NAVAL AVIATION NEWS

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A report on the Navy's only RVAH wing, the Vigilante community at NAS Albany.

Also:

What the Navy is doing to combat drug abuse.

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NAVAL AVIATION NEWS

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Deputy Chief of Naval Operations (Air)

Rear Admiral G. E. Miller
Assistant Deputy Chief of Naval Operations (Air)

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THE STAFF

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COVERS

PH1 Tom Sorensen photographed a Vigilante crew preparing for a flight from NAS Albany for this month's cover. The back cover, by JOC Byron Whitehead, announces conclusion of a three-part ASW series. The photo of an F-4 at NAS Miramar, Calif., was taken by PH3 Jim Fallon.

OUR GREATEST NATURAL RESOURCE

Our nation is stronger today than ever before. We, as a people, face our problems more squarely than others. We are more willing to talk to one another – if even at the top of our voices. Above all, in America, there is much more hope than regret. There is less cause for remorse than rejoicing. It will always be so as long as we have young men and women willing and prepared to accept responsibility.

– Admiral Thomas H. Moorer

NAVAL AVIATION NEWS

Deep Freeze Covers Available to Philatelists

WASHINGTON – Philatelists may have covers postmarked at South Pole and Byrd Stations in Antarctica and aboard Operation *Deep Freeze* ships which operate a post office during the 1970-71 Antarctic season.

Collectors are limited to one cover per person to be postmarked at Byrd Station, South Pole Station, and from each *Deep Freeze* ship. If a cancellation is desired from only one station, the word "Byrd" or "Pole" should be written in the lower left corner of the cover.

Byrd and South Pole Station postmarks can be obtained by placing two addressed covers bearing United States postage at the letter mail rate in an envelope and mailing them to: Deep Freeze Philatelic Mail, U.S. Naval Construction Battalion, Davisville, R.I. 02854. Collectors in foreign countries may use International Reply Coupons to defray postage.

Philatelic mail to be postmarked at either Byrd or South Pole Station must reach Davisville no later than September 1, 1970. Postmarked covers should be returned to the collector between October 1971 and March 1972.

Ships from which cancellations may be obtained are: USCGC *Burton Island* (WAGB-283), P.O. Box 20820, Long Beach, Calif. 90801; USCGC *Westwind* (WAGB-281), FPO New York 09501; USCGC *Staten Island* (WAGB-278), FPO Seattle, Wash. 98799. Cutoff date for covers to reach the ships is November 1970.

Conrad, Bean at TPS Reunion

PATUXENT RIVER – *Apollo 12* astronauts, Captains Charles Conrad, Jr., and Alan L. Bean, told more than 1,000 persons about their flight and moon walk while they were at the Naval Air Test Center for the 22nd Annual Test Pilot School Reunion and Symposium.

Captain Richard F. Gordon, also a TPS alumnus, could not attend because of a prior commitment.

Scheduled for a 15-minute public appearance, the astronauts spent nearly 45 minutes with the audience, relating many of their mission experiences. Captain Bean explained the feeling of weighing 50 pounds on the moon when his earth weight, with all equipment, would have been 300 pounds.

The astronauts presented a *Saturn V* model and a small silk flag they took to the moon, to NATC. The flat is mounted on a plaque with the Test Pilot School and *Apollo 12* emblems.

First NFO Flight Surgeon

GLYNCO, Ga. – LCdr. Ronald E. Gable, MC, became the first flight surgeon to attain Naval Flight Officer status when he graduated from the Airborne Tactical Data Systems School (ATDS) at NAS Glynco.

Dr. Gable, who ultimately wants to work exclusively in aerospace and aviation medicine, is now fully qualified to operate the computerized ATDS equipment in the E-2A *Hawkeye*.

ATDS instructors were impressed by the doctor's rapid grasp of the highly sophisticated and technical equipment. ATDS enables an operator to detect, track and identify airborne targets while simultaneously relaying information to fighter aircraft and CIC's aboard accompanying NTDS-equipped surface units. *Hawkeyes*, airborne CIC's, can provide task force commanders with a complete tactical picture.

Dr. Gable will receive additional training at NAS North Island before reporting to Airborne Early Warning Wing 12 for primary duty as a flight surgeon and additional duty as a Naval Flight Officer.

Aircraft Rain Gauge Developed

CORONA, Calif. – An ingenious rain gauge for aircraft has earned a patent award for Robert D. Zink of the Naval Weapons Center Corona Annex. The idea came from hearing rain on a tin roof.

The electronic measuring device records the size of raindrops and the time and frequency with which they hit a cone-shaped kettledrum mounted on the nose of the aircraft.

Drops impacting on the cone furnish the initial information. From this, the amount of rain, the time in milliseconds of first entering the rain squall and the exact time of leaving it

can be determined. Radar had previously been used to find the approximate rain rate while flying.

The gauge is useful in connection with research communications projects where rain interference is a factor. It also can be used in the study of aircraft turbulence, and in weather studies where the amount of rain at specified altitudes and the amount falling on the ground might be useful comparisons.

The aluminum cone, with a six-inch-diameter impact surface, is insulated from the aircraft vibration. A falling raindrop hits the cone, transferring momentum to the cone like a small hammer pounding on a kettledrum. The airstream going past the cone wipes off the water immediately, allowing the next drop to register.

A crystal accelerometer with its amplifier is mounted on the inside of the cone wall. It converts damped resonant vibrations into voltages. (The amplitude is proportional to raindrop size.) This information is then fed to a tape recorder inside the airplane. Taped playbacks converted to printed paper records furnish visual displays from which start and stop times, rain rates and times of changes in drop sizes can be determined.

New Pilot for Golden Eagles

PENSACOLA – Helicopter pioneer aviator Charles R. Wood, Jr., Naval Aviator #9712, Jet Pilot #26 and Helio #3CD of Camarillo, Calif., was elected Pilot of the Early and Pioneer Naval Aviators Association *(Golden Eagles)* at their 14th annual reunion.

Wood, a retired commander in the Naval Reserve and the third Naval Aviator to fly helicopters, succeeds R.L. Ireland, Naval Aviator #84, as president. Vice Admiral C.P. Mason was unanimously re-elected to the Chief Pilot's position as the most senior member of the group. Admiral Mason, a former mayor of Pensacola, Fla., is Naval Aviator #52.

ComNavAirLant Lauds VC-8 Rescue Crew

SAN JUAN, P.R. – Vice Admiral Robert L. Townsend, ComNavAirLant, here on an administrative inspection of the Atlantic Fleet Weapons Range, commended the crew of a VC-8 helicopter that rescued 26 survivors from a commercial DC-9 airliner that went down at sea in adverse weather on May 2, 35 miles east of St. Croix, Virgin Islands. The rescue is reported to be a record for Navy hoist operations at sea.

Navy officials have commended the crew, LCdr. James E. Rylee, Ltjg. Donald G. Hartman, ADC William A. Brazzell and AD1 Calvin V. Lindley, "for exemplary airmanship and demonstrated professionalism."

The SH-3A *Sea King* arrived on the scene 88 miles from Roosevelt Roads, where VC-8 is headquartered, less than one hour after notification that the DC-9 had apparently run out of fuel while searching for a way through a storm. The jet was on a nonstop flight from New York to St. Martin, Leeward Islands, when it ditched in 5,000 feet of water. Forty of the 63 passengers and crew were rescued. Coast Guard helicopters rescued 14.

The VC-8 *Sea King* was first to arrive at the scene and began rescuing isolated survivors first. In some cases, the crewmen jumped into the water to aid passengers. The main group of survivors was found clinging to an inflated emergency exit chute. The SH-3A made four separate series of survivor pickups in an hour and 35 minutes, flying survivors to St. Croix for medical attention.

A Navy report on the rescue states in part: "Although hampered by adverse weather conditions of rain, poor visibility, high sea states, impending darkness, inoperative automatic stabilization equipment and an inoperative radar altimeter, the crew continued operations until the SH-3A was unable to hold any additional survivors [on each trip]. Fleet Composite Squadron Eight's rapid response, from weekend stand-down condition, and demonstrated professionalism are considered to be in the highest naval tradition."

VC-8, a utility squadron, has two SH-3A *Sea Kings* attached. The squadron's duties include transportation of men and supplies and the retrieval of aerial target drones.

VP-16 Tests SAR Kit

JACKSONVILLE – A new externally carried search and rescue drop kit is being evaluated by Patrol Squadron 16. Its decision will help determine whether or not the kit will replace the "soft package" SAR kits currently in use aboard P-3 *Orions*.

The Billy Pugh SAR drop kit consists of two life rafts and an equipment package linked by 500-foot lines and packed in a rigid container. The container resembles a yellow fuel tank and is carried on a bomb rack beneath the wing.

A pilot-controlled release launches the kit and the equipment is dropped to survivors so that inflated life rafts surround them.

SAR kits presently are carried in soft packages and must be kicked out of the aircraft by plane crewmen, a method which poses a hazard to both men and equipment. An externally carried kit would eliminate the danger.

If the findings of VP-16 and other squadrons evaluating the new kit conclude that it is preferable to the one now used, it will undergo further evaluation at the Naval Air Test Center, Patuxent River, where final tests will determine if the new SAR device will be distributed to P-3 *Orions* and other aircraft on a fleet-wide basis.

GRAMPAW PETTIBONE

Late Night Dip

It was carrier qualification time for 24 new replacement pilots in the A-7 training squadron. Some were embarked aboard before the CVA left port; the remainder were scheduled to fly out in increments and complete their CQ periods.

A certain Ltjg. among the fly-on group arose that morning at 0545. He was briefed and ready to go by 0845 and launched at 1015, with a wingman, in his A-7B *Corsair II* for a VFR routine flight to the carrier. At his approach time, the new pilot proceeded into the landing pattern for a touch-and-go, followed by two wave-offs and seven trapped landings. He was finally shut down at 1250.

Knowing it would be a late night, he tried to get some sleep in the afternoon but, with his stateroom directly below the landing area, he was unable to do more than rest for a while.

After preparing thoroughly for his first night period, he hotseated (manned an aircraft already turning up on the flight deck) an A-7 at 2215 but was delayed and eventually shut down because of catapult problems.

He again manned the aircraft at 15 minutes past midnight and was launched into the black, clear night at 0035.

Because of remote compass difficulties, in the pattern, his scan broke down, the rudder shaker came on, and he had to recover the aircraft from a near stall. Informing the ship of his problems, he was given a no-gyro approach, calling the ball at 600 feet. The *Corsair* became low on the glide slope, and the LSO called for power. The Ltjg. still felt uncomfortable, and so he initiated his own wave-off.

The next pass was much better. The approach power compensator checked out properly on the downwind leg and was used for the approach. He received a line-up call from the LSO but, after correcting, everything looked good. However, the left wing dropped and the craft landed 20 feet left of the centerline with a left drift. As the aircraft neared the end of rollout, the left main landing gear hit and rolled over the port deck edge into the catwalk. The nose gear soon followed. The *Corsair* teetered for a moment, resting on several life rafts, then slowly nosed down over the side of the ship, shedding the cross deck pendant on the way.

The pilot thought the plane was going to stop in the catwalk and, by the time he realized it wasn't, the attitude was too steep for ejection. He decided to wait until he was under water to try to get out.

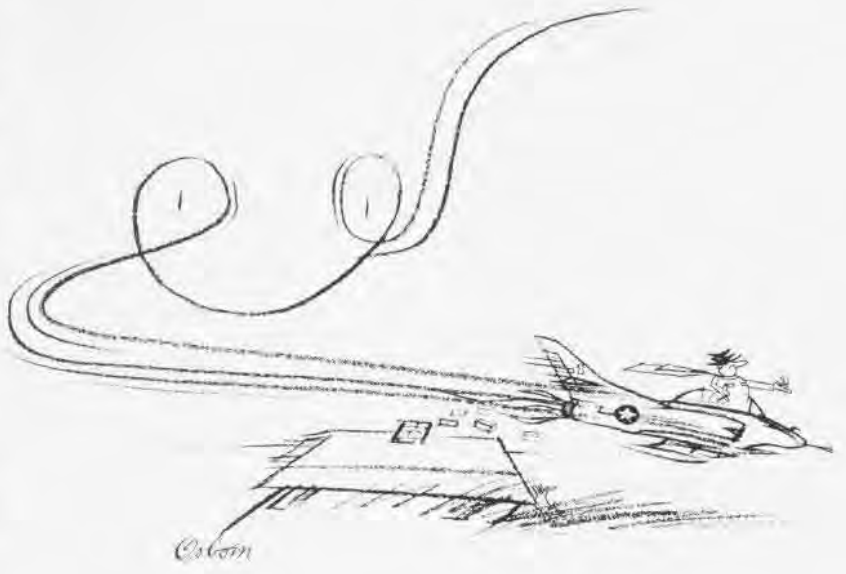
The *Corsair* entered the water inverted, nose down and, after a one-second delay, the Ltjg. ejected using the alternate handle. The equipment worked, and he found himself free in the water. His mask had pulled away from his face, and he was experiencing severe back pain but was able to follow the stream of bubbles to the surface. He was right alongside the inverted airplane, so stood on the UHT while inflating his MK-3C life preserver.

The helo pickup went relatively smoothly, and the pilot was deposited on the carrier deck at 0100 and then taken to sick bay for treatment of a cracked vertebra.

Illustrated by Oplom

Grampaw Pettibone says:

Thunderation! Wha' hoppened? This flight sure went to worms in a hurry. Sure and it's pilot error, but why? He dropped his left wing while concentrating on the ball so hard those last few seconds. Fatigue has got to be kept to a minimum at times like these. Skipper, is it really necessary to keep the guys goin' for so many hours in one day? I'm fresh outta' other suggestions to stop this sorta' accident. The replacement pilot woulda' had a better chance if he'd followed NATOPS – pulled the canopy interrupter and used the face curtain when ejecting under water.



To the Victor Go the Spoils

Subj: Investigation, Alleged violation of flying regulations concerning Lt. H. P. SIZZLE, USN, 942179/1310

Lt. Sizzle had completed his second combat tour as a well disciplined and professional photo-pilot. The be-medaled young man had successfully flown all his missions and never lost an aircraft. His peers and superiors respected his outstanding airmanship, good sound judgment and aggressive spirit.

