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(Air Warfare)

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COVERS—Front, a VF-4B *Tomcat* flies off *Nimitz* (CVN-68) in stormy weather, returning to Norfolk after a Med deployment. The photo by AC2 (AW) Richard W. Collins won the third bimonthly ANA photo competition. Back, at sunset in the Atlantic an H-46 from *Milwaukee* (AOR-2) concludes a vertrep aboard *Farrestal* (CV-59). This shot by Ens. J. Scott Bruce, VT-10, was a runner-up in ANA's second bimonthly contest.

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By Vice Admiral Richard M. Dunleavy, ACNO (Air Warfare)

Setting the Watch



JO1 Jim Richeson

I'm the new guy on the block, having just relieved Vice Admiral Bob Dunn as OP-05. In order to "set the watch," let me share a few thoughts with you.

Recently, I have heard a lot of doom and gloom in the defense establishment, particularly in industry. We all have read a litany of published reports about our "imminent demise." Let me say up front: it's not over till it's over. Our Navy is out there today performing like never before. You can't tell by its performance that we have any problems.

Navy's leadership has clearly stated where our collective sights must be set. During a testimony before the House Armed Services Committee back in May, Secretary of the Navy (designate) Garrett said Navy's "highest priority" remains the well-being of our people. This is particularly true in Naval Aviation. Our number one priority in Navy Air remains people.

One of my concerns in this area is **pilot retention**. This issue will receive my undivided attention while I am OP-05. While airlines are hiring, it still is more fun to Fly Navy. Navy leadership must keep fun in the job. This is a simplified statement, but I believe it is a key to pilot retention.

The main budget item in this area is **flying hours**. The best way to retain pilots is to fly pilots. The Naval Aviator

is a unique breed; he is born to fly, born to strap on an airplane. If we let him do this often enough, he is not only skilled but he will stay in the service as well. One caveat here — the right kind of flying is needed, not just boring holes in the sky. That's where the CAGs and the squadron C.O.'s come in.

Next comes military pay. We can't afford to watch the private sector and the civilian employees of the government outstrip the gains we made in pay when we became a volunteer force. While patriotism and service will always be the main motivators for military service, standard of living cannot be sacrificed indefinitely.

My third priority is **aircraft carriers**. The early retirement of USS *Coral Sea* when *Abraham Lincoln* joins the fleet in 1990 leaves a total of 14 deployable carrier battle groups, and not the 15 which we had hoped for and planned. As [CNO] Admiral Trost reminded members of the House Armed Services Committee, this means we will continue to "experience a shortfall in satisfying overseas commitments . . . Secretary Cheney has stated up front that we will not attempt to do more with less."

This is a significant statement. The pressure will remain great to use car-

rier battle groups like a limitless resource — world events dictate operational requirements. Still, Navy leadership is committed to a policy of a minimum of one year in the home waters between six-month overseas deployments. We believe this is essential to ensure our sailors and families do not experience increased hardships and separations.

Maintaining the carrier force level at a sufficient number is key to this effort. Fourteen carriers is the bare minimum which, as CNO stated, means we will *still* suffer shortfalls in being able to meet all our commitments. In the days ahead, I hope to continue to get these words, and our goals, across to Congress and the American public. And the surest way to communicate is through Naval Aviation's continuing superb performance. Keep up the great work and I'll spread the good news. Keep strokin'. ■

On May 25, 1989, VAdm. Dunleavy was relieved by VAdm. John K. Ready as Commander Naval Air Force, U.S. Atlantic Fleet, and subsequently became ACNO (Air Warfare), taking over from VAdm. Robert F. Dunn who retired. VAdm. Dunn turned over the Gray Eagle title to Adm. Huntington Hardisty, Commander in Chief, U.S. Pacific Fleet, who is now the senior active duty Naval Aviator.

It Ain't Over til It's Over

On a cold and stormy day aboard a carrier in the Mediterranean, an airman, who did not have a life preserver on, was carrying parts on the hangar deck. While walking near the edge of one of the elevators, the ship listed strongly to starboard. The airman was flipped into the water.

Fortunately, a plane guard helo was airborne and shortly after the "man overboard" call sounded, the whirlybird was hovering over the young man. A search and rescue (SAR) swimmer jumped into the water and the rescue hoist was deployed. The two sailors were hauled up to safety and the helo recovered aboard. A quick-responding medical team whisked away the airman for examination which revealed he was O.K.

After such an ordeal it is standard practice to replace the SAR swimmer with a "fresh man." The "wet" rescue swimmer was thus relieved. As he was exiting the helo, however, he was in such a hurry that he did not see an A-6 *Intruder* taxiing into position for launch just forward of his position. An alert first class petty officer safety observer hurried to the swimmer, grabbed him and pulled him away. Another couple of steps and the swimmer might have been caught up in the *Intruder's* jet blast and tossed back into the sea.



Grampaw Pettibone says:

As Ole Gramps recalls from the olden days, the best place to swim in the Med is within "seein" distance of the French Riviera, not way out there where there's no land or bikinis in sight.

This brave young fella coulda gone from hero to "helpless" quicker'n blink. Thank the Lord for that first class. You gotta be like a defensive driver when on the flight deck: expect somethin' bad to happen, then, hopefully, it won't.

Sad Surprise

The S-3A *Viking* was on a carrier-based, overwater surveillance flight

*It's not the heat,
it's the stupidity!*



with MK 76 practice bombs and sonobuoys. The crew conducted several radar run-ins on surface targets for RADEX (radar exercise) qualification

after which the sensor operator (SENSO) transmitted on the intercom, "This is getting really boring."

The mission pilot responded, "Well, are you ready to go bombing?" (The crew had briefed bombing practice after getting airborne.)

A little later, at an approximate altitude of 350 feet with airspeed 200 knots, and without any notification, the pilot added power and pulled the *Viking* into a 25-degree climb. At 2,000 feet, he began a wingover-type roll to the left. From their positions aft of the cockpit, the tactical coordinator (TACCO) and the SENSO felt the onset of a stall. They were uncertain as to whether the S-3 completed a roll or only achieved a 60-degree angle of bank before returning to wings level.

The TACCO believed the *Viking* entered a steep dive and felt a heavy load of positive Gs, as if a recovery from the dive was in progress. The SENSO felt the Gs but was uncertain about the aircraft's nose attitude.

Either the pilot or the copilot/tactical coordinator (COTAC) transmitted, "What's going on? . . . we're stalling . . . we're stalling . . . no, I got it . . . I got it."

The pilot or COTAC next said, "Now" or "No."



The pilot then ordered, "Punch out!"

One or the other initiated command ejection.

Neither the TACCO nor SENSO believed his chute fully blossomed during the ejection sequence, because they experienced no opening shock prior to impacting the water very shortly after leaving the *Viking*.

Although subsequent signaling and emergency radio difficulties ensued, a P-3 *Orion*, another S-3 and a helo from the carrier rescued the TACCO and SENSO as night was drawing near.

The COTAC's body was afloat in the sea and recovered by the helo. The pilot was not found. Apparently, neither the pilot nor the COTAC were ejected before the S-3A struck the water.



Grampaw Pettibone says:

Goldang it! Seems like a brainbuster. There was no sign of mechanical troubles. Each of the four crewmen had a reputation as a pure pro. The pilot, especially, was an aggressive, athletic type who liked to fly and was good at it.

The mishap board dug deep, though. Some folks who had flown with the pilot admitted that he was apt, once in awhile, to "execute unannounced and unbrieffed aerobatic maneuvers, some . . . at low altitude." These witnesses didn't think the incidents were unsafe or involved out-of-control flight. So they didn't report them.

This squadron had an excellent safety program but the guys at the top were unaware of the pilot's negative tendencies because others didn't see a need to crack down, or at least caution, this popular, hard-charging Naval Aviator.

Ole Gramps doesn't have a good answer to prevent same from happenin' again. Nobody likes squealers. But skippers and everybody else had better be wary of the type aviator who, without even tellin' his own crew beforehand, wraps up the bird down low. It's flathattin' any way you cut it!

Sea King Calamity

A flight of three NAS West Coast H-3s were at a stopover point. The



Are we
clowns or
professionals?



Grampaw Pettibone says:

Where in blazes was number one? Not that it mattered. He doomed this sortie when he didn't come down hard on the wingman who wanted to pay a rotary-wing visit to friends in the country.

Bad, bad show. Makes Pettibone's stomach growl like I ate somethin' too hot and bubbly and thick for people my age.

Gramps' Advice to the Airborne

Ever watch a bunch of pilots preflight their aircraft? Some of 'em never look up the tail pipe or check for leaks around the hook, a real fire hazard, but almost ALL of 'em kick the tires! Must be a holdover from the old days when on a preflight we usta just kick the tires and twang the wires, or maybe it's just a savage urge to show the beast who's boss!

(NA News, August 1959)

Personnel Chief Addresses Aviation Issues

An Interview with VAdm. J. M. Boorda



VAdm. J. "Mike" Boorda
Chief of Naval Personnel

NANews: You recently stated that the Navy is short approximately 1,500 junior-officer pilots and that the new Aviation Continuation Pay law will bring the Navy to within five percent of its goal of 45 to 46-percent pilot retention.

Where will the shortage have its greatest negative impact?

VAdm. Boorda: I'm hoping that we can do better than I said. Those comments came out of testimony on Capitol Hill before the Senate Armed Services Committee. I was doing my best to see how much assistance we could get from Congress to help us retain aviators. And, by the way, we are getting great cooperation there. With the airlines doing so much hiring, we now have a 1,500-lieutenant-through-lieutenant commander pilot shortage, and no matter what happens, without a great deal of money, we'll always have some shortage through the next five or six years. There are some things we can do to ameliorate that shortage: we could train more people, we could change the way we assign people and we could simply say we need less. We're looking at all those things, but we need the number of pilots that we say we need and for good reason — combat readiness.

The impact is that aviators, pilots in particular, don't get to do other things that they might like to do. More of them would like to go to Postgraduate (PG) School. More of them would like to have the opportunity for tours outside aviation, in between two squadron tours. When there is a shortage, the detailers don't have that option. Most of the pilots have to be either in cockpit jobs in the fleet or flying in the training command teaching new pilots. There are also a few shore jobs that pilots have to fill because they require a pilot's special knowledge and ability. Of all our ensign-through-lieutenant

commander pilots in the Navy, only 5.6 percent of them are not flying airplanes today. We need that number to be a little bigger for career flexibility. That's what more retention will do; it will allow aviators to have some variety in assignments while still making maximum use of their flying skills.

What impact has the seven-year-after-training obligation had on recruiting pilots from the civilian sector as well as the Naval Academy and Naval Reserve Officers Training Corps (NROTC)?

Each year, for the past two years, we've increased the obligation for officers getting their wings after flight training, and now we're up to seven years. So the people who signed this year are going to stay in the Navy for at least seven years from the time they get their wings, which in some cases is almost nine years total service. They're really obligating themselves for almost the first half of their career. That's a big choice for somebody to make. Logic would tell you that if you had a shorter obligation, you'd get more people and they'd think about it less than if you had a seven-year obligation. This year, we did not get all of the pilots we would have liked to have from the Naval Academy. We had more quotas and more opportunity for Naval Academy graduates to fly than we had takers, but it wasn't a big difference.

We had a much harder time in making our goal in the NROTC program this year but we made it. We're not having any trouble in the civilian sector — there are more people that want to fly than we can take from there. But the Naval Academy and the NROTC grads are a known quantity. We've had a chance to train them and watch them through their college years, so that's where we'd like to get most of our input. It's worrisome to me when midshipmen are not volunteering in comparable numbers as before, and the main thing that has changed is the number of years of obligation. So, it's having an impact, but not a disastrous impact. I think a seven-year commitment is about right. There are some proposals and bills on the Hill that would make it even longer. The Navy's position has been that seven is enough. Young people have a way of doing the right thing no matter what. Navy Air really is a special brand of aviation, and I'm confident we'll always be able to get people that want to fly with us. It's an exciting business.

What is the impact of the law on equitable sea/shore rotation for all enlisted men and women?

With regard to women's advancement, over the past several years, we have taken women in the Navy without paying as much attention as we might have to what ratings they were going into. That stopped a couple of years ago. Now, we have to watch and make sure that one rating doesn't get too heavily populated with women. We want sea/shore rotation for women and men to be equitable. That doesn't mean exactly equal, but as close to equal as we can get it. In ratings that have a lot of sea duty billets in ships and squadrons where women can't serve by law, we have to control the male/female balance so that women won't end up on shore duty all of the time and men won't end up on sea duty all of the time.

In 1987, the Women in the Navy Study Group recommended that men and women in a rating compete freely for noncombat requirements. At the point where the Navy has combatant manning requirements that only men can fill, we will promote men to fill those vacancies. The Navy's advancement system has always been vacancy driven. By law, women cannot serve on ships or units with a combat mission, and for this reason they do not compete for the combat vacancies that men must fill.

The policy was implemented to ensure that combatant manning requirements can be met, and to support an equitable sea/shore rotation for all sailors in a rating. The Navy's old system of advancement did not allow us to manage the percentage of men and women in a rating to guarantee combatant manning. The revised policy is intended to inform women of their opportunities and to attract them to sea-intensive technical ratings where they will have the greatest chance for advancement — because sea duty assignments for women are expanding.

I hope by managing the input into the ratings and by being honest with Navy women up front, women will opt for the ratings where there is the most opportunity. I'm hoping the situation will balance itself out over time. I don't know a better way to do this that is more fair to both men and women. I also know that I would be very unhappy if I were a person who scored high on an advancement test and somebody else who scored lower than me got advanced. But all I can do is explain the policy, tell why we need it and tell you it's not intended to be discriminatory. It is intended to keep sea/shore rotation in balance, so that men don't pay a price for something over which they have no control and, at the same time, to encourage women to go into nontraditional areas where

advancement will be better.

What is the current aviation command opportunity for women Naval Aviators?

There are certain squadrons women can't command because of the law, and women don't serve in those squadrons. In the squadrons in which women fly, their command opportunity is exactly the same as men. We control the input to any community, be it male or female. You only need so many S-3 pilots, C-2 pilots, fighter pilots, etc. Because we control those inventories, the command opportunity will remain exactly the same for women as men. Whether they actually achieve that opportunity or exceed it will depend on how well they do in their careers, but from the performance I've seen, I'm confident our women aviators will do fine.

Will a woman ever be the Chief of Naval Operations (CNO) or Master Chief Petty Officer of the Navy (MCPON)?

In my view, it will still take a long time for women to get senior enough to be a CNO. I have 33 years and I'm not even close! Our program, and expanded opportunity, for women in the Navy in unrestricted line occupations — surface warfare and as pilots and NFOs — is still fairly new. It's going to take time for women to acquire the operational experience they need at the highest levels of Navy leadership, but they're coming and they're doing great. Only time will tell. For Master Chief Petty Officer of the Navy, women are moving along faster because of past performance and expanded opportunity. We had our first woman master chief, selected at sea, report to a tender. Last year's Sailor of the Year, AMSC Beth L. Blevins, is now working for the Master Chief Petty Officer of the Navy. I think it's only a matter of time until we have a very strong woman contender to be the MCPON, and I think that would be great.

Can you comment on both the Navy's plan and the new Senate proposal for an increase in flight pay. What are the prospects for success and when might it occur?

