NAVAL AVIATION NEWS

45th Year of Publication

JUNE 1964

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TASK GROUP ALFA IS SIX

'Coping with the submarine threat is and must be a team effort of ships, submarines, naval air power and, above all, of people working together to carry out ASW missions. Through coordination, careful timing and controlled action, a hunter-killer group commander is able to apply team effectiveness to great advantage. The sum of the capabilities of the team is far greater than the sum of the individual abilities of the various units. It is a case where 1 plus 1 does not equal 2; but instead equals 11.'—VAdm. John S. Thach, DCNO(Air).

NAVAL AVIATION NEWS

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FORTY-FIFTH YEAR OF PUBLICATION JUNE 1964

■ IN THIS ISSUE

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■ COVERS

The front cover features Grumman's E-2A Hawkeye. . . . USS Randolph sent in the above picture of Task Group Alfa in honor of the group's sixth anniversary. . . . *Naval Aviation News* is indebted to NAF Naples for the special photograph on the back cover.

NAVAL AVIATION NEWS

Defense Closings Planned

6 Naval Aviation Centers Affected

On April 24, Secretary of Defense Robert S. McNamara announced 63 actions to consolidate, reduce, or discontinue Department of Defense activities in the United States and overseas. Of these, six were Naval Aviation facilities.

Two air stations, NAAS NEW IBERIA, La., and NAS GROSSE ILE, Mich., and four seadromes—Pensacola, Norfolk, Key West and Jacksonville—are being disestablished. Military personnel and equipment will be assigned elsewhere.

Training Squadron 27, which is located at New Iberia, will be transferred to NAS CORPUS CHRISTI.

Tentative date for Grosse Ile's final consolidation with Selfridge AF Base is September 1, 1967. A Reserve air station since 1945, NAS GROSSE ILE has aboard, in addition to the Air Wing staff, 22 Naval Air Reserve and six Marine Air Reserve squadrons or units.

Ens. Myers is '63 NavCad

Named by CNATra, Meets President

Ens. William M. Myers, now serving with VF-142 at NAS MIRAMAR, was selected Outstanding Naval Aviation Cadet of 1963 by the Chief of Naval Air Training, VAdm. Fitzhugh Lee. He received a gold watch award from the National Society of the Daughters of the American Colonists and was received by President Johnson.

He was selected outstanding cadet on the basis of his grades in flight proficiency, academic standing, and officer-like qualities.

Ens. Myers is a former aviation electronics technician, second class. He was performing duties as information and education petty officer when he was accepted as a NavCad for flight training at Pensacola.

ENS. MYERS MEETS COMMANDER IN CHIEF

In Washington, he also received personal congratulations from Secretary of the Navy Paul H. Nitze, Chief of Naval Operations Adm. David L. McDonald, and two members of Congress from his home state, Missouri, Senator Stuart Symington and Representative Thomas B. Curtis.

At the DAC presentation ceremony, RAdm. Daniel F. Smith, Chief of Naval Air Basic Training, represented Chief of Naval Air Training, VAdm. Lee.

Marine WO's to be Pilots

Will Train for Helos at Pensacola

A helicopter pilot training program for USMC Warrant Officers has been announced in change one to Marine Corps Order 1040.14A. Requirements for the flight training program are the same as those for the Corps' basic Warrant program, with the exception that an Area Aptitude Test score of 120 is required instead of 110.

Upon successful completion of the screening and basic courses, qualified applicants will be ordered to Naval Air Station Pensacola for training.

Festivities at Pensacola

Open House Scheduled for June 13

At NAS PENSACOLA, festive activities celebrating the station's 50th anniversary include a gigantic air show, an open house, parades, a national model airplane meet and various sailing events.

Highlight of the year-long celebration is the open house and air show on June 13, a date which coincides with the City of Pensacola's annual Fiesta of Five Flags.

The air show in the morning will feature the *Chuting Stars*, the Navy's famed parachute exhibition team, and the Flying Professor, Capt. Dick Schram, USNR. A Pre-Flight parade and graduation follows at the parade grounds. A 50th anniversary cake-cutting and plaque unveiling will round out the morning program. It will be attended by ranking civilian and military VIP's.

At 1300, at Forrest Sherman Field, the *Blue Angels* are scheduled to open a thrill-packed demonstration. The *Chuting Stars* and the Flying Professor will again perform. They will be followed by a series of flight demonstrations by the Navy's latest aircraft.

The Navy Cup Regatta takes place June 14. The Golden Anniversary and Fiesta week-long festivities will close that evening with a fireworks display at Pensacola Beach.

USS *Lexington* and the destroyer *Tweedy* will be open for public visiting.

Events in June include a Navy Relief bridge tournament at Mustin Beach Officers' Club June 7, the DeLuna yacht parade and landing at Pensacola Beach June 10, "Old Timers" and past commanding officers' reunion the first week in June.

'Top Shot' Awards Given

VMA-224, VA-146 are Recipients

The Atlantic "Top Shot" award for *Bullpup* guided missile firing in world-wide armed forces competition was presented at MCAS CHERRY POINT April 24 to Marine Attack Squadron 224, 2nd Marine Aircraft Wing, by Mr. G. T. Willey, vice president and general manager, Martin Marietta Corp., Aerospace Division, Orlando, Florida.

The same honor for West Coast squadrons was given VA-146 at NAS LEMOORE. The presentation was made by Mr. Wendell Hall, Martin Company senior representative, to Cdr. E. V. Crangle, Commanding Officer of the *Blue Diamonds*. Both squadrons fly A-4C *Skyhawks*.

The Martin Corp., manufacturers of the *Bullpup* missile, awards a plaque semi-annually to the squadrons with the best missile firing performance during the competitive period. The purpose of the awards is to create competitive spirit in all U. S. squadrons having *Bullpup* capabilities.

More than 100 attack/fighter squadrons equipped to fire the *Bullpup* missile are considered for the "Top Shot" awards given for each of five major U.S. military air commands throughout the world. To be eligible, a squadron must have fired at least 20 missiles during the period of competition. Over-all weapon system reliability, as well as accuracy, are considered in judging squadron performance since the ground handling and maintenance procedures of squadron ground crews are important factors contributing to the tactical effectiveness of the weapon.

PILOTS FROM THREE NATIONS TO TEST P.1127

International Unit Ready

Will Evaluate P.1127 in Maneuvers

An unprecedented multi-national jet fighter squadron, composed of American, British and German airmen, is being formed in England. The squadron will evaluate the revolutionary vertical-takeoff-and-landing (VTOL) Hawker Siddeley P.1127 under combat conditions in conjunction with NATO field maneuvers in Europe.

Nucleus of the squadron will be these flyers (see photo): Maj. J. K. Campbell, USAF (in cockpit); Col. G. F. Barkhorn, Federal (West) German Republic Air Force (top); LCdr. J. J. Tyson, USN (middle); (left and right on ground in uniform) Wing Cdr. D. M. Scrimgoeur, RAF, and LCol. Lowell Solt, USA. Civilians at left and right of bottom row are Bill Bedford and H. Merewether, test pilots for the Hawker Blackburn Division of Hawker Siddeley Aviation, manufacturer of the P.1127.

Wing Cdr. Scrimgoeur commands the tripartite squadron. Col. Barkhorn and LCol. Solt serve as his deputy commanders.

The P.1127 can take off and land vertically as well as fly conventionally at supersonic speeds. The evaluation squadron will be equipped with nine P.1127's, now in production.

End of a Long Career

Last Pacific Fleet HUP Retires

In April, the last of the Navy's Pacific Fleet operated UH-2S tandem-rotor helicopters retired. Rotocraft Buno. 128526 departed Helicopter Squadron One, NAAS REAM FIELD, Imperial Beach, Calif., for its final resting place at Litchfield Park, Ariz.

The HUP's career was filled with varied and exciting missions. The first HUP's assigned to the Pacific Fleet came whirling into San Diego on March 6, 1952, and were assigned to HU-1.

On May 1, the HUP performed her first mission as "angel." Henry Cordoza, AD1 (AP) pilot, and his crewman, W. M. Hilton, AD1, were sent to rescue a fighter pilot who had ditched his aircraft near the Los Coronados Islands. It was a night rescue made more difficult by fog.

The HUP has served her squadron primarily in the plane guard position on Pacific Fleet carriers, rescuing more than 250 people since that first rescue. The last HUP rescue was made in May 1963 by Ltjg. H. A. Thienes and crewman J. Sims, AN, while operating from the USS *Hancock* (CVA-19).

CELEBRATING ITS SIXTH *anniversary, Task Force Alfa assembles units for an official portrait. Alfa was commissioned in April 1958 under the command of RAdm. John S. Thach to accelerate the development of ASW tactics, doctrine and equipment in order to improve ASW readiness. Alfa consists of the USS Randolph (CVS-15) with Carrier Anti-submarine Air Group 58 embarked, the destroyers Mullinnix, Laffey, Fox, Vogelgesang, Stormes, Holder, Lowry, and the submarines Cubera and Sirago. The 42,000-ton Randolph has S-2D Trackers, E-1B Tracers, SH-3A Sea Kings and A-4C Skyhawks. Alfa, commanded by RAdm. W. A. Stuart, is capable of sustained operations for indefinite periods.*

GRAMPAW PETTIBONE

Ferry Fiasco

A flight crew consisting of a pilot, copilot, plane captain and second mech arrived at a mid-west naval air station late one bright morning to pick up a P-2F which was to be delivered to NAF LITCHFIELD PARK. This crew was assigned to a ferry squadron and therefore familiar with the details associated with acceptance and delivery of aircraft.

A VFR flight plan was filed to El Paso International Airport and the flight departed at 1725. After the P-2F was airborne, all in-flight checks were performed with all systems checking out satisfactorily.

The flight progressed routinely for approximately two hours when the pilot noticed the starboard sump light had come on. The flight at this time was cruising at an altitude of 8500 feet, 10 to 15 miles northeast of an Air Force base. The plane commander reduced power on the starboard engine and decided to make a precautionary landing at the nearby Air Force field.

After adjusting the power on the #1 engine and feathering #2, the copilot contacted the tower and informed them of the trouble. He also advised the tower the crew did not desire to declare an emergency as they considered the engine failure to be a routine matter. The tower operator

cleared the pilot into the pattern at an altitude of 2000 feet and advised him of the duty runway which was 13,500 feet long and 300 feet wide.

Things progressed normally during the first part of the approach and at the 90-degree position, the landing gear was lowered and flaps were set at 20 degrees. The pilot felt he was in good position, but as he turned on final at 500 feet with 115 knots and full flaps, airspeed started to fall off rapidly and the aircraft entered a pronounced right drift. At approximately 100 feet and 100 knots, the plane captain rolled in right rudder tab, as instructed. The copilot added waveoff power to try to stop the sink rate.

The aircraft continued to lose airspeed and altitude and the right skid increased. Contact with the ground was made in about a 20-25 degree bank to the right at an airspeed of 85 knots. Full power was still on the port engine at time of impact and remained on as the aircraft continued across the field in a right skid before coming to a rather abrupt stop in a deep drainage ditch.

The crew immediately abandoned the aircraft and was taken to the base hospital by an Air Force ambulance. Only one crew member received minor injuries but the aircraft sustained strike damage.

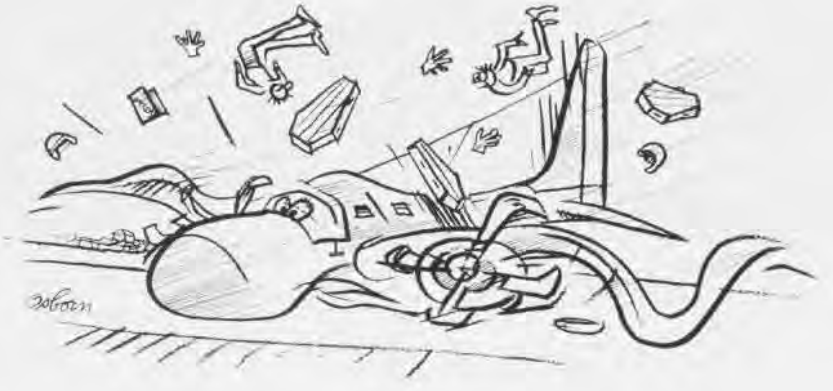
Grampaw Pettibone says:

Great heavenly days! This plane commander worked like a beaver to booby-trap himself. It's not his fault that the entire crew didn't end up wearin' wooden overcoats.

This lad clearly demonstrated that he's not too familiar with the single-engine landing procedures for this aircraft by gettin' himself into a position where it was impossible to execute a waveoff. This accident is a prime example of what happens to a pilot who fails to comply with NATOPS.

Additional evidence of the haphazard manner in which this flight was conducted is the fact that none of the crew was wearing a hard hat or flight gloves. Although plenty of time was available to prepare for the landing, the pilot and copilot failed to lock their shoulder harnesses. The plane captain and second mech didn't even fasten their seat belts. It's pretty easy to see that this pilot's lack of professionalism and judgment affected the entire crew.

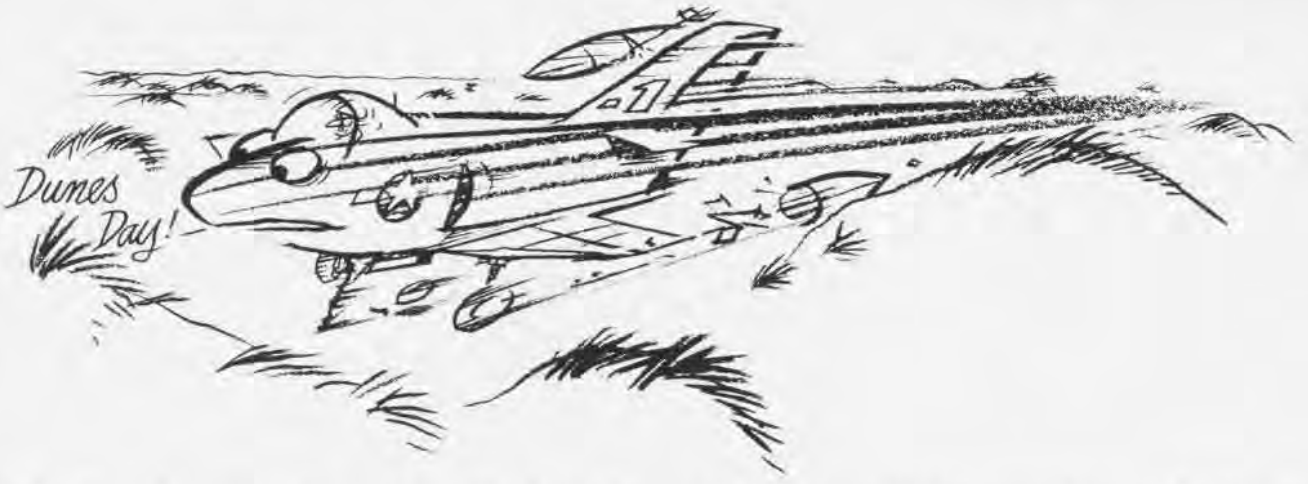
Such things as seat belts, shoulder harness, hard hats, gloves, and all items of safety and survival equipment are provided for a darn good reason. Failure to use them is downright stupid. These lads were lucky to come out of this can of worms in one piece.



Lucky Lad

A section of A-4B (A4D-2) *Skyhawks* on a cross-country flight stopped at El Paso International Airport for

ILLUSTRATED BY Osborn



fuel. The pilots remained on the ground approximately two hours occupied with such routine activities as eating lunch, briefing the next leg of the flight, and filing a DD-175. After pre-flighting their aircraft, they started and called for taxi instructions.

Each pilot had computed his takeoff roll at 7400 feet—which was about right for that particular mid-summer day in West Texas. The tower directed the section to taxi into takeoff position on the duty runway which was 9000 feet. In the takeoff spot, each pilot checked the other's aircraft for flap setting, oil vapor and locked canopy, and after receiving a thumbs-up, the lead plane began his takeoff roll.

The wingman waited until the lead aircraft was approximately 1000 feet down the runway before advancing the throttle to the stop and releasing the brakes.

Initial acceleration of the little bird met with the pilot's complete satisfaction. At 5000 feet he observed his airspeed to be 120 knots so he began to rotate. The aircraft lifted from the runway and at this point the anxious pilot sucked in the landing gear, but as the gear retracted he felt the A-4B vibrate and start to settle back on the runway. He immediately placed the landing gear handle down, hoping he could possibly abort. In another few seconds, the aircraft was digging a path between sand dunes across the hot Texas desert.

After skidding several hundred feet both wing tanks were torn away and finally the aircraft dug a wing into one of the sand dunes and came to rest in a veritable flood of JP-4 fuel.

The shocked but uninjured pilot immediately got out of the cockpit and ran several yards before stopping to look at the wreckage. A small fire had started in the intake ducts and in a couple of minutes the seat cooked off and fire completely consumed the aircraft. Rescue vehicles arrived fast.

Grampaw Pettibone says:

Great balls of fire! The little aircraft was really an innocent victim of a combination of circumstances over which it had no control—a full load of fuel, a high hot runway, an overanxious pilot who over-rotated and completely disregarded the pre-computed takeoff distance and speed.

The pilot didn't indicate that he considered ejecting at all. The A-4B NATOPS is pretty clear that ejection can be accomplished on the ground at a speed of 90 knots or above. Rather than challenge those sand dunes, which were 8 to 10 feet high at near takeoff speed, he should have elected to eject rather than take the chance of walking away. It's hard to argue with success, but this lad is mighty lucky that the aircraft chose a path between those sand dunes instead of plowing into one. I'll just bet he has spent sleepless nights thinking about this one.