As soon as things had settled down after the usual hubbub of homecoming, H.P. was transferred to shore duty with the replacement instrument training squadron at his home station and quickly completed transition to the TA-4F *Skyhawk*. After accumulating about 40 hours in type, he submitted a cross-country request to his commanding officer via the operations officer. It was for a multiple-RON flight to the other coast. He would, in addition to building his instrument proficiency, get some airways navigation training and be able to visit with his family and fiance – who lived near his requested stopover. The cross-country flight was quickly approved for the following weekend.

The flight across the nation was executed on Friday evening with typical precision, including a mid-continent fuel stop. Lt. Sizzle arrived at his destination before midnight and the three-day holiday weekend which followed was thoroughly enjoyable.

Late Monday afternoon, our intrepid Naval Aviator filed his flight plan and departed the AFB for return to homeplate. Within 15 minutes, the base operations officer, base security office and two local village police departments began receiving a flood of complaint calls regarding a jet aircraft which had made three low passes over a nearby shoreside residential area. One complainant tentatively identified the aircraft as an A-4; others said it flew so low that it blew up a cloud of sand from the beach, turned over patio chairs and swayed a TV antenna.

The base operations officer noted that Lt. Sizzle's aircraft was the only one in or out of the base that evening. He also determined that Lt. Sizzle's family owned a summer home within one block of the area where the jet had made its low flights. A message to the pilot's home air station launched a Judge Advocate General's investigation which circumstantially placed H.P.'s aircraft as the only known aircraft in the vicinity at the time. The investigating officer recommended against disciplinary action since it could not be proven beyond a reasonable doubt that Lt. Sizzle was the pilot involved. But, as a precautionary measure, he recommended that H.P. be restricted from cross-country flights to that area for a period of six months.

Endorsers in the chain of command, however, had a different point of view. Each, in turn, was convinced that Lt. Sizzle was indeed the pilot involved and that he had violated federal air regulations and OpNav general operating instructions. In addition, the pilot had shown a marked lack of maturity and judgment.

The type commander felt that the cost would be too great to warrant trial by general court martial. He issued a letter of reprimand to Lt. Sizzle and directed his commanding officer to make appropriate comments and markings in his next fitness report.

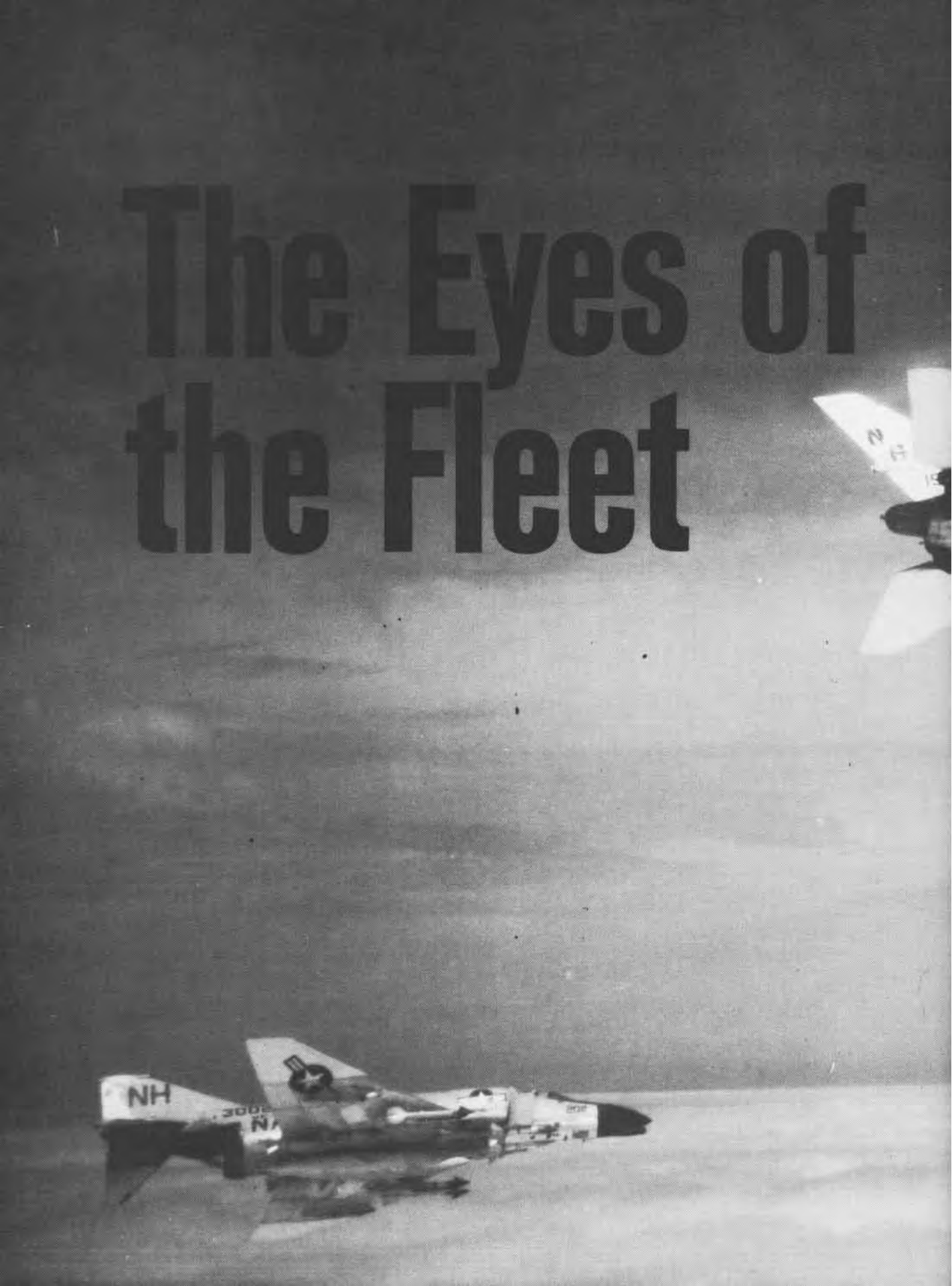
Grampaw Pettibone says:

Consarn it! It's about time them young whippersnappers were brought up short. Within the same three months, there were two other planes involved in flat-hatting accidents which destroyed the aircraft, killed the pilots and created considerable ill will for the Navy.

This uncaged tiger got his just desserts. If'n more cases like this were publicized, mayhaps we could save a few more lives and a few more airplanes.

Most people desire the results of safety but do not wish to pay the price of prevention.

The Eyes of the Fleet



By Commander J.E. Wise, Jr.
C.O., NIPSTraFac, Albany

Reconnaissance Attack Wing One, NAS Albany, Ga., is the home of the Navy's most sophisticated tactical reconnaissance platform, the RA-5C *Vigilante*.

The primary mission of the *Vigilante* wing is "to provide the fleet with combat-ready reconnaissance attack squadrons trained to conduct carrier-based, all-weather, multi-sensor tactical air reconnaissance – obtaining current area and target intelligence as required by fleet commanders."

Captain K. E. Enney directs the efforts of a highly functional staff which closely monitors the training, operations and readiness of local squadrons prior to their deployment to fleet attack carrier air wings.

The wing, consisting of some 325 officers and 3,000 men, includes the wing staff, nine fleet squadrons, a training squadron, a fleet air photo lab and the new Naval Intelligence Processing System Training Facility.

The "attack" label found in the wing and squadron designation is a carry-over from the days when the community was part of the Navy's heavy attack program. Between 1951 and 1964, the wing flew P2V-3C, AJ, A-3D (A-3B) and A-3J (A-5A) aircraft while training for long-range, all-weather delivery of conventional and nuclear weapons.

A supersonic, all-weather, two-place aircraft, the *Vigilante* is the only carrier-based aircraft in the United States' military inventory that can simultaneously perform photographic and electronic reconnaissance. It is the air segment of what is known as the Integrated Operational Intelligence System (IOIS). The surface component,the Integrated Operational Intelligence Center (IOIC), is currently installed in all *Forrestal*-class carriers and those of later design. The IOIC processes, analyzes and disseminates intelligence collected by the RA-5C's highly sophisticated, computerized equipment.

In carrying out the wing's mission, RVAH squadrons deploy around the world as elements of the First, Second, Sixth and Seventh Fleets. With the Sixth Fleet, the RA-5C's fly recon-

Photographs by PH1 Tom Sorensen and PH3 Neil Miller

naissance missions in the Mediterranean. These include training flights over friendly land masses and the monitoring of unfriendly merchant ships and naval combatants. The *Vigilante* continues to support U.S. military efforts in Southeast Asia where, since 1964, it has performed a vital role — collecting vast amounts of intelligence for use by the on-scene commanders.

But, before joining fleet squadrons, pilots and reconnaissance attack navigators (RAN's) receive extensive training in RVAH-3, the wing's training squadron. Until recently, all pilots reporting aboard for training were highly qualified second-tour aviators. However, late last summer, selected newly designated Naval Aviators were ordered to the community to see if they could transition to a complex platform such as the *Vigilante*. Thus far, the program is successful.

Ltjg. Dave Jones completed his FAM phase in April. He says, "I guess you might say I'm unique since I'm the first newly-designated aviator to be ordered into the RA-5C program. I've had a dozen or so flights and I really like the *Vigilante*. It's certainly not a difficult airplane to fly, but it is more demanding and less forgiving than other aircraft I've flown. However, I don't foresee any problems."

Replacement pilots spend 26 weeks and RAN's 32 weeks in the training squadron. They receive 600 hours of ground training and 110 hours of syllabus flying. Additionally, long hours are spent in mission planning and end product analysis. Student flow has been maintained even with budget limitations. The training is completed

Planning and executing an RA-5C reconnaissance mission is a complex task. At left, NFO's plot coordinates on a map. Some of the Vigilante's sensors include serial frame and panoramic cameras, infrared, side-looking radar and passive electronic countermeasure equipment, above. Preparing for a flight, a crewman is outfitted by a survival equipment-man.

with carquals in either the Atlantic or Pacific.

Further training in reconnaissance air operations is accomplished in fleet squadrons and as a part of carrier air wing work-up, which normally commences three months prior to deployment (average turn-around time between deployments for reconnaissance attach squadrons is nine months).

The Naval Intelligence Processing System Training Facility is a relatively new member of the Reconnaissance Attack Wing One community. Commissioned in July 1969, the school, formerly a department of RVAH-3, provides training for IOIC operators and maintenance personnel. With the expansion of the naval intelligence processing system to intelligence centers aboard amphibious command ships, fleet command ships and certain antisubmarine warfare carriers, command status became necessary. Staffed by personnel experienced in IOIS fleet operations, the new intelligence command offers 24 separate courses. Three hundred fifty trainees will complete training in 1970.

The best way to understand the Reconnaissance Attack Wing One community is through those who man the aircraft and carry out its mission. During a recent interview with a cross-section of both fleet and training squadron personnel, questions were posed about the aircraft and the art of reconnaissance.

The RA-5C is no doubt the largest supersonic aircraft you've flown. Compare it with the others.

Lt. Robert R. Powell, a combat-experienced A-4 driver currently training in RVAH-3, the wing's training squadron: A lot of people have asked me that because practically all my background has been in A-4's. People call the A-4 the sports car of the fleet. Since flying the RA-5C, I feel as if I've joined the Cadillac set. The plane's big, very smooth — a comfortable airplane. By comfortable, I don't mean just sitting in the cockpit. I mean the way it feels as you fly it; frankly, I was

Maintenance crewmen, silhouetted in one of the wing's hangars, work shifts to keep the RA-5C's flying. Photographers assigned to the Naval Intelligence Processing Facility at Albany, are trained to load, set and maintain the complex camera systems. Here the system is loaded.

amazed at how easy it was to fly.

Commander Pat O'Gara, a former fighter and attack pilot who is presently the commanding officer of RVAH-3: It's a tremendous airplane. Its response in the high speed range is just fantastic. The cockpit is comfortable, even for a person of my build. I've flown it eight hours in a single day and haven't been overly tired. And I have great respect for the *Vigilante* in combat. Some people describe its limited G capability as a bad feature but, during a 1967 WestPac cruise when we spent a good deal of time in the North, I found it completely reliable. It has outmaneuvered the SAM time and again. And after my squadron completed 125 missions in the Hanoi-Haiphong area with only two instances of battle damage, I have to rate it high in combat survivability.

Many say that reconnaissance flying is an exacting art. Have you found this to be true?

O'Gara: My background includes fighter and heavy attack in the A-5A and reconnaissance. I would say, with no reservation whatsoever, that it's the most enjoyable and most demanding flying that I've done. There's a new challenge, a different technique or a new way to do something each time you plan and fly a mission. It's a continual process of improving. In effect, it requires a bull's-eye each time.

Commander R.R. Taylor, C.O. of RVAH-6, who previously flew the RF-8 and EA-3: Well, I've been in the reconnaissance business for a long time, and I don't think people in the Navy address it as the profession it really is. Aerial reconnaissance is just one aspect of photogrammetry. There's a lot of very simple things involved in taking pictures, or imagery, if you will, since we do derive many varied types of imagery in this community. To take a simple picture, the photographer must hold the camera steady and take time to compose his picture. You have to do the same thing in an airplane. It's not sufficient to fly over a target and turn on your cameras

A last internal check on the big engines while the pilot and NFO complete preflight.

and then hope that everything is going to turn out right. You must know your profession thoroughly and ensure that nothing is left to chance. This is what makes the difference and results in consistently good photography. Of course you have to know what the user wants. This is not always easy to determine. I think Naval Air is still pretty much "bombs oriented" and the need for reconnaissance is often overlooked – until someone wants to know where to drop the bombs. Then there's a big scramble and the lack of effective tasking during peacetime operations begins to tell. I do believe, however, that this situation is improving. We have special short courses set up at Albany for educating personnel in the use of our system and, over the past year, personnel of numerous carrier divisions, attack carrier air wings and ships have taken advantage of this opportunity.

Powell: Compared to my previous experience in attack aviation, this is really an exacting science. In attack, you're briefed and shown your targets. Usually it was a matter of hanging onto someone else's wing and, once you rolled in, you looked up and hopefully found what you were looking for. In reconnaissance, you spend long hours in detailed planning. Often you have nine or ten targets to cover, and it's imperative that preplanned parameters over each target be adhered to in order to get usable imagery. On bombing runs, when the bombs are dropped, you are done. Here I'm trying to understand someone else's point of view: that is, figure out what the photo interpreter needs to meet the demands of the tasker. It's a completely new field for me, extremely demanding but highly rewarding because you can see and use the end product.

