

NAVAL AVIATION

NEWS



48th Year of Publication

APRIL 1967





HOW IS THE GROUND WAR GOING?

Lieutenant General Victor Krulak, USMC, FMF Pacific, reported on January 27: 'I see solid evidence of progress. We are doing the right things. We are getting results that can be quantified (in the Marine areas): 76 villages have defense forces that had none a year ago; 51 villages have mayors, none had a year ago; 117 schools have been built; and 117,000 people fled the Viet Cong and put themselves under our protection.'



NAVAL AVIATION NEWS

FORTY-EIGHTH YEAR OF PUBLICATION APRIL 1967

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■ THE STAFF

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■ COVERS

A Skyhawk on the USS Enterprise (CVAN-65) comes under the control of the hook man, AA James Hinkle. Other photos are on pp. 20-21. . . . Above is a view of ordnance handling aboard USS F. D. Roosevelt (CVA-42). . . . Aircraft shown in formation on back cover are Skyhawks from USS Independence (CVA-62).

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NAVAL AVIATION NEWS

Safety Winner Announced VT-27 Wins CNAVAnTra Trophy

In February at NAS CORPUS CHRISTI, Rear Admiral R. A. MacPherson, Chief of Naval Air Advanced Training, presented the 1966 CNAVAnTra Aviation Safety Trophy to Training Squadron 27. Commander Robert N. Radtke, VT-27's skipper, accepted the trophy and the citation.

The citation reads in part, "For outstanding achievement of Naval Aviation safety and accident prevention while engaged in the training of student aviators in S-2A multi-engine aircraft during the calendar year 1966. During this period VT-27 flew 32,640 accident-free hours and completed the training of 247 student aviators."

In presenting the trophy, Admiral MacPherson noted that all four multi-engine training squadrons in his command had completed 1966 accident-free, making it difficult to choose the winner.

Admiral MacPherson also presented the quarterly "Aces" award to VT-27 and presented five flight instructors with 1,200 accident-free flight hour certificates.

VT-27 passed its 60,000th accident-free flight hour in January.

Aviators' Reunion Planned Scheduled for Five Flags Fiesta

Are you an "old" Naval Aviator? If so, some people in Pensacola, Fla., are looking for your name and address.

A reunion of present day, retired, or ex-Naval Aviators designated in, or before 1938, is being planned during the Fiesta of Five Flags at Pensacola, June 7-11, 1967.

The Chief of Naval Air Basic



AT NAS CORPUS CHRISTI, Mrs. Walter G. Dick, State Regent of the Texas Society, Daughters of the American Revolution, presented the 12th annual "Armed Services Awards for 1966," engraved wristwatches, to the three top graduates of the Naval Air Advanced Training Command. Winners and present duty stations are: (left to right) Lt. Keith C. Edgcomb, USCG, Coast Guard Air Station, Traverse City; Capt. Robert L. Potter, USMCR, MAW-2, MCAS Cherry Point; and Ens. Wayne F. Hillegas, USNR, VP-19, Moffett Field.

Training is coordinating the reunion with the Fiesta staff, and Vice Admiral C. P. Mason, USN (Ret.), Naval Aviator #52, heads the reunion committee.

Present plans include a golf tournament, visit to the Naval Aviation Museum, a carrier cruise, fishing trips, participation in the Fiesta of Five Flags celebration, an air show and various banquets and receptions.

Those planning to attend should send in their name and address to CNABaTta, NAS PENSACOLA, Fla., 32508. Those who cannot attend are urged to send in name and ad-

dress anyway to enable them to receive information concerning their shipmates. A postcard will do.

VT-28 Sets Safety Milestone 75,000 Accident-Free Hours

Recently, Training Squadron 28 at NAS CORPUS CHRISTI passed a safety milestone of 75,000 accident-free flying hours. In the two-year period, the squadron trained 550 students and flew over 12 million miles. VT-28 flies the TS-2A *Tracker*. Seven thousand carrier and 180,000 field landings were made, most of them by student pilots.

PACIFIC, ATLANTIC 'E' WINNERS NAMED

ANNOUNCEMENT of Battle Efficiency "E" winners in both the Pacific and Atlantic Fleets, for the competitive year ending in December 1966, has been made by the commanders of Naval Air Forces in both areas.

Six aviation ships and 19 air squadrons have earned the coveted "E," according to the announcements. One of the ships, the USS *Intrepid*, was granted the award in a special category; she performed as a light attack carrier during a deployment off Vietnam, even though she is designated a CVS.

Ships winning awards in the Pacific were the nuclear-powered attack carrier, USS *Enterprise*, currently on her second combat deployment, the ASW carrier USS *Kearsarge*, recently returned from the Western Pacific, and the sea-plane tender, USS *Currituck*.

Atlantic Fleet winners, in addition to *Intrepid*, were the Navy's newest CVA, the USS *America*, and the CVS, USS *Essex*.

Aviation squadrons winning "E's," their home bases ashore and the types of aircraft they fly include:

Pacific—VF-142, NAS MIRAMAR, F-4; VF-194, NAS MIRAMAR, F-8; VA-192, NAS LEMOORE, A-4; VA-215, NAS LEMOORE, A-1; VAH-4, NAS WHIDBEY ISLAND, A-3; VP-17, NAS WHIDBEY ISLAND, P-2; VP-22, NAS BARBER'S POINT, P-3; VP-48, NAS NORTH ISLAND, P-5; VS-29, NAS NORTH ISLAND, S-2; and HS-8; NAS REAM FIELD, H-3.

Atlantic—VF-102, NAS OCEANA, F-4; VA-106, NAS CECIL FIELD, A-4; VA-65, NAS OCEANA, A-6; RVAH-1, NAS SANFORD, RA-5; VS-28, NAS QUONSET POINT, S-2; HS-5, NAS QUONSET POINT, H-3; VP-21 (FAW-3), NAS BRUNSWICK, P-2; VP-8 (FAW-5), NAS PATUXENT RIVER, P-3; and VP-18 (FAW-11), NS ROOSEVELT ROADS, P-2.

In addition, several shipboard departments claimed awards. Pacific Fleet winners were:

Operations — *Enterprise*, USS *Bennington* and USS *Pine Island*; Communications — *Enterprise*; Air — USS *Oriskany*, *Bennington* and USS *Salisbury Sound*; Engineering — *Enterprise* and *Bennington*; Weapons — *Enterprise*, *Kearsarge*

and *Currituck*; Supply—USS *Coral Sea*, *Kearsarge* and *Currituck*; ASW —*Kearsarge*.

Atlantic Fleet ships winning departmental awards were: Air—*America* and *Essex*; Communications—*America* and *Essex*; Engineering—*America* and USS *Randolph*; Medical—USS *Independence* and *Essex*; Operations—*America* and *Randolph*; Weapons—USS *Forrestal*; Weapons (single type)—*America*; Operations, Air and Medical (single type)—*Intrepid*; ASW —*Essex* and CVSG-60.

'Safer' Concept at Norfolk New Computer Now Operational

In February, Rear Admiral W. I. Martin, Assistant Chief of Naval Operations (Air), cut the traditional ribbon and pushed a small plastic button at the Naval Aviation Safety Center in Norfolk. He thus put into operation a new Honeywell 1200 digital computer that will be used in an effort to lower the accident rate in Naval Aviation.

From 1951 to 1965, the naval aircraft accident rate was reduced about 75 percent despite increasing aircraft performance, airspeed and complexity. In 1965, the Safety Center observed that the accident rate was beginning to level out and more effort had to be expended to lower the rate. The computer is the answer.

The Safety Center calls the program the SAFER concept (the Systems Approach for Enhanced Readiness) and will use the computer to examine the safety implication of the man, the machine and the environment as a system.



ADM. MARTIN (R.) AND ADM. BUIE

Rear Admiral Paul F. Buie is Commander of the Safety Center.

Gala Year is Scheduled For San Diego's 50th Anniversary

While most of the events are scheduled for the summer months, NAS NORTH ISLAND already is celebrating the Golden Anniversary of the Navy's facilities at San Diego.

Thus far in 1967, various lunches and parties have been held. This month features the Eleventh Naval District elimination bowling matches.

In June, the San Diego County Fair will have a special Golden Anniversary Day. The same month, a golf tournament will be held as well as an All Hands' Dance and the Miss Golden Anniversary Beauty Contest.

Two mid-summer reunions are scheduled: the WAVES' 25th anniversary convention, July 20-23, and the Early and Pioneer Naval Aviators Association, July 26-29.

August will be marked with a gigantic air show with aerospace exhibits, static display of aircraft, the *Blue Angels*, the Army's *Golden Knights* as well as many other events.

In November an historical monument will be dedicated at the City of Coronado Park, adjacent to Gate 5, NAS NORTH ISLAND. Also in November are scheduled two Golden Anniversary balls, one at the Officers' Club, one at the CPO Club.

New AEW Course at Glynco Trained for Tracer Operations

The Airborne School Branch of the Combat Information Center School, NAS GLYNCO, Ga., has initiated a new airborne early warning (AEW) program.

Students are usually ensigns or officer candidates. After a preparatory three-week AEW/Airborne Electronic Warfare course and a five-and-a-half week AEW course, they are ready for training as Anti-submarine Air Controllers and Air Intercept Controllers.

The preparatory training stresses radar theory and navigation. The five-and-a-half week course stresses the missions of the AEW aircraft, primarily the carrier-based E-1B.



GRAMPAW PETTIBONE

All Yours

After a complete preflight of their T-34, the instructor and his student took off at 1200 for a pre-solo check flight. The weather was clear and both pilots were in proper mental and physical condition to fly.

Upon completion of some initial high altitude maneuvers, the *Mentor* entered the landing pattern at the auxiliary landing field and commenced practicing touch-and-go landings. After the final touch-and-go and upon reaching an altitude of 550 feet indicating 110 knots, the instructor chopped the throttle, simulating a low altitude emergency. The student executed the initial procedures properly and headed for a farmer's field to the north of the auxiliary landing field.

On final approach to the field, with gear and flaps down, the student noted his line-up was a bit right of his intended point of landing and added left aileron to correct it. (Up to this point the student had correctly executed the maneuver with the exception of trimming the *Mentor* for balanced flight.) Just after adding left aileron, he noted the instructor was

also on the controls although there was no verbal or other acknowledgment by either of them that control had shifted. As soon as he perceived the instructor on the controls, the student released the stick and throttle quadrant. He demonstrated that he no longer had control by holding his hands over his head. The instructor, then in con-

trol, returned the aileron to a neutral position, added full power, and attempted simultaneously to apply left rudder.

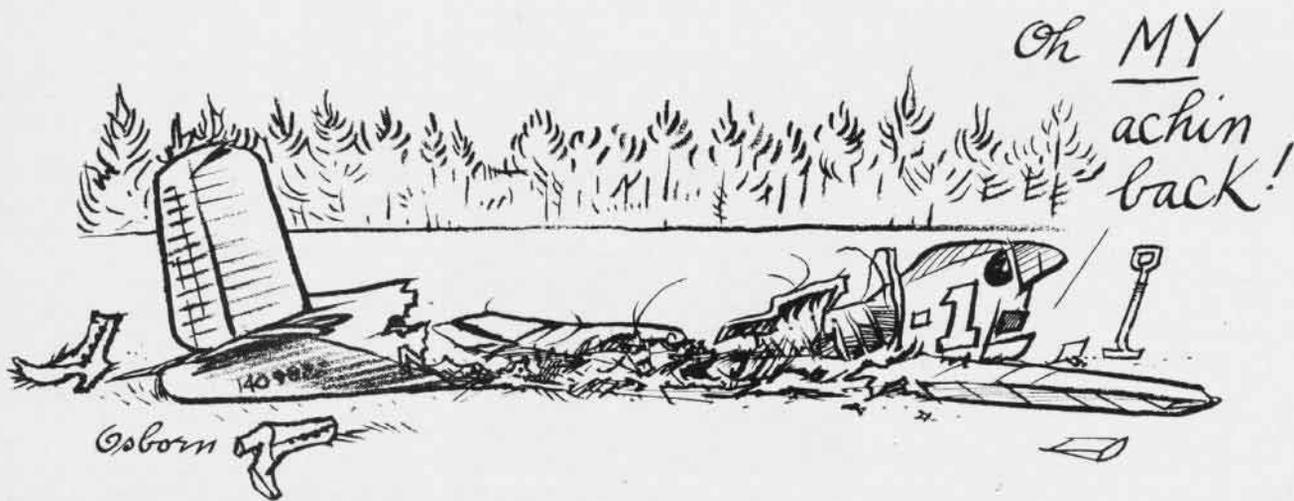
He was unable on the first few tries to depress the left rudder as the student had failed to remove his feet from the rudder pedals. This, in effect, prevented coordination of rudder and aileron movement and resulted in a cross-control situation. By the time the instructor was able to neutralize the rudder, too much altitude had been lost to allow for recovery.

The T-34 hit a fence post, bounced twice and came to rest. The engine burst into fire on impact and the aircraft was destroyed. Both occupants experienced some degree of difficulty exiting the wreck, but finally made it with only minor burns. They retreated to a safe distance and were picked up shortly by the SAR helo and returned to base.



Grampaw Pettibone says:

Heavenly days! This sort'a foolishness went out'a style with button shoes. If Gramps could only get all throttle jockeys to read OPNAV Instruction 3710.7C and live by it,



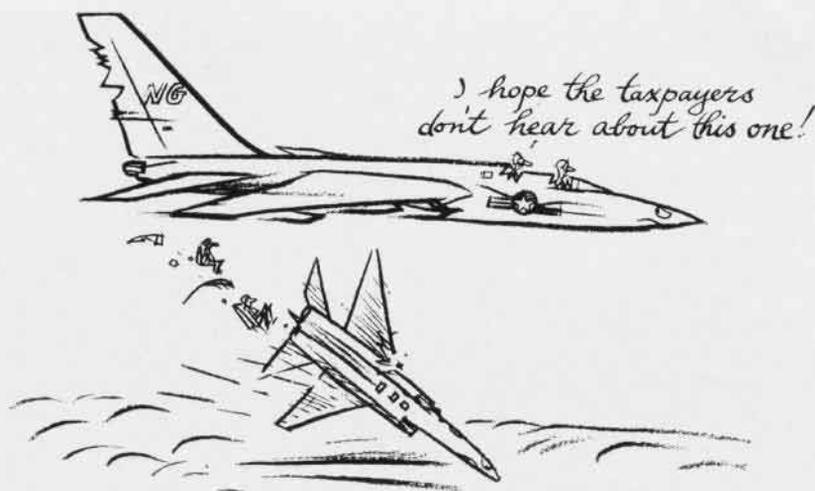
how serene life would be. Para 411 on page 4-2 of this book covers the change in control procedure extremely well. It was written just to prevent this sort of thing because it has happened before. A wise man learns by his mistakes; a wiser man learns by the mistakes of others.

'Over Exposed'

Monday's schedule called for this pair of *Vigilante* crews to brief at 0830 for a chased familiarization flight. The senior RP (Replacement Pilot) had considerable experience flying the A-5A in the past and just recently had completed the "difference" ground course for the RA-5C. (Normal procedure for pilots with past experience such as this was to commence photo reconnaissance training rather than go through the complete fam stage of the RA-5C.)

Concluding their brief at 0900, both crews proceeded to their respective aircraft and conducted the preflight inspections. Both aircraft checked out okay and the instructor became airborne at 0935. The RP took off some two to four minutes later and, following the instructor's track, rendezvoused about 60 miles out from base. The RP felt real comfortable in the new bird and informed the instructor that he would like to take the air-to-air photos, acquiring some oblique shots first. He then positioned his aircraft some 800 to 1,000 feet abeam to starboard and about 300 to 400 feet above. The sun's position was poor, so the student informed the leader that he would move to the port side which he did by dropping back and down, passing beneath to the opposite side. After completing several oblique shots, he informed the instructor that he was ready for the vertical photos and would maintain 15,000 feet. The leader agreed to drop down and back and to fly under #2, holding 14,500 feet.

The instructor lined up with the photo plane and established a closing speed of five-eight knots while holding his altitude at 14,500 feet. The vertical separation appeared to be at least 500 feet and remained so until the aircraft were nearly in line. At about this time, the instructor lost the RP from his normal field of vision and



shortly thereafter heard the transmission—"You're too high."

Meanwhile in the photo plane, the B/N reflectively positioned himself tightly back in his seat as he continued to watch the closure in the viewfinder. The RP was startled by the appearance of a vertical stabilizer rising up rapidly in front and to the right of the cockpit. He felt as though he could almost reach out and touch the vertical fin and instinctively tried to pull up and roll to the left.

There was very little, if any aircraft response. A mild thud was felt, followed rapidly by a loud roar and blast of air. Simultaneously with the air blast, the pilot was aware of a dark, ill-defined mass heading for his face from above and to the right. As he recoiled in the seat, he turned away and felt a stunning blow to the right side of the head. He gritted his teeth and, thinking the aircraft was disintegrating, elected to eject immediately. Pilot and B/N were ejected without further incident while the abandoned *Vigilante* rolled over and headed for its doom.

The chase plane, suffering minor damage, was able to remain on the scene until the two airmen were recovered before returning to home base for an uneventful landing.

Grampaw Pettibone says:

Great jumpin' Jehosaphat! It's a downright shame that these here characters were allowed to pool their complacent attitudes and misguided talents for this sort of production. Regardless of the RP's rank or experi-

ence, our RAG instructors can't afford to let this influence their judgment or permit deviation from the approved syllabus. We all know that when you assume that your thousands of hours in the air make you immune to accidents, you're a candidate for the "Deep Six" or the wrong end of the long green table.