It's my own opinion that because the Senate and House both have identical bills which increase flight pay that we will see a flight-pay improvement this year. It is also my personal opinion that it is long overdue. The Navy strongly supports it.

Squadrons actively recruit maintenance personnel who have

previous same-type aircraft experience. This in-community retention is seen as highly advantageous in maintaining readiness. There is a perception, however, among service members that "breadth of experience" or a variety of assignment is required for selection to the khaki ranks. What is the real impact of breadth of experience on selection to E-7 through E-9?

It's not a good perception. Let me say this in the kindest way possible. Often times when an individual doesn't get promoted, that individual looks for a reason. And it's really a lot more comfortable if you can find a reason that didn't have anything to do with you. Ratings compete among themselves for advancement. When I signed the E-8/E-9 advancement board precept, it said that "this" many people in "this" rating could be advanced. Those sailors don't compete with any other rating. That's based only on needs. So, we've zeroed down into the rating now, and we know that it's equitable there because you're only competing with other people in your rating. Now, how about a guy who did nothing but work on P-3s as opposed to somebody who worked on P-3s, E-2s and CODs and lots of other planes. Is one better than the other? The answer is: no, a big, definite no.

Advancement selection is based on individual performance. It is based on an individual look at a person's record and how well they've done. We will make sure that boards understand that. I will do everything I can, while I'm the Chief of Naval Personnel (CNP), and as every past CNP has done, to ensure that advancements and the competition for advancement are based on an individual's performance and potential — and not on some perceived requirements like moving around a lot among different communities.

Several years ago, the Navy established the Flying Limited Duty Officer (FLDO) program whereby an enlisted member could become a Naval Aviator. Subsequently, the program has ended but there are approximately 75 FLDOs on active duty. Many have aviation command aspirations and possess the skills to be selected. In order to become unrestricted line (URL) officers, FLDOs must complete four years of college. A recently rejuvenated aviation officer accession program called NAVCAD (Naval Aviation Cadet) is available for civilians having completed two years of college. NAVCADs receive a URL designation

upon the completion of training.

What can be done to allow the FLDO to compete on the same playing field with the NAVCAD?

FLDOs are assigned by the LDO detailee. Why not assign them from the aviation desk?

My own experience is germane to what you're talking about. I'm an ex-first class petty officer who got commissioned with no college. Of course, times were different back then, but I had no college at all when I was commissioned. About the time I made lieutenant commander, I realized that if I was going to have a long, successful career, I needed more education. So, I found a way to get a college degree. I don't think that I would have gotten quite as far without that degree.

The NAVCAD program doesn't require a degree but I think NAVCADs, as they get more senior, are going to feel the need to have more education, and there are programs to let them go to school and get a college degree. I think that an FLDO, if he or she is young enough to have a long-term career, needs to think about that. The Navy will help those people take the time to get a degree, provided they have good performance and they're doing well in their specialty. They can become unrestricted line officers (1310s), after completing 10 years total service, and compete right along with everyone else. In fact, more than half of our original 83 FLDOs have redesignated to either URL (1310) or aviation duty officer (1540).

Your second point regarding FLDO detailing is a good one. We are looking at the issue now. Perhaps they are better detailed by the 1310 shop, and that would be easy to do.

With limited aviator selection to PG School, coupled with disassociated and joint-tour requirements, what bearing will a postgraduate degree have on future command selection opportunity?

Certainly I think it's better to have gone to Postgraduate School than not. Will it end your career if you don't go to PG School as an aviator or surface warfare officer? No. Will it help your career, if you go? Probably, particularly if you then become an expert in a subspecialty in addition to solid performance in your warfare specialty. We call that a proven subspecialist. So there are lots of things that an officer can do. But most important is progression in your warfare specialty. Once you've done that, it makes real sense to start thinking about joint tours, PG School, and all the other

interesting options that expand one's professional horizons.

With the amphibious assault ship (helos), LPH, being replaced by the amphibious assault ship (multipurpose), LHD, approximately 18 post-command sea duty billets for helicopter pilots will be lost. Has an alternative career path been structured to the helo pilot's opportunity for major sea command and flag?

Helo pilots have opportunities for major sea command and flag right now. There are lots of commands that unrestricted line officers — aviators, surface and submarine officers — can go to. Every May we look at the major command plan. We try to structure it in two ways. One, and the most important thing, is to make sure that command is exercised by the person best able to exercise that command. For example, as a surface warfare officer, no one ever considered me for a submarine squadron, nor should they. And no one ever considered me to command an aircraft carrier either, because the law says the C.O. will be an aviator. But there are a lot of commands that could be commanded very well by an outstanding URL officer regardless of designator, aircraft or ship-type specialty.

Our annual major command plan conference tries to balance that consideration with our second objective, which is looking at *all* the designators and *all* the opportunities that make sense for that specialty. As we lose ships that helo pilots could normally expect to command, we will be trying to find a way to expand their potential somewhere else. You have to remember there is no free lunch here. Any command you specify for one community has to come from another, so we have some real interesting discussions at the conference.

Many of our outstanding enlisted personnel are forced to retire each year after reaching the statutory limits for their paygrades. This is necessary to allow for upward mobility of more junior people. Meanwhile, many enlisted recruiter billets are being filled involuntarily. What is the feasibility of contracting with our retired enlisted members (much like NJROTC instructors) to fill recruiting billets?

I don't like high-year tenure. High-year tenure means that we're telling someone who has done a good job, who has gotten promoted to the final rate they're going to achieve, that it's

time for them to retire so someone else can be successful in their career. We're not telling them. "You are not a good worker" or "You're not a good petty officer." High-year tenure is simply a way to have people who have done a good job, who have reached a point in their lives where they've had a long, successful career commensurate with the rate they've achieved, that it is time to retire so that *several* someone else's can get promoted.

If a master chief petty officer retires, we don't just get to make one new master chief petty officer. We get to make a master chief, a senior chief, a chief, a first class, right on down the line because we have an advancement system that only needs so many people in each rank. It's vacancy driven. So, you get all those promotions for one retirement. At the point when you have to ask a person to retire so that can happen, you don't feel good about it but most people understand and are ready to move on and start a new phase of their life. I wish high-year tenure wasn't necessary, but it has a positive result overall in the long run.

With regard to the recruiting aspect, I have a study going on now to look at the recruiting command and see what other things we might do there — one, to make recruiting more effective and, two, not to send so many people to recruiting who do not want to go.

We realize we have some problems in recruiting. We didn't do enough about a recruiter's quality of life before, but we are now. We didn't worry enough about recruiters' working hours before, and we are now, and we're putting more recruiters out there to lessen those working hours. We're doing things like ombudsman training and leadership revitalization in the recruiting command, but it will take a few years before those people who had a little better experience start coming back to the fleet.

We have to man recruiting to maintain a Navy, and we need some of our very best people to go there. Could some retired people do that? The answer is probably, yes. I don't know how long they would stay motivated in a job like that, and the pay might not be commensurate with pay in a civilian job. So there are a lot of things to look at. My most important goal, with respect to recruiting, is to make it the kind of place where people want to be. By doing that, I think we'll lessen many of our problems.

If the Department of Defense budget does not grow beyond the inflation rate over the next few years, what will be the long-term effect on

Navy force levels and advancement opportunity?

The budget sent to the Hill for manpower reflects the fact that we're going to decommission some ships and put them in the reserves. The manpower reductions for those decommissioned ships are proportionate to the number of people on the ships. The bottom line is that we didn't make unnecessary or excessive reductions in people for that cut, and the Navy will remain well manned. We went into 1989 with 593,200 people in the Navy. In 1990, we'll have 592,000 but we'll have several less ships to man. We'll have slightly better sea-shore rotation and, in the end, it's a net positive in the way that Navy people's quality of life will be seen.

The money that came out of the personnel budget matches the reductions from 593,200 to 592,000 but it doesn't cut out the personnel "overhead" of manning the Navy. We didn't take PCS fund reductions. We took no reductions for advancement in rate. There won't be any early outs caused by this and there will be no promotion delays. In 1990, given congressional approval of the budget request, we'll have a nice, stable year. I don't see any need to do PCS extensions for money. We've funded the account properly, and I feel very good about that. There were certainly considerations of cuts to manpower accounts that could have been felt by Navy people, but the Secretary of the Navy and the Chief of Naval Operations realized that people are the backbone of the Navy, and they found the dollars to fund it correctly. I'm upbeat about the 1990 budget as far as people programs go.

With regards to our commitments, I can tell you that Admiral Trost and the Navy leadership are committed to maintaining the personnel and operational tempo limits that have been set for the Navy. I know that CNO has discussed this with the Secretary of Defense and that's one of the givens in this budget. The goal is to maintain six-month deployments; to have the two-to-one turnaround time that we've had in the past; and to not maintain commitments at the expense of Navy people.

Last year, our pay raise looked good until compared with a drop in variable housing allowance (VHA) for many members. Are there initiatives in work to regain the lost ground?

We received a four-percent pay raise last year. We also received a 4.7-

percent raise in basic allowance for quarters (BAQ). Housing costs are based on the difference between BAQ and VHA and the cost of housing in the area. So, some VHA came down a little to match the rise in BAQ. Also, in some areas of the country, housing costs went down. I'm one who argues that the cost doesn't go down for the person on the spot, particularly if that person has signed a lease, has a contract on a house or is making house payments. Nothing changed for that person because the overall prices went down. But the way the VHA law is written, you do a survey and you have to apply the results of the survey. This year, we get a chance to go back to Congress and say this isn't working all that well and we ought to have a save-pay clause which protects people from these reductions.

Thirteen percent of the people in the Navy took reductions and 87 percent got a raise. I think the VHA program needs to work better. I don't think you should take a pay cut during the year because of VHA. I think each year when civilian pay rises in the private sector, our pay ought to rise, too. We got four percent last year in basic pay. That's important, but we are now about 10.1 percent behind the civilian community in what they have gotten since 1980. None of us stay in the Navy to get rich, but we do expect to be fairly compensated. I can tell you that the Navy's leadership is in there fighting for the 3.6-percent pay raise this year, and that's still in the budget. We're looking for ways to make sure we minimize or eliminate that kind of VHA/BAQ formula operation that we did last year.

Again, I want to be sure you understand that 87 percent of the people saw an increase and only 13 percent saw a decrease. Those aren't bad figures. I'd like it to be 100 and 0, and that's the goal.

A sailor looking at the quality of life factors most certainly will evaluate health care available for himself and especially his family when making the decision to reenlist. What are the near and long-term results of the most recent medical health care initiatives?

The main focus of the Medical Blue Ribbon Panel was to increase the access to Navy care for you, me and our families. We've done that in a lot of different ways which are all aimed at increased Navy medical care. First, we're improving the opportunity for graduate education for our doctors and other medical professionals, so they can learn new skills and, at the same time, commit to longer Navy service.

We're also doing some contracting for services. We would rather have Navy doctors, nurses and corpsmen but we don't have enough, so we're manning the hospital as fully as possible, sometimes with civilians, to provide access to the care. At 19 hospitals around the country, we've now gone to contracting in the emergency room and I hope everybody sees some rapid improvement because the ER is often where many of us make initial contact with Navy medicine.

We know we have to keep our Navy doctors and we recently added a bonus for them which is going to get bigger next year. By April, thirty-three percent of the eligible doctors in the Navy accepted the bonus and made a commitment to stay in the Navy for a while. We're trying to stem the retention problem of doctors through graduate education and this bonus. We've just increased the number of people eligible for the bonus and more of them are taking advantage of it.

We're also doing a lot of contracting for nurses, because this country has a nurse crisis right now. We're contracting to fill in where we don't have enough military nurses, and we're trying to do a better job of recruiting them.

I've made some major changes along with Vice Admiral Zimble, the Surgeon General, with regard to corpsmen so that we get the best use of their skills. It doesn't make any sense to have OR techs who aren't getting a chance to work in the operating room. We've spent a lot of money and time and those people have a lot pride in their skills, so we want to use them to their greatest potential. We've made independent-duty corpsman duty a great deal more attractive, both financially and careerwise, and lots of other ways that seem to be working. All of those things add up to one important result: more access to better medical care. I think we are achieving that and I can tell you we are committed to continuing to work for it. The problems did not develop overnight, and will take some time to fix, but we are determined to do so.

In many locations throughout the Navy, CHAMPUS is the primary method for covering routine dependent health care. With the cost of medicine outpacing inflation, is CHAMPUS an adequate health insurance program? In your opinion, is supplemental health insurance advisable?

First of all, if we had our way, we wouldn't have to use CHAMPUS at all.

We would be able to go to a military hospital. This ties into what I've said earlier with access to better Navy medical care. We'd want to get that care in the Navy and get the best care possible. Anything less than that is something less than the very best. I think it makes sense to cover yourself. There are a lot of very good private health care plans out there, and you have to look at them and at your own family's needs. Then you have to make your own decisions. But I do believe it's a good idea to have supplemental health insurance; it's relatively inexpensive. When you look at the catastrophic things that can happen to you and your family, I think it's a smart move if you can afford it.

Is there anything you would like to add by way of closing remarks?

Working in Washington is a lot of fun. You can do good things for the Navy in Washington, from this job and other jobs here, but none of it compares with being on a ship or in a squadron. If I had my choice and could be where I want to be, it would be back on a destroyer someplace or back on *Saratoga*. I thoroughly enjoyed my tour there. But what I really want to say is that this place, NMPC and OP-01, exists for two reasons. One reason is to get the most readiness that we can from the people and the money that we're allowed to have, and the second is to take care of those people to the very best of our ability. I am trying to have personnel business be as caring, as sensitive and as individualized as it can be in a large organizational environment. I don't think those are two competing needs. I believe people do better if they are treated fairly and in an individual way. My goal here is to say, "yes," as often as we can. Somebody to whom you say, "yes," is going to be happier and do a better job, and that is what this is all about. We need a valid and solid reason before saying "no."

Lastly, I would say that some people have looked at me as a first class petty officer who came up through the ranks and got to be a vice admiral. I got to be a vice admiral because of the leadership of two individuals — one first class petty officer and one chief petty officer. All the rest of it just sort of happened.

When I first came in the Navy, I worked for a first class who saw this youngster, a 16-year-old with no high school education. I lied about my age to get in. I used to worry that the Chief of Naval Personnel would catch me. I'm not concerned about that anymore. The



Seaman Apprentice J. "Mike" Boorda, graduate, Personnelmen Class "A" School, NTC San Diego, Calif., July 1956.

first class saw something in me and he treated me, not special, but like everybody else in the division. He took care of us and he helped us to improve and succeed. When I got to be a first class, I did that for my people and the chief for whom I worked noticed and said, "That's the kind of guy I think ought to get ahead in the Navy." He helped me get a commission. All the rest of it after that was just by accident I was in the right place at the right time.

I'm not telling you that every first class and every chief can be Chief of Naval Personnel someday. But I am telling you that if you take care of your people and you do that kind of leadership for your people, whether you succeed or they succeed, one thing is for sure: the Navy, the country and everybody succeeds. And I would hope that more people could take that attitude. I always say that the important subject of any story that involves me is not me, it's that first class petty officer and that chief. ■

Red Griffins

Sentries of the Pacific

By JO1 Jim Richeson



JO1 Jim Richeson

The squadron's primary mission provides the aircraft carrier battle group with fixed-wing submarine hunter and long-range reconnaissance capabilities.