Faulty Attention

On a bright California morning, two proficiency pilots in a trusty C-45 received taxi clearance to the warm-up spot for the north runway at a West Coast air station. During warm-up, the pilots were informed by ground control that wind conditions were such that they could use the west runway if they so desired. Due to the sun, the decision was made to use the alternate runway. After being cleared, they taxied toward the takeoff end of the other runway. To expedite their departure, the copilot switched to tower frequency and requested takeoff clearance en route to the warm-up spot.

The tower cleared the aircraft for takeoff and both pilots hurriedly completed the remaining few items on the check-off list. Another C-45 was holding to the left side of the throat, to the runway perpendicular to the taxiway centerline. Both pilots of the taxying aircraft were busy with last minute takeoff items and did not see the parked C-45 until their starboard engine contacted the starboard wing of the other aircraft. Both aircraft were substantially damaged but, fortunately, there were no injuries.

Grampaw Pettibone says:

Well, now, if that doesn't tear the rag off the bush! Drivin' a bug smasher or any other aircraft around with a pair of eyes in the cockpit copying a clearance or doing anything else is absolutely ridiculous. The visibility in a C-45 is poor at best and even more reason to use extra caution during ground operations, but the same attention and caution is required regardless of the type of aircraft you're in. Maneuvers like this are gettin' to us at the rate of several hundred clams each year. There is just no defense for a guy who pulls such a trick.

This lad really didn't have a clearance problem as a United Airlines plane had just taxied around the parked aircraft. He just FAILED to INSURE that the area ahead was CLEAR. It's just that simple and to put it any other way would be a waste of words. Uncage the eyeballs, boy!

THE BATTLE OF THE PHILIPPINE SEA

ON THE SECOND DAY *of battle, Task Force 58 caught up with a retreating enemy fleet and delivered an attack at long range as the sun neared the horizon. In spite of violent maneuvers, the enemy took bomb and torpedo hits which sank 3 ships and did serious damage to others.*

By Adrian O. Van Wyen
Aviation Historian, DCNO(Air)

TWENTY YEARS ago this month, *Essex* and *Independence* class carriers had their first test against the Japanese Fleet in the Battle of the Philippine Sea. It began with the Marianas Turkey Shoot on June 19, 1944, when fighter pilots of Task Force 58 stood off a day-long air attack launched from Japanese carriers and shore bases. Its action ended late on the 20th as Task Force 58 pilots caught up with a retreating enemy, made their attack and returned through darkness to a carrier force lit up in brilliant defiance of whatever dangers might be lurking around it.

That the battle was the inevitable result of our assault on the Marianas is only partly true. On the American side there was some hope but more doubt that a fleet engagement would result. Japanese thinking was another matter. Although the place was neither to their liking nor of their

choosing, the time was ripe for a decisive fleet action and it was exactly what they had in mind.

They had not forgotten Adm. Yamamoto's insistence that complete destruction of the U. S. Fleet was essential to victory. His successor, Adm. Soemu Toyoda, thought along the same lines and had provided for that eventuality in recent plans. Setbacks in the Gilberts and Marshalls in late 1943 and early '44, and the increasing tempo of U. S. carrier force operations since then, made it quite clear that a time of reckoning was fast approaching—if indeed not already at hand. They were fully aware that an opportunity to engage the U. S. Fleet must be found, hopefully when it was committed to an amphibious operation, and that it must then be annihilated in one quick blow.

By May 1944, preparations to meet that opportunity were nearly complete. New carrier air groups had been trained to replace those lost at Midway and frittered away from shore in the South Pacific, and were on board nine carriers. In mid-May these and other combatant units of Mobile Fleet under VAdm. Jisaburo Ozawa were assembling at Tawi Tawi in anticipation of battle. Shore-based air forces on the string of islands, reaching southward from Japan through the Bonins, Marianas and the Carolines to the Philippines, were also being reinforced with over 500 aircraft. Other air groups stood by in Japan to reinforce these defenses by staging through the Bonins. Only the opportunity for decisive action was lacking.

The opportunity was in the making early in June as Fifth Fleet assembled at Majuro for the Marianas campaign, but other events sounded the first alarm. Carrier air raids on Marcus and Wake on May 20 and 24 suggested something in the wind, but a landing on Biak by Southwest Pacific Forces on May 27 looked like the awaited opportunity.

Two days later, Toyoda ordered aircraft to the defense of Biak, drawing many from the Marianas, and sent in a reinforcement group. It ran into trouble and retired and a second group suffered the same fate. Deciding that halfway measures would not do, he detached a heavy surface unit from Mobile Fleet, and on June 10, with VAdm. Ugaki in command, it started for Biak to settle the issue. But our attack on the Marianas the next day changed the picture, and Biak suddenly become unimportant. Toyoda recalled Ugaki, sailed Ozawa and Mobile Fleet from Tawi Tawi and arranged for the two forces to join at sea, east of the Philippines.

WITHIN HOURS of the Marines landing the 15th, Toyoda ordered his forces to the attack. At 1835 the same day, Mobile Fleet steamed through San Bernardino Strait into the Philippine Sea. In mid-afternoon next day, Ugaki's force joined. VAdm. Ozawa now had under his command nine carriers (six CV, three CVL) with 435 aircraft on board, five battleships, 11 heavy and two light cruisers, 25 destroyers, and a supply group of six oilers and as many destroyers. Almost the entire heavy strength of the Japanese Navy was at sea.

Our assault on the Marianas began with a four-day carrier air attack, started in late afternoon June 11 and was supported on the later days by heavy gunfire from support ships. Behind this bombardment, the Marines stormed over the beaches of Saipan early on the 15th. The carrier force spearheading the attack was composed of 15 carriers (seven CV, eight CVL) with 900 aircraft, seven battleships, three heavy and 10 light cruisers, and 58 destroyers. These ships made up Task Force 58, organized into four task groups, commanded by VAdm. Marc A. Mitscher. It was a part of Fifth Fleet, commanded by Adm. R. A. Spruance, who also commanded the entire operation.

The carrier attack was in its third day and two carrier groups were on the way to neutralize airfields in the Bonins, when a report was received from the submarine *Redfin* that the Japanese Fleet had left its anchorage at Tawi Tawi. Although there was no evidence of its destination, Adm. Spruance considered the move significant enough to inform his force commanders of the possibility that an enemy fleet could be within striking distance by the 17th.

The departure from Tawi Tawi took on added meaning on the 15th when *Flying Fish* reported passage of a large enemy force through San Bernardino Strait, and on the 16th when *Sea Horse* reported what was apparently a second enemy force east of Surigao Strait. Upon receiving this news, Spruance called a council of war and made new plans. Landings on Guam were postponed; unloading at Saipan would stop the night of the 17th. The carrier groups in the Bonins were recalled. Patrol planes were ordered up from the Marshalls to make long-range search. The Bombardment Force would cover Saipan from the west and the escort carriers would take over the job of close air support. Task Force 58 would be beefed up by transferring certain cruisers and destroyers from Bombardment Force and would take on the major task of dealing with the approaching enemy fleet.

In his battle plan, Spruance assumed that the primary Japanese objective was destruction of invasion forces at Saipan. To achieve it, the enemy Fleet could be expected to avoid action until within range of Saipan, and it was therefore probable that the whole force, or a substantial part of it, would attempt to sweep around the area in which Task Force 58 was operating. To counter this sweep, or end run, his plan called for the carriers to operate near the forces they were to protect. Only after all units of the Japanese Fleet had been located should Task Force 58 move to the attack and then it must attack vigorously.

WITH HIS ASSIGNMENT thus stated, Mitscher sent planes to search for the enemy. After fueling, he took his force west to gain as much distance as possible before sending out night search. Neither made contact. On the 17th, air operations were held to a minimum while the force reformed to absorb ships transferred from Bombardment Force and to form a Battle Group with seven battleships, four heavy cruisers and 14 destroyers withdrawn from the carrier task groups. The new group was commanded by VAdm. W. A. Lee and placed to the west of the carrier force along the line of most probable enemy approach.

The carrier force then began an operating plan calling for a westerly course at night to reach a point not more than 300 miles from Saipan by morning, and easterly by day to bring it close in by nightfall. This kept the force within striking distance of Saipan, allowed an advance toward the enemy each night and, because the

prevailing wind was from the east, also permitted air operations all day without change of course.

If earlier estimates had been correct, the enemy fleet would soon be within striking range, but nothing had been heard of it since early on the 16th when it was reported east of the Philippines. A small oiler group, reported at 0510 on the 17th, was at best only an indication that a fueling operation had been, or was about to be, carried out. Bigger news came at 0320 on the 18th when a message from the submarine *Cavalla* reported sighting a force of 15 or more ships five hours earlier in position 12°23′N, 132°20′E, making 19 knots due east. From it, Mitscher estimated that the enemy would be about 660 miles from Saipan by dawn and about 500 miles from his 0530 position. If Task Force 58 steamed westward, the two forces might be within striking range in the afternoon. However, he needed confirmation of the enemy position which would take time, and, with half his strength still on its way from the Bonins, it was easy to decide to wait.

At about 0730, shortly after his decision and his force had turned to its easterly daylight course, a second message from *Cavalla* reported losing contact at 0630 with a major element in position 12°29′N, 134°30′E, still moving at 19 knots but on a new course of 080. This report confirmed Mitscher's previous estimate except for bearing. If his opponent kept coming, he could be picked up by carrier search at about 300 miles in mid-afternoon, and if Mitscher closed during the afternoon and night, a night surface action might ensue. He therefore sent a message to VAdm. Lee, commanding his Battle Group, asking if he favored a night surface engagement. If Lee was opposed, his plan was to retire eastward to maintain distance between the fleets.

Adm. Lee gave several reasons why a night engagement was undesirable. Adm. Spruance sent a message agreeing with Lee and made other comments on *Cavalla* reports. He considered the second as adding little to the first, concluded that the disposition of enemy forces was still not clarified and that the position of contact indicated that the group sighted was the southern flank of the enemy approach. He reminded Mitscher that Saipan must be covered and that it could best be accomplished by moving Task Force 58 westward during daylight and eastward at night. This not only nullified any thought of closing with the enemy, but completely reversed the normal operating pattern.

Task Force 58 turned southwesterly at noon, made rendezvous with the task groups returning from the Bonins and then set up a battle and cruising formation with three carrier groups on a general north-south line about 12 miles apart, the Battle Group ahead under protection of the fourth carrier group. When this formation was completed, search planes were sent off and at 2030, June 18, the force began retirement toward Saipan.

Two hours later, CinCPac informed Adm. Spruance that at 2023 Radio Direction Finding had located an enemy force within 100 miles of 13°N, 136°E. This was 585 miles and 257 degrees from Saipan and roughly 355 miles WSW of Task Force 58. With both forces on easterly headings at about the same speed, the distance between them would not be changed by morning. For Mitscher, the distance struck an unhappy medium, being greater than the effective range of his own aircraft but well within the longer range of the Japanese. Further, the closer his force moved to enemy airfields on Guam and Rota, the more difficult its position would become. Everything pointed to the desirability of reversing course to cut down the distance to the enemy which he estimated could be reduced to between 100 and 150 miles by morning. With air search on either side, he could then locate and cut off any force attempting the feared end run. At 2325, he proposed to Adm. Spruance that course be changed to 270 at 0130 "in order to commence treatment at 0500."

Before the answer came, Adm. Spruance intercepted a request from Pearl Harbor to the submarine *Stingray* for a repeat of a message possibly garbled by jamming. Knowing that *Stingray* was operating about 80 miles south of the RDF position, Spruance gave more credence to the jamming than to the position. He still lacked proof that all elements of the enemy fleet were together. His reply, at 0038, therefore, again reminded Mitscher that the possibility of an end run must not be overlooked and that a change of course was undesirable. Task Force 58, accordingly, continued its course toward Saipan and, with the decision made, Mitscher went to bed.

As day broke on the 19th, Task Force 58 was in a position about 90 miles northwest of Guam and 120

COMBAT INFORMATION CENTERS *and Fighter Director teams, which tracked incoming raids and set up the interceptions, made a vital contribution to victory on the first day of battle.*

southwest of Saipan. The respective task groups were in their assigned positions spread out over more than 800 square miles of ocean. Night search had not been heard from. Combat Air Patrol was up. Early in the morning, planes from *Monterey* made a routine interception of two *Judys* approaching from Guam. At 0720, planes from *Belleau Wood* reported many aircraft taking off from Guam and called for help. At 0800, a group of 30 to 40 planes was detected by radar about 80 miles to the southwest, apparently bound for Guam. Fighters went out to intercept and by 0930 had destroyed 35 enemy planes in the air and

ADMIRAL *Raymond A. Spruance, Commander Fifth Fleet, made the basic decisions of battle.*

reported others attempting to take off and many more on the ground. By 0950, enemy planes were appearing all around the radar scopes and, shortly after, a large group was detected orbiting at 20,000 feet about 100 miles to the west.

There was altogether too much activity to please Mitscher. Everything suggested that his force was about to get the working over he had visualized the night before. It did not help at all to learn at 0915 that a PBM search plane from Saipan had located the enemy fleet at 13°20′N, 137°00′E at 0115 the night before but had been unable to transmit its report. That sighting not only confirmed his earlier estimates of its position but also the validity of the position established by RDF. But the report was already too old and attack on the enemy fleet was now out of the question. It was time for action of another kind.

The general alarm was sounded at 1004 and the fighters over Guam were recalled. The carriers turned into the wind, launched additional fighters, and cleared their decks of bomber and torpedo planes by sending them off to orbit to the east. Preparations were made for a long hard battle.

Fighter Directors sent out the *Hellcats* to meet the incoming enemy. It was a fighter group made up of 61 *Zekes*, some carrying bombs, and eight *Jill* torpedo planes. The opposing forces met head-on about 60 miles out, and the fury of the *Hellcat* drive split the group into three separate parts and then chewed the parts into bits and pieces. Those that evaded the first interception were met by a second wave of *Hellcats* but still some slipped through to press home their attack on the first task group within reach. It was the Battle Group with the greatest concentration of anti-aircraft firepower in the entire force. Even so, they scored a 500-pound bomb hit on *South Dakota*, a near miss on *Minneapolis*, and one plane destroyed itself against the hull of the *Indiana*. Not one reached the carriers. Of the 69 starting the attack, 42 never returned.

Right on the heels of the first attack, a second appeared. It was a bomber group composed initially of 53 *Judys* and 27 *Jills*, escorted by 48 *Zekes*. The same pattern of interception and destruction was repeated. Half a dozen dive bombers broke through to score near misses on *Bunker Hill* and *Wasp* in the southernmost of the carrier groups. A small group of *Jills* launched torpedoes at carriers in the next group north, without success. Of the 128 planes launched by the

THE BACKBONE *of the Fast Carrier Task Force of World War II, Essex and Independence class carriers spearheaded the attack in the Marianas and met their first test against an enemy fleet in the Battle of the Philippine Sea, less than one year after the first went into action.*

Japanese for this attack, 107 never returned. It was noon.

During the lull which followed this attack, bomber and torpedo planes, orbiting to the east, were called in after bombing the runways at Guam. In the same period, Adm. Spruance sent word to Saipan by message drop, to get additional patrol planes ready, and to extend night search to 700 miles. Task Group 58.2 made ready to send off another search group.

The third raid, which came in at 1300, was the smallest and luckiest that day. Only some of the 47 aircraft launched found their intended target. They were intercepted about 50 miles to the north and seven fell on the first pass. A few made a half-hearted attack on the northwest carrier group and ran for home. Forty of the 47 planes launched made it. The raid was over; it was 1320.

Stragglers and small groups came in at odd intervals, but CAP pilots and AA gunners either shot them down or fended them off. As the enemy attack appeared to deteriorate, there was increased activity over the islands. At 1449, radar picked up a large group headed for Guam. It was made up of 20 *Zekes*, 27 *Vals* and two *Jills*. It was intercepted over the island and, in a swift action, 30 were shot down and the remainder damaged beyond repair. That was the end of raid four. It was mid-afternoon.

During the day, fighters were repeatedly sent to Guam, and strikes by dive bombers and torpedo planes on both Guam and Rota airfields kept the runways cratered. At 1845, one of these fighter patrols fired the last shots of the battle in a brief tangle with a superior force of *Zekes*. More than ten hours after the action began, the Marianas Turkey Shoot was over.

Mitscher's report put the day's score at 392 enemy aircraft destroyed; 360 in air combat, 13 on the ground and 19 by ships' AA. A more popular figure, based on squadron claims, put the total at 402. Post-war studies of Japanese reports place the number nearer 300, but this was still the best day's work of the war.

It was a victory forged by the courage and skill of the fighter pilots of Task Force 58, ably assisted by fighter director teams aboard ship and supported by the men who launched, recovered, serviced and armed their planes. It was the first time a major air attack had been made on our forces without sinking or seriously damaging one of our carriers. Our losses in aircraft stood at 23 in air combat and six operationally. Twenty pilots and seven aircrewmen had been lost in the air battle and four officers and 27 enlisted men had been lost on the ships. A more serious loss in terms of hitting back was one of position.

