

NAVAL AVIATION

NEWS

IN THIS ISSUE:

**NO PAIN,
NO STRAIN**



APRIL 1973

NAVAL AVIATION NEWS

FIFTY-FIFTH YEAR OF PUBLICATION

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COVERS—Taking advantage of a cease-fire lull in activities in the Gulf of Tonkin, TF 77 units steam in formation, right. From left to right; carriers America, Enterprise, Oriskany and Ranger are escorted by Bronstein, Corry, Lawe, Fanning and Cone. Sea Kings are silhouetted on back cover. On the front cover, Enterprise crewmen use portable hoist to load MK 82s on an A-6 (see page 8).

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EDITOR'S CORNER

They appear as regularly as the sun rising in the East and they are as distinguishable from one another as grains of sand in a dune. Always with us, they are as nautical a tradition as bas'n pipes and side buoys. They are cake-cutting pictures.

For some unknown reason there seems to exist in the minds of seafaring, high flying folks a certain mystical something about the cutting of a commemorative cake. We've tried to ascertain what it is and searched the faces in the photos for the answers — to no avail.

Whatever the fascination, friends and neighbors, PAOs and COs, it's lost on us. When was the last cake-cutting picture you saw on these pages? We can't remember either. So here are a couple, selected at random from the hundreds we receive. Check it out real good because they are likely to be the last, unless, of course, you have an exact replica — in devil's food and frosting — of your favorite carrier with a real plane on it, and it catches the #3 wire.

On the same note, here is an item which started all this. Courtesy of that renowned authority on naval cake rituals and former editor, Art Schoeni. The story was written many years ago for (you guessed it) the baking industry magazine.

Thousand-pound cakes or little ones, six-deckers or one-layers, there probably is no organization in the world as "cake happy" as the U.S. Navy.

At the drop of a hat, for almost any occasion a little out of the ordinary that calls for a celebration, the Navy's bakers will turn out a cake. And all hands turn to get a piece after the skipper or honored guest has cut the first one with a sword or a butcher knife from the galley.

Probably nowhere in the Navy is cake-making more popular than in aviation, aboard carriers or at air stations. The cake, to flyers and friends, is a symbol of reward for anything from bravery to a simple commemorative occasion.

Possibly the biggest excuse to break out a cake comes when a pilot makes a 1,000th landing aboard a carrier. During wartime, these landings come every week or oftener, but no sooner does the lucky pilot touch his wheels on the deck than the ship's bakers wheel out a heavily frosted cake and hand the flyer a knife.

Probably the biggest cake for a special occasion was made aboard *Philippine Sea* off Korea last spring. When Ltjg. J. P. Skyrud brought his fighter plane in for the 55,000th landing aboard, the granddaddy of all cakes was wheeled out.

The 1,000-lb. beauty was in the shape of the carrier. The eight-foot monster took 23 hours to prepare and contained — among other things — 240 pounds of flour, 130 dozen eggs, two quarts of vanilla, 536 pounds of sugar and 80 pounds of butter. It even had miniature airplanes on its deck.

Land-based patrol squadrons, since they can't use the excuse of a thousandth landing to cut a cake, do like VP-29 did at Atsugi, Japan. The squadron skipper used a Japanese samurai sword to cut a well iced cake in honor of the squadron's 500th combat mission to Korea.

Anniversaries offer a good chance for bakers to practice their art, and sometimes the women get into the act, such as birthday parties honoring the 8th or 10th anniversaries of the founding of the Waves or Women Marines.

In wartime, the carrier landings sometimes came so fast the cooks didn't have time between thousandth landings to bake a cake for each. *Coral Sea* was not in the war, but she was busy with war games in the Med and had to let two pilots share the



cutting honors because they had made the 52,000th and 53,000th landings close together.

Maybe the "special occasion" seized upon to justify a cake-cutting is an open house on Armed Forces Day at an NAS. The skipper at Olathe, Kans., carved a 350-pound cake on one such occasion, with the aid of the Waves.

It isn't always the pilots who "trigger" the bakers, either. When the mechanics of a Marine squadron kept their planes in such good repair that the pilots were able to fly them for a record 2,000 hours in one month, Major General Field Harris cut a cake in honor of the hard-working mechs — and they all got a big slab.

Nor is it always a Marine or Navy pilot who wields the cutting knife. Each year some Air Force and Navy pilots exchange services, learning to fly the others' aircraft. That's how Capt.

Continued on page 40





1911

1973

A New Approach to Aviation Recruiting

NAS QUONSET POINT, R.I. — Approximately 60 Norwich University cadets took orientation flights in a Navy SH-3D *Sea King* and a T-34 *Mentor* in January. According to Captain R. E. Combs, commanding officer of the Boston Recruiting Station, this was the first time in New England that civilians, other than newsmen and government personnel, had been allowed to fly in operational Navy aircraft. CNO removed the restriction on operational aircraft to allow the Boston recruiters to give the potential Naval Aviation applicants the feel of "Fly Navy."

The Boston recruiting team of Lieutenants Robert Pothier, Norman Schwartz and Jack Cibelli was augmented by a helo crew from HS-1.

The program was received with great interest at Norwich University, home of the Army Reserve Officer Training Corps and the oldest civilian military academy. The cadets are required to take the basic Army or Air Force ROTC courses for their first two years and wear the uniform of the Vermont militia which is similar to a U.S. Army officer's uniform. There are some cadets who have expressed interest in the Navy and in participating in summer programs at the Newport Navy Base.

The recruiting team found a number of eager cadets. Each 20-minute helicopter orientation flight could only accommodate five cadets. Those students who were scheduled for the next flight waited patiently in the snow-covered parking lot that served as the

helo pad, despite the windy ten-degree temperature. When one flight ended, another group of cadets was ready to climb on board. Extra hops were flown each day.

At the Montpelier, Vt., airport, Lt. Cibelli conducted orientation flights in the two-seat T-34.

During the planning of the Vermont trip, Capt. Combs expressed the hope that the Norwich University recruiting effort would "provide a good number of quality applicants, besides spreading the Navy word and displaying a very favorable Navy image."

Commander Edward L. Richards, naval liaison officer at Norwich, and Capt. Combs were extremely pleased

with the outcome and enthusiastic response of the Norwich University cadets. They echoed the praise contained in a recent message from the Commander, Naval Air Forces, U.S. Atlantic Fleet: "Well done on an exceptionally fine approach to better community relations and Navy awareness! Your innovative and timely endeavors to augment recruiting stand as examples for all Atlantic aviation communities to follow. I truly thank you for a fine job. Well done."

The Boston recruiting team plans other trips, augmented by Naval Aviation commands in the area. A visit to the University of Rhode Island campus by the recruiters and the HS-1 team, which was postponed last December because of bad weather, will be rescheduled later this spring.



Above is artist's concept of the Soviet Union's first aircraft carrier. Under construction at the Nikolayev Nosenko shipyard on the Black Sea, the carrier is estimated to be 900 feet long, displacing approximately 46,000 tons. No catapults are in evidence, so it is presumed she will carry V/STOL aircraft. The new aircraft carrier is likely to be fully operational in a year. Two Soviet helicopter carriers, *Maskva* and *Leningrad*, are presently in commission.

LAMPS Deployment Ends

IMPERIAL BEACH, Calif. — LAMPS Helicopter Antisubmarine Squadron Light Thirty-One's Det. Two has returned to the naval air station from a seven-month deployment in WestPac aboard USS *Harold E. Holt* (DE-1074).

As a result of its pre-deployment training and testing at sea, the LAMPS Det proposed changes in ship construction, lighting for night flying, arrangement of hangar spaces and new procedures for tactical employment of new and complex equipment installed in the SH-2D *Seasprite*. The HSI-31 Det. Two crew will also meet with personnel of other squadrons deploying to the Western Pacific.

Bombing Champs Named

CHERRY POINT, N.C. — Headquarters and Maintenance Squadron 14 has been named overall champion of the MAG-14 Bombing Derby held December 15 at MCAS Cherry Point. H&MS-14 also won the Visual

Bombing Champion award with Maj. R. F. Gore and Capt. R. O. Neal getting the Top Gun, Visual plaque. VMA(AW)-224 took the Systems Delivery Champion award with Captains T. G. Sprouse and W. D. Carr getting the Top Gun, Systems plaque.

VMA(AW)-121's team three landed the Special Weapons Loading trophy. Maj. C. G. Hyde, Capt. C. U. Dejong and Lieutenants R. W. Bates and J. O. Lundeen were named the Best Photo Reconnaissance Team. This is for competition between VCMJ-2 teams.

Runway Automatic Landing System Opens

JACKSONVILLE, Fla. — The Navy recently certified a multiple-runway automatic landing system at this air station.

Built by Bell Aerospace, the system offers fully automatic landings at 15 touchdown points on the station's four runways.

The Cecil Field installation is a land-based version of the carrier-based AN/SPN-42 all weather automatic

landing system that is currently in operation aboard nine aircraft carriers. Both systems permit automatic landings in which the pilot can fly "hands-off," monitoring his instruments.

The Cecil Field installation, identified as AN/SPN-42T2, was developed by Bell under a 1970 Naval Electronics Systems Command contract award. By last December the system had logged 10,857 landings.

The SPN-42T2 is fully integrated into the air station with its runway-located radar being operated and monitored from the installation's existing radar air traffic control central facilities.

At Cecil Field, the system is capable of handling 120 aircraft an hour. The multi-runway coverage of the new system enables Cecil Field to electronically "rotate" the use of its runways into the wind.

The system is used primarily to train Navy pilots and operators in the use of the carrier-based landing system. Certification of the AN/SPN-42T2 means the system is no longer experimental and is adopted for routine use.

A second remote automatic landing

Chapter II in the Continuing Saga of the Nebulous Neutercane

Although the term "neutercane" gained considerable notoriety during its short operational life (*NA News*, January 1973), the nation's weathermen have decided to reserve the expression for research. At the Interdepartmental Hurricane Conference held in Miami, Fla., late in January, the neutercane found itself an agenda item.