The griffin, in Greek mythology, has the body of a lion and the head and wings of an eagle. It has an uncanny ability to find gold in the mountains and build nests with it. Hunters are tempted by the golden nests, forcing the griffin to keep vigilant guard. By instinct, the griffin knows where buried treasures lie and it does its best to keep plunderers at a distance.

Today, the griffin is a symbol signifying valor and a noble heart. One West Coast-based squadron proudly sports this emblem on the tails of their aircraft. The *Red Griffins* of Air Antisubmarine Squadron (VS) 38, home-ported at NAS North Island, Calif., continue the traditions of their namesake.

The embodiment of the lion is represented by the squadron's dignified stance against any formidable foe. The eagle's wings and keen eyesight symbolize the *Red Griffins'* ability to stand guard and defend the country's democratic way of life.

Now embarked onboard *USS Ranger* (CV-61), VS-38's primary mission is to provide the aircraft carrier's battle group with a fixed-wing submarine hunter and long-range reconnaissance capabilities.

Skipper Commander Jim Brooke leads a complement of 15 pilots, 22 tactical coordinators, 12 sensor operators and more than 200 men. Their task is to see to it that the squadron's 11 S-3A *Vikings* are maintained and ready to fly when called upon to protect the carrier's outer defense area. "Our job is to make sure that no hostile submarine gets within striking distance of the ship," said one of the squadron's crew members.

The squadron has been carrying out this mission since a small group of naval reservists were called back into active duty in July 1950 to support the needs of the Korean conflict. The group formed what was then known as Air Antisubmarine Squadron 892 in Seattle, Wash.

After 22 years of flying S-2 *Tracker* series aircraft, the squadron, which was redesignated VS-38 in February 1953, transitioned to the more well-



While on board USS Ranger (CV-61), the Red Griffins of VS-38 fulfill the role of antisubmarine warfare's force multipliers.

equipped Lockheed S-3A *Viking* in 1976.

Since then, the *Red Griffins* have demonstrated why the lion has come to be known as the king of the jungle and the eagle ruler of the skies. The squadron has compiled accolades which include being the first West Coast-based S-3A squadron to win the coveted Captain Arnold Jay Isbell Trophy for excellence in antisubmarine warfare (ASW).

The high-pitched whining of the *Viking's* twin-turbofan engines is unmistakable — it sounds like a gigantic vacuum cleaner. The S-3 is affectionately known as the "Hoover."

While sailors may quip about the aircraft's sound, those who have flown the S-3A know what the *Viking* is capable of doing.

Lieutenant Bayly Taft, a Naval Academy alumnus, has more than 950 flight hours, 600 of which were flown in the S-3A. "It's one of the safest aircraft in the carrier environment," the squadron's aircraft division officer said. "It's a pretty forgiving aircraft. It's not difficult to land it on the ship; however, many LSOs [landing signal officers] say that it's difficult to land it and look good," he added.

Whether or not the S-3A looks good while it lands aboard the carrier is beside the point. Taft is totally convinced that the aircraft is well-suited for its ASW mission.

It is capable of scanning the ocean more than 2,000 miles from the ship,

giving the aircraft carrier an added long-range reconnaissance capability. The *Viking* has been called the force multiplier in ASW. Aside from its submarine hunting capabilities, the S-3A also performs mining, bombing, search and rescue, over-the-horizon targeting, in-flight refueling and logistics support.

While at NAS North Island, the squadron, in cooperation with the U.S. Coast Guard and the Drug Enforcement Agency, also puts this technical prowess to good use when it flies missions tracking down suspected drug smugglers.

The *Viking* relies completely on a four-man crew during each ASW mission. According to Taft, the crew consists of the pilot, or mission commander, and copilot/tactical coordinator (COTAC) up front. Behind them are the sensor operator (SENSO), normally an aviation ASW operator, and the most pivotal member of the crew, the tactical coordinator (TACCO).

Information which has been gathered electronically in the aircraft's sophisticated computer systems is shared by the COTAC, who is responsible for operating the S-3's nonacoustic components — radar, data link, electronic surveillance measures, forward-looking infrared radar and magnetic anomaly detector — and navigation and communication equipment. The SENSO controls the acoustic gear, while the TACCO directs the crew's tactical activity and

evaluates all of the acoustic and nonacoustic information flowing into the aircraft through its myriad sensors.

For them to be proficient in each of the S-3's components, Taft pointed out that it takes each aviator and Naval Flight Officer (NFO) about nine months to learn about the aircraft, various proven ASW tactics, and all of the components and weapon systems while going through the replacement air group's syllabus.

"Five months of that is devoted to learning about the computer and all of the different sensors using our trainers," Taft said.

According to Lieutenant Tim Donovan, an NFO, usually by the time a pilot and NFO leave the squadron, they have accumulated more than 1,200 total flight hours in the aircraft. "They arrive here from the training command with about 450 hours," Donovan added.

Both Lts. Taft and Donovan agree that it is the quality of people that sets their squadron apart from the others. The professionalism of the squadron's aircrew, maintenance, supply, operations and administrative personnel forges a cohesive bond among the *Red Griffins*, which ensures that their aircraft will be maintained and always ready to support the aircraft carrier's battle group. This bond has on many occasions determined the success of a VS-38 mission. ■

Association of Naval Aviation Bimonthly Photo Competition

Honorable mention photographs in the third bimonthly Association of Naval Aviation Photo Contest included: Below left, two P-3 *Orions* joining up in formation for a mine-laying exercise over the Atlantic, shot by Ltjg. Mike Day, VP-24; below right, a refueling mission with VMGR-152 KC-130s from MCAS Futenma, Okinawa, Japan, and A-6s stationed at Iwakuni, Japan, taken by Sgt. Jeffrey L. Poncelet, VMGR-152; and, bottom, a Soviet *Badger* which was intercepted by an F-14 *Tomcat* of VF-2 aboard USS *Ranger* (CV-61), photographed by Lt. Jim Palmer, VF-2.





AFCM (AW) Othan N. Mondy
ComNavAirPac's Force Master Chief

Speak Out!

The Master Chief's Perspective of the Pacific Fleet's Naval Air Force

By JO1 Jim Richeson

One sailor logged in more nautical miles than the entire Seventh Fleet last year.

Since becoming Commander, Naval Air Force, U. S. Pacific Fleet's (ComNavAirPac) force master chief in December 1987, AFCM (AW) Othan Nathaniel Mondy traveled from the sunny coast of California to the shores of Alaska and down to the frigid continent of Antarctica. He also ventured into the waters off of Africa before ending his 300-day journey.

What the 45-year-old native of New Orleans, La., saw impressed him tremendously and strengthened his belief in today's Navy. "Having just completed a world cruise, and seeing Pacific Fleet sailors working extremely hard, many of them just 19 years old, led me to believe that we have some of the finest sailors in the Navy today," the 28-year Navy veteran remarked. "I am absolutely convinced that the sailors we have out there in the fleet are doing the job and doing it well, and the talent we have is better than ever," he added.

Before becoming ComNavAirPac's first black master chief, Mondy headed USS *Kitty Hawk's* (CV-63) 425-man aircraft intermediate maintenance department.

As AirPac's top enlisted man, Mondy has made a commitment to meet with as many of the troops as he can and act as the messenger of their personal interests. Mondy has taken on the responsibility of voicing the essential concerns of more than 65,000 Navy enlisted men and women in the Pacific, who are assigned aboard seven aircraft carriers, seven functional air wings and 12 naval air stations scattered up and down the West Coast and worldwide.

"When I came into this job, I understood that it would require a great deal of travel and energy. If for one moment I didn't think I would have the energy and the time, I would not have elected to put myself in for this job," Mondy said.

The master chief has visited every installation within the force, including its seven aircraft carriers. Mondy added, "I hope to be able to do that again this year. Get back out there and stay on top of it. Make myself accessible to individuals and let them know that there's someone here working on their behalf. Surely with their continued support in doing the things we ask them to do — to defend this precious democracy of ours — it's not asking a lot from me to go visit them. I think it's important that I make

myself available in my job."

Mondy wasted no time in trying to establish his objectives. With the help of other senior enlisted members, the master chief mounted a campaign to have all eligible voters in the force exercise their right to vote by registering. During election year 1988, according to Mondy, approximately 96 percent of all eligible voters in the force registered and, of those, 86 percent actually voted in last year's elections.

Next, the master chief committed to continuing his support of the Navy's chain of command and making it stronger and more viable — keeping lines of communication open — so that important issues are brought forward and receive proper action.

Many of the issues facing today's Pacific Fleet sailors, according to Mondy, are simply recurring subjects such as the adequacy of overseas housing, child care and overseas screenings.

"In terms of adequacy and availability, overseas housing continues to be one of the major issues we have to deal with," Mondy pointed out. "This is one area I am concerned about because, if we are going to send troops abroad, we must be prepared to provide them with adequate quarters."

Child development centers, Mondy emphasized, are another big item — one which is not just nice to have, but something which needs to be expanded. "As long as we continue to increase the number of dual military couples and women in the Navy, we need to provide them with child development centers," he said.

In the area of overseas screenings, Mondy explained that the problem is twofold. One, individuals who are scheduled to transfer overseas do not always state the possible problems which their families may encounter, if they accept such orders. An example he cited was families which have gifted children enrolled in special school programs. "If these families are assigned to areas where these programs are not offered, then the kids suffer," he said. "The same holds true when a sailor's family member has a medical problem, or financial problem. So, I think the individual who's being screened to go overseas needs to be honest and forthright while talking with the commanding officer."

Once an individual accepts overseas orders, the master chief said, the entry approving authority does not always provide enough information to the individual — such as the country's economy or the cost of living where the prospective sailor is going to be stationed.

"We need to tighten up on that

procedure to make sure that the approving authority is giving individuals more than adequate information about the area to which these folks are going," Mondy explained. He added that many command sponsor programs are adequate and do provide the necessary information; however, the information package does not always get to the individual in a timely fashion. In many cases, the sailor has already arrived at his new duty station.

These particular issues were brought to Commander, U.S. Pacific Fleet's attention, Mondy said. "I've also recently returned from the Family Support Conference in Norfolk, Va., where many of these issues were discussed," he added.

In a related matter, each year, many sailors from both coasts who have decided to separate from the Navy cite the anxiety of enduring the long family separations associated with each deployment as their main reason in leaving their jobs. Mondy was very optimistic in his approach.

"Traditionally, I've heard that time and again — too much family separation. We need to understand that, when we begin to go forward with our workups for each deployment, we need to do everything we can in preparing the sailors as well as their families for the separation," he said. "We need to

continue to have strong and viable ombudsman and family support programs. I don't think we can leave those programs up to the specialists alone. Those of us in the chain of command have to be very much concerned with the young sailor, his or her spouse and the dependents."

He added, "In reality, when we're dealing with the sea services, we have to understand that these family separations are part of the job and are, in fact, the nature of the job. But anything we can do to lessen that anxiety, we ought to do.

"We're doing very well in terms of our retention statistics," he continued. "We're not having a tremendous amount of individuals say, 'We're going to go home.' I think it's imperative that we retain quality sailors. You can accomplish this by making sure that the well-being of your sailors and their families is well taken care of; you are managing or leading individuals effectively; you are helping them plan and control their careers; you are giving them the recognition which they have earned; and you are providing an environment which allows the individual to want to stay."

Mondy emphasized that there is no substitute for strong-line leadership. "That's the thing which has kept me in the Navy for 28 years." ■

JO1 Jim Richeson



East meets West! During Commander Naval Air Force, Atlantic's change of command ceremony, May 25, AFCM Mondy greets his East Coast counterpart, PRCM William Crowley, ComNavAirLant's force master chief.

Center

By JO2 Milinda D. Jensen

Like the pump for a fine oiled piece of equipment, the Center for Naval Analyses (CNA) provides the lubricant to keep the wheels of progress turning in the ever-changing world of naval technology. Its origin traces to 1942, when the Antisubmarine Warfare Operations Research Group (ASWORG) was created to help defeat the German U-boat. ASWORG was assigned to the headquarters staff of Commander in Chief, U.S. Fleet. After the war the group changed its name to the Operations Evaluation Group (OEG).

CNA was formed in 1962, consolidating OEG and the then separate Institute of Naval Studies. CNA is a nonprofit, federally funded research and development center sponsored by the Department of the Navy.

By applying the scientific method to warfare, CNA analysts provide decision makers with the tools to make sound decisions. One of the soundest decisions occurred during WW II when the military community requested aid from civilian scientists.

The concept of civilian scientists and the military working together wasn't common practice. But due to the high success rate of German U-boats against merchant ships in WW II, a small group of top scientists, from prestigious universities such as MIT, Columbia, Harvard, Cal Tech, Stanford and Princeton, was mobilized. Scientists were also recruited from industry and government to help in the national defense. The partnership between the top scientists and military specialists led to the development of an effective team to combat the German U-boat campaign. But the mandate for research and analysis extended beyond antisubmarine warfare, pushing data gathering into all aspects of the war. Scientists were deployed for six-month tours to various military commands to study specific problems. These field assignments enabled the scientists to observe operations, gather data, talk with personnel and then make recommendations.

This field information was then sent to the Washington headquarters, for use in other analyses, and circulated to other commands providing valuable feedback.

During the Korean War, the Navy



for Naval Analyses

was presented a unique situation. With the weakness of North Korean naval forces, the battle for control of the seas was nearly nonexistent, making one of the Navy's major roles that of providing support to United Nations ground forces. It was shortly after the conflict started that naval commands directly involved in the fighting began requesting analytical assistance. Over the next three years, scientists were sent to various overseas assignments. The largest number of analysts, four, was assigned to Commander in Chief, U.S. Pacific Fleet.

These researchers helped to solve tactical problems and suggest possible new techniques for improving operating procedures. OEG's analysts worked on a variety of items, including the selection of weapons for naval air attacks on tactical targets, a scheme for conducting successful interdiction missions, effectiveness of weapons for shore bombardment, the ability of naval forces to blockade North Korea, the difficulties of providing close air support, and the desirability of increasing the tempo of carrier night-flight operations.

During the Vietnam conflict, with much of the attention focused on ground battles, the Navy's uncontested use of the seas was often overlooked. Certain aspects of the war could not have occurred without that use. North Vietnam transported weapons, ammunition and supplies to the Viet Cong along extensive inland waterways and sea routes. Assessing the problem, CNA analysts, along with military officials, concluded that the Vietnamese navy should conduct its own search and seizure operations, augmented by U.S. Navy ships and planes on conventional patrol. Given the code name "Market Time," the plan was put into operation and later credited with forcing the Viet Cong to alter their supply system. Other important areas of analysis were combat aircraft losses, strike planning and effectiveness, and airborne reconnaissance.

Today, field analysis remains the basis for successful problem solving. "In a nutshell, the center provides

A P-5 flies over a junk in the waters off South Vietnam. During Operation Market Time, patrol aircraft reported on U.S. or South Vietnam ships in the area for follow-up searches.

information through research, data, fact finding and field analysis," said research analyst Dennis Gallus. He added that studies written by field analysts contribute to the operating Navy. "By applying the scientific method to warfare, there's more time to focus on the problem," Gallus said. With about 40 of CNA's 200-plus professional researchers assigned to Navy commands, unit/squadron commanders are freer to deal with the day-to-day operations of their respective commands.