Lt. James B. Lamb, Jr., has over 500 hours in the RA-5C and is now a reconnaissance/attack navigator instructor with RVAH-3: I agree with all that's been said; however, I think that the term "exacting science" should really apply to IOIS because we are a system rather than separate air and surface entities. The system is complex and demanding, and all who are involved, whether they are aviation technicians on the line or photo intelligencemen in the IOIC, must be completely attentive to their role within the system. All work toward the goal of effective reconnaissance support of fleet requirements. Success comes only through a tremendous team effort.

Jones: I haven't flown any actual reconnaissance missions so I can't comment on the subject. The only contact I've had with reconnaissance is what I've learned since reporting to RVAH-3. Unfortunately, the training command doesn't offer an introduction to Navy reconnaissance.

Close teamwork between the pilot and the reconnaissance attack navigator is considered essential in the RA-5C. Why is this so important in this particular airplane?

Lt. Douglas E. Ledbetter, USNR, formerly with a composite squadron, presently attached to RVAH-1: This aspect is probably more important in this community than in others. In the A-6 or F-4, you pretty much have direct contact between the crewmen. In the RA-5C, the pilot and RAN are completely removed from each other. Thus, the dependency on each knowing his particular job is greater. I might be a slight bit prejudiced, but I feel that the RAN is a key man in this system. He has to be able to concentrate on several things at one time. Success or failure of a mission will often depend on this factor and how quickly he can adjust to changing situations.

O'Gara: I think this is extremely important because of the mission and the role of the NFO. He is in a closed environment and has to work an intricate system while communicating closely with the pilot. And the two of them have to work almost as one man to attain the most effective use of the airplane and the system. The pilot can take off and land the airplane but little else can be done in mission effectiveness without a capable NFO in the back seat. Communication and coordination are difficult when you don't sit side by side and can't even see each other. The mission itself is demanding. You must get over the target precisely – and just getting to and from that target on a long-range mission can be challenging. Close coordination is an absolute must in the *Vigilante*.

Lamb: I experienced the need for this team coordination during WestPac operations. During a combat mission, the pilot is watching his APR-25 and jinking the airplane. He's got his hands full just flying. The RAN navigates and operates the reconnaissance systems. Calls for course changes by the RAN are responded to almost automatically. This kind of teamwork is absolutely necessary if we are going to do the job. I feel that there isn't a greater responsibility or challenge for an NFO in the Navy than right here in this program.

Powell: This is my first experience flying with a crewman, and I really had no idea how important this guy can be. The idea of driving single seaters around is fun, and I've certainly enjoyed it, but, as soon as you find out that you're not just flying an airplane but working a system, you need help: the help of the RAN (which is much more than I had ever imagined it could be).

Taylor: Frankly, if I were a RAN this would be the only kind of aircraft I would want to fly. He directs the mission, runs the navigation, works the computers and monitors the sensors. It's a tremendous responsibility and quite a challenge.

DR GALLUP

MAYDAY!

Dr. Pursch, a flight surgeon and psychiatrist, has had more than 12 articles published in *NANews*. As a frequent contributor, he has given his light touch to subject matter ranging from aviation medicine and psychology to sailplane flying. In his present assignment as Chief, Neuro-Psychiatry Clinic, Naval Dispensary, Washington, D.C., Dr. Pursch has gained wide experience with drug abuse involving both active duty personnel and teenage dependents from the Washington area. Additionally, he teaches the dangers of drug abuse and almost daily counsels youth groups. He has seen drug addiction in all its phases – from the youth just beginning to the pathetically addicted at Bethesda Naval Hospital. He is the medical member on the Chief of Naval Operations Drug Abuse Team.

If you observe life from behind the psychiatric couch, you invariably come to the conclusion that there are no new problems in life; there are only new methods of coping with stress or new ways of trying to solve the same old psychological conflicts.

In terms of psychological conflicts, adolescence is one of the most stressful periods in everyone's life: a time of transition between childhood and adulthood with the drawbacks of both and the advantages of neither. The typical adolescent spends much of his psychic energy trying to make peace between his growing body, his burgeoning hormones, and the bonds of his religion and hometown mores. Although seemingly nonchalant, he is painfully concerned with how he looks to others. He works hard at trying to point his best profile in all directions simultaneously, and finds it a real drag to walk around the swimming pool all day looking sublimely bored, while at the same time keeping his gut sucked in without collapsing from exhaustion. And how do you keep your hair short to please your parents and at the same time grow it shaggy to be "in" with your friends? [Although adolescents are brashly striving to be "different," they want more than anything else to "belong."] And if he has to make a choice about where he belongs, he often chooses the gang in order to escape ostracism, the harshest punishment inflicted on the one who *is, looks* or *acts* different from the rest.

And what about your isms, the adolescent asks himself. Do you chuck the establishment and root for anarchy? Do you stick with true love (what's that?) or do you go for free love (has there ever been such a thing?)? And what about your future goal? Do you dedicate your life to the United Nations, work for the circus or become an "eight to five suburban slob" like the old man?

Now, just because a headshrinker can come up with an ominous-sounding name for a youngster's nervousness doesn't necessarily mean that adolescence is an illness. As a matter of fact, all maturing individuals go through an identity crisis before they finally achieve emotional adulthood. Adolescents, by and large, are aware of the conflicts and are able, and sometimes eager, to talk about their plight – if they feel reasonably sure that the listener won't make fun of them.

And, before you older folks go defensive on me and angrily point out that "in our day there certainly wasn't any of this adolescent turmoil business," let's agree that although it seems like there wasn't, there probably was.

In 1932, Adolf Hitler said: "The streets of our country are in turmoil. The universities are filled with students rebelling and rioting." Shakespeare wrote in *The Winter's Tale:* "I would there were no age between ten and three and twenty, or that youth would sleep out the rest; for there is nothing in the between but getting wenches with child, wronging the ancientry, stealing, fighting." And Socrates noted 2,400 years ago that adolescents "have bad manners and contempt for authority. They show disrespect for their elders and love idle chatter in place of exercise. Children are now tyrants – not the servants of the household. They no longer rise when elders enter the room. They contradict their parents, chatter before company, gobble up their food and tyrannize their teachers."

Any middle-aged square who has read this far will probably see some good sense in all this – partly because it reads like a putdown of the adolescent. The adolescent, on the other hand, clearly identifies all this as verbal dribble, the product of a middlescent, arteriosclerotic brain.

I think the only way an open-

MAYDAY! MAYDAY!

Who am I? Where am I going? What shall I believe?

By Commander Joseph A. Pursch, MC Illustrated by LCdr. N. F. O'Connor

minded, 18-year-old visionary can see the progress of time and experience the smugness of someone half his own age is for the 18-year-old to tell his 9-year-old brother, "Look, Johnny, I know you like slingshots and hate girls, but believe me, when you're 18 like me, you're really gonna go for the chicks." Then let him watch the pity and contempt on the 9-year-old's face.

Most psychiatrists agree that the adolescent's plight today is more conspicuous, widely publicized and socially irritating than in previous generations when his lack of choice, time and money restricted his ability to voice his turmoil and fear of the future. Adolescence then, although not a disease, can be called a period of emotional dis-ease.

But most youngsters, even today, survive their dis-ease by using time-honored trial and error methods of self-healing such as a temporary slump in school grades, vigorous sports activities, fads in dress, puppy love affairs, running away from home and living with relatives for a few weeks, lamenting in their diary, daydreaming, etc. Unfortunately, a certain number try to blot out their emotional growing pains by use of mind-numbing substances. The principal danger here is that although they set out to experiment, to take a drug for fun or to avoid being a square, many are unable to stop. Instead, they go on to more potent drugs and thus slide from emotional dis-ease into mental disease, namely social deterioration, drug addiction or psychosis. As with most bad habits and diseases – or detours – the further a person goes down the road, the more difficult the trip back becomes.

The best way to understand why Benny pops pills or Mary Jane smokes grass is to talk to a perceptive, articulate youngster who has begun the return trip on that lonesome road. Time and again, in the privacy of my office, I commiserate with teenagers as they describe their own identity searches, their loneliness and the ravages caused by drugs. How about reading with me some excerpts from unsolicited letters written by drug-involved youths who somehow felt the need to let me know what they have been going through.

The first one, formerly a bright, sensitive, restless 18-year-old ADJ, now sounds like a veteran of the green rebellion; a little older, somewhat wiser and much sadder, he writes:

Dear Sir,

I deliberated for nearly a year, wanting to be positive that sending this letter would be "a right action" insofar as leaving the ranks of the military was my only solution and, also, that my personal conflicts with the military warranted such action. I have for the past year or so been undergoing a period of "self change." During this time it has been difficult for me to take a "full hearted" stand on any particular issue, simply because my frame of mind has been in a continual flux. It's extremely difficult to attempt to "find one's self" when that self is always changing, changing slowly with every new friend or book, constantly accepting and rejecting new ideas until finally, hopefully, the individual levels off and is in a sense his own man.

I first tried marijuana a few years ago, even before joining the Reserves. [Most Navy drug abusers started using drugs prior to enlistment.] *It's a fun drug actually, but it gets rather boring after a while. You'll find that most people who smoke it continuously, about once a day, are weak*

people, too immature to cope with the problems that confront them daily. [It takes guts to be this honest with your drug-using friends. You are apt to get the same reaction from them as you would if you took the bottle away from the alcoholic or the sand away from the ostrich, and for the same reason: It hurts to face reality.] *I saw this happening to me,* the ADJ's letter continues, *and I immediately tried to stop smoking, which wasn't easy. Regardless of what medical men state, the drug is addicting* [habit forming might be a better word] *and has adverse effects. One literally loses his memory from repeated use, and if he can't remember the past, the present becomes all-important, and no preparation is made for the future, thus yielding "hippie living" on marijuana—living in the present.* What this lad hasn't experienced that we see in increasing numbers are "bad trips" or panic reactions which make the marijuana user paranoid. In case you don't know what paranoid means, think of the guy who no longer goes to the football games because he has become aware that every couple of minutes the guys on the field form a circle, put their heads down and talk about him. Also, no drug user ever knows for sure what is really in the substance that he is buying. We have one case on record where a profit-greedy dealer was cutting his marijuana with horse manure, thereby creating a "stable blend" of his own – guaranteed to provide that extra kick. And the user never suspected him. It is a pity that an idealistic youth, a "seeker after truth," can be so taken in by a horse-trading scoundrel. This also points out that the effects of marijuana are both *on* the mind and *in* the mind.]

So, as you can see, marijuana is an involving drug that changes the daily life pattern of the user without his awareness. It took a long time, but I finally completely stopped using it.

A potential change in one's life pattern, which the pusher or the misguided "friend" who is looking for company never mentions to the casual user, is the long-term effect of drug abuse on such things as future choice of occupation. Did you know, for example, that all Armed Forces flight training programs categorically reject any applicant for flight training who has a history of drug abuse? And that airlines and the FAA take an equally dim view when it comes to selecting future airline pilots or air controllers? If that sounds like a hard-nosed attitude, think of it this way: Would you like to be a passenger on an airliner whose pilot is subject to flashbacks? And what about the air controller talking you down through the soup, who is quietly, but grandiosely, disoriented and decides to ignore radar – instead, he chooses to guide your pilot by "rapping" with him through "friendly vibrations."

I have used other drugs besides marijuana, namely LSD and mescaline, and, after repeated use, I once again found them to be of little value and containing potential danger. The drugs magnify one's awareness of perceptions as well as any fears. Usually one can cope with his fears, but when they are magnified hundreds of times you can't begin to distill them and put them in their proper place.

A high school student whose father is on active duty writes: *I went on a long, drawn out, soul-searching trip that was beautiful but horribly depressing. I could see the good of me but also the bad, and since the latter was more pronounced, it was more disturbing.*

And a sixteen-year-old high school girl's letter says: *I'm just so weary of it all. I'm tired of smoking grass, I'm scared my brain has rotted from acid. I now think that sex is meaningless and mediocre without love.*

To hear things like this is alarming. And if you are a clinician with a feel for humanity, it is also sad. But the situation is no longer hopeless. Formerly, my teenage friends and patients were nervously telling me that it was very difficult to "belong" and not take drugs of some kind. It was the "in" thing. If you didn't take drugs, you had to explain yourself away constantly, like a pacifist on a battlefield. Then, finally, the saturation point was reached. Now, every high school kid knows somebody – either directly or reliably secondhand – whose mind has become "messed up" on drugs. The drug abusers I see of late are angry because the "squares" are looking down on them, almost with the same contempt that formerly went the other way. More and more they hear that you have to be "stupid" to take a chance on acid and that you have to be "sick" to go for heroin because it will lead to addiction.

My colleagues from other hospitals tell me that when it comes to hospitalization for drug abuse, there has been a shift from experimenters and misguided youths to drug users who have latent or overt mental illness and who are empirically using drugs to treat their innate disturbances because they feel emotionally disturbed and unhappy – with or without drugs.

Our ADJ's letter concludes sadly: *The reason I have gone into detail about the drugs I have used is to more or less show you that I'm not ignorant of the consequences of drug use. I suppose it's a shame that I had to first get involved with drugs before I could condemn them, but it seems that's the way I learn, "the hard way." Thank you for listening.*

An even sadder and more final note was left by a 20-year-old journalism student at a southern university who was tripping on something he had bought "from the friendly mescaline salesman." The note read in part: *To those of my friends who might also think about learning about themselves with mind expanding drugs – DON'T! Learn about yourself as you live your life – don't try to know everything at once by swallowing a pill: it could be too much for your mind to handle at one time. It could blow all the circuits as it did with me.*

And then he committed suicide.

I don't realy know how to go abough wrighing this letter, but I said I would so I will hope it is done right. I first starded smokeing weed with a gril who was four years older then me. The first time i smoked it was realy far out. I went home stoned on it and no one knew anythink and at the time that was great for me. A few weeks went by and one of my good friend was just getting stared by one of his biger borthers and in no time we were geting it by the pownds and selling it by the lids. Beside we could smoke as much as we could, after a wile we were smokeing 3 times a day every day. Then all of a sudden weed when dry and it wasent as cheep as it use to be. When we raised our price on it no one could aford to buy it and we whent out of bussiniss and that was guit a blow on us and we started robing wemens hand bags to get the money for weed.

