. For example, in the S-2, if you lose an engine, you're in a tough situation. Not so in the T-44. Plus, you don't have to shut down a bad engine in the T-44 to feather the prop."

At 10,000 pounds, the T-44 (it hasn't been assigned a Navy name yet) is half the weight of a fully loaded S-2. It accommodates an instructor and student in the cockpit while a second student occupies an observer station aft until his turn at the controls. The cabin is air-conditioned — a major plus, in the eyes of Commodore Colvin. "In this part of the country," he says, "summer days with 90 percent humidity are not uncommon. Many will remember the chore involved in manning-up an S-2 in such heat."

The cabin is pressurized and the PT6A turboprop engines provide the same endurance as the TS-2A. The instrument package, mostly Collins gear, incorporates the latest technology has to offer. It includes a fully integrated autopilot, one UHF and two VHF radios, a pair of VORS, Tacan, ILS and IFF. The T-44 cruises at 220 knots TAS and can operate in the same altitude structure as those aircraft which students will fly in the fleet.

Additionally, the T-44 will be supported by contract maintenance much like the T-34. Although the wing will monitor the maintenance program, the manufacturer is responsible for each level of maintenance. There won't even be a Navy plane captain on the line. A stable corps of civilian technicians will provide total support during normal workdays which will run from 0600 to 2400. Especially important is the worldwide stockpile system employed by Beech. Aircraft availability rates should remain high since parts can be shipped in expeditiously.

T-44, above, incorporates latest in aviation technology and will help train advanced maritime students. It will replace the Tracker, below.

Contract maintenance will alleviate the Group IX personnel shortage which exists within many training command units. Along with NIFTS, the Navy expects training results to improve while achieving savings in manpower, fuel and other expenditures.

Details of NIFTS are too complex to list here. Essentially, the system incorporates the same phases of instruction needed to train a pilot for the fleet. Phases are divided into primary, intermediate and advanced for each of the pipelines (charts, pages 19 through 22). The total flight time accumulated by each student hasn't changed radically. Strike people get about 250 hours, maritime and helo,

about 200, NFOs, between 75 and 100.

In one sense, by emphasizing T-34C time, training has been shifted "upstream." It is believed that candidates who might be dropped out of the program eventually would be identified early on, saving training costs.

Trainers and simulators are being used extensively. Students and instructors agree that simulator time enhances skills. In many cases a student can actually "fly" his syllabus hop on the ground before going aloft and completing it in an airplane. There are other advantages. A simulator at Meridian, for example, is used preparatory to dive-bombing flights. The simulator picture gives the student, if not the "feel" of the pattern, at least a fairly realistic view of what it and the target look like during a run.

Academic subjects have changed little over the years. However, a significant portion of them is now meted out through a self-study format. The student thus becomes a manager of his own book time.

The bottom line, the vital value, of the Naval Air Training Command, is measured by the performance of the instructor/student corps. How they do today dictates to a considerable degree how Naval Air will do tomorrow. In the eyes of the commanders, there is booming optimism about the quality of students in the mid-1970s.

Students still arrive at the Annapolis of the Air with different educational backgrounds. Perhaps more have engineering type degrees as compared to 30 years ago, but the existing cross-section is multi-faceted. For example, last November in VTs 7, 9 and 19 at Meridian's Training Air Wing One, there were 78 students onboard — 25 had engineering degrees. Others had studied oceanography, law enforcement, languages, Latin-American affairs, liberal arts, history, business and many other subjects.

Regardless of their backgrounds, students have to live with unprecedented pressures once they begin training. He or she must sweat completing the course, all the while hoping a fleet seat will be available once the wings have been pinned on. The competition is very strong.

Training command leaders interviewed by *NANews* concur that today's student is smarter than his counterpart of a generation ago. He also has the same flair traditional in the fledglings of Navy Air. It may be manifested in more subtle ways, though.

Commodore Tom Wimberly, Commander of NAS Chase-based Training Air Wing Three, praised the candi-

Helos

Whiting Field's HT-8 is tasked with providing primary helo instruction for Navy, Marine, Coast Guard and Allied flight students. About 500 are trained annually in the TH-57A after they receive the prescribed fixed-wing instruction. Built by Bell, the *Sea Ranger* is a light-weight, jet turbine powered aircraft with a maximum speed of 130 knots.

The squadron was originally formed in 1950. The early astronauts received special training at HT-8 to familiarize them with high-speed vertical descent characteristics similar to those of the Lunar Module.

After completing HT-8's syllabus, students move on to HT-18, also at Whiting, for advanced training. There they fly the H-1 *Huey*, another Bell aircraft. Students master formation flying and other techniques, including carrier qualifications, before receiving wings.

Carquals, above. Below, H-57 Sea Rangers in formation, and a Huey.

Maritime students work in the Tracker trainer, right. Far right, T-2 Buckeye simulator. Below, A-4 simulator panel.

dates' "flair as well as their initiative." He adds, "I tell instructors and students if they want to impress people, do it by flying precisely on the glide path all the way to touchdown."

Captain John Wasson, C.O. of Chase Field, keeps his hand in by regularly flying instructional hops. "They're super intelligent," he says about the students, "and have qualities as good as junior officers in the fleet when I was a squadron skipper a few years back. They accept the challenge of Naval Aviation, are serious about their work, and are impressively disciplined. And they can fly.

"The other day," he went on, "my student made an IFR descent, broke out at 800 feet and got us on deck readily — a professional evolution all the way. I felt that he did better than I could have when I went through."

Captain Richard Zick, Commander, Training Air Wing One, recalls, "I went through training in *Spads*. On a bombing run you more or less 'stuck' the gunsight on the target and released. The youngsters of today will have to master heads up displays and much more complicated equipment. In a way we're preparing them to operate airborne weapons systems rather than teaching them, in the purest sense, to fly."

He adds, "Pilots and BNs have to know how their systems work. In addition, they're operating almost entirely in an IFR or radar-controlled environment. Still, the accident rate has remained low — testimony to the superior instructors and good attitudes on the part of all hands, including the ground support personnel."

Every student, Navy, Marine, Coast Guard or Allied, has a "book" written about him by the time he graduates. The Aviation Training Form (inside front cover) is completed by the instructor after each sortie and contains a fairly detailed analysis of the candidate's performance. Instructors and students alike take this form very seriously, for obvious reasons.

Squadrons also try to assign two instructors to each student for a particular phase of the syllabus. This provides continuity and eliminates the candidate's concern — "I wonder who I'll be scheduled with tomorrow?" Check flights are flown with a different instructor, of course.

Should a student receive a "down," the flight is openly and thoroughly discussed. Re-flys are scheduled as necessary. The student is given every reasonable chance to make it through. The attrition rate, incidentally, has remained the same for the last 20 or so years, about 25 percent.

While there is praise for the students, instructors are equally regarded by commanders. Says Corpus Christi's Commodore Colvin, "They're tops, absolutely superb, in my book. And the duty's good. In addition to lots of flight time," he declares, "the instructor's job is a per-

Harry Gann

Buckeyes are used in basic strike training. Left, T-2s on the way up. Above, student rolls into USS Lexington's groove during carquals.

sonally rewarding one. I also feel that no officer ought to be a C.O. without a tour as a flight instructor."