Task Force 58 had worked eastward all day and by nightfall was within 20 miles of Guam. Distance between opposing forces could have changed very little and there was a good possibility that it had been lengthened by an early enemy retirement. At 1500, Adm. Spruance gave the order to start pursuit, but by the time the air action was over and all aircraft were recovered, several hours had passed. At 2000, the force turned to the chase and put on 23 knots to gain a position for attack. Task Group 58.4 stayed behind to fuel and to maintain neutralization of airfields on Guam and Rota.

During the day, Spruance and Mitscher had received word of submarine attacks by *Albacore* on the carrier *Taiho* at 0909 and by *Cavalla* on *Shokaku* at 1220, but neither knew that both had been successful and had reduced enemy carrier strength by two. Except for those contacts and a reported sighting by a search plane from the Admiralties shortly after noon, the exact location of the fleet they chased was unknown.

Patrol planes from Saipan searched during the night covering the west-northwest sectors to 700 miles without success. Morning search, launched from the carriers at 0530, went out 325 miles with nary a sign of the enemy except some *Jakes*. A special search-strike group, sent out at noon, covered a narrow sector to 475 miles but made no sighting. Another group went off at 1330. The probability of finding the missing fleet seemed remote.

The prospect suddenly changed at 1542 as a garbled report came in from the 1330 search. The enemy fleet had been sighted in position 15°02'N, 135°25'E, moving due west at 20 knots. This was roughly 250 miles away. Amplifying reports confirmed the position and indicated that the fleet was in two or three groups. The distance was too long for an attack group to make the round trip before dark, but the opportunity was the first of the battle and too good to lose. Against the unpleasant prospect that his losses would be high, Mitscher decided to shoot the works. He ordered strikes readied and at 1553 informed Spruance of his intention to attack.

At 1555 the task groups were instructed to launch their first deck load and to prepare for a second. At 1630, 216 aircraft—85 fighters, 77 dive bombers and 54 torpedo planes—were winging their way west. They had hardly gone when the search plane shadowing the enemy sent in a corrected report which put the fleet 60 miles farther away than its previously reported position. If the former distance was long, this new one stretched the strike range to its extreme limits. With the prospect thus changed, Mitscher decided to hold his second strike until morning.

First planes of the attack group arrived over their target at 1820 as the sun neared the horizon. They were met by a heavy AA barrage which began as if on signal by a deep red burst at 14,000 feet. The bursts were of all colors—reds, yellows, greens, blues and lavendars. It looked for all the world like a Fourth of July display of fireworks, but it was more deadly than that. As the attack came in, Japanese interceptors rose to meet it.

Due to the extreme range, the fuel shortage and the distance separating the different formations, there was no attempt to rendezvous for an over-all coordinated attack. The different formations, which arrived at irregular intervals between 1820 and 1845, split into air groups, each going in to attack as soon as it arrived.

The Japanese carriers were in three groups spread on a NNE-SSW line with an oiler group trailing. As each came under attack, the ships maneuvered independently. Pilots went for the carriers but other ships also came under attack. *Zuikaku*, in the northernmost group, was hit several times and left burning. *Chitose*, in the southern group, was also set on fire. *Hiyo*, in the center, took several bombs and torpedoes and went to the bottom. *Junyo* was damaged. The battleship *Haruna* was hit, the cruiser *Maya* caught fire. One air group sighted only the oiler group and attacked it, sinking two oilers and dam-

aging other ships. It was a quick but determined attack—over by sunset.

EACH AIR GROUP struck out for home right after completing its attack, some pursued briefly by persistent Japanese fighters. Pilots made no attempt to find their own squadron or air group but joined up with anyone nearby. Less than an hour after the action it was dark, and a heavy overcast made it very dark. Planes became separated, some ran out of fuel early and had to ditch, some pilots lost their bearings. Homing signals of the Task Force became audible at about 70 miles and, by 2030, some of the planes were within visual range.

To give the returning pilots plenty of maneuvering space, distance between task groups had been opened to 15 miles. Night fighters were sent out to round up lost pilots and bring them in. At 2045, the task force turned into the wind and made ready to recover. At this point, Adm. Mitscher, who had been watching and waiting on the bridge, walked into Flag Plot and gave his never-to-be-forgotten order—"Turn on the lights." In a magnificent gesture of contempt of whatever enemy might be lurking in the dark, the Fleet promptly complied. Carriers turned on truck and running lights, glow lights around their flight decks, and sent flashing identification signals skyward. Ships of the screen followed suit and kept the whole area brilliantly illuminated with star shells. Flagships marked the center of each task group formation with a searchlight beam straight up.

With such assistance, finding the task force was easy, but finding the home carrier was another matter. Most pilots accepted the first carrier deck that appeared; some, unable to distinguish one ship from another, made landing approaches on battleships and cruisers. Lack of night landing experience, fatigue and tension from the long mission combined to make the number of deck crashes high. Many planes ran out of gas while waiting for decks to be cleared. The whole area boiled with activity. Searchlights playing on the water located some downed airmen, flashlights blinking from the water showed where others were swimming, and destroyers moved about fishing them out.

GRUMMAN HELLCATS *enhanced their already high reputation in the Marianas Turkey Shoot.*

Recovery took almost three hours. At 2325, the force again turned to trail the enemy, leaving behind a destroyer division from each task group to continue the rescue. Confusion of the recovery and the mix-up of air groups and squadrons made it difficult to determine the score, but the overall count showed that of 216 planes launched, only 116 had been taken aboard. In those missing planes were 100 pilots and 109 aircrewmen. No one knew then that rescue operations by destroyers, patrol planes from Saipan and observation planes from battleships and cruisers would reduce the number of those lost to a final count of 16 pilots and 27 aircrewmen.

Carriers and Air Groups of Task Force 58

VADM. MARC A. MITSCHER

58.1 RADM. J. J. CLARK

Hornet, CV-12	*CVG-2*
Yorktown, CV-10	*CVG-1*
Belleau Wood, CVL-24	*CVG-24*
Bataan, CVL-29	*CVG-50*

58.2 RADM. A. E. MONTGOMERY

Bunker Hill, CV-17	*CVG-8*
Wasp, CV-18	*CVG-14*
Monterey, CVL-26	*CVG-28*
Cabot, CVL-28	*CVG-31*

58.3 RADM. J. W. REEVES

Enterprise, CV-6	*CVG-10*
Lexington, CV-16	*CVG-16*
San Jacinto, CVL-30	*CVG-51*
Princeton, CVL-23	*CVG-27*

58.4 RADM. W. K. HARRILL

Essex, CV-9	*CVG-15*
Langley, CVL-27	*CVG-32*
Cowpens, CVL-25	*CVG-25*

Damage done to the enemy was difficult to assess. Poor light during the attack aided by the hasty departure made accurate reporting difficult. Claims were somewhat optimistic, but the actual results of the strike were the carrier *Hiyo* and two oilers sunk; four carriers, one battleship and one heavy cruiser damaged. The 22 enemy aircraft claimed by the pilots was actually nearer 40.

The westward advance of Task Force 58 was slowed by continued rescue operations and a diminishing fuel supply. Search planes from Saipan picked up the enemy fleet and trailed it until 0130 at which time it was about 325 miles from Task Force 58 and moving away. Two *Avengers* launched at 0227 reported the force at 0657 in position 17°30'N, 131°-40'E. A strike group launched at 0550 was unable to reach it. Efforts to close the distance with a high-speed, heavy-power surface unit, escorted by two carriers, were futile.

At 1920 on the 21st, with the Task Force 675 miles west of Saipan, Adm. Spruance called off the chase and ordered retirement. The Battle of the Philippine Sea was over.

TO THE MEN of Task Force 58, it was unfinished business. An enemy fleet had dared to come into the open, had made an attack, and was returning to base with only minor bruises. Their chagrin was ably expressed in the closing sentences of Adm. Mitscher's report as he wrote: "The enemy had escaped. He had been badly hurt by one aggressive carrier air strike at the one time he was within range. His Fleet was not sunk."

But it was hardly that bad. Enemy losses in ships, counting the two sunk by submarines, amounted to 109,600 tons, which was only 10,000 less than had been sunk at Midway. And, as at Midway, an entire carrier air force had again been destroyed, this time all the carrier air force the enemy had. As would become quite apparent in a few months, carriers are quite useless without pilots. Further, without the loss of, or serious damage to, a single ship, a victory had been won that would have more influence on the final outcome than any other of the entire war. If the Battle of Midway had been the turning point of the war, this one sealed the fate of Japan. ★★★

THREE TIDAL WAVES, *one immediately after the earthquake, deluged the Kodiak station ramp which leads into Old Woman's Bay. The first crested at 22 feet above the area's low tide mark; the second (at 2200) crested at 25 feet; the third wave, early the 28th, at 30 feet.*

WHEN THE WORLD BEGAN TO SHAKE

ON THE EVENING of March 27, Good Friday, a devastating earthquake struck Alaska and smashed several of the most important cities in the 49th state.

Ens. D. D. Henricks of VP-2, stationed at NS Kodiak, expressed the general shock and disbelief: "I thought it might be the old washing machine downstairs that shook the washroom during its spin cycle. Suddenly I knew all too well what was happening. It was a full-scale earthquake."

Outside, everything was chaos. Walking, even just standing, was difficult, for with everything shaking and falling, a sense of lightheadedness was induced. Buildings seemed to swing and jump up and down. Light poles swayed like saplings and chimneys toppled. Landslides started from surrounding hills. Cars bounced around as though on a trampoline.

The earth's convulsion set fires, de-

BEFORE THE EARTHQUAKE, *a station photographer recorded this picture of two of Kodiak's fishing fleet, the Victory Maid and the Lucky Star.*

THE LUCKY STAR *was a complete loss, but the securely-tied Victory Maid, took the wharf with her as the powerful tidal waves struck.*

MASSIVE WAVES *hurled fishing boats on their sides. A broken fence, a missing dwelling, a ruined washer seem to symbolize destruction.*

ADRIFT ON LAND, *but still upright, is a ship which must have been lifted above houses and buildings as nature flung it roughly ashore.*

stroyed buildings and disrupted utility services. Huge tidal waves smashed piers and battered coastal communities along the Gulf of Alaska and as far away as California. Unknown numbers of people were killed. Hundreds were left to face the Alaskan night without shelter, heat or warm clothing.

Within minutes after the earthquake, the other states knew something had happened in Alaska. At NAS WHIDBEY, Washington, the first Disaster Control Alert was followed by a report from a P-2 *Neptune* of VP-2 flying near Kodiak. "I am unable to communicate with Kodiak or Anchorage, and I believe they have been hit by an earthquake," the pilot reported.

Whidbey became the focal point for marshaling emergency supplies. By sunrise the 28th, four P-3A *Orions* from VP-19 and VP-31 had arrived from Moffett Field. These, with four C-54 transports from Whidbey and Alameda, were loaded with supplies for the stricken area. A call late Saturday for 150 portable stoves was met with the help of the Naval Supply Depot and local merchants in the Seattle area.

Kodiak also needed mobile generators, transformers, and jet aircraft starting units. These were taken directly from Whidbey's support equipment shops and flown to Kodiak. A complete portable water system was loaded aboard a Whidbey plane.

The Whidbey-based seaplane tender USS *Salisbury Sound,* commanded by Capt. M. M. Hershey, was ordered by Capt. D. G. Gumz, ComFAir Whidbey, to get underway. The ship got underway about five hours after the earthquake and only two hours after receiving the order to go. Because of her rapid departure, she left behind 250 of her crewmen who were on shore leave at the time. Later these men were flown to Alaska to rejoin the ship. Arriving March 31, the ship served at Kodiak 14 days. RAdm. Robert E. Riera, Commander, Alaskan Sea Frontier, and Commandant, 17ND, commended the tender for "assistance so willingly and ably rendered."

Outfitting of plane crews, news reporters and other passengers with arctic clothing presented a special problem at Whidbey. About 100 individuals arrived at the air station wearing nothing more than business suits or lightweight flight clothing. All were outfitted at Whidbey before takeoff.

Civilians and the military services all cooperated in meeting the immediate needs of Alaska after the catastrophic earthquake. Tons of needed supplies were airlifted, as all emergency forces united with the Red Cross to bring assistance fast to the stricken state.

THIS GIANT BUOY, *which once guided shipping into the mouth of Old Woman's Bay, was driven from the open sea to rest on Kodiak ramp.*

SEAPLANE TENDER, *USS Salisbury Sound, served at Kodiak as floating repair base, providing power, water and supply service to Station.*

FS Stations Modernized

FAA Will Consolidate Facilities

Continuing modernization of the airways communications network will permit conversion of 42 FAA flight service stations into remote-control facilities. The move, approved by President Johnson, is expected to result in an annual savings of about $35,000 for each station without affecting service or safety standards.

Responsibility for services which have been provided by the 42 stations will be assumed in a one- to two-year period by adjacent units through a two-way radio operated by landlines from the controlling station. This same technique has already proved successful in 60 other locations.

At present, there are 296 manned flight service stations in 48 states. Shortly after WW II there were 464.

Technical advances in communications and the air traffic control system have made the consolidation of stations possible. Expansion of direct peripheral sites has been increasing steadily. Today most of the contacts between the ground controller in the air route traffic control centers and the pilot flying under IFR rules are made directly through these remote sites.

VS-25 in Uniform Test

To Wear New Outfit for 12 Months

At NAS San Diego, 60 petty officers of VS-25 are sporting a new look that is "chief-ly experimental." Their

MEN MODEL OLD AND PROPOSED UNIFORMS

experiences in the next 12 months will affect thousands of their second and first class petty officer contemporaries within the next few years.

Four sets of uniforms plus accessories have been provided for the test period. Each issue will consist of one blue uniform, one khaki and two white uniforms. Standard black shoes will be worn with all three types of uniforms.

The uniforms will be worn primarily on liberty and for inspections. The limited number of outfits available to each man precludes their use as a working or on-station uniform.

Since VS-25 is scheduled to deploy to the Far East on USS *Yorktown* in October, the squadron will be able to conduct the test of the uniforms under shipboard as well as shore conditions.

VMF-323 has Big Month

F-8 Squadron Flies 1600 Hours

Marine All-Weather Fighter Squadron 323 has set what it believes to be a record for *Crusader* squadrons; it flew 1600 hours in a single month. The unit, commanded by LCol. C. O. Barnhill, accomplished the feat in March during simulated combat conditions. VMF-323 is part of MAG-11 on the West Coast.

Pilots flew air-to-air intercept, strafing and gunnery missions. In one nine-day period, they expended 31,000 rounds of 20 mm ammunition.

Upon completing the 1600th hour of flight time, VMF-323 had 17 of its 18 *Crusaders* in an operational status.

Special SH-3A's Ordered

To be Mine Countermeasures Type

BuWeps has placed an order for $2,050,000 with Sikorsky Aircraft Division of United Aircraft for the conversion of a number of SH-3A *Sea King* helicopters to a mine countermeasures version. The new version will be designated RH-3A (R for reconnaissance).

The order is in the form of a supplemental agreement to an existing contract for SH-3A helicopters. The principal modification will be the addition of mine-sweeping gear. The Navy has conducted experiments for a number of years with such gear on earlier helicopters, such as the HSS-1.

ABOARD USS SARATOGA *for initial squadron carquals are RA-5C's belonging to VAH-5, the first unit scheduled to deploy with the new dual-mission version of the Vigilante. Scheduled to deploy on the USS Ranger in the Pacific sometime this summer, VAH-5's first RA-5C carqual period was aboard Saratoga in the Atlantic. This somewhat unusual situation, an AirPac squadron operating from an AirLant ship can be traced to Heavy Attack Wing One's new role. The wing will supply A-5 squadrons for both Atlantic and Pacific Fleet operations. Pilots from VAH-3, HATWing One's replacement training squadron, also participated in this first operational carqual period for the RA-5C.*

A DAY ON THE USS CONSTELLATION

By Elretta Sudsbury
O&R, North Island

THE ATTACK CARRIER *Constellation* staged its first Dependents' Cruise on April 4. More than 1600 guests spent an action-packed day getting acquainted with the supercarrier.

On September 17, 1962, CVA-64 steamed into San Diego harbor for the first time and dropped anchor at the North Island quay wall. Bands and speeches welcomed the Navy's biggest conventionally-powered carrier that day. Since then, *Constellation* has become a familiar sight to San Diegans across the bay and to North Islanders. The ship docks near the Supply Department warehouses and within two blocks of the O&R Department where many of her aircraft, engines, and components are reworked.

The cruise started when visitors began to board before 0700. Excitement was written upon the faces of the men, women and children who streamed toward *Constellation* and were engulfed in the 2995 compartments, acres of deck, and thousands of feet of passageways.

In the hour or so that followed, 250 gallons of coffee and 10,000 doughnuts were consumed in messhalls and wardrooms. Each man showed his dependents the part of the ship which was of special significance to him. Now, when wives and children are waiting at home while *Constellation* prowls through Pacific waters, they can visualize the surroundings of their men.

Many and various are the images etched in the memories of the dependents who were on the cruise. Random pictures in the shifting kaleidoscope of action are:

• Signal flags of many colors whipped against the cloudy sky.

• Neatly arranged crew quarters where each man has a foam mattress and his own reading lamp.

• The vast, clean forecastle where the anchor chain is housed, each link of the 2160-foot chain weighing 360 pounds.

• The mirror effect of identical doors that reflect themselves as far as can be seen when one stands midway of a main passageway and looks fore and aft.

GUESTS ON CONSTELLATION'S FIRST DEPENDENTS' DAY CRUISE WERE WELCOMED ROYALLY

• The combat information center, a dark place for radar screens and intent men wearing earphones and charting data.