Some people say that weed doesent hooked people. Bull! after a while you get hooked in your mind like I mean I used to live untill the next day only to smoke more weed. After a while my mother found out I used the stuff and I starded useing vizine in my eyes and the took out all the redness. And I was able to tell her I quit.

Then one day she found a lid in my pillow and I told here it was a fake to get off the hook. That night I ran away and went to big sir and spent the night. The next day I went to San D. on my way to Mexico. When I was hitchhiking I got to thinking that I was going to be a nobody if I dont go thow high school and there anit no way so I called home and stared on my way when I meet you.

(The above letter, received by a San Diego, Calif., school teacher, was written by a 14-year-old marijuana user. The teacher put the boy on an airplane for his home in San Francisco. The letter appears as it was written.)

THE KILLERS!

Article and Photographs by

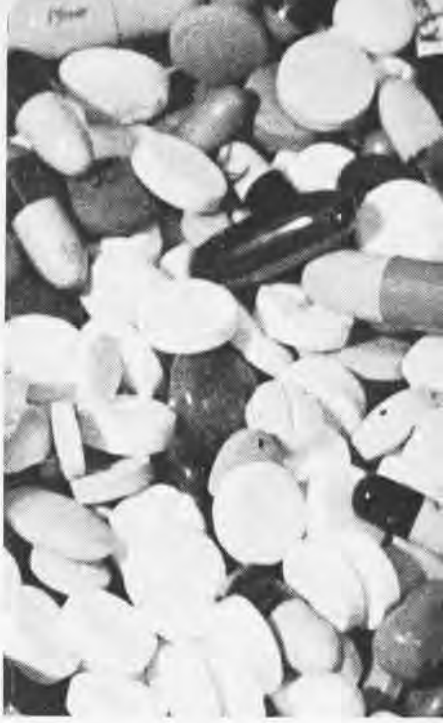
PH1 Robert E. Woods

The average drug user in the Navy is on his first enlistment, usually non-rated, unmarried, a high school dropout and 20 years old. However, the age group ranges between 18 and 23. Some of the brighter ones had three to nine months of college before they dropped out. Further, they are almost invariably service school dropouts. Sixty percent of Navy drug users began using drugs prior to enlistment and are, therefore, fraudulent enlistees, having concealed the fact upon enlistment. The Navy has recognized the problem. The Secretary of the Navy has directed (SecNav Directive 6710.1A) commanding officers to institute a mandatory drug education program for preventing and eliminating drug abuse within their commands and to report the results to the Secretary of the Navy and the Chief of Naval Operations by letter. Additionally, Chaplains have established workshops to deal with the problem.

In 1963, 30 men were discharged for drug abuse. The figures for subsequent years have continued to rise. Last year, 3,808 men were discharged for illegal drug use.

Drug abuse is a tragic and growing problem. We can think of nothing more potentially dangerous than a man on drugs working around airplanes. *NANews'* purpose in presenting these articles is twofold. We are concerned about the young man who may be contemplating drug experimentation. We urge him not to. And we are concerned about what could happen on a flight deck, flight line or in an aircraft where a drug user might be working. It is a chilling thought.

If we can reach one individual and stop him from drug experimentation, then it will have been worthwhile.



If you don't know how to smoke 'pot,' shoot 'speed,' or 'smash' or 'smack,' and if you don't know how to pop pills, I'm going to show you," EMC Donald F. Methlie told a group of Navy enlisted men. "I'm going to show you what it looks like, how much to pay for it, and where to get it. I want you to be informed."

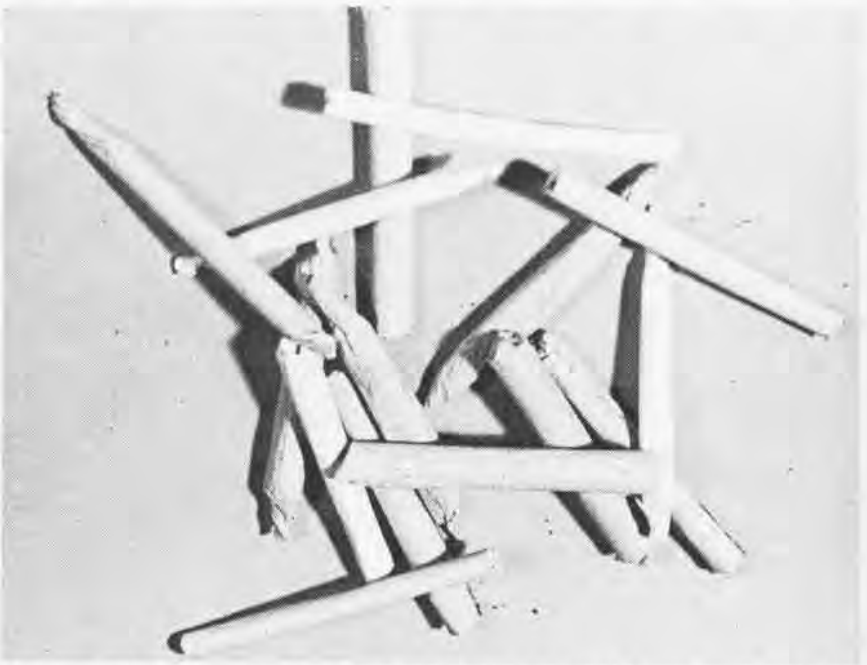
Chief Methlie is not a drug pusher. He's a member of Cruiser-Destroyer Force, Pacific Fleet investigation team. Among his duties is the job of educating Navy personnel on the effects of drugs. The presentation is called, simply, *Drug Awareness*.

"We want to make the men aware of the narcotics problem. It's like sex: everybody knows about, but no one wants to talk about it," he said.

Society is experiencing a crisis with young people and the drug problem. The CruDesPac team is attemping to tell Navy men – the young 18-23-year-old, non-rated, single men – how narcotics affect people.

"This problem doesn't have any social, economic, geographic or ethnic boundaries. It affects the rich as well as the poor; the Negro as well as the Caucasian," Methlie says.

In his presentation, Methlie holds a captive audience. His voice is strong, often to the yelling point, and the audience can't do anything but pay attention. Chief Methlie becomes very angry over drugs. He has seen what happens to young people who experiment with them. Periodically, he and other members of the team visit the



Confiscated marijuana 'joints' range from well packed and rolled to very rough sticks. The dilated eyes on the preceding page (set up in the North Island dispensary by Navy doctors) show what a marijuana user's eyes look like. The injection shot on page 19 is also staged – to show the grim reality of drug use. Some of the pills above are no more dangerous than vitamins. Others of them can be deadly, used improperly. If you don't know, don't take it!

Los Angeles Police Department Narcotics Division.

Methlie emphasizes he does not deal in fiction or philosophy, only facts.

"In 1967, the Naval Investigative Service Office (NIS) investigated 3,949 individuals for illegal drug use. In 1968, NIS investigated 7,771 men for drug abuse – a 98 percent increase over 1967. In the first eight months of 1969, we investigated 7,741 drug cases. We had another 100 percent increase last year," he said.

Marijuana, the most popular drug for beginners, can be both a depressant and a stimulant. Methlie calls it a "mood" narcotic.

"It depends on what mood the person is in when he uses it. If the user is happy, he becomes happier, and frequently forgets normal caution. If he is depressed, he will become more depressed, even to the point of suicide. An angry person will become angrier.

"A marijuana user normally is a gregarious individual: he likes company. A real user would 'blow grass' with his head in a plastic bag – if he could do it and still breathe."

Although marijuana is not physically addictive, a user may develop a psychological dependence on it. Users' behavior patterns, vision, timing and judgment are affected while under the influence of marijuana. Law enforcement agencies insist there is a definite relationship between marijuana use and violence.

The marijuana plant normally grows 12 to 15 feet high and looks like a tree. It will grow anywhere and, under optimum conditions, it may reach 20 to 25 feet.

The most characteristic thing about a marijuana plant is its leaf. It always has an odd number of leaflets and the bottom two point down. The leaflets are long and slender, pointed at the ends, with serrated edges. The buds and sticky residue from under the leaflets of the female plant are used to make hashish, the purest form of marijuana. Normally, when marijuana is purchased, it is made up of both the male and female plant parts and any other vegetable substance to make volume for sale. The user never knows what he is really getting.

Marijuana is one of the few plants not pollinated by insects – only by the wind. "A grasshopper won't attack this plant, a bug won't go after it, a bee won't pollinate it, but a sailor will smoke it!" Methlie exclaims.

Chief Methlie explains where marijuana comes from, how to manicure it, roll it into "joints" or "sticks," and how to ingest it by eating, drinking or, the most popular method, smoking. He compares marijuana with the use and abuse of alcohol and discusses how users use the comparison in their attempt to legalize marijuana.

"The important thing to note about marijuana is that it does have a mild hallucinogenic effect and it is the perfect vehicle for introducing someone to LSD or heroin," Methlie says.

The U.S. government and the military look upon the use and possession of marijuana as a felony. Military men stand the chance of general court-martial and a dishonorable discharge when they use illegal drugs.

The House Select Committee on Crime recently made public a report estimating six million Americans used marijuana in 1969, netting illegal traffickers $850 million. The committee figures are based on conservative estimates and the assumption that not all of the six million are habitual users. Some were "experimenters" and "social users." The report suggests that

the sale of marijuana has become big business.

More important, and extremely more dangerous than marijuana, are stimulants and barbiturates. Of the two, barbiturates are the most potent and dangerous.

"We have a pill to take if you're not nervous – it will make you nervous. We are a nation of hypochondriacs," Methlie continues.

There are five or six million people in the United States on pills. The federal drug people say that last year alone there were four billion pills made illegally in this country.

Stimulants are nothing more than pick-me-ups, commonly called "co-pilots," "truck drivers" and "uppers"; they work on the central nervous system. They are subdivided into amphetamines and methamphetamines. The latter, and most potent, normally is called methadrine or "meth," "crystals" and "speed." It can be injected, eaten or sniffed. According to Methlie, most young users prefer to inject it. The current trend is to get a tattoo into which they can inject without leaving telltale marks.

"If the kid doesn't have a tattoo he will shoot between his toes, under his tongue or in his armpit. A girl will often shoot herself in the breast. Parents don't check these areas," Methlie says. "A person who shoots speed is about a quarter-inch from heroin."

Barbiturates or "barbs" are nothing more than sleeping pills or "downers." Users get "high" on downers by fighting sleep.

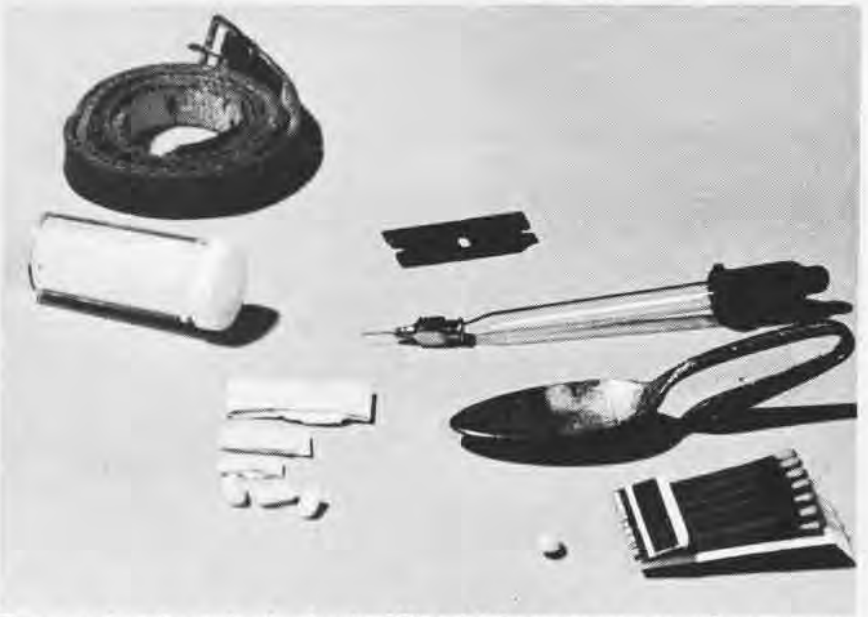
Chief Methlie cautions that just because a pill is a certain color, doesn't indicate what's in it.

"You don't know what's in the pill – so don't take it! I find it inconceivable that any American citizen with half a day's education would go anywhere in the world, take a pill and actually ingest it, not knowing what it is. Because it's red doesn't mean it's sodium seconal. Because it's yellow doesn't mean it's nembutal. Because it's blue doesn't mean it's ambutal. And because it's blue and red doesn't necessarily mean it is tuanaul (or rainbows). *So don't take it!*

"The guy I'm worried about is the 'ding-dong' who comes up with what they call the 'giddyap' and 'whoa.' That's when you mix an amphetamine with a barbiturate. And, buster, I'm telling you it's like jumping on a horse and saying giddyap and pulling on the reins and telling him to stop at the same time."

In explaining how popping pills becomes habit forming, Methlie says, "More people in this country are killed by barbiturate poisoning than all the other poisons put together, with the exception of carbon monoxide. It is not unusual for a person to die coming through a withdrawal from barbiturates. It takes 7 to 21 days. The first thing affected is the respiratory system. Normally, on the seventh day, the user gets pneumonia."

Most users get started on drugs through association. Surprisingly, many children learn from their parents. They see mother pop a pill when she gets up in the morning to get started, during the day to keep going, and at bedtime to put her to sleep.



These are the grim tools of a heroin addict. A belt to serve as a tourniquet, a spoon, the heroin, and matches to melt it into liquid form, the needle. Oh, yes – and the razor blade. After awhile, heroin addicts become so shaky that they can't use the needle. So they cut a vein with the razor blade and attempt to pour the raw heroin in.

Marijuana and pills usually lead to heroin. White heroin, the most potent, comes from the Orient; brownish, from Central and South America; and grey from Europe. The heroin user always has a special kit, the same kit used to shoot speed. He has a tourniquet, a razor blade, an eye dropper with a needle, a bent spoon, matches, a piece of cotton and heroin. The razor blade is used instead of the needle when the addict is too shaky to get the needle into a vein – he simply cuts the vein and pours the heroin in. When shooting heroin, the "mainliner" has to inject into a main vein. He must get it into his blood stream.