How about those fleet seats? How are a new flyer's orders determined? Needs of the service dictate, certainly. High grades help a student get his choice but there are no guarantees. Detailers have a difficult job in keeping the flyers happy but every effort is made to honor their desires.

Students seem to be remarkably mature about their futures in Navy Air. They know what they want. They also accept the fact that they may not get their choice. Above all else, their single most important goal is to get those Gold Wings.

Commodore Colvin made a convincing point about the quality of today's flight student when he discussed the type of maritime flyer produced by the training command.

"We have lieutenants junior grade flying P-3s as plane commanders. I think it reflects the type of training the Navy provides that a young officer can take charge of an imposing aircraft like the *Orion* and its crew, and go after a submarine whose skipper is probably 20 years his senior. It requires a first-rate intellect to operate a plane like the P-3 and make tactical decisions along the way."

One C.O., commenting on those in pursuit of wings, puts it simply, "The Navy still attracts the good ones."

And we should all be pleased with that.

Flying School VT-7 Style

Pop in at VT-7 and you enter a world of green coveralls, people in motion and aircraft on the move. Permeating the environment, and innate to it, is a lively sense that vital aeronautical information is being exchanged at a rapid pace. That's because the Meridian-based squadron is one of the aviation training command units where those who aspire to Golden Wings learn to fly the Navy way.

VT-7 operates the tandem-seat Douglas *Skyhawk*, its principal hardware asset. Those who maintain the TA-4s and the admin types who manage the records are instrumental in VT-7's success. At the same time, the squadron's foremost human resource is the instructor/student corps. These are the main men, the people in the trenches, who make the mission happen. In so doing, they weave the fabric of Naval Aviation's future.

On a given day you might catch Commander Bill "Red" Riley greeting a contingent of freshly arrived students. His preliminary remarks are kindly and serious. The skipper has a Georgia drawl and the imposing presence of a linebacker who's been around the league for years.

In fact, Cdr. Riley has extensive tactical flying background. He's an ideal choice to head an outfit which will form a deep and lasting impression on those who matriculate there.

"Work hard at ground school," he exhorts. "Keep yourself in good physical condition. You need to be in top shape to produce on the ground and in the air."

The four young men in khaki listen attentively. This is not the first "welcome aboard" they've experienced. Nor will it be the last. Each is aware of the stair-step pathway to wings and each knows it behooves him to understand the rules of the road at each stair-step squadron along the way. Those rules don't change much. The tone, or character, perhaps does.

"You're here to fly," Riley continues. "And when the time's right, to have fun. Students and instructors work together — and play together.

"The TA-4 is a good airplane. It goes fast and handles well. Learn to fly it and you'll be reasonably ready to take on fleet aircraft.

"There will be strict adherence to Natops and safety procedures. They constitute an unbeatable insurance policy."

Riley pauses. There is punch in his final words.

On the opposite page is a close-up of VT-7's Bicentennial aircraft. Commander Bill Riley, left, is skipper of advanced strike unit. Above is a view of the line from the top of a hangar.

Story and Photos by Cdr. Rosario Rausa

"Every instructor here, including me, wants you to get your wings. We will do our share. We expect you to do yours."

The briefing alley in VT-7's spaces resembles a row of telephone booths sans doors. Each space is an austere cubicle furnished with a couple of chairs and a blackboard. In these chambers, instructors and students engage in a dynamic exchange — transference, if you will — of aviation data.

Lt. Bob Wood, an A-6 driver before coming to Meridian, and Ens. Richard Barrett share a cubicle. They are traveling the verbal route through a FAM 3 hop.

"OK," says Wood. "Union departure to the middle of the block. Accelerate to three five zero on level off. Then we'll begin with . . . ."

Barrett is all at once relaxed and intense. He takes few notes. He's briefed himself countless times for this very sortie. In one way he welcomes the lucid, carefully delivered description of the ensuing session in the sky. In another, he's impatient, wanting to say "let's get on with it, let's get out there where I can fly the plane instead of talk about it!"

Wood. "Remember, you might have a tendency to roll too slowly during the barrel roll." Barrett recalls, somewhat uncomfortably, that this maneuver gave him problems on FAM 2. "On the overhead maneuvers," continues Wood, "maintain the proper Gs. Don't relax 'em coming up through the vertical."

Barrett gives a head nod. The brief goes on easily, the student answering or asking a few questions along the

way. An observer can almost feel Barrett concentrating.

"The slats may come out asymmetrically," says Wood, "so don't be surprised if a wing drops. I'll introduce vertical recoveries next. Close your eyes and I'll wrap her around to disorient you. When I call 'you've got it,' open your eyes and recover."

"There's a temptation," Wood goes on, "to keep your eyes open. If you do, you'll probably make super recoveries and be graded accordingly. But believe me, Rick, you'll be cheating yourself. Sometime during ACM stage you're going to get in an unusual attitude. You'll have to make a 'real' recovery. Learn to be ready for it. Enough said."

The brief is not really brief. It's a lengthy, thorough, step-by-step, precisely calculated preview of a sequence of events which will carry the student and his instructor through virtually every minute in the next two or so hours of their lives.

Take a moment and multiply this instructional evolution by the hundreds of sorties which are flown daily throughout the training com-

mand. The learning yield would certainly match that of any huge university.

Safety items, emergency questions, Natops — all are reviewed. The tedious donning of flight gear and a check of the yellow sheets is next.

But after that, the two flyers finally go outdoors. Row after row of *Skyhawks* wait in the Mississippi sun. Others, plus some T-2 *Buckeyes* from a sister squadron, rise into the sky. Others screech onto the runway, landing.

Wood and Barrett saunter to their machine. They examine it as if it were for sale and they want to buy it. They seem to scrutinize each bolt and crevice. They push and pull surfaces which are supposed to be pushed and pulled. Their heads disappear into the wheel wells, searching for a leak or a safety pin out of place.

Then they climb the metal steps of the A-4's boarding ladder and deposit themselves in the confines of their respective cockpits. A plane captain helps strap them in. Thus girded, helmets donned, prestart

Wood and Barrett head for Skyhawk, above, and then give it a close scrutiny, left. Here, plane captain helps Barrett strap in.

checks complete, Barrett, up front, signals for start.

The plane captain flips a switch on the jeep-like huffer and sends a rush of pressurized air through the tube connected to the aircraft's starting unit. Barrett eyes the gauges. He knows that Wood is doing the same and will intervene in the event of an improper start. But he also knows it's vital for him to discover a malfunction on his own without assistance from the man behind him.

The rpms rise through 50 percent and, influenced by the power plant's gathering thrust, the tapered nose sinks down on its strut. For the poetically inclined, this gesture is not unlike an actor's bow at the start of a performance.

Item after item on the checklist is reviewed. This process includes a ballet-like transmission of signals between the pilot and plane captain as control surfaces, speed brakes and flaps are cycled. Minutes later, satisfied they have an up bird, Barrett and Wood head for the takeoff strip.

Their clearance is accepted and recorded on thigh-mounted kneeboards and when instructor and student once again mutually ensure all is OK, Barrett steers the *Skyhawk* onto the runway.

With the tower's OK, the journey really begins. On the concrete below them, smudged tire marks from a million touchdowns blur by. Roaring at full power, the *Skyhawk* races forward. The two-thousand-foot marker whips by, then three thousand, four. The *Skyhawk* reaches liftoff speed and escapes from the ground. Climbing, Barrett retracts the wheels. The A-4 assumes its bullet-like profile. Student and instructor are now on stage.