As described in *Naval Aviation News*, the neutercane is a very small storm, smaller than a hurricane, but somewhat larger than the conventional waterspout. Because of its size, the neutercane is difficult to detect on the average weather map. It was through study of cloud pictures from meteorological satellites that the neutercane was discovered. It apparently gains its energy from the same sources as the mid-latitude storms — temperature or density discontinuities. Also the neutercane is not a resident of the tropics, but appears to form between the 25th and 35th parallels and usually

By Commander Neil F. O'Connor

off the east coasts of continents. However, it is because of the nebulous origin of these storms and the problems that resulted when the term "went public" that the weathermen decided to make the neutercane an item for discussion.

This year's annual hurricane conference, as before, brought together meteorologists involved with the formulation of the National Hurricane Plan, meteorologists from the Joint Chiefs of Staff, Naval Weather Service Command, Air Force, and the National Oceanic and Atmospheric Administration, and representatives of operational activities of military aviation components such as Weather Reconnaissance Squadron Four and the Federal Aviation Administration. They reviewed the past year's effort and updated the hurricane plan for this year's hurricane season.

The use of the term "neutercane"

was originally raised at the 1972 conference at which time it was agreed that the expression was specifically intended for internal use by meteorologists responsible for tropical storm forecasting. There was no plan to use the term in public advisories; however, when one such storm was being tracked, the term inadvertently became known to the media. Since then, the use of the expression has resulted in some confusion in the press and with the public.

Because research on the neutercane is incomplete, the weathermen agreed, in January 1973, that the term should not be used in operational forecasts. Only a slight adjustment was required of existing definitions used in tropical storm forecasts to accommodate the characteristics of the neutercane.

Although the use of the term neutercane might have been premature, the incident at least gave the public a brief insight into the continuing research being done in meteorology.

system will be installed and operated at NAS Whidbey Island. It is scheduled for delivery in December 1973, for full operation by mid-1974.

Jet Runways Opened

NAS PENSACOLA, Fla. — Student pilots are training on a new 8,000-foot concrete and asphalt jet runway at Choctaw Field in Santa Rosa County which was opened in January.

Choctaw is manned by a security force and men to handle tower duties and fire-fighting chores. They are bussed from Pensacola on a temporary basis. Construction on a new tower, living quarters and office space is scheduled to start soon.

The new landing strip, which permits north and south landing options, is the second jet runway opened in the Pensacola complex during January.

NAS Pensacola opened a second 8,000-foot runway parallel to the older southwest-northeast runway at Forrest Sherman Field. This asphalt runway has 1,000-foot sections of 10-inch concrete at each end and 1,000-foot overrun areas.

Completion of the two runways will enhance the jet training capabilities in the Pensacola training complex. VT-4 is transitioning its instructors and personnel in the operation of the TF-9 *Cougar*. Under the Naval Air Training Command's "single basing concept," flight students receive both basic flight training (in the T-2C *Buckeye* by North American) and advanced flight training (in the TF-9 *Cougar* by Grumman) at VT-4.

Air Facility Information Available from Air Force

ST. LOUIS, Mo. — The Defense Mapping Agency Aerospace Center (DMAAC), formerly the USAF Aeronautical Chart and Information Center, maintains an Automated Air Facility Information File (AAFIF) on all known airfields and seaplane stations within the foreign free world. It is a current comprehensive file, containing details of the operating area and available support facilities and services. The file is classified and the airfield descriptions are not published in operational flight information publications.

The basic contents of the AAFIF are available to any authorized DOD element by duplicate magnetic tape or printout. DMAAC also provides a quick response service for airfield printouts on a one-time basis, tailored to meet the user's special requirements.

All Navy units are encouraged to use the AAFIF as their needs arise for airfield data. If you are planning a special exercise, or preparing or updating a contingency plan, contact DMAAC for their services. For more particulars on the Aerospace Center's AAFIF, write or call for their brochure, "Guide to the Free World Air Facilities and Flight Information Library." The address is DMAAC (ADP), 8900 South Broadway, St. Louis AFS, Mo. 63125.

Gold Wings for Jumper

CHRISTCHURCH, N.Z. — WO William S. Couch has received his gold parachute wings as a member of the Navy's only pararescue team. The wings represent Couch's tenth parachute jump from an aircraft and were earned in just two and a half months.



It isn't an everyday occurrence, so when AZ3 Lee Ruth Alverson and TD3 Carol L. Kokes were designated observers, a cameraman was there to record the event when they descended from their P-3 Orion at Moffett.

As a member of VXE-6, Couch will be making his parachute jumps at the bottom of the world in the event of an accident or an air crash in the frozen, remote regions of Antarctica. VXE-6 provides air support for Operation *Deep Freeze*, the Navy's logistic support program for American scientists conducting studies in Antarctica under the auspices of the National Science Foundation, Washington, D.C.

VT-27 Receives Award

CORPUS CHRISTI, Tex. — Training Squadron 27 is the first training squadron at the naval air station to receive the Vice Admiral John H. Towers Memorial Flight Safety Award. It was presented to the squadron's commanding officer, Commander Lawrence H. Grimes, Jr., by the Daedalian Foundation for achieving an outstanding record in its safety-oriented flight program during the fiscal year.

Selection of a winner is based on aircraft accident rates, the number of students completing the training program, the average weeks to complete flight students, total student syllabus hours flown and outstanding safety records.

VAdm. Towers, Naval Aviator #3, was active in the experimental development of Naval Aviation.





GRAMPAW PETTIBONE

How Much Fuel?

During a mid-afternoon scheduled recovery time, while conducting flight operations off the U.S. coast, a carrier encountered fog which had been hidden by haze and some low clouds. The weather had been 8,000 feet scattered, 20,000 feet broken with five miles visibility in haze. It quickly deteriorated to an estimated 300 feet obscured, one and a half miles in fog and haze with some pilots reporting the ceiling at the carrier as low as 150 feet. Recovery was delayed because of the time required for traffic control center to switch from visual to instrument approaches. In addition, the flow of weather and divert information to the aircraft was affected when traffic control center lost some of its radios.

A decision was made to divert eight aircraft (six A-7's, a KA-6D and an F-4) to NAS Divert. The latest weather the ship had for the NAS was 800 scattered, 1,500 broken, 8,000 overcast; four miles visibility with thunder-showers in the vicinity; but now communications between the station and the carrier were unreliable. All the aircraft had sufficient fuel for the divert except the F-4 which was refueled by the KA-6D en route.

At approximately 50 miles out, all the aircraft attempted contact with NAS Divert. The F-4's radio failed shortly after the initial contact, but the pilot was able to descend VFR, locate himself, and proceed to the field where he circled until he received the green light. As he landed on the wet runway, the increased tire pressure (for carrier landing) caused the F-4 to hydroplane so the pilot elected to use the field arresting gear. The *Phantom* had 2,000 pounds of fuel remaining.

The weather, during this time, varied from 600 to 1,300 feet overcast with visibility restricted by heavy rain.

Immediately behind the F-4 on a



GCA final was one of the A-7's which, due to a low fuel state (350 pounds), landed behind the F-4 on the same runway. After landing, the A-7 pilot, seeing the F-4 take the arresting gear, engaged his nosewheel steering and guided around the F-4. The next aircraft to land, an A-7 experiencing radio difficulty, landed on the parallel runway and also engaged the arresting gear (its fuel state was 600 pounds). The next three aircraft landed on one of the other parallel runways (one set of parallel runways was now closed because of aircraft in the arresting gear) following circling approaches; they had 300, 300 and 100 pounds of fuel, respectively! The remaining A-7, after experiencing difficulty in being located by radar, landed on a "special VFR" with 300 pounds of fuel.

The final aircraft, the KA-6D, had more fuel than the other aircraft and held at an approach fix until all the others had landed. He then declared

an emergency (low fuel state) and was given a GCA approach landing with 800 pounds remaining.



Grampaw Pettibone says:

Well I'll be a monkey's grampaw! Some folks can get away with anything. It makes it mighty tough on an NAS when you suddenly saddle it with eight unexpected, low-fuel-state flyin' machines during IFR weather. The fact that communications from shore to ship were inadequate didn't help the problem any since our NAS was unable to pass the change in weather to the ship. With all our modern communicatin' equipment you wouldn't believe this could happen in this day and age — now you've seen it! Mighty easy solution to this one — get the radios fixed! I'm afraid to add up the total fuel remaining in all of these birds; it would be bad for my ulcers!

Unscheduled Touchdown

Two pilots manned their C-117D *Gooney Bird* for a flight from NAS Southeast to NAS Northcoast. Forecast weather for the planned flight of six hours and fifteen minutes was mixed VFR and IFR conditions en route. The arrival forecast was for 2,500 feet broken, 5,000 feet broken, 12,000 feet overcast, seven miles visibility, with light rain, snow showers and ice pellets in the vicinity.

Flight altitude was initially 8,000 feet with a later change to 9,000 feet where the aircraft cruised for the remainder of the flight. Flight conditions were in and out of clouds at various times en route, with no unusual conditions encountered. Favorable winds enabled the flight to progress more rapidly than planned.

Descent to 6,000 feet was initiated by the control center in the vicinity of the final fix. The altimeter setting was given at this time as 30.39. The aircraft

was now shifted from center to local approach control. The pilots were informed by approach control to expect radar vectors to the TACAN final at destination.

They were given clearance to descend to 3,000 feet, followed by numerous vectors around traffic, and then cleared to descend to 2,000 feet. The pilots discussed their concern over rapidly approaching the final course radial while still 90 degrees off heading.

Approach control informed the pilot that he would pass through the approach course slightly to gain separation from traffic landing at satellite airports. Control directed him to turn left and cleared him for a TACAN approach, stating that he was 12 miles from destination.

Shortly thereafter, the pilot asked approach control for clearance to switch tower frequency. He was cleared

and informed that radar contact had been lost.