• A library of 7500 volumes and a fully equipped TV studio which telecasts 50 hours weekly when the ship is underway.

• Bright, cheerful mess decks and wardrooms.

• A storage area said to be as big as a six-story warehouse one block square, stocking 10,000 to 12,000 different items.

• Shops and shops and shops, ranging from a tailor shop to an ice cream plant, to shops which repair aircraft components.

• A "back porch" called the fantail where a person can sit and become mesmerized by the whipping white wake the big attack carrier makes.

• A hospital and related facilities which include a modern operating room and everything necessary to protect the health of *Constellation's* men.

There were static displays on the hangar deck. Access ladders enabled visitors to look into the pilots' cockpits. The display of survival equipment was reassuring.

Connie personnel and their dependents looked down on the flight deck as preparations were made for the launching and recovery of aircraft. The wind blew cold, causing women to knot head scarves tightly and button jackets to their chins.

Far below, young men in jerseys and headgear of brown, green, yellow, purple and red performed a kind of ballet on deck, moving in orderly effort for a few minutes, then seeming to collapse against aircraft or on elevator hatch covers. A signal would bring them to their feet and into movement again. Once they formed a line almost shoulder to shoulder across the flight deck and walked the length of the deck searching for loose objects which might be drawn into jet intakes.

Noise was a steady crescendo as catapults were tested. Yellow tractors

A CRUSADER IS PHOTOGRAPHED JUST AS IT BEGINS CATAPULT RUN

A DOUGLAS A-4C SKYHAWK IS PREPARED FOR ITS CATAPULT LAUNCH

and mobile starting generators scurried around the deck as aircraft were checked and moved into position for launching.

While fixed wing aircraft were readied, a silver and red UH-2A *Seasprite* helicopter rose from the deck, hovered for a moment, lowered its nose slightly and slid into forward flight. The *Seasprite* remained in the air during the exercise.

An F-4 *Phantom II* and an A-4C *Skyhawk* were made ready for launch. On a signal, the *Phantom* was hurled from the giant slingshot and moved quickly from sight, leaving a blast of sound behind.

The A-4 was up and away short seconds later. Next an A-3 *Skywarrior* was launched—an operation similar to thrusting a locomotive into the sky. Then an F-8 *Crusader* was flung outward, gaining altitude with effortless grace. Independent of the catapult, an A-1H *Skyraider* and E-1B *Tracer* rolled down the deck and lifted off.

Soon the planes began to reappear and form a landing pattern. Each hit the deck with a thud and a scream of sound, engaged the arresting cable and came to a stop. With stunning precision, each plane was disengaged and moved quickly out of the way as another landed. Finally, a "Willie Fudd," the E-1B, was caught by the cable. The show was over.

The men have sufficient reason to be proud of their ship and the tradition she inherited from the frigate *Constellation* for which CVA-64 was named. The original *Constellation*, a sailing vessel of 164 feet, was the first ship of the U.S. Navy. Built in 1795-1798, she was named for a national symbol, the circle of 13 stars in the original flag of the United States.

Constellation performed with honor for 160 years, serving in five wars, six combat engagements and two diplomatic actions. Now being restored in Baltimore, she will become a national shrine.

The new *Constellation* was commissioned on October 27, 1961. The supercarrier CVA-64 features the largest flight deck, the greatest weapons systems, and operates the latest supersonic aircraft of the conventionally powered carriers. *Constellation* and its striking force is the spearhead of modern sea and air power.

While the complex world of *Constellation* was being introduced to the cruise guests, engines hummed smoothly and the ship traced a giant circle on the blue waters off southern

K. A. HOBART, CS3, SERVES A LADY WHO LIKES WHAT SHE SEES

THIS DAUGHTER WILL REPORT TO CLASSMATES, 'MY DADDY SAID. . . .'

V-2 DIVISION MEN SHOW OFF CAT CONSOLE

ON SIGNAL BRIDGE, D. KILCREASE AND WIFE

ONE GUEST TRIES OUT PHANTOM II COCKPIT

California. Visitors were hardly aware of the motion of the ship. It might have been "a painted ship upon a painted ocean," so motionless it seemed.

Now and then the shrill voice of the Boatswain's pipe called all ears to attention. "The smoking lamp is out," "the smoking lamp is lit on the fantail," and other messages were broadcast over the intercom.

Host for the occasion was Capt. Frederic A. Bardshar who has been skipper of *Constellation* since November 9, 1963. His special assistants for the cruise were Cdr. R. K. Minard, Jr., Weapons Department Officer, and LCdr. J. F. Higgins, who coordinated the project.

After lunch, guests went topside for the air show. A ragged blanket of gray and white partly covered the sky. The 4.1-acre flight deck was uncrowded. An announcer explained that Carrier Air Group 14 would present an air power demonstration.

The show was a beautiful blur of fast flying aircraft attacking an imaginary enemy outlined in smoke just above the water. Rockets were launched, bombs dropped, and aircraft refueled in the air. A photo-reconnaissance plane simulated the taking of night pictures of the battle area.

During the demonstration, the F-4 supersonic fighter provided special excitement when it rocketed above the ship and went into a steep climb directly over the deck. It was a throat-catching sight with something of the joyous abandon expressed by a torso-twisting dolphin.

An observer might have thought, "How beautiful and quiet the aircraft is up there. No wonder they call it the *Phantom*." Then WHAM! The blast of noise exploded on deck and seemed to bounce upward. The climax was a fly-over in formation by all the aircraft which took part in the demonstration.

On the 89,000-pound capacity elevators, the crowd rode quickly to the hangar deck to see a talent show, produced by Ens. Richard J. Ricci, the Special Services Officer. The stars were *Constellation* personnel.

All day beneath the color and pageantry, the glamor and razzle-dazzle of the superbly constructed and equipped carrier, guests were aware of professionalism in control. The officers and men of *Constellation*, taut and tough, poised to meet any requirements, project an image of total self-assurance.

Point Loma came into view. While the ship navigated the channel through San Diego Bay, guests watched from vantage points all over the ship. Tugs, like self-important water beetles escorting a whale, swarmed around. Slowly *Constellation* moved to the quay wall and was nudged into her berth.

FROM DAWN TO SUNSET, CONSTELLATION PROUDLY SHOWED OFF THE SHIP TO 1600 GUESTS

Unit Flies 'Turn Table'

VMA-214 Takes A-4's to Kaneohe

Marine Attack Squadron 214 completed Operation *Turn Table* in April when pilots flew their new A-4C's 2233 miles from El Toro to Kaneohe Bay, Hawaii. The *Blacksheep* squadron, based on Kaneohe, had traded in A-4B *Skyhawks* for the newer models at El Toro and spent two weeks of weapons training at Yuma, Ariz., before making the trans-Pacific flight.

The planes were refueled on the return trip by KC-130 *Hercules* tankers from Marine Aerial Refueler Squadron 352, stationed at El Toro. Support units assisting the squadron were the Hawaiian Sea Frontier, Western Area Coast Guard, the 28th North American Air Defense Command, the Pacific Missile Range at Point Mugu and Marine Air Control Squadron Two.

DAUGHTERS GREET LCOL. HOWE AT KANEOHE

LCol. O. "E." Howe, Jr., skipper of VMA-214, said, "This is real fine training and every squadron that has the capability should do it, but we are sure glad to be back at Kaneohe." The unit is part of Marine Aircraft Group 13.

Marines Get Teaching Aids

Memphis Designs Copter Trainers

Two communication - navigation, identification trainers for the Marine assault helicopter, CH-46A *Sea Knight*, have been completed by the Naval Air Maintenance Training Group at Memphis for the Fleet Marine Forces. One of these has been delivered to MCAF SANTA ANA, Calif., for the use of Naval Air Maintenance Training Detachment 1028.

The training on the East Coast will be done by Naval Air Maintenance Training Detachment 1027 at MCAF NEW RIVER, Jacksonville, N.C. This unit also uses the new trainer.

M. D. SAYRE, AM3, ADJUSTS GYRO MOUNT

Each trainer contains the electronics system of the *Sea Knight* broken down into components and spread out on nine separate work benches. The student is thus able to see all sides of each component in learning how it operates. All units are actual aircraft components, not specially designed instruments for training. Each bench can be operated as a single unit or all nine can be interconnected for classroom use.

Capt. C. A. Williams commands the Naval Air Maintenance Training Group, Memphis, Tennessee.

Cherry Point Unit Cited

VMCJ-2 Gets Commendation Medal

Marine Composite Reconnaissance Squadron Two, a unit of the 2nd Marine Aircraft Wing based at Cherry Point, has been awarded the Navy Unit Commendation Medal for "exceptionally meritorious service."

A citation from SecNav cited the squadron for planning and executing aerial reconnaissance missions of utmost importance to U.S. security from September 1, 1960 to December 1, 1962.

GCA Record for Iwakuni

Controlled Approach for 70,000

Late in February, Maj. Ralph Thuesen touched the deck at MCAS Iwakuni in his RF-8A *Crusader* to become the 70,000th pilot to make a GCA landing at the station.

Air traffic control specialist, Sgt. Roger T. Egan, talked Maj. Theusen down. The GCA established by Theusen and Egan came one full year after the 60,000th approach in Feb. 1963.

75,000 ACCIDENT-FREE HOURS *of multi-engine flight training were completed by Training Squadron 31 when Lt. D. E. Kennedy returned from a routine training flight in a TS-2A Tracker with his two Naval Aviation Cadet students. Left to right are the plane captain, G. R. Lanser, AMH3, the flight students, NavCad D. L. Garringer and NavCad R. W. Anderson, Instructor Kennedy, and Cdr. D. H. Jay, VT-31, squadron skipper. The record dates back to June 25, 1959.*

FEW SMILES WERE *evident on the day VR-661 officers and men received immunization shots prior to deployment. "Shot cards" were checked.*

THE TRANS-LANT *route is studied by Cdr. Denny (L) and pilots in VR-661 Ready Room at NAF Washington, during a monthly meeting.*

TWO WEEKS IN ANOTHER TOWN

By Scot MacDonald

ANY TROUBLE on the block time, Tom?" the skipper asked. There was none.

He looked thoughtfully at the burning butt held gingerly in his fingers, squashed it, and lit another cigarette.

"Passengers will muster next door (in the CPO lounge) at 2100," he continued. "What is the status for loading baggage?"

Lt. Tom Burrowes, in civilian life a BuSandA transportation officer, answered. It was weighed, sorted, but not yet loaded. Most of it would be put aboard plane number three.

The C.O. stood, towering over those still seated. "Well, I strongly recommend you get some crew rest."

Pappy, the skipper's flight mechanic, spoke: "The station keepers have already made a plane check, captain, but we want to check it ourselves."

He nodded permission, thought a moment, and said, "I want to express my displeasure about this late muster [three enlisted men were late]. This is no way to start a deployment. Pappy, let those who haven't arrived know my displeasure. And, Pappy, I meant what I said. I want you to get some crew rest, do you understand?"

Pappy nodded, a bit embarrassed by the attention. The enlisted men were excused, but the meeting continued with the squadron officers participating. The scene was the VR-661 ready room at NAF Washington at Andrews AFB. The reserve Fleet Tactical Support Squadron that night was to board three C-54 *Skymasters* for a two-week active duty mission in the Med.

Last September, when the CNARESTra schedules were published for VR squadrons, Cdr. James H. (Hal) Denny, commanding VR-661, officially learned when his squadron would deploy. Immediately, he emphasized both celestial and pressure pattern navigation training during the monthly drills. He led a half-dozen long range navigational flights, round-robbining from Andrews to Bermuda to Roosevelt Roads in the night hours, returning to Washington, non-stop. These were flown in preparation for the coming trans-Atlantic deployment.

He was concerned with the number of flight orderlies qualified in the squadron and instructed Lt. Burrowes, the Air Transportation Officer, to increase the number. By deployment time, six were fully qualified, with four more in training.

The long-range flights also gave the enlisted radiomen added training in filing radio reports. During the flight, they were to file aireps to Andrews airways on HF, as far as 40° west and then to Lajes airways in the Azores. In the actual trans-ocean flight, the radiomen experienced common difficulties and had to work with Goose Bay, Labrador, radio who relayed the reports to Andrews; the pre-flight training helped prepare for this unexpected change. Before deployment, the radiomen boned up on their CW, not normally required in the U.S., but a must in the Med.

In the VR-661 ready room at noon the day the squadron was to deploy, Cdr. Denny continued with the briefing. "We'll go IFR to Rota, regardless of the weather conditions. It's in the chart."

"By the way," a pilot asked, "what is the weather?"

"One thousand over, two miles, light rain, possible thunderstorms. We should run out from under before we're very far down the road to Bermuda."

"When we get to Rota, how many trips will we make?"

"I want to keep it down to two a day, if possible, keeping one of the aircraft in reserve and use it for local training."

"And liberty?"

"I'll be frank with you. My concern in getting 48 hours liberty out of Rota for the enlisted crew is greater

A SQUADRON C-54 *Skymaster on the line at Rota is serviced for a flight. In the Med area, the three aircraft logged 23,670 nautical miles on NALCO airlifts. Terminal points ranged from Africa to England. Host squadron, VR-24, graded the squadron's performance as excellent.*

than my concern for the officer crew. You can understand that. But there will be liberty for the whole crew, you can be assured of that."

Denny dismissed the officers after once more reminding them of crew rest and the squadron was secured until 2100.

The night was warm and muggy. The rain that had drizzled on the Washington area through the day had stopped. Muster was again taken and the crew and passengers of plane one, piloted by Cdr. Denny, boarded. In the cabin, L. P. Benn, PN1, on loan from NARTU to the squadron for the deployment, immediately dug into his box lunch and the air was acrid with the tart odor of peeled orange. Promptly at 2130 the plane launched. Ten minutes later, plane two was blocked, followed in another ten minutes by the squadron's third plane.

The 58 officers and men of VR-661 scheduled for the deployment were supplemented by seven from Air Wing Staff 66, 16 from NARTU ANDREWS, and two from NAIRU, totalling 83. Their mission in the Med was to conduct logistics flights in support of the Sixth Fleet, as assigned by ComFAirMed. Based at NS ROTA, the squadron was to be hosted by VR-24.

EUGENE A. GEARHART, *ADR1, inspects a prop during a routine check made on the Rota line.*

MAINTENANCE MEN *put in long hours to keep the unit's three aircraft in an up status.*

FROM LEFT *are G. E. Brown, ADR1, J. D. Smerick, ADR1, and James R. Beane, AMS3.*

A CRITIQUE *in the VR-24 conference room is given of the two-week deployment period. Standing is host Operations Officer, Cdr. Torbert.*

PROJECT HANDCLASP *gifts are delivered to 600 Spanish orphans in the Escula Professional de Pobres Familias at Puerto Santa Maria, Spain.*

which was to provide an experienced pilot acquainted with problems peculiar to the area, as well as a flight orderly and a radioman on each aircraft, assisting the regular crew members.

Experienced radio technicians, the squadron was warned before deployment, are in heavy demand and in short supply at NS ROTA. Radiomen assigned by VR-24 were to assist 661 —whenever language difficulties arose. Their ears are attuned to Spanish, French, and Italian accents. In actual flight, 661's men proved up to the demands and did not make heavy use of their hosting assistants.

Flight orderlies were assigned to the squadron to aid with weight and balance computations so as to cut to a minimum the amount of ground time.

En route, the 661 planes made a brief gas stop at Kindley AFB, Bermuda, and overnighted at Lajes. At dawn, the planes launched for the last leg of the trans-Lant. Undercast covered most of the route, but when the planes landed at Rota, Spain, the skies were clear and the sun was bright. It was mid-afternoon when they arrived, greeted by Capt. J. C. Azab, commanding VR-24, Cdr. J. H. Torbert, Operations Officer, LCdr. R. P. Caldwell, Service Information Officer, and his assistant, Ltjg. R. L. Holloway. The officers and men of VR-661 were billeted.

Next morning, the squadron mustered at Rota's auditorium. Before filing in for briefing, Cdr. Denny addressed the group.

"I want you to work hard while you're here," he said. "And I know that you will play hard while on liberty. But I want to warn you that if you play hard at liberty and don't work quite as hard on the job, then I assure you that something has got to give—and I also assure you that it will not be the work that will give. This deployment is to prove that we can do the job that the Navy has assigned us. We will do that job well."

In the auditorium, Cdr. Torbert outlined the operational demands and discussed the work that would be required of the squadron. Navy journalist Jim French, assigned to Com-

BILLED AS THE *third most important bullfight in Spain, La Plaza de Torros at Puerto Santa Maria attracted many of the off-duty squadron personnel. For most, it was the first bullfight attended.*

THE NATIONAL *dance, the flamenco, is performed by Isabella Romera for Navy audience.*

THE ADMIN DIVISION *was singled out for special praise. Here, F. F. Anthony, PNC, and L. P. Benn, PN1, check squadron records at Rota.*

A CRACKED JUG *is discussed by Cdr. Denny and squadron maintenance men. The bad cylinder was replaced in record time, causing little delay.*

mander Naval Activities, Spain, lectured on local customs, and a station chief hospital corpsman discussed medical aspects of Mediterranean duty. The squadron then reported to VR-24 area where pilots and navigators were given three hours of lectures on search and rescue, air traffic control, instrument approaches, and similar subjects. Flight orderlies and radiomen also attended lectures, while the ground crew was introduced to appropriate shops and spaces.