If a problem in operations does exist, commanding officers can request assistance from CNA through their chain of command. After a proposal is received, CNA reviews it to see if it is feasible for study. Action is then taken to make it happen. "One ongoing project for us is analyzing crew performance in tracking Soviet subs," said Commander Peter Kallin, Tactics Officer, Commander Patrol Wings, Atlantic. "We plan a time for a CNA representative to visit our location. Meanwhile we gather data, such as messages and flight logs, here at the command," Kallin explained. Working with the analyst ahead of time to decide what they each would like to get out of the study, the project is discussed from a fleet and CNA perspective.

Air defense of the fleet, with its difficulties in detection and interfacing land and water components, has gained measurable success through field analysis. "We have documented a great deal of the problems," David Dittmer, Director, System Planning Program, said. One of the single most important factors in determining the success of an air battle is surveillance and early warning detection. With this information, the pre-positioning of anti-air warfare forces plays a critical role in countering the threat before the launch of an attack. Other areas of concern are counterplatform, counterweapon defense and mission support. He added that the center is assessing what shortcomings exist and what needs to be done to increase capability, eliminate shortfalls and make improvements with projected new systems entering the fleet.

The center also provides quick-response analysis. This method gives immediate attention to questions from

top officials. At times, these questions are budget related and the research information that is gathered can mean the difference between a proposal that will save money and one that won't.

There are also regular briefings which allow flag officers and analysts to hear presentations, debate issues and decide on "blueprints" for a master plan. These blueprints govern the intended direction that Navy leaders see for several decades of military acquisitions, battle plans and issues of problematic decisions. Analysis may continue for several years depending on the problem at hand.

In an effort to develop a training methodology, a recent study focused on aviation training and readiness. "We wanted to see if increased flight activity resulted in better performance," said Captain Bill Franson, Aviation Training Branch, office of the Assistant Chief of Naval Operations (Air Warfare). Capt. Franson added that all indications are that more flying time does enhance performance. A larger scale study currently under way will follow an entire training and deployment cycle, focusing on flying hours.

Another upcoming major task for the center is the study of carrier air wings and what is needed for the year 2000. Acting as the pivotal point for analysis, the center collects other data from the Navy laboratory systems, systems commands, industry, the office of the Chief of Naval Operations and the Marine Corps. This overall effort includes all relevant parties, and the conclusions drawn from the information serve as guidance for structuring the naval air wing. A carrier air wing study will be under way by early 1990.

Through the use of the analyst's tools — among them, probability theory, war gaming, simulation models, hands-on observation and practical application — operational problems can be avoided or remedied. Acting as advisor to policy makers, CNA has had considerable influence on naval decisions. Integrating its scientific staff with that of the operational Navy has resulted in an overall improved force performance. The Center for Naval Analyses has been a credible advisor for almost 50 years and will continue working with the Navy to maintain and improve overall force strength. ■

By Hal Andrews

Very much a Navy aircraft as indicated by its T-47A designation, the *Citation* is however not in the Navy inventory. A member of Cessna's business jet *Citation* family, the T-47 was specifically developed to provide undergraduate Naval Flight Officer (NFO) training at Pensacola, Fla., to be done in company-owned aircraft.

Contractor support of training command aircraft has become common, and the T-45 program was set up from the start to provide an integrated training system, including both aircraft and simulators (*NANews*, July-August 1988). The T-47 is part of an even more comprehensive "package deal." With a relatively small number of specialized aircraft required, a competitive program was set up to replace the retiring T-39Ds used in NFO training. One contractor would provide the aircraft, with their full support and the pilots to fly them, as well as supplying and operating the simulators. Training Air Wing 6's (TraWing-6) VTs 10 and 86 would control their operations, with the squadrons' instructors responsible for all training.

Cessna — with Northrop taking care of flight operations (including pilots) and maintenance, and CAE Link supplying and operating the system simulators — won the contract and has been meeting TraWing-6's needs since 1985. Under the contract, 15 T-47s are provided at NAS Pensacola, Fla. Cessna based its proposal on combining features of its long successful *Citation* series to meet the specialized needs of NFO training, adding additional features where needed, such as the nose-mounted Emerson APQ-159 radar. The airframe was strengthened for higher speed operations at low altitude and extended life in high maneuvering and turbulent flight conditions. And, of course, the necessary student and instructor stations and consoles replaced the usual comfortably furnished cabin interiors.

The prototype of Cessna's model 500 series — which became *Citations* — first flew 20 years ago, in September 1969. Designed around two Pratt and Whitney Canada JT15D 2,200-pound-thrust turbofan engines, it was

intended to fill a gap between the turboprop and then-available turbojet business aircraft. The objective was to provide an airplane capable of operating from smaller fields like the turboprops, but having cruise speeds closer to the jets at equally high altitudes. With fan engines and a larger cabin than the other "bizjets" in its class, it promised economical business transportation. A straight wing conventional design, with aft fuselage-mounted twin engines, a pressurized cabin and manually operated control surfaces, the basic configuration has been maintained through the different 500 series *Citation* models to date.

Sales following certification to transport category requirements in 1972 proved the wisdom of Cessna's objectives, and success in meeting them. The *Citation* soon became the leader in "bizjet" deliveries. With development of a new, larger, swept-wing 600 series *Citation III* in the late 1970s, the updated 500 became the *Citation I*. It was superseded by the Model 550 *Citation II*, certified in 1978 with increased wing span, a lengthened fuselage for more cabin space and 2,500-pound-thrust JT15D-4 engines, continuing the *Citation's* popularity. Like the earlier *Citations*, the *II* was certified to transport standards and could also be used for single-pilot operation when equipped with appropriate avionics and cockpit configuration.

With the overall "bizjet" market decline, *Citation II* production was discontinued in 1984, but was resumed in 1987 as the simplest and lowest priced member of the *Citation* family.

In the early 1980s, Cessna engineers adapted the new technology airfoils, as used in the *Citation III* design to a significant upgrade of the *II*, resulting in the model S550 *Citation S/II*. Along with the supercritical wing section for higher speeds, the inboard leading edge was extended, increasing wing area and fuel capacity. New Fowler-type flaps were also fitted to maintain small field capability. The JT15D-4B engine used had greater thrust at high altitudes than the -4 in the *Citation II*.

Looking at the Navy's NFO training requirements in 1984, with the *S/II* being certified as its predecessors had been, Cessna based its proposed design



on the *S/II*, since a certified aircraft would be necessary. Designated Model 552, it would be an *S/II* with changes needed for its new operating environment, which would include extensive maneuvering and high-speed, low-altitude flight. Most obvious changes are the clipped wing tips, 34 inches on each side, and the extended nose radome for the APQ-159 radar. The clipped tips provide several benefits: reduced roll damping for increased roll response, reduced structural loads in the inboard wing when pulling Gs, and reduced gust response in pitch during low altitude high speed flight. With these, and appropriate structural strengthening,

Citation



the airframe is certified for long life at the higher dynamic pressures and maneuvering loads it will experience. A redesigned windshield withstands bird strikes at higher speeds, allowing operations at maximum speeds on the deck — a type of flying not normally experienced in "bizjet" operations. To provide adequate roll response, the hydraulically boosted aileron system of the *Citation III* was adapted. A window was added in the cockpit ceiling for better visibility during maneuvers.

Certification of this special variant was for single pilot operation, with full provisions for dual pilots. Crew stations for an instructor and three NFO students were installed. As the contract

winner, Cessna produced the new model *Citation* and it was given the T-47A designation.

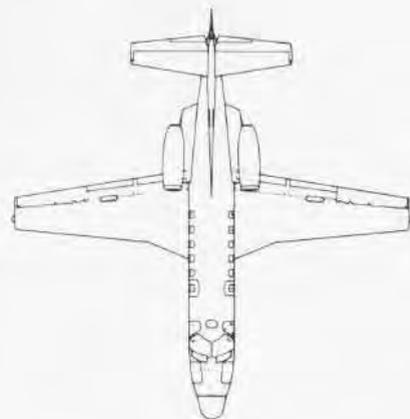
To date, the T-47s at NAS Pensacola have shown the same operability and safety that the commercial *Citations* have enjoyed. Cessna was awarded the Collier Trophy in 1986 for the *Citation's* safety record in commercial use. And even in its far more rugged flight environment, the T-47 has done just as well.

With interest in other military training potential, and an improved model 560 *Citation V* in production replacing the *S/II*, the T-47A promises to have many close relatives in the air for years to come. ■

T-47A



Span	46'6"
Length	47'11"
Height	14'8"
Engines:	
Two P&W Canada JT15D-5	2,900 lbs. thrust
Speed (max operating, at sea level)	358 kn
Ceiling (max operating)	43,000'
Range	1,700 nm
Crew:	
One pilot; one instructor; three students	



Expert on Naval Aircraft

John M. Elliott

By J02 Milinda D. Jensen

If you want to know about naval aircraft markings, ask an expert. John M. Elliott, assistant historian in the Naval Aviation History Office, colocated with *Naval Aviation News*, is a walking encyclopedia on the subject.

John's work with old aviation records and his interest in airplane markings resulted in his first published book, *"The Official Monogram US Navy and Marine Corps Aircraft Color Guide."* The book traces the development of Navy and Marine Corps aircraft markings from the earliest days of Naval Aviation to modern planes.

John spent over 20 years digging through Navy and Army directives to uncover the correct paint scheme for individual planes, but his interest in aviation began as a youngster growing up in Santa Barbara, Calif.

"As a boy I remember jumping on my bicycle and riding to the airport," John said. "In those days you were able to climb onto the aircraft and look in the cockpit." Living near a small airport helped foster future aviation ambitions. "There were Navy ships in and out of the harbor and the area was a beehive of aviation activity," he commented. It was in the mid-1930s when John took his first airplane ride. "I was in junior high school and paid for my first flight," he said. "I don't really remember what that flight cost me," but added that as a kid he recalled going to air shows where you paid a penny for every pound you weighed and that was the cost of your plane ride. But even with his daily contact with planes he never wanted to be an aviator. "I never had a desire to learn to fly; I had some training to qualify as rear seat gunner. It's quite a thrill to start at 1,200 feet and then go straight down," he stated. "I really wanted to be an aeronautical drafts-



A daily part of John Elliott's life involves searching through files.

man, but I also wanted to join the Marine Corps."

In 1942, John enlisted as a private in the corps, rising up through the ranks to master sergeant and retiring as a major. He worked as an aviation ordnanceman while in the Marine Corps, serving in various squadrons, including with the renowned *Black Sheep* of Marine Fighter Squadron 214 during the Korean War. Even though John never served directly under the command of Colonel Gregory "Pappy" Boyington, the WW II flying ace and

Medal of Honor winner, his future endeavors evidenced the maverick spirit that Boyington left behind.

Throughout his 24 years as a Marine, John stayed in aviation ordnance. However, it was only through the ingenuity of John and a fellow sergeant that he ended up in ordnance as an officer rather than infantry. "In 1952, I was an instructor at Quantico Marine Corps Air Station, teaching aircraft fire control systems," John recalled. "We had to put malfunctions into the system so that the students

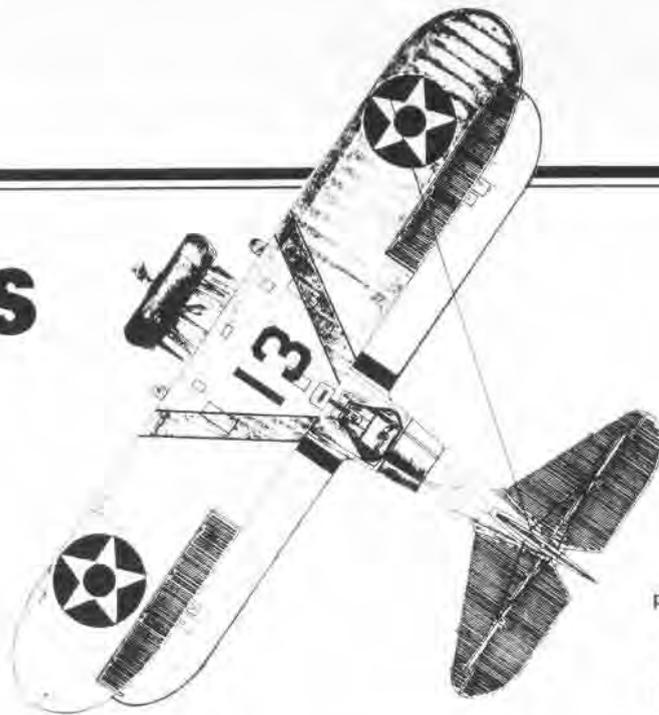
Markings

could learn. Sometimes we weren't so sure that this was working properly, so we decided to design a simple unit that worked with an electrical current and told us if indeed the system was operating properly," he explained. The instrument was about the size of a cigar box and had only one knob and one meter. "It worked well in class, so we sent a letter off to the Bureau of Ordnance to see if they wanted to use it in the fleet," John added.

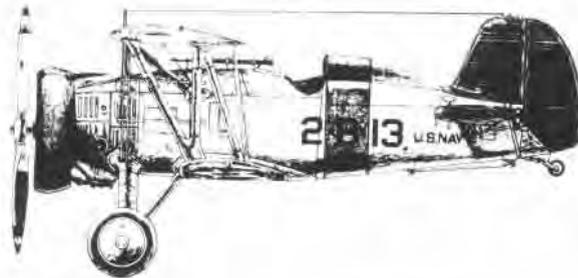
Shortly after that John was sent to Basic School. "I didn't hear anything from the bureau until I had been in the school for several months. Normally I would have become an infantry officer," he said. "But instead, because of that device, the Marine Corps put me back in the ordnance field."

After retiring from the corps in 1966, John worked as chief of the collections branch, National Armed Forces Museum Advisory Board at the Smithsonian Institution. "I was interested in how vehicles [planes] were being restored; my interest evolved into an official research project," he recalled. "A lot of the time the old records were like old friends I'd worked with for years," reminisced John. "With all that information, plus my own collection of records, a book seemed like a good idea," he added. According to John, before radios and call signs, the color scheme was the only way to recognize a particular squadron. "The first number on the fuselage is always the squadron designation," the historian pointed out. "The letter tells what type of squadron and the third number indicates the number of that plane in that squadron."

John explained that each aviator had to know where he belonged in the flight pattern. This was done by color scheme. "The number one man in each squadron had a red cowl and red belly band. All the planes were painted according



The first number on the plane below identifies this aircraft as belonging to squadron two, the letter "B" indicates it is a bomber plane and the 13 shows that it is the 13th plane in that squadron.



to the Bureau of Aeronautics directive. "Sometimes it's really difficult to answer a request for aircraft paintings, especially planes that were in the training command. They had their own system. They weren't painted by the bureau directive," he said.

John collected over 850 directives on painting Navy aircraft throughout his time in service. "I used the National Archives, then had to get into old Army Air Corps records," he said. His first book, encompassing the years 1911 to 1939, was originally written as a Marine aircraft guide but then grew to include Navy planes. His second volume, covering the next 10 years, is currently at the publisher and is expected to be out this summer. In the meantime, work continues on volumes three (1949-1959) and four (1959-present). Enlisting his wife, Helen, as his editor, John devotes most of his evenings and weekends to writing. "The writing part is easy," he said. "Drawings take the most time."

Drafting since high school, John does all of his mechanical drawings as well as overlays.

"This is my hobby. My approach is everybody needs one," he stated.