Attempts to contact the tower were unsuccessful. The tower received the initial call and transmitted landing information on both primary and guard frequencies but could not establish direct contact.

While descending on final TACAN approach, the pilot noted "green" in his peripheral vision, looked up and saw a tree ahead; he pulled back the yoke and added a sudden burst of power; the crew felt the *momentary* impact with the trees and then the aircraft was airborne!

The pilot informed approach of his impact and declared an emergency. He ordered his crew into their parachute harnesses.

Investigation by the crew indicated hull damage, starboard engine feathering line severed and various dents and scrapes near the starboard engine.

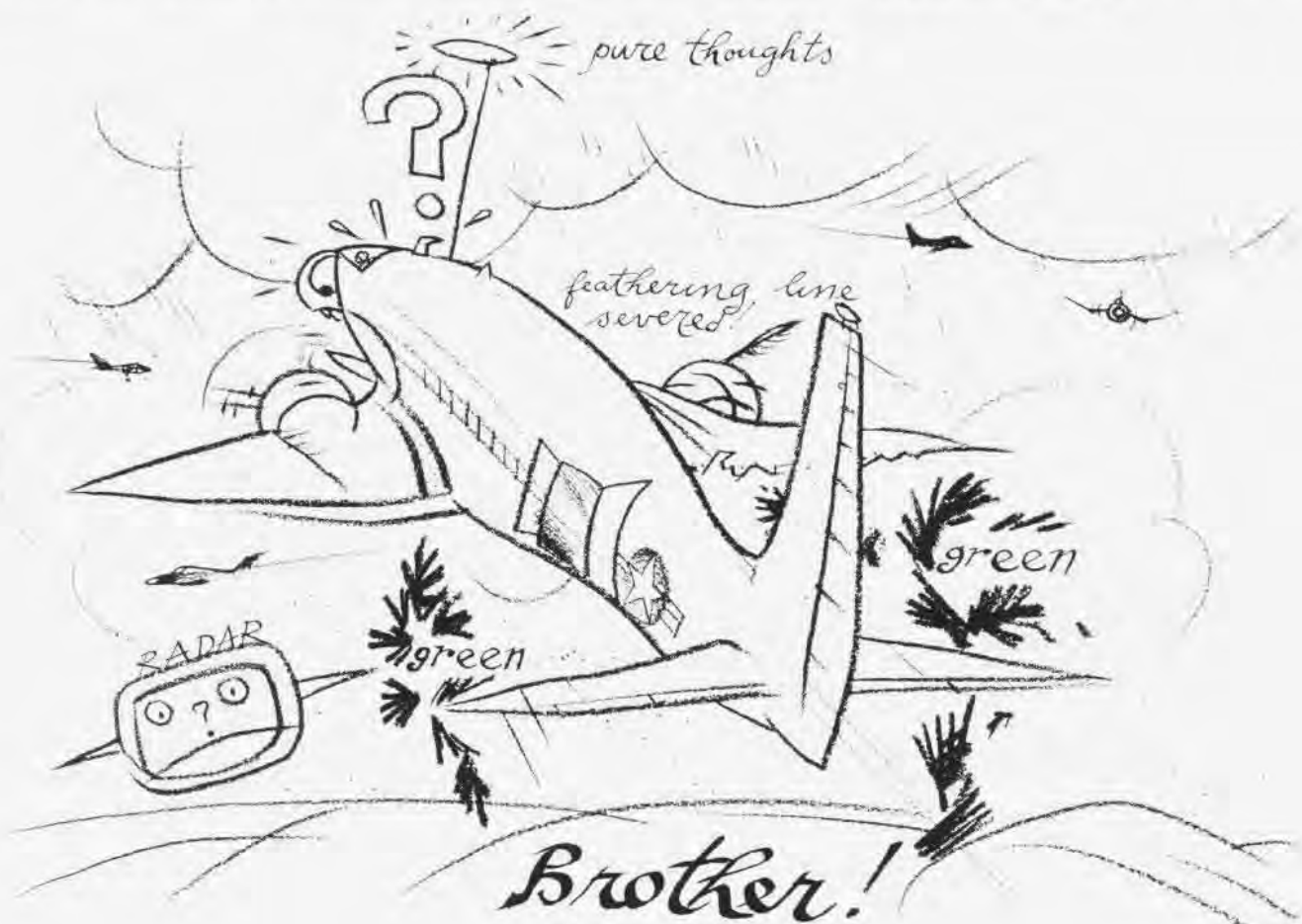
The aircraft was vectored to a nearby field with better weather. An uneventful landing was made. The aircraft sustained major damage.



Grampaw Pettibone says:

Sufferin' succotash! I don't believe it! These boys must'a been thinking pure thoughts all their lives. Would you believe that this was this fella's first flight as a plane commander — almost his last, too! This lad's NATOPS check "was not in strict compliance with NATOPS" and, additionally, the copilot's instrument card had expired four months before the accident! Yet, in spite of this, the accident board assigned "no supervisory responsibility" for this fiasco.

To further make my ulcer ache, one of the pilots listed five ways to prevent this accident in his statement. But he forgot one. Don't descend below minimum prescribed altitude during an approach. It's that simple!



The new way! HLU-196 replaces seven men in a bomb loading crew, and easily handles this Mk 55 aerial bomb during evaluation at Naval Weapons Evaluation Facility at Albuquerque.





NO PAIN, NO STRAIN

By JOC Dick Benjamin

IRRP to a flight deck bomb loader is by no means the irritating belch of an uncouth diner. Rather it means increased safety, better working conditions, an end to strained muscles and, most of all, no more hernias.

IRRP stands for Improved Rearming Rates Project and is rapidly bringing a new way of life aboard aircraft carriers, especially for the bomb loaders. Two factors are bringing about this change: preconfiguring weapons loads below decks on triple and multiple ejection racks (TERs and MERs) and an 80-pound portable bomb hoist.

The concept of IRRP is to obtain a faster rearming of aircraft on the flight deck and to do away with the back-breaking effort of loading the bombs with muscle power. The first task is preconfiguring the weapons loads.

As aircraft are recovered from flight, each MER or TER is retrieved and cycled through the aircraft intermediate maintenance department where personnel test the electrical circuits on the racks, replace the breech assembly with a clean unit and

preset the sway braces. The rack is then mated to a skid load of bombs built up in the magazine.

The build-up is obtained by prepositioning the bombs in a suitable skid adapter, transporting and mating it with a retested MER or TER, making the necessary cable connection, installing arming wire and safety pins and attaching the rack. The completely preconfigured MER or TER then constitutes one ready service load than can either be struck up to the flight deck for immediate aircraft loading or temporarily stowed until needed.

Although not an all-inclusive tenet of the improved rearming rates project, the idea of having air ordnance in an as close-to-the-end-use configuration as possible for rapid rearming has long been a fundamental goal. For the more sophisticated missiles, this had largely been accomplished by delivering assembled missiles in their containers. Once aboard the carrier, little more had to be done than to break them out for immediate strike-up and use.

Bombs, however, posed considerably greater difficulties for

similar treatment. They still required the assembling of many separate components before rearming and subsequent adjustments even after being loaded onto the aircraft. Preconfiguring, while not the ultimate answer, at least provided a way to get some of these operations off the flight deck so they could be performed during less critical times. A typical preconfigured weapons load would be six bombs completely electrically fuzed, cables connected, arming wires and safety pins installed on a MER below decks and ready for immediate strike-up.

When an air strike is called, the preconfigured MERs and TERs can be transported to the flight deck and loaded within a matter of minutes — and the only muscle power needed is that required to hook up the portable hoist.

The load capacity of the hoist is 2,000 pounds direct lift and 4,000 pounds with adapter and double cable lift. It is manned by a three-man crew which contrasts sharply with the eight to ten men needed previously to load a 1,000-pound bomb. Exit aching backs, cussing and hernias.

Technically known as the HLU-196A/E Bomb Hoisting Unit, the hoist consists of a 3.5 horsepower gasoline engine, gearbox and cable assembly, roll frame and removable boom. The one-cylinder, two-cycle, air-cooled engine, mounted in the roll-frame assembly above the gearbox and cable drum, has low and high speed carburetor adjustments, magneto ignition and a simple spring-loaded, pull-type, start compression release valve for easy starting.

Lift rate for the unit is 15 feet per minute to a height of 12 feet. The boom assembly can be rotated up to 90 degrees to either side and still function properly, which makes it easy to operate around objects such as missile hoists and fuel tanks.

Trolleys, a hoisting band and



Prototype MER/TER tester is used during first fleet evaluation aboard Enterprise, above. Fins, electrical fusing, booster adapter and arming wires are installed during bomb assembly below decks, below. Enterprise AOs attach Mk 82 bombs to a MER, opposite top, and a flight deck bomb loader with his HLU-196 awaits delivery of a preconfigured load, right.





simple rack adapters for the various aircraft complete the unit. Put it all together and a weapons load goes up quickly, easily and safely.

To attach the hoist to the A-6, the breech cap is pivoted out of the way to make room for the adapters. A female adapter is hooked over the rack on the in-board side and a male adapter inserted from the opposite side. The hoist is seated in the adapter, the clutch released to free the cable, and the cable drawn out for rigging and attached to the inboard adapter.

A trolley is installed on each side of the MER or TER and the cable seated in the trolleys. The engine is started, cable slack taken up and away goes the load. When the load is secure, a safety pin is installed, the clutch is released and the trolleys, hoist and adapters are removed.

Down-loading is just as easy. Engine power is needed only to raise the load enough to release the hooks. When this is done, the brake is released on the hoist and down comes the load.

For an unbalanced load only a single trolley and adapter are used. This shifts the center of gravity between the loaded shoulder and the center station.

For the A-7, the rack adapter is adjustable to compensate for different stores suspensions. The adapter is hooked onto the rack attachment and seats against the rack. One trolley is installed in the first hole in the hoisting band and the second trolley is installed in the hoisting band hole suited to the diameter of the store. Tension must be kept on the cable until the slack is taken up to keep the trolleys in place.