Cdr. Denny, in the meantime, readied for the first flight, this one to Naples where he would report to Com FAirMed. There, he was given a general briefing on Mediterranean operations and was told of his squadron's role in them. Next stop was the Naval Air Logistic Coordinator (NALCO), Europe, representative in Naples, Cdr. Phillip W. Oddo, who assigned specific flights to the squadron aircraft.

"I was deeply impressed by the intricacy of NALCO's job," Cdr. Denny said later, "and by the extraordinary smoothness of the operations." The 661 aircraft made available for Fleet support flights were "cranked into the system," and during the next two weeks, squadron planes were sent to European and African terminals. The itinerary included, besides Rota and Naples, West Malling, England (near London); Kenitra (Port Lyautey), Morocco; Athens, Greece; Souda Bay, Crete; Sigonella, Sicily; Barcelona, Spain; Wiesbaden, Germany; Palermo, Italy; Istanbul, Turkey; Nicosia, Cyprus; Pisa, Italy; and Elmas, Sardinia—frequently landing several times at some terminals, on separate flights.

Of the 19 scheduled flights, the squadron actually flew 17, two canceled because of weather. In the Med area, 661 aircraft flew 23,670 nautical miles on NALCO airlifts, carrying 371 passengers from point to point, and lifting 35,943 tons of cargo, in addition to 11,277 tons of mail.

During the two-week deployment, the squadron also participated in Operation *Handclasp*. It carried 3000 lbs. of cargo, containing such items as aspirin and other medical supplies, chewing gun, crayons, and self-sticking wallpaper. These were distributed to several orphanages and churches in the area.

In a critique conducted by the host squadron, Cdr. Denny found that VR-24 officers and men were pleased with the performance of his squadron.

He had another opportunity to observe the professional capability of his men in action. On the return flight to Andrews, his aircraft experienced an engine malfunction after he had passed the equal time point on the Rota-Lajes leg.

Inspection on the ground pinpointed the trouble: a cracked jug. The 661 men, under direction of Leading Chief J. V. Bowie, immediately worked on the engine, replacing the broken cylinder. In what Cdr. Denny declared was record time ("We were only delayed three hours longer than the schedule called for") the repair work was completed, the engine tested, and the aircraft in the air. Squadron VR-661 returned to Naval Air Facility, Andrews, via Argentia.

"The only difficulty we had during the deployment," he said later, "was in maintenance—and this was because of the age of the aircraft." They had been built in 1942 and been flown almost continuously since then.

"The entire tour," Cdr. Denny stated, "emphasized one important point: the men of our squadron showed they receive realistic training during their weekend drills. Not only were we able to operate three aircraft on a regular basis and fulfill all scheduled assignments, but we asked for and got additional missions over and above those assigned.

"If called to active duty tomorrow, VR-661 would be ready to operate as part of the regular Navy. I'm mighty proud of that."

Cdr. D. D. Despain, parent command representative from NARTU ANDREWS, participated in the deployment. He singled out the Administrative Division for particular praise. "Usually," he said, "this is the weakest part of reserve squadrons. In 661, it proved one of the strongest. I'm very much impressed by its efficiency."

ComFAirMed, too, was impressed—with the overall performance of the squadron. "Your services while operating in the Med," he messaged, "much appreciated. Well done and *arrividerci*."

As the men debarked from the aircraft at Andrews and returned to their homes, Cdr. Denny said to his Executive Officer, Lieutenant Commander J. F. Brown, "You know, Joe, there wasn't a bad performance in the bunch." ★★★

Another Step to the Moon

Grumman Module Mock-up Studied

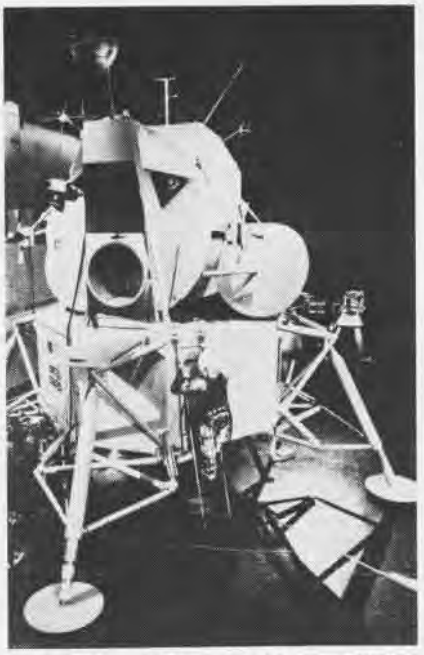
At the Grumman plant at Bethpage, N.Y., a full scale mock-up of the Lunar Excursion Module (LEM) has been reviewed by officials of NASA's Manned Spacecraft Center in order to achieve a "design freeze" on the general interior configuration.

The mock-up, designated TM-1, represents its current configuration. An *Apollo* spacecraft program management and engineering team presented a critique that capped the three-day conference. The critique covered the general location of cockpit display panels, astronaut support and restraint devices, hand control devices and location, hatch arrangement, ingress and egress procedures, crew station and cabin equipment design.

The Lunar Excursion Module is that portion of the *Apollo* spacecraft which, when in lunar orbit, will separate from the command module and transport two astronauts to the surface of the moon. The LEM will serve as a "moon base" while the astronauts perform their exploratory duties and then take off and again join the orbiting command module.

When the LEM is detached from the *Apollo* command and service modules in order to descend to the surface of the moon, it will weigh less than 15 tons. The two-man cab is approximately ten feet in diameter.

Mounted on four legs, LEM stands about 20 feet tall. The legs and descent stage will serve as a launch platform and will remain on the lunar surface when the LEM ascent stage takes off to rejoin the mother spacecraft. LEM will weigh about four earth tons when it leaves the moon.



GRUMMAN PRESENTS FULL-SCALE MOCK-UP

Grumman is developing LEM under contract with NASA. This contract covers the design, fabrication and delivery of nine LEM ground test vehicles and 11 LEM flight vehicles. Grumman is also scheduled to support NASA efforts during the operational phase of the Moon exploration program.

WITH FIVE A-3A SKYWARRIORS, *four of them borrowed, the Naval Air Test Facility, Lakehurst, N. J., evaluated a solution the Naval Engineering Laboratory, Philadelphia, devised to overcome certain arresting gear discrepancies with Fleet aircraft carriers. In one day, 165 arrested landings of the 25-ton A-3's at speeds of 115 mph, were completed. The crews let out all the stops to carry out the tests. They refueled aircraft "hot," changed tires with engines running, changed arresting wire ropes, and managed to average a test event every two minutes. As each plane made an arrestment, the others were being readied and lined up for their next turn.*

Brake Flusher Designed

One Solution for Three Problems

When Training Squadron Nine at NAS PENSACOLA was faced with three problems in connection with repeated brake gripes on the North American T-2A *Buckeye,* Walter W. Howell, AMH-1, solved all three at once by his invention.

The problems were (*1*) repeated brake gripes caused by foreign material in the hydraulic system, (*2*) conservation of hydraulic fluid because of the normally large amounts of fluid required to flush the system, and (*3*) setting quickly and effectively the "brake-out" pressures on the T-2A speed brakes.

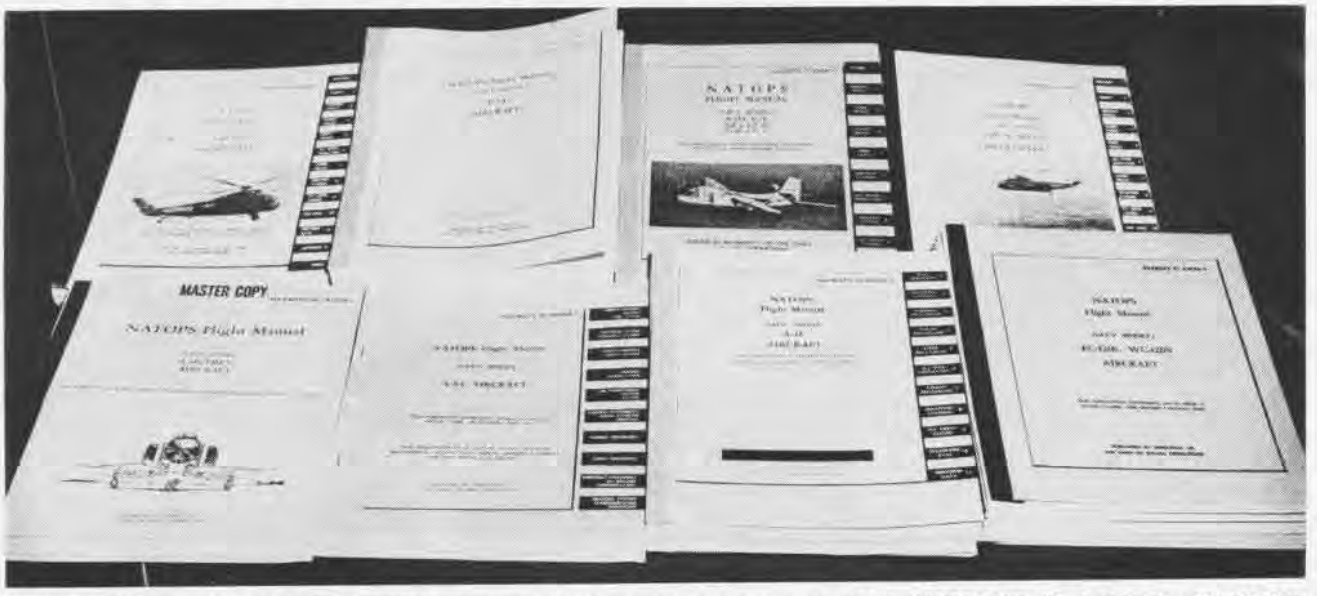
HOWELL AND FLUSHING UNIT HE BUILT

To meet these problems, Howell designed and built a piece of equipment which has been dubbed "Brake Flushing Unit, Portable."

The unit, mounted on a three-wheeled dolly, was fabricated from a ten-gallon container which serves as a reservoir, two Micronic type filters, a hand-operated hydraulic pump, a manually operated two-position selector valve, a hydraulic gauge and various lengths of flex hydraulic line and associated fittings. The pressure gauge and selector valve are utilized primarily for setting the "brake-out" pressure of the speed brakes.

Specifications and working details of the unit have been presented to CNATra and the unit is undergoing evaluation. Howell, now aboard USS *F. D. Roosevelt,* received a Letter of Commendation for outstanding work.

NATOPS PROGRAM CONSTANTLY EXPANDS



EXTENSIVE EFFORTS ARE BEING MADE TO COMBINE NATOPS MANUALS WITH AIRCRAFT HANDBOOKS IN A SINGLE PUBLICATION

By LCdr. James A. Mulligan, Jr.

THE NAVY has taken a big step forward in the NATOPS program. Since it began three years ago, changes have been made in the scope and content of available flight information. One significant advance has been the combining of NATOPS flight manuals with the aircraft handbooks.

To try out this idea, Grumman Aircraft Engineering Corporation was directed to prepare a combined manual for the S-2D/E and McDonnell Aircraft was given a similar assignment for the F-4B. Delivery of these new manuals to commands was completed late in 1962 for evaluation.

The Grumman S-2D/E *Tracker* manuals were produced in two volumes: an unclassified NATOPS flight manual and a confidential supplement. The F-4B manual consisted of Volume I, *Aircraft Systems*, Volume II, *Operating Procedures*; and a confidential supplement. Both products were appraised by the users at review conferences before printing.

As a result, NATOPS flight manuals were derived from users with current aircraft experience. Reactions to these combined manuals were highly favorable. The model managers (supervising units) and the evaluators (NATOPS officers) of other type aircraft requested combined manuals. In some instances, Fleet aircraft squadrons had flight handbooks which were obsolescent and NATOPS manuals which were up-to-date. A combined flight manual for all aircraft is essential.

In 1963, the CNO NATOPS coordinators reviewed all comments on the S-2D/E AND F-4B combined manuals and consolidated them in a standard arrangement. After these were evaluated, the final manual format was issued as a guideline for similar manuals.

Action was initiated to change the flight manuals of in-production aircraft to the same format, and this requirement was written into new technical manual contracts. NATOPS review conferences were scheduled with the model managers and manufacturers to expedite the changeover. The conference held early in the summer of 1963 brought the SH-3A, P-3A and A-5A into the system. Other conferences were scheduled to effect a similar change for the remaining in-production aircraft. Aircraft that will have the combined manual systems are: A-4E, RA-5C, A-6A, F-4B, F-8D/E, S-2D/E, E-2A, T-39D, SH-3A, UH-2A, CH-46A.

Out-of-production aircraft posed a problem. Normally, when the last aircraft of a series is delivered, funds for publications support stops. Hence, flight manuals and associated technical manuals can only be updated with separate "call contract" funds. Generally, there is a greater demand for funds to update manuals than there are funds available, and flight manuals become outdated and obsolete. To meet requirements, a priority was established to bring aircraft into the system.

At the Dallas conference in September 1963, the list was dated to reflect the latest operational usage plans. The recommendation, approved by the NATOPS Advisory Group, was that BUWEPS take action to: (1) Revise and update all technical manuals for out-of-production aircraft and (2) separate publication and airframe contracts so that publications will be maintained after airframe contract ends.

Initial steps were taken to insure coordination between CNO, BUWEPS, and the Naval Air Technical Service Facility (the Navy contracting organization). Through the combined efforts of these agencies, funds were obtained and contracts let. A standard technical manual contract requirement was written so that all aircraft would come into the system once funds became available. Out-of-production aircraft which have received call contracts for new manuals are: A-3A/B, RA-3B, A-4A/B/C, F-8A/B/C, RF-8A, S-2A/B/C, C-1A, TF-9J, and EC/WC-121K.

AERIAL REFUELING IS A VMGR-352 SPECIALTY. THIS KC-130F REFUELS TWO FIGHTERS BELONGING TO THE THIRD MARINE AIRCRAFT WING

VMGR-352 TALLIES OVER 55,000 HOURS

By 1st Lt. Joseph C. Maiden, USMC

QUEBEC Bravo 685—cleared to land." A KC-130F *Hercules* of Marine Aerial Refueler/Transport Squadron 352 touches down, completes a safe landing and returns to its line at MCAS EL TORO, Calif. The end of the mission marks over 55,000 accident-free hours.

In May of 1959, VMGR-352 (then VMR), flying R5D's and R4Q's, had its last accident. The nose gear of an R5D collapsed on touchdown with all systems indicating "safe" gear. Since that time the "Railroaders" have provided assault air transport of personnel, equipment, and supplies in support of Fleet Marine Forces efficiently and safely. With the advent of the KC-130F in mid-1961, inflight refueling of high performance jet aircraft became not only an integral part of the squadron's mission, but also its specialty. During the five-year accident-free period, VMGR-352 received CNO Safety Awards for the years 1960 and 1962.

VMGR-352, commissioned as VMJ-352 April 1, 1943, first flew R4D's at Cherry Point, N.C. It has served in both the Atlantic and Pacific areas and now makes its permanent residence with the Third Marine Aircraft Wing, flying both operational and training flights from El Toro. The squadron logs more than 1000 hours each month, the lion's share of which is accrued through operational flights, such as refueling assignments, participation in FMF operations and exercises, reserve air lifts, and trans-Pacific flights.

In January 1962, VMGR-352 provided aerial refueling and support for VMF(AW)-451 in Operation *Pine Needle*. In the first trans-Pacific flight of a Marine jet squadron, VMF(AW)-451 was transferred from MCAS EL TORO to NAS ATSUGI, Japan. Two months later, in Operation *Tall Pine*, VMA-211 was deployed to Atsugi. In both operations 18 aircraft (F-8's and A-4B's) made the trans-oceanic flight. Since that time, other squadrons have been deployed in the same manner. This type of deployment as against surface shipment is being used more and more because of the great savings in time and money.

After *Tall Pine* in March of '62, a detachment of 352 participated in the Tulunguan Exercise (SEATO) and, upon its completion, operated in conjunction with VMGR-152 (from Japan) in deploying Marine Air Group 16 to South Vietnam. To help meet the Cuban crisis in October 1962, 352 provided a detachment for special operations. Six aircraft were sent to Cherry Point and operated in and out of Key West, Fla., and Guantanamo Bay, Cuba, carrying troops, equipment, supplies, and evacuating dependents.

Although 352 is constantly supporting FMF field units throughout the year, the maximum effort occurs during annual exercises, such as *Steelgate* and *Desert Wind* in early 1963. In these two operations, 352 flew a total of 988 sorties to carry 18,763 passengers and 4,921,311 pounds of cargo. During *Steelgate*, 352 was also involved in the test and evaluation of a Short Airfield for Tactical Support (SATS) set up in the area of Twenty-Nine Palms.

Mid-February 1964 brought a similar exercise designated *Winter Night*. This involved practically all units of the First Marine Division and the Third Marine Aircraft Wing. Operating between El Toro, Camp Pendleton, Twenty-Nine Palms, and Yuma, Ariz., 352 flew more than 4,600,000 passenger-miles and tallied more than 700,000 ton-miles in 389 sorties.

Every year the squadron airlifts many reserve units for their summer training. The first month the KC-130's were used for these lifts, they saved the taxpayer $116,000. According to a recent estimate of airlift capability, 1272 KC-130 hours equals 4200 hours of its predecessor, the R5D.

In addition to its flight duties, the squadron also operates a school for the ground training of pilots and flight engineers. These students are Marines from both East and West Coast squadrons, U. S. Coast Guard and U. S. Naval Aviation personnel.