In a few minutes they reach the assigned working area high over the green rolling hills north of Meridian. Barrett is at the controls and does his thing. He maneuvers the A-4.

Wood says little, observes all. His student arcs and winds his way through the air. He dives the machine, accelerates, climbs it, banks it, rolls it. He labors at his apprenticeship. The sequential execution of aerial events is carried out expeditiously — a planned program, unfurled with minimum waste of time. For the outside observer, watching the jet-propelled plane soar and twist and flip, it looks like pure fun.

For Barrett it's mostly work. He mutters an expletive or two on top of a barrel roll when he realizes he's going to miss his recovery heading by 20 degrees. And there are moments he feels testy because of that pair of eyes behind him, like a human video machine, recording every

movement he makes.

But he learns. With every minute in the sky, he learns. In the process he accumulates a measure of experience which will never be taken from him.

The actual flight portion of FAM 3 passes like a finger snap compared to its ground-oriented segments. All too soon instructor and student are inbound to the field for the finale of touch and go's and a full stop landing.

After several circuits in the pattern, they clear the runway. They taxi in and return the A-4 to its resting place on the VT-7 line. The canopy, an elongated glass cocoon, is raised. The power plant sighs to a stop. The 100 or so minutes they have spent in the sky have been a meaningful exercise, indeed a priceless period of instruction.

For many in the business of Naval Aviation, this is a moment for reflection — flight over, home safe and sound, some good work accomplished. There is a feeling of subdued joy which is known by only those who labor in the cockpits of Naval Air. Like Barrett and Wood, they contemplate the unspoken knowledge that they are a part of a rich and magnificent heritage.

Appropriately, the moment is fleeting. Barrett and Wood dismount. Rumpled, a little frayed at the edges, the two young men retreat to the hangar. On the yellow sheets, they log their flight time and complete the crucial maintenance records. After this, it's back to the cubicle without the door.

The debrief is no less detailed than the brief but, thankfully, goes a bit quicker.

"Barrel rolls were better today," declares Wood. "In fact, most of your high work was a sharp improvement over FAM 2. Now about that no-flap landing . . . ." And so it goes.

Ultimately, for Barrett and Wood, the delightful drudgery of this part of a VT-7 day draws to a close. The two flyers rise from their chairs. In deference to his rank, Wood departs first. He looks back and tosses Barrett a thumbs up.

"Good hop!" says the instructor. Welcome words for someone on the road to Golden Wings.

776 is reflected in mirror of lead A-4 on a training hop, far left. Aerobatics are a part of VT-7 course, center. Below, Skyhawk rests.

Harry Gann

Story and Photos by JOC Bill Bearden

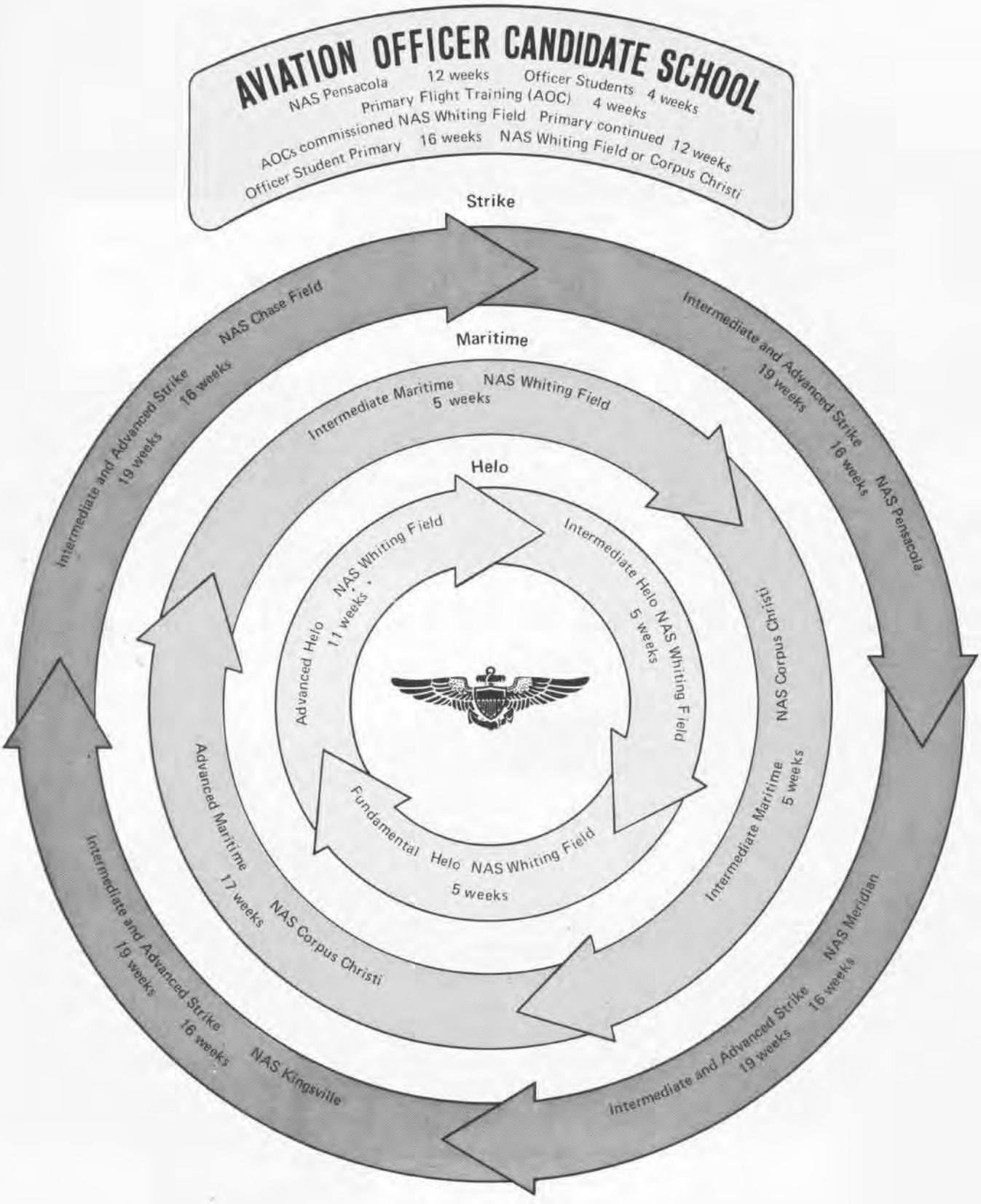
Stevan Kaplan
FIRST SOLO FLIGHT

The young man, his face aglow with confidence and achievement, sat in the cockpit of the idling T-34 on the small airstrip carved in Alabama farmland, known as Magnolia Field. He had just completed his first solo flight and was waiting for his instructor before flying back to Training Squadron One at NAS Saufley Field, Pensacola.

The man was 2nd Lt. Stevan M. Kaplan, USMCR. From Issaquah, Wash., Kaplan was first introduced to flying by his mother who flies Beechcrafts and Cessnas. "Before entering flight training I had just enough exposure to know what an airplane was," he said later, back in the VT-1 ready room. "But I knew I wanted to fly. I chose the Marine Corps because they guaranteed me a flying billet after training." Kaplan related how he prepared himself for his first solo hop, another hurdle in the long training path toward earning Wings of Gold.