In 1984, the 66-year old chronicler started his third career, as assistant historian in what is now the Naval Aviation History Branch, Naval Historical Center, Washington, D.C. Daily requests for information on old planes and operations keep the author happily active. John also serves as a Naval Aviation Insignia Board member, giving final approval to squadron/unit insignias. And, of course, all questions on airplane markings are handed over for his expertise.

John plans to retire during the summer of 1990, but contends that volume four on plane markings will be his last book. "I'll never write another textbook; there're too many headaches," he lamented. "But I'll continue to write for the magazine." ■

Strike Rescue



An HO3S-1 helicopter from an air rescue squadron lands at the Korean front to pick up a wounded G.I. for transport to a nearby hospital.

The following is adapted from a presentation at the Argentine Joint Military Helicopter Symposium in October 1988 by Commander Larry E. Larson, then of the Aviation Training Branch, office of the Assistant Chief of Naval Operations (Air Warfare).

Strike rescue is a relatively recent concept in warfare. Yet, the state of the art has advanced so rapidly that it has produced an environment in which the novice will meet with limited success. Since WW I, rescue operations have consumed a disproportionate amount of attention in the U.S. military. There are several reasons for this:

- Our traditional western value on human life.
- A rescued airman returns a valuable asset to the fleet.
- To deny the enemy a source of intelligence and potential political asset.
- To improve the morale and aggressiveness of the aircrews.
- An overland strike rescue capability will improve overwater capability as well, since much of the defensive equipment and tactics are the same.

Before airplanes gave man the ability to get shot down well behind enemy lines, strike rescue as a concept did not make much sense. Even in WW I, when aviators began shooting at each other, the military did not think much about recovering the survivors. The hapless aviator usually followed his airplane down in a blaze of glory.

In WW II, the Germans, followed later by the British and the Americans, provided effective overwater strike rescue for their aviators. The Germans established an extensive strike rescue network along the French coast early in the war using seaplanes, boats and buoys. They also pioneered personal survival equipment, such as inflatable rafts, for their aircrews. The Americans and British entered the war with very little strike rescue capability. Bomber crews who bailed out over the English Channel could only hope that a passing fisherman would rescue them before the Germans did.

Not until late 1942 did the allies form a combined air-sea rescue service, which functioned very well for the war's duration. In the Pacific theater, where most of the action took place overwater, the Americans developed an effective strike rescue system.

Strategically positioned seaplanes, surface vessels and submarines recovered many American fliers.

Overland strike rescue presented a very different challenge which the Americans could not adequately address until late in the war. In Europe, bomber crews shot down over occupied territory hoped the local resistance found them before the Germans. Overland rescue in the Pacific theater depended on evacuation teams slogging through the jungle for weeks to recover downed aircrewmembers.

In 1945, the U.S. Army Air Corps in China established the first American helicopter squadron, the 8th Emergency Rescue Squadron, to improve their overland rescue capability. Before the war ended, the squadron's Sikorsky R-6s flew 110 missions and rescued 43 airmen. While the helicopter arrived too late to contribute decisively to the war effort, it had immense implications for strike rescue's future. Rescue rates improved dramatically as helicopters performed overland rescue in hours, not weeks.

In the Korean War, the helicopter again demonstrated its utility as an overland rescue vehicle. U.S. Air Force Air Rescue Service (ARS) helicopters saved about 10 percent of the aircrewmembers who went down inside North Korea, a vast improvement over the virtual absence of overland strike rescue in WW II. However, the Navy often operated its aircraft beyond the ARS helo's range, leaving strike rescue up to the carrier's organic helicopter. The Sikorsky HO3S-1, a small, slow, fragile machine, often left directly from the plane guard pattern for North Korean airspace. Although extremely vulnerable against even a primitive air defense system, helicopters made overland strike rescue possible. Unfortunately, both the Navy and Air Force abandoned combat rescue after the war and were forced to relearn it in Vietnam.

The ARS combined constantly improving tactics and weapons systems to rescue 3,883 people throughout Indochina during the Vietnam conflict. The ARS, which later became the Aerospace Rescue and Recovery Service (AARS), entered the war with its largely HH-43 force geared toward peacetime search and rescue (SAR). With nonexistent doctrine and ill-suited aircraft, the ARS could not provide dependable strike rescue support. It therefore pioneered several advances, including heavily armored and armed HH-3s and HH-53s, specially trained strike rescue pilots and parajumpers, and theater-wide SAR coordination using airborne command and control centers.

The Navy also performed combat rescue extremely well in Vietnam with Helicopter Combat Support Squadron (HC) 7. As the war began, the Navy had no assets to perform the strike rescue mission in the north. As in Korea, the battle group tried to cover the mission with its organic helicopters. This approach proved unsuccessful and expensive.

In early 1966, the Navy stripped the antisubmarine warfare gear from some H-2s and H-3s and assigned them to strike rescue detachments, a plan made possible by the nonexistent submarine threat. The aircrew received scanty, nonstandard training and the helicopters' strike rescue modifications amounted to adding two M-60 machine guns and armor plate around the pilot seats and engine cowling.

The crews performed heroically, but the results did not improve significantly; while the Navy rescued 158 (96 percent) of the pilots who bailed out over the water with no SAR losses, the overland rescue statistics were different. Of 169 survivors, there were 27 successful combat rescues but 19 SAR aircraft destroyed and 15 SAR personnel killed. Finally, the Navy combined the H-2 and H-3 detachments to form a dedicated combat rescue squadron. HC-7, with its dedicated assets, mission specialization and standardized tactics, rescued over 150 pilots from the combat zone without losing a crew to enemy action.

As after WW II and Korea, the Navy dismantled its active duty strike rescue apparatus after the Vietnam war and the responsibility was transferred to the Naval Reserve Force.

From our experiences in WW II, Korea and Vietnam, we have learned that well-trained combat rescue aircrews, more survivable rescue aircraft and preplanned criteria for the commitment of strike rescue assets are essential to the successful rescue mission. However, with hand-held, infrared and optically guided surface-to-air missiles widely available today, strike rescue has become even more complex. This has resulted in some changes in our combat rescue philosophy.

First, the risk is far too great to conduct a search in the modern hostile environment. Before rescue forces are committed, the location of the survivor must be pinpointed, either by his wingman, other friendly aircraft or by electronic means such as the pilot's survival radio. Second, the daylight rescue, even with escorts, has a low probability of success if opposed by any significant force.

U.S. national search and rescue policy states that there is an

indispensable need for military SAR in support of military operations, and each armed service is responsible for providing SAR in support of its own operations. Thus, combat rescue for the naval task force in a naval campaign is the Navy's responsibility. This is true whether in support of a carrier battle group or an amphibious assault, peacetime or wartime, and over land or water.

During joint operations, the armed services are expected to function in mutual support of the SAR effort as directed by the joint commander.

Strike rescue must be an integrated part of the strike mission. Pre-mission planning should include analysis of the threat, designated safe areas to which downed aircrews will proceed, ingress/egress routes for the rescue aircraft and authentication procedures.

When an aircraft goes down, the area SAR commander must rapidly decide which rescue assets to employ. His decision depends on factors which include the distance to and location of the survivor, type of threat, rescue force capabilities/survivability and rescue aircraft training. Although each strike rescue mission is unique, most will fit within three broad categories. Each category has its own rescue strategies:

Rescue at sea. During WW II, Korea and Vietnam, the aircrew stood the greatest chance of rescue if they could nurse their crippled aircraft to the water before ejecting. The Navy has always done this mission extremely well, employing air, surface and

subsurface units in tandem.

Rescue overland opposed by relatively primitive air defense. The Navy faced this scenario in parts of Korea and Vietnam and in many contingency operations. Here, the quick-reaction rescue force can overwhelm the enemy with firepower. This option requires: armed, armored helicopters able to withstand intense small arms fire; fixed-wing pilots trained in how to escort helicopters; and a strike rescue command and control center to coordinate the effort.

Rescue overland opposed by a more sophisticated air defense. In this environment, the rescue should most likely be conducted at night by a single helicopter flying at low level using forward-looking infrared radar or night-vision devices. The helicopter should be protected by standoff command and control radar and fighter/attack aircraft coverage.

The Navy's Vietnam experience and more recent experience in Lebanon indicate that overland strike rescue missions in a high-threat environment (extensive anti-aircraft or attack aircraft) are not viable.

Current U.S. rescue assets include the Air Force Aerospace Rescue and Recovery Service, which flies HH-3Es and MH-60Gs and remains well trained since Vietnam. The Army by virtue of its mission to operate overland in combat has an inherent strike rescue capability.

Today, the Navy's combat rescue capability resides primarily in HC-9, NAS North Island, Calif., which



The HH-60H will serve as the primary strike rescue vehicle and will be assigned to reserve Helicopter Combat Support Special Squadrons 4 and 5.

maintains a cadre of trained personnel to provide a limited capability for contingencies and can rapidly mobilize for full capability. HC-9 flies HH-3As modified with armor plate and machine guns and is capable in a light-to-moderate small arms environment. HC-9 aircrews remain the Navy's experts on combat rescue tactics and mission planning. This squadron trains most carrier air wing H-3 crews prior to deployment and assists with the strike rescue course at the Naval Strike Warfare Center, NAS Fallon, Nev.

In addition, the H-2, H-3 and H-60 fleet readiness squadrons provide varying degrees of basic training in overland evasive maneuvering and combat rescue tactics. Presently, HS (helicopter antisubmarine squadron) and HSL (helicopter antisubmarine squadron, light) crews are prepared to respond to a SAR mission at sea or where unopposed overland pickup and transit is possible. Despite the responsiveness of these forward-deployed units, they are neither well equipped nor specifically trained for most opposed combat rescue missions. Most fleet helicopters lack the armor, armament and self-defense systems necessary for overland missions in a hostile environment.

Poised against the combat rescue forces of the future are advanced technology weapons of increasing power and accuracy. However, the same technology can provide aircraft capabilities which were once thought to be impossible. Unfortunately, this advanced technology is also very expensive.

Affordability is the key issue in future upgrades to the Navy's combat rescue capability. As peacetime and combat statistics indicate, we are basically an overwater SAR organization. With the majority of our missions capable of being met by aircraft not specifically designed and configured for overland/hostile environments, the case for acquisition of more modern, more capable combat rescue aircraft is difficult to defend when funds are limited.

Additionally, the small numbers of uniquely equipped, special-purpose weapons systems are expensive to produce and support. If a substantial development program is also required, it becomes virtually cost prohibitive, because the few assets acquired cannot justify the enormous investment. At some point, money for an exotic combat rescue capability will be better spent on better survivability for the tactical strike aircraft to reduce the need for rescue.

To be affordable, a combat rescue aircraft must be multimission,

developed or procured within a larger acquisition program, and have a large logistic support base. There are several important characteristics that a combat rescue aircraft must have. A vertical takeoff and landing capability is essential for small deck flexibility within the battle group and small landing zones. It must have excellent speed, range, payload and be capable of low-level flight at night and in adverse weather to avoid combat; it must also have good combat survivability when opposition is unavoidable. Above all, it must be able to perform the mission at high altitude in a hot environment.

One program which supports near-term combat rescue requirements is a variant of the H-60 helicopter. The HH-60H will provide a significant improvement in mission capability over present helicopter assets at an affordable price. This was achieved by commonality with the SH-60F which is

going into production as the replacement for the SH-3H. The HH-60H will be outfitted with mostly off-the-shelf equipment and avionics.

The HH-60H will serve in two reserve helicopter combat support special squadrons (HCS). HCS-5 already formed at NAS Point Mugu, Calif., and HCS-4 to stand up in October will have well-trained crews and substantially improved aircraft to provide combat rescue detachments in support of aircraft carrier and amphibious operations. By mid-1990, HCS-5 and HCS-4 will become the Navy's primary combat rescue forces. ■

The historical information in this presentation was used with permission from the Air Command and Staff College report, "Combat Search and Rescue Policy for the United States Navy," by Lieutenant Commander Bryan P. Murphy.

Strike Rescue Update

By Cdr. Ron Kurth and Cdr. Larry Larson

The Navy's strike rescue organization has been significantly enhanced during 1988-89. Advances have been made in the areas of policy, equipment, training and tactics as described below.

Policy

The term combat search and rescue (SAR) was replaced by strike rescue (SR). The new name recognizes that strike rescue is a strike support mission and properly associates the rescue plan with the overall strike plan. Combat SAR was *reactive* whereas SR is *proactive* and an integral part of strike planning. The Chief of Naval Operations assigned Commander, Helicopter Wings, Atlantic (ComHelWingsLant) as the operational action authority for strike rescue. Consequently, ComHelWingsLant developed a plan of action to increase the Navy's SR capability. Changes were made to the required capabilities of helicopter antisubmarine squadrons (HS) and helicopter antisubmarine squadrons, light (HSL) to better define their SR responsibilities. A draft Office of the Chief of Naval Operations (OPNAV) instruction outlining the Naval Strike Rescue Program was prepared by ComHelWingsLant and is being circulated for review and comment.

Equipment

The HH-60H aircraft is currently being procured for the reserve helicopter combat support special squadrons (HCS) and will be optimized for the SR mission. The first flight was on August 17, 1988, followed by the official presentation ceremony on November 8, 1988. The HH-60H is a derivative of the SH-60F, and the first two aircraft are currently at NAS Patuxent River, Md., for developmental/operational testing.

Deliveries of the HH-60Hs to HCS-5 will begin during the summer of 1989. All 18 HH-60Hs are now on contract with the last delivery scheduled for FY 91.

The PRC-112/ARS-6 pilot locating system (PLS) fleet assessment was an unqualified success but problems with the system emerged during operational evaluation. Development and testing of the PLS will continue; procurement funding is tentatively planned as an FY 92 budget issue pending the successful completion of testing.

Several body armor issues are being pursued by the Naval Air Systems Command. Fleet reservations about the T-65 body armor have been noted and are one of the reasons that the Navy is participating in the Army Search and Rescue Vest Integration Program. This program will provide body armor with improved performance over the T-65 system and is expected to be available in FY 92.

Training

ComHelWingsLant sponsored an SR training standardization meeting in February 1988 with representatives from all major commands which have SR responsibilities. This high-level group developed a three-week training course designed to qualify a fleet helo crew in the SR mission. The full course contains a 30-hour ground syllabus, an 18-hour basic flight syllabus, 8 hours of carrier air wing (CVW) integrated flight training at NAS Fallon, Nev., and 18 flight hours of basic night-vision goggle training. The course is modular in design, thus allowing different helicopter communities to utilize only the portions they need.

Four active duty Navy strike rescue instructors (SRIs) from HSs 1 and 10 (the HS fleet readiness squadrons) have completed

instruction with HC-9 and are ready to begin training SR crews on both coasts. Using the new syllabus, the SRIs will train two qualified SR crews per deploying HS squadron. HC-9 will continue to shoulder SR as its primary mission, as well as support for CVW integrated SR training at NAS Fallon until the initial operational capability of HCS-5 when HC-9 will stand down.

The light airborne multi-purpose system (LAMPS) MKs I and III HSL communities will continue their hostile environment courses, which may be expanded to include a portion of the three-week SR course. In the future, battle group LAMPS officers in charge will attend SR ground training at NAS Fallon with the deploying CVW

Tactics

With any mission, success is highly dependent on tactics and training. The proliferation of cheap, effective anti-aircraft weapons in today's combat environment has made tactics and training especially critical in SR. Recognizing the need for better tactics standardization and dissemination, Fleet Aviation Specialized Operational Training Group, Pacific developed a tactics supplement to NWP 19-2 (Combat Search and Rescue Manual) which covers SR mission planning. This supplement was approved by OPNAV and forwarded to the Navy Tactical Support Activity for printing and distribution. NWP 19-2 and the new SR supplement will be used extensively in SR

training both locally and during Fallon deployments.