Only for a Pro

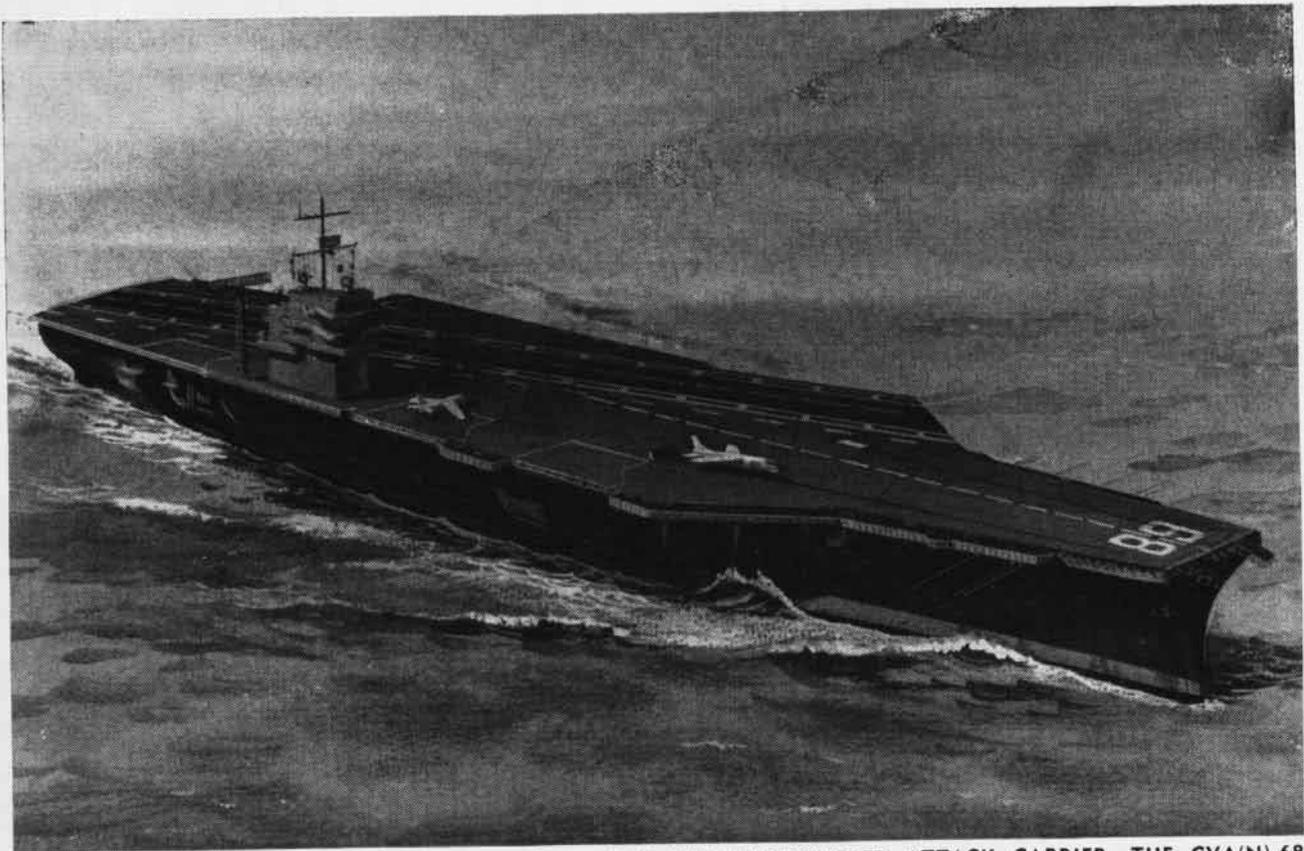
As the A-4 approached the rendezvous and added power, there were severe engine chugs and explosions. Retarding the throttle to 92% and below smoothed it out; nevertheless, the pilot turned toward the ship and dumped fuel.

He leveled off on instruments as the cloud deck ran from 500 to 5,000 feet. At 3,000 feet, the driver extended his gear and flaps. He descended to 1,000 feet at 180 knots and 90% for CCA, decelerated to approach speed, and acquired the meatball, intentionally holding it a bit high. He eased throttle at the ramp in response to Paddles' call.

At touchdown, the hook skipped #1 wire, tipped #2, skipped #3 and 4. As the pilot applied power, the engine chugged severely and would not produce sufficient thrust to stay airborne. The unfortunate *Hawk* driver pulled the curtain some 15 to 30 feet above water in a wing-level attitude and made it without injury.

Grampaw Pettibone says:

You did your part like a pro, son, but this coulda' turned real wormy. It's no license for any inexperienced types.



ARTIST'S CONCEPT OF THE NAVY'S NEWEST PROPOSED NUCLEAR-POWERED ATTACK CARRIER, THE CVA(N)-68

SECRETARY McNAMARA ON DEFENSE BUDGET

Appearing before the Senate Subcommittee on Defense Appropriations, Secretary of Defense Robert S. McNamara outlined his proposals for the armed services for the coming year. Those portions pertaining to the Naval and Marine Aviation squadrons and ships are presented as they appeared in his "posture" statement.

Attack Carrier Forces

Last year, I described to the Committee a new plan under which we would maintain an active fleet of 15 attack carriers and 12 air wing equivalents, instead of the 13 carriers and 13 air wings we were planning on before. We made this change because the new force structure promises to provide significantly more usable combat power than the one previously planned—and at no increase in cost. However, a force of 15 carriers and 12 air wing equivalents would require some change in the present mode of operation. Carriers would normally deploy in peacetime with less than the maximum complement of aircraft and additional aircraft would be flown to the carriers when and as needed. In effect, we would be treating the attack carrier as a forward floating air base, deploying the aircraft as the situation requires, much as we do in the present carrier operations off Vietnam. It is this kind of operational flexibility that enables the attack

carriers to make a unique contribution to our over-all tactical air capabilities.

Although the adjustment of the air wings to the new force structure is scheduled to begin in FY 1968 and be completed by FY 1971, the total number of combat aircraft assigned to the attack carrier force will remain virtually unchanged. You may recall that two years ago, in a decision unrelated to the number of carrier wings, we decided to increase the number of light attack aircraft per squadron, and the number of light attack squadrons per *Forrestal*-class carrier. In terms of aircraft assigned, these increases, together with the replacement of *Essex*-class carriers with the much larger *Forrestals* and *Enterprises* will just about offset the reduction to 12 equivalent air wings. In other words, each equivalent air wing will have about 25% more aircraft than the present average air wing.

Ships—The attack carrier force at the end of the current fiscal year will consist of one nuclear-powered carrier, the *Enterprise*, and seven *Forrestal*-, two *Midway*- and five *Essex*-class. In FY 1969, the last of the conventionally-powered attack carriers now under construction, the *John F. Kennedy*, will join the Fleet, followed in FY 1972 by the second of the nuclear-powered carriers.

As I stated last year, if we are to retain a force of 15

carriers, two more will have to be provided. One is scheduled for FY 1969 and one in a later year; both will be nuclear-powered. Fifty million dollars is included in the FY 1968 budget for long lead time components for the FY 1969 carrier. When these ships are delivered to the Fleet, the remaining *Essex*-class carriers will be retired from the CVA force, which would then consist of four nuclear-powered, eight *Forrestal*- and three *Midway*-class carriers, for a total of 15.

Carrier Aircraft—No major change is contemplated in the composition of the aircraft complement of the attack carrier forces from that projected a year ago. The decline in the number of fighter aircraft after FY 1967 reflects two factors—the previously mentioned reduction from 15 to 12 air wing equivalents beginning in FY 1968, and the substitution of the more capable F-111B for other fighter aircraft on a less than one-for-one basis. When the transition from 15 to 12 air wings is completed, the fighter force will consist of F-111B's, F-4's and F-8's. The F-8's will be retained for the *Essex*-class carriers which cannot effectively operate the F-4's or F-111B's.

In contrast to the fighters, the number of attack aircraft will have increased substantially by the time the transition to the 12 equivalent air wings is complete. At that point, the attack aircraft force will consist mostly of A-6's and the new A-7's. The first few A-7's are scheduled to be delivered to the Fleet by the end of the current fiscal year.

Inasmuch as the A-3 heavy attack aircraft are no longer required for the strategic mission, they are now being used as tankers to extend the range of "shorter-legged" Navy aircraft. However, the tanker configuration package is readily removable and these aircraft can be reconverted to the attack role in a matter of days, if required.

No significant changes have been made in the combat readiness training aircraft forces.

ASW and Destroyer Forces

... **ASW Carriers**—We now have eight *Essex*-class ASW carriers, one of which, the *Intrepid*, is temporarily operating as an attack carrier in support of Southeast Asia operations. Our studies show that compared with other ASW forces, the CVS ASW group is a high-cost system in relation to its effectiveness; the annual operating cost of a CVS is about \$32 million, including about \$17½ million for the aircraft complement.

As the newer ASW systems—the SSN's, the DE's, the P-3 patrol aircraft, etc.—join the Fleet in increasing numbers, the relative value of the ASW carriers will continue to decline. Accordingly, we now propose to reduce the force somewhat when the conflict in Vietnam ends.

The older SH-34 helicopters on CVS's have already been replaced by the new SH-3's, and the CVA's are now also being provided some of these helicopters.

The older S-2's will have been completely replaced by the newer S-2E's by the end of FY 1967. While full scale development and procurement of a replacement aircraft should not be undertaken until the role of the

CVS in the over-all ASW effort of the 1970's has been clarified and until the need for a more sophisticated capability has been clearly demonstrated, we have included funds for contract definition of a new ASW aircraft (VSX) should further study warrant our going ahead with this program.

In addition to its ASW aircraft, each CVS is authorized a few A-4's in order to provide a limited intercept and air defense capability. Finally, we will continue to maintain eight squadrons of carrier-based ASW search aircraft and four squadrons of ASW helicopters in the Naval Reserve forces for the four CVS's we plan to retain in the Reserve Fleet.

* * *

Patrol Aircraft—While we still plan to maintain a total of 30 squadrons of ASW patrol aircraft, we now propose to phase out the three remaining squadrons of seaplanes (SP-5) and retain, instead, three squadrons of SP-2 land-based patrol aircraft. One squadron will be converted this year and the other two in FY 1968. This change will permit us to decommission the three remaining seaplane support ships (AV's) and thereby save \$17 million per year in operating and indirect costs, with no reduction in our over-all ASW or surveillance capability. Except for these three squadrons, all the SP-2's will be phased out of the active ASW patrol forces over the next few years and replaced with 27 squadrons of the new P-3's. (Ten squadrons of SP-2's will be retained in the Navy Reserve.)

Beginning in FY 1968, all new P-3's will be procured with the A-NEW avionics system and when the force build-up is completed, we will have nine squadrons so equipped. The A-NEW system should greatly improve the over-all effectiveness of the P-3 by increasing its capacity to analyze data from either existing or new sensors.

* * *

Amphibious Assault Ships

Last year I informed the Committee that while our objectives of achieving a modernized (20-knot) amphibious lift for one-and-a-half Marine Expeditionary Forces (MEF's, or division/wing teams) and sufficient older ships to provide a slower lift for another half of



SECRETARY McNAMARA TALKS TO PENTAGON PRESS



NAVY'S NEWEST ATTACK AIRCRAFT, A-7A CORSAIR II

a MEF remained the same, further study of the composition of the force had convinced us that some modification of the future construction program was desirable. I also noted that the Navy was investigating the possibility of designing a multi-purpose ship which could combine the features of several different types of amphibious ships and that one of the reasons we had rescheduled the program was to provide time to develop a design for this new ship.

Over the years since the end of WW II, both the tactics and the equipment of the amphibious forces have undergone a continuing evolution. Up through the Korean War, the ocean-going amphibious fleet consisted primarily of ships specialized in terms of what they carried—attack transports (APA's) for personnel, attack cargo ships (AKA's) for general supplies and equipment, landing ship docks (LSD's) for carrying and launching landing craft, and the tank landing ships (LST's) for heavy equipment. In making the assault, the men and equipment were off-loaded over the side from the APA's and AKA's into landing craft which, together with the LST's carrying the tactical vehicles, then proceeded to the beach.

In the post-Korean period, the rapid development of the helicopter opened up a new type of assault tactic called "vertical envelopment" in which the helicopter was used to transport both men and equipment during the assault phase. To provide a platform for these helicopters, we modified some of our older aircraft carriers into amphibious assault ships (LPH's).

To provide a conventional over-the-beach capability, we built new LSD's which are capable of launching relatively large preloaded landing craft from floodable wells. Thus, we began to specialize our new amphibious ships in terms of the assault tactic they were designed to employ, although of course the older types continued to constitute a large portion of the amphibious fleet.

The next logical development was to design a ship which would be capable of both over-the-beach and vertical envelopment assault tactics. Our initial effort with such an all-purpose ship was the amphibious transport dock (LPD). Unfortunately, experience has shown that our current LPD's are too small to be truly effective as a multi-purpose amphibious ship in the assault role and they cannot by themselves serve as a replacement for a variety of specialized ships. For this purpose we need a bigger assault ship capable of landing, either by air or by sea, a much larger and more balanced land force than is now possible with any existing amphibious vessel, and this was the type of ship I mentioned last year.

Our further study of this problem indicates that the development of such a ship is not only feasible but highly desirable. On the basis of the Navy's preliminary design work, this amphibious assault ship, now designated the LHA, would be quite large (about 40,000 tons, compared with less than 18,000 tons for the LPD) and would have both a boat well and a helicopter deck. It would be able to carry as many troops and helicopters as the LPH, as much cargo as an existing AKA and as many landing craft as the LSD. The LHA would also overcome one of the major shortcomings of the specialized ships, i.e., the imbalance which occurs when one of the specialized ships is lost. The LHA would not only carry a balanced load of men, equipment, and supplies, but because of its size, should be more difficult to sink. Moreover, a smaller number of large ships are easier to protect against air and submarine attack and from mines than a large number of smaller specialized ships.

In view of these advantages, we now propose to substitute LHA's for a variety of specialized amphibious ships which we had previously programmed. The first of these LHA's has been included in the FY 1968 program. As in the case of the C-5A and the Fast Deployment Logistics ships, we plan to use the two-step contract definition, total package procurement technique for the LHA's; and \$18 million is included in the FY 1968 Budget for contract definition, in addition to funds for the construction of the first ship.

One of the goals we hope to achieve in this program is a considerable reduction in operating costs. To this end the competing contractors will be encouraged to design this ship so that it can be operated by significantly fewer personnel than previous ships of this size. Our preliminary analyses show that this program will not only permit us to achieve our objective of a 20-knot lift for one-and-a-half Marine Expeditionary Forces (MEF's) more effectively (from a military point of view), but also more economically (13 percent lower on a ten-year systems cost basis) than we could under the program proposed last year. Under

this revised program, the 20-knot/one-and-a-half MEF lift capability should be realized when the last of the LHA's phase into the force.

* * *

Logistical, Operational Support, and Direct Support Ships

... Qualitative shortcomings in the underway replenishment force can impact seriously on the over-all effectiveness of the combatant fleet. In order to take advantage of modern re-supply methods and to complement the higher speeds of our latest ships, we have planned a long-range construction program to rebuild the underway replenishment fleet. The FY 1968 program includes two AE's (ammunition ships) and one AOE (fast combat support ship) at an estimated cost of \$137 million.

Marine Corps Forces

The major Marine Corps ground and air units are essentially the same as those we projected last year. The temporary units added to support the Southeast Asia deployments include a fourth active division with its associated nine infantry, one tank, one amphibian tractor, and the equivalent of five artillery battalions, four *Hawk* air defense batteries, and two light observation and two medium transport helicopter squadrons. The permanent force remains at four divisions/aircraft wings (three active and one reserve).

The Marine Corps fighter forces will be maintained at about the current level. The last of the F-8's in the active air wings will be replaced by F-4's. As additional A-6's and the new A-7's are delivered, the older A-4's will gradually phase out.

The Tactical Air Control (TAC) force, which is used to locate enemy targets and then direct the attack aircraft to them, is programmed to remain at the present level. The older T-1's will be completely phased out by end FY 1968 and the TF-9's a little later, as both these aircraft are replaced by the newer TA-4E's, the first few of which will enter the force this year.

In the transport helicopter category, we now plan to maintain the currently augmented active force level

through FY 1969, while simultaneously building our Reserve structure. When the Vietnam conflict ends, the Marine Corps transport helicopter force will return to the planned permanent level. Meanwhile, we will continue to replace the older UH-34's with the new CH-46 medium transport helicopter. The CH-37's, currently in the active forces, will have been replaced by the new CH-53 heavy helicopter by the end of the current fiscal year; they will then be used to activate a new heavy helicopter squadron for the Reserve Marine division. When this modernization program is completed, the transport helicopter force will consist of CH-46's and CH-53's, and will be considerably larger than it was in FY 1965 and prior years.

In the light helicopter and observation category the total number of aircraft will be increased significantly in FY 1968 through the temporary retention of O-1's and UH-1's previously scheduled to phase out after the new OV-10's are delivered.

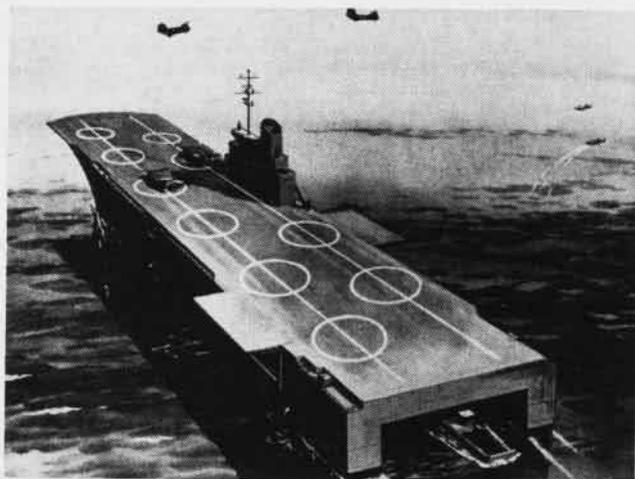
Last year we undertook a major program to increase the fixed-wing combat readiness training capabilities of the Marine Corps. This program will be continued. We also undertook at that time, on a temporary basis, a program of combat readiness training for Marine Corps helicopter pilots. In order to initiate that program promptly, and to equip two medium helicopter squadrons for the temporary active division, we diverted 48 UH-34D's from the Marine Corps Reserve in FY 1966. We now plan to make the combat crew readiness training program permanent and to expand the force level. Later, as the OV-10 enters the operating force, we plan to add some of these aircraft to the combat readiness training force.

* * *

Navy and Marine Corps Reserve Forces

... The Naval and Marine Corps Reserve air units are programmed for about 740 aircraft at the end of this fiscal year, and this number will be increased over the next few years.

All of the fighters and about one-third of the attack aircraft in the reserve forces are earmarked for the Marine Corps Reserve air wing; the rest are for the



PROPOSED LARGE MULTI-PURPOSE ASSAULT SHIP (LHA)



A-6A INTRUDER IS PROVING ITS WORTH IN VIETNAM

carrier forces. The Search Units are for the ASW carriers in the *Bravo* Fleet.

Navy-Marine Corps Aircraft Procurement

In order to meet the requirements of the Southeast Asia conflict and continue the planned modernization of the force, we propose to increase the FY 1967 program from the original 620 aircraft to 1,047, and to buy another 680 aircraft in FY 1968 instead of the 604 planned a year ago. The addition of 427 more aircraft to the FY 1967 program and 76 to the FY 1968 program is the result of several factors, the most important of which is the decision to provide for projected combat attrition in Vietnam through the normal procurement lead time, i.e., December 1968 for the FY 1967 Budget, and December 1969 for the FY 1968 Budget. (The original FY 1967 Budget was based on the assumption the conflict would end by June 30, 1967.) Other factors influencing the increase, particularly in the FY 1967 program, are:

(1) The somewhat higher than expected losses of Navy aircraft which have resulted from a higher than planned number of sorties flown, coupled with a larger proportion flown against North Vietnamese targets.

(2) The need for more combat readiness training aircraft to handle the higher training loads.

With regard to the modernization of the attack carrier fighter forces, we still plan to initiate F-111B procurement in FY 1968. The technical problems involved in mating the *Phoenix* missile system and the airborne missile control system with the F-111B airframe appear to have been solved.

To provide for combat attrition beyond FY 1967 and complete the equipping of the Marine Corps fighter squadrons, we have increased the FY 1967-68 F-4 procurement programs substantially over the number previously planned. This will permit the replacement of the last Marine F-8 squadron in FY 1968.

Since we plan to retain a number of F-8 aircraft in both the active Fleet (for the *Essex*-class CVA's) and the Reserve forces for some time beyond FY 1968, we have decided to rework a substantial number of the latest models, providing them with new wings and other life-extension modifications. The program was initiated last spring, using about \$17 million of FY 1966 funds; \$70 million is in the revised FY 1967 Budget; another \$70 million is requested for FY 1968.

In the attack category we now plan to increase substantially the FY 1967-68 procurement program envisioned a year ago. We have added A-4F's and A-6A's to the FY 1967 program, and A-6A's to the FY 1968 program. The A-7 program for FY 1967-68 is about the same as presented a year ago.