"Last night I studied procedures—maneuvers and emergencies. I went to bed early so I would be completely rested. This morning I got up about 0545 and ate a good breakfast. About an hour later I came to the ready room to talk with friends and do some last minute reviewing. After muster, my instructor (Ltjg. Harvey Anderson) came in and briefed me for the flight. For some reason I felt tense, nervous. We talked about things unrelated to the hop, he asked me a few emergency procedures and I began to relax.

"Preflight, taxi and the flight to Magnolia went well. I had had 11 previous hops with my main instructor, Ltjg. Rob Coffeen, so I felt fairly confident. On my first solo touch and go, I was too busy flying the airplane to think about soloing for the first time and the excitement related to it. It was when I got down, after my third landing, that I realized what I had done. Then I was excited . . . really excited. I was on top of the world."



NAVAL AVIATION NEWS

Naval Air Trai

TRAWING THREE
NAS Chase Field

VT	24, 25	TA-4J	Advanced Strike
	26	T-2C	Intermediate Strike

Naval Air Training Unit, Mather
Mather AFB, Sacramento

Advanced NFO
(Navigation)

TRAWING TWO
NAS Kingsville

VT	21, 22	TA-4J	Advanced Strike
	23	T-2C	Intermediate Strike

TRAWING FOUR
NAS Corpus Christi

VT	27	T-28B/C (T-34C)	Primary and Intermediate Maritime
	28, 31	US-2B, TS-2A (T-44)	Advanced Maritime

CNATF
NAS Corpus

Marine Aviation Trainir

Construction Batta

ing Command

TRAWING ONE
NAS Meridian

VT	7	TA-4J	Advanced Strike
	9, 19	T-2C	Intermediate Strike

TRAWING FIVE
NAS Whiting Field

VT	2, 3, 6	T-28B/C (T-34C)	Primary/Intermediate Maritime and Helo
HT	8	TH-57A	Fundamental Helo
	18	HH-1K, TH-1L, UH-1E/H/L	Advanced Helo

NAS PENSACOLA

- Marine Aviation Training Support Group
- Naval Aviation Schools Command
- USS Lexington
- Blue Angels
- Naval Aviation Museum

TRAWING SIX
NAS Pensacola

VT	4	TA-4J, T-2C	Intermediate and Advanced Strike
	10	T-2C, T-39D	Basic NFO
	86	TA-4J, T-39D	Advanced NFO
HCT	16	HH-46A	Search and Rescue

sti

pport Group

Unit 407

NAVAL FLIGHT OFFICER FLOW

NAVAL AVIATION SCHOOLS COMMAND, PENSACOLA

NFO (Officer Student) 4 weeks

NFOC 12 weeks

BASIC VT-10
NAS Pensacola
T-2C
T-39D
1D23 Trainer
26 weeks

Advanced Jet Navigation
VT-86
6 weeks
NAS Pensacola

- A-6
- A-3
- RA-5C
- EA-6A
- RF-4B
- S-3A

Airborne Electronics Warfare
18 weeks
NTTC Corry Field

- EA-6B
- EC-121
- EP-3
- EA-3B

Radar Intercept Officer
VT-86
13 weeks
NAS Pensacola

- F-4
- F-14

Navigation School
22 weeks
Mather AFB

- P-3
- C-130

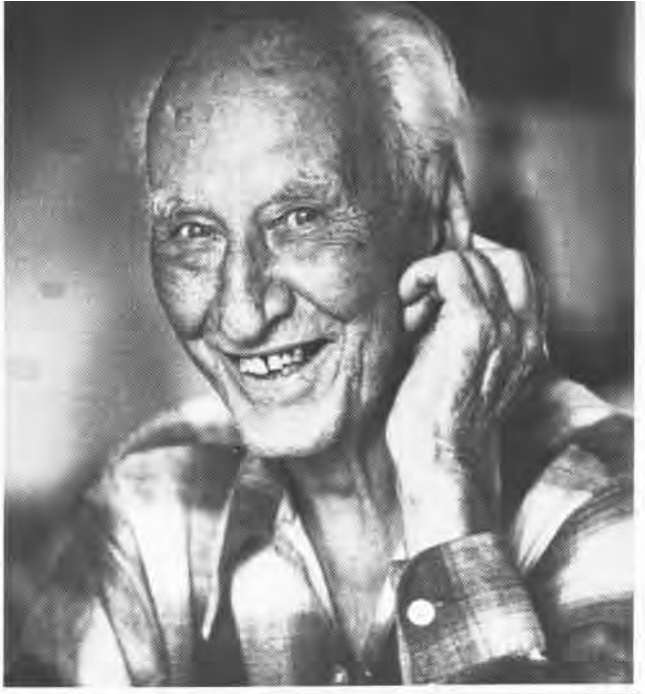
Airborne Tactical Data Systems
RVAW-110
NAS North Island
RVAW-120
NAS Norfolk 10 weeks

- E-2

Fleet Aircraft

Rip Paunack
OLDEST NAVAL AVIATOR

Story and Photos by JOC Bill Bearden



Retired Navy Captain R. R. "Rip" Paunack has the distinction of being the oldest Naval Aviator. He was 90 on July 4, 1976.

Today, Capt. Paunack and his wife live in Pensacola where he completed the first official course of instruction for Navy student aviators in 1915. Their home is in the flight pattern of the Pensacola Municipal Airport. Each day he watches the "big boys" fly over and is still awed by man's accomplishments in flight.

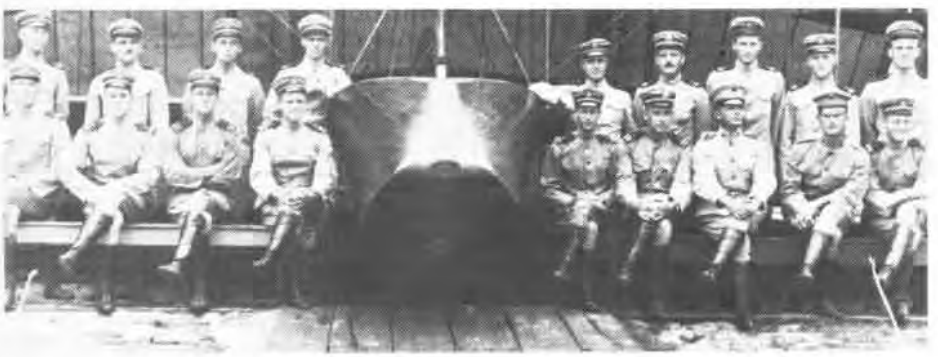
"I take my hat off to those fellows. They're damned good," he says of the men who fly today's sophisticated aircraft. "And the men in the space program are just amazing. That first man on the moon must be quite a guy. I wouldn't have the nerve.

"Flying in my day was like riding a sled or bicycle. You could look out the side and see where you were and with one hand you could make the plane go where you wanted it to."