A C-1A TRADER, *belonging to Transport Squadron 21 Detachment, NAS Atsugi, Japan, circles above attack carrier USS Coral Sea (CVA-43) in the Western Pacific before delivering the mail it is carrying to the men serving on the ship.*

'MAILMAN' FOR WESTPAC CARRIERS

By Anthony A. Broom, JOSA

THE 'MAIL PLANE' *comes in on the carrier as deck crewmen watch its approach. Officers and men of the Seventh Fleet never fail to welcome the aircraft that brings letters from home.*

AT ATSUGI, *mail and vital materials are loaded for flight to an aircraft carrier.*

BRUCE HULMAN, *AT2AC, checks manual before beginning repair work in Avionics Shop.*

L. R. FOLJAHN, *AE-2, and T. M. Saenz, AN, test plane gear in VR-21's Electrical Shop.*

CDR. J. E. STEVENSON, *OinC of VR-21 Detachment, checks the unit's correspondence.*

FLEET TACTICAL Support Squadron 21 Detachment, NAS ATSUGI, might well be called "the mailman" for U.S. carriers in the Western Pacific. It is an honorary member of the National Association of Letter Carriers.

The detachment averages four flights a day, one from Atsugi and three from other bases in the Western Pacific to deliver mail, cargo and personnel to the carriers.

VR-21 Detachment maintains eight C1-A *Traders* and a VC-54S. Thirty officers and 120 men make up the unit. VR-21 headquarters is located at the Naval Air Station, Barber's Point, Hawaii.

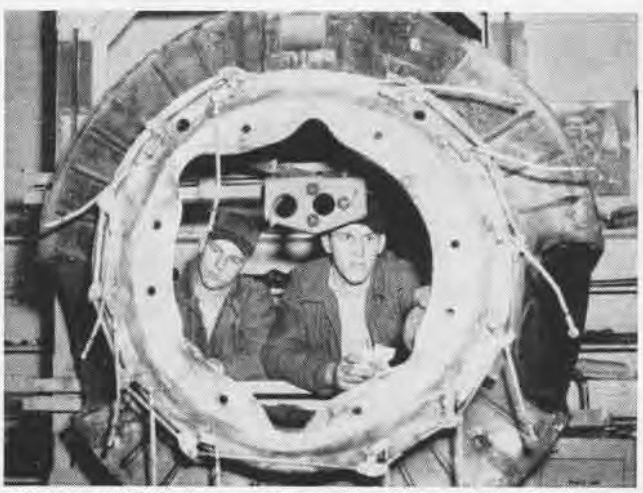
Much of the squadron's work is done by deployed crews at various bases in the Far East. VR-21 provides service to ships operating in an area of 4,000,000 square miles.

An average of 35 tons of material, including half a million letters, is hauled each month to the big carriers.

VR-21 is one of four such groups performing carrier-on-board delivery. The other three squadrons operate from NAS ALAMEDA, Calif.; Naples, Italy; and Norfolk, Va.

TO KEEP *its eight Traders ready requires constant maintenance. Here squadron mechanics repair the brake on one of VR-21's C-1A's.*

JOHN A. MACALUSE *checks the stock number of a part in the course of preparing to order gear needed on a VR-21 airplane.*



JOHN R. HIXON, *AA, and Robert P. London, ADRAN, clean an engine mount in VR-21 Detachment's power plant maintenance shop.*

HS-4 AIDS INTERNATIONAL SCIENCE PROJECT

By Chuck Brown, JO1

FOR SOME 1300 Ecuadorians living in the remote Galapagos Islands, 1964 will be remembered as the Year of the Helicopter.

These isolated South Americans had their first amazed look at a helicopter early this year when two Navy H-34 *Sea Horse* helos of Helicopter Anti-submarine Squadron Four visited the equatorial islands.

The two aircraft served as aerial pack mules for a small expeditionary army of 50 scientists participating in the Galapagos International Science Project, sponsored by the National Academy of Sciences. Representing Australia, New Zealand, Japan, several Latin American countries, and the United States, the scientists spent three weeks conducting extensive studies in evolutionary progression in the relatively unspoiled region.

Located 650 miles off the coast of Ecuador and straddling the Equator, the Galapagos Islands have been considered a natural laboratory for evolutionists since the visit of British naturalist Charles Darwin in 1836. Species of plant and animal life found in this group of islands differ markedly from those found elsewhere, and periodic expeditions are made to the Galapagos to record the development of the unique strains.

The two H-34 helicopters, three pilots, and a dozen crewmen from the Ream Field-based helicopter squadron were made available to the scientists by the Navy because of the lack of transportation and the distances between the many islands. Nearly 250 miles separate the northernmost island of Darwin (Culpepper) from Isla Espanola on the southern extreme.

AN HS-4 HELICOPTER MAKES A LANDING ON ROCKY POINT OF LAND IN GALAPAGOS ISLANDS

The detachment from HS-4 departed San Diego, Calif., aboard the Pacific Fleet seaplane tender USS *Pine Island* (AV-12) and 12 days later, the ship anchored off Isla Baltra, 25 miles south of the Equator.

During the three weeks in which they provided aerial support to the science project, the three pilots logged a total of 126 flight hours. Operating much of the time from a small beach

ECUADORIANS OF ALL AGES ARE INTERESTED IN THE HELICOPTERS

SCIENTISTS STUDY THE VOLCANIC ROCK AND ASH ON JAMES ISLAND

near *Pine Island's* anchorage, they ferried the scientists and their fact-finding equipment to many otherwise inaccessible areas in the island chain.

The mobility and versatility of the helicopters proved them far superior to the modes of transportation used by previous expeditions to the Galapagos. Volcanic in origin, most of the islands rise steeply from the sea, discouraging sea approaches but not affecting helicopter landings.

Until this year, scientists had been unable to conduct studies on Darwin Island because they could not get ashore. One party from an earlier expedition had managed to reach a sea-level ledge but were forced to return to their boats by the pounding surf surrounding the island.

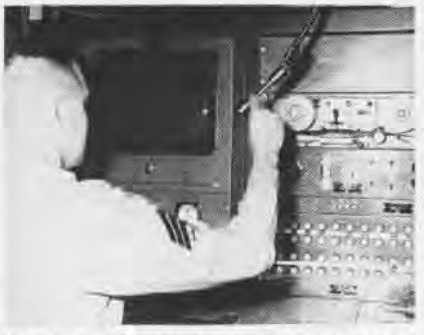
This year, however, HS-4 pilots landed 11 members of the party on Darwin for the first known visit to the site by man. To show their appreciation for the aerial assist, the scientists built a lava-rock cairn and planted an HS-4 pennant alongside an Ecuadorian flag on the edge of a 600-foot cliff overlooking the Pacific.

Mr. Potts, Belgium-born manager of the Darwin Scientific Station, located across Santa Cruz Island from *Pine Island's* anchorage, agreed that the helos had made an obvious impression on the local population. He expected this to become more evident as time passes and the Ecuadorians living in the islands begin to refer to events as happening either before or after the helicopters came.

Fast, New Weather Service

Cherry Point Telecasts its Data

MCAS CHERRY POINT's Meteorology



SGT. J. P. YOST GIVES A WEATHER REPORT

section is now in the television business. The "Weathervision" network consists of a master transmitter in the Meteorology section and eight receiving sets in all operational squadrons' ready rooms.

The transmitter is fitted with zoom lens which allow any size slide to be used; a tape recorder which can be used to retain conversation between the weather section and the squadron; and an alert buzzer for emergency weather bulletins. The broadcasts include regularly scheduled weather reports; special weather summaries; storm warnings and hurricane alerts. The closed-circuit network projects aviation safety reminders throughout the day.

Unlike most TV networks, "Weathervision" has two-way communication. Squadrons can request special weather information to be flashed on the screen. In turn, the Meteorology section can talk to one or all stations at the same time.

Maj. R. E. Gidley, Meteorologist, says the network is "faster, more accurate and eliminates phone calls."

HOW IMPORTANT ARE MAINTENANCE MEN?

THE MEETING got underway. The Commanding Officer, Executive Officer, Operations Officer, and Maintenance Officer were gathered. The Skipper kicked it off. "Gents, we're here to discuss the forthcoming Yuma deployment. As you know, we have two weeks in which to qualify this squadron in conventional weapons. The theme of this meeting is "How." From there, Operations laid out the number of sorties required and the order of flights. Everyone was agreeable until the scheduling of flights was brought up, a schedule calling for eight "up" aircraft 12 hours a day, every day. Slowly the Maintenance Officer rose and pointed out that there would only be ten planes at Yuma. It was, he stated, too optimistic to expect 80% availability with such heavy flying. But requirements are requirements and his warnings were to no avail. There was simply no other way.

Some two days prior to deployment, the squadron received word that one of its aircraft was to be delayed in PAR and would not be ready in time to make the Yuma trip. Nine! They were all up on the big day and after a quick trip to the south they rested on the sunny apron at MCAS YUMA. Then the plane captain of 412 brought the news that his bird had a faulty elevator power package. The metalsmiths confirmed the discrepancy and announced that a new part would be required. Then the *final* blow! The part was not available at Yuma, San Diego, or Lemoore; in fact, not on the West Coast. Down indefinitely awaiting parts. Eight! Kaput!

Another meeting, and plans were laid for a six or seven-plane schedule, since all agreed that this was a maximum attainable effort. All agreed—except the men of the Maintenance Department. Monday, 43 sorties, no maintenance losses. Tuesday, no maintenance losses. Wednesday, Thursday, Friday, and come secure Saturday, some 228 sorties later, the "Eight Iron Birds" were still in flying status. The squadron had not missed a sortie due to maintenance.

Great planes? You bet! But, even more, a great effort by a great crew! Sweat, guts, and determination made probabilities lie and statistics meaningless.

The arrival of the delinquent aircraft from PAR and the needed part from Lemoore made the next week a snap. After perfection, excellence is easy. Another successful deployment was chalked up for a "can-do" outfit.

The squadron? Oh, yes, the *Shrikes* of VA-94, of course.

SELECTED AIR RESERVE

JOSEPH J. BULKO, JR., *AM1 received a "Man of the Year" trophy from RAdm. George P. Koch during the admiral's visit at NAS Grosse Ile.*

CAPT. McAFEE, *C.O. of NARTU Norfolk, presents the CPO Leadership School Award to Chief Salyer as LCdr. Howard T. Ross, Jr., looks on.*

Norfolk Reservist Honored

At NARTU NORFOLK, Capt. Frank M. McAfee, C.O., held a Meritorious Mast to recognize the Achievement Award recently given to James B. Salyer, Jr., AKCA. With several other chief petty officers from NARTU NORFOLK, Chief Salyer attended a recent CPO Leadership School held by the Naval Air Training Command, Pensacola, Fla. At end-of-the-course ceremonies of Class 64-A, Chief Salyer was formally presented the CPO Leadership School Achievement Award.

Giving of the award is based on these points: high morale, industriousness, perseverance, a willingness to cooperate with others and thus contribute to the achievement of the class. The award is a peer evaluation, given by the most critical judges—fellow CPO's.

Capt. McAfee extended congratulations to Chief Salyer for the award.

Marines Continue Safety Record

The Marine Air Reserve Training Command, NAS GLENVIEW, has announced that the Command has broken its own record for consecutive accident-free days for the third time in the past two fiscal years.

The previous record stood at 130 days of flight operations without an accident until Friday, the 13th of March, when that mark was tied. On March 14, a new record was set at 131 and each succeeding day has sent it soaring.

"Our new record for consecutive accident-free days," said LCol. William T. Witt, MARTC Aviation Safety Officer, "is possibly the best of any major aviation command in the Naval Service."

Comparative figures show that MARTC accident rate for FY 1964 was 1.39 per 10,000 flight hours on March 1. During the same period last fiscal year, the accident rate was 1.66. Fiscal year 1963 ultimately recorded the lowest accident rate, 1.21, in Marine Air Reserve history.

Chief Honored for Long Career

While on its two-week active-duty cruise at NAS JACKSONVILLE, VP-724 of NAS GLENVIEW held an all-hands farewell party for its leading chief, Frank J. Sarno, ADRC. Chief Sarno will retire on June 30, bringing to an end a career of military duty spanning 45 years and two branches of the Armed Forces. The Chief was honored with a plaque given as "a token of esteem and friendship" by members of his squadron.

Chief Sarno served in the Army from 1919 to 1922 with the occupation forces in Europe. Between WW I and WW II, he was a member of the Army Reserve, and became an engineer for the Chicago and Northwestern Railroad.

At the outbreak of WW II, he enlisted in the Navy as an Aviation Motor Machinist, second class. He served with Fleet Air Wings Four and Fourteen in the Pacific, flying combat missions as a radio operator. He returned to reserve status in 1946 and joined VP-724 as leading chief in 1947.

Voice to Alaska

At NAS LOS ALAMITOS, a team of Navy ham radio operators played a small but important role in the aftermath of the Alaskan earthquake.

Seven men, all members of the Naval Air Reserve Electronics Unit and qualified operators of K6NAR, NAS LOS ALAMITOS' ham radio, spent 40 hours at their mike as a "net control" between various points on the U.S. mainland and Alaska. A "net" is a frequency by which two ham operators can clearly communicate with each other.

The operators at Los Alamitos established a clear frequency on Saturday of the tragedy, and kept the flow of messages and calls going through Tuesday. They set up watches so that a fresh operator would always be at

RADM. KOCH *receives 1000-mph pin from A. P. Gallatian of Ling-Temco-Vought after flying Crusader with Test Pilot John Konrad.*

NARTU ALAMEDA'S *VP-877 awarded a medal to N. H. Bouton, Jr., the first plane captain to qualify after unit's transition to P-2's.*

the mike ready to handle the traffic.

As net control, K6NAR relayed messages to Alaska from as far as Bangor, Maine. Patch calls were set up to connect families by telephone.

The team was headed by two ATC's, Chief Art Brink and Chief Ed Shields. Other operators were Charles Nichols, AT1, Don Van Sant, AT1, Gene Williams, AT1, Dennis Rise, AT2, and Dave Simmons, AX2.

Old Adage Reversed

The Chief of the Naval Air Reserve Training Command reversed the old adage about sons following in the footsteps of their illustrious fathers on a recent visit to Dallas.

RAdm. G. P. Koch, visiting the Ling-Temco-Vought plant, took time out to fly the TF-8A two-seater *Crusader* trainer. He was initiated into the "1000-miles-an-hour" club of which his son already is a member.

The son, Ens. James P. Koch, has completed training in the *Crusader* at NAS CECIL FIELD and has been assigned to fly with VF-33. He will join the squadron aboard USS *Enterprise*.

Adm. Koch was presented a 1000-mph certificate by A. B. Gallatian, director of plans and programs (acting) at LTV, who was one of Adm. Koch's classmates at the U. S. Naval Academy. Adm. Koch's copilot on the flight was LTV's Chief Test Pilot.

'Perfect' is Good Enough

Calvin A. Nichols, Jr., AN, of NARTU NORFOLK, entered the Electronic Fundamentals Course at NAS OCEANA and finished with a perfect score of 100. The course was established aver a year ago, and Nichols is the first one to achieve a perfect score. Failure rate is usually 10 per cent.

CHUCK STOUT, *YN1, in miniature "Fly Navy" Model T, and Tom Binns, YN2, in convertible, arrived a week too soon to try out Chesapeake Bay Bridge Tunnel from Norfolk to Eastern Shore.*

Foreign Visitors at Atlanta

Sixteen foreign Naval officers visited NAS ATLANTA at Marietta, Ga., for four days late in April. The officers were from the Senior Foreign Officers' Orientation Course in mine warfare located at the Mine Warfare School, Charleston, S. C.

The visitors varied in rank from lieutenant to rear admiral and represented 12 countries—Burma, Nationalist China, West Germany, Indonesia, Japan, Korea, Mexico, Philippines, Spain, Thailand, Turkey and Vietnam.

The officers are in the United States to acquaint them with the economic, industrial, geographical and cultural structure of this country.

Small World in the Pacific

Off Hawaii recently, cruising in his EP-2E *Neptune*, Lt. Norman G. Peterson, USNR, was surprised to receive a message from a fellow Minnesotan from the sea below.

A member of VP-811 from NAS MINNEAPOLIS, Lt. Peterson was working on an antisubmarine training problem with the USS *Taylor* (DD-468). The squadron was serving its two-week active duty for training at NAS BARBER'S POINT.

From the DD came the message, "Please relay to Capt. Curtis R. Johnson of VF-813 upon your return to Minneapolis regards from nephew Dean R. Johnson." Dean Johnson is a sonarman attached to the *Taylor*.

Another facet of this exchange is that Capt. Johnson had been Lt. Peterson's aerology instructor at NAS PENSACOLA during the Korean conflict.

AT SEA WITH THE CARRIERS

THESE MARINES *from Task Force 62, which stands watch near Cyprus, get underway (Enterprise in background) for first liberty in 62 days.*

CAPT. MICHAELIS, *CVAN-65 skipper, congratulates Cdr. Bowman and Cdr. Sullivan, VF-102 X.O. and C.O. Each made 500th carrier landing.*

ATLANTIC FLEET

ENTERPRISE (CVAN-65)

Artfully reminding editors that the carrier is nuclear powered, *Enterprise* news releases carry an exaggerated drawing of the ship, emphasizing her unique mast, Navy wings, and Einstein's theorem of converting matter into energy ($E=mc^2$). The letter E represents energy in ergs; *m*, the mass of the matter in grams, and *c*, the speed of light in centimeters per second.