The center station on the A-4 uses the same adapters as the A-6. On the *Skyhawk* wing stations, the hoist adapter has spring-loaded feet that fit around the fuel slot and cartridge ejector foot.

Hoist adapter for the F-4 seats

against the sway brace locking nut and is secured at the forward end with a ball-lock pin. For straight lug balanced TERs, two adapters and two trolleys are used. A balanced or unbalanced TER equipped with a canted lug needs only a single trolley designed specifically for the canted lug configuration, and a single rack adapter.

When aircraft are already equipped with MER or TER racks, the hoist can handle individual bombs using standard MER/TER adapters. The HLU-196A/E can also be used as a single-store hoist for those carriers not able to preconfigure weapons loads below decks. To be fully IRRP capable, a carrier must have the enlarged elevators to transport the MER and TER loads to the

flight deck, magazines large enough for working with a forklift, and adequate space for bomb assembly preconfigurations.

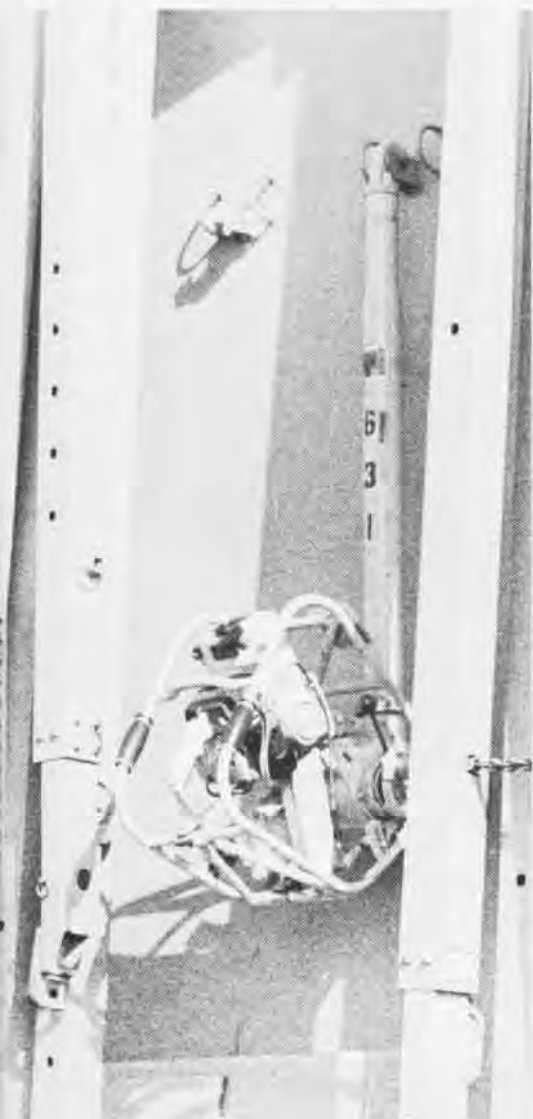
USS *John F. Kennedy* was the vanguard for the carrier testing of IRRP, having deployed with the system (including 15 prototypes of the HLU-196) since her commissioning in 1969. The system was tested under normal operating conditions and during various exercises in the Mediterranean. The HLU-196 was also tested at NATC Patuxent River, Md., and at Naval Weapons Evaluation Facility, Albuquerque.

Kennedy received production models of the updated bomb hoist in 1972, as did *Enterprise*, *America* and *Ranger*.

(*Ranger* is not fitted for the IRRP system and is using the

hoist only in the single-store mode, as is *America*, although she is fully IRRP capable. *Independence* received partial IRRP capability during her latest yard period which ended last month, and *Coral Sea* is capable of operating with TER preconfigurations. Long-range plans are now under way to backfit *Saratoga*, *Independence*, *Ranger*, *Kitty Hawk* and *Constellation* with full IRRP capability. *Nimitz*, *Eisenhower* and CVN-70 have the capability designed into them. At present there are no plans to backfit *Hancock*, *Midway*, *Oriskany*, *Forrestal* or *Roosevelt*. As previously stated, these carriers can still do away with the hernia bar by using the HLU-196A/E in the single-store mode.)

Although the IRRP system





Finding stowage space for the HLU-196A/E is no problem, far left. At least one aviation ordnanceman seems to feel dejected at being replaced by a machine, left. The portable hoist can be turned to either side and still function properly, top. The hook-up on an A-4 is shown above. Preconfigured MER with Mk 82 bombs is easily loaded onto A-7, right.

worked well aboard *Kennedy*, it was still not known if it would work efficiently under combat conditions. Commander, Naval Air Force, U.S. Pacific Fleet, was one of those who wanted to know and *Enterprise* was selected to try the system under the press of combat conditions.

The ship departed NAS Cubi Point, R.P., in late September 1972 and steamed for Dixie Station to warm up for air strikes being conducted against targets in North Vietnam. The plan — to operate for two days under the older but tried system of manual loading, and then for two days under the preconfigured system, then compare the two.

During the first two days, mission requirements were met in the usual manner. Single bombs were prepared below decks, struck-up and then transported out to the aircraft to be manually loaded to the MER or TER one at a time. Each bomb was then electrically and mechanically connected by cables and arming wires, sway-braced to the MER or TER, and made safe. These were operations that later, under the preconfigured system, would be done below decks with the assistance of mechanical equipment rather than the former reliance on sheer muscle power.

After a weapons replenishment on the night of the second day, weapons department personnel completely swung the system around to commence building up loaded MERs and TERs for the next day's mission requirements. Topside, squadron personnel prepared for mechanical loading of the weapons by using the HLU-196A/E portable hoist for the first time.

Ship and squadron personnel had received some prior training in the new methods, but for the most part this had been limited to brief indoctrination sessions ashore or training sessions at sea. Despite not having previ-

ously worked with IRRP and being asked to switch systems in midstream, *Enterprise* personnel managed to use the system and exceed previous performance.

According to even the most critical observers, the most immediate revelation was how much safer the weapons handling was throughout the strike evolution although using far fewer transporting and loading personnel and with much less supporting yellow gear.

While the system required additional personnel below decks to perform the added function of MER/TER testing and preconfiguring, this was considered to be more than offset by the realization of more rapid rearming. In some events, aircraft were re-armed before they even moved out of their recovery spots.

Of primary consideration during the test was whether the new system would increase the hung-bomb rate which *Enterprise* prided herself in holding to an extremely low level. A lot more was being asked of this system as electrical connections had to be continually broken and re-made, and racks had to be moved over greater distances and several handling stations.

While the four-day experiment cannot be considered all-inclusive, the results were more than encouraging. Preconfiguration held its own on the hung-bomb rate, and even demonstrated a lower rate during one of the evaluation days.

During the four days, the preconfigured system recorded an increased total volume handled with a higher percentage of scheduled sorties and weapons loadings met. This was accomplished despite one event being tactically scrubbed during the preconfiguring evolution, and all the work completed with less than ideal facilities or adequate quantities of support equipment to sustain the system.

A significant factor brought out by the trial was that much depended upon the ship's capability to organize and coordinate the new system.

Even in its present state, IRRP, and the HLU-196A/E, is considered a significant improvement in aircraft rearming.

In her evaluation of the system, *Enterprise* concluded that the preload concept is a major improvement in weapons loading and will significantly enhance flight deck safety; flight deck rearming times are reduced about 30 percent for a typical launch; total weapons handling times are increased about 20 percent due to increased handling below decks; preload hung-bomb rate compares favorably with the conventional loading method with potentially significant improvement; flight deck loading personnel can be reduced although an increase is required below decks; and the HLU-196A/E is a significant step toward a mobile automatic weapons loader — a real back saver.

Enterprise recommended that the full preload concept be implemented aboard the carrier at the earliest possible date.

The WestPac Weapons Handling Safety Survey Team was just as jubilant about IRRP. The team's initial reaction to the system was that the significant improvement in flight deck handling, loading and overall increase in flight deck safety was remarkable, and it highly endorsed the concept.

ComNavAirPac concurred with *Enterprise's* evaluation of IRRP and requested maximum assistance in meeting the carrier's implementation schedule of the full preload concept.

Even for those carriers unable to implement the IRRP system, the HLU-196A/E Bomb Hoisting Unit means an end to aching backs, sore muscles, cussing and, most of all, no more hernias.



The following song is part of the sound track of a film made about the portable HLU-196A/E Bomb Hoisting Unit. It depicts the hardships of a flight deck bomb loader and the changes

in both his work and his life brought about by the hoist. It is sung to a tune similar to the old Western ballad "Starving to Death on my Government Claim," or "Greer County Bachelor."

Oh I was a sailor in '72, and they made me part of a bomb-loading crew.
I thought at first that it just might be fun, but my muscles were achin' when my work was done.
Singin' heist the bombs high, away and aho, up in the air and don't let 'em go.
Lock 'em securely up there in the rack, oh, even though you're bustin' yer back.

They brought us a weapon weighed 1,000 pounds, and told us ta heist it clear up from the ground.
I said ta the gunner, 'I don't mean ta complain, but heisting them bombs really gives me a pain.'

The gunner he smiled, he was such a good sport, then he said "son, you're on report."
Well I didn't think I had done any wrong, but I'm here in the brig a' singin' ma song.
Singin' heist the bombs high, away and aho, up in the air and don't let 'em go.
Lock 'em securely up there in the rack, oh, even though you're bustin' yer back.

I went to the doc with a pain in ma side, and the doc looked me over and then he replied.
"Go back on the deck, do the best that you can, and show all your buddies how much you're a man."

I say there now, gunner, can it be true, tell me where is the rest of the crew.
I can't believe what my eyes really see, in that loadin' crew, why there's only three.
Singin' heist the bombs high, away and aho, up in the air and don't let 'em go.
Lock 'em securely up there in the rack, oh, even though you're bustin' yer back.