Last year we had planned on buying the first 100 OV-10 aircraft for the Marine Corps in FY 1967. However, the need for certain design changes has delayed the award of the contract and has caused us to reduce the FY 1967 quantity. Additional OV-10's will be procured in FY 1968.

For the ASW mission, another increment of the P-3's with A-NEW will be procured in Fiscal Year 1968.

To provide for the higher tempo of operations and

future combat attrition in Vietnam, we are increasing our procurement of helicopters in FY 1967, and buying more in FY 1968.

In the Fleet Tactical and Mission Support category, we have added some C-130 radio relay aircraft to the FY 1967 program and canceled the previously planned C-2A procurement. We believe that the 17 C-2's already procured, together with the present C-1's in the force, will suffice to meet our carrier-on-board delivery requirements as we now see them.

The increase in planned pilot production from 2,200 to 2,525 per year will require the procurement of additional training aircraft. Further analysis of our training requirement indicates that we can transfer some T-28 aircraft now being used for proficiency flying to the training mission and that we can best meet our remaining fixed-wing trainer requirements by procuring T-2B and T-37B twin-jet, two-seater aircraft for basic training and TA-4's for instrument and combat readiness training.

The T-37B, the Air Force's basic jet trainer, can provide approximately equal performance in all basic training missions except carrier landing, and can be procured at about one-third the cost of a T-2B. While the optimum mix of T-2B's and T-37B's is still being studied, it is clear that the T-37B can be substituted in many of the basic training roles with no degradation of pilot performance. Accordingly, we have canceled the previously planned procurement of 72 T-28C's in FY 1966 and 58 in FY 1967, and instead we now propose to procure 36 T-2B's and 94 TA-4's in FY 1967, and 90 T-37B's in FY 1968. We have also included in the FY 1967 program nine TC-4C's (a version of the Grumman *Gulfstream*) for navigator/bombardier training. This will reduce the requirement for A-6A's now being used for this purpose.

For helicopter training, we will be able to utilize UH-1E's as they are released by new OV-10's phasing into the force, thus permitting the cancellation of the 20 TH-1E's planned for procurement in FY 1967. In addition, we plan to buy 40 new instrumented light turbine helicopters (LTH's) in FY 1968 to provide the increased training capacity I mentioned earlier.

* * *

Naval Reserve

For the Naval Reserve, we have programmed a total of 126,000 men on paid drill training status for the end of FY 1968, the same number estimated for the end of the current fiscal year and about 2,200 more than were actually in paid status at end of FY 1966. In addition, about 8,000 Naval Reservists (the same as last year) are expected to perform short active duty training tours during FY 1968.

Marine Corps Reserve

The Marine Corps Reserve authorized paid drill training strength was raised by 2,500 in FY 1966 to a total of 48,000 in order to increase the readiness of the Reserve Division/Air Wing Team. This strength will be maintained through FY 1968. In addition, about 2,800 other Reservists will participate in annual two-week active duty training tours.

NIMITZ FIELD DEDICATED AT ALAMEDA

By Barbara Baack

ON JANUARY 26, the airfield at NAS ALAMEDA was dedicated to the memory of Fleet Admiral Chester W. Nimitz. The ceremony took place in Hangar 11 because of rain.

The admiral's widow unveiled the plaque which reads: "Nimitz Field. In commemoration of Fleet Admiral Chester William Nimitz, United States Navy. (February 24, 1885—February 20, 1966.) His excellence in command leadership was a primary source of victory in war—and strength in peace. This field is dedicated to his memory. January 26, 1967."

The plaque was designed and modeled by William Huff, a patternmaker in the O&R department at the station, and was cast in the department's foundry. It will be



CAPT. CAMPBELL, COMMANDING OFFICER NAS ALAMEDA, AND MRS. NIMITZ

mounted inside the Air Terminal.

The guest speaker, Rear Admiral John E. Clark, Commandant of the Twelfth Naval District, spoke to an audience that included representatives of the western conference of the Navy League and top military commanders in the area.

Others with Mrs. Nimitz on the speaker's platform were Rear Admiral Vincent P. dePoix, ComCarDiv Seven, who represented Vice Admiral A. M. Shinn, ComNavAirPac; Captain Edgar E. Stebbins, ComFAir Alameda; and Captain D. A. Campbell, C.O. of NAS ALAMEDA.

In his address, Rear Admiral Clark declared, "Never has the na-

tion produced a more dedicated naval officer than Fleet Admiral Nimitz."

Captain Campbell read excerpts from messages. One from Secretary of the Navy Paul H. Nitze said, "The men and women of the naval service throughout the world join with you in spirit today as you dedicate the airfield of the Naval Air Station, Alameda, to the memory of the late Fleet Admiral Chester W. Nimitz. His life was a career of service to his fellows, his navy and his nation, which made him one of the nation's great heroes. I regret that I cannot be there personally to participate in this significant undertaking."



TWELVE BAY AREA ADMIRALS ATTENDED DEDICATION



MR. HUFF, PLAQUE DESIGNER, AND ADMIRAL'S WIDOW



IN JANUARY 1917 SCENE AT PENSACOLA ARE THREE STURTEVANTS, A GALLAUDET AND N-9'S IN BACKGROUND

Naval Aviation in World War I IN THE VERY BEGINNING

Fifty years after an event affords an historical perspective which *Naval Aviation News* intends to use to advantage in recapitulating some of the outstanding events of Naval Aviation in World War I. What was so new then is now an accepted part of naval operations. WW I forced a rapid growth of naval aircraft and organization to meet the contingencies of battle. *NANews* proposes to run a series of articles which will look back to the beginnings of Naval Aviation month by month from this issue through November 1968. This article develops the background for events to follow.

THE DECLARATION of war against Germany on April 6, 1917, found United States Naval Aviation unprepared for the task ahead. The strength—almost too optimistic a term—of Naval Aviation stood at 48 officers and 239 enlisted men with some aviation experience, 54 aircraft of training types, one free balloon, one kite balloon, one unsatisfactory dirigible and one air station. This was the nucleus around which an effective fighting force would be built.

Though it had been six years since the first aircraft had been acquired by the Navy and its first pilots trained, the Navy had nothing resembling a formally organized aviation force. Only the first faltering steps toward developing operational units had been taken.

Very naturally, the emphasis in the early years was on training. In April 1917, the training program was just recovering from the effects

By *Adrian O. Van Wyen*
Naval Aviation Historian

of a six-month hiatus that began in June 1916 when accidents underscored the unsatisfactory nature of the aircraft in use.

The effect of the \$3½ million provided for aviation in the Naval Appropriations Act of August 29, 1916, had not been felt. The Naval Flying Corps, authorized by the same act, had not been established. Aircraft manufacturing was undergoing some measure of expansion as a result of orders from abroad, but not as a result of Navy orders. Although suitable sites for air bases along the East Coast had been selected, their establishment and construction were still in the planning stage.

Some advance had been made in flight training after the delivery of N-9's late in 1916 and the experiments conducted with shipboard

catapults had borne some fruit. The USS *North Carolina* was equipped with gear necessary to carry and operate aircraft; the USS *Huntington* and the USS *Seattle* were being similarly equipped.

Outside the Navy, interest in aviation was widespread. Aviation elements existed in the Naval Militia and in the National Naval Volunteers and, without much practical Navy support, a start had been made in training men to fly the airplanes and mechanics to keep them flying. Student groups at universities, led by the unit formed at Yale, found the money to buy aircraft and hire instructors. Other young men not associated with the organized units were taking instruction on the chance of joining them.

Curtiss and other enterprising manufacturers had set up schools not only to profit from the growing interest but also to stimulate its continued growth. Rear Admiral

Robert E. Peary, an ardent advocate of aviation and one fully aware of the possibility of war, raised money by individual subscription to form the National Coastal Patrol Commission. Its first unit, Aerial Coastal Patrol No. 1, was composed mainly of men from the First Yale Unit. From these efforts, there were many fully or partially trained aviators when war came and many more who recognized the aviation potential.

The air station at Pensacola had opened in January 1914. Its flight training program was informal although in the next three years some progress was made toward developing a formal curriculum. Personnel were assigned individually, rather than in groups. In consequence, training was sporadic and, although men assigned in the summer of 1915 were generally considered the first class at Pensacola, the station still lacked the formality of class organization.

Ground school for prospective pilots stressed the technical aspects of aviation but, because all the students were Annapolis graduates, omitted entirely such subjects as navigation and fundamentals of seamanship. These courses were added later when officers were recruited from civilian status. Training of airplane mechanics was more formal, but these classes had only been started recently.

ALTHOUGH the years preceding the declaration of war against Germany left much to be desired in terms of training, organization and numbers of pilots and aircraft, there were notable events that pointed to a future in which airplanes would go to sea and take their place in the growing arsenal.

Air operations in the Fleet were inaugurated January 6, 1913, when the entire naval aviation element set up the Aviation Camp on Fisher's Point, Guantanamo Bay, Cuba. As part of Fleet maneuvers, aircraft flew scouting missions and were charged with spotting mines and submerged submarines. Such activities served to demonstrate the operational capabilities of the aircraft and to stimulate an interest in aviation among the personnel.

On April 20, 1914, an aviation unit was first called into action

with the Fleet. Twenty-four hours after receiving orders, three pilots, 12 enlisted men and three aircraft, commanded by Lt. John H. Towers, sailed from Pensacola aboard the USS *Birmingham* to join Atlantic Fleet forces operating off Tampico in the Mexican crisis. The next day, a second aviation detachment, commanded by Ltjg. P. N. L. Bellinger—one pilot, three student pilots and two aircraft—also from Pensacola, embarked in the *Mississippi* upon the same mission.

In the vicinity of Veracruz on May 6, the Curtiss AH-3 hydroaeroplane, piloted by Ltjg. Bellinger, with Ltjg. R. C. Saufley as observer, was hit by rifle fire while making a reconnaissance flight over enemy positions—the first marks of combat on a Navy plane.

Such activity furthered the importance of aviation in the Navy and the Secretary of the Navy Josephus Daniels boldly announced that the point had been reached "where aircraft must form a large part of our naval forces for offensive and defensive operations."

In the process of developing aviation, many a hard-set Navy record was chalked up as pilots proved by courage and tenacity the potential of aircraft.

On October 6, 1912, Lt. John H. Towers, flying the Curtiss A-2, took off from the water at Annapolis at 6:50 A.M. and remained in the air six hours, ten minutes, 35 seconds, setting a new American endurance record for planes of any type.

On December 3, 1915, Lt. Saufley, flying the Curtiss AH-14, set an American altitude record for hydroaeroplanes, reaching 11,975 feet over Pensacola and surpassing his own record of 11,056 feet which he had set only three days before.



N-9 WAS THE PRINCIPAL TRAINER

Lt. Saufley, again flying a Curtiss hydroaeroplane at Pensacola, bettered on March 29, 1916, his earlier record with a flight to 16,010 feet and, on April 2, extended it again, this time to 16,072 feet.

A little over two months later, June 9, 1916, on an endurance flight in the AH-9 over Santa Rosa Island off Pensacola, Lt. Saufley crashed to his death after being in the air eight hours, 51 minutes.

When war came, the Naval Aviation program was marked by improvisation. In April 1917, several privately owned fields and schools, plus those of the Naval Militia at Squantum and Bay Shore, were placed under the jurisdiction of the Navy. These facilities served as outlets for the initial expansion of aviation and carried the load until stations of a more permanent type could be built. Base construction began at once.

The training program was revised to permit assignment of new classes every three months for an 18-month course for either heavier-than-air or lighter-than-air pilots. But no sooner was its implementation approved than it was abandoned as impractical once the expansion began. So that the heavier-than-air training might be concentrated at Pensacola and the lighter-than-air training be more efficiently conducted, negotiations were completed with Goodyear for a balloon and dirigible school at Akron. About the same time, a contract was made with the Curtiss Exhibition Company to give flight training at the Curtiss School at Newport News, Va.

To meet the growing demand for aviators, a training section was organized in the Office of Aviation (Operations) under the direction of Lt. Earle F. Johnson. Johnson not only supervised training, but also had cognizance over the enrollment of candidates for pilot training. He also directed the movement of personnel by coordinating the assignments with the Supervisor of the Naval Reserve Flying Corps, LCDr. John H. Towers. The multiple activities connected with these tasks combined to make the training section one of the most important offices at the start of the war and one of the largest sections of the Aviation Division at war's end.



VA-174 CHALKED UP 332 TRAINING SORTIES IN CORSAIR II AT MCAS YUMA

Training in Corsair II

VA-174 Reports on Yuma Period

Attack Squadron 174, commanded by Commander D. S. Ross, the world's first A-7A squadron, has completed its first weapons training deployment to MCAS YUMA.

Since the acceptance of the first Fleet *Corsair II* by the Navy and VA-174 in October 1966, the squadron has been engaged in an intensive transition training program. The nucleus of the flight program is centered in 22 pilots. They are all well qualified, having been instructors previously in A-4 and F-8 aircraft.

Backbone of the A-7A effort is provided by ten aviation ground officers and 430 enlisted personnel. They not only maintain and service the aircraft but also provide the training for other maintenance personnel being assigned to future A-7A squadrons of the Atlantic Fleet.

In addition to being charged with replacement aviation maintenance personnel training, VA-174 is the "model manager" for the A-7A. All that VA-174 does is another "first," so the *Hell Razors* are writing the book for this, the Navy's newest aircraft.

At Yuma, 20 pilots were able to

develop and improve simulated conventional and nuclear weapons delivery.

In support of flight operations, three ground officers and 98 key enlisted personnel carried the maintenance load. In all, 332 sorties (attack missions) were flown in the three-week period. This amounted to two-and-a-half sorties per day per pilot; five sorties per day for each aircraft.

The detachment departed Cecil Field with six aircraft. In Yuma, this complement was increased to eight. The first group of ten pilots was rotated midway through the deployment while the ground officers and enlisted personnel remained for the entire period.

Isbell ASW Trophy Awarded

VP-21, VS-28, HS-5 Are Winners

Three Atlantic Fleet ASW squadrons—VP-21, VS-28 and HS-5—have been named winners of the Arnold Jay Isbell Trophy for the competitive period of July 1965 through December 1966.

Pacific Fleet winners had not been named when *NANews* went to press.

Sponsored by the Martin Company, the award is presented to ASW squadrons in each Fleet

achieving the highest degree of excellence in antisubmarine warfare.

VP-21, home-based at NAS BRUNSWICK, Maine, flies the SP-2H *Neptune*. Based at NAS QUONSET POINT, R. I., VS-28 operates its S-2E *Trackers* at sea from the USS *Wasp*. HS-5 flies its SH-3A *Sea King* helicopters out of Quonset and from the USS *Essex*.

New 'Deep Freeze' Skipper

Adm. Abbot to be Commander

In February as Operation *Deep Freeze '67* was drawing to a close, Rear Admiral James L. Abbot relieved Rear Admiral Fred E. Bakutis as Commander, Naval Support Force, Antarctica. The change-of-command ceremony took place at McMurdo Station and marked the closing of the summer support operations and the beginning of the wintering-over period.

Operation *Deep Freeze*, Navy's task force assisting scientists probing the secrets of Antarctica, is providing valuable data on man's ability to survive and function in remote, austere areas.

Admiral Abbot, the fifth Support Force Commander since the beginning of *Deep Freeze* in 1955, is a Naval Aviator. Admiral Bakutis is scheduled to report as ComFAir ALAMEDA in April.

Product of Navy Ingenuity

X-Ray Stand Made from Scraps

NATTC JACKSONVILLE'S Aircraft Maintenance Radiography School has devised a system to help its students use their ingenuity and available scrap materials to make their job easier.

To demonstrate the efficient use of scrap to lighten the work load GySgt. Robert Darnell, an instructor, devised an X-ray tube head stand from a six-dollar boat winch and scrap materials.

The stand, which is made from an old discarded engine stand, is combined with several lengths of pipe to hold a 40-pound X-ray tube head. In the past, the tube head which is used to X-ray metal part of an aircraft to detect defects, had to be propped into the desired position with whatever was available. With the new device, the tube head can assume any angle.

AIRBORNE TELEVISION IN VIETNAM



C-121 SUPER Constellation, one of two dubbed 'Blue Eagles,' beams TV programs to the Vietnamese in the Mekong Delta area while flying a set pattern over Can Tho.

PROJECT JENNY, the airborne television station that informed and entertained Americans and Vietnamese in the Saigon area so successfully from February to October 1966, is proving equally successful in the vital Mekong Delta.

Since October, two C-121 *Super Constellations*, dubbed *Blue Eagles*, have been alternating flights over Can Tho in the Delta, beaming programs to a predominantly Vietnamese audience. In Saigon, programs are now broadcast from recently completed ground transmitting stations.

But *Jenny* has not been staged without difficulty. To begin with, conventional radio and TV equipment had to be adapted for use in the *Super Connies*. Once it became operational, technical problems—such as the effect of the constant vibration of the aircraft on the transmission—had to be overcome.

"Considering the problems involved, it is amazing we have been

able to transmit with such regularity," says Lieutenant Colonel D. Forrest Ballou, officer-in-charge of the Armed Forces Radio and Television network in Vietnam. "I know we would have been off the air on many occasions if it had not been for the Navy crews."

Project *Jenny* began when a 1965 study on the feasibility of using television in Vietnam concluded that TV would contribute significantly to the policy objectives of the Vietnamese government and its allies.

Navy was assigned the responsibility of providing interim coverage until permanent TV stations could be constructed. A two-channel system was set up, providing programming for Americans on one channel, Vietnamese on the other.

The *Blue Eagles* fly at approximately 11,000 feet. Each aircraft is equipped with two video tape recorders, two 16mm film projectors, a small live, sound-proof studio and six audio tape recorders to fulfill

its broadcast mission. The planes also transmit shows donated by the major U.S. networks.

Every night the planes fly in the same immediate area, allowing viewers to place their antennas in a fixed position to obtain optimum viewing.

The airborne TV stations belong to the Oceanographic Air Survey Unit (OASU), based at NAS PATUXENT RIVER, Md. The OASU Western Pacific Detachment is headed by a Naval Aviator, LCdr. R. L. Triplett.

After a visit to Vietnam, the Special Subcommittee on the Armed Services reported: "The potential of television in bringing the people of Vietnam into closer participation with their own government is almost unlimited."

LCdr. Triplett thinks TV has new potentials. He believes such a "weapon" can contribute significantly and widely to the policy objectives of the Free World forces.



CPO W. J. Smithers adjusts a dial on an audio panel aboard one of the C-121's.



EVERY NIGHT Vietnamese of all ages gather around the many outside television sets to watch programs broadcast from the studios aboard the 'Blue Eagles' flying overhead.

VAW-33 RETIRES EA-1E 'GUPPIES'

CARRIER Airborne Early Warning Squadron 33, at the end of 1966, retired the last two operational ASW EA-1E's in the Navy. The aircraft, nicknamed "Guppies," have been operational since 1953.

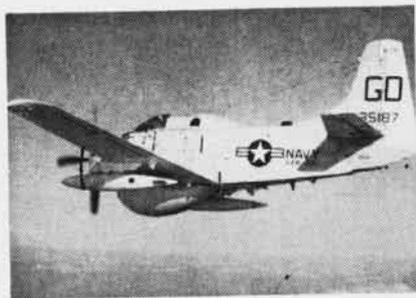
Commander Carl C. Neidlinger, C.O. of VAW-33, transferred the Guppies to Captain Joseph C. Kemp, commanding officer of O&R Quonset Point. Both aircraft were turned over with "hot stacks" after completing a section tactics mission in the Quonset area.