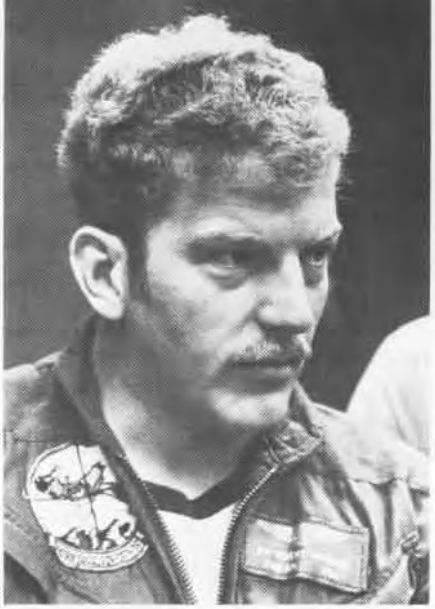
A graduate of the Naval Academy, Class of 1909, Capt. Paunack flew both HTA and LTA before retiring in 1935. Recalled to active duty in 1941 for WW II service, he retired again in 1945.

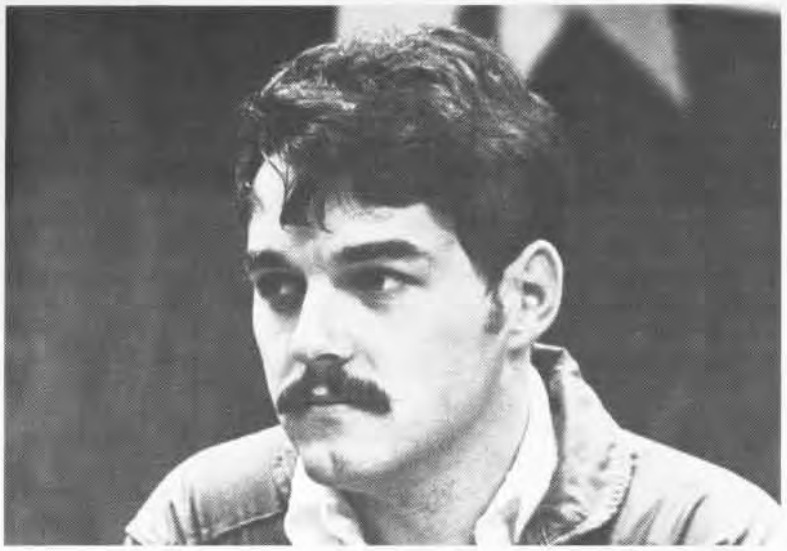
While he is modest about being a pioneer in Naval Aviation, he does admit that it was kind of tough in his day because aviation was new and they were the ones making the trial run. "My nerves received quite a shock when I first saw the training planes. I couldn't believe that flimsy structure of bamboo poles could possibly hold together. I was very relieved to learn the plane could glide if it had an engine failure."

Capt. Paunack was awarded the DFC for heroism in flight on June 3, 1919, when he saved the dirigible C-8 and its six crewmen. Without a parachute, Paunack straddled a support beam and pulled himself out about 10 feet, with nothing below him but space, to extinguish a blazing carburetor. The C-8 was filled with highly explosive hydrogen. "I don't remember being scared till later."



First official class, 1914. Rear, left to right, Paunack, Spencer, Bartlett, Edwards, Bronson, Corry, Norfleet, McDonnell, Scofield. Front, Saufley, Bellinger, Whiting, Mustin, Read, Johnson, Cunningham, Evans, Hass.





Faces of the Future

What the students are saying today

On the opposite page are but a few of the faces around training command ready rooms today. Below are some remarks by these and other seekers of gold wings. In most cases, it seems that the same words, perhaps slightly rearranged, could have echoed across the ramp a generation or two ago.

'For me, for now, the T-28 is the most romantic plane around.'

'There's pressure on you to get through the program. But there's an advantage to this if you can hack it. Later, when you're driving a P-3 over the ocean, tracking a submarine, you'll be confident that one of your fellow flyers won't go bananas.'

'If you want to be a pilot, you've gotta want it deep down.'

'You have to keep going every minute to keep up. You have to be perfect. Not just perfect, but perfect in the same way that everybody else is perfect.'

'The further I get along in the program, the less romantic it gets.'

'Just about everybody knows the procedures on a good day but, when the weather turns bad and you lose a navaid, the situation can work against you. If you don't handle it, the instructor has got to grade you accordingly until you prove otherwise the next time around.'

'What weighs most on my mind is getting a fleet seat.'

'Studying to be a flyer is a tedious business. Still, you know what you must know, so it becomes a matter of hitting the books and plodding on through.'

'For me, getting out of the simulator or the classroom and getting into the cockpit and flying the plane is the fun part.'

'Everybody has to put out 100 percent and in some cases our [ladies] 100 percent can't match the guys. But anytime you go through a program like this, where you have total involvement, a camaraderie develops. We're all going through this together and everybody helps everybody else without question. You have to. And the guys have been great.'

'I want to fly F-14s. If I can't get them I'll take Phantoms. *If I can't get* Phantoms *I'll take A-7s. If I can't get A-7s I'll take whatever they give me.'*

'Got my traps today. I am now carrier qualified. I can't seem to ged rid of this smile I'm wearing.'

'I like the instructors. They take the time to set you straight.'

FROM THE TOP

Rear Admiral Burton H. Shepherd heads the Naval Air Training Command, a widespread organization of 2,000 officers, 9,000 enlisted personnel and 4,100 civilians with an average student load of about 2,700. In his career he has commanded Attack Squadron 81 and Carrier Air Wing 16. Among his many other assignments, he was the Executive Assistant to the Chief of Naval Operations, Commanding Officer of USS America and, prior to becoming the Chief of Naval Air Training, the Naval Inspector General. RAdm. Shepherd wears the Navy Cross, two Silver Stars, six Distinguished Flying Crosses and holds numerous other awards. He was interviewed by Naval Aviation News at CNATra headquarters, NAS Corpus Christi.

NANews: Admiral, how would you compare the training command students of today with those of a generation ago?

RAdm. Shepherd: Today's student is much superior. His education level is higher than 20 or 30 years ago. In WW II, for example, a high school education was often adequate to qualify for flight training. Until recently, candidates with two years of college could qualify for the NavCad program. Today the man or woman who seeks Navy wings must have a college degree.

Several years ago, a candidate with a score of three or four based on a 10-point grading system on a battery of tests could be accepted into the program. Grades of seven are common today. We don't categorically reject the candidate with the lower score. However, those with scores of three or four must be very strongly motivated in order to complete the program.

Do the student Naval Aviators and Flight Officers have the same flair—the same pizazz so to speak—of the past?

Yes, absolutely. They still have that "Tiger" attitude. Because aircraft have become more and more complex, it takes a great deal more study, skill and precision to fly them. We don't see flyers with white silk scarves flung over their shoulders, but the healthy spirit of completion and confidence in Naval Aviation is alive and well among our students.

Yes, the young students of today have both the attitude and the skill to leave the training command and master machines like the *Tomcats, Orions, Vikings* and *Sea Knights* in the fleet.

Do you emphasize certain phases of flight instruction such as landing and instruments?

No, the emphasis is on developing a well rounded aviator with broad competence. We teach the student what he needs in order for him to eventually operate fleet aircraft. Landings and instrument flying are vital, of course, but so are other categories such as navigation, formation and acrobatics. We want the students to be equally proficient in all areas.

Are there essential differences between the NFO and pilot students?