The only nuclear-powered aircraft carrier, *Enterprise* has been a showpiece since her commissioning. The fascination is as strong in the military as it is among civilian visitors. This fact was underscored when 1100 Sixth Fleet Navy men and Marines boarded her in the first "liberty" they had in 62 days. The visitors had been standing off Cyprus since hostilities erupted earlier this year. They were transported in six troop ships, by helicopters, landing barges and liberty launches.

Before they boarded the carrier, they witnessed a 21-event firepower demonstration by Carrier Air Wing Six, attached to the USS *Enterprise*.

Earlier, the *Big E* made her first visit to Istanbul, Turkey, during her third Med deployment. While in port, 20 crewmember volunteers spent their off-duty hours painting the state-sponsored Mevlane Kapi Boys Rehabilitation Center, home for 250 boys.

Other Sixth Fleet sailors responded to a plea for blood by the Turkish Red Crescent Society and donated 193 pints. John W. Gill, ET3, spotted a floundering Turkish citizen who had fallen from a ferryboat. He dove into the icy Bosphorus, towed the woman to an expertly maneuvered liberty launch and administered mouth-to-mouth resuscitation while others wrapped her in blankets. The woman regained consciousness and was rushed to a hospital from Fleet landing. VAdm. C. D. Griffin, Commander in Chief, U.S. Naval Forces, Europe, joined Capt. F. H. Michaelis, commanding the carrier, in commending Gill for his "particularly courageous" action.

Quick thinking on the part of Charles W. Lodge, ABH3, aboard the carrier, also prompted a commendation from Capt. Michaelis. Manning his station on the flight deck during the recovery phase of air operations, Lodge saw something fall from a landing *Skyraider*, ran to it, and discovered it was a parachute flare. The delayed fuse had ignited. Lodge quickly cut away the burning portion of the flare and tossed it over the side. It had a 500,000 candlepower rating.

Lodge's action prevented almost certain injury to flight deck personnel and aircraft. Said Capt. Michaelis, "Yours was indeed an outstanding example of ingrained professionalism, in keeping with the finest performance standards of the Navy."

Among the new crewmembers in the *Big E* are Cdr. Forrest S. Petersen, former X-15 test pilot and co-winner in 1961 of the Collier Trophy, and Ralph D. Schiffbauer, AT2. Cdr. Petersen relieved Capt. W. M. Harnish as Executive Officer of CVAN-65. Schiffbauer is assigned to the RC Division. "He (Schiffbauer) is, as far as I know," says Ltjg. J. E. Gingold aboard, "the first, and only, nuclear-

A FLIGHT *of Attack Squadron's A-6A Intruders herald the arrival of USS Independence after seven months with the Sixth Fleet in the Med.*

ON SHANGRI LA, *J. N. Cochran, IO2, makes move in play against Chief Lemkey, as G. J. Fleming, FTG2, waits for Chief to return to his board.*

trained airdale in the entire U.S. Fleet.

"After four months aboard," continues Ltjg. Gingold, "his conversion is nearly complete. Schiffbauer no longer talks of black boxes and landing approach radars, or makes strange swooping motions with his hands over the mess table. He is thoroughly involved with neutrons, control rods and scrams. His shipmates are hard-pressed to convince him to get out in the sun even to watch flight ops."

Crewmen aboard the carrier can't be accused of draining the U.S. gold reserve if one day's money order transactions aboard is any indication. Weary *Enterprise* postal clerks sold 1700 money orders in a seven-hour period, handling $56,941.61 in cash. Previous record aboard for a single day's transaction was set in November 1962 when 1254 postal money orders were processed, to the face value of $50,618.13.

Said Argel Greene, PC1, "I'm not entirely convinced that the amount of money we've taken in today is a record, but I'll wager my own paycheck that no other installation has ever sold 1700 money orders in a single day."

A different sort of a record is claimed by Capt. Michaelis. He is confident that the *Big E* has logged 30,000 landings in less time since commissioning than any other carrier.

Cdr. J. S. Christiansen, Commander Carrier Air Wing Six, logged the carrier's 30,000th landing just two years, two months and four days after the first landing aboard was made. An average of 1153 landings each month has been recorded on *Enterprise* since the first landing, and an average of 1071 since her commissioning.

The C.O. and X.O. of VF-102 aboard, Cdr. W. P. Sullivan and Cdr. F. G. Bouwman, respectively, each logged their 500th carrier arrestments when they landed F-4B *Phantom II* aircraft during the first recovery of the day.

FRANKLIN D. ROOSEVELT (CVA-42)

No longer will the F-3B "screaming" *Demon* wail aboard the *Roosevelt*, according to a story that appears in *The Presidential*, the ship's paper. The *Tophatter* pilots of VF-14 completed a transition training course in the F-4B *Phantom II* and embarked aboard as a unit of Carrier Air Wing One.

FORRESTAL (CVA-59)

Marine Fighter Attack Squadron 531, a unit of the 2nd Marine Aircraft Wing, successfully completed carrier qualifications aboard the *Forrestal*. In doing so, the unit became the first East Coast-based Marine *Phantom* unit to complete carrier training operations.

During the exercise, 22 pilot-RIO teams completed two carrier controlled approach landings, 10 arrested landings and 10 catapult shots to become carrier-qualified.

Capt. Michael J. Hanley assumed command of the *Forrestal*, relieving Capt. Dick H. Guinn. Capt. Hanley previously commanded *Thetis Bay* (LPH-6) before decommissioning.

INDEPENDENCE (CVA-62)

When *Independence* neared home waters, completing her seven-month Med deployment, she was met by a flight of A-6A *Intruder* aircraft assigned to VA-75 "Sunday Punchers." The squadron, newly transitioned to this aircraft, is a unit of Carrier Air Wing Seven aboard CVA-62. The four aircraft departed NAS OCEANA and rendezvoused with *Independence* some 700 miles off Bermuda. Cdr. W. L. Harris, Jr., commands the squadron.

Aboard the carrier when she returned was a ten-pilot, 40-man detachment (No. 62) from HU-2, based at NAS LAKEHURST. During the deployment, Det 62 demonstrated one of the capabilities of the UH-2A *Seasprite* they flew, by making the first night Stokes litter transfer from the *Nantahala* (AO-60). This performance was later repeated with a destroyer.

Before the deployment was completed, Det 62 helos made over 1000 personnel transfers, ship-to-ship and ship-to-shore; transferred over ten tons of mail and cargo; and flew over 1000 hours of plane guard, day and night.

INTREPID (CVS-11)

It isn't every day that Eugene J. Stepaniak, ADJ2, can look down on his Navy colleagues—especially those who elect not to remain in service. But he had the opportunity recently and took full advantage of it.

Assigned to HS-3 aboard the *Inter-*

pid, he decided his 14 years, eight months, and 16 days service were interesting enough to warrant additional time. In a squadron *Sea King* helo, at 14,861 feet above Norfolk, Va., his Commanding Officer, Cdr. Kenneth L. Morse, administered the reenlistment oath that committed Stepaniak to a full 20-year career in the Navy.

LAKE CHAMPLAIN (CVS-39)

Jimmy Lee Sanford, BT1, listened as RAdm. William M. McCormick, ComCarDiv 14, read an official document. At hand were Capt. Clarence A. Blouin, commanding *Lake Champlain;* Cdr. R. L. Anderson, Engineering Officer; and his Division Officer, Lt. J. A. Ducat. It was a serious occasion.

Earlier, Sanford was in the carrier's fire room and spotted a steam fire pump overspeeding and out of control. At great personal risk, he secured the pump. RAdm. McCormick, learning of the incident, expressed a desire to personally award the commendation; normally, this is given by a ship's commanding officer.

"Your persistent efforts in the face of the dangers which resulted from escaping steam," RAdm. McCormick read, and the overspeeding pump's possible disintegration, coupled with your outstanding knowledge of the machinery and piping systems, prevented the occurrence of a major casualty. Without your quick action, it might have been necessary to evacuate the fire room and secure the boiler. This would have caused a shutdown of the ship's entire auxiliary plant."

SARATOGA (CVA-60)

They're known as STRIKEX and ASWEX 2-64 aboard the *Saratoga,* but to a potential enemy, they'd spell disastrous encounters and, as one participant put it, "an awkward side of the fence to be on."

In STRIKEX, *Saratoga*-based aircraft launched simulated air strikes against strategic Florida targets, assuming, for the sake of the exercise, that they were enemy held. A purpose of the exercise was to test evasive tactics while conducting anti-air warfare against landbased aircraft.

AN F-8E, *belonging to VF-62, is launched from Shangri La anchored in Bay of Naples.*

At the same time, the aircraft participated in the ASWEX 2-64 exercise, an antisubmarine warfare exercise against conventional submarines. These subs—the *Picuda* and *Seacat*—conducted simulated attacks on the Fast Carrier Task Group, consisting of *Saratoga,* the fast guided missile escorts *C. F. Adams* and *MacDonough* (conventional frigates), *Little Rock* (cruiser), and *Bainbridge* (nuclear-powered frigate).

After completing the striking missions and recovery of the aircraft—A-4 *Skyhawks* and A-5 *Vigilantes*—the Fast Carrier Task Group rendezvoused with an escorted fleet oiler for refueling. During the refueling operation, the FCTG was protected from the "enemy" submarines by a screen of destroyers. The combined Striking/-Antisubmarine exercise continued into a second day before breaking up for return to home ports.

Saratoga dropped anchor off West Palm Beach, Fla., for what a ship's release described as "the warmest reception the eight-year-old attack carrier had ever experienced.

"The first indication of the jubilant welcome the carrier received was the fleet of over 150 yachts and small boats that met the ship at sea and escorted her to anchorage."

The local newspaper ran a special four-page supplement welcoming the ship and, according to the release, "it was almost impossible for a sailor in uniform to take a walk—too many people were offering rides . . . Perhaps one of the most common incidents occurring was people driving by, waving out the car window and shouting, 'Hi, *Saratoga!*' "

SHANGRI LA (CVA-38)

Robert C. Seeley, EMCS, had a peculiar tale to tell those aboard *Shangri La* when he boarded for a six-day familiarization tour. Attached to the submarine *Dogfish* at the time, he finished over 18 years active duty, never once having been aboard a surface ship underway. He claimed the only time he'd been aboard surface craft was when he had to walk across their decks to reach his submarine docked alongside.

Seeley boarded *Shangri La* as the carrier was preparing to get underway from Valleta Harbor, Malta. He debarked at Naples.

While aboard, he was passed from one department to another and given an extensive tour of the ship. "The amount of space is unbelievable," he is quoted as saying. "All I can say is, it's . . . BIG!"

He was taken to the flight deck where he stood with the catapult chief between the aircraft being hurled from the ship. As the noise of the aircraft engines died down, he exclaimed, "This is great! I should have done this a long time ago."

This was the beginner. Seeley was put aboard an aircraft and launched via the ship's catapult and, a short time later, made an arrested landing. This, he claimed, was his most exciting experience.

When the carrier reached Naples, he returned to his submarine and reassumed his duties as Chief of the Boat (leading petty officer).

Lt. David W. Dyke had a similar exciting moment. That occurred when he brought in an A-4C *Skyhawk* for the carrier's 58,000th arrested landing since recommissioning in 1955.

PACIFIC FLEET

HORNET (CVS-12)

Hornet has won a NavAirPac Battle Efficiency Award for the Competition Cycle 1962-64. The carrier also won the Department E award in the air division of the competition. In a dispatch to all winners, VAdm. P. D.

Stroop, ComNavAirPac, said, "Exceptionally fine performance turned in by all ships and all may be proud of their records. Well done to all hands and congratulations."

Leaving Hong Kong, the "fighting lady" participated in the large scale amphibious assault operation *Backpack*, a joint operation between Nationalist Chinese and U.S. Naval and Marine Corps forces. The operation involved over 140 units of the Seventh Fleet.

Following *Backpack*, *Hornet* paid two more visits to Yokosuka and then set sail for home port, Long Beach.

Ltjg. John C. McColly made the carrier's 82,000th arrested landing, in an S-2D *Tracker*. He is assigned to VS-35.

KEARSARGE (CVS-33)

Hopeful work, long hours and negative results filled four frustrating days as *Kearsarge*, answering a request from the Coast Guard, joined in the search for a ditched, privately owned DC-4. When last heard from, the plane, on a flight from Hawaii to Los Angeles, reported an engine fire.

As soon as *Kearsarge* reached the search area, air operations started and continued on an around-the-clock basis. Helicopter Antisubmarine Squadron Six and Air Antisubmarine Squadrons 21 and 29, embarked, provided air support. At sunset of the fourth day, the nine passengers in the plane were presumed lost, the search was called off, and *Kearsarge* sadly returned to her home port.

Two days before the carrier joined the search, RAdm. F. E. Bakutis relieved RAdm. C. A. Karaberis as Commander Antisubmarine Warfare Group One in ceremonies aboard. Both are graduates of the Naval Academy's class of 1935.

KITTY HAWK (CVA-63)

Lt. James M. Bockler of VAW-11 recently passed two milestones believed to be a record in the E-1B *Tracer*. Serving in the *Kitty Hawk* with VAW-11's Det Charlie, he passed 2000 flight hours and 200 arrested landings. In accumulating the hours and landings, he also flew from the *Saratoga*, *Randolph*, *Independence*, *Enterprise* and *Hornet*.

MIDWAY (CVA-41)

They call themselves the Alfagators and they are proud of their OinC. They are Detachment Alfa of Light Photographic Squadron 63 aboard the *Midway*. Their OinC is LCdr. Ray Dunkin who hooked into the carrier's 118,000th landing and, in a classic maneuver of one-upmanship, became a Centurion at the same time. He made the landing in an RF-8A *Crusader*.

ORISKANY (CVA-34)

When the *Saints* come flying in, they now fly in with a little more authority than they had before. The *Saints* are members of VA-163, aboard the *Oriskany*.

The added authority was given them when *Top Saint*, Cdr. M. D. Short, commanding, conferred honorary *Saint* status to Chaplains LCdr. James T. Callahan and LCdr. Carl Elwood.

With a much different connotation, VA-163 pilots can now joyfully sing, "Coming in on a Wing and a Prayer."

RANGER (CVA-61)

Ranger provided ferry service for the Army's XV-5A lift-fan jet V/STOL (vertical and short takeoff and landing) aircraft. The plane was transported across San Diego Bay to North Island in the first leg of a journey from Ryan Aeronautical Company's San Diego plant to NASA's Ames Research Center at Moffett Field, for wind tunnel testing.

Hoisted aboard the *Ranger* at North Island, the XV-5A made sea journey to Alameda where it was transferred to a barge for final portion of delivery, down San Francisco Bay to Moffet.

AT PEARL HARBOR, *one of four S-2F's is lowered to flight deck of USS Valley Forge*

TICONDEROGA (CVA-14)

Capt. J. P. Weinel, commanding *Ticonderoga*, has granted unusual authority that is of particular interest and value to the men aboard. He has authorized division officers the power to grant special liberty so men can attend high school classes at San Diego Evening High School when they are in the duty section.

This is just part of an intensive program aboard the carrier to encourage those who do not yet have high school diplomas. The program is specifically aimed at those who have completed the Armed Forces General Educational Development Test. The San Diego school is making it possible for these men to receive a standard high school diploma. California law requires students actually to attend the school granting the diploma. Sixty-four sailors aboard are taking advantage of the program.

YORKTOWN (CVS-10)

Traditional ceremony was put aside when Cdr. A. W. Ayers reported to *Yorktown* to assume duties as executive officer. Since CVS-10 was in drydock, he boarded her by shipyard crane. As one wag put it, "That's an unusual way of putting on Ayers."

As *Yorktown* shook loose of the yard at Long Beach, she headed for San Diego and a month's extensive underway training, conducted by the Navy's Fleet Training Group.

At the same time, the carrier learned that she had been named the outstanding carrier in her class in the Pacific Fleet. Competing among CVS's during the cycle of 1962-64, she won the Battle Efficiency E for the second time. This triumph was made even sweeter when she learned that her Engineering Department won the departmental E for efficiency.

Yorktown now sports a large white E with a hash mark *and* a large red E.

NEW ARRESTING GEAR IS INSTALLED

THIS ARTIST'S CONCEPT *shows the E-15 arresting gear in action. Rotary friction engines are installed below ground level. The re-battery time for the equipment is about five minutes.*

THE BUREAU OF NAVAL WEAPONS is installing E-15 and E-27 aircraft emergency recovery equipment at East and West Coast Naval and Marine Air Stations. Installations are also being made at Naval Air Advanced Training Command stations in Texas, and in the Hawaiian and Philippine Islands. Additional installations will be made as funds and equipment are available.

The development of the E-15 and E-27 gear was required because the increased weights and speeds of new aircraft have made the chain gear types (E-5 and E-5 mod. 1) "horse and buggy" equipment. The greatest drawback is primarily the length of time it takes to re-battery the gear after an engagement—approximately 30 minutes.

The E-15 and the E-27 are major steps toward the ideal. These have the capacity to arrest our latest fleet-type aircraft and a re-battery time of approximately five minutes. These types utilize rotary friction arresting engines. Aircraft arrestment is accomplished by the engagement of the aircraft arresting hook with a deck pendant which spans the runway. During run-out, the energy of the arrested aircraft is transmitted from the deck pendant through nylon tapes to a tape reel which is connected to aircraft style brakes and allows controlled emergency arrestment.