SR has taken a giant step forward. With continued resolve and innovation, we will accelerate the process. For the near future, the reserve HCS squadrons will supply dedicated, deployable HH-60H assets. For quick-reaction contingencies, HS crews trained by Navy SRIs will provide a limited response. Long-term plans are for the HV-22 to become the active Navy's first dedicated SR asset but recent budget cuts have put this in question. If these budget limitations can be resolved in the future, the mix of HV-22s and HH-60Hs should meet battle group strike rescue requirements well into the next century. ■

Pensacola Recollections

By Captain Steven U. Ramsdell

A mbling along the jogging path past the lighthouse toward the O Club parking lot where I started running 20 minutes ago, the T-2 overhead catches my attention and takes me back to the late spring and early summer of 1966. At that time I was in Pensacola for a short, but intensive six weeks of air-to-air gunnery and carrier qualifications — the final phases of T-2 basic flight training. That was the last time I was stationed in Pensacola and the most recent experience on which my memories of the "cradle of Naval Aviation" are based. As does every Naval Aviator, I have special memories of this place, and they all come back with a fresh intensity during my long-delayed return.

The jogging path itself strikes me as indicative of the way things have changed and not changed here. It runs along the waterfront, past the O Club, Fort Barrancus, Sherman Field and the marina, to the back gate. While it may not be really new, it is new to me, and it's a good example of the improvements that have made the base look so much better. Neatly groomed and well marked, its appearance reflects its healthy, invigorating purpose. In fact, the entire drive from the main base area to the back gate has taken on a well-finished look.

One landmark near the water is as visible from the jogging path today as it is in the memory of every flight student, past and present — the obstacle course. As I run along with it in view, I'm distracted by the comparison between the way my exercising makes me feel and the emotion produced by what I see. After just 30 minutes on



One of the toughest physical challenges that every flight student faces is scaling "the wall."

the trail, I have no trouble imagining the barrier of pain and exhaustion more serious runners must overcome to complete a marathon, and standing before me, quietly asserting its ominous authority, is the barrier every flight student must overcome to enter the fraternity of Naval Aviation. Both barriers inspire enduring fear and respect. The former, a physical sensation, is named figuratively; the later, a 12-foot-high reality, is named literally. They are both named, **the wall**.

One of the clearest memories I have from my first stay in Pensacola is of the brief moment when I paused atop the wall for the last time. Miraculously, I had made it to the top. Looking ahead at the rest of the course, I knew that the only thing between me and

the finish was a few minutes of gut-straining exertion. I could handle it and, in a flush of relief, I knew that there was nothing insurmountable between me and my wings. Even though I hadn't touched an airplane, everything else in my way could be handled, too.

Another familiar edifice on the waterfront remains unchanged: the swimming pool building. Looking in through the side windows I verify that its most unforgettable feature is also unchanged. Even though the Dilbert Dunker was not a particular terror for me — I was a decent swimmer — it did get my attention, and I'm sure it continues to capture the imagination of today's would-be aviators.

And I find it reassuring that all those who would become one of us are challenged the way I was. Maybe it's van-

ity, but I see the wall and the dunker as more than tests of stamina and agility. They are tests of character as well.

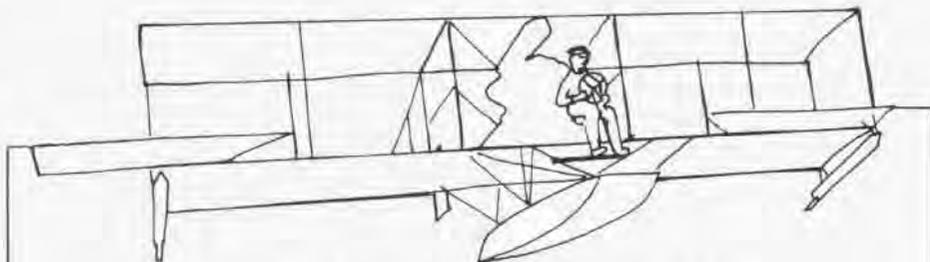
One challenge is different from my preflight days. The cross-country course which was located between Splinterville and the Naval Aerospace Medical Institute is gone. (Of course, Splinterville itself has been replaced by modern BOQ facilities.) The underbrush through which we had to run is all cleared out, and the sand hill, to which I took such a strong dislike in my pre-jogging period, now appears to have no function other than supporting a small utilities complex for the adjacent housing.

The BOQ parking lot still has more than its share of convertibles and sports cars. But they are driven by flight students who, beyond a shadow of a doubt, are much younger than before, and many of them are strikingly more appealing than were the bachelors in 1965 and 1966. In fact, the informal census I take along the jogging trail finds as many women as men committed to self-improvement and conditioning. I'm told that's indicative of the effort the women students are making in this competitive education.

Perhaps my strongest impression of the base is that those who warned me that I wouldn't recognize a thing were wrong. More things are the same than are different. In fact, I find my return to be like visiting an old friend after many years and not only finding him doing well but doing better than ever. And my impression of Pensacola off the base is much the same.

There has been a tremendous amount of development in Pensacola, but the area nearest the base hasn't changed much at all. I was astounded to find that Elinor Village is still standing and looking just as it did when my wife and I moved in in August 1965. However, my guess is that the rent is now a little higher than the \$55 a month we paid. As you drive into downtown, you will see increasing evidence of the development. However, it still has the same basic appearance it had 23 years ago.

Downtown Pensacola south of the main drag is a different story. The entire district, all the way out to the imposing convention center at the end of a pier in the bay, has been rejuvenated to its look of a hundred years ago or so. This reproduced historic area now surrounds one of the truly authentic historic establishments in Naval Aviation history: Trader Jon's. Once inside, the ravages of time and progress are harder to detect. The walls are covered with photographs of Naval Aviation notables. However, careful examination



From Years Gone By

Reproduced verbatim from an early training directive.

1913 Jan. The following requirements to attain a navy air pilot certificate are designated:

1. Attain an altitude of 2500 feet, as recorded by a maximum altimeter, or barometer, adjusted to local conditions before starting, there being no restrictions as to load carried.
2. Carry, to a height of at least 500 feet, a weight strapped to the passenger seat, equivalent to that which, combined with the weight of the aviator, will total 275 lbs. During this maneuver, the motor being cut off at 500-300 feet altitude, execute a *volplane* to the water on which a landing must be made within 150-300 feet of a designated mark or buoys without upsetting. Then, with the power shut off and the propeller at rest, the machine must be started again, made to rise from the water and, after a short flight, must be made to land on the water, from a low altitude, within fifty feet of the mark. The power being shut off only on landing.
3. Make a straight course flight in air, over water, by compass, at an altitude of at least 500 feet between two designated points, out and back, at least 5 miles apart, with the wind blowing across the course at least 10 miles per hour, as recorded by an anemometer at the starting point. The atmospheric conditions existing at the time of the test will be taken into consideration by the board in judging whether the courses made were sufficiently straight to pass the test.
4. Make a reconnaissance flight at the minimum height of 1000 feet for a distance of 20 miles, ten miles out, ten miles back, one half of which will be over land, but in sufficient proximity to water to enable a *volplane* to the water to be made at any time. During this flight, observations, bearings and estimated distances of objects of interest on shore must be made at least every five minutes, recorded and later located on a sketch chart which show a track of the courses made good and which should accompany a report of the flight to the board. Any of the tests may be repeated if necessary to satisfy the board. The board will make its report to the Navy Department, forwarding the report of the applicant, with recommendations as to the issue of a certificate.

reveals that the montage has been managed by a deft hand. The collection on display is largely a who's who in Naval Aviation, especially in and around Pensacola today.

The outlying fields have experienced a mixed fate. Whiting continues to thrive. The thunder of the T-28s has

been replaced by the whine of T-34Cs and the whoosh of TH-57s. Now the home of Primary and all helo training, the field is as active as ever and looks it. Time has treated Whiting as kindly as it has Mainside.

Ellyson, on the other hand, should only be visited by the stout-hearted —

those who don't cry at memorial services. Now named the Ellyson Industrial Park, it is no longer owned by the Navy. The hangars and base ops buildings are still standing, but just barely. Neglected and in a sad state of disrepair and surrounded by generally unsightly commercial activities, they are no longer a credit to the name of Naval Aviator #1. This is the old friend who's fallen on hard times.

Saufley Field is an in-between case. It actually looks pretty good, maybe better than I remember. The BOQ, erected since I was there last, contributes to a comparatively modern appearance, and its grounds have received a lot of careful attention. But in the middle of the week, when you'd expect the place to be hopping, it's as quiet as a church on Monday morning.

The field's principal function explains this disparity, at least in part. While still under Navy control, Saufley is now a minimum security federal prison. I'm told the Navy has made an arrangement with the federal prison system

whereby we provide this facility for its use in return for its taking on our hard-core prisoners.

But Saufley is as quiet as it is for the same reason it was made available to the federal prison system: VT-1 and Primary Flight Training are no longer here. VT-1 is just a memory and Primary has moved to Whiting and Corpus Christi, Texas. The old VT-1 hangar, a beehive of activity in my day, is being used as some kind of warehouse and is devoid of life by comparison. In 1965 the squadron's four subdivisions, or flights, staked out their territory on the hangar floor with flimsy partitions, the flight schedules were hectically managed on chalkboards, and the orange-suited inhabitants seemed to have discovered perpetual motion.

I drive slowly out onto the flight ramp next to that old hangar to survey the scene. No one notices or objects. To my left the glass-windowed control tower has been removed from the top of the old operations building, a sym-

bolic epitaph to the field as an operating facility. The ramp, which I remember crowded with rows of white and orange T-34s, is deserted, except for a few parked cars, and its recapture by nature is well under way.

Off in the distance a lone T-34 circles the pattern using the one runway which remains open for touch and goes. It catches my attention on its final approach. The unsteady hand of a neophyte is unmistakable. Could this be the young pilot's first landing at the controls? Curiosity compels me to linger for another pass. Still shaky, but better. He or she will make it.

My own experience spans one-third of Pensacola's 75-year history as a naval air station. The changes which have taken place during my quarter of a century have been both big and small, but the essential character here has been unaffected. What will the budding pilot in the T-34 find when he or she returns to the cradle of Naval Aviation 25 years from now? ■



Past Naval Aviators visited the predecessor of today's Naval Aviation Museum, shown here, to browse through an ever-growing collection of Naval Aviation memorabilia.

Awards

Winners of the FY-88 Department of the Navy Procurement Competition Award are: Randall H. Gay and Capt. J. J. Stewart, NavAirSysCom; Lt. M. K. Maloney, NAS Miramar, Calif.; and James F. Wilson, NavAvionicCen.

HSL-74 received the 1988 Com-HelWingRes Retention Excellence Award for its outstanding temporary active reserve and selected reserve retention statistics.

Based on its flying record, VS-41 received the ComNavAirPac Golden Wrench Award for excellence in aircraft maintenance for 1988. VS-41 trains Naval Aviators, Naval Flight Officers, enlisted aircrewmembers and maintenance personnel to fly and maintain S-3 *Vikings*, a carrier-based antisubmarine warfare aircraft designed to counter the submarine threat to the carrier battle group.

MALS-39, MCAS Camp Pendleton, Calif., was awarded the 1988 Fleet Marine Force, Pacific Aviation Logistics Award. MALS-39's mission is to perform logistical support for aviation units attached to a Marine aircraft group and the Marine Air Ground Task Force.

VP-65, NAR Point Mugu, Calif., received the 1988 AVCM Donald M. Neal Award, which recognizes the squadron's overall excellence in aircraft maintenance.

Records

Several units marked safe flying time: HT-18, 400,000 hours and 8 years; VMGR-252, 300,000 hours; VP-49, 187,185 hours and 27 years; VP-19, 147,000 hours and 20 years; VP-48, 146,000 hours and 21 years; VS-33, 134,000 hours and 28 years; VP-45, 130,000 hours and 19 years; HC-3, 100,000 hours and 14 years; HMM-365, 92,000 hours and 16 years; VS-41, 90,500 hours and 9 years; VQ-1, 90,000 hours and 20 years; VP-65, 70,000 hours and 18 years; VFA-25, 55,000 hours and 12 years; VAW-126, 39,000 hours and

20 years; VMFA-333, 35,000 hours and 9 years; VMA-214, 30,000 hours; HS-75, 26,821 hours and 10 years; VMFA-251, 25,000 hours and 7 years; HSL-42, 25,000 hours and 2 years; VF-114, 18,600 hours and 5 years; VF-154, 14,800 hours and 4 years; VX-1, 14,500 hours and 4 years; VA-34, 14,000 hours and 3 years; HS-17, 12,000 hours; and NAS Bermuda, 7,200 hours and 11 years.

Cdr. Thomas C. Lang, former C.O. of VAW-122, recently surpassed his 1,000th arrested landing, in an E-2C *Hawkeye* aboard *America* (CV-66).

HSL-32, flying the SH-2F *Seasprite* helo, recorded a milestone in the history of the LAMPS MK I program when aircraft BuNo 161642 exceeded 1,000,000 LAMPS MK I flight hours.

Cdr. J. H. Winter, C.O. of the HS-12 *Spearguns*, recorded his 5,000th accident-free flight hour, while Lt. Charley Davis flew his 1,000th accident-free flight hour and Lt. Steve Vissers completed 1,000 total flight hours.

Cdr. Jim Van Sickle, X.O. of Reserve Detachment 282 of NAS Whiting Field, Fla., flew his 5,000th flight hour while piloting a T-34C *Turbo-Mentor*.

Lexington (AVT-16), the Navy's only training aircraft carrier, scored a milestone in arrested landings during carrier qualifications last January. Capt. C. Flack Logan, *Lady Lex's* C.O., and LCdr. Jack Ross made the carrier's 475,000th arrested landing in a VT-26 T-2C *Buckeye*. The WW II-vintage carrier marked her 46th birthday on February 17, 1989.

An F-14 *Tomcat* from VF-102 piloted by Lt. John G. Matheson made the 250,000th arrested landing onboard *America* (CV-66).

Rescues

The *Circuit Riders* of HC-2 recently demonstrated the capability of the CH-53E *Super Stallion* during a recovery of a disabled SH-2F *Seasprite*. The SH-2F was on a training mission when an in-flight fire required an emergency landing in a wooded area near Smithfield, Va. The CH-53E,

capable of lifting 36,000 pounds of external cargo, is used for heavy-lift operations including retrieval of disabled aircraft. The helo easily lifted the *Seasprite* to an awaiting Army landing craft air cushion vehicle for further transport.

AT Eric Koryn, PMTC, Point Mugu, Calif., was a recent graduate of rescue swimmer school when a training flight turned into real-life drama. He told H-46 pilot Lt. Chris Taylor and copilot Lt. Dave Smith that he saw someone in the water who needed help.

Kevin Brown and Eric Richardson had been drifting and paddling for 20 hours clinging to their overturned catamaran, unable to notify anyone of their dilemma. Early in their sailing outing, a line snapped and they lost the mast. At least one helicopter had already passed over without spotting them.