"Can't you just see a guy, he just shot 70 bucks worth of 'smack' into his arm," Methlie lectures. "His arm feels great. His head is caving in, but his arm feels great."

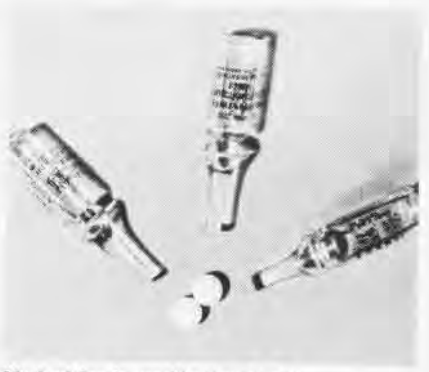
Like the user who shoots "speed," heroin addicts will also get a tattoo in an attempt to conceal "track" marks.

Drug addicts think they are a close-knit group. Their kits are interchangeable. If one addict in the crowd has syphilis or hepatitis, everyone in the crowd will have it.

A heroin addict in New York City

Barbiturates (these from Mexico) are frequently wrapped in tinfoil. Depressants – these are red sodium seconal capsules – are called barbs, downers or goofballs.

Amphetamines, these in capsules, also come in pill form. They are stimulants with popular names like benzadrene, dexamyl, dexedrine, and names coined by users: such as uppers, copilots, bennies and truck drivers.



Methadrine is used in liquid, pill, crystal or powdered form – popularly called speed, meth or crystal by users. Methadrine is taken by swallowing, sniffing or injecting.

told a state legislative committee hearing on drug addiction how he stole pocketbooks, sold drugs in school and broke into apartments to support his habit. He had seen most of his friends on drugs and didn't want to be left out. He is 12 years old.

One of the most dangerous and exotic drugs on the market is the hallucinagent LSD, or d-lysergic acid diethylamide.

"LSD is a very, very potent and dangerous drug," Methlie says. "On LSD you can re-trip, or re-flash, up to two years after use. The Navy can't afford this. We also know that it causes users to become mentally deranged and remain so indefinitely. There is strong likelihood that chromosomal breakdown in the user's body can be passed from one generation to another."

LSD (acid) is a synthetic chemical compound derived from a rye culture which has no smell or taste and can't be seen. It normally is mixed with charcoal, milk, sugar or even a barbiturate. It frequently is sold in sugar cubes, chewing gum, mouthwash, or even on the back of postage stamps.

"One drop of blood contains approximately one million cells. All we need to take a trip on LSD is the equivalent weight of one of these cells. According to government estimates, a regular two-suit suitcase would contain enough LSD to trip the entire continents of North and South America," Methlie continues. "No one should use LSD without a 'travel agent' or 'guide' to make sure the user doesn't do any window jumping. We can almost guarantee you that if you have any suicidal tendencies and take LSD under a depressed state of mind, you'll try to take your life." Chief Methlie cites a recent case in which a girl, under an LSD re-flash, killed herself by jumping from a window.

His presentation is strong. He wants to scare young people out of drug experimentation. He shows them what drugs look like and explains what they can do to a person.

"Now we want to enlist the aid of the young man in fighting this problem," Methlie concludes. "Without his help, we can't fight it. We must have the troops on our side."

LSD is a hallucinogen. It can't be seen, tasted or smelled. Users normally mix it with charcoal, milk, sugar or in a barbiturate capsule. It is sold in mouthwash, pills, sugar cubes, in gum wrappers or on the back of postage stamps. No one can predict its reaction, or when it will recur.

SELECTED

The reorganization of the Naval Air Reserve has caused considerable discussion within the Reserve community. Commanding officers of several Reserve stations asked personnel in their commands for their reactions to the changes engendered by the new organization. The observations on these pages are a representative sampling of the many responses received.

CWO KAMSTRA

LT. GERLACH

LT. EVANS

CAPT. SULLIVAN

CWO-2 John A. Kamstra, VP-62R2

The closing of nearby naval air station facilities after many years of squadron participation is sad. However, the plan for the future role of Air Reservists is a bright light!

The VP Air Reserve program, which I have drilled with from PBY thru P4Y, P2V and SP-2H, has apparently just begun to emerge from its shell and stand on its own two feet. The planned VP squadron structure at a few selected facilities on each coast will concentrate a large amount of the latest equipment at each base. Incentive, pride in unit, ability to rack up meaningful ASW exercises, rock-hard integrity in training and accomplishment – these are all direct results of putting the Air Reserve Forces in the perspective now designated by CNO.

Lt. Mickey G. Evans, VA-22G1

The reorganization provides for a much more effective Naval Air Reserve Force capable of efficient integration with active forces should the world situation dictate.

Squadrons will benefit by having maintenance personnel trained and working exclusively in type.

The fact that each unit will have its own personnel, support equipment and aircraft should provide for a much more effective organization.

Captain John V. Sullivan, RSAND A-1

The new Naval Air Reserve Force concept offers a real challenge to the professional. His reward is that he will become a member of an "elite" force that is a vital member of the team. Many senior Selected Air Reserve officers who have commanded tactical units believe the new concept of measuring Naval Air Reserve readiness on the same basis as the Regular Navy is long overdue. The total force concept is the key which allows the Air Reserve to significantly contribute to the operational readiness capability of the Navy.

The evolving structure will definitely require renewed commitment on the part of each and every individual. It will demand an extra measure of time and effort. From my perspective as a unit commander, I am confident that the Naval Air Reserve is equal to the challenge.

Lt. Karl J. Gerlach, VA-22G1

Readiness is the "name of the game" for the Naval Air Reserve. The marriage of aircraft, personnel and pilots into squadrons of the air wing means a higher degree of readiness. The increased support gained from the assignment of active duty personnel to each squadron will add the latest talents and techniques of the fleet to each unit.

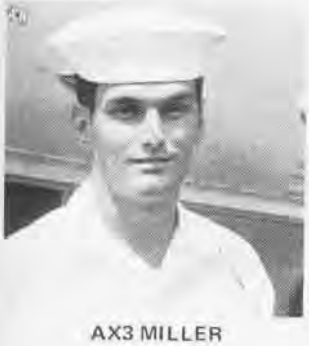
Functioning as a unit, I see squadron and wing esprit de corps reaching levels never seen before in the Naval Air Reserve.

The new program will require more time on the part of each Reservist – time spent in becoming better prepared as a unit of this nation's sea power.

AIR RESERVE

AMEC ANDERSON

CAPT. PITNER



AX3 MILLER

CDR. STUPAR

AX3 George F. Miller, VP-62R2

The problems that were uncovered as a result of the *Pueblo*-crisis activation were well known beforehand. Training in the Naval Air Reserve program was probably much better than the average Reserve unit – but still left a lot to be desired.

The proposed reorganization is long overdue, and *meaningful* training should be established. If a Reserve unit is to be activated, it should be functional and able to stand on its own or to do so after a short refresher training program.

I look forward to this new concept.

Lt. Carl F. Moslener, VA-32R1

The idea of reorganizing the Naval Air Reserve to conform more closely to fleet organization is long overdue. As shown in the Reserve call-up for the *Pueblo* crisis, the Reserve squadrons are not easily integrated into the active duty forces. If the Reserves are going to fulfill their proper role as a ready force in reserve, the reorganization is absolutely necessary.

AMEC Douglas J. Anderson, NARTU Washington

It has long been apparent that the Naval Air Reserve organization is burdened with numerous problems that have seriously affected its state of readiness and ability to mobilize effectively. These problems have been brought to light and many will be resolved through the realignment of the Reserve organizational structure, increased readiness training and the assignment of newer and more reliable equipment.

One of the least talked about and perhaps most underestimated problems is the maintenance readiness training program. As a maintenance chief, I have been concerned with this area for some time and feel that under the present program we have fallen short of our capabilities. The new squadron organization should provide a more suitable atmosphere for the achievement of a sound training program. Both TAR and Selected Air Reserve will have a common unit to identify with and a sense of belonging. The instructor/student ratio will be close to optimum. Through the careful selection of augmenting personnel, this type of training program should be a tremendous improvement.

Captain Robert N. Pitner, CNAResTra support component

The Naval Air Reserve, the most dedicated of the Reserve forces, is the twin brother of active duty Naval Air and is imbued with the same esprit de corps, sense of teamwork and desire to provide a ready defense for our country. Effectiveness of the Naval Air Reserve has declined in recent years due to equipment obsolescence, shortage of training aids and deterioration of facilities, but motivation of personnel has not diminished. The present reorganization of flying units into fleet type squadrons with modernized equipment and facilities will ensure the ability of the Naval Air Reserve to respond to any emergency.

Commander Branko Stupar, NAIRU A-1

The inflammatory atmosphere existing in the world today more than ever demands that the Reserve forces be truly ready to answer the President's call to action. Precious time expended in organization and absorption-in-training "catch up" can simply no longer be tolerated. Recent experience in quieter times has amply demonstrated the folly of two naval air commands. The results are predictable: the one active, modern and always advancing; the other, no matter how eager and willing, always hopelessly falling behind the program of the former.

ON PATROL

with the Fleet Air Wings

VP-17 Hosts JMSDF Neptune Crews

VP-17, which recently returned from a six-month deployment to Iwakuni, Japan, showed the aloha spirit when the officers and men of the *White Lightning* squadron welcomed six P-2 crews of the Japanese Maritime Self Defense Force to NAS Barber's Point.

Greeted upon their arrival by the unit's C.O., Commander Robert E. May, the Japanese received the traditional floral leis from squadron wives. In addition, a giant wreath was placed over the nose of each P-2 as it arrived.

During the two-week period the detachment operated from the air station, its members received training in submarine detection methods and evaluated their antisubmarine weapons systems capabilities and, of course, toured Oahu and the neighboring islands.

Two officers of VP-17, who have flown together on the same crew since October 1967, will continue their naval careers on the same team at NAS Patuxent River, Md.

LCdr. David L. Gastony and Lt. Leonard A. Puchalla first flew together as members of VP-17's Crew Four at NAS Whidbey Island, when the squadron was stationed there. Flying the old P-2 *Neptune,* the two men served as copilot and tactical coordinator, respectively.

When the *White Lightning* squadron began flying the P-3A *Orion* in late 1968, the two flight officers found themselves flying together once more, as members of Crew Seven.

LCdr. Gastony noted that he and Lt. Puchalla flew more than 2,000 hours, received two Air Medals and deployed twice to WestPac during their service together.

The two veterans have been assigned to the Naval Air Reserve Detachment at Patuxent River, in the Training and Administration of Reserves.

Maintenance Award Won by VP-4

The *Skinny Dragons* of VP-4, led by Commander John R. Emerson, have been named the winners of the Chief of Naval Operations Aircraft Maintenance Award for patrol squadrons in the Pacific. The competitive cycle for the award was from July 1, 1968, to December 31, 1969.

The formal presentation of the trophy, which is provided by the Lockheed Aircraft Corporation, will be made when the squadron returns to NAS Barber's Point from Adak.

The award is based on: (1) a command inspection with special attention to condition of aircraft and administration of the maintenance department, (2) grades on the condition of aircraft material during inspection by Commander Fleet Air Wing Two prior to and after deployment, (3) an analysis of aircraft mishap reports by Commander Fleet Air Wings, Pacific,

MAY DAY *was "Welcome Home, Daddy Day" for LCdr. Charles Asher of VP-22. The squadron returned to Hawaii after a five-and-a-half month deployment to the Philippines.*

JAPANESE *fliers and their P-2 Neptunes were given the traditional Hawaiian welcome when they arrived at NAS Barber's Point. VP-17 hosted the Japanese during two weeks of training.*

to determine if maintenance factors are involved and (4) comparison of the operational readiness of aircraft against the maintenance man-hours.

The *Skinny Dragons* competed with 11 other Pacific-based patrol squadrons for the award.

Indians Receive Books via VP-56

A P-3C belonging to VP-56 took off for Kirtland AFB from NAS Patuxent River recently, carrying with it a special cargo of several thousand pamphlets and books. The reading material was destined for regional libraries on a number of Indian reservations in New Mexico.

The flight was the culmination of a project which began last December when 40 students from Chopticon High School in Marganza, Md., members of an extra-curricular club, conceived the idea. Under the guidance of their teacher, David Roberts, an active book collecting campaign was begun. Public reaction to the project was very favorable, and contributions to the book drive came from many sources in the surrounding communities.

The problem of transporting the books to the reservations was solved by Stanley Taulbee, the 15-year-old son of LCdr. William H. Taulbee. After a few high-level conferences at home, Stanley reported that transportation arrangements had been made. With the approval of Commander Melvin Meltzer, VP-56 C.O., and the assistance of the operations department, final details were worked out.

The books were distributed through the Bureau of Indian Affairs and the Save the Children Foundation.

'Mad Foxes' Exercise in Med

The *Mad Foxes* of VP-5 have completed two busy weeks of round-the-clock flight operations in support of two operational exercises in the Med.

National Week was an exercise involving air, surface and subsurface units of the Sixth Fleet. The format of the exercise included a transiting friendly Blue task force opposed by Orange force aggressor ships, submarines and aircraft. VP-5 flew 23 sorties, maintaining three planes on station at all times over a period of five days. In their role of Blue surface surveillance and ASW units, the *Mad Foxes* detected and neutralized the Orange submarine threat and located a simulated missile-firing cruiser, thus saving the task force from destruction. The squadron flew its missions from Sigonella, Sicily, and Souda Bay, Crete.

The second exercise, *Epic Battle,* was a two-week NATO operation involving surface, air and subsurface units from Greece, Turkey, Italy, the United Kingdom and the U.S. The operation was divided into two phases; the first phase included exercises in coordinating tactics between submarines, ships and aircraft in preparation for phase two, a week-long opposed convoy transit through the eastern Mediterranean.

VP-5 stationed a two-plane detachment at Souda Bay to fly in an ASW support role for the Blue forces. The *Mad Foxes* were credited with 17 attacks on submarines, destruction of six patrol boats and interception and identification of five aggressor aircraft.