That 196 it is truly a gem, and it takes the place of 17 men.
You'll never have reason no longer ta moan, this little hoist has a heart of its own.
Singin' heist the bombs high, away and aho, up in the air and don't let 'em go.
Lock 'em securely up there in the rack, oh, even though you're bustin' yer back.

They brought us a weapon weighed 3,000 pounds, and told us ta heist it clear up from the ground.
I smiled at the gunner, he looked so surprised, but he walked away with a gleam in his eyes.
Singin' heist the bombs high, away and aho, up in the air and don't let 'em go.
Lock 'em securely up there in the rack, oh, even though you're bustin' yer back.

When loadin' them bombs even on the F-4, well it does its job and a little bit more.
You'll never have reason no longer ta bitch, when you start using the 196.
That little hoist does the job on its own, and I'm out here a' heistin' them bombs all alone.

Singin' heist the bombs high and make it quick, now that you've got a 196.
Lock 'em securely up there in the rack, cause you're no longer bustin' yer back.
Cause you're no longer bustin' yer back.

Despite blinding snowstorms and aircraft maintenance problems that must be solved in freezing weather, Antarctic Development Squadron Six, NAS Quonset Point, R.I., has completed its 18th season of flying operations at McMurdo Station, Antarctica.

Led by Commander John B. Dana, VXE-6 is the U.S. aerial support arm of Operation Deep Freeze. More than 1,000 Navy men participate in the joint venture conducted by the National Science Foundation and scientific research teams of 16 nations.

The squadron's primary mission in the Antarctic is to fly men and supplies to various Antarctic locations. To complete this task, the squadron uses special ski-equipped LC-130 *Hercules* and UH-1N *Hueys*.

VXE-6 arrived in Antarctica last October and was immediately faced with the problem of removing thousands of pounds of ice and snow that had buried the main living quarters.

"As soon as we would dig the houses out, a snowstorm would cover them up again," is the way BMC James R. Burns described the situation.

The Antarctic weather also created problems for the pilots and maintenance, support and supply personnel. More than once violent snowstorms with 70-mile-an-hour winds stopped flight operations.

"October was a bad month. As soon as we would get ready to fly, the 'Hawk' (an Antarctic snowstorm) would drive us back indoors for several days," says CPO Milton Ducharme.

Squadron pilots say that flying in the Antarctic is a dangerous, difficult and very demanding duty. "Flying here is different for many reasons. At this station, you don't have the navigation and landing aids normally available in other places, and landing on the snow is difficult because of low visibility caused by blowing snow and

cloud layers that blend with the horizon," declares Commander Bruce T. Willey, VXE-6 operations officer. This type of flying depends on the skill of the individual.

During the five months VXE-6 is in the Antarctic, the sun shines 24 hours a day. This creates navigation and other problems for the aviators who say that steering an airplane through many of the uncharted regions of the 5.5-million-square-mile continent is "tricky" business.

The skill of one flight crew was tested during the season when its aircraft encountered mechanical problems.

After delivering a load of supplies to Byrd Station, 800 miles from McMurdo, the electronic guidance system of the plane failed and the aircraft's compass started spinning wildly in a circle.

"Sure I was scared," is the way one crew member described his feelings as

VXE-6 In



the pilot's attempts to correct the malfunctioning compass failed and the aircraft continued on an unknown heading.

LCdr. Joseph Weibelhaus, navigator, used one of the oldest navigation aids known to man, the sextant, and, by taking a series of three-minute shots of the sun, brought the aircraft to within 40 miles of its home base. The pilots used radar to land the craft (*NANews*, March 1973, page 5).

Another problem that plagued VXE-6 was aircraft maintenance. Temperatures that often plunged to 40 degrees below zero froze the hands of aircraft mechanics trying to change an engine. The sub-zero weather also created slippery, cold footing for men loading the planes with supplies.

"Keeping the aircraft flying, especially in Antarctica, is a problem that will always bother us. Let's face it; there is no place on earth as cold as the Antarctic," declares CPO William



Antarctica



AE1 Elias Fernandez keeps a sharp lookout during an LC-130 mission, top. Above, during survival training, Lieutenant Commanders Gary Strain and Leroy Frontz carry blocks of ice for a wind breaker for their tent shelter. Boxes of supplies and Hercules look small against Antarctic skyline, left. Hercs carried 700,000 pounds of supplies in one month.

Rosenow, a maintenance chief.

Despite the weather and other hazards related to living and working on the Frozen Continent, VXE-6 forces transported what they believe is a record amount of cargo and personnel during the five-month austral summer season.

In November and part of the weather-plagued month of October, squadron aircraft carried almost two million pounds of supplies and over 850 passengers to Antarctic stations.

"We flew over 1,300 hours in less than seven weeks. All concerned can be proud of the squadron's accomplishments," says Commander Dana, who often refers to VXE-6 as the "world's southernmost airline."

Working in 12-hour shifts, the aircrews and support personnel worked for 68 consecutive days just before Christmas. During the month of December, one aircrew was ordered to rest, with a note of thanks from the

C.O., after it accumulated 151 hours in the air.

While people in the U.S. were celebrating New Year's Eve, the "Granddaddy of the *Hercs*," #319, was establishing an Antarctic, and possibly a world, record for military LC-130s. Dubbed *Old Herc* because of its age and time in the air, 319 came within one hour of reaching the 17,000-hour mark in flight time (a figure that reportedly is more than that of any other C-130 in the U.S. Armed Forces).

"Our three *Hercs* flew a record 989 hours and carried almost three million pounds of supplies and hundreds of passengers in December," one pilot says proudly.

A highly competitive spirit exists between *Herc* and helicopter pilots in VXE-6. In addition to flying over 600 hours in November and December, the UH-1Ns carried hundreds of passengers to locations in the Antarctic where the *Hercs* couldn't land, and

thousands of gallons of fuel to special storage points.

In late December, a team of scientific research students stranded on a cracked ice floe in the Ross Sea of Antarctica were rescued by a VXE-6 helo team.

"When we reached them, the helicopter couldn't land solidly on the broken ice floe because the weight of the helo would throw the men into the freezing water," says Lt.jg. Jeff McComas, pilot of the rescue helo.

While McComas used the helicopter's rotor blades to keep the weight of the plane off the ice, his crewmen pulled the students onboard (*NAVNews*, February 1973, page 4).

On March 2, VXE-6 returned to NAS Quonset Point. During the next seven months, squadron members will undergo special psychological, physical, survival and other training to prepare for another tour of duty in the Antarctic later this year.





Opposite page, VXE-6 loadmaster signals a "come ahead" to crew loading supplies on LC-130. Top left, helo prepares to deliver rubberized bags of fuel to special storage area. Above, even refueling takes on different aspect. The ever present penguins remain photogenic, left. Commissary personnel fed well, preparing three hot meals a day and midnight snacks for aircrews working round the clock, below left. And Santa Claus found VXE-6, courtesy of the Royal Air Force.



NAVAL AIRCRAFT

MA

The Martin-built *Mars* flying boats, though few in number, became well known in the post-WW II period due to their accomplishments in carrying cargo and passengers across the Pacific.

Designed in 1935 and ordered by the Navy in 1938 as a long-range patrol bomber, designated the XPB2M-1, *Mars* made its first test flight in June 1942. By the time it was delivered, its mission was changed to that of aerial transport. The first plane was delivered to VR-8 at NAS Patuxent River in November 1943 and the same month made its first operational flight, delivering cargo to Natal, Brazil, following the 4,375-mile nonstop flight, surpassing the previous seaplane record by 50 percent.

In January 1944, the plane was transferred to VR-2 at NAS Alameda, joining transport-configured PB2Y *Coronados* on central and western Pacific supply routes. The original *Mars* was followed by a modified version which was redesignated JRM-1, the first of which were accepted by the Navy in January 1945. These became *Philippine Mars*, *Marianas Mars*, *Marshall Mars* and *Hawaii Mars*. The only JRM-2, *Caroline Mars*, was accepted in April 1947.

The *Mars* boats featured two cargo/passenger decks with forward and aft stairways, two sets of crew's quarters and fuel tanks in the hull below the lower deck. They were designed to carry 138 fully equipped troops or 100 litter patients with 10 attendants or 35,000 pounds of cargo. A 5,000-lb. capacity bridge crane under the port wing root facilitated cargo loading. Until their retirement in 1956, the *Mars* carried over 200,000 passengers without injury. After WW II, they operated mainly between Alameda and Hawaii on a thrice-weekly schedule.



XPB2M-1R



JRM-2



RS



JRM



Length		120'3"
Height		43'8"
Wing span		200'0"
Maximum takeoff weight		
JRM-1		155,000 lbs.
JRM-2		165,000 lbs.
Engines		
JRM-1	4	R-3350-8
JRM-2	4	R-4360-24
Takeoff power		
JRM-1		2,400 hp each
JRM-2		3,000 hp each
Maximum speed		
JRM-1		197 kts.
JRM-2		220 kts.
Ceiling		
JRM-1		20,800 ft.
JRM-2		20,600 ft.
Range		
JRM-1		3,075 nm
JRM-2		3,790 nm
Crew		11



JRM-1



Weather forecasting throughout the world begins when weather observers like the ones at the Naval Weather Service Environmental Detachment (NWSED) Cubi Point, R.P., step outside and look at the sky.

A glance across the runway at the flat mountain ridge beyond Subic Bay tells the observer that visibility is about 15 miles because that is how far he can see clearly. Looking to the left, at the high mountains beyond Grande Island, he can tell by the way the clouds cover the tips that the ceiling is 3,000 feet. His aerographer's training tells him what kinds of clouds he sees at different altitudes.

Every hour someone at each of the thousands of weather stations throughout the world does the same. With the visual observations and the information he gets from instruments in the weather office, the observer fills out a report written in the international code of weathermen. (Almost every country in the world exchanges weather information through the World Meteorological Organization.)