Commander John W. O'Donnell, piloted GD-879, accompanied by Ltjg. James E. Duffer, Naval Flight Officer. GD-881 was piloted by Ltjg. David A. Jorges with Ltjg. Frederick M. Blakely, NFO, in the right seat. Both Guppies served the Fleet with VAW-11 and VAW-13 before being transferred to VAW-33.

The need to extend the eyes of the Fleet became apparent in the closing months of WW II. Airborne radar seemed the answer. Early attempts involved use of the TBM *Avengers* which were modified to the new mission late in the war years. They used the radome underneath, giving the Navy its first Guppies. (Another Guppy type, the AF-2W which came into service in 1950, was used for ASW rather than AEW.) Just before the Korean conflict, it was decided to use another available airframe to house AEW equipment.

The Douglas *Skyraider* was selected and reconfigured, entering service as the AD-3W. Later versions were the AD-4W and AD-5W. The latter was redesignated the EA-1E. Guppy became its name because of the big radar dome mounted under the fuselage.

Before the Guppies came to VAW-33 with their ASW mission, they had served both the Atlantic and Pacific Fleets as radar picket planes. VAW-11 and VAW-13 had transferred all their Guppies by 1960, and in 1961 VAW-12 transferred her remaining Guppies to VAW-33. VAW-33's ASW capability was thus strengthened and, with the Guppies flying out of the same hangar as the EA-1F's, the squadron became one of the largest carrier-



THE GUPPY acquired its name from large radar dome mounted under the fuselage.

based squadrons in the world.

During a NATO exercise in 1964, a VAW-33 detachment made headlines when one of its EA-1E's piloted by LCdr. R. S. Jackson, discovered, intercepted and photographed two Soviet *Badger* jet reconnaissance aircraft. More recently, VAW-33's Guppies were used in support of five *Gemini* recoveries.

VAW-33 Guppies have flown from every ASW carrier in the Atlantic Fleet, providing complete and accurate early warning information for the ASW task forces. Using its search radar, a Guppy could locate air and surface targets, then vector other aircraft in for further investigation. They also assumed, at times, combat information duties while searching for surface forces or lost aircraft.

An era has ended at VAW-33 with the loss of the EA-1E's. The squadron has relinquished its ASW mission to concentrate all of its efforts in the field of electronic countermeasures.



TWO CREWS from VAW-33 turn over the last of the Guppies at NAS Quonset Point.

Advanced Study Program Master's Degree for Officers

The Superintendent of the Naval Academy, Annapolis, Md., has been authorized to begin a graduate pilot program for selected midshipmen. The program will allow the midshipmen to complete the requirements for a master's degree in a minimum period of time, following their graduation in June 1967.

The new program will be a year long and be conducted at the Naval Postgraduate School, North Carolina State University and Georgia Institute of Technology. Forty 1967 June graduates have been nominated for graduate work at the three schools in the coming year. Courses include mathematics, engineering mechanics and aeronautical engineering.

The immediate master's degree is designed to be a powerful incentive program for midshipmen. It is hoped it will provide the Navy with officers qualified in a sub-specialty early in their careers.

Plastic Saves \$3.4 Million

Bombs Protected by New Plugs

Shipping plugs on bombs scheduled for Vietnam are now made with plastic instead of steel forgings, resulting in a \$3.4 million a year documented saving to the Navy.

Plastic plugs are used to protect threads on the entire low-drag bomb series, including bombs weighing up to 2,000 pounds. Primary advantage of the polyethylene plugs is the difference in cost between plastic and steel, a saving of \$6.50 on a single bomb.

Each bomb needs a set of six plugs which weigh .28 pounds when made of plastic, as compared with 17.52 pounds when made of steel. This is a saving of approximately 862 tons of each shipment of 100,000 bombs.

The new plugs need no protection from corrosion, do not loosen under vibration and can be inserted or removed with a simple spanner wrench.

The idea of substituting plastic for steel was developed by engineers at the Naval Weapons Laboratory, Dahlgren, Virginia.

AIR TRANSPORT SQUADRON 22 PHASES OUT

THOUSANDS OF servicemen share a common bond with American statesmen, a European prince, and for that matter, with America's space monkeys, Able and Baker. They have all been transported by Air Transport Squadron 22, for the transport functions performed by VR-22 in its 21-year history are many and varied. The log of VR-22 will be closed this month with the decommissioning order for the "Anytime-Anywhere" squadron.

VR-22 was originally commissioned as Utility Transport Squadron Two (VRJ-2) on June 14, 1946. In its first year the utility squadron flew two R4D *Skytrains*, seven JRB Beechcraft *Executives* and five R50 *Lodestars* scattered in single plane detachments from Guantanamo Bay, Cuba, to Quonset Point, R.I.

The Norfolk-based squadron was redesignated Air Transport Squadron 22 in September 1948, but its job remained the same. With the Korean War and the need for increased Fleet logistic support, VR-22 became Fleet Tactical Support Squadron 22 in December 1950 and assumed a carrier-on-board delivery mission. Almost immediately the squadron received its first TBM-3R *Avengers*.

By 1952, VR-22's aircraft complement had grown to eight R5D's, eight R4D's and four TBM's. Later, Grumman TF *Traders* delivered

By JOI G. T. Mills

passengers, mail and cargo to carriers up to 300 miles at sea. During the next few years, 1954-57, VR-22 supported both Arctic and Antarctic scientific projects.

In July 1958, VR-22's designation was changed from Fleet Tactical support squadron to Air Transport Squadron with the transfer of the squadron to the Military Airlift Command (MAC), formerly MATS. VR-22 and VR-3, at McGuire AFB, N.J., formed the Naval Air Transport Wing, Atlantic. By the end of that year, the squadron's new C-118 *Liftmasters* had flown more than 200 Atlantic crossings and the unit passed its third year without an accident.

In the spring of 1964, VR-22 embarked in a new era of aviation as the reliable C-118's gave way to the C-130E *Hercules*. By December of '64 the squadron was rated C-1, the Air Force's highest degree of combat readiness.

In 1965, while maintaining its increasingly heavy flying schedule and continuing to exceed its commitments, VR-22 was awarded the MAC Flying Safety Award for the fifth consecutive year, making it the only Navy squadron to be placed on the MAC Safety Honor Roll.

During the month of August 1966, operational readiness reached a high of 89% and at no time dur-

ing the year did it drop below 80%. Air Force minimum is 71%.

In the fall of 1965, the 430 officers and men of VR-22 and their families left Norfolk for NAS Moffett Field, Calif., where they became a unit of Naval Air Transport Wing, Pacific. All maintenance personnel were transferred to VR-8, the maintenance squadron for NATWPac.

For its outstanding performance during 1965, VR-22 was praised by Major General Donald W. Graham, Commander 21st Air Force, who said, "I note with considerable pride the consistent fine record of accomplishment by the Navy aircrews.

"The fact that this enviable record has been made in the face of many supply and maintenance difficulties which were further aggravated by the necessity to maintain an unending flow of strategic airlift into Southeast Asia adds to the luster of the crew accomplishment."

VR-22 personnel spent the months of October and November 1966 supporting Operation *Deep Freeze*, along with VR-7 and VR-8. The planes made weekly mail and supply trips from Christchurch.

Although this month marks the end for Air Transport Squadron 22, its inherent ability to accomplish many and varied tasks "Anywhere-Anytime" will not be forgotten for a long time to come.



A VR-22 C-130 HERCULES FLYING NEAR NAS MOFFETT



IN 1963, PERSONNEL PREPARED FOR ADMIN INSPECTION



810 DIGS OUT FOR FLIGHT SOUTH

ON FEBRUARY 5 and 6, nearly 500 Selected Reserves and station-keepers at NAS TWIN CITIES, Minn., packed up and flew south. This was an annual two-week migration, but not for the winter—for training.

The Reservists on training duty represented three Naval Air Reserve patrol squadrons, VP-811, 812 and 813 (collectively designated VP-810) and Naval Air Reserve Maintenance Unit (NARMU-812). The station personnel represented the support group.

Training this year for the squadrons was under the operational control of Commander Fleet Air Wing 11, NAS Jacksonville, Fla. The *Flying Vikings* used three C-54 *Skymasters*, three C-118 *Liftmasters* for the trip south and 11 SP-2E *Neptunes* for the cruise.

The 500 men were on a "Hardware Cruise," proving that the Naval Air Reserve Training they had received one weekend each month at home had fitted them to join the Fleet immediately and to assume equal responsibility with the regular operating forces.

Hardware squadrons were first designated because they had the planes, maintenance equipment and qualified men to permit them to go to sea as soon as they could be ordered to active duty. They are expected to maintain themselves in a condition of readiness that permits them to be called to active duty anytime, ready to fly their own aircraft and do their own

HARDWARE CRUISE FOR NAS TWIN CITIES

By Cdr. William R. Greer, USNR

squadron maintenance as well.

Fast mobilization is the goal of the men in the hardware squadrons. Their hardware is their planes and maintenance equipment; their stock in trade is their know-how.

At home, VP-810 is three separate, comparatively small training squadrons, each with a commanding officer, a leading chief and a complete organizational set-up. On cruise and on active duty, they combine with a maintenance unit to become a larger Fleet-size unit with a single commanding officer. The other commanding officers become division heads in the larger organization.

The *Flying Vikings*, trained in hunting rooftops with simulators which send out signals similar to those received when a submarine is under them, went to Jacksonville to prove beyond all doubt that they could tell the difference between a rooftop and a submarine at sea.

They proved it to the satisfac-



FROILAND WITH HIS ALFA CREW



NOONAN, HIS GORILLA, FROILAND

tion of all observers. Their accomplishments included:

- Receiving an efficiency score of 91 percent—highest score ever awarded a hardware cruise by the Fleet Air Wing Department of the Fleet.
- Having one of their 12-man crews, led by Commander Rudolph Froiland, make a score of 97 percent—highest score ever awarded a single crew.
- Qualifying three new Alfa crews in a nationwide command that had only one on February 1.
- Qualifying three new Bravo crews.

To do this they logged 550 plane hours of flight and 1,100 pilot hours.

In Jacksonville, where VP-810 personnel joined crews and planes of VP-45, Fleet observers were placed aboard to determine if the crews were able to meet the necessary standards for actual patrol flights. There is no simulation of conditions on these flights. The squadrons to the right and left of you, in an area hundreds of miles at sea, are active duty Fleet squadrons, and you are expected to correlate with their activity. The squadron on cruise is expected to keep two and sometimes three planes in the air over the sea lanes, on their way to the patrol area or on their way back every hour day and night. This means 24-hour-a-day watches in all departments.

At 0330 one cold Florida morning, a chief ordnanceman in the

outfit expressed it differently. "Sure it's hard to fly these hours and then sit down for de-briefing, but if we didn't like to do it, we wouldn't be here at all."

Alfa crew? In the language of competition it is a crew that has earned and authenticated through records a minimum of 180 qualifying points out of a possible 200.

Although Alfa crews have a special distinction, the backbone of the antisubmarine warfare activity is the Bravo crew. The Bravo crew needs fewer qualifying points, but it is still very competent in patrol duty under active duty conditions. A maximum number of Bravo crews is the goal of every training program. The competition for the Alfa rating serves to add interest to the business of keeping qualified. When the *Flying Vikings* left the Twin Cities, they had two BRAVO crews. When they returned they had five.

While VP-810 was flying, NARMU-812 augmented the NAS Jacksonville aircraft maintenance department to render support and receive maintenance training to improve unit readiness.

Commander P. J. Noonan, commanding officer of VP-813, senior commanding officer of the three VP squadrons, acted as C.O. of VP-810.



NAS TWIN CITIES CREW NO. EIGHT



PATRON 810'S CREW NUMBER SIX

The husky, cigar-smoking gorilla with a handful of submarines (see cut) that welcomed all who entered the BOQ at NAS JAX belongs to VP-813.

Commander Froiland, who is commanding officer of VP-812,

acted as executive officer of 810 for the cruise. Commander Froiland's crew qualified as the first Alfa crew from NAS TWIN CITIES and received the highest efficiency score ever awarded by the Fleet to a Reserve ASW crew.

News of their success awaited members of VP-810 when they returned to the Twin Cities. They received a telegram from Vice Admiral C. E. Weakley, Commander ASW Forces, Atlantic:

"The unusual accomplishment of qualifying three ASW Alfa crews during the active duty for training period deserves congratulations and a hearty Well Done.

"The can-do spirit and outstanding services provided by Naval Air Reserve and Fleet support personnel contributed directly to this accomplishment which has substantially enhanced our ASW readiness and mobilization posture.

"Well done and keep up the good work."

Captain John H. Burton, Commander Fleet Air Wing 11 at Jacksonville, whose inspectors and observers did the scoring, added his commendation with "Congratulations on the unprecedented achievement of attaining three ASW Alfa crews. Well done to all hands for an outstanding first."



LEADING CHIEF HERDA, NARMU 812



CREWMEN WARM ENGINES IN PREPARATION FOR FLIGHT TO JACKSONVILLE



HOOK MAN HINKLE EYES INCOMING PLANES



ON THE CARRIER, A HOOK MAN WATCHES ANOTHER CUSTOMER



PILOTS OF THE USS ENTERPRISE APPROACH

NAVY'S PL MEN WHO MAN THE

A wire $1\frac{3}{8}$ inches by 110 feet—this is the USS Enterprise (CVAN-65). T apart across the steel deck. As plane tempo—swoop down at speeds in excess abruptly in a mere couple hundred feet these cables is a necessity. Each day tv safety reasons. Neglect could cause l Here and on the front cover are pictur



ARRESTING CABLE PRIOR TO ANOTHER LAUNCH

THE GRABBERS WIRES ON ENTERPRISE

The size of an exposed arresting cable aboard are four of these cables stretched 35 feet the Seventh Fleet—in an ever increasing 100 mph, slam to the deck, they are halted constant vigilance on the wear and tear of the cables are replaced due to wear or for of life or a multi-million dollar aircraft. the men who maintain the arresting cables.



USS ENTERPRISE MEN CHECK THEIR CABLES



FAUTIN, AN, THROWS THE SWITCH THAT RETRIEVES THE CABLE



AS THE NAVY'S ONLY FULL-TIME TRAINING CARRIER, LEXINGTON OPERATES MOSTLY IN THE GULF OF MEXICO

LEX: A BUSY SHIP IN HER 25th YEAR

THE AIRCRAFT CARRIER that holds the record for the most arrested aircraft landings has never recovered planes returning from strikes over Vietnam.

For that matter, this carrier hasn't deployed to the Western Pacific, or anywhere else overseas, for several years.

Yet a good many of the Naval Aviators who are catapulted off a carrier deck "where the action is"—in a plane that might be a "hot" A-6A *Intruder* or a stubby, little S-2E *Tracker*—owe a big part of their ability to get their planes back on the flight deck to the crew of this CVS.

And though she's never been assigned to the Seventh Fleet's Yankee Station team, operating today

By JOI Rick Williamson

in hostile waters off Vietnam, the ship in question has earned a proud heritage in combat.

She's the USS *Lexington*—by design an attack aircraft carrier, by designation an antisubmarine warfare carrier, but by assignment the Navy's only full-time training carrier. She's assigned to the Naval Air Training Command, based in Pensacola (where she's homeported). You'll often find her operating in the Gulf of Mexico, where her crewmen go about the big business of qualifying or re-qualifying Navy pilots for carrier landings.

For 24 years, today's carrier has carried a name made famous when

a band of Lexington colonial farmers fired "the shot heard round the world" at Concord, in what is generally called the first battle of the American Revolution.

That was April 19, 1775. Less than a year later, on March 22, 1776, the Continental Congress gave the village's name to an 86-foot brig hurriedly acquired to protect colonial shipping from a British man-o'-war.

Since then, there have been four other *Lexington's*. There was a U.S. sloop-of-war that plied the seas from 1825 to 1855, and a gunboat that fought for the Union during the Civil War—from 1861 to 1865.

Then there was the CV-2, the Navy's second aircraft carrier. Originally designed as a battle cruiser,

she was converted while she was still on the building ways, was launched October 3, 1925, and was commissioned December 14, 1927. This *Lexington's* crewmen and pilots compiled a worthy combat record in the early days of WW II, but she was sunk by a terrific internal explosion after she was pounded by bombs and torpedoes during the Battle of Coral Sea.

When they learned that CV-2 had been sunk, 23,000 workers at the Fore River Yard in Quincy, Massachusetts, petitioned the Secretary of the Navy to pass the name to a new carrier being built at the yard.

It took a day for SecNav to approve the request, and the newest *Lexington* was commissioned February 17, 1943. She was soon steaming in the Pacific; it didn't take long for the enemy to learn she was around. Before the war ended, *Lexington* pilots and gunners destroyed 387 enemy planes in the air and 475 on the ground, sank or destroyed 300,000 tons of shipping and damaged 600,000 tons more, and, with air groups from other carriers, sent three Japanese carriers and a *Natori*-class cruiser to the bottom.

Although her nickname was *Lady Lex* (which has always been further shortened to *Lex* by the thousands of sailors who have served aboard her), the *Essex*-class carrier soon was being called the "Blue Ghost" by Tokyo Rose. The Japanese gave her the name because she was for a time the only non-camouflaged carrier in the Pacific, and because she had the persistent habit of recovering from damage after the enemy had counted her as lost.

When WW II ended, so did *Lex's* career—temporarily. She was decommissioned and placed in the Reserve Fleet at Bremerton, Washington, but was returned to active service in August 1955. Then, equipped with a new angled deck and the latest conveniences, she was sent again to the Western Pacific.

Lex alternated between the West Coast of the U.S. and Seventh Fleet deployments — including standby duties during the Quemoy-Matsu and Laotian crises—until July 23, 1962, when she left San Diego for the last time.

As they took their ship around

Cape Horn, *Lex* crewmen became—so the claim goes—the first carrier sailors to conduct flight operations in that storm-torn region before they steamed into the Atlantic. *Lex* underwent an abbreviated overhaul period in New York before she was called out to participate, with other Navy units, in operations off Florida during the Cuba crisis.

Lexington arrived in Pensacola December 20, 1962, to relieve the USS *Antietam*—which was bound for mothballs—as training carrier. She had been designated a CVS the preceding October.

Just a month before their ship turned 20 years old, *Lex* men landed their first training aircraft aboard. And, except for an intensive overhaul period in 1964-65, and another just recently (see "At Sea With the Carriers," this issue), they've been at it ever since.

The importance of *Lex's* mission can readily be understood by the fact that the demand for pilots in the Navy is increasing constantly. Each year, *Lex* men qualify an average of 2,000 new Naval Aviators. With a number like that, it's easy to see why the ship was soon setting records for arrested landings.