Due to the alertness of Koryn, the men were quickly hoisted into the *Sea Knight* and examined by medical personnel on the trip back to Point Mugu.



AT Eric Koryn, left, listens to Richardson describe the watery ordeal while Brown makes a call to relatives. The H-46 which carried them to safety is in the background.

Cdr. Jim Noland, X.O. of VA-122, NAS Lemoore, Calif., flew a TA-7C *Corsair II* from California to Chicago, Ill., nonstop, to deliver a donor heart to Loyola University Hospital officials.

With the heart container strapped in the aircraft's back seat, Noland landed at Chicago's Midway Airport where the heart was transferred to a commercial emergency flight helicopter and transported to the hospital. Time was the crucial element in getting the organ to Chicago since it had to be at Loyola

Lt. Don Demier

Hospital in less than three and one-half hours to be considered usable for transplant. Cdr. Noland's flight time was two hours and 26 minutes.

Quick action and response by Cdr. Noland, Oakland Highland Hospital in California and Loyola University Hospital doctors resulted in a successful heart transplant.

A Norwegian seaman suffering from chemical burns over 50 percent of his body was airlifted by a helo crew of VC-5 from NAS Cubi Point, R.P. The

PHC Chet King



Left to right: VC-5 SAR crewmen AMH2 Kevin Trainor, aircraft commander LCdr. Bob Nicol, copilot Ltjg. Jim Douglas and first crewman ADC Donald West.

rescue occurred last April 21 when the Norwegian merchant ship *Berge Racine* requested Navy assistance for its crewman. An SH-3G hovered amidships as the medical and helo crews were lowered to the deck. Within 20 minutes, all naval personnel and the burn victim were hoisted aboard the *Sea King* for the flight to Cubi Naval Hospital, where the man was listed in satisfactory condition.

Two Air National Guard F-4 *Phantom* pilots bailed out of their fighter at 18,000 feet over the Pacific and 35 miles east of Tillamook Bay, Ore., on January 3, 1989. A wingman in another F-4 observed the down position of 1st Lt. Mark Baker and 2nd Lt. Mike Markstaller.

CGAS Astoria launched an HH-65

helicopter, piloted by LCdr. Bill Peterson. The helo moved in over one life raft — hovering 15 feet above the 16-20 foot seas while ASM3 Kelly Mogk jumped in and began swimming to Markstaller. He was entangled in the suspension lines, drogue chute and raft tethers and was suffering from hypothermia in addition to having several broken bones. Mogk cut away the web of parachute lines. "At one point, I reached over and squeezed his hand and he squeezed back. That was a good sign. . .," she said. After 27 minutes in the frigid water, she freed Markstaller and put him into the hoisting sling. His size required the aid of two men to get him aboard the helo. 1st Lt. Baker wasn't visible.

A second helo from an aerospace rescue recovery service hovered overhead trying to locate Baker and to hoist Mogk, who was also suffering from hypothermia, from the rough seas. After transporting Markstaller to a hospital, the second helo returned to Baker's raft, found him entangled in his chute, drogue and raft lines, and beyond help.

For her part in the rescue, ASM3 Kelly Mogk earned the Coast Guard Air Medal.

B. A. Pimental



ASM3 Kelly Mogk

HC-16, NAS Pensacola, Fla., received word from the Rescue Coordination Center in New Orleans, La., that the 72-foot fishing vessel *Miss Deborah* had run aground east of Panama City, Fla. The squadron duty officer contacted the commanding officer for permission to launch out of its local area. One-half hour later, aircraft 402 was airborne and on its way to a rescue.

The SH-3D *Sea King*, piloted by Lt. David Burg, arrived at the scene one hour later. A 41-foot Coast Guard cutter and a shrimp boat were also on the scene, but neither was able to get to the boat because of shallow water. Copilot Lt. Jack Leanhart reported, "We made one fly-over to assess the boat's situation. On the second pass, we dropped a floating smoke flare to provide a reference point for our approach and a wind indication. The boat was listing 45 degrees to starboard and one-half to two-thirds of the stern was already underwater."

Hovering was difficult due to winds up to 35 knots. The rotor wash from the hovering aircraft added to the pitching and rolling of the boat below. The three-man crew of *Miss Deborah* had only hand-held flashlights to signal their position.

Rescue swimmer ADI Stephen Krochmalick was lowered into the water about 75 yards away from *Miss Deborah*. He instructed the three men to put on their life vests and climb down the side of their boat, one at a time, so he could hoist them into the aircraft.

Krochmalick said, "The deck was pitched so much that you could not stand on it without falling. The boat's entire starboard side was underwater." With the first man hoisted into the aircraft and the second man in the horse collar, the helo started to drift due to high winds. To protect the harnessed man, he was released from the collar.

Fish were flooding out of *Miss Deborah*. Krochmalick contacted the helo crew that water rescue was no longer feasible since more than eight sharks were spotted off the port side. A rescue attempt from the bow of the boat was the next option. After several inane attempts, the men were in the raft. The pilot hovered over the bow while the crew chief hoisted the men up. The helo departed and landed at Tyndall AFB, Fla., where the men were released to Air Force medical personnel.

Honing the Edge

CGC *Thetis* (WMEC-910), a 270-foot medium endurance Coast Guard cutter is equipped with a helo deck landing grid. Its TALON system has been used in NATO navies for a decade.

TALON allows HH-65A *Dolphin* helos to be restrained rapidly and safely, eliminating the hazardous requirement for crewmen to handle tie-down hooks while the helo rotor is turning. This is most critical on the cutter where the crew must approach the aircraft from the front.

The TALON system consists of a helicopter-mounted hydraulic probe and a six-foot-diameter shipboard-mounted, honeycombed grid. After the helicopter touches down, the probe is manually activated by the pilot to engage the grid. The probe contacts and locks into the grid by applying and maintaining a hold-down force.

Located aboard Naval Air Engineering Center, Lakehurst, N.J., Hangar One, a national historic landmark for its role in the history of lighter-than-air flight, serves as the Naval Aviation Boatswain's Mate School. This school is comprised of three separate occupational specialties — Aviation Boatswain's Mate, Equipment (ABE), Aviation Boatswain's Mate, Fuel (ABF) and Aviation Boatswain's Mate, Handler (ABH).

The ABEs take care of launch and recovery equipment onboard aircraft carriers while the ABFs cater to the fuel and fueling systems. Two other courses are also taught in Hangar One. The optical landing system maintenance course teaches candidates about the lighting system that guides the pilots onto the carrier deck. The second course focuses on the catapult and launch equipment. Prospective electrician's mates are taught about electrical circuitry which is crucial to the efficient operation of both the arresting gear and the catapults.

The ABHs are responsible for aircraft handling consisting of towing, taxiing and directing aircraft both aboard ship and on shore. ABHs are also responsible for crash and salvage firefighting onboard aircraft carriers and amphibious-type ships.

The AB Support Branch is the final

component of the AB School staff. It is responsible for the maintenance and upkeep of the aviation ground support equipment and aircraft that are used to train the students. The branch is manned by AB staff instructors, Aviation Support Technicians, Aviation Structural Mechanics and Aviation Machinist's Mates.

PH2 Angela Romine



Prospective ABHs receive instruction in the technique used to maneuver aircraft on a simulated aircraft carrier deck.

Navy pilots at Naval Air Development Center (NADC), Warminster, Pa., flew the first fluidically controlled formation flight in a T-2C *Buckeye* accompanied

by one of NADC's A-7s.

The formation flight demonstrated that the fluidic flight control system has the stability and control necessary for close formation flying such as tactical maneuvering and in-flight refueling. The aircraft, reconfigured at NADC in July 1988, was equipped with an 8,000-psi hydraulic system with dual fluidic flight controls and an electric fly-by-wire flight control system in place of the aircraft's conventional mechanical flight controls.

Et cetera

VT-23 is an intermediate strike jet training squadron in TraWing-2 at NAS Kingsville, Texas. The mission of the *Professionals* is to train Navy and Marine Corps student aviators in fundamental jet flight operations, preparing them for follow-on training in advanced strike squadrons. The squadron also trains selected rotary and fixed-wing Naval Aviators in the jet-transition program and E-2/C-2 student Naval Aviators. Students complete familiarization, instrument, formation, out-of-control flight and air-to-air gunnery phases

This photo won honorable mention in the 3rd bimonthly ANA photo competition.



Dueling blades. A flight deck crewman maneuvers the rotor blade of one of many CH-46 Sea Knights parked on the flight deck of the amphibious assault ship Belleau Wood (LHA-3).

PHCS Ron Bayliss

prior to culminating intermediate training with carrier qualification landings aboard *Lexington* (AVT-16) or a fleet carrier.

VT-23 achieved its 1989 training objective with the successful carrier qualification of 19 student Naval Aviators during the January carrier qualification detachment to NAS Key West, Fla. The event pushed the squadron past its requirement for 137 student pilots for advanced training two months ahead of schedule.



Aviation enthusiast Connie Edwards of Big Springs, Texas, painted his restored Albatross in Coast Guard markings to help commemorate the service's 200th anniversary this year. Another of Edwards' vintage planes, a PB-5 Catalina, was one of a two-plane reenactment of the first transatlantic flight during 75th Anniversary of Naval Aviation activities in 1986. Mr. Edwards' 17-year-old son, Tex, shares his father's love of flying. The young aviator is type rated in both heavy multiengine land aircraft and seaplanes.

Anniversary

The *Tophatters* of VF-14, NAS Oceana, Va., the oldest active squadron in the Navy, is celebrating 70 years of carrier aviation. The squadron was established in 1919 and later flew aboard *Langley* (CV-1).



A VF-14 Tomcat

NANews Journalist Leaves



J02 Jim Richeson

In March, *Naval Aviation News* (NANews) bid farewell to assistant editor J02 Julius L. Evans, who transferred to the public affairs office aboard *Abraham Lincoln* (CVN-72).

Petty Officer Evans' creativity, enthusiasm and energy significantly contributed to the magazine. He consistently produced outstanding, in-depth photofeature articles which promoted the objectives of the Assistant Chief of Naval Operations (Air Warfare) and the Naval Historical Center. His imagination and dedication to accuracy won him the respect of all commands he described on paper.

During off-duty hours, J02 Evans completed his A.A. degree and tutored for the Prince George's County Literacy Council, a program for nonreading adults.

The NANews and Naval Aviation History staffs wish him smooth sailing during his naval career.

Change of Command

CVW-7: Capt. J. M. Luecke relieved Capt. A. L. Wise.

CVWR-20: Cdr. Dana F. Miller relieved Capt. Royce R. Mattson.

CVWR-30: Cdr. J. P. Hazelrig relieved Capt. D. K. Simmons.

HelTacWing-1: Capt. Chester F. Harrison relieved Capt. Paul F. Erny.

HMLA-267: LCol. Donald B. Beaver relieved LCol. Henry C. Perry.

HMT-302: LCol. George G. Jacobson relieved LCol. Larry J. Bockman.

HS-75: Cdr. James W. Aires relieved Cdr. James C. Spillman.

HSL-32: Cdr. James F. Boland, Jr., relieved Cdr. Augustus W. Clark III.

Kitty Hawk: Capt. Daniel L. Rainey, Jr., relieved Capt. Frank L. Tillotson.

NAESU: Cdr. Gary K. Ikuma relieved Cdr. Robert L. Moeller, Jr.

TPS: Cdr. Richard Rhoades relieved Cdr. Charles W. Woomer III.

VAQ-34: Cdr. Charles H. Smith relieved Cdr. Rex W. Kibler.

VF-51: Cdr. R. F. Willard relieved Cdr. G. A. Stevens.

VF-111: Cdr. Thomas L. MacKenzie relieved Cdr. Raymond P. Rose.

VFA-81: Cdr. Gerald L. Hoewing relieved Cdr. William N. Deaver, Jr.

VFA-136: Cdr. John B. Sandknop relieved Cdr. Michael D. Malone.

Vinson: Capt. Doyle J. Borchers II relieved Capt. George D. O'Brien, Jr.

VP-6: Cdr. David J. Nelson relieved Cdr. Walter B. Massenburg.

VP-44: Cdr. Walter C. Spearman, Jr., relieved Cdr. Stanley J. Lichwala.

VP-45: Cdr. William B. Evers relieved Cdr. Charles J. Dale.

VP-93: Cdr. Patrick B. Peterson relieved Cdr. Howard F. Rundell, Jr.

VR-56: Cdr. Mack Simons III relieved Cdr. Carlton Lee.

VS-30: Cdr. David Architzel relieved Cdr. Tim Baker.

VS-33: Cdr. P. B. Hennessy relieved Cdr. T. S. Douglas.

VT-2: Cdr. Daniel E. Erndle relieved Cdr. Brendan J. O'Donnell.

LRAACA Named

The Navy approved the designation P-7A for the long-range, air antisubmarine warfare-capable aircraft (LRAACA). Work on the LRAACA full-scale development contract is expected to lead to production of a first increment of 125 aircraft in the mid-1990s.

V-22 Osprey Flies



A prototype of the world's first production tilt-rotor aircraft, the V-22 Osprey, flew for the first time at Bell Helicopter Textron's Flight Research Center, Arlington, Texas, on March 19, 1989.

Bell Helicopter Textron

VS-37 on a WestPac deployment aboard USS *Constellation* (CV-64).

The modification allows carriage of an aerial refueling store on the left wing pylon and adds in-flight refueling to the capabilities of the S-3. Assigning the *Viking* in the tanker role releases more A-6s for long-range strikes and bombing missions.



Ltjg. Chris Buhlmann

The new refueling capability adds versatility to the S-3 airframe and enhances the strength of carrier air wings for years to come.

F/A-18 Composite Materials

A McDonnell Douglas F/A-18 displays an outer wing panel made from a new thermoplastic polymer material during a test flight at the Naval Air Test Center, Patuxent River, Md. On the *Hornet's* other wing, another advanced material made of a toughened carbon-epoxy composite is also demonstrated. Advanced aircraft systems under development need tougher composite materials for improved damage tolerance and enhanced supportability in service. McDonnell Douglas processes several new composites which are gaining popularity in the aerospace industry.



McDonnell Douglas Corporation

G-Tolerance Improvement Program

Several hundred Top Gun pilots took part recently in the G-Tolerance Improvement Program at the Naval Air Development Center, Warminster, Pa. The training teaches F-14 *Tomcat* and F/A-18 *Hornet* pilots how to withstand the sudden increases in G forces of tactical maneuvers in their high-performance aircraft. In tight, high-speed turns, pilots can experience as much as nine Gs or nine times the force of gravity. By being able to control G-force effects, pilots will feel better prepared to face combat situations.

S-3 Modification

Installation of an airframe change began last summer on S-3A *Vikings* assigned to fleet squadrons. Flight evaluation was performed at the Naval Air Test Center, Patuxent River, Md., and VS-41, the West Coast fleet readiness squadron. Initial operational evaluation was assigned to

Battles Es

The 1988 Battles Es, awarded for combat readiness, efficiency and excellence, were presented to the following units:

ComNavAirLant: USS *Forrestal* (CV-59), HC-2, HS-7, HSLs 34 and 42, VAs 46 and 176, VAQs 33 and 132, VAW-126, VF-84, VFA-15, VP-26, VRC-40 and VS-22.

ComNavAirPac: USS *Enterprise* (CVN-65), HC-5, HS-12, HSLs 33 and 45, VAs 95 and 97, VAQ-38, VAW-114, VC-5, VF-1, VFA-25, VP-1, VQ-1 and VS-33.