Very few in motivation and qualifications. NFOs are more and more becoming an integral part of the leadership corps in the fleet. They have been commanding officers of most types of squadrons and I'm sure it won't be long before an NFO achieves flag rank. The student NFO's training is as difficult and challenging as that of the student Naval Aviator, although shorter. While the pilot learns motor skills and physical control of the aircraft, the NFO masters weapons systems, computer technology and radar navigation.

NFOs get their wings after about one year of training. Pilots take a little longer. Jet pilots accumulate about 250 flight hours in the training command compared to 75-100 flight hours for the NFOs. The fleet would like the NFO to have more flight time. However, with the assets at hand and in view of other requirements, we're giving NFOs the most flight hours possible at this time.

Have simulators reduced actual flying time?

Not dramatically. In the maritime (multi-engine and helo) community, flight hours have been cut back. Since there are increased performance requirements in tactical air, we will continue giving students in the strike (VA-VF) pipeline about 250 actual flight hours. However, there will be an *increase* in simulator time for the VA and VF students. We're moving with deliberate speed toward improved training through simulation.

We must be cautious not to jeopardize safety by excessively substituting simulator training for flying time. We're acutely aware that teaching basic flying skills has to be done in the air.

In the future, simulators will continue to substitute even more for

actual flying time as their usefulness is confirmed. They were used extensively in preparing astronauts for flights to the moon and there is valid basis for utilizing them in many areas of Naval Air Training.

I should add that some simulators are incredibly expensive. Ultimately, we may not save enough money in some cases to justify their use. We'll have to look carefully at each step we take in this area to ensure quality training at optimum cost.

The consolidation of Army and Navy helo training is in a hold status but may come in the future. Navigation training for advanced students is being conducted with the Air Force at Mather Air Force Base. Do you envision further consolidation?

The Air Force has an excellent new navigation training aircraft in the T-43, the military version of the Boeing 737. The plane has 12 training stations where students learn celestial navigation, on-the-job computer technology and radar navigation. We're pleased with this particular consolidation.

The issue of consolidating Army and Navy helicopter training has not been resolved; it will come before Congress.

As Chief of Naval Air Training my position is that the instruction our students receive should come from fleet-experienced Naval Aviators and NFOs. For example, our helicopter pilots must be able to fly considerable distances from a destroyer, at night and in bad weather, and navigate to another ship using limited directional aids and air control support from ships or shore bases. Only a flyer who has been there and done it can impart this knowledge optimally to the student.

It's difficult to quantify this. But the best teaching is done by skilled, motivated, enthusiastic, fleet-proven and experienced Naval Aviators. It follows that the Army may have certain techniques which Army instructors handle best. Naval Aviation is a unique profession. It requires unique training.

However, if we are directed to consolidate with the Army, we will do all possible to ensure the high quality of pilots reporting to the fleet.

How do today's instructors compare to those of two or three decades ago?

Just as students have gotten better so have the instructors. The instructor is the key figure in the entire organization of Naval Air Training. If he fails, we fail. I cannot emphasize enough that the instructor is our most vital element.

When you think about it, all of us in Naval Aviation personify, in some way or another, the end product of the various instructors we've had in our careers. It is my sincere belief that the instructors are unsung heroes of Naval Aviation.

Has the Group IX manpower shortage seriously affected maintenance support and the quality of that support?

Throughout the Naval Air Training Command we are deficient by about 2,000 Group IX personnel. This is the most significant limitation we have. The quality of the personnel remains high. Our sailors are doing the very best they can. Our supervisors face a continuing challenge, but they are holding up well.

We can have the airplanes, fuel, instructors and students but without the indispensable maintenance personnel, our efforts would fail. The shortage hurts but we're vividly aware of it and strive to keep safety foremost.

Is the present student attrition rate about what you expect it to be?

Overall, approximately one-fourth of the students leave flight training through attrition. This rate has remained about the same since I began flying in the late 1940s. I don't believe it will change much. Under NIFTS (Navy Integrated Flight Training System) an increase of flight instruction in the new T-34C primary trainer upstream in the training cycle will help us identify earlier in the program those candidates not qualified to graduate. But the overall rate won't vary much, in my view.

Do the majority of students get assigned to flying communities of their choice?

Needs of the Navy dictate this, of course. This precept won't change. But we are very sensitive to the students' desires. And I know how seriously the young flyers feel about this.

On the other hand, if a student insists he wants a particular training specialty and nothing else, he seriously jeopardizes his opportunities. The best philosophy is one whereby the candidate's main goal is to earn a set of Gold Wings.

Those with high grades do get a better chance for assignment to the flying community of their choice.

How many students are you turning out today as compared to the peak period of the Vietnam War?

We were graduating about 3,500 pilots and NFOs annually during the war years. That figure has been reduced to about 1,900 today. Included in that total are Navy, Marine, Coast Guard and foreign students.

Would you comment on how the future of Naval Aviation looks to you from your vantage point as Chief of Naval Air Training?

I am somewhat concerned about sea and air power in the years ahead in the context that our hardware assets may diminish. I'm also concerned that there might come a day when we won't have a carrier task force available to respond to another Lebanon or Mayaguez crisis. I'm concerned that if naval forces are reduced in a step by step manner in the next few years, we may not be able to function dynamically in the best interest of our country. But I have faith that our constitutional government will keep our Navy strong to ensure peace at home and abroad.

I am not apprehensive about the people in Naval Aviation. I am not worried about the capability and spirit of those who will be manning the cockpits and aircrew stations of Navy aircraft in the years ahead. They are well trained and eager to meet the challenges of the future.

DOORWAY TO THE SKY

Story and Photos by JOC Bill Bearden

It's Tuesday morning at the Annapolis of the Air, the Naval Air Station, Pensacola, Fla. It starts like most other Tuesdays. As the sun winks through the trees, civilian-attired students, bright-eyed and bushy-tailed, casually straggle in to report for training. They come from all corners of the land. Most, directly from university campuses, some from the fleet, all with stars in their eyes and visions of streaking through the skies in today's sleek Navy aircraft.

They're met at roadside by a soft-spoken but very military looking senior candidate officer standing at parade rest. He checks off their names on his clipboard and tells them to wait under the scrub oak at his left until the others arrive. As they wait, they eyeball the building and the sign in front which proclaims their future in Naval Aviation.

Around 0730 the big white door to the building opens. A Marine Drill Instructor steps through. The men look up at their DI for the first time. He looks back, sizing up each person, quietly, from the huge porch. Then suddenly all hell breaks loose. The DI's heckling voice echoes throughout the slowly awakening station. The candidates' daydreams of flight are instantly invaded by his stark, commanding shouts. The men realize for the first time that they're entering a world foreign to their fantasy. Another class of Aviation Officer Candidate training has begun.

During the next 12 weeks the candidates will suffer tailor-made indignities as part of the DI's task of remolding each individual, physically and mentally. The DI must guide them through the startling transition from civilian to military life, from thinking only as an individual to thinking of the good of the team. He must make them aware of the responsibilities of leadership. The non-hackers are weeded out early, some during the first day, the majority by the end of indoctrination week. The embryonic aviator soon realizes that he has a long arduous journey ahead before he will be allowed to join the exclusive fraternity of Naval Aviators.

In the next few pages, *NANews* takes a photographic look at a group of Aviation Officer Candidates during indoctrination week. Physical fitness, daily drill and a group of newly commissioned ensigns bidding farewell to their DI are also examined before the cycle begins again on another Tuesday for another group of students.