The CVS became Fleet leader in arrestments April 29, 1966, when she became the first carrier to reach

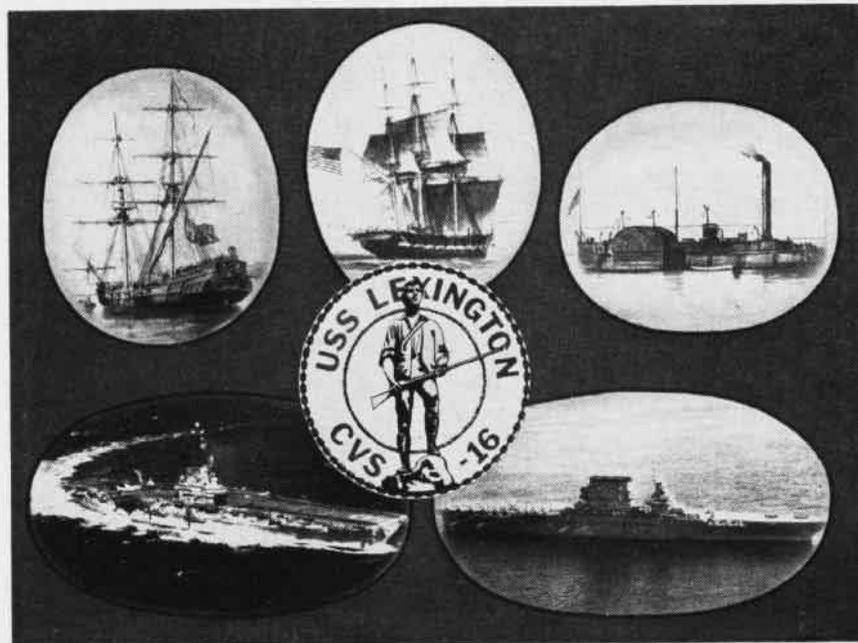
the 152,000 mark. Her crew also claims the record for the most arrested landings in a single day: 604. *Lex* men contend they set a new high with this number during 16 hours and 51 minutes of flight operations March 23, 1966.

In addition to her primary job of carrying student Naval Aviators, *Lex* has been assigned another mission: She is one of the Navy's most active public relations "vehicles."

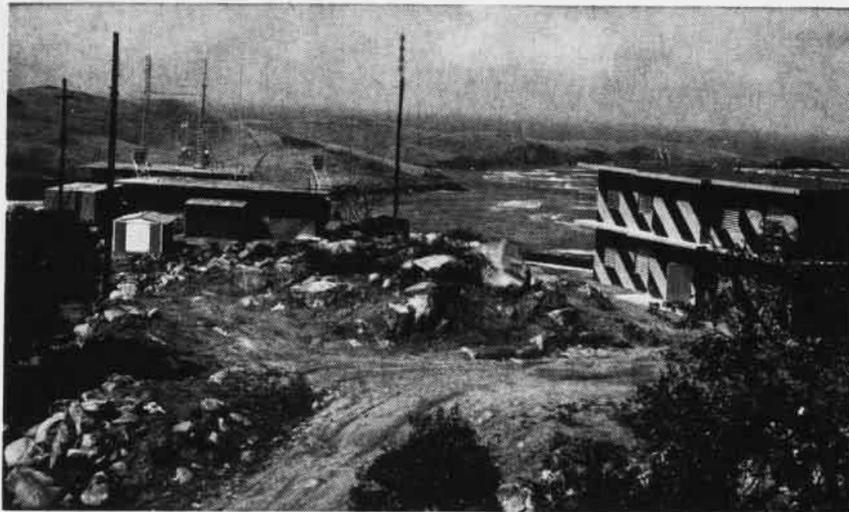
To accomplish this assignment, *Lex* personnel maintain a well-organized cruise-tour program to acquaint members of civic, professional, educational, military and religious organizations throughout the U.S. (and a few foreign nations, as well) with every facet of shipboard life. Her biggest year as a "host ship" was in 1963, when more than 160,000 visitors were aboard.

Many of these visitors boarded the carrier while she was in port, since *Lex* regularly holds "open house" for civilians in port. Her crewmen are kept busy showing guests most of the facets of shipboard life—from the steam plant within the ship to the flight deck topside.

It's simply another aspect of a busy lady's schedule as she steams into her 25th year.



FIVE LEXINGTONS HAVE BEEN CARRIED ON NAVY ROLLS SINCE 1776



FLAMINGO POINT TARGET TRAINING SITE; NEW LIVING QUARTERS, RIGHT

NEW TRAINING COMPLEX COMPLETED

EARLY THIS YEAR, a major air-to-ground target complex for the Atlantic Fleet was opened at Flamingo Point on Culebra Island, Puerto Rico. Commander R. H. Lenson represented Captain C. E. Healy, Commander Atlantic Fleet Weapons Range, in turning over the operations control center to LCdr. Joseph S. Burke, AFWR's range officer.

The new complex is the result of over two years of planning and development at an expenditure of over \$2 million.

The northwest peninsula of Culebra has long been used as a naval gunfire support training site. However, the new air-to-ground target complex encompasses many targets and scoring facilities on Culebra and over 15 surrounding islands and cays which encompass a land and sea area of approximately 150 square miles.

The Culebra target complex combined with the existing close air support facility on eastern Vieques will provide the Atlantic Fleet with target facilities comparable to those existing at MCAS YUMA and in many instances will be superior. Facilities are available for scoring by both optical and electronic means in the delivery of all types of air-to-surface weapons. Targets are available for live and practice bombing, strafing, rocket delivery, missile delivery and aerial mine dropping. Two and three-dimen-

sional plotting of loft and over-the-shoulder bomb deliveries are available.

The complex is manned and operated by four officers and 30 enlisted men living at the three control centers and operating at various subordinate spotting stations. Major helicopter and boat logistic support is provided by the Naval Station, Roosevelt Roads, which also maintains the small Public Works detachment at Culebra to provide support services.

Situated only 20 miles east of the airfield at the Naval Station, Roosevelt Roads, the Culebra complex will allow pilots to be "on target" just a few minutes after takeoff.

Over-all range control will be coordinated from the Flamingo Point Control Center with subordinate control being coordinated by the western and eastern sub-complexes from Luis Pena Cay and Culebrita Lighthouse. Both the western and eastern target sub-complexes have similar facilities available.

Broad distribution has been given to ComLantFltWpnRan Inst. 3120-1A, the Atlantic Fleet Weapons Range manual, which provides detailed information concerning this new facility and instructions for its use. Interested agencies which have not received a copy of this manual may do so by writing directly to Commander, Atlantic Fleet Weapons Range, Box 23, Fleet Post Office, New York, 09551.

CVSG-54 Wins ASW Honors

Bloodhound and Dipper Awards

In March Rear Admiral Forsythe Massey, Commander, Fleet Air Quonset, presented the *Bloodhound* and *Dipper* Trophies to two crews of Carrier Air Group 54.

The *Bloodhound* Trophy was won by Crew One of Air Antisubmarine Squadron 32 led by Commander Bernard E. Goehring, commanding officer of the squadron and pilot of the crew. The crew uses an s-2 *Tracker*.

The *Dipper* Trophy was won by Crew Six of Helicopter Antisubmarine Squadron Five, piloted by Commander Paul F. Frankenberg. Crew Six uses the SH-3A *Sea King*.

Winners of both Quonset awards are selected on their operational proficiency of hunting, training and attacking submarines in missions flown from aircraft carriers and off-shore patrol while in port. In both squadrons, the crews must work together as a team for the six-month period of competition and have an accident and violation-free record during this time.

The winners of both trophies were named for the period July 1 through December 31, 1966.

O&R Department is Praised

Flotation Collar for Spacecraft

In February, Dr. Donald E. Stullken, Chief of the Recovery Operations Branch of the Manned Spacecraft Center, Houston, Tex., commended the NAS PENSACOLA Overhaul and Repair Department for its participation in manned space flight programs.

Dr. Stullken read a letter commending the department for its support in developing flotation collars. The collars have been used in the successful recoveries of all flights of the manned space flight programs including three *Mercury*, eleven *Gemini* and two *Apollo* flights. He also commended the department for manufacturing and distributing the collars to the recovery forces in a "timely and economic manner."

Dr. Stullken was at one time an aviation physiologist on the staff of the Chief of Naval Air Training Headquarters at NAS PENSACOLA.

MEDICAL TEAM STUDIES PILOT STRESS

A NAVY-NASA bio-medical team recently completed extensive stress studies of pilots during actual combat missions. Based aboard USS *Constellation* in the Tonkin Gulf, the team collected information which will provide the Navy with physical and non-physical stress data never before gathered in an aviation combat environment.

The team made inflight electrocardiographic recordings of pilots during runs on enemy targets as well as carrier takeoffs and landings and other physiological samples for comparison.

Pilots provided flight surgeons with preflight data, such as amount and number of snacks, sleep and other factors. Upon return from combat the pilots were interviewed again.

Tiny electrodes were attached to the pilots' skin and connected to a conductive black threadlike wire.



PILOT provides flight surgeon with pre-flight details, including snacks, sleep, etc.



DR. CLYDE Bricston (L), Mr. Pete Hagen and Captain Austin look over incoming data.

Three electrodes on the pilot's chest monitored electrocardiographic data to a tape recorder during flight.

Radar tracked aircraft and pilot to provide the bio-medical team with continuous record of pilot's inflight performances from four miles to touchdown.

Information obtained is being used in a continuing study to establish base lines, or norms, for inflight physiological functions and to determine what factors affect these functions. Ultimate findings will form the base line of further advance studies in Naval Aviation research programs concerning pilots under stressful flight conditions. A preliminary non-combat

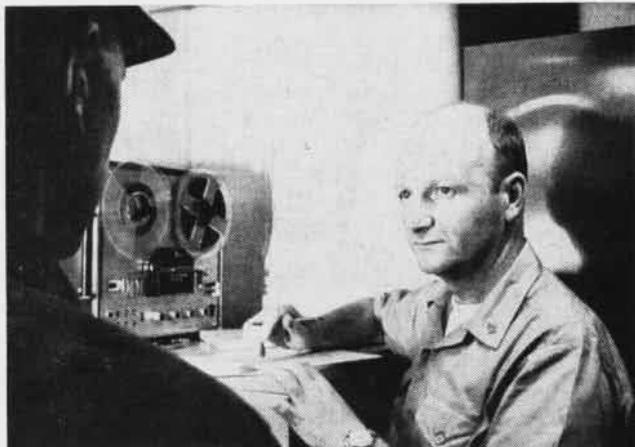
feasibility study was conducted by NASA for the Bureau of Medicine and Surgery on board the USS *Bon Homme Richard* in 1965.

When the evaluations are completed in the U. S., they will be correlated with one another and then superimposed with other previously gathered reports on similar studies made under non-combat conditions.

The team was headed by Captain Frank Austin, MC, Office of Chief of Naval Operations, and included LCdr. Thomas Gallagher, MSC, Bureau of Medicine and Surgery, and Dr. Charles Lewis, Mr. Randy Leach and Mr. Ron Stone, all from the NASA Flight Research Center at Edwards AFB.



A TINY electrode is attached to skin with fast drying cement by a NASA technician. Three electrodes were fastened to pilots' chests.



LCDR. Thomas Gallagher, BuMed's Head of Aviation Operations Psychology, interviews *Constellation* pilot following combat mission.

NAVY SAVES LIVES WITH FROZEN BLOOD

FROZEN BLOOD may soon resolve a problem that has plagued the medical profession for many years—how to maintain an adequate supply of donor blood. Whole blood, stored in a refrigerator at 4°C., has a shelf life of only 21 days. This makes it especially difficult to maintain an adequate supply of rare blood types. Frozen blood, on the other hand, may be stored and used for over two years. It can be used in transfusions within an hour after thawing.

The U.S. Navy became interested in this project because of its life-saving potential under the most adverse clinical conditions and has led the way in research that is already paying dividends on the battlefield in Vietnam. Recently, 400 units of the frozen blood were transfused to 40 war casualties in Vietnam, completing a year-long project for researchers directing the program at Chelsea Naval Hospital near Boston.

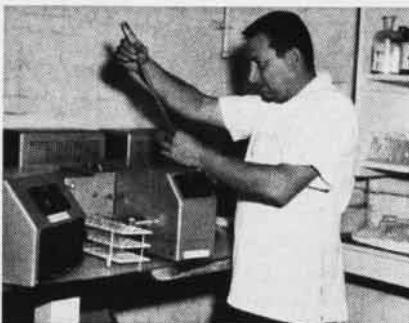
The term "frozen blood" refers only to red blood cells. Only the red cells are used in the experiments at Chelsea Naval Hospital and for transfusions. At Chelsea LCdr. C. R. Valeri directs activities designed to extend the shelf life of donor red blood cells by means of freezing. He is continuing work started at Chelsea in 1949 by Captain Lewis L. Haynes, the first Navy surgeon to use frozen blood. The staff at Chelsea has used frozen blood since 1958 in addition to regular donor blood.

Only two other hospitals in the United States use frozen blood in their clinical transfusion services, the Massachusetts General Hospital in Boston and the Michael Reese Hospital in Chicago. Both hospitals have cooperated with the Navy at the Chelsea research laboratory.

The primary advantage of frozen blood is the far longer period during which it may be stored, ready for use. In the civilian field—as well as the military—it could well mean the end of the constant worry as to whether an adequate supply of blood would be available in an emergency.

By JOI Cloyis T. Craft

Frozen red blood cells must be maintained in a preservative medium at -80° C. until they are needed. This procedure has proved to be a relatively simple one, but thawing and separating the blood from the preservative has been the trouble area in previous research. Dr. Valeri and his associates use glycerol as the preservative and have adopted the "Huggins method" of separating the red cells from



HOSPITALMAN scrutinizes contents of test tube while preparing red cells for freezing.



TECHNICIANS keep close watch on machine which clumps the red cells prior to freezing.



DR. VALERI (left) shows a package of the frozen red blood cells to LCdr. G. S. Mass

this preservative. This method, introduced by Dr. Charles E. Huggins of the Massachusetts General Hospital, permits the removal of the preservative by inducing spontaneous clumping of the red blood cells in sugar solutions.

Scientists now seek to determine whether frozen red cells can be stored without deterioration for as long as five years.

Because of the encouraging results at Chelsea, frozen blood banks have been established at the Naval Support activity in Da Nang and aboard the hospital ship USS *Repose* in the Vietnam area. Thus research is saving lives.

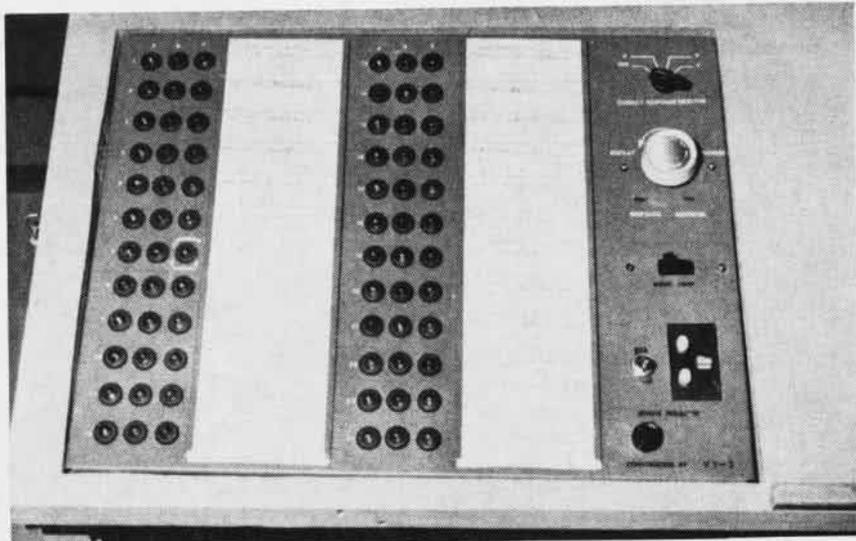
FOR THE Vietnam project, frozen blood was prepared at Chelsea, packed in dry ice and flown to Da Nang via Oakland, Calif., and Subic Bay, R.P. These locations are equipped with refrigeration units which maintain the blood at -80° C. LCdr. Gerald S. Moss, MC, now assigned to the Naval Medical Research Institute at Bethesda, Md., was officer-in-charge of a mobile frozen blood bank unit at Da Nang. Dr. Valeri, commenting on the Vietnam project, said, "Dr. Moss' contribution has demonstrated unequivocally that frozen red cells can be used on a battlefield to supplement the routinely used ACD (Acid-Citrate-Dextrose) blood. This study in Vietnam has demonstrated that frozen red cells can be used in multiple transfusions to wounded servicemen with excellent clinical results."

Dr. Valeri's work received international note last year when he lectured on this subject at the International Blood Transfusion Congress in Sydney, Australia.

Russian scientists attending the Congress took pictures of all display material on the subject and requested a copy of the lecture presented. The request was honored by Dr. Valeri because, as he put it, "all this will be published anyway." Russian interest in the project may stem from the fact that scientists in that nation are trying similar procedures for the stockpiling and storing of white blood cells.



GIBSON USES STUDENT MONITOR



INSTRUCTOR'S CONSOLE IS LINKED WITH RESPONDERS AT STUDENTS' DESKS

'READING THE MINDS' OF STUDENTS

AT WHITING FIELD, officers in Training Squadron Two's flight support section have designed and built a low-cost training aid. Known as Student Response Monitor (SRM), the device is a classroom system which allows the instructor to monitor the progress of his students throughout a lecture.

Here's the way it works. Each student desk in the classroom is equipped with a responder. This is nothing more than a four-position switch, marked "Off, A, B and C." The instructor's master console contains a display which includes a list of the students' names. Next to each name is a series of three small lights marked "A, B and C."

Should the instructor desire to check the understanding of the class before moving on to a new topic, he needs only to ask a multiple-choice question, the answers identified by A, B or C. Each student selects an answer on his responder and the selection which he has made illuminates the corresponding light on the instructor's console. The instructor then announces the correct answer.

The use of this system gives the instructor an instant indication of the level of comprehension of the class. If someone gives a wrong answer or hesitates unduly in answering, the instructor can discuss the

point again before moving on to new material.

Slow learners can be readily identified through the SRM and can be given additional instruction early in a course. This approach to a lecture tends to generate maximum student interest in the lecture material. Also, students tend to have a higher degree of retention because of the quick confirmation of the correct answer.

The instructor's console also contains controls for room lighting and a remote control device for a slide projector which may be used in the lecture.

Much of the credit for creating this effective training aid goes to VT-2's Lt. Bob Goulding. He derived the idea from an article in a national aerospace magazine which pictured a similar device in use at

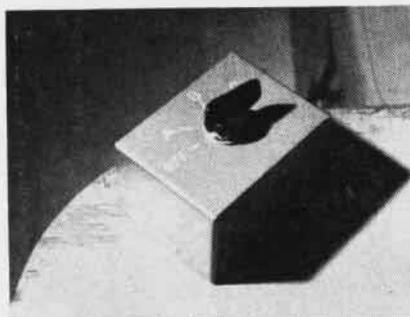
a nearby airline training center.

Intrigued with the possibilities of such a system in VT-2, he commenced collecting information on the subject. He visited an airline training center in Miami, where he saw the system in operation, and discussed its use with airline instructors at the school.

Upon his return to Whiting Field, he initiated a request through the Naval Training Device Branch at NAS PENSACOLA, only to find that funds were not currently available for the project. But for Lt. Goulding this problem was not insurmountable. He set about at once to solve it.

He enlisted the aid of Lt. Walt Gibson, another flight support officer in VT-2. The two obtained locally-procured materials with money from a small training aids fund available to the squadron. The two officers then embarked on the do-it-yourself project, designed the device and installed it themselves. The total cost was less than \$200.

Initial reaction to the device has been very favorable. Student comments reveal that they appreciate the way the device has changed the focus of the classroom. Students have become active participants, rather than a passive audience for the instructor.



RESPONDER'S FOUR-PLACE SWITCH

FLEET AIR WINGS ON PATROL



COMMANDER Roberts of VP-30 gives key to LE-1 to **Commander Falkenstein** as **Captain Rapp**, Fleet Air Wing Three, looks on.