The detachment claimed a first for patrol aviation. In keeping with newly instituted policies regarding NFO's, the detachment was commanded by Patrol Squadron Five's senior TACCO, Lieutenant Commander Carl Leban.

GIBRALTAR PROVIDES THE BACKGROUND AS A P-3 TRACKS A RUSSIAN SUB

at Sea with the Carriers

PACIFIC FLEET

Bon Homme Richard (CVA-31)

The statement "when it rains it pours" could very well mirror CWO-2 William E. Tanner's sentiments concerning the turn his Navy career has taken. Two distinctions came to him in a relatively short period of time.

CWO Tanner, weapons assembly officer aboard *Bon Homme Richard*, currently in WestPac, has joined an elite few among Navy warrant officers: he has qualified as underway officer of the deck (OOD) aboard one of the Navy's largest warships.

"I requested this duty," said Tanner, "because I knew that it would be interesting and would afford me an opportunity to broaden my knowledge of seamanship, navigation and the ship's operation and overall handling."

In addition to his qualification as a carrier OOD underway, CWO Tanner is scheduled to be commissioned an ensign under the Limited Duty Officer (LDO) program.

The 11-year Navy veteran was one of 239 Navy warrant officers who were selected from a group of 1,200 applicants for the LDO program.

Coral Sea (CVA-43)

Coral Sea recently performed what those aboard feel may be a first in modern naval history. In a non-emergency situation, Captain Samuel G. Gorsline, Jr., C.O., offered 50,000 gallons of fresh water to the other carriers operating in the area. This is the second time that CVA-43 has offered to share her hard-to-obtain fresh water with those in need. Near the beginning of the cruise, she supplied Subic Bay, R.P., when the inhabitants of the base were experiencing water rationing.

The lack of fresh water at sea is a very real problem. On board a carrier, however, this problem is especially severe because every catapult launch uses many gallons of fresh water, and most carriers must ration their supply in order to have a sufficient amount.

Coral Sea also claims another record: more arrested landings aboard her flight deck than any other attack carrier still in commission. At present, she claims over 212,000.

Oriskany (CVA-34)

Oriskany and her CVW-19 are together again. Also back with the carrier, which is preparing for her second consecutive combat cruise, is ComCarDiv-7, Rear Admiral Roy M. Isaman, and his staff.

The *Mighty O* and company returned from a seven-month combat cruise in Vietnamese waters last November. Embarked aboard for the upcoming

RARE DUTY *for a Navy Warrant Officer: CWO-2 Turner of the Bon Homme Richard has qualified as underway officer of the deck. Shangri-La is refueled by the oiler Caloosahatchee during refresher training.*

WestPac deployment are VA's 153 and 155 and VF's 191 and 194. The attack squadrons are based at NAS Lemoore, and the fighter squadrons, which were aboard *Oriskany* during the last cruise, are based at NAS Miramar.

The four detachments assigned to the air wing are Alameda's VAQ-130, Miramar's VFP-63, North Island's VAW-111, and Imperial Beach's HC-1.

Oriskany is commanded by Captain John A. Gillcrist.

Ranger (CVA-61)

Following an in-port period at Sasebo, Japan, *Ranger* has returned to Yankee Station, where the aircraft of CVW-2 are presently flying combat missions in support of Allied forces in Southeast Asia.

Ranger's final line period of the 1969-1970 WestPac deployment is nearing completion: she is scheduled to return to Hunter's Point Naval Shipyard in San Francisco via Subic Bay, and Alameda, her homeport.

ATLANTIC FLEET

Forrestal (CVA-59)

Command of CarDiv-4 changed hands when Rear Admiral George C. Talley, Jr., relieved Rear Admiral William H. Housé in ceremonies held on board *Forrestal* while she was anchored at Argostoli Bay, Greece.

RAdm. House's next assignment will be as Director, Strike Warfare Division, and Nuclear Attack Carrier Program Coordinator, in CNO.

RAdm. Talley came to CarDiv-4 from the Office of the Deputy Chief of Naval Operations (Plans and Policy) where he was Deputy Director, Strategic Plans Division.

LCdr. N. H. Lowery counted his 400th *Forrestal* arrested landing recently. It is rare that an aviator makes enough cruises on the same ship to enable him to become a quadruple centurion. From 1959 to 1963, LCdr. Lowery was attached to VF-102. During that tour, he flew the F-4D *Skyray* (F-6) from *Forrestal.*

AT REST *in Guantanamo Bay, the Forrestal is silhouetted by the setting sun and caught by the camera of PH2 W. R. Curtsinger. Saratoga men enjoy a picnic while on board ship. Only one thing was missing – ants.*

Saratoga (CVA-60)

Saratoga will try almost anything, even serving as the largest floating picnic table in the world. Amid the smells of salt water, tanning lotions and sizzling steaks, *Sara* had a picnic – at sea.

CVA-60 was in the midst of training exercises in the Caribbean when Captain Warren H. O'Neil, her commanding officer, decided the crew was due for a well deserved day of rest.

It was a sight to behold as the ship's crew got into the spirit of the occasion by donning various kinds of weird and colorful attire. Sporting events of all kinds were the order of the day – from hop-scotch and volleyball to skeet shooting, bingo, and a form of softball called lob-ball in which the only enthusiasm lacking was in the ball's agility. The ball was stuffed with dried beans and foam rubber.

Testimony to the excellence of the food was the fact that the men devoured more than 3,000 pounds of *Sara* steak.

It was a day to simply lie in the sun, relax, listen to your favorite music and bat the breeze with your buddies. The only thing missing was the usual supply of ants.

Recently *Saratoga* was host to several high ranking officers from such countries as Yugoslavia, New Zealand and Peru as part of the 1970 annual naval attache tour sponsored by the Secretary of the Navy.

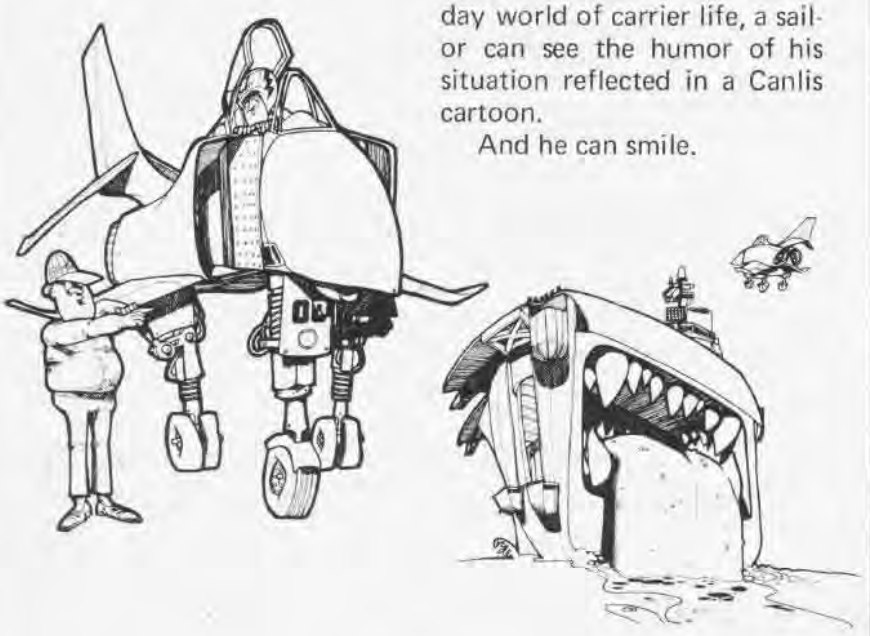
It was a short stay, only eight hours, but the visitors got a look at nearly every phase of at-sea carrier life. While the more than 4,000 crew members performed normal operations, the guests, including six officers of flag rank, were able to learn something about the carrier's operations.

On an aircraft carrier 12,000 miles from home, it is hard to make a sailor smile. Ltjg. Tony Canlis can. Stationed aboard the *Constellation*, Canlis is a cartoonist who has captured the interest of the ship's 5,300 men with his sometimes zany, sometimes serious sketches of life aboard an aircraft carrier.

A longtime resident of the Pacific Northwest, Canlis attended the University of Washington from 1962 to 1967. His cartoons were published in the school's *Daily*. His work now appears in the ship's daily newspaper and in the air plan.

In the work-a-day, everyday world of carrier life, a sailor can see the humor of his situation reflected in a Canlis cartoon.

And he can smile.



. . .and if any of you guys think Zip Code moves the mail, you've got something else coming.

The annual tour for foreign attaches gives them the opportunity to visit U.S. naval organizations.

Sara is homeported at Mayport.

America (CVA-66)

The high seas belonged to the *Americas* recently when CVA-66 steamed along with her namesake, the schooner-yacht *America* in the Atlantic.

Propelled by over 200,000 horsepower, the carrier overtook the two-masted gaff-rigged schooner shortly after departing Norfolk on her way to the Caribbean.

The two ships sailed at close range for several minutes as the men of the carrier lined the flight deck to survey the billowing sails of the sleek, black-hulled schooner, held together with about 10,000 pounds of shining bronze fastenings.

The yacht is a replica of the *America* of 1851 which won the first race around the Isle of Wight for the America Cup Trophy.

Lexington (CVT-16)

Another record was established aboard *Lex* when the assistant CIC officer, LCdr. A. W. Rehfield, made the ship's 252,000th arrested landing in a C-1A, to keep the carrier far ahead of the rest of the fleet in arrested landings.

While *Lexington* was conducting advanced carquals in the Gulf of Mexico off Corpus Christi, she was visited by Rear Admiral Frederick C. Turner, Chief of Naval Air Advanced Training.

The admiral flew aboard and observed F-9J *Cougar* and S-2 *Tracker* landings with Captain Cyrus F. Fitton, the ship's commanding officer. During the visit, landing #253,000 was recorded.

The *Lady Lex* recently returned to normal operations in the Gulf of Mexico after a seven-month yard period at Boston, Mass., and a two-week shakedown cruise at Guantanamo Bay, Cuba. She averages 3,231 arrested landings each month.

EDITOR'S CORNER

Personnel from the Naval Air Reserve Training Unit, Washington, D.C., have been "flying a kite." ATN2 John Fellow, ATN3 Tim Hiday and other members of NARTU's avionics shop pitched in to help George Graybeal, a civilian employee, build the prize-winning flyer.

Fourteen feet high and five feet square, the big box weighs 45 pounds, has 28 square yards of cloth, 260 feet of wire, and cost about $25. George's sister, Annita, acted as seamstress, sewing up the cloth.

George says, "To tell you the truth, I wasn't sure the thing would fly." But fly it did and, furthermore, it won two contests, capturing three trophies. At the Smithsonian Institution's Kite Carnival, it won the best-box-kite trophy and, in Maryland University's Kappa Alpha Theta competition, was named the best off-campus and the best engineered entry.

It is estimated that the kite's lift is between 80 and 150 pounds. During the first contest, George and his teammates ran out of cord at 300 feet. During the second competition, it climbed over 1,000 feet.

PHC BOB ALLEN was waiting for the SAR crew to check out a helo for an aerial photo mission over NAS Kingsville when his eyes wandered to the VT-22 flight line and his mind did a double-take. He automatically took the picture, at the bottom of the page, of an F-9 *Cougar* apparently being hijacked.

He says, "I felt a little silly when I learned the whole scene was an everyday occurrence – a plane captain 'doing his thing' as he gives the signal for external power."

Oh yes, the caption: The Captive Cougar Caper.

When Romeo Redcock retired as the mascot of the *Fighting Redcocks,* he was a combat-seasoned veteran. He had made three combat cruises with VA-22 aboard *Coral Sea, Ranger* and *Bon Homme Richard.*

But he left an able replacement, as the examining official can testify. *Romeo Redcock II* received his first annual flight physical from Colonel N. G. Maceachern, USAF, Assistant Surgeon for Veterinary Services, Air Defense Command. Col. Maceachern presented Commander Henry Holt IV, squadron C.O., with *Romeo II's* "up-chit" and the new mascot immediately flew all of three feet.

SHAMROCK ROARS off the runway with *Rebel* close behind, but *Bwana* sits quietly. *Shamrock* and his compatriots are F-4B *Phantoms* of VMFA-314, 1st Marine Aircraft Wing, Vietnam.

"Our *Phantoms* are named by their pilots," explains 1st Lt. Robert W. Franklin who flies a *Phantom* called *Rat.*

Shamrock* is flown by Lieutenant Colonel Thomas R. Kelly, C.O. Major James B. Leonard, Jr., XO, pilots *Rebel.

***Bwana* gained his title when the pilot bombed an enemy infiltration route and killed six elephants carrying supplies and ammunition.**

AND IN *this corner is the 45-lb. kite that flies. And it is assumed that Romeo Redcock II, above, came out fighting. But the hijacking proved to be a false alarm.*

ASW AIRCRAFT

LCdr. Paul Mullane

With the end of World War II, the Navy's aerial ASW forces underwent a sharp reduction, as did all military organizations during postwar demobilization. By the summer of 1947, our aviation antisubmarine units consisted of 16 land-based and 15 seaplane patrol squadrons, three escort carrier air groups (CVEG's) and two lighter-than-air squadrons. For the most part, these units were equipped with aircraft types which had been used in the recent war: PB4Y-2's, PBM-5's, PBY-6A's, F6F-5N's, TBM-3E's and ZPK airships.

By mid-1948, eight squadrons of P2V-2's had been introduced, the majority assigned to the Pacific area. The Atlantic, however, was served by two of the three carrier ASW groups. The CVEG's were made up of eight F6F-5N's and 18 TBM-3E's, each group operating from an escort carrier: *Sicily* (CVE-118), *Mindoro* (CVE-120), and *Badoeing Strait* (CVE-116).

Due to the unsettled international situation following the war and the increased tension between the North Atlantic nations and the Soviet Union, the U.S., with its recent experience in submarine warfare fresh in mind and aware of the USSR's growing undersea fleet, began to feel the need for increasing its ASW capability. Not only did Russia have a much larger submarine force than Germany began WW II with, but many of her submarines incorporated important new features. Most important of these was the newly developed snorkel. Unofficial estimates at the time credited the Russian Navy with not fewer than 350 submarines of various types with another 120 under construction. Among those in service were a number of former German-type XXI's which had an advanced streamlined hull design giving a much greater underwater speed. Improved submarine design combined with the snorkel presented ASW forces with a much more difficult detection and tracking problem than they had previously faced.