Coded messages giving visibility, ceiling, precipitation, wind direction and speed, temperature, dew point and pressure are sent hourly from NAS Cubi Point by teletype to the automatic digital weather switch at Clark AFB where the report is automatically entered into the worldwide weather network and becomes available to all stations.

Every hour, NWSED Cubi receives information over teletype from hundreds of sources, including ships in WestPac. Reports filed from the most distant station are received within 30 minutes. These are clipped on boards for quick reference for each of the average 1,300 pilot briefings made monthly.

Teletypes are constantly receiving coded messages from stations throughout Asia. This code includes a number identifying the station and the area where it is located. Cubi, for example, has a station number of 426 and is in the 98th "block," which includes the Philippines.

A plotter takes the information and



World Weathermen

transfers it to a map next to the station which made the report. The map used at Cubi covers the mid-Pacific and west to India. When the plotter has finished transferring data to the map, the forecaster begins his job.

The forecaster's skill in interpreting the plotter's figures is what gives meaning to the weather map. He draws isobars, lines connecting areas of equal pressure. If there is no station reporting the pressure he is graphing, he draws his line between stations which report higher and lower readings. Thus he isolates high and low pressure areas.

There is a forecaster on duty at all times at NWSED Cubi. He briefs pilots before takeoff — on what kind of weather to expect and what route to take. He also fills out a weather briefing sheet which gives the pilot information on weather at takeoff, en route and at the proposed landing place. He gives the pilot weather data for an alternate landing field in case the primary landing strip must be bypassed for some reason. The fore-

caster is held responsible for the briefing data.

Not all data used by forecasters comes in by message. Another important source is the weather satellites which scan the earth's surface. At present, NWSED Cubi receives pictures every morning from *Essa 8* and, in the near future, will also have the capability to receive nighttime infrared pictures. The satellite pictures clearly show large cloud areas and usually provide the first indications of typhoons.

Another aid is provided by Fleet Weather Central, Guam, which electronically transmits, via undersea cable, weather maps that are reproduced on facsimile copying machines.

Additional information on actual flight conditions is obtained by radio from aircraft flying in the Cubi area. NWSED in turn supplies pilots in the air with weather information.

Cubi also provides antisubmarine warfare environmental prediction service for NAS-based patrol squadrons. Oceanographic parameters such as

water temperature, wave heights and underwater sound propagation conditions are supplied before each patrol mission to aid the crew in detecting submarines.

Another service provided by the weather detachment is the repair and maintenance of electronic weather equipment belonging to Navy and Marine Corps units, including ships, in WestPac and SEAsia.

The detachment's area of responsibility ranges from Guam to Diego Garcia in the Indian Ocean and from Taiwan to Australia. Tasked with this job is a meteorological and oceanographic equipment technical liaison officer with a staff of one engineer and two electronic technicians.

Because of the 1971 WestPac base realignments and the closing of Sangley Point, NWSED Cubi has almost doubled in size to its present manning level of three officers, one engineer, 16 aerographer's mates, two electronic technicians and two meteorological technicians. The officer in charge is Lt. Raymond F. Martinson.



It's all in a day's work for Navy's weathermen. From left: doing administrative work; charting a storm's progress; running calibration tests on electronic equipment; checking alignment of theodolite before launching a balloon to gather data on wind speed and direction; checking wind speed and direction on automatic wind recording equipment; and briefing a Naval Aviator on weather conditions.



The Cat Makes Tracks

VXN-8 Begins Six-Week Project Magnet Mapping

NAS PATUXENT RIVER, Md.— VXN-8 will soon depart on an extended six-week operation utilizing one of the Navy's newest and most unique aircraft, the RP-3D *Orion*. The operation, known as Project *Magnet*, will circumnavigate the Southern Hemisphere twice and overfly the South Pole. Stops along the way for the 21-man crew will include Cordoba and Buenos Aires, Argentina; Punta Arenas, Chile; Cape Town and Port Elizabeth, South Africa; Perth, Australia; Christ Church, New Zealand; and San Juan, Puerto Rico.

The United States Oceanographic Office has been engaged in systematic and comprehensive mapping of the earth's magnetic field for many years in an effort to acquire more accurate and adequate data for the improvement of navigational and magnetic charts. Project *Magnet* was established in 1953 to augment and enhance existing programs of ship surveys.

The RP-3D survey aircraft is equipped with vector and scalar airborne magnetometers and special navigational equipment. The magnetometers measure the intensity and direction of the earth's magnetic field, providing information for charting all elements of the field. The results of the survey are combined with information from ground magnetic observations and other magnetic survey programs to produce a series of world magnetic charts. These charts include nautical, aeronautical, and world isomagnetic publications which provide improved knowledge of the earth's magnetic field and more reliable navigational data for ships and aircraft of all nations.

VXN-8 is the only squadron of the Navy devoted solely to airborne oceanographic research. Its projects include polar ice reconnaissance and acoustical and thermal trend studies.

Tomcat is a familiar word at NAS Miramar, Calif., these days. Preparations for fleet introduction of the aircraft began in mid-1970 and a well developed schedule for training and operational accomplishment is presently under way to ensure that F-14 personnel receive adequate instruction in flying and servicing the new fighter.

In 1972, Fighter Squadrons One and Two were commissioned at Miramar (*NA News*, December 1972, p. 4), the first two deployable F-14 squadrons. Prior to that date the *Tomcat* made its Miramar home with VF-124, the F-14 training squadron.

Within these three squadrons, 77 officers and 785 enlisted men work steadily to obtain maximum utilization of F-14 systems and equipment. At the time of commissioning, VF-1 was manned by 105 enlisted men, VF-2 by 88. Now the enlisted ranks have grown to 203 and 195, respectively. Forty-one of the officers formerly attached to VF-124 have been ordered to the new squadrons. When completely manned and fitted, each of the squadrons will have 33 officers and 250 enlisted men and will deploy aboard attack carriers.

At VF-124, 165 men are participating in maintenance training; in approximately five months that number

will increase to 200. Already one half of the enlisted personnel in each squadron is fully trained—a record which speaks well of the squadrons' effort to get "Tom" to sea.

To provide maintenance, support and knowledgeable flight crews for the new aircraft, the Navy has introduced some of its most advanced training and support equipment. At VF-124's fleet readiness aviation maintenance training department and at Naval Aviation Maintenance Training Detachment 1008, progressive educational methods and training aids provide flyers and technicians with a maximum amount of knowledge. For the flight crews, simulated flight and mission trainers, closed circuit television and classrooms mechanically designed to evaluate student response and proficiency are accomplishing significant achievements in formal Navy training.

A computer-managed training program (CMT) is operational in the three squadrons. By systemizing many routine and time-consuming administrative procedures, CMT will eventually relieve personnel of cumbersome accounting and record-keeping tasks so that more effort can be directed toward creative planning and improved servicing of personnel needs.

Tomcat is making tracks toward its rendezvous at sea.



Personnel at the F-14 academics center man the stations in an AWG-9 mission trainer, left, while the men responsible for maintenance of the *Tomcat* learn all its "ins and outs," right.



Icelandic Airlift

Navy transport aircraft and Air Force helicopters of the U.S. Iceland Defense Force provided emergency evacuation assistance for the residents of Iceland's Westman Island of Heimaey after that offshore island was endangered by an erupting volcano on January 23. Food and supplies were carried to fire fighters and salvage workers on the island and people, household goods and livestock were evacuated to the south coast of Iceland.



Vestmannaeyjar, Heimaey, is veiled behind a curtain of steam as red-hot lava flows into the sea, top. Three Navy C-117s were stripped of their seats for Operation Sheeplift, above and left. In a two-day airlift, nearly 400 sheep were flown to safety in Iceland.



Targeting in air support is the

Aerial Observer

By LCpl. Charles Rowe

Photos by Sgt. W. S. Barleston

A Marine and his rifle is the most dangerous weapon in the world." Grammatically correct or not, these words were said in 1918 by General John J. Pershing after witnessing the performance of Marines at Belleau Wood and Meuse-Argonne.

Today's Marine rifleman is backed up by a powerful array of support weapons—close air support, naval gunfire and artillery barrages.

This support does not automatically appear when the Marine on the ground needs it. It must be targeted in. And the men in the Corps responsible for

getting it there are the aerial observers (AOs). Usually orbiting just above the combat zone—a special target for enemy fire—these men direct the numerous support weapons waiting to be unleashed when the "grunt" on the ground calls for them.

AOs are trained at the Aerial Observation School, MCAS New River, N.C. Five times a year, this school turns out qualified Naval Air Observers to commands throughout the Corps.

Aerial observation dates back to the days of balloons such as those

used during the Civil War by the Union Army. With the advent of the airplane, aerial observation took on a new meaning but communication was a major problem. By the start of WW II, that problem had been solved: wireless apparatus was standard in almost all military aircraft. After WW II, aerial observation was allowed to lapse under a peacetime, dollar-conscious defense budget.

In Korea, aerial observation was needed again and the Marines improvised. As Marines slogged it out at Pusan, Seoul and the Chosin Reser-

voir, they were supported by relatively untrained volunteers who performed the function of aerial observers under perhaps some of the most hazardous conditions experienced by aircrewmembers.

The need for AOs was recognized. All major commands trained their own and supplied them with what equipment was available. One school was located at MCB Quantico, Va., until 1956. Then it moved to MCB Camp Lejeune, N.C., as the 2d Marine Division School. Since the division relied on the air station for aircraft and flight gear used in the training, the facilities were gradually relocated there.

Finally, in 1968, the Marine Corps granted formal recognition to aerial observation. A military occupational specialty, Naval Air Observer, 0805, was created and the facility at MCAS New River was designated the training installation for AOs. The unit is now a separate command, attached to Headquarters and Maintenance Squadron 29 for administrative purposes. It began with a seven-and-a-half-week syllabus, jumped to nine weeks in 1969 and to the present ten-week course in 1972.

The facility has a staff of six instructors, five officers and one senior enlisted.