MR. ROSENBERG has just shown **Commander Walker** and **Commander Vasseler** of VP-4 a dragon that one can buy in Far East.

Training in the Orion

Crews One through Four of Patrol Squadron 11 returned to NAS BRUNSWICK the 20th of January after seven weeks of intensive training with VP-30 in the P-3B *Orion* at NAS PATUXENT RIVER.

At that time, the squadron, commanded by Commander R. F. Falkenstein, had just received its fourth *Orion* and expected to receive the remainder of the planes in March.

Just prior to returning to Brunswick, Commander L. R. Roberts, Jr., VP-30 C.O., presented Commander Falkenstein with the keys to LE-1, the unit's first P-3B. Captain W. R. Rapp, Commander Fleet Air Wing Three, Brunswick, was on hand (at right, in above photo) to congratulate the men.

Crews Five through Eight of VP-11 then began their training with VP-30 so that the entire transition could be completed by the end of March.

VP-11 is the seventh Atlantic Fleet Patrol Squadron to receive transition training with VP-30 since its formation in June 1962.

Twice in 26 Months

Does lightning strike the same place twice? LCdr. F. P. Gigliotti of VP-30 is sure that it does. Within 26 months, he was confronted with two similar emergencies and came through a winner.

On September 20, 1964, while de-

ployed to Keflavik, Iceland, with VP-8, LCdr. Gigliotti, upon request, launched a search and rescue mission for a single-engine Mooney aircraft en route from St. Pierre Island, Canada, to Iceland. Lacking VHF homing equipment, LCdr. Gigliotti and his navigator, as soon as radio contact was made, estimated the voice reception distance between the two aircraft to narrow down the area of probable sighting. Sure that the Mooney's heading of 125° magnetic was not compatible with making landfall at Iceland and considering the pilot's estimate of only one hour, 30 minutes fuel remaining, Gigliotti advised the pilot to take a heading of 050° magnetic.

Shortly thereafter the Mooney pilot reported he was receiving an intermittent signal on the Keflavik

VOR station bearing 050° magnetic! Within minutes the Mooney aircraft was sighted by the P-3A. A VP-7 *Neptune* was diverted to assist in the search. The "alert ready" helicopter was launched. None too soon! The Mooney, after 21 hours in the air, ran out of fuel just 36 miles short of land.

Survival gear was dropped and 20 minutes later, the pilot, Mr. Lawrence W. Moody, a USAF reserve Major in the Air National Guard, was safely aboard the helo.

For this outstanding aerial performance, LCdr. Gigliotti, his navigator and crew, and LCdr. P. F. Yosway, plane commander of the *Neptune*, were highly commended.

LCdr. Gigliotti encored this mission December 2, 1966, with the help of his copilot, Cdr. T. H. Warren, navigator, Lt. J. Orzechowski, flight engineer, ADJC R. H. Fall, AXC J. M. Laughlin and AOC H. M. Hagan, all of VP-30. They were on a training flight about 150 miles southeast of Norfolk when they heard that an Air Force C-119, en route from Bermuda, had broadcast an emergency message. The C-119 had lost all oil from its starboard engine, had secured the engine and was unable to maintain its assigned altitude of 8,000 feet.

Three minutes later, the C-119 announced that it was down to 3,500 feet, jettisoning cargo and turning back to Bermuda. Upon hearing this, LCdr. Gigliotti called N.Y. Oceanic Control Center to of-



CDR. J. M. Brozema presents Navy Commendation for Heroism to Petty Officer Potrats.

fer assistance. An estimated position of the C-119 was given and the 3-PB headed for it.

Cruising at over 350 knots, the P-3B intercepted the C-119 32 minutes later, within 20 seconds of the *Orion* navigator's estimate.

Barely able to hold 3,500 feet of altitude and making only 142 knots ground speed, the C-119 crew was relieved to sight the *Orion* on its starboard wing. With barely one hour and 45 minutes fuel remaining and Bermuda 165 miles away, survival gear was readied by AOC Hagan in case they had to ditch.

Fortunately, the C-119 made it to Bermuda. Major Rushton, who commanded it, thanked LCdr. Gigliotti and his crew, calling their escort "about the most professional job of airmanship and heads-up thinking I have seen in a rescue assist mission."

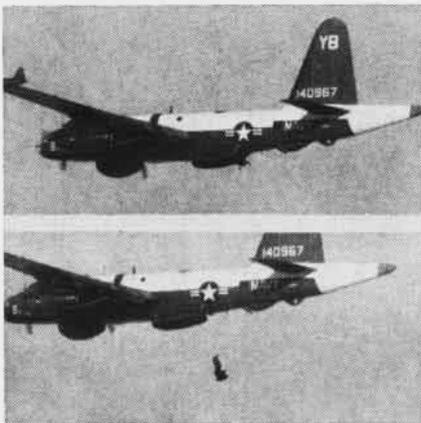
Overseasmanship

Mr. Dave Rosenberg, BUPERS' authority on foreign customs, spent some time recently with VP-4 and other naval air units at NAS BARBER'S POINT to brief them on Overseasmanship.

Overseasmanship is the word the Navy uses to describe the manner in which a Navy man or Marine deals with the people in a foreign land. VP-4's C.O., Commander Charles M. Walker, and X.O., Commander W. P. Vosseler, familiar with the presentation given by Mr. Rosenberg, flew him to Hawaii.

"Tourists—and our servicemen are part-time tourists—want to do 'what's right' but often don't know how," Mr. Rosenberg said. "I give the men a kind of inoculation against cultural shock. People-to-people begins with the individual. How to get along in a foreign land is a skill to be learned."

Speaking for the first time in Hawaii, Mr. Rosenberg gave clear guidelines for conduct abroad. Using a variety of techniques, he stimulated everyone in the audience by the skillful use of sounds, smells and tastes. Audience participation, a seemingly bottomless bag of tricks, demonstrations and perpetual motion, were his props in a presentation designed to encourage and educate through entertainment, mimicry and visual aids (NANews, April 1963, p. 12).



PETTY OFFICER C. P. Clifford of VP-1 (top) explains to Neptune flight crew the procedures for his 500th jump. Three pictures (below) record the jump of the onetime member of the "Chuting Stars."

'For Heroism'

At Playa Beach in Catania, Sicily, on June 2, 1966 Airman Frank J. Zajac, Jr., was gripped by cramps and a turbulent undertow was sweeping him out into the bay at a fearful rate.

At that point, with complete disregard for his own safety, ADJ3 R. L. Potratz plunged into the water and rescued his unconscious shipmate. Bringing him to shore, Potratz administered artificial respiration while awaiting medical assistance, and saved the life of Airman Zajac.

For this act of valor, Petty Officer Potratz of VP-56 recently received the Navy Commendation for Heroism bestowed by the Secretary of the Navy. Commander J. M. Brozena, his C.O. made the presentation at NAS NORFOLK.

VP-1 Parachutist's 500th Jump

MM2 Charles F. Clifford of VP-1 made his 500th jump at NAS WHIDBEY ISLAND from an SP-2H *Neptune*.

The *Neptune* is normally not used as a jump aircraft and few voluntary parachute jumps have been made from it. Clifford wanted to disprove any "old wives' tales" that it was unsafe to exit the SP-2H via a parachute. Almost everyone in VP-1 was looking skyward with cameras on hand to capture the event.

The designated altitude for the jump was set at 8,500 feet. Clifford readied himself in the after-station of the aircraft awaiting the all clear signal from the control tower. The FAA-authorized target at the end of runway 31 was his aim point.

In a flash, Clifford was clear of the aircraft and free falling toward earth. The free fall lasted about 35 seconds. According to Clifford, there is absolutely nothing equal to the sensation of free falling. At 2,000 feet the canopy snapped open and Clifford skillfully guided himself to the impact area with a stand-up landing.

In a little over six years of parachuting he has fallen approximately 2.5 million feet and delayed free falls up to 107 seconds.

Clifford is the team leader and instructor for the Parachute Team at NAS WHIDBEY ISLAND.

SELECTED AIR RESERVE



COMMANDER Killion smiles proudly at his Navy family: Robert (Ltjg.) Jeffrey and Donald (ET1). Jeffrey's brothers were promoted shortly after the picture was taken.



A MOTHER-DAUGHTER team are enlisted in Naval Air Reserve Wave Program, Dallas.

A Family Tradition

At NAS ALAMEDA when Jeffrey Alden Killion enlisted in the Navy, his action didn't cause a domestic stir. Three other members of his family are already in the Navy.

Young Killion was enlisted by his father, Commander Clyde D. Killion, Supply Corps, officer in charge of the Transportation Coordinating Office at NAS ALAMEDA. His enlistment was witnessed by his two brothers, Ltjg. Robert A. Killion, now assigned to USS *Gudgeon* (SS-561), and ET1 Donald L. Killion stationed at the Naval Shipyard in San Francisco.

Jeffrey was immediately assigned to NARTU ALAMEDA. He will attend the Accelerated Recruit Training Program this summer.

Mother-Daughter Team

In January at NAS DALLAS, a mother-daughter team enlisted in the Naval Air Reserve Program. This was a first for Dallas and probably a first for the Naval Air Reserve Training Command.

Mildred K. Reeves, the mother,

and Linda Jean Aaron, her daughter, were sworn in by Captain David S. Crockett, Dallas' commanding officer.

The mother, a member of the Dallas Police Department, is the first woman to hold the rank of detective on that force. Mrs. Reeves entered the Naval Air Reserve un-

der the Advanced Rating Program as a personnelman, second class. The Advanced Rating Program allows women with special skills to enter the WAVE program at a rate equivalent to their civilian skills.

The daughter, Linda Jean, is a student at North Texas State University. She will attend a two-week recruit training course at Bainbridge, Md., this summer.

Fastest Man

Bill Malone, the popular master of ceremonies of TV's daytime game show, "Supermarket Sweepstakes," qualifies as one of the fastest men in the entertainment industry. But he has a second career that is even faster. He is Commander William Polglase, a jet pilot in the United States Naval Air Reserve.

Polglase began his Navy career in 1942 as a Cadet in the Naval Air Training Command. Twenty-four years and 2,000 flight hours later, he has just completed a training session in that same command. He recently attended a two-week spe-



BILL MALONE strikes a pose in his second identity, Commander Wm. Polglase, USNR.

cial training course in instrument flight procedures. The training prepares him for his new job as instrument flight training officer of VF-662, based at NAF ANDREWS, Washington, D. C.

Two weekends a month he flies with VF-662 in an F-8 *Crusader*. Malone has also, as Commander Polglase, been commanding officer of VF-661 at Andrews.

Even though his show business career has caused him to move around quite a bit, he stays with his Naval Reserve career wherever he goes.

Vietnam Airlift

Recently, eight American helicopters were back in the air against the Viet Cong, thanks to the high priority airlifting of badly needed helicopter engines to Da Nang by an all-Reserve volunteer crew from NARTU ALAMEDA. Delivery was made by a C-118 *Liftmaster* piloted by LCdr. Robert Munn.

Nearly 15,000 pounds of cargo were airlifted from NARTU ALAMEDA to the Philippines. Then eight helicopter engines were picked up for delivery to Da Nang—on a high priority basis.

The all-Reserve crew volunteered to make the trip which lasted eight days and covered 15,750 miles with stops at eight different locations. A similar WestPac flight leaves NARTU ALAMEDA about every two weeks.

Members of the crew in the picture are (from left to right) front row: LCdr. Munn, Lt. Don Scott and LCdr. V. E. Hall; back row: AEC E. F. Rogh, ADRC J. G. Wood, PRI Frank Tuma, Lt. William Mazzocco, AT1 L. J. Campbell, ADRI Harry Brauch and ATN2 Dan Laugrey.

Marine Training

From as far away as New York and as close as Los Alamitos, some 700 Marine Aviation Reservists descended on MCAS EL TORO late in January. They came for their two-week period of annual training.

Two of the Reserve units, Marine Attack Squadron 132, NAS NEW YORK, with their A-4B *Skyhawks* and Marine Aerial Transport Squadron 353, Seattle, with their C-119's functioned as entirely



MEMBERS of the Alameda crew that flew helo engines from Philippines to Da Nang.

separate units during the training period. Their mission was to carry out all the functions of completely operational squadrons. This meant bombing, rocketry and instrument flight for VMA-132 and cargo and passenger flights for VMR-353.

Some 300 of the Reservists, representing four units from the Mid-

west and East Coast, were combined with the nucleus of Marine Air Base Squadron 47 from NAS LOS ALAMITOS. Joining MABS-47 for training were the Fifth Communications Squadron, Chicago; Seventh Engineering Section, Green Bay, Wisc.; Third Engineering Maintenance Squadron, Lincoln, Nebr.; and the Second Motor Transport Maintenance Squadron, Wyoming, Pa.

Eleven Reserve members of MABS-47 also attended the Third Marine Aircraft Wing Non-commissioned Officers Leadership School for special instruction.

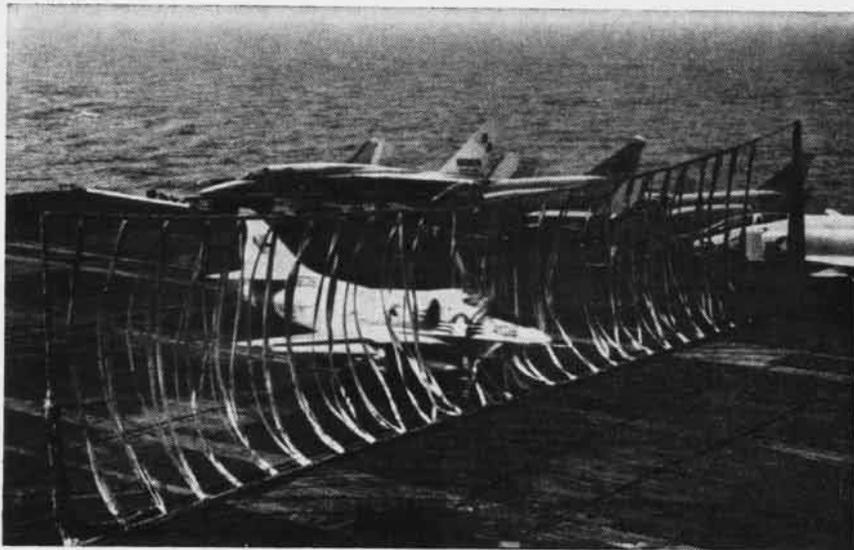
While gathered at El Toro, all the Reservists were inspected by Brigadier General A. H. Adams, Commanding General, Marine Air Reserve Training Command, Glenview, Ill.

And just as this large contingent was leaving, Marine Medium Helicopter Squadron 766, NAS TWIN CITIES, arrived for their two weeks of active duty training. HMM-766 personnel were guests of Marine Medium Helicopter Training Squadron 301 at El Toro, Calif.



A FISH-EYE lens catches the scene as two pilots from HS-861, NARTU Norfolk, fly low over the Chesapeake Bay in their SH-3A Sea King on one of their routine training missions.

AT SEA WITH THE CARRIERS



A-4C SKYHAWK, piloted by Ens. John A. Lockhard of VA-112, is pulled to a safe stop by an arresting barrier rigged aboard *Kitty Hawk*. The A-4 was hit by enemy AA fire.



HIS 200th combat mission over, Coral Sea's Ltjg. Bennett P. Crawford leaves aircraft.

PACIFIC FLEET

ENTERPRISE (CVAN-65)

While *Enterprise* aircraft were being launched on strike missions as the ship steamed off Vietnam, CVAN-65 crewmen were hosts to a variety of visitors.

Under Secretary of the Navy Robert H. B. Baldwin flew aboard the nuclear-powered carrier in a helicopter from the *Ticonderoga*. The Navy official was accompanied by Vice Admiral John J. Hyland, ComSeventhFlt, and Rear Admiral Emery A. Grantham, deputy commander of the Naval Ships Systems Command.

Before he ate lunch with crewmen in the enlisted mess decks, Baldwin was given briefings by Rear Admiral Walter L. Curtis, Jr., ComCarDiv Nine, and Captain James L. Holloway III, skipper of the *Enterprise*.

Another Defense Department VIP to visit the CVAN was the Secretary of the Air Force, Dr. Harold Brown. He was accompanied by Jack Stempler, assistant to the

Secretary of Defense, and General James Ferguson, commander of the Air Force Systems Command.

High-ranking as these visitors may have been, they didn't receive exactly as enthusiastic a welcome as did TV personality Johnny Grant. Then again, that's understandable; Grant brought with him a couple of items guaranteed to compete effectively with the brass for the crew's attention: Girls.

Actresses Tippi Hedren and Diane McBain flew aboard *The Big E* with Grant in a C-1A *Trader*. Arriving from Da Nang, they were aboard for two days.

After almost 30 days "on the line" in the Gulf of Tonkin, *Enterprise* made port in Subic Bay, R.P., then steamed to Manila.

KITTY HAWK (CVA-63)

When Ens. John Lockhard, VA-112, was launched from *Kitty Hawk* in his A-4C *Skyhawk*, bound on a bombing mission in North Vietnam, he had no intention of setting any precedents. He did, though—the hard way.

Just a short time later, JO1 How-

ard U. Grais reports, Ens. Lockhard made *Kitty Hawk's* first barricade landing.

The VA-112 pilot's aircraft was hit by antiaircraft fire as he was completing a bombing run on a railroad bridge complex a few miles from Ninh Binh. During a harrowing, 50-minute flight back to the carrier, a check of the damage by another VA-112 pilot convinced Ens. Lockhard that he should radio for a barricade landing.

While the crippled *Skyhawk* orbited overhead, *Kitty Hawk* flight deck crewmen recovered all the other aircraft returning from missions. Then they rigged the nylon barricade (see cut).

"I didn't know how long the aircraft was going to hang together," Ens. Lockhard said later. The little *Skyhawk* did just fine, though, and its pilot did too. He set the plane down on the deck; the nylon strands pulled it to a halt. An uninjured Ens. Lockhard exited, holder of a pair of somewhat dubious "firsts"—his first barricade landing, as well as *Kitty Hawk's*.

A wide range of visitors have toured *Kitty Hawk* during the

ship's latest Seventh Fleet deployment. The most recent included political personality Barry M. Goldwater, Evangelist Billy Graham, members of a gospel musical show who call themselves the Singing Rambos and 120 happy Filipino school children (who toured the carrier while she was in port).

CORAL SEA (CVA-43)

When he made *Coral Sea's* 163,000th arrested landing in a *Skyhawk*, VA-22's LCdr. Fred Spellman also logged his 100th arrestment aboard CVA-43.

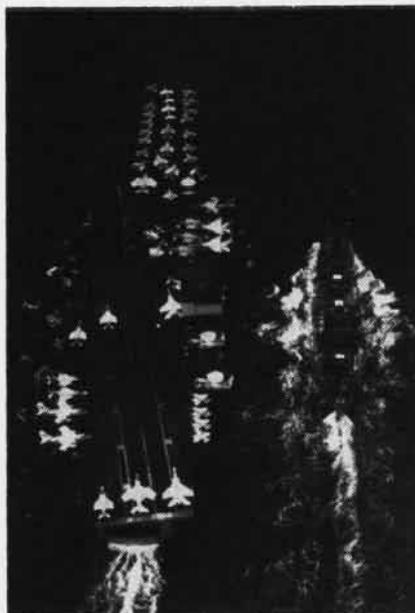
Just over 12 years ago, a first class boilerman named James Johnson enlisted a young man named Doug Barron in the Navy. That was when Johnson was a Navy recruiter in Barron's home town of Panama City, Fla.