The startling transition from civilian to military life begins the moment candidates check in and are met by their DI. They are given a list of things to bring with them for use before they receive their Navy issue. As this student quickly learned, the gym shorts he used as a women's athletic coach were not on the list. Students suffer many indignities during their 12-week AOC training, but everything has a purpose.

DOORWAY TO THE SKY

Candidates get a thorough physical, military haircut and their Navy issue of clothing and toiletries during indoctrination week. They are introduced to the Navy way of doing things and reprimanded when they don't do them right.

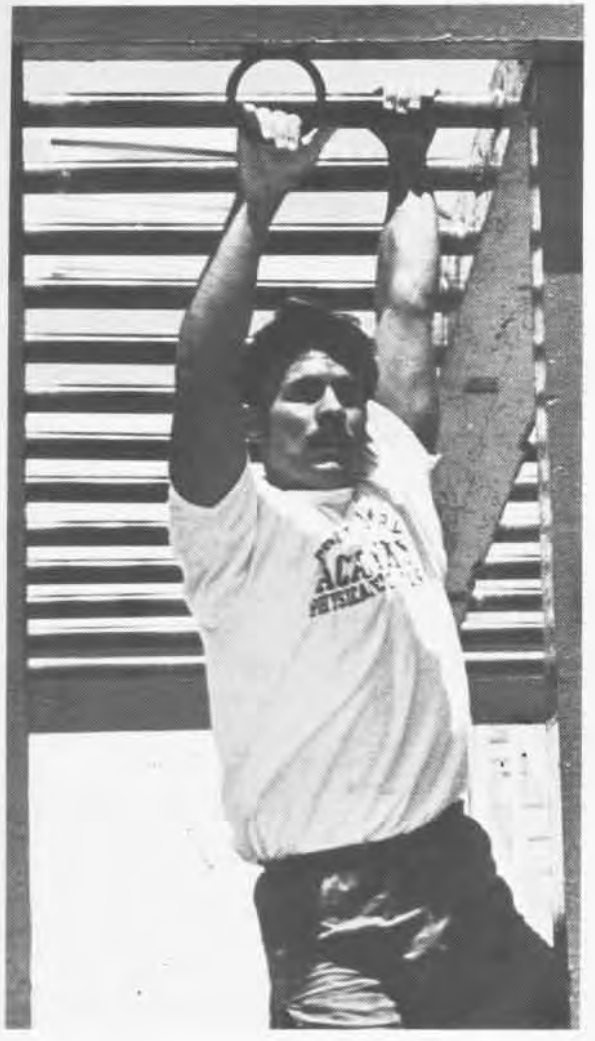

T-13

DOORWAY TO THE SKY

An important ritual taught new candidates by senior AOCs is how to properly knock (pound the pine) and speak (sound off) upon entering an office. They also learn formation, marching, rifle drill and how to properly file into a building for class.

DOORWAY TO THE SKY

Physical fitness is a must for future aviators. They must meet certain requirements on the obstacle course, swimming and running. An introduction to sea survival is received in the Dilbert Dunker and learning how to inflate a Mae West.




NAVY
VT-86

DOORWAY TO THE SKY

After graduation, above, each newly commissioned ensign rushes back to his assigned barracks without wearing his hat. The first enlisted man to salute the new officer will receive a silver dollar. Traditionally it is the DI, left. Later the new ensigns bid farewell to their DI before heading for actual flight training.

It's Tuesday morning and the cycle begins again. Standing at parade rest, a senior AOC waits at roadside with his clipboard for another group of candidates to arrive and take the first step in the long, arduous journey leading to Wings of Gold.

NFO College

The Naval Flight Officer (NFO) is a non-pilot flying officer whose training and skill make him an indispensable member of any squadron. Among his responsibilities are the control and coordination of the complex electronic weapons systems aboard most naval aircraft and the vital functions of communications and navigation.

Prospective NFOs and Naval Aviators begin their aviation careers at the Naval Aviation Schools Command, NAS Pensacola, Fla. Approximately half of those entering the training program are Naval Flight Officer Candidates (NFOCs). The other half are previously commissioned officers. The NFOCs are college graduates and attend Aviation Officer Candidate School for 12 weeks. They are trained in the leadership qualities demanded of a naval officer.

During the 12-week phase, the NFOC and his Naval Aviator counterpart receive academic, military and physical training in such areas as naval orientation, history, justice, leadership, basic seamanship, aviation physiology, basic aerodynamics and engineering, physical fitness and swimming.

The second phase of instruction commences at NAS Pensacola's Training Squadron 10 during which time students are given two hops in the T-2C *Buckeye* and T-39 *Sabreliner* to acquaint them with the airborne environment, interplane communications and basic visual navigation. Considerable time is spent in the classroom studying Federal Aviation Administration and military flight rules.

Commissioning in the Naval Reserve follows for NFOCs.

Basic NFO training at VT-10 spans a 26-week period during which students receive approximately 500 hours of academic work and 36 hours of flight time. In the academic phase, areas of study include navigation, basic and advanced computer systems, radar systems and instruction in the 1D23 trainer, which is a computerized navigation/communications unit that accommodates up to 40 students in individual cockpit consoles. Each station is capable of stimulating a realistic operating environment. Many a student has ruefully admitted that the only way to beat the 1D23 is to trip the fire alarm.

The flight phase begins with four hops in the T-2C *Buckeye* to give the student an idea of what fleet jet aircraft are like. Then, after completing the 1D23 phase, the student prepares for his T-39 flights with more classes in navigation and radar systems. In the T-39D *Sabreliner*, Tacan, point-to-point and airways navigation, and communications procedures are put into practice. After completion of these flights, electronic warfare is studied.

More classroom preparation for inflight work follows. Classes deal with the aircraft's power plant, systems, communications and emergency procedures, including the use of the North American ejection seat. Next are flights in the T-2 to practice high-speed, low-level navigation, formation tactics, acrobatics, high G maneuvers and all-weather instrument work.

A final series of lectures and brief-

Top left, NFO candidate inspects nose gear of T-39. Left, instructor explains radial tracking technique. In the photos above, students work out navigational problems.

ings completes the training at VT-10.

Selection for one of the four advanced training pipelines is based on current needs of the fleet, record of accomplishment and the individual's desires. Each pipeline is tailored to either a specific aircraft mission or to replacement training squadron's needs which could easily be assembled into one advanced course. At completion, the student is designated a Naval Flight Officer and receives his wings.

Advanced Jet Navigation School serves the A-6, RA-5C, RF-4, S-3 and EA-6A communities. Held at VT-86 in Pensacola, this course is oriented to low-level visual and radar navigation necessary in the attack aircraft. After completing this course and receiving their wings, some NFOs go on to airborne electronic warfare training at Corry Field, Pensacola, which provides students with the academic background and practical experience necessary for operational training in electronic warfare aircraft like the EA-6B, EA-3B or EP-3.

Also at VT-86 is the Radar Intercept Officer School which prepares the student for assignment to F-4 *Phantom* and F-14 *Tomcat* squadrons. The course includes training in detecting airborne targets, conducting intercepts and tactics.

Advanced navigation training is conducted in the interservice navigation course at Mather AFB, Calif. Here, emphasis is on developing navigational skills required by patrol and force support aircraft. Most of the graduates will fly the P-3 *Orion*.