Classes are kept small—between six and ten men—in an effort to provide the individual attention each trainee needs. Prerequisites are exact.

Only volunteers are accepted and they must have 12 months active duty remaining, except for reservists on active duty for training. Each man must be physically sound, pass the Naval Aviator's survival swim test and complete pressure chamber and ejection seat training.

Students are drawn from ground specialties—artillery, infantry and armor. Personnel in grades warrant officer to captain are accepted from every major Marine activity. After graduation, the AOs are qualified to serve at the school as instructors; in an observation squadron, artillery regiment or field artillery group; on command duty afloat; with landing force training commands; or with an air naval gunfire liaison company.

The main aircraft used by the school are OV-10 *Broncos* and UH-1N *Hueys*. Students receive approximately 40 hours' flight time in the latter and 25 in the former. Since 100 hours are required for graduation, the men also spend 35 non-syllabus hours in CH-46s and 53s.

Field work includes many hours of aerial photography, 15 hours of live-firing exercises with Camp Lejeune artillery units and two weeks working with fighter aircraft from MCAS Cherry Point, N.C. In addition, students observe and control A-4s, A-6s and F-4s. A regular feature of the class is back seat sorties in a TA-4. In this way each trainee can see a close

air support mission carried out from the pilot's vantage point.

When a student graduates, he is proficient in eight related areas. He learns aerial map reading and basic navigation, communications procedures and equipment, basic aircraft capabilities, and land and sea survival. AOs learn to gather, brief and report intelligence information and to use sensor equipment. Tactical aerial observation is perhaps the most comprehensive section, including aerial photography, road and bridge reconnaissance, and selection and preparation of helicopter landing zones.

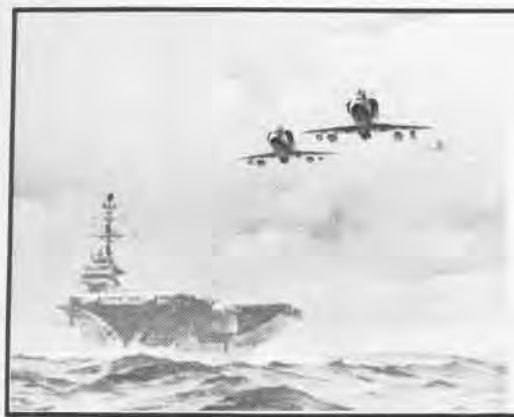
Other instruction includes convoy control, visual reconnaissance, small unit support, radio relay, beach and hydrographic reconnaissance, and two weeks of naval gunfire classes at the Naval Amphibious School, Little Creek, Va.

If the training cycle does not sound overly difficult, consider the following: each student must acquire a working knowledge of at least a dozen different jobs; he puts in five full days a week on the job, days that can begin as early as 0600 and not end until 2200; and he must attend approximately 140 different classes, procedural sessions or practical application periods, classes which can last as long as eight and a half hours at a stretch.

But when it is over, the student wears the wings of an aerial observer, wings he knows he has earned.



Correctly marking targets and recording grid coordinates for attacking aircraft are vital duties of an aerial observer, left. Strange-looking camera, opposite, is used by students at the AO school to learn and practice aerial photography.



at Sea with the Carriers

Lexington (CVT-16)

On February 17, 1973, *Lexington* celebrated her 30th anniversary in the same dry dock that was the site of her commissioning.

The fifth of a long line of proud ships bearing the same name was born in a time of crisis. When the previous *Lexington* (CV-2) was sunk in the Battle of Coral Sea, a new aircraft carrier, USS *Cabot* (CV-16), was on the building ways at the Fore River Shipyard, Quincy, Mass. Twenty-three thousand yard workers petitioned Secretary of the Navy Frank Knox to change the name to *Lexington*. The request was granted the very same day it was made.

The ship was launched a year ahead

of schedule on September 26, 1942, and then towed to dry dock #3 at the Boston Naval Shipyard for final fitting out.

She went on to avenge her predecessor by destroying 372 enemy planes in the air and 475 more on the ground and sinking or destroying more than 300,000 tons of Japanese shipping while damaging another 600,000 tons. Together with air groups from other carriers, she sent three Japanese carriers to the bottom, along with a cruiser.

Lexington participated in many of the major combat operations of the Pacific. She spent a total of 21 months in the combat area. Her planes struck at Tarawa, Kwajalein, Marianas, Palau, Philippines, Truk, Bonins, For-

mosa, Okinawa and Japan.

Lex was retired from active service in 1947 but was recalled in 1955, sporting a new angled deck, catapults and complete modernization. Since 1962, she has been in Pensacola, Fla., as the Navy's training carrier.

Former crew members who had served on CV-2 and CV-16 gathered for the ship's anniversary and years of memories were relived in just a few hours. Admiral R. E. Rumble, Commandant of the First Naval District, spoke on the Navy of the future. Among other distinguished guests were Mr. Allan Kenney, Chairman of the Board of Selectmen of Lexington, Mass. He presented the ship with a copper-engraved picture of the "Lexington Minuteman" by artist Joseph



At left, Capt. Carter, C.O. of *Lexington*, accepts a picture of the *Lexington Minuteman* and, above, a musket salute is rendered to the carrier during thirtieth anniversary ceremonies.

Keeffe. Captain Charles C. Carter, C.O., presented the town of Lexington with the battle flag of CV-2.

Guam (LPH-9)

Guam was the scene of an operation recently that, if not unique, was at least unusual: carrier qualifications for Army and Air Force helicopter pilots, qualifications that are a part of the long-range planning that precedes the annual joint services' exercise *Exotic Dancer*.

MAG-29 hosted 21 visiting pilots, 18 Army and three Air Force, who brought with them one Air Force and four Army Hueys and an Air Force HH-3 (similar in appearance to the CH-53). The pilots had previously practiced carrier landings on a land-based airfield. Maj. Mike Barkovich acted as coordinator and instructor and, despite the snags of any first-time program, pilots all agreed that everything went smoothly.

HML-268 provided a ready room and administrative support for the operation. MCAS New River's Huey squadrons loaned pilots, experienced in carrier landings, as instructors and safety pilots.

At New River, the visiting airmen suffered through two days of classroom instruction in the peculiarities of landing on an LPH. Most didn't seem to mind when they realized the restricted space available and the consequences of a foul-up.

The big show commenced with an early briefing by Maj. Barkovich in 268's ready room. Two HMM-264 CH-46s ferried the pilots to Guam for a final briefing. There Maj. F. C. Gerlon, air operations officer, and LCdr. Hubert Dale, Guam's air boss, filled in the gaps in their knowledge.

Then they got a break. HMM-264 was conducting operations and that morning the '46 squadron ferried Camp Lejeune Marines ashore in a training exercise, brought them back to the ship when the operation was over, and performed carrier qualifications of its own. This gave the uninitiated a chance to see how it was done. A show in itself took place when two HMA-269 Cobras showed up to practice landings.

Once the air show was over, the *Sea Knights* took the pilots back to New River. Adjusting nicely to the operational pace, the first group took their



An Air Force Huey goes through a familiar routine in an unfamiliar environment aboard USS Guam. Air Force and Army helicopter pilots were quizzed in preparation for *Exotic Dancer*.

birds out when they were supposed to. Then the fun began. For the next three hours, all six birds made touch-and-go's: over 100. (Each pilot is required to make five landings for his qualification certification.) This was what they were there for and they made the most of the opportunity.

A lot of credit goes to the men of Guam. For three hours, flight deck and operational control center personnel kept helos moving on and off in an unbroken pattern, one right after the other.

Those 21 pilots are ready for Exercise *Exotic Dancer 1973*.

Enterprise (CVAN-65)

At 0800 on Sunday, January 28, 1973, the crew of *Enterprise* assembled on the flight deck and joined millions of Americans in a memorial and thanksgiving service marking the Vietnam cease-fire. Captain Frank R. Morton, senior chaplain, led the crew in prayer. Captain Ernest E. Tissot, commanding officer, spoke briefly; then Vice Admiral Damon W. Cooper, Commander, Attack Carrier Striking Force, Seventh Fleet, addressed the crew.

News of the cease-fire came a week after the *Big E* had ended a week of upkeep and liberty in Subic Bay.

Training flights and support operations for the implementation of the cease-fire became the daily routine for CVW-14 pilots and crews as *Enterprise* continued her role as part of TF 77.

CVW-14 pilots continued to establish milestones. Lt. Larry E. Gardiner and his B/N, Lt. David J. Steffen, VA-196, recorded the 133,000th landing in an A-6 *Intruder*. A few days later, Lt. William J. Snyder and RIO, Ltjg. Preston H. Hiers, VF-143, recorded the 134,000th in an F-4J *Phantom II*.

Ranger (CVA-61)

The man who was one of the first pilots to begin bombing North Vietnam in 1965 is also the man who directed the last bombs dropped there.

Captain H. P. Glindeman, Jr., was a pilot on the Navy's initial air strikes over North Vietnam in February 1965. At that time he was CAG-15 aboard *Coral Sea* (CVA-43).

As commanding officer of *Ranger*, Capt. Glindeman authorized the last Navy aircraft to head for Vietnamese territory with its bombs. "We were on the midnight-to-noon cycle and therefore finished it up at 0800," he explains.

Ranger was the last of four U.S. carriers on station in the South China Sea to end its combat flights before the cease-fire went into effect.

"Ninety-five months ago," Capt. Glindeman says, "I flew one of the first retaliatory strikes over North Vietnam. Although I was stationed aboard *Coral Sea* when it started, *Ranger* was there also. *Ranger* is the only carrier which was on duty when it started and when it finished."

The captain said that "*Ranger* launched and safely recovered the last

plane to bomb Vietnam. Nothing has meant more to me than to be present here as the cease-fire goes into effect."

Ranger has made seven combat deployments to Southeast Asia during the last eight-and-a-half years.

Intrepid (CVS-11)

HS-11, embarked aboard *Intrepid* while she was anchored in Lisbon, Portugal, was called on during the late night hours of January 28, to perform an emergency medical evacuation.