Today, Lt. James Johnson is an engineering specialist and LCdr. Doug Barron is a pilot assigned to VA-22—and they're shipmates aboard *Coral Sea* as the CVA operates off Vietnam.

Lt. Johnson chose the Limited Duty Officer route as he advanced in the Navy, while LCdr. Barron earned his rank by qualifying for the Naval Cadet program. They were reunited in *Coral Sea* less than a year ago.

YORKTOWN (CVS-10)

Members of the Los Angeles Chapter of the American Ordnance Association, some 460 of them, were guests aboard *Yorktown* for a one-day orientation cruise.



DURING replenishment in the Tonkin Gulf, *Enterprise* receives ammo from *USS Shasta*.

KEARSARGE (CVS-33)

Rear Admiral Burton H. Shupper relieved Rear Admiral Eli T. Reich as ComASWGrp Five during a ceremony aboard *Kearsarge* while the CVS was in Long Beach.

TRIPOLI (LPH-10)

The Navy's newest LPH was host to Vice Admiral Francis J. Blouin, commander of Pacific Fleet amphibious forces, who flew aboard to observe landings of helicopters loaded with Marine assault troops and a speed-and-maneuver run. The ship was then operating off the coast of California.

CONSTELLATION (CVA-64)

Reserve officers from Naval Reserve Research Company 11-5, Pasadena, Calif., toured *Connie* while the ship was in San Diego and attended a panel discussion entitled "The CVA in Naval Warfare."

HORNET (CVS-12)

In a ceremony aboard *Hornet*, SN David S. Russell was presented the Navy Commendation Medal for rescuing a resident of Long Beach, Calif., from a burning apartment in June 1966. The medal was presented by *Hornet's* C.O., Captain Van V. Eason, Jr.

The young seaman carried an elderly man from his room after he spotted the fire. He had gone to the apartment house to pick up a friend, but ended up giving a fire warning to its occupants and rescuing one of them.

Russell credited his participation in shipboard fire drills with causing his fast action.

PRINCETON (LPH-5)

A program of stannous fluoride treatments for dependents of *Princeton* crew members has been launched by the LPH's dental department.

The treatments were offered for children between 6 and 18; it's expected to reduce the number of cavities as much as 50 percent. The result of pioneering work conducted by the U.S. Naval Academy, the program is supported by the Bureau of Medicine and Surgery.



EVANGELIST Billy Graham discusses dedication and motivation of troops in Vietnam in interview with *Kitty Hawk's* George Briggs.



VIP VISITOR to *Enterprise*, General James Ferguson, USAF, gets briefing on the nuclear-powered carrier from Captain Holloway.



F-4 PHANTOM assigned to *America* lands on the carrier during operations in the Mediterranean. Just two years old, *America* has begun her second Sixth Fleet deployment.

BENNINGTON (CVS-20)

Bennington was another Seventh Fleet carrier to host the Under Secretary of the Navy during his visit to the Far East. He spent the night aboard.

An S-2E *Tracker*, with LCdr. Martin L. McCullough as pilot and Ltjg. Donald W. Wetmore as copilot, made *Benn's* 95,000th arrested landing.

TICONDEROGA (CVA-14)

Pilots from *Ticonderoga* teamed with their counterparts aboard *Kitty Hawk* and *Coral Sea* to hit the Ninh Binh railroad yard and transshipment area as the carrier continued to operate off Vietnam.

The Ninh Binh operation was the second two-day, three-carrier coordinated strike over North Vietnam. Aircraft from the same three carriers attacked the Dong Phong Thuong military storage and transshipment area between Hanoi and Vinh a few days earlier.

Their record of 1,063 case III carrier-controlled approaches in a 28-day period is claimed to be a new high for carriers by air controlmen aboard *Tico*.

Forty-seven years of Navy experience went to work for the bene-

fit of *Tico's* enlisted men recently when two master chief petty officers tackled a new kind of shipboard duty.

Based on the establishment of the post of Navy Senior Enlisted Advisor (NANEWS, March 1967, p. 2), *Tico* has come up with not one, but two, SEA's. Their job will be to advise Captain Ward Miller, *Tico's* skipper, on matters affecting the 3,200 enlisted men aboard.

The master chiefs are QMCM Ray Dorris and RDCM Kenneth Ayers. Chief Ayers has been designated assistant to Chief Dorris.

ATLANTIC FLEET

AMERICA (CVA-66)

It's been a busy time for *America* of late. In a relatively short period, the Navy's newest CVA arrived in the Mediterranean to begin her second cruise with the Sixth Fleet, turned two years old with appropriate ceremony and chalked up an X000th landing.

America crewmen knew they were nearing their operating area for the next several months when their ship passed the Rock of Gibraltar en route to the Med. As

flagship for ComCarDiv Four, Rear Admiral Dick H. Guinn, *America* has embarked squadrons and detachments of CVW-6.

The second anniversary of the ship's commissioning was marked by a hangar deck ceremony held after *America* reached the Med. During the ceremony, LCdr. Henry L. Bouchard and DCI Lester Elliott were named recipients of the Catherine T. McDonald Award, named for the wife of the Chief of Naval Operations and *America's* sponsor. The award is given on the ship's anniversary date to the officer and enlisted man who have contributed significantly to crew morale, operating efficiency and material readiness.

America's 21,000th arrestment was made by an A-4C *Skyhawk* piloted by Commander W. E. Ramsey, CVW-6 operations officer. The landing was made while CVA-66 was still participating in *LantFlex 66*, a major Second Fleet exercise.

WASP (CVS-18)

Wasp, accompanied by the destroyer USS *Bache*, arrived in Pensacola, Fla., to assume the job of qualifying student Naval Aviators for carrier landings while the Navy's regular training carrier, *Lexington*, underwent an overhaul in Mayport, Fla.

With Rear Admiral Percival W. Jackson, ComCarDiv 14, embarked, *Wasp* was to conduct at-sea operations for the Naval Air Basic Training Command in waters off Pensacola for about a week. During that time, an estimated 70 student aviators were to be carqualed.

Best known of late for her work in recovering astronauts launched on *Gemini* space flights, the Boston-based *Wasp* is commanded by Captain Melvin R. Etheridge.

The ship was scheduled to return to her regular operations after completing the training assignment. *Lexington* was to leave the yard, her overhaul completed, in mid-March.

ESSEX (CVS-9)

An S-2E *Tracker*, with VS-22's Ltjg. H. B. Allen as pilot and LCdr. R. L. Chrans as copilot, made *Essex's* 131,000th arrestment.

INDEPENDENCE (CVA-62)

Independence returned to home port, Norfolk, after an eight-month deployment with the Sixth Fleet in the Med. Returning with the carrier were squadrons and detachments of embarked CVW-7.

Independence was relieved by *America* in Pollensa Bay, Spain, after CVA-62 had steamed over 50,000 miles during the deployment. CVW-7 planes made some 10,000 arrested landings during the same period, and *Independence* crewmen pulled liberty in Beirut, Lebanon; Barcelona and Palma, Spain; Naples, Italy; and Athens, Greece.

Before CVA-62 steamed for home, VA-86 was presented the CVW-7 "Golden Hook" award for the fifth time during the cruise. Captain John P. Fox, *Independence's* C.O., passed the award to Commander Charles R. Long, VA-86's skipper, during a ceremony attended by Rear Admiral V. A. Lambert, ComCarDiv Six.

The Golden Hook was presented eight times while *Independence* was deployed, in recognition of outstanding performance.

F. D. ROOSEVELT (CVA-42)

FDR has returned to home port, Mayport, Fla., her first deployment with the Seventh Fleet's Yankee Station Team ended. CVA-42 was the third Atlantic Fleet carrier to



CREWMAN assigned to *Saratoga's* closed-circuit TV station sits at the controls.



UNDERWAY after completing intensive overhaul at the Norfolk Naval Shipyard, *Forrestal* completes her first at-sea refueling in ten months with the oiler *USS Kankakee*.

deploy to WestPac since the war in Vietnam intensified.

The ship returned home under a new skipper, Captain Martin G. O'Neill relieved Captain James D. Ramage during a ceremony held while the ship was still in WestPac. Captain Ramage had assumed command of *FDR* temporarily after the then C.O., Captain George C. Talley, was stricken by illness and transferred to the naval hospital at Subic Bay.

Chief of staff to CTF 77 when Captain Talley became ill, Captain Ramage returned to that post.

SARATOGA (CVA-60)

As they asked the question, "What floating city should be without its own TV station?" *Saratoga* crewmen, led by Lt. O. E. Van Houten, continued their efforts to improve the ship's internal television outlet before the CVA deploys again.

Latest improvements to the system, dubbed WSAR-TV, include the addition of a video tape recorder and other electronic niceties.

A "Family Day" held aboard *Sara* for dependents of crewmen featured tours, a buffet dinner and a colors ceremony featuring the ship's Navy-Marine drill team.

Later, with their ship in drydock at the Norfolk Naval Shipyard for hull inspection and repair, *Sara* sailors hosted Norfolk area soapbox derby contenders in Tidewater's 1967 kickoff rally. Nearly 300 prospective racers and committee members converged on the carrier for the annual affair.

FORRESTAL (CVA-59)

Forrestal left the Norfolk Naval Shipyard after a major, 10-month overhaul with the mayor of Portsmouth (where the yard is located) and the city manager embarked as special guests.

Before they were flown off the carrier, Mayor R. Irving Smith and Aubrey Johnson toured the ship and had lunch with CVA-59's X.O., Commander Jesse W. Taft. The mayor also made a short speech to *Forrestal's* crew.

Forrestal's medical laboratory has become the first of its kind to be featured in a professional medical journal. The laboratory, run by HM2 John G. Saucier, was chosen for an article in *The Virginian*, a publication of the State Society of the American Medical Technologists. The article is intended to familiarize civilian doctors with Navy technological capabilities.

Aircraft Group Activated New Squadrons at Santa Ana

A new Marine Aircraft Group was activated early this year at MCAF SANTA ANA, Calif. MAG-56 will provide tactical helicopter support for MCAS EL TORO's Third Marine Aircraft Wing.

The new group is commanded by Colonel Gene W. Morrison. The group's three squadrons fly UH-34D, CH-46A, CH-53A and UH-1E helos.

ASO is Inventory Center Prevents Duplication of Items

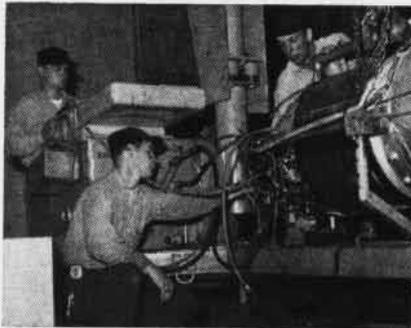
The pace of development of military aircraft has required supply "bouncers," a group at Navy's Aviation Supply Office in northeast Philadelphia. They slam the door on new aerospace hardware items that do not have proper clearance. The group makes sure that items are unique and not counterparts of ones already existing in the federal supply system.

The ASO is part of the Department of Defense program known as Item Entry Control. Not only does it prevent duplication, but it also standardizes military inventory. This program is an outgrowth of

Project *Shakedown* that, for over three years, has been weeding out duplicates in the DOD system.

The ASO group is responsible for the monitoring of eight aeronautical stock classes used by the Army, Air Force and Navy. Included in these classes are aircraft ground servicing equipment, aircraft wheel and brake systems, maintenance and repair shop equipment and gas turbines and jet engines.

Over 14,500 new items a year seek entry into the eight federal supply classes monitored at ASO. The program is expected to increase the efficiency and reduce cost.



THREE BROTHERS are all assigned to the same division at NAS Oceana. AD3 Harold Soyez and his twin brothers, AA's Robert and Richard, get together every day at the aviation maintenance department of the station.

HT-8 Claims Safety Mark No Accident in 75,000 Hours

For the first time in aviation history, a helicopter squadron has flown 75,000 hours without an accident. Lt. Gary N. Wax, a flight instructor with Helicopter Training Squadron Eight, Ellyson Field, Fla., Ltjg. Michael W. Phillips, a helicopter flight student, and PR3 Michael E. Highfield, an aircrewman, passed the mark during a routine instrument training flight.

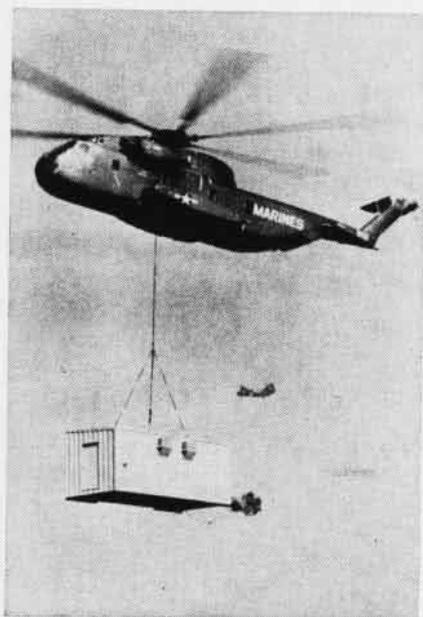
In FY 1966, HT-8 won the Chief of Naval Operations' Naval Aviation Safety Award for the third time since 1960. It also won two quarterly safety awards given by the Chief of Naval Air Basic Training. HT-8's accident rate for 1966 was less than one-fourth the Navy-wide helicopter rate and the lowest accident rate in the Naval Air Training command.

With the cost of HT-8's two helicopter models running about \$600,000 per H-34 advanced trainer and \$60,000 per H-13 primary trainer, the low accident rate meant a saving to taxpayers of at least half a million dollars.

The squadron is commanded by Captain Robert Q. Wallace. Safety officer is Cdr. Charles H. Knight.



THE VERSATILE CH-53A demonstrates its lift capability. In Vietnam, the newest addition to the First Marine Air Wing's arsenal retrieved a UH-1E near Hue. The Huey had its rotors tied down to prevent spinning in transit. Before the arrival of the CH-53A in Vietnam, a three-hour engine-removal job had to be done before



downed helos could be retrieved. At Santa Ana, Calif., a CH-53A lifted an 8,500-lb. transportable calibration laboratory. Trans-lab, 10x10x24, is useful as a highly mobile avionics or ordnance repair station, communications center or photographic laboratory. The Sea Stallion with a capacity of 15,000 lbs. can carry the lab 60 miles.

TURBULENCE STUDY AT JOHNSVILLE CENTRIFUGE

By Donald Morway and
JOC Bill Mathers

THE AEROSPACE Medical Research Department at the Naval Air Development Center, Johnsville, Pa., is using its huge centrifuge to study the "upset" and recovery problems of sweptwing jet transports encountering severe air turbulence. The program, in which the Federal Aviation Agency is collaborating, is described as Air Turbulence Dynamic Flight Simulation.

One of the major problems of sweptwing jet air transport flight at high speed and altitude is atmospheric turbulence. Tumultuous air currents can batter a jet so severely that the pilot can lose control of the aircraft completely. While every attempt is made to bypass turbulent areas, unpredictable air currents can result in unexpected encounters with turbulence.

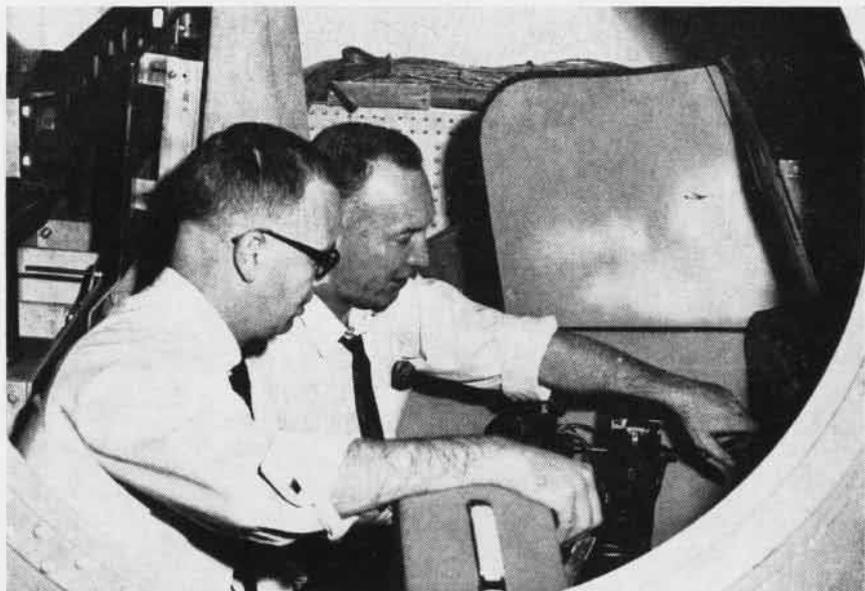
On the whole, sweptwing jet aircraft have achieved excellent safety records, but the few serious accidents are cause for alarm. As the volume of air travel grows, accident potential increases.

The Armed Forces, FAA and the commercial airlines are making every effort to discover ways of improving safety records. A question in every post-accident investigation is always: What can be done to prevent future accidents?

FAA officials, aware of the success of NADC in producing the dynamic force environment in all its space flight simulations, approached the Navy about the possibility of using its centrifuge—the world's largest—to simulate the characteristics of a sweptwing jet aircraft encountering turbulence.

The Center's Aerospace Medical Research Department agreed to create the first complete ground-based dynamic aircraft simulation. The department is headed by Dr. Lloyd Hitchcock and the project officer is Donald Morway.

The Boeing 720B was selected as the basic airplane because of the ready availability of flight data. A mock-up of the 720B cockpit, including the seat and active instru-



CHECKING the NADC centrifuge cockpit of the 720 simulator are Dr. Hitchcock (L) and Pan Am's Capt. John Walker, one of the commercial pilots participating in the project.

ments and controls, was fabricated and installed inside the centrifuge gondola.

A computer analog, using basic aerodynamic equations and actual flight test data, was programmed. This analog responds to the pilot's control and also commands the centrifuge to produce conditions equivalent to natural turbulence. In addition, storm turbulence on magnetic tape was obtained from the National Severe Storms Project, so that severe turbulence can be introduced at any time during a flight without the pilot's foreknowledge. These magnetic tape storms consist of lateral and vertical wind gusts which affect the simulated aircraft in much the same way as they would under actual flight conditions.

The centrifuge creates the sustained long-term accelerations which are the result of changes in the aircraft's flight path called for by the pilot or imposed by the storm gusts.

An hydraulic actuator, supporting the entire cockpit mock-up within the centrifuge gondola, provides the higher frequency vibrations. Thus the entire range of the force environment experienced in turbulence is simulated.

Another Turbulence Study

Last December, the National Committee for Clear Air Turbulence (CAT), meeting in Washington, D. C., found that although substantial effort is being made to understand and combat clear air turbulence, no coordinated national program exists. The group recommended that primary responsibility for different areas of the program be assigned to DOD, the Department of Commerce, NASA and FAA and that the Federal Coordinator for Meteorological Services and Supporting Research act as coordinator.

Major General Jack Catton, USAF was chairman of the meeting.

The urgency of the situation is pointed up by the fact that in 1964 8,507 pilot reports of CAT were made to the Weather Bureau, and that over 600 of them rated the turbulence as moderate to extreme.