The last advanced pipeline is the Airborne Tactical Data Systems course. Principally academic in nature, it is designed to fill certain prerequisites required to operate as an air intercept controller in the E-2B/C *Hawkeye*.

Upon completion of the advanced course, each new NFO is ordered to the appropriate replacement training squadron where he will receive up to six months of further instruction in his particular aircraft and weapons system.

VT-10 was established in 1960 as a division of the training department at NAS Pensacola. Known as Basic Naval Aviation Officers (BNAO) School, inevitably nicknamed Banana School, it remained a part of the department until 1963 when it became a separate command under the Chief of Naval Air Training. But it was far from the organization of today. In February 1965 the school received the UC-45J and the T-1A.

The UC-45J was a twin-engine prop, dubbed the *Bug Smasher*. It carried up to six passengers and was used for navigation and communications training. Giving students their first experience in jets, the T-1A offered training in formation tactics, acrobatics and high G maneuvers, in addition to navigation and communications.

1965 also marked the redesignation of Naval Aviation Observers as Naval Flight Officers. Another milestone for NFOs was achieved in June of that year when the first NFO assumed command of a squadron: Commander C. Nelson became the commanding officer of BNAO School.

As the importance of Naval Flight Officers in Naval Aviation continued to grow, so did BNAO School. In 1968, it was commissioned as Train-in Squadron 10. A classroom building named in honor of LCdr. John G. Griffith, an NFO who received the Navy Cross, was built to provide space for the increasing number of students.

Between 1972 and 1974 the squadron doubled in size to accommodate the increased number of training hours and to maintain the 10 T-39s and 30 T-2s on board. Presently, over 100 staff officers and 260 enlisted personnel support the training of more than 555 student Naval Flight Officers each year.

From *Bug Smasher* to *Buckeye*, from classrooms to computers, today's organization is a far cry from that of its predecessor. But VT-10 is still carrying out its original mission to produce a competent, aggressive NFO with a thorough background in all basic aviation procedures who will be, in every way, a professional.

Today, Naval Flight Officers comprise approximately one-third of the commissioned officers in Naval Aviation. As weapons systems become increasingly sophisticated, the need for highly trained NFOs will become even more essential.

NAVAL AVIATION NEWS letters

New Platform?

Due to further financial constraints placed on the Navy's P-3 program, VP-44 will soon transition from its P-3As to the Navy's newest concept, the P-3D, in foreground.

The P-3D incorporates a new simplified concept in airborne ASW. The crew consists of one pilot and one Tacco. Takeoff is accomplished by the Tacco pushing the aircraft down the runway while the pilot turns the prop by running on the shaft in log-rolling style. Communications equipment consists of one CB radio mounted immediately behind

the prop housing, enabling the pilot to talk to any fool who will listen.

The acoustic sensor, simple yet very cost effective, consists of an orange juice can (held by the Tacco) equipped with 6,000 feet of nylon fishing line with a stethoscope receiver mounted on the end. This system enables the P-3D to detect even the most modern submarines at ranges up to 300 feet.

The ordnance package is comprised of six hand grenades carried by the Tacco and one 12-gauge pump shotgun mounted at the pilot's station.

While the physical effort required of the pilot (constantly running on the shaft to stay airborne) and of the Tacco (to maintain his balance while straddling the spinning shaft) is very strenuous, the Navy has assured us that this is consistent with present policies of improved physical fitness.

It is rumored that early testing of the prototype has initiated air frame change number 001 which will include a hurricane lantern, mounted just below the pilot's station, for night operations, and four functionless knobs for the Tacco to play with.

Even though the P-3D is a totally different concept, VP-44 is looking forward to operating with the newest, albeit modest, platform.

Dale Smith, Ltjg.
PAO, VP-44
FPO New York 09501

Operation Torch

Have just finished reading Clarke Van Vleet's article on Operation *Torch* in the November 1976 issue and thought you might enjoy the enclosed article along the same lines. It may be a helpful addition to your records.

John M. Elliott, Maj., USMC(Ret.)

Ed's Note: Thanks. Here's an interesting excerpt from that article by Maj. Elliott in the *American Aviation Historical Society Journal*, Spring, 1972: "On 30 September 1942, in preparation for Operation *Torch*, it was directed that all American aircraft participating in the invasion display a yellow circle around the national aircraft insignia. That the yellow circle was a definite aid to recognition is borne out by the fact that the U.S. star on aircraft had been frequently mistaken for the German cross or "swastika."

Help!

As public affairs officer for the *Fighting Diamondbacks*, I have the job of squadron historian. When I began to review the files I recently inherited, I was amazed to find that there is virtually nothing prior to 1972. I am now trying to piece back together the story of the *Diamondbacks* and need the help of your readers — any anecdotes, photographs and/or documents.

I will appreciate any help I can get. After all, I have 17 years of history to catch up on.

D. H. Else, Ltjg.
PAO, VA-102
FPO New York 09501

I am compiling a short history of the role of the "backseater" in the Vietnamese conflict and wish to interview aircrew members who flew as RIOs, etc., in the F-4, A-6 and F-105F during 1965-1971 in Southeast Asia.

John March
Airtite Publishing
Box 2366
San Francisco, Calif. 94126

Cobras and Broncos

In the October 1976 issue of *NANews* there is an article about *Cobras* and *Broncos* that is of interest but not complete.

I believe more significant than your information on VMO-8 as the source of OV-10s at Atlanta is the fact that VMO-4 was a viable squadron for several years at MARTD, Selfridge ANG Base, Mich. VMO-4 moved lock, stock and *Bronco* to Atlanta and retained its squadron designation. Of more importance to aviation, per se, I believe, is that VMO-4's move, along with deactivation of HMM-766 eliminates the presence of Marine aircraft from the Michigan area after more than 40 years! Between the commissioning of VO-5MR on June 19, 1931, and the deactivation of HMM-766 and transfer of VMO-4 on October 1, 1976, Marine aircraft have flown in this area. I believe Atlanta's gain is Detroit's loss. Although Marine Aviation will continue to be represented by several fine support units, the loss of aircraft will be noticed.

You have a fine magazine.

C. R. Perry, Lt. Col., USMC
C.O., MARTD
Selfridge ANG Base, Mich. 48045

Published monthly by the Chief of Naval Operations and Naval Air Systems Command in accordance with NavExos P-35. Offices: 801 N. Randolph St., Arlington, Va. 22203. Phone: 202-692-4819, autovon: 222-4819. Annual subscription: $12.85, check or money order ($3.25 additional for foreign mailing) sent direct to Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Single copy is $1.25 from the same address.

These squadrons are part of Training Air Wing Four based at NAS Corpus Christi. VT-27 operates T-28Bs and Cs for primary and intermediate maritime instruction. VT-28 and VT-31 teach advanced maritime flying and operate US-2B and TS-2A aircraft. VT-27 is scheduled to receive T-34Cs in the future while VTs 28 and 31 expect the T-44.

As the home of Naval Aviation, the Naval Air Training Command is a special place. Here the instructors who have earned their Wings of Gold return to impart their knowledge, skills and fleet experience to those who aspire to become the Naval Aviators and the Naval Flight Officers of the future. Earning those Wings of Gold requires great skill, courage, dedication and perseverance. These same qualities are essential to the decisive employment of naval air power at sea.

F.C. Turner
DCNO(Air Warfare)