In response to this situation, new antisubmarine techniques, tactics, equipment and aircraft were investigated and adopted to offset the darkening ASW picture. Hunter-killer groups had been in operation since 1943 with VC squadrons aboard CVE's, flying F4F's and TBM's. Just after the war, these squadrons were broken down into VF and VA components within a CVEG, operating F6F-5N's and TBM-3E's. By 1948, the fighter aircraft were dropped from the force and the units were again designated VC squadrons. They now employed two variations of the TBM. The TBM-3W equipped with APS-20 radar (developed for AEW and later found to be superior for detection and tracking of surface targets, including snorkeling submarines) was teamed with the TBM-3E. TBM-3W's also had the ability to transmit radarscope pictures to an attacking aircraft or ship. By 1949, the TBM-3S was being delivered as a replacement for the TBM-3E. This new variation was a modification incorporating a searchlight, sonobuoys and improved electronic detection gear. To accommodate the added equipment, the rear turret and oxygen provisions were removed. By 1949, nine VC squadrons using these aircraft were operating from three CVE's.

PART III: 1946-1970

PB4Y-2 Privateer, top left, developed as a reconnaissance bomber during WW II was assigned ASW tasks in postwar VP squadrons. Twelve .50-cal. guns and 6,000 lbs. of depth charges made it a considerable threat. It was powered by four 1,350-hp. P&W R-1830 engines. PBY-6A, lower left, last of the famous Catalina series, was retained in some patrol squadrons until 1949. PBM-5 Mariners, left, replaced PBY's. They were powered by two 2,100-hp. P&W R-2800's, carried a crew of nine and were armed with eight .50-cal. guns and over 8,000 lbs. of ordnance in engine nacelle bays and wing stations.

ASW AIRCRAFT

TBM-3E Avenger featured APS-4 radar, was armed with rockets, depth charges. Wright R-2600 gave 1,800 hp. and speed over 200 kts.

Last modifications of ASW Avengers were TBM-3S2, top, and TBM-3W2. Attack version added searchlight, sonobuoys, bombsight and more electronic equipment. The search teammate was fitted with AEW-type radar, eliminating bomb-bay stores. Both lost rear gun turret.

In 1950 during the Korean war, the ASW-oriented VC squadrons, now ten in number, were redesignated VS squadrons. In the same year, a new aircraft made an appearance as a member of the team aboard ASW carriers. This was the AD-3W, an AEW plane which operated in small detachments with antisubmarine air groups. Another variation, the AD-3S, was produced in a small quantity as an ASW attack aircraft. It was equipped with both radar and armament and could combine search and attack functions, but performed most effectively when teamed with the AD-3E antisubmarine search plane. The *Skyraider* did not figure importantly in an antisubmarine role and soon disappeared from the scene, except in VAW detachments aboard CVS's.

Patrol plane aviation had also been progressing in these years. In 1946, VP squadrons were principally equipped with PB4Y-2's, PBY-6A's and PBM's but, by 1950, 12 out of 18 land-based squadrons were flying P2V's. One squadron of P4M *Mercators* and five *Privateer* squadrons made up the balance. The *Neptunes*, equipped with an improved radar and the latest electronics equipment, proved to be such successful ASW vehicles that the basic airframe was retained with continuing modifications until the last SP-2H was retired from the fleet early in 1970, a span of 24 years.

In seaplane squadrons, another long-lived patrol plane, dating back to 1936, the *Catalina*, was completely replaced by *Mariners* in 1949. The number of seaplane squadrons declined in the postwar years from 12 in 1946 to 9 in 1950 when the Korean conflict began.

When North Korea launched its attack across the 38th parallel in June 1950, the U.S. Navy was aware that the Soviets had more than 80 submarines in the Western Pacific area. On hand to counter any possible subsurface threat were several VP squadrons. From Yokosuka, VP-47 began providing local ASW patrol and escort for shipping to Korea with its nine PBM-5's. *Privateers*, now designated P4Y's, of VP-29 at Naha moved to Itami AFB, Japan, to give additional antisubmarine support. Further to the south, PBM's of VP-46 operating from the tender *Suisun* in the Pescadores and *Neptunes* of VP-1 from Naha covered the southern approaches. By July 7, VP-6 arrived in Japan with its P2V-5's and began ASW flights over the sea of Japan the following day. To coordinate these activities, Fleet Air Wing Six was commissioned in Tokyo to control patrol squadron activities in the Japan/Korea area. Also under FAW-6 supervision were British *Sunderlands* of RAF 88 Squadron which arrived from Hong Kong and were placed at U.S. disposal at the outbreak of fighting. As more VP squadrons arrived, including several reactivated reserve units, they also reported to the wing. To better supervise activities in the Formosa Straits, FAW-1 moved its headquarters from Guam to Okinawa. As the conflict progressed and it became evident that hostile submarine forces were not being committed, patrol aircraft were given a variety of other assignments in support of U.N. forces.

During the Korean War, new aircraft were being introduced in our ASW forces. AF-2S and AF-2W *Guardians* were assigned to some VS squadrons to replace the aging TBM-3E's, -3W's and -3S's. The AF, originally developed as the XTB3F-1, was to have

A few AD-3E and AD-3S Skywarriors saw ASW roles. These, assigned to VX-1, developed tactics and tested equipment. AD-3S, lower right, had radar and other electronic equipment and could perform search and attack roles but was more effective when working with AEW plane.

F6F's teamed with TBM-3E's in escort carrier air groups immediately after WW II but soon were replaced by TBM-3W/-3S combination.

been a jet-assisted torpedo bomber, but the requirement was dropped with the end of WW II. With increasing developments in electronic equipment and a growing emphasis on using two aircraft as a hunter-killer team, the TB3F design was revised (less jet engine) and built as a replacement for the ASW-configured TBM's. At the time, it was the largest single-engine carrier plane in operation. Its large size allowed an increase in electronic equipment, including the APS-33 radar which the AF-2W used in locating its target and vectoring its attack teammate, the AF-2S, and later the AF-3S. The AF-2W, also fitted with electronic countermeasures carried no armament. The AF-3S had a three-man crew, APS-31 radar, and a searchlight, and was armed with depth charges and torpedoes. Its sonobuoys were carried in the bomb bay.

Even before the *Guardian* entered service it was becoming evident that avionic advancement would allow both functions to be performed by one aircraft, resulting in a design competition which produced yet another long-lived Navy plane – the S2F *Tracker*. The S2F is the first carrier aircraft specifi-

PBM-5, above, saw service until 1956. P2V-2, below, assigned to squadrons in 1947, was armed with eight 20mm. and two .50-cal. guns as well as bombs, rockets and torpedoes.

AF-2W had no offensive weapons, crew of four, and only search and tracking equipment, including APS-20 radar and sonobuoys.

Three-place AF-3S had APS-31 radar and searchlight under wings, with ordnance and sonobuoys carried in its internal bomb bay.

S2F-1, featuring retractable radome and MAD, was first carrier-based aircraft designed to perform all phases of the ASW mission. It entered service in early 1954.

cally designed so that all phases of the ASW mission can be performed by a single plane. It first entered service with VS squadrons in the Pacific Fleet in 1954. Its crew consists of two pilots and two sensor operators. As first introduced, it was equipped with a retractable ventral radome, retractable MAD boom, sonobuoy dispensers in the engine nacelles and ECM equipment. It was capable of carrying rockets, bombs, depth charges and torpedoes. The *Tracker* first went to sea with VS-23 aboard *Princeton* on a WestPac deployment late in 1954.

The S2F series has gone through many modifications in its long service with our ASW forces,and perhaps this is a good point to convert to the current designation system. After the S2F-1/S-2A, came the S2F-2/S-2C with an enlarged bomb bay, for a larger homing torpedo. The S-2D had its fuselage lengthened slightly for improved crew accommodation; it also had enlarged tail surfaces and a three-foot-longer wing span. This model of the *Tracker* also had its nacelles altered to increase sonobuoy stowage from a total of 16 to 32 and an increased fuel capacity which added three hours to its endurance. The S-2E, similar to the S-2D, has more advanced ASW electronics equipment and provisions for new types of armament, including nuclear depth charges. The S-2E first entered service in 1962 when delivered to VS-41.

While improvements were being made to carrier antisubmarine aircraft, organizational changes were taking place in the command structure. In 1951, Hunter-Killer Force, Atlantic Fleet (HUKForLant) was established to supervise development of ASW tactics. As Soviet submarine strength continued to grow and improve in quality of equipment, a need for a more flexible and responsive command structure became apparent and, in December 1954, AntiSubForLant was established to supervise the integration of technological improvements into antisubmarine warfare. HUKForLant became a subordinate of this new command. By 1957, as the Russian undersea force grew even larger, the Navy's ASW forces were reorganized once again. This time all antisubmarine efforts of the Atlantic Fleet were placed under one centralized command. In July, Antisubmarine Defense Force, Atlantic, was commissioned with the mission "to conduct or direct antisubmarine warfare, air early warning and other offensive and defensive operations in the Atlantic Command area . . . to defend the continental United States, its essential bases and areas, and shipping at sea from attacks. . .through the Atlantic." Though the name was changed again in 1961, from ASDeForLant to ASWForLant, the mission has remained the same.

Within a year of the establishment of ASDeForLant, a new organization was established under its jurisdiction. From Atlantic Fleet units, Task Group Alfa was formed under RAdm. J.S. Thatch with the mission to develop and improve fleet ASW tactics and upgrade fleet ASW readiness. This included developing ASW training and the best use of new weapons reaching the fleet, as well as finding ways to get the most out of ships, aircraft and equipment then available. First, the various components of the group had to learn to work together.

Task Group Alfa was a normal HUK group of one CVS, seven destroyers augmented by two submarines and elements of one patrol squadron. Its assigned aircraft included S2F's, HSS-1's, AD-5W's and P2V-5F's. These same type aircraft were assigned to the ASW CarDiv under ASDeForLant. For the first time, jet aircraft showed up in an ASW force when, for a short period, F2H *Banshees* of VF(AW)-4 were assigned to provide air defense for HUK groups. Later in 1958, Task Groups Bravo and Charlie were formed to supplement the work of Alfa. Task Group Bravo, formed as CarDiv-14 around *Wasp* and seven DD's, was also given the mission of developing HUK tactics, but with slightly different forces – no ASW submarines, and P5M's instead of P2V's. Task Group Charlie, a destroyer-patrol plane team composed of one DL, four DD's and six P2V-7's of VP-11, was tasked with

developing convoy escort procedures.

The success of these measures in the Atlantic led to establishment of ASDeForPac in March 1960 under CinCPacFlt, with the job of coordinating the overall ASW effort for 85 million square miles of the Pacific. There, as in the Atlantic, the ASW force commander supervised the activities of antisubmarine aviation – reorganized into carrier ASW air groups (CVSG's). The first of these to be formed was CVSG-53, commissioned at NAS North Island in 1960 and composed of two VS squadrons of S2F's, one HS squadron of HSS-1N's and detachments from VAW-11 flying AD-5W's. Later, A4D's of VA-22 were added to provide air defense for the group. As part of this reorganization, replacement CVSG's were planned, as were replacement VP squadrons. The number of CVSG's grew rapidly to ten, plus two RCVSG's, by 1962, when the Cuban Missile Crisis saw the highest number of ASW air groups. In 1963, CVSG's dropped to nine and remained at that figure until 1967 when the number was further reduced to eight and then to seven in 1968. In 1966, the Marine Corps briefly joined the ASW effort by providing A-4's from H&MS-15 for CVSG-57 air defense. With the establishment of VSF-1 the Navy soon resumed this role with A-4B's and continued this mission until the squadron's decommissioning in 1969.

A vital part of the CVSG's was the helicopter squadron which, through its aircrafts' unique ability to hover over a point in the ocean and lower listening devices or sonar equipment, became one of the most important postwar ASW developments. The helicopter also has the advantage of a speedy launch and recovery cycle precluding the need for the carrier to change course for any length of time, a most desirable consideration when operating with a convoy or with screening vessels. Though Navy officials had advocated the use of the helicopter as an antisubmarine platform as early as 1943, it was not until 1949 that a suitable aircraft could be found. VX-1 at Key West, after unsuccessful attempts

S2F-2 of VS-36 on landing approach to CVS, above, had larger torpedo bay and tail surfaces than predecessor, S-2D, right, introduced major changes to Tracker, with longer fuselage, twice the sonobuoy capacity and increased endurance. VS-37, over Philippine Sea (CVS-47) in 1957, below, was in process of changing aircraft color scheme. Trackers of VS-35, bottom, are launched during operations off Vietnam.

ASW AIRCRAFT

ZS2G-1, first of new class designed to replace K-type, was equipped with radar, searchlight and latest detection equipment.

ZPG-2 was 343 ft. long and had 975,000 cu. ft. capacity. It could reach 85 kts. and set 200-hour endurance record in May 1954.

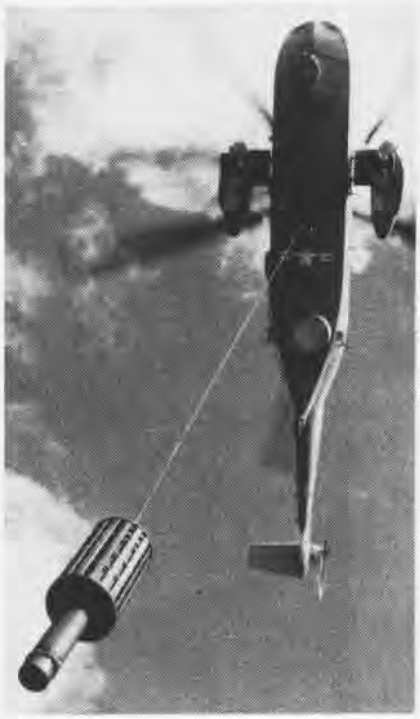
ZPG-2 was part of ASW team operating with Leyte (CVS-32). It was first new patrol ship built since WW II and first flown in 1951.

with other helicopters, obtained HRP-1's from the Marine Corps and, after removing their fabric skin and making other weight reductions, began testing airborne dipping sonar.