Distinguished Airmanship Award

A flight crew from HS-6, NAS Miramar, Calif., was presented the Distinguished Airmanship Award by the Order of Daedalians, a fraternal organization established by a group of WW I pilots to perpetuate the ideals and memories of the military aviator.

On January 22, 1988, while deployed aboard USS *Enterprise* (CVN-65), the crew of SH-3 "Indian 612" was tasked to medevac a critically injured Japanese fisherman from a small fishing vessel. While the craft wallowed in 20-foot swells, LCdr. Thomas F. Phillips skillfully hovered the helicopter over the tiny deck. Narrowly escaping being crushed against the ship's hull, AW3 Edward J. Dion was successfully lowered to the deck of the *Yahata Muru*. Petty



Left to right: AMS2 Henry; presenter LCol. Bill Rattray, USAF(Ret.); Lt. Wallace; and AW3 Dion.

Officer Dion then prepared the victim for transfer, and he the fisherman were recovered.

The medevac aircrew comprised aircraft commander LCdr. Phillips, copilot Lt. Lorne J. Wallace, flight surgeon Lt. James P. Murphy, ASW first crewman AW2 Charles G. Guntner, ASW second crewman AW3 Dion, and flight technician AMS2 John M. Henry.

WEATHER FRONT

By Capt. Neil F. O'Connor, USN(Ret.)



Hurricanes

For the five-month period from June 1 through November 1, stateside meteorologists scrutinize the Atlantic, Gulf of Mexico, Caribbean and Eastern Pacific for indications of tropical storm development. In the Western Pacific, forecasters at the Joint Typhoon Warning Center, Guam, work nearly year-round scanning for signs of the storm that when fully mature generates the energy equivalent of 400 20-megaton hydrogen bombs in just one day. Known as hurricanes in the Atlantic and Eastern Pacific, the WestPac sailor calls them typhoons. In the Philippines they are sometimes called Baguios — in tribute to the city of Baguio. A record 46 inches of rain fell on that city in one 24-hour period during the passage

of a tropical cyclone in July 1911.

Tropical cyclones, for the most part, are born in ocean areas of the tropics and subtropics as "tropical disturbances" imbedded in the easterly tradewinds. Continued growth leads to the first stage of hurricane development — the "tropical depression" — although winds are no greater than 33 knots (38 mph). If the winds increase to 33 knots, but not higher than 63 knots (73 mph), the system is upgraded to a "tropical storm." Once surface winds reach 64 knots (74 mph), the tropical storm has reached hurricane proportions. After this point, hurricanes are divided into five angry categories.

Fortunately, only two category-five hurricanes have struck the U.S.: "The Labor Day Hurricane" of 1938; and

"Camille," which made landfall just east of Bay St. Louis, Miss., shortly after midnight on August 18, 1969. Winds were clocked between 165 and 200 mph. A storm surge estimated between 20 and 25 feet was reported just east of the point where the coast was breached. Although Camille weakened significantly as she moved inland, the remnants of the storm, combined with the mountainous terrain of southwestern Virginia, produced 27-31 inches of rain. In the end, Camille was responsible for 256 deaths and \$3.81 billion in damage. It is interesting to note that the Naval Oceanography Command, the agency responsible for Navy weather and oceanography, is now located at the Stennis Space Center near Bay St. Louis.



Hurricane Categories			
	WIND RANGE (MPH)	TYPICAL STORM SURGE	CENTRAL PRESSURE (MILLIBARS)
I	74 to 95	4 to 5 feet above normal	980 or higher
II	96 to 110	6 to 8 feet above normal	979 to 965
III	111 to 130	9 to 12 feet above normal	964 to 945
IV	131 to 155	13 to 18 feet above normal	944 to 920
V	more than 155	18 or more feet above normal	less than 920

By Cdr. Peter Mersky, USNR-R

Allen, Thomas B. and Norman Polmar. *Merchants of Treason: America's Secrets for Sale, From the Pueblo to the Present*. Dell Publishing, 666 Fifth Ave., New York, NY 10103. 1989. 480 pp. Illustrated. \$4.95.

If you've wondered why Soviet tattletales may not be so closely following your carrier's battle group lately, this book may have a few answers. Thanks to a flourishing network of spies and turncoats, the Soviets have a lot of information about U.S. military procedures and contingency plans. The book's dust jacket states, "required reading for everyone in intelligence" and "a copy should be sent to every congressman and senator in Washington." I would include every member of the U.S. armed forces.

In a well-researched book that will leave readers shaking their heads in disbelief, these two experienced authors chronicle post-WW II U.S. espionage for the Soviet Union. They focus on the notorious Walker spy ring of the mid-1980s whose true damage will probably never be fully known.

Merchants of Treason begins with the seizure of the intelligence ship *Pueblo* in January 1968, which kindled a thirst for cryptographic and communication knowledge in the Soviet Union. The authors suggest, with startlingly detailed accounts, that the Walkers may have compromised the abortive 1980 Iranian hostage rescue by supplying the Russians with important communications equipment and information. The Soviets then relayed this information to the Iranians.

The greed, guile and ego of these traitors who make such a profitable business of selling out their country will be hardly believed by the average citizen. The authors further suggest that the Walkers supplied additional information from which the Soviets knew American plans during the 1973 Arab-Israeli War. At that time, a direct confrontation between the two superpowers in the Mediterranean was a distinct possibility and, as America placed its military on the highest level of peacetime alert since WW II, the Russians knew what to expect.

While not an aviation book, *Merchants of Treason's* links to related communities are frighteningly clear. The price of this book is a steal for what amounts to a postgraduate-level education in one of America's major problem areas.

Hallion, Richard P. *Test Pilots: The Frontiersmen of Flight*. Smithsonian Institution Press, 955 L'Enfant Plaza, Suite 2100, Washington, DC 20560. 1988. 347 pp. Illustrated. \$17.50.

This fine, updated edition covers a unique subject — from the earliest aeronautical experiments by balloonists and glider pilots, to the Wrights and the eventful periods of the world wars. The advent of the turbojet is well documented, as is the development of the helicopter.

Even if your interest is not in this area of aviation, *Test Pilots* deserves your attention. It is well researched and written with knowledge and appreciation of the subject by a recognized author and aviation historian whose work always breaks new ground. The book includes a large center portfolio of aircraft and people whose development and work are discussed in the text.

Perhaps the most exciting portion of the book is the postwar testing period involving the X series of rocket planes, i.e., X-1, X-2 et al. This highly dangerous yet rewarding time produced a cadre of unique personalities and highly qualified test pilots who formed the public

image of their occupation. Problems with the X-15 and XB-70 are highlighted and the early space program is also included.

Test Pilots ends on the upbeat story of the *Voyager* and its unrefueled flight around the world in December 1986 — a feat which captured public imagination and the headlines like no other aviation event since the walk on the moon in 1969.

Dr. Hallion's work belongs on every aviation enthusiast's and historian's shelf as a reference, and as an example of how serious research doesn't have to produce a boring book.

Schultz, Duane. *The Doolittle Raid*. St. Martin's Press, 175 Fifth Ave., New York, NY 10010. 1988. 325 pp. Illustrated. \$18.95.

Glines, Carroll V. *The Doolittle Raid: America's Daring First Strike Against Japan*. Orion Books, 225 Park Ave. S., New York, NY 10003. 1988. 258 pp. Illustrated. \$17.95.

Both of these books have merit, are highly readable and show a lot of research by their authors.

The first major U.S. offensive operation after Pearl Harbor, the long-range strike against Japan by 16 U.S. Army B-25s, has become part of American wartime legend. Each book tells the story of how the April 1942 raid was planned, what training the aircrews received and how the strike was flown. The individual experiences of the courageous crews are told, along with details of how the B-25 was selected as the aircraft best suited for the daring raid and how famous prewar flyer Jimmy Doolittle was chosen to select and lead his crews.

These books are equally well-written. Schultz likes to tell the story in his own words, using quotes and direct sources sparingly. Glines, on the other hand, relies heavily on first-person accounts and is not afraid to devote two pages to them. Glines' book contains more photos, especially of individual crews. Schultz, however, offers a list of crew members and the ultimate fate of their aircraft.

The books by Schultz and Glines by their nature and subject end up duplicating each other, but each is worthwhile reading on one of the most daring operations in WW II.

Meijering, Piet Hein. *Signed With Their Honor: Air Chivalry During the Two World Wars*. Paragon House Publishers, 90 Fifth Ave., New York, NY 10011. 1988. 191 pp. Illustrated. \$18.95.

This unique book covers a subject which, although it is usually mentioned in passing in books on WW I aviation, has never received more in-depth attention. The author has devoted long years of research and collection, and quotes from many well-known sources to illustrate his treatise on aerial chivalry and comradeship.

Immelmann, Boelcke, von Richtofen, Galland and Bader. They're all here, but the U.S. reader will find few American names except for those pilots who flew with the Lafayette Escadrille in WW I, or the obligatory mention of Eddie Rickenbacker, America's Ace of Aces in the Great War.

The illustrations are generally well known, but there is an occasional reproduction of a notice of an airman's death and funeral which his enemies would deliver to his home base. The text is supported by a readable section of chapter notes which enlarges on a particular point or gives sources of further information.

This book is for those readers looking for something a little different.

FLIGHT BAG

Riggers

I am a Master Chief Aircrew Survival Equipmentman and I want to thank you for Hank Caruso's article, "Rigging the Game," *NA News*, March-April 1989.

I have been a "rigger" for more than 26 years and have always known that we (PRs) are the elite of the fleet. We have a great sense of pride and professionalism. We are taught in "A" school that what we do and how well we do it could mean the difference between life and death for an aircrewman in a survival situation. We think about that every day when we inspect and fit flight gear, pack life rafts and parachutes, or perform maintenance on oxygen regulators and liquid oxygen converters.

Your article pointed out that we still have the "top half of the class" attitude and you let the fleet know that what we do is important. Thanks. It feels good to be appreciated.

PRCM Richard F. Greenleaf
101 Riva Ridge Dr.
Hollywood, MD 20636

USS Wasp (CV-18) 1943-1972 reunion, July 5-9, Norfolk, VA. Contact Richard VanOver, 6584 Bunting Rd., Orchard Park, NY 14127, (716) 649-9053.

Wasp (LHD-1) commissioning, July 8, Norfolk, VA. Former shipmates of USS Wasp (CV-7/18) interested in attending, contact Jerome Nelinson, Hampton Roads Council of the Navy

League, (804) 464-5018.

Aviation Boatswain's Association Symposium, August 7-12, Valley Forge Sheraton Inn, King of Prussia, PA. Contact YNCM Richard Powers, USN(Ret.), 2211 Willowood Dr., Norfolk, VA 23509.

Aircrew Survival Equipmentman School reunion, August 10-12, Lakehurst, NJ. Contact PRI Tom Butler, autovon 624-2477/2050 or (201) 323-2477/2050; or PR2 Margaret Valentino, autovon 624-2689/2420 or (201) 323-2689/2420.

F-8 Crusader Society reunion, August 11-12, San Diego, CA. Contact J. P. O'Neill, P.O. Box 371368, San Diego, CA 92137-1368, (619) 483-9215.

NAS Twin Cities reunion, August 12, NCO "Contact Club," Minnesota ANGB, Minneapolis-St. Paul International Airport. Contact Kirk Johnson, 7325 14th Ave. S., Richfield, MN 55423, (612) 866-7194.

USS Belleau Wood (CVL-24) and air groups reunion, August 16-20, San Diego, CA. Contact Robert Ross, 2732 S. US 23, Oscoda, MI 48750, (517) 739-2182.

Northeast Flight '89 Airshow, August 26 and 27, Schenectady County Airport, NY. Contact Northeast Flight '89, 419 Mohawk Mall, Schenectady, NY 12309, (518) 382-0041.

Women Military Aviators, Inc. reunion, September 1-4. Contact Capt. Marcelyn Adkins, 9130 Blarney Stone Dr., Springfield, VA 22152, (703) 569-9544.

National Stearman Fly-In, September

6-10, Galesburg, IL. Contact Tom Lowe, 823 Kingston Ln., Crystal Lake, IL 60014, (815) 459-6873.

USS Curtiss (AV-4) reunion, September 6-10, Grosvenor Inn, San Diego, CA. Contact Frank Paulu, 682 Medford St., El Cajon, CA 92020, (619) 466-8618.

Carrier Aircraft Service Unit 20, Roi-Namur, Marshall Islands reunion, September 7-10, Portland, OR. Contact Lloyd Norene, 8035 N. Dwight, Portland, OR 97203, (503) 283-2713.

VC-5 reunion, September 8-9, NAS Moffett Field, CA area. Contact James J. Schriver, 2879 Barkley Ave., Santa Clara, CA 95051, (408) 296-5450.

USS Philippine Sea (CV-47) reunion, September 8-10, Jacksonville/Mayport, FL area. Contact Chuck Davis, USS Philippine Sea Assoc., POB 597, Levittown, PA 19057, (215) 946-3836.

USS Nassau (CVE-16) reunion, September 14-16, New Orleans, LA. Contact Sam Moore, 10320 Calimesa Blvd., Space 221, Calimesa, CA 92320, (714) 795-6090.

National Championship Air Races, September 14-17, Reno, NV. Contact P.O. Box 1429, Reno, NV 89505, (702) 826-7500.

VF-14 reunion, September 15-16, NAS Oceana, VA. Contact Lt. John Woods or Ltjg. David McLaughlin at autovon 433-5874 or (804) 433-5875.

USS Gambier Bay (CVE-73) and VC-10 reunion, September 18-24, Sheraton Mayfair, Milwaukee, WI. Contact Charles Heintz, 8329 St. Rt. 119, Maria Stein, OH 45860.

The Association of Naval Aviation Photo Contest

The Association of Naval Aviation and its magazine, *Wings of Gold*, is sponsoring an annual photo contest, beginning in January 1989. There will be six bimonthly winners and end-of-year first, second and third-place winners. The contest is intended to capture on film the exciting world of Naval Aviation, its airplanes, ships and people in the Navy, Marine Corps and Coast Guard. Winners will be announced with their photos in *Wings of Gold* and *Naval Aviation News*. Everyone is eligible except the staffs of the Association of Naval Aviation and *Naval Aviation News*. The ONLY requirement is that the subject matter pertain to Naval Aviation. Submissions can be in black and white

or color, slides or prints of any dimension.

Cash Awards

Bimonthly:	\$100
Annual:	
First	\$500
Second	\$350
Third	\$250

Deadlines for submissions for the bimonthly awards are the 1st of February, April, June, August, October and December. The deadline for the annual awards is December 1. Please be sure to include a complete name and address with each entry.

Bimonthly winners will be selected by the staffs of *Wings of Gold* and *Naval Aviation News*. All photos submitted throughout the contest period, whether or not they were

bimonthly winners, will be considered for the annual awards by an expanded panel of judges which will include recognized out-of-house experts in the photography field.

This ensures that EVERY ENTRY will get a fresh look. Photographs may be published by the Association of Naval Aviation (ANA) and *Naval Aviation News* and used for promotional purposes by the ANA, but owners retain their rights of usage.

Mail photographs, WITH CAPTIONS, to: Association of Naval Aviation Photo Contest, 5205 Leesburg Pike, Suite 200, Falls Church, VA 22041.



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