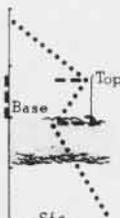
Aviation needs improved CAT detection and forecasts. Within the next 18 months, the Environmental Science Services Administration, Department of Commerce, expects to establish a national CAT forecasting facility that will provide detailed forecasts and serve as a focal point for gathering CAT data.

Subsidence Inversion

SUBSIDENCE IN THE ATMOSPHERE IS THE PHENOMENON OF A GENERAL SINKING OF A LAYER OF AIR. THE EFFECTS, WHICH ARE SIGNIFICANT TO AVIATION, TEND TO MAKE THE ATMOSPHERE MORE STABLE. SUBSIDENCE INVERSIONS ARE USUALLY FOUND AT HIGHER LEVELS IN HIGH PRESSURE SYSTEMS.



Temperature



IN THE NORMAL ATMOSPHERE, TEMPERATURES WILL DECREASE WITH HEIGHT. AT TIMES, WHEN SUBSIDENCE OCCURS, THE TEMPERATURE INCREASES WITH HEIGHT. THIS IS CALLED AN INVERSION.

THE POINT WHERE THE TEMPERATURE BEGINS TO INCREASE IS CALLED THE BASE OF THE INVERSION. THE TOP OF THE INVERSION IS THE POINT WHERE THE TEMPERATURE AGAIN DECREASES WITH HEIGHT.



THE SUBSIDENCE INVERSION IS CHARACTERIZED BY A SHARP DROP IN RELATIVE HUMIDITY THROUGH THE WARMER LAYER. THE LACK OF MOISTURE DISTINGUISHES THE SUBSIDENCE INVERSION FROM OTHER TYPES OF INVERSIONS.



THE SUBSIDENCE INVERSION IS ALMOST A CLIMATIC FEATURE ON WEST COASTS OF CONTINENTS. THESE INVERSIONS ACT AS CAPS TO THE ATMOSPHERE IN THAT HAZE AND CLOUD LAYERS FORM BENEATH THEM.



THE LOW STRATUS CONDITIONS THAT ARE OFTEN FOUND ALONG THE CALIFORNIA COAST ARE ASSOCIATED WITH SUBSIDENCE INVERSIONS. IF THE INVERSION IS PRONOUNCED, THE CLOUDS MAY PERSIST FOR LONG PERIODS OF TIME. IF THE INVERSION IS WEAK AND HIGHER CLOUDS ARE NOT PRESENT, THE LOWER DECK WILL NORMALLY DISSIPATE.

Vertigo Problem Studied Three-Day Meeting at Johnsville

A three-day symposium on the subject of vertigo as a problem in aerospace medicine took place February 7-9 at Naval Air Development Center, Johnsville, Pa. It was held under the sponsorship of the Chief of Naval Operations and the combined auspices of the Naval Aviation Medical Center, Pensacola, and the Aerospace Medical Research Department of the Johnsville Center.

Approximately 60 national and

international military and civilian authorities on vertigo participated. Each day's session was introduced by a formal presentation concerning one phase of vertigo in aerospace medicine. A round-table discussion followed. Facts and theories regarding causes of vertigo, possibilities and limitations in the use of vertigo trainers, and the relationship of the degree of realism achieved in simulation to the value of the simulator were examined.

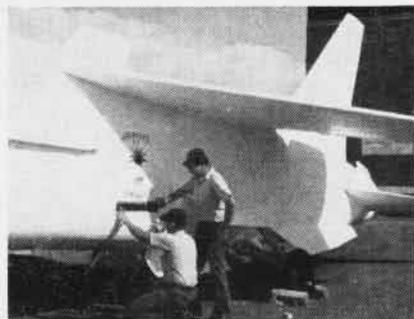
Captain Frank B. Voris, Assistant to the Director of Research, BuMed, delivered the symposium's

opening address. Guest lecturers included Captain Frank H. Austin, from the office of DCNO (Air); Captain Richard Luehrs, Naval Aviation Safety Center, Norfolk; Dr. A. J. Benson, Institute of Aviation Medicine, Farnborough, England; and Dr. F. E. Guedry, Aerospace Medical Center, Pensacola.

A New Preservative Used Protects Aircraft for Shipment

NAS BARBER'S POINT became the first intermediate maintenance activity in the Pacific to use the new Spraylat preservation system. The first aircraft was coated for overseas shipment in January.

Aircraft shipped overseas on open decks are exposed to the corrosive effects of salt water, sunlight and dust. The Spraylat preservation



COATED AIRCRAFT READY TO SHIP

system is very simple. Openings in the plane are closed with caulking compound, masonite, foil and/or tape. The aircraft is then sprayed with successive coatings of black, gray and white preservation film. This protective coating is easily peeled off, a capability which yields great advantages.

Previously, a solvent base coating was used to protect the aircraft. But the solvent had a detrimental effect on painted, plastic, rubber and other sensitive surfaces and the aircraft had to be protected from the solvent by an undercoating. Only steam washing could remove the solvent.

The new method saves about eight man-hours per aircraft. In the photo, AMHAN Francis Lodge (standing) helps hold the stencil as AMS2 Jerry Wilhite sprays the completion date on the first aircraft preserved by the new process.

PERSONAL GLIMPSES

Editor's Corner

POPULATION EXPLOSION. To help control the animal population, the rabbit hunting season at Point Mugu has been made a year round sport. The open season announcement was made in January and applies specifically to jack rabbits, with no bag limits. Cottontail hunting is still regulated by state laws during a certain period of the year. Point Mugu officials set up an official regulation for interested hunters and designated the security officer, Commander H. E. Minnick, as "game warden" for the station.

Chaplain's Corner. "Whether it is called maturity or development of personality—this is the greatest opportunity the Navy offers its own. In the Navy the young man or woman is given a challenge. Without the stability or the security of your civilian counterpart, the Navy says, 'Grow up.' The responsibilities, the opportunities are here, but you must freely accept them. The men who do, grow. This challenge can be applied to every aspect of naval life, technical, social, economic. It is true in a man's religious and moral growth. An adolescent fulfills his religious and moral obligations largely because his parents, his environment puts pressure on him. In the Navy, these responsibilities are placed squarely on the shoulders of the individual. For the first time in a man's life, he is free to fulfill these obligations. It is in the proper use of this freedom that a man grows. This is the greatest opportunity that the Navy offers." (By Chaplain Richard Lyons, in NAS LEMOORE's *Golden Eagle*.)

FLEETING BACKWARDS. "John Paul Jones is once again back aboard his flagship, the USS *Bon Homme Richard*." This was the twist in a story sent out in January, 1967, by the PAO of the carrier *Bonnie Dick*. It was an announcement that John Paul Jones III, an aviation ordnance man serving with VA-125, was serving aboard CVA-31 for a six-month tour. Jones, who claims no relationship with

the famed Navy officer of earlier times, says he is proud of his famous name. "People are bound to notice me, with that name." His father, John Paul Jones, Jr., was a Navy man in World War II.

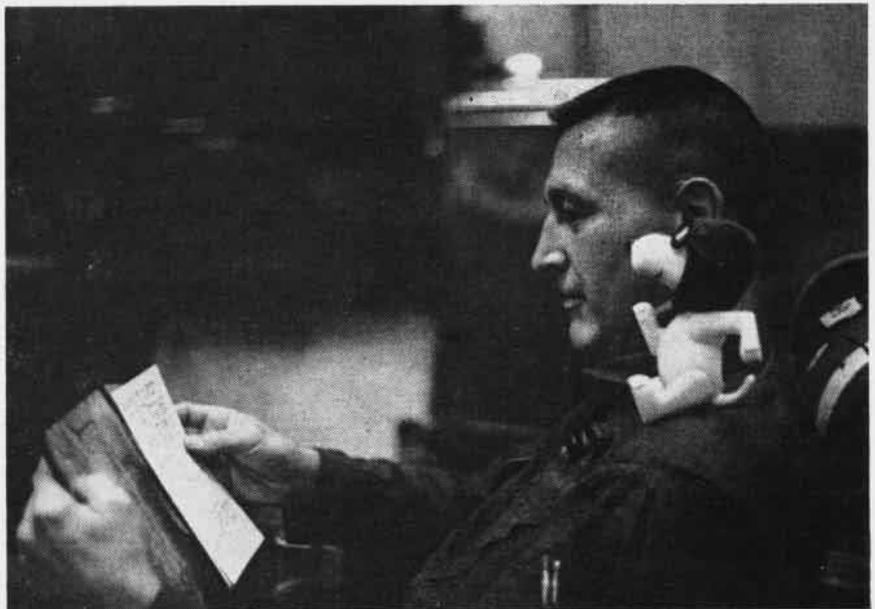
For Men Who Are All Thumbs. Chief Radioman Barbara Petrone, a WAVE attached to Naval Air Station, Pensacola, bought one of those build-it-yourself color television sets. Armed with a screwdriver, pliers, soldering iron and 40 hours worth of patience, she put 300 parts together. The first time she plugged it in, it worked!

PRINTER'S LICE, UPDATED. New sailors who have been told to "watch for the mail buoy" and Air Force men who have made trips to the flight line to fetch "buckets of propwash" have a Marine counterpart at the El Toro MCAS. On the rounds of the individual's check-in travels, Marines are directing newcomers to "report to Building 77." Recruits caught unaware later find that Building 77 is really the station flagpole.

New Worlds to Conquer. After an aviation career covering more than 50 years, a retired Navy captain has found new fame in a new field—he won a national contest as builder of the best performing paper airplane. Captain Ralph Barnaby, of Philadelphia, submitted his entry in a much-publicized paper airplane contest sponsored by American Airlines and *Scientific American* magazine. His entry, made with ordinary typing paper of standard size, outperformed 10,000 others in the acrobatics category. Other division champs were picked for distance and duration of flight.

Captain Barnaby, in an interview in the *Philadelphia Bulletin*, said his design was conceived more than 50 years ago. His friends, who remembered his little paper planes of decades past that could outsoar the paper craft of other modelers, urged him to enter the recent competition.

Now 73, Captain Barnaby will receive a trophy to place alongside his Air Medal, Legion of Merit and other awards earned during a Navy career that spanned 30 years prior to his retirement in 1947. He is associated with the Franklin Institute as a consultant to the director of the institute's museum.



SNOOPY of cartoon fame "helps" Commander Charles E. Hathaway plan a forthcoming mission over North Vietnam. Commander Hathaway is the C.O. of VA-195 aboard the USS *Ticonderoga* and has completed 200 combat missions, the first Ti pilot to achieve this record.

LETTERS

Attention, WAVES

SIRS: The WAVES' 25th Anniversary National Convention is being held in San Diego, July 20-23, 1967. We hope to have thousands attend.

For the anniversary, San Diego WAVES have been in touch with Navy women, past and present, all over the country, asking for their favorite recipes. Nine hundred of these have been collected in a cookbook, entitled *WAVES Anniversary Volume: Eats and Sweets*. The cost for a copy is \$3.00, plus 50 cents for handling and postage.

Any WAVE wishing to buy the cookbook or obtain convention information should write me: P.O. Box 12007, San Diego, Calif. 92112.

NORMA M. BATCHELDER, LCDR., USNR
National Chairman

Objection Declared

SIRS: I am singularly unimpressed by VMFA-513's record claim of 820.3 hours at MCAS YUMA as reported in your January 1967 issue.

Reserve Squadron VA-831, stationed at NAS NEW YORK, deployed at MCAS YUMA in April 1965 for 13 days. This A-4B squadron, led by Cdr. Joseph Sapinsky, logged 831 hours to equal its name.

All flights at Yuma were short ordnance flights averaging 1, 2 hours. Drop tanks were removed from all aircraft after the flight from New York and re-installed only for the return flight. On the 14th day of the active-duty-for-training period, the aircraft were turned over to another reserve squadron for training flights. Fourteen A-4B's and 16 pilots were deployed.

WILLIAM HOLLAND
Commanding Officer, VA-832
Ex-Ops Officer, VA-831

Information Wanted

SIRS: Bombing Squadron Five (VB-5) reunion in commemoration of the 25th anniversary of decommissioning will be held in late June in San Diego. All former members are urged to contact me at 4512 Pescadero Avenue, San Diego, Calif., 92107.

JOHN W. TROTT, CDR., USN (RET.)

Reunion at Corpus

SIRS: A reunion of all Navy and Marine Corps aviators who were commissioned or served at Naval Air Training Command, Corpus Christi, Texas, during WW II, with special recognition and honor for those who served in 1942, is planned for October 25-28, 1967, at NAS CORPUS CHRISTI.

Families of the officers will be welcomed. Social and recreational activities, visits to squadron training spaces, briefings on cur-

rent Naval Air activities are to be included in the program.

A dinner dance at which a prominent Naval officer will be invited to make the principal address has been proposed as the final event of the four-day reunion. Inquiries and ideas are invited from all interested officers.

Additional information may be obtained by writing to:

25TH CORPUS CHRISTI
YELLOW PERIL REUNION

c/o Staff Public Affairs Office
NAS Corpus Christi, Texas 78419

Historical Data Needed

SIRS: For several years I have been tracing the history of the Ryan Aeronautical Company of San Diego, Calif. This research, of course, includes tracing the history of each individual aircraft which Ryan produced through the years. I am a member of the American Aviation Historical Society and this project was recently given their approval. The full account will appear in their quarterly *Journal*.

I would like to hear from Naval Aviators who have flown Ryan airplanes in Navy operation or in a civilian capacity. Photographs would also be of interest.

One side project I am presently working on is the history of the PBV series aircraft and again I would like to hear from any veterans of the Navy who have flown or were involved with these airplanes. Photos are needed here, too. Any other anecdotes that may be of interest will be appreciated as well.

Anyone writing to me will receive full credit for any assistance they can offer and I will answer all letters. All material mailed will be handled with the utmost care and returned promptly.

EVERETT CASSAGNERES
Ryan Aircraft Historian

1210 Avon Blvd.
Cheshire, Conn. 06410

New Building at Ellyson Has Color TV and 2-Man Rooms

A new building has been completed at ALF ELLYSON FIELD, Fla., which provides living quarters for



ELLYSON'S MODERN READING ROOM

143 men. It features lounges with color TV, reading rooms and two-man rooms and is the first completed in a \$1.2 million renovation and new construction program. Three old barracks will be modernized and two new ones built for enlisted men.

Rear Admiral John J. Lynch, CNABaTra, joined with Captain Robert Q. Wallace, Helicopter Training Squadron Eight's C.O., in cutting the ribbon to open the new building.

A separate project will update two bachelor officers' quarters and build a new one at a cost of approximately \$1.2 million.



CONTAINERS MOUNTED ON AN A-4

Delivery Units are in Use New Way to Supply the Troops

American troops fighting in isolated areas in Southeast Asia are getting prompt, accurate, on-the-spot, aerial delivery of urgently needed supplies such as medicine, ammunition, rations and medicine. The delivery is made by a container specially developed by NADC JOHNSVILLE, Pa.

The unit, mounted externally on an aircraft, is 21 inches in diameter and nine feet long with a load capacity of 500 pounds.

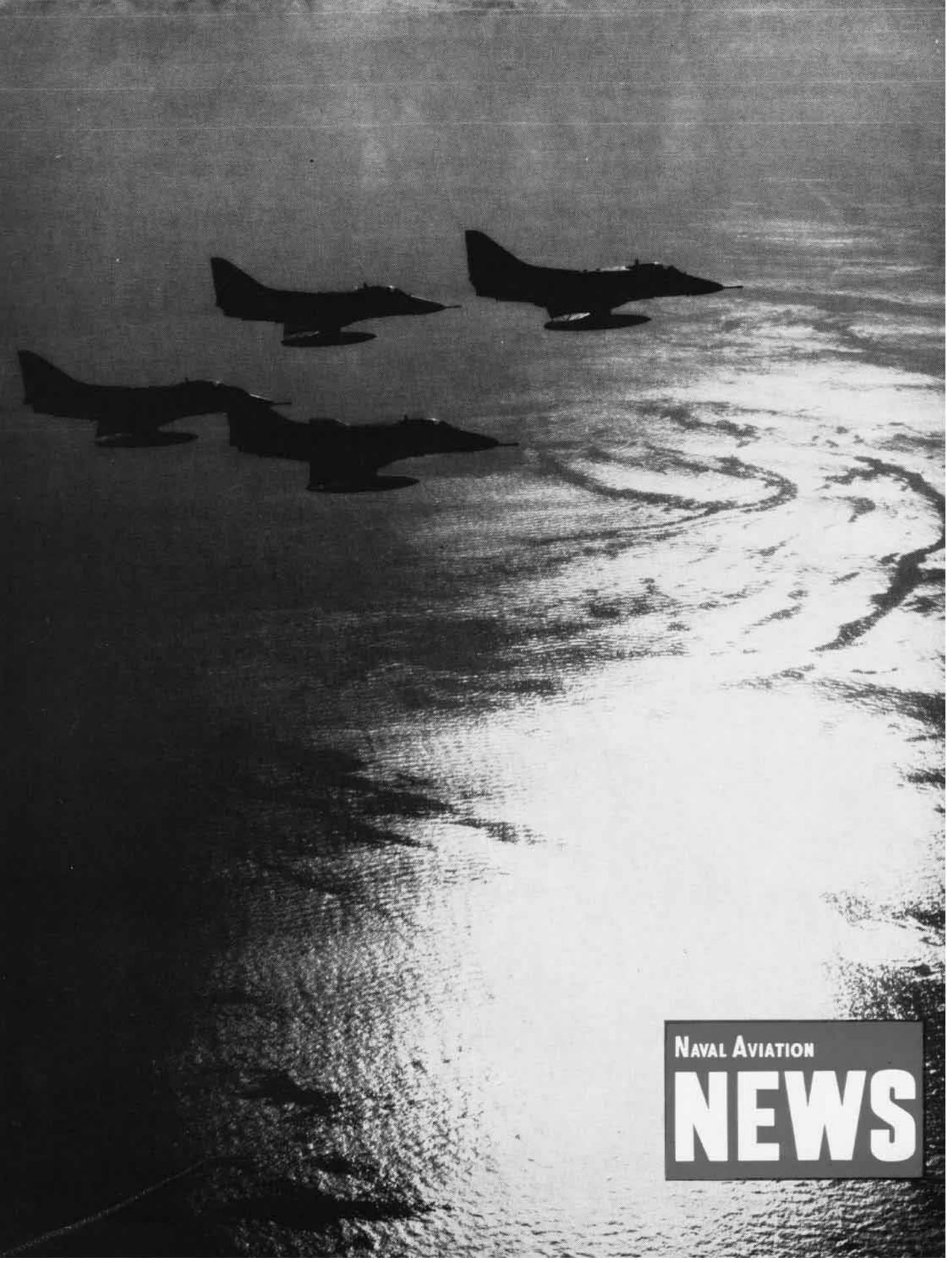
Delivery is made by aircraft traveling at speeds up to 500 mph at an altitude of only 300 feet. Delayed deployment of the parachute prevents collision and entanglement and allows for simultaneous release of as many as five containers. Total descent time is only eight seconds, minimizing enemy awareness of the location of the dispersal area.

In use for the past six months, the recoverable container has proved a great success in relieving emergency supply situations.



VP-741, home-based at NAS Jacksonville, was commissioned VP-ML-56 in August 1946 and became VP-741 in 1949. The squadron was called to active duty in 1951-53 for the Korean conflict and in 1961-62 for the Berlin build-up. The 'Fighting Gators,' led by Commander G. R. Frost, fly P-2's and boast a 15-year accident-free record.





NAVAL AVIATION
NEWS