The HO4S was tested with dipping sonar at Key West in 1950 and, by 1952, the HO4S-1 with AQS-4 sonar was being evaluated for its ability to detect fleet and guppy type subs and to develop helicopter screening tactics. HS-1 had been formed at Key West in October 1951. Along with VX-1, HS-1 pilots flying these helicopters helped develop ASW tactics. With an improved engine, the HO4S became the first helicopter to be permanently assigned to ASW work. The addition of an autopilot proved of significant value in its ASW mission. HS-4 was soon commissioned at Ream Field to assist in configuration development of HO4S-3 helicopters. Another helicopter used in this testing was the HSL-1 which was the first rotor aircraft to combine both hunter and killer roles. It was equipped with a more advanced sonar than the HO4S and was used to develop ASW techniques. Concurrent with HO4S development was the introduction of HUP-2 helicopters into the three HS squadrons existing by summer 1952. The HUP-2 was the standard ASW helo for the next few years, until it and the HO4S were replaced by the HSS-1 in 1956.

The HSS-1, later designated SH-34G, was selected in 1955 to be the first fleet helicopter built specifically for ASW. It had a four-man crew, two pilots and two equipment operators, and an endurance of 3½ hours. It combined hunter-killer roles and incorporated dipping sonar plus other submarine detection equipment. Introduction of the HSS-1N/SH-34J in 1958 added new capabilities to the *Seabat* series with addition of Doppler radar, automatic rpm controls and an autopilot with a hover coupler. The HSS-1N was capable of both day and night ASW operations under instrument conditions, an important advancement in the art.

The next advancement in ASW helicopter development appeared with the HSS-2/SH-3A *Sea King* which was designed and built as an integrated weapons system. It features an improved ASQ-10 sonar system, higher cruise speed on its two turbine-powered engines and increased endurance. Other new features are the boat hull and floats which allow water landings if necessary. The *Sea King* can attack an enemy sub using torpedoes, bombs and conventional or nuclear depth charges. The SH-3A entered fleet service in 1961 with a Ream Field HS squadron and displayed its improved capabilities in 1962 ASW exercises.



Submarine-eye view of Sea King's dipping sonar occurs while SH-3A's from Hornet (CVS-12) participate in ASW exercise.

HRP-1 provided first successful test platform for dipping sonar. Stripped of its skin to lighten its weight, the aircraft was used by VX-1 at Key West but did not enter service with the fleet.

HUP-2S equipped with sonar was an early interim ASW helicopter frequently found in the same squadron with HO4S's. Powered by a 525-hp. R-975, it cruised at 80 kts. and had a range of 340 miles.

HO4S-1, upper left, was Navy's first widely used ASW helicopter. HO4S-3 had later engine, raising power from 550 to 700 hp. HSS-1, lower left, first fleet type to combine hunter-killer roles, featured improved sonar, carried homing torpedoes. SH-3D, above, latest of the Sea King series, has advanced detection equipment and electronics. Two 1,400-shp. turbine engines give 130 kts.

ASW AIRCRAFT

P5M-1, left, was first post-WW II seaplane assigned ASW mission. Nacelle bays could each contain two 2,000-lb. bombs. P2V-5, above, introduced MAD tail cone and large tip tanks. A later modification added two turbojets in underwing pods to increase maximum speed.

The SH-3A has now been replaced in all HS squadrons by a more modern and even more sophisticated helicopter, the SH-3D. This version of the *Sea King* has more powerful engines, ASQ-13 sonar, and an improved torpedo launcher which no longer requires forward flight for properly firing a homing torpedo against its unseen enemy.

While these developments were taking place in carrier ASW, patrol ASW also saw changes. The last P4Y's were retired from VP squadrons by the summer of 1954. P5M's, which had been introduced in 1952, had replaced the last PBM's by late 1955. The first T-tail P5M-2's entered service in 1955 in VP-44. By 1956, all land-plane patrol squadrons were equipped with P2V-5F's or -7's. The *Neptune-Marlin* team dominated patrol aviation until 1963 when VP-8 and VP-44 received the first of a new breed, the four-engine turboprop P-3A *Orion*. The P-3A marked a big step forward for patrol ASW. Equipped with improved radar, ECM and navigation system, it is a much more effective submarine killer. The inertial-doppler navigation system provides precise geographical position information continuously to assist the TACCO in his duties. The *Orion* can carry conventional depth charges or *Betty*, the Mark 101 nuclear depth charge, plus four Mk. 44 torpedoes internally and another ten Mk. 44 externally, a deadly load for any submarine to meet with.

By 1966, an improved *Orion*, the P-3B, was delivered to the fleet. VP-26 and VP-9 were the first to receive the new model which featured improved engines and facilities for launching the *Bullpup* missile. The following year saw the end of 56 years of seaplane aviation in the Navy when an SP-5B *Marlin* of VP-40 made its last operational patrol over the South China Sea from NS Sangley Point, R.P. It marked the final phase of the transition of VP squadrons to land planes begun four years before. The latest advance in patrol ASW came this year when VP-56 and VP-49, NAS Patuxent River, received the advanced P-3C. This latest *Orion* features the A-NEW avionics package – a digital computer linking the various sensor equipment with a data processing system and a memory capability. It relegates time-consuming tactical calculations and other routine functions to the computer, leaving the TACCO and sensor operators time to concentrate on making correct ASW decisions. A-NEW also ensures that *all* available sensor information is utilized in solving the tactical problem. In 1970, the *Neptune* also departed from the scene, leaving VP aviation with a single type of aircraft for the first time in its history.

Organizational developments also took place in the VP establishment following the Korean War. Fleet Air Wings, Atlantic, organized in 1955, composed of FAW's 3, 5 and 11, Fleet Airship Wing One and a seaplane tender, supervised the operation of a variety of aircraft. At the time of its establishment, its units flew P2V's, PBM's, P5M's plus ZSG and ZPG blimps. The seaplane tender operated in advanced areas to provide seaplanes, away from established bases, with support in the area of logistics, communications and flight operations. Fleet Air Wing Ten was commissioned at Moffett Field in June 1963 and, in 1964, Fleet Air Wings, Pacific, was established. Paralleling developments in carrier ASW, Task Group Delta was set up to study and improve VP tactics. Though originally planned as a one-year project, the program proved so successful that Delta was retained as a permanent group.

At present there are several new ASW aircraft under development which will augment or replace those now in service. The S-3A being built by Lockheed is the first carrier-based jet antisubmarine aircraft and is planned as the replacement for the venerable S-2 series which first entered service 16 years ago. The S-3A as now planned will have a four-man crew consisting of a pilot, copilot, TACCO

P5M-2 was first delivered in 1954. Its tail had been redesigned and MAD boom added. Larger fuel tanks and more powerful engines were also included. Nose housed APS-44A forward scanning radar.

P2V-7 entered VP squadrons in 1955 as last version of the Neptune series. It had two J-34 turbojets, enlarged crew space and other improvements. The last fleet SP-2H was retired early this year.

and sensor operator. The plane will have a computer which is a miniaturized version of the A-NEW system found in the P-3C and carry a variety of ordnance including homing torpedoes, mines, depth charges, rockets and missiles.

Another new program now under study is LAMPS (Light Airborne Multi-Purpose System). This system would employ a light, manned helicopter capable of being based aboard destroyer-type escort ships and employed in ASW along with its other missions. The aircraft would carry a variety of weapons and sensor equipment and replace or augment the QH-50 drone ASW helicopters now aboard some escort vessels.

Though ASW aircraft have improved their capabilities tremendously since the end of WW II, this does not mean that they would have an easy time against hostile submarines. Advances made in submarines in this same period include nuclear power, improved high speed hull designs, deeper diving capabilities and reduction of noise levels of internal machinery and propeller cavitation. Advances in both aircraft and submarines may be expected to continue for the foreseeable future as new technology contributes to the advances of each side in the hide-and-seek of antisubmarine warfare.

Orion, above, began replacing P-2's in 1962. P-3C, the latest modification, was introduced in 1969, featuring sensor-computer system. S-3A, below, is planned S-2 replacement.

P2V-5F	SP-2E
P2V-7	SP-2H
P5M-1	SP-5A
P5M-2	SP-5B
S2F-1	S-2A
S2F-2	S-2C
S2F-3	S-2D
S2F-3S	S-2E
HO4S-3	UH-19F
HSS-1	SH-34G
HSS-1N	SH-34J
HSS-2	SH-3A

Letters

VMF-312 Reunion

Tentative plans are being made for a 25th-year reunion of Marine Fighter Squadron 312 in October at Chicago, Ill. An effort is being made to obtain the current addresses of all personnel who served in the squadron from August 1943 through June 1945.

Please send all information to: M. O. Chance, Box 54, RFD #1, Brookeville, Md. 20729, or Phil Yeckel, Hidden Valley Ranch, Big Horn, Wyo. 82833.

Merritt O. Chance

ASW

What a rare pleasure it is for a black shoe to correct a brown shoe. *NANews*, May 1970, has a truly excellent article on ASW aircraft, but with one minor error. In discussing the role of lighter-than-air (page 39), the article cites their remarkable statistics but says "without the loss of a single ship to submarine action."

The blimps did a fine job indeed, but K-74 was shot down by a German submarine on July 18, 1943. My reference book says "in the Caribbean," but I think it was in the Gulf of Mexico because we heard some of her last radio transmissions when I was on a training cruise off Key West from the old SubChaser Training Center in Miami.

Incidentally, in the days of 1942 coastal convoys, we were more dismayed than cheered by the sight of a distant blimp on patrol. It was highly visible at very long ranges and always indicated the presence of a convoy. As the escort, we didn't feel that the blimp's offensive potential offset the disclosure, but our group never lost a ship in 15 months, so perhaps they were more useful than we thought.

Roy C. Smith, III, Captain, USNR (Ret.)
Director
U.S. Naval Historical Display Center

¶ The statement that there was no ship loss to submarine action was meant to refer to surface ships. However, it is understandable how it might easily be misunderstood.

The K-74 incident is indeed an interesting one. Though airship doctrine called for blimps to attack only submerged or submerging U-boats, in this case, the pilot elected to make an attack due to the circumstances in which he found himself. The K-74 had come upon the submarine at night and though it tracked it for some time, the U-boat made no evasive maneuvers nor showed any indication that it had observed the airship. Since the sub was approaching a convoy only 20 miles ahead, the pilot decided to make an attack to prevent one upon the convoy. It approached the submarine but nothing happened until the blimp was well within the range of the U-boat's guns. Then, everything opened up at once: machine guns, 40mm's and the deck gun. Although blimps could take quite a bit of small caliber rounds without immediate serious consequences, the deck gun was another matter. It opened one large hole right in front of the control car. As the blimp slowly lost altitude, it held its course toward the submarine and answered with its own .50 cal. On passing low over the U-boat, both depth charges were released but failed to drop from their attachments. The blimp continued on into the darkness, losing altitude and soon crashed into the sea. The sub continued on its way but missed the convoy. The next day the entire crew was rescued and, later the same day, the submarine returned to the scene of the fight and recovered part of the airship's envelope which it carried back to Germany.

Soaring

I can't begin to tell you how pleased I was to read your fine article on sailplanes in the April 1970 issue of *Naval Aviation News*. It was high time someone wrote a decent article on *real* flying, and you sure came through! However, there was one area of soaring left out that I feel is worth mentioning: radio-controlled model sailplanes. I am a midshipman in ROTC at the University of Nebraska and fly such aircraft. Mine vary in size from six to ten feet in wingspan and use a five channel digital proportional radio control system. When nine to seventeen knots of wind hit one of the numerous dams in this area, the wind is deflected upward into a beautiful updraft. Flying in such waves, I have been able to achieve flights of up to two hours in duration. (Tell Gramps he missed his boat by not becoming a sailplane jockey!)

Midn 4/c Dale E. Pahl
3717 Michael Terrace
Lincoln, Nebraska 68524

Flying Club

Congratulations to Commander Pursch, Chief Johnston and *Naval Aviation News* for an outstanding article, "Daedalus and Icarus of Patuxent River," in the April issue. That the article has generated considerable interest in the soaring program is evidenced by the number of new members who have joined us at Pax River and the numerous inquiries from other activities about how to organize their own programs. We are currently procuring an additional sailplane to accommodate our increasing activity and are most optimistic about the future of soaring here at Patuxent. Any inquiries should be addressed to: Patuxent Navy Flying Club, Post Office Box 5, Naval Air Station, Patuxent River, Md. 20670.

LCdr. Bruce Fleming
President, Patuxent Navy Flying Club

Correction

The April 1970 issue incorrectly listed VAH-110 as the winner of the Battle Efficiency Award for KA-3's. Heavy Attack Squadron Ten (VAH-10) was the winner.

It appears that everyone except *Naval Aviation News* is aware of the accomplishments of *Heavy Ten*. The *Vikings* are known worldwide for their dependable services in support of fleet operations both in the Mediterranean and WestPac. These services are provided through detachments aboard ship as well as operations out of the parent command at NAS Whidbey with both KA-3's and EKA-3's.

Commanding Officer
VAH-10

¶ Our apologies. The gremlins really slid that *one* in.

Naval Aviation Films

The following motion picture films are among the latest released by the Film Distribution Division, U.S. Naval Photographic Center. They deal with specifics in Naval Aviation.

MN-10481A (unclassified) *T-2B Familiarization – Part I: Air-to-air gunnery ground procedures.* Illustrates preflight and postflight ground procedures for air-to-air gunnery (12.5 minutes).

MN-10530 (unclassified) *Automatic Sprinkling System for Ship Missile Magazines – Part II: Wet Type, operation and maintenance, combined automatic and hydraulic controlled.* Sprinkling systems for extinguishing fires caused by temperature increase in missile magazines (27 minutes).

MN-10659 (unclassified) *Parachutes – Success or Failure.* A view of the proper care and handling of parachutes to avoid damage and consequent hazards to personnel and cargoes. Inspection, repair, repacking methods and abuses and hazards in stowage that could damage the chute or cause malfunction are discussed (30 minutes).

MN-10761A (unclassified) *T-34B Familiarization: Preflight, taxi and takeoff.* Preflighting, taxying and takeoff of the aircraft (22 minutes).

Instructions for obtaining prints of newly released films are contained in OpNav Instruction 1551.1E.

Reconnaissance Attack Wing One

'COVERING THE WORLD'

NAVAL AVIATION

NEWS

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