The E-27 and E-27 mod. 1 gears use a single nylon tape connected to the deck pendant. The E-15 and E-15 Mod 1 gears use two parallel nylon tapes that are connected at the deck pendant. The E-15 is essentially a double E-27 with increased arrestment weight capacity. These gears may be installed on one side of a runway with the tape doubling back under the runway from the opposite side. They may also be installed in "Morest" (portable) or "split" form with an engine on each side of the runway.

Several designs have been developed to allow surface installations, pit installations and installations with provisions for future increased capabilities. Selection of the arrangement for an individual field is based upon aircraft activity, ground soil conditions, weights of aircraft used, location on the runway as well as other factors. Pit installation will be utilized wherever such construction is feasible.

The Engineering Department and Field Service Department of Naval Air Engineering Laboratories (SI) are providing technical and on-site assistance to all the stations involved. This includes guidance for and review of architectural and engineering drawings, follow-up on material deliveries, functional check-out of equipment after installation, and certification for operations. In addition, assistance is provided after equipment is operational.

The E-5 or E-5 mod. 1 chain arresting gears presently installed at most fields will act as back-up gear and will continue to serve a most useful function on runways where the E-15/E-27 is not installed.

Shorebased *operational* arresting gear continues to be developed so that every landing will be an arrested landing.

WHITING'S FERTIG AND SAM ADJUST TOOL

New Device at Whiting

Facing Tool Saves Time, Money

Three sailors from the Aircraft Maintenance Department at NAAS WHITING FIELD have designed a facing and grinding tool for fuel pumps and shaft seals. Improvised from spare parts including a vacuum windshield wiper motor, the device reduces repair time on fuel pumps by nearly an hour.

Michael A. Fertig, ADRAN, planned the device and worked with John C. Sam, ADRAN, and John T. Wilson, AN, in developing it. Originally, surfaces of the fuel pump cup seal and the shaft were sanded by hand. The new tool utilizes two pulleys and a small rubber belt along with the motor to do the job. The invention is not only quicker but sands the surfaces more evenly than ever before.

C.O. Proud of Unit Record

He Lets Them Eat Cake, Sweetly

In a hangar ceremony at NAAS KINGSVILLE, Cdr. A. N. Nelson, Jr., cut a cake commemorating the 60,000th flight hour flown by VT-23. Assisting the commanding officer was 1st Lt. Donald C. Cory, USMCR, who flew the record-hour flight.

The 60,000 flight hours represent the total flying time accumulated since the squadron was established in November 1958 as Advanced Training Unit (ATU) 222. At that time, the unit consisted of only 12 instructors, 100 enlisted men and eight aircraft. Since then, it has been redesignated Training Squadron 23 and has expanded to 24 instructors, approximately 300 enlisted men, and 35 aircraft.

The use of the F-11A *Tiger* in student training did not begin in this squadron until March 1959, when Ltjg. Gunnar Jenson became the first student to fly the supersonic jet trainer at Kingsville. At the logging of the 60,000th flight hour, the squadron had designated 1,112 students.

Scientific Fleet Pooled

Instrumentation Ships under DOD

Instrumentation ships required to support programs of NASA and DOD are to be placed in a pool and operated by DOD in behalf of both agencies.

The agreement involves an eventual national inventory of 20 ships—12 equipped for telemetry and 8 equipped for telemetry data acquisition only—to be operational by the end of 1967.

There are now 17 instrumentation ships, two of these to be extensively modified for Project *Apollo*. Three more ships, taken from the Maritime Reserve Fleet, will also be converted for tracking and data acquisition purposes for Project *Apollo*.

The responsibility for design, construction and modification of all instrumentation ships will be centralized by DOD under the Navy, which has established an Instrumentation Ship Project Office. Director of this office, Capt. Alex. F. Hancock, USN, will have USAF and NASA deputies.

The Military Sea Transport Service will be responsible for operation of the ships, and DOD range agencies will be responsible for the scheduling and ship instrumentation operation.

CATAPULT TESTS MADE IN CVA-42

WITH A WHOOSH *and a thud, a dead load roars down the shuttles of Franklin D. Roosevelt's forward catapults, sails through the air, and splashes into the waters of East River at New York Naval Shipyard. During overhaul period, both port and starboard catapults were reconditioned. When overhaul was completed, work was tested and rechecked. For three weeks, day and night, the cats launched recoverable deadweight loads until testers were satisfied the systems were good.*

Aviation Supply Lauded

Assistant SecNav Praises Progress

Assistant Secretary of the Navy (Installations and Logistics), the Honorable Kenneth E. Belieu, has commended the Aviation Supply Office (ASO) for outstanding progress in the Aviation Material Management Improvement Program.

The Assistant Secretary individually cited RAdm. John Crumpacker, Chief of BuSandA, RAdm. K. S. Masterson, then Chief of BuWeps (now Commanding the Second Fleet), and RAdm. H. F. Kuehl, Commanding Officer of ASO, for contributions to the program and their leadership.

Upon receiving the Secretary's commendation, Adm. Crumpacker and Adm. Masterson cited officers and civilians of ASO who were instrumental in making the AMMIP an outstanding success.

Between March 1963, when its advanced automated purchase order system went into operation, and April 1964, ASO processed 100,000 small purchase orders with a monetary value of $24 million. Not only has this meant monetary savings, but it has greatly reduced the time required to fill requisitions from the Navy's Aviation Supply Distribution System.

Project Short'nin Here

New Procedures are Incorporated

Project *Short'nin*, the preparation of Preventive Maintenance Documentation, is underway. Maintenance Requirement Cards (MRC's), Sequence Control Charts (SCC's) and the Preventive Maintenance Requirement Manual (PMRM) are currently being used for seven aircraft models. Basically, the system provides standardized methods of presenting data in order to improve organization and management in the maintenance area. It also reduces maintenance requirements to the minimum consistent with technical, military and economic need while presenting the data in a concise manner.

MRC's and other documents permit scheduling of maintenance functions by personnel to the lowest practical level of skill and at the same time improve the quality of work. Other advantages are improved control of check crew personnel; creation of better work habits and reduction of aircraft "down" time in check.

Further, the system designates a more positive starting and stopping point in work assignments, improves accuracy in man-hour accounting, prevents duplication of work and facilitates quality control inspections.

Responsibility for preparing maintenance systems for naval aircraft is assigned to teams, each consisting of an officer and an average of seven Fleet and shore enlisted personnel. These men are selected for their technical competence and precise knowledge of the aircraft. Overhaul and Repair personnel can be used when required but, for the most part, the project is an in-house activity.

Team members receive a two-week course of instruction, instituted by Fleet Work Study Groups. To insure standardization, on-site monitoring and verification is provided by the groups and the Maintenance Engineering Analysis Branch (MEAB) at NATC Patuxent River, Maryland.

Project *Short'nin* is expected to satisfy the requirements concerning Preventive Maintenance Documentation contained in OpNav Instruction 4700.16A, the Standard Navy Maintenance Management System, at considerably less cost and time than was originally anticipated. The project's full implementation is, according to BuWeps experts, expected in 1965.

Editor's Corner

CAN'T BRUSH AFTER EVERY MEAL? Box lunches for crewmen operating on long flights (10 to 12 hours) out of NS Keflavik, Iceland, contain a friendly reminder from the dentist. A note inserted into the box lunches urges airmen to eat coarse foods last to take advantage of tooth-cleansing action, and to rinse mouths with water after eating. Reports the USN *Medical News Letter*, "This is an excellent example of delivering the message to personnel at the most opportune time."

Stuff to be teached by. In a special edition of the *Flying K*, NAAS KINGSVILLE, the Information and Education department ran the following April First advertisement: "It are terribel, the way youse personell aint' takin out no choruspondunce corses. Nobody's never gonna given youse no respekt if you don't let us borrow you some books and stuff to be teached by. After all, 'a book in hand is worth two on the shelf.' "

UNDER NEIGH REPLENISHMENT. Usually the men of USS *Altair* replenish other ships' stores by helicopter. But one morning in the bay at Palermo, faced with the replenishment of a nest of submarines inside the busy harbor, they couldn't use a helicopter because of the crowded conditions inside the bay. The AKS sailors solved their problem by hiring a horse and carriage, "lifted" some 1000 pounds of cargo in the old style.

Add to Navy's 10,000 Hour Club. VP-44's Commanding Officer, Cdr. James L. Ball, joined the 10,000-hour flight hour "club" recently upon completion of competitive navigational exercises at Roosevelt Roads, Puerto Rico. A former Chief Aviation Pilot, Cdr. Ball in his almost 14 months of airborne time "has never even blown a tire." His squadron now flies the P-3A *Orion*.

CAT MAN'S LAST SHOT. In an unusual ceremony, LCdr. Paul Jones Weaver, catapult officer on the *Coral Sea*, was "shot over the side" to end a two-year tour of duty on the carrier.

Division crew men rigged a man-sized dummy with clothes, tied it to the Number One cat and let the departing officer "shoot himself" over the bow (see photo).

Born 99 Years Too Late. Perusing an 1865 revision of Navy Regulations which his father had found in a bookstore 30 years ago, Chief H. D. Clark, Jr., of VS-25, found the following articles that governed our Navy almost a century ago:

"No person in the Navy will upbraid another person in the Navy for refusing a challenge to fight a duel. . . . No disgrace can attach to any one for refusing a challenge, as such a course would be in obedience to law.

"The commanding officer will permit a lighted lantern to be hung up in a suitable place during meal hours . . . from which pipes or cigars may be lighted. No pipes or cigars shall be lighted at the galley or on the berth deck.

"Within the United States, leave of absence for a longer time than one week will only be granted by the Secretary of the Navy, except in cases of great emergency, which must be immediately reported to him."

SUPERSONIC EATING. In advance of the supersonic transport, the KLM Royal Dutch Airlines surveyed some of the effects that high speed will have on airline passenger eating habits. The survey showed that it will take a 1900-mph transport "about the time it takes a passenger to linger comfortably over a meal" to cover the 3250 miles from New York to Amsterdam. Besides having to eat faster, the report said, passengers will find "the second cup of coffee is one of the expendable items." In the time it will take to consume a cup of coffee, the airliner will have travelled 333 miles.

Ever Mint Julep. A group of southern gentlemen flyers, "dedicated to the preservation of the world's greatest fighter aircraft," opened their 1964 flying season in March at Harlingen AF Base. Known throughout the south as the Confederate Air Force, the pilots (all civilian enthusiasts) fly the Navy's F4F, F6F, F8F and F4U (World War II types) plus the P-40, P-51, P-63, P-38 and the P-47. During their shows, the pilots perform aerobatics and novelty acts. Headquartered at Rebel Field, Mercedes, Texas, the CAF has as its motto, "Semper Mint Julep."

CHOICE DUTY CHOICE. Under new re-enlistment rules which "conditionally guarantee" a re-enlistee his choice of duty, Thomas M. Knight, AE3, reported for duty at NAS Atsugi recently. For Knight it meant changing from Med duty aboard the USS *Independence* with VA-41 to shore duty in Japan, which in any Navy is quite a switch in duty stations.

Population Explosion Afloat. When Ltjg. Gerald Jacobson, VA-64, went aboard the USS *Enterprise* at the start of its recent Med deployment, he took along four guppies from his home aquarium. Although the first generation of 11 babies all died, he had acquired a new crop of 65 by mid-April. With a new generation arriving each 21 days, he figures to have a total of 2790 guppies by the time the ship returns to its home port of Norfolk. (Ichthyological note: the guppies were unable to eat for the first three weeks at sea, according to Lt. Jacobson, "because they were seasick.")

MUSIC TO CHIP PAINT BY. While the USS *Yorktown* (CVS-10) was undergoing overhaul at the Long Beach Naval Shipyard, Airman G. L. Pace may have set a new style for paint-chipping sailors. He plugged a set of earphones into a portable radio, chipped in time to the music of the day.

LETTERS

Whoops!

SIR: As should be, most air traffic controllers have a keen eye when it comes to aircraft recognition. All of us at RATTC enjoy the articles in *Naval Aviation News*. Errors are few and far between, but in the March issue, we spotted one.

In the article about C-130's finding new roles in Naval Aviation, page 25, the tail view of the aircraft being loaded is not a C-130, but a C-133: Three-bladed props, rounded tail cone, trim tabs on the horizontal stabilizer, gear protrusions, and also the upper edge of the cargo opening. Please correct me if I'm wrong.

MICHAEL BROWN, AC2
RATCC-35, NAS Oceana

P.S. Please don't try to launch a C-130 with all the equipment shown in the picture. C-130's are expensive.

¶ You're right! Recognition refresher training commenced. The C-133 pictured was then on Exercise Long Pass. We should have punted.

Correction

SIR: In the February 1964 issue of your very fine publication, the 1963 Naval Aviation Review by Adrian O. Van Wyen has an error on page 8 that needs correction.

On May 16, 1963, the USS *Kearsarge* (CVS-33) recovered Maj. Cooper. Cooper remained inside the capsule until it was hoisted aboard by ship's crane at No. 3 elevator.

The helicopters were used to drop UDT personnel near the capsule immediately after it landed to ascertain the physical condition of the astronaut, and to attach a flotation collar to the capsule to provide proper flotation in case it was leaking.

Cooper and his capsule were recovered by the same technique used to recover Cdr. Schirra and his capsule, i.e., by a boat pulling a nylon line from ship to capsule, attaching the line to the capsule, pulling the capsule by hand to the ship, attaching the crane hook and hoisting capsule aboard. The picture on the left side of page 7 shows some of the details.

E. P. RANKIN, CAPT., USN
Ex-C.O., USS *Kearsarge*

'Guide' Wanted

SIR: Where may we eternally aspiring Naval Aviators obtain copies of Capt. Malcolm W. Cagle's *Naval Aviator's Guide?*

GEORGE F. KLEIN, JR., LCDR.
Attack Squadron 811

NAS Twin Cities

¶ Capt. Cagle's book may be obtained by ordering it from the U.S. Naval Institute, Annapolis, Maryland. All you do is enclose check or money order in the amount of $5.50.

VT-4 Stars in Safety

Logged 25,000 Safe-Flight Hours

VT-4's Lt. P. G. Baron logged the squadron's 25,000th accident-free flying hour this spring at Forrest Sherman Field, Pensacola. Ltjg. J. F. Dowd rode the back seat of Baron's T-2A for the record-making flight.

Training Squadron Four's safety record dates from October 1962. Since then the unit has graduated 645 student pilots in gunnery and carqual phases of basic training, recorded over 5450 carrier landings, and over 79,000 landings at Sherman Field and Field Six in the Eglin reservation. Commanding Officer of Training Squadron Four is Commander J. M. Jones.

PATROL SQUADRON ONE *proved itself the top ASW squadron at NAS Whidbey Island when it successfully competed with the three other patrol squadrons based there. VP-1 entered four crews in the ASW competition and garnered two first and two second places. In recognition of these achievements, the Honorable Paul Fay, Under SecNav (right) presented the ASW trophy to Cdr. F. C. Forsberg, VP-1 skipper (center). Capt. D. G. Gumz, ComFAir Whidbey stands at the left.*

ATTENTION ALL AVIATORS

Individual Flying Time Report, OPNAV Form 3760-4, recently revised (3-64) with extensive changes, is in the process of being distributed and will be in the hands of all commands in time to be utilized for the due reporting date which is 10 days after the close of the fiscal year.

This report is required from all Naval Aviators, Naval Aviation Pilots and Flight Surgeons on active duty in a DIFOT status, less Marine Aviators and Pilots. Marine Aviators will not be required to submit an annual flying time report to CNO, but will submit a similar form to CMC. All old forms, OpNav Form 3760-4 (Rev 1-61), should be destroyed. For further information see OpNav Instruction P3760.8A, March 31, 1964.

The new form asks for pilot experience in several areas "by flights" in addition to "by hours." The purpose of asking for the new information is to attempt to validate a proposition that a compilation of flights by a Naval Aviator in various situations is a better index of his experience than are flight hours. A subsequent assessment of the results will probably cause one or the other to be removed from a future revision of the report.

VMF(AW)-122 Sets Mark

Flies 10,000 Safe Hours in F-8's

Marine All-Weather Fighter Squadron 122 set a safety mark in March when squadron pilots totaled 10,000 accident-free hours. Commanded by LCol. D. L. Ward, the unit was serving with MAG-11 at Ping Tung, Taiwan, at the time.

VMF(AW)-122 began its accident-free streak in 1962 and flies F-8's.

SQUADRON INSIGNIA

These A-1's above San Francisco are the dependable weapons of Attack Squadron 52, based at NAS Alameda. A unit of CAW-5, the 'Knight Riders' won the 1963 CNO Safety Award, totaled 6097 accident-free hours. Deployed 305 days last year, VA-52 operated from three carriers, including the USS Ticonderoga. Cdr. G. H. Edmondson, C.O., relieved Cdr. R. W. West last January.

Whether They're Short or Tall, They Read

NAVAL AVIATION NEWS

(Some May Only Look at Pictures)

It is good 'economy sense' which dictates a policy of one copy of *Naval Aviation News* to be passed among each 10 men in units, squadrons and ships around the world. What was your muster report for today? Is your ship or unit receiving enough copies to meet the 10-to-1 rule of thumb? If not, write to the Editor, *Naval Aviation News*, Navy Department, Washington, D. C., 20360. Perhaps an adjustment is overdue.