The plea came from Portuguese military officials after they received an urgent message from the German tanker *Southern Seas* that one of her crewmen was suffering from a cerebral hemorrhage.

Two SH-3Ds were launched. The first was commanded by LCdr. Richard Grant. Copilot was Ltjg. Larry Zimmer with AW1 Robert George and AW2 Gary C. Pray, the crew members. The second helo, commanded by Lt. Craig Vossseteig, carried copilot Lt. Thomas Abernethy and crewmen AW3s Richard Sandkuhle and Steve Livingstone.

Several factors hindered the mercy mission as fog and poor weather threatened the area, with the fog expected to close in. Plans for possible alternate landing areas were made, including farmers' fields outside Lisbon. In addition, the pilots were faced with navigating 100 miles out to sea with no navigational aids and only the firing of flares from the *Southern Seas* to mark their destinations. The SH-3Ds carry night rescue automatic approach equipment for rescues at sea, but this equipment could not be used.

On arrival over the tanker, LCdr. Grant lowered LCdr. Henry MacDonald, *Intrepid's* senior medical officer, to the deck. The doctor examined the patient and prepared him for the flight back to Lisbon. Meanwhile, Lt. Vossseteig and his crew, circling overhead, maintained radio contact with Lisbon rescue, reporting on the progress of the mission.

After the pickup, the helos transported the patient to Lisbon International Airport where a team of doctors waited and then the Navy crews flew back to CVS-11 where they were congratulated by their commanding officer, Commander F. W. Johnston.

When crewmen aboard CVS-11 have a question or problem of ship-



Capt. Glindeman accepts flag that was flying from Ranger when the cease-fire began.

wide interest, they can take it right to the commanding officer. Once a week, Captain Raymond H. Barker stars in his own television show, "Captain's Call," during which the crew questions him on shipboard policies and regulations. At the same time, the program provides the C.O. with an

opportunity to open direct lines of communication with his crew.

The captain prefaces each show with an update of the ship's operations and schedule. Then he begins taking calls. Through an electronic hookup, a crew member's telephoned question is heard simultaneously by the captain on the telephone and the entire crew on television and radio speakers throughout the ship. Calls requesting that the ship's dry cleaning unit be made available to enlisted men, for example, and that enlisted crew members be allowed to use quarterdeck liberty launches in off-peak hours are answered with an immediate "It's done."

For subjects which require more investigation before an answer can be given, Capt. Barker tells the crew that he'll have the answer by the next "Captain's Call."

The series, which began in early January, is another step in *Intrepid's* efforts to promote increased communication between command and crew.

On the bridge of Midway (CVA-41), behind a spider-like position board, SN Rob Skinner plots a ship's location. A curious aspect of Skinner's job is that he must write backwards, right to left, in order for the coordinates to appear in a normal sequence on the opposite side.





THE SELECTED AIR RESERVE

Reserve TSC Duty

Reservists are being integrated into the "regular" Navy as never before. Witness the following:

In January 1971, the Antisubmarine Warfare Tactical Support Center (TSC) was introduced to the fleet to provide automated ground support for the computerized P-3C *Orion*. The P-3C processes data, records and displays information relating to ASW using computer digital tape techniques. With the P-3C flight crew now arriving for a debrief with only a digital tape in hand rather than a packet containing 20 flight logs, tapes, charts and graphics, the need for a TSC computer for debriefing is mandatory and the post-flight analysis is now processed in a manner which is more timely and accurate than ever before.

As with any new system, operating the TSC presented a personnel training problem. Active duty personnel receive formalized training prior to reporting to an operational TSC but the problem of qualifying inactive Reserve personnel, who would mobilize to a TSC, presented a challenge. Where and how were they to be trained?

This problem was of prime concern to CFAW-11 since personnel from a number of reserve OpCon units would mobilize to the CFAW-11 TSC/OpCon

at NAS Jacksonville. The training and qualification requirements were defined and a training syllabus was developed by Commander K. E. Schoeff, CFAW-11 TSC/OpCon officer who, along with Commander L. L. Fagan, C.O., Reserve OpCon Unit 7F2, began considering the problem of implementation. In order to properly train a cadre of Reserve officers, it was decided to train them during their annual active duty for training. Accordingly, a two-week training syllabus was developed. Administrative details were arranged, and eight Reserve officers were designated ComFAirWing 11 staff duty officers.

In addition to initial training, frequent utilization of TSC equipment is required if personnel are to maintain operator proficiency. In order to allow the Reservists to remain current and to augment regular duty officers, designated Reserve duty officers man the TSC/OpCon on weekends. Arrangements have been made which allow Reservists to stagger weekend duty and to credit watches stood at the TSC/OpCon toward weekend training requirements.

Track and Field Meet

Young athletes from 20 Ocean and Monmouth County high schools recently gathered in Hangar Six for the 9th Annual Naval Air Reserve Invitational Track Meet at NARU Lakehurst, N.J.

The annual event, now involving over 500 young athletes, is co-sponsored by NARU Lakehurst and the Jersey Shore Council of the Navy League. And though Naval Air Reservists who work within Hangar Six and the hundreds of local track fans who flock to the invitational each year probably don't give it a second thought, the original affair was one of small dimensions.

Back in 1965, Central Regional High School's state champion quarter-miler, George Berg, felt that his school needed a spot where indoor track practice and track meets could be run during the winter months. Feeling that one of Lakehurst's blimp hangars would be ideal for the purpose, young George sold the idea to his dad, Captain Norman Berg, then NARU commanding officer.

The evolution of the annual invita-

tion meet from that point on was predictable. Each successive year, a few more schools participated, the level of interest rose and more spectators attended. Of course, as the scope of the invitations expanded, the planning requirements mounted.

For the second consecutive year, the bulk of the planning now rests upon the shoulders of Mauro Altizio, Toms River South track coach.

Olathe Fleet Support

The one-Navy concept became a reality at NARDet Olathe when Naval Air Reservists began support of the fleet through a pilot program that will save the government over \$35,000.

For the past two months, Olathe Naval Air Reservists have been renovating Aero 12C bomb skids from USS *Hancock* (CVA-19).

According to Commander G. E. Ready, officer in charge of the 550-member Naval Air Reserve base, the Reserve work participation was accomplished through a repair-in-lieu-of-procurement program which effectively used the talents and manpower of Selected Air Reservists.

In the past, such assignments almost always meant a backlog of repair work at regular Navy shops. "We are extremely proud to say that out of 50 bomb skids sent to us, we have put 49 back into the system," Ready says.

But the assignment was no small job.

AMSI Jerome Gaedtke, project coordinator and a NARDet instructor, stated the bomb skids arrived in "scrap condition" — cracked, broken and in pieces.

The two-wheel bomb carts with wheelbarrow-type handles are used aboard aircraft carriers to transport bombs, weighing up to 1,250 pounds, to various aircraft.

According to Gaedtke, the skids were broken down into various parts so they could be sandblasted, stripped, corrosion-proofed and repaired or replaced. Some of the parts even had to be welded. All received a new coat of paint.

He also estimates that the entire project required about 2,000 Reserve man-hours. "It's really hard to place a dollar value on on-the-job training. Our Air Reservists have been waiting for a project such as this one for quite some time," he said.

MUGU LAGOON

Story by Al Frascella

Photos by Commander R. O. Baker

When the Spanish explorer Juan Rodriguez Cabrillo sailed up the California coastline in 1542, there were a number of salt water lagoons and bays. The influx of population into California during the ensuing 430 years has taken its toll. Almost every lagoon and bay in Southern California has been ecologically damaged or destroyed by the onslaught of civilization. The biggest bays and estuaries have become harbors. Others have been dredged and filled to provide land for subdivisions or recreational purposes. Some have fallen victim to pollution and some dried up when they were bypassed by flood control channels.

Only one salt water lagoon in Southern California remains in approximately the same natural state as when Cabrillo and his men explored the area. Located a few miles north of Mugu State Park and within the confines of the Pacific Missile Range, Mugu Lagoon has been preserved in its near natural condition by the Navy since World War II.

This estuary serves as a basin for Calleguas Creek which drains about 325 square miles of Ventura County. The creek begins near the summit of Santa Susanna Pass in a ditch beside the Simi Freeway and winds its way to the sea past Moorpark and Camarillo.

Seen from the Pacific Coast Highway, which forms its eastern border, the lagoon presents the appearance of

a marshy wasteland. It is far from that. This estuary is an important source of food, both directly and indirectly, for offshore fish. It is also a nursery and breeding ground for a number of different species of fish. The estuary is an important sanctuary for migrating waterfowl and shore birds, including several that are on the endangered species list, such as the California brown pelican and the clapper rail.

Consisting of approximately 460 water acres at low tide, Mugu Lagoon is oriented parallel to the coast in an east-west direction. The estuary contains three basic sections which are ecologically distinct and yet interdependent upon each other.

In the eastern section, the water is shallow with both mud and sand bottoms and an extensive area of salt marsh. This area of the lagoon is a primary breeding ground for several species of fish, including the shovel-nose guitarfish. Shore birds, including the clapper rail and California brown pelican, as well as great blue heron, gulls, terns and others, abound in this section of the lagoon, feeding on an abundant supply of shellfish, snails, worms and vegetation. This area is also inhabited by several species of small land mammals—field mice, moles, ground squirrels and skunks. During the summer months *thallophytes ulva*, an algae, produces an extensive covering of green "felt," which covers the water and increases

temperature and plant decay underneath. The decay has an unpleasant odor that many people mistakenly assume is pollution. It is not; it is both natural and healthy for the lagoon and in no way indicates an unsatisfactory sanitary condition.

The central section of Mugu Lagoon is a large basin near the inlet, extending about 1,200 yards back from the sand barrier. This is the deepest section of the estuary and is the only place on the mainland where harbor seals give birth to their young on the sandbars. During the summer months, the central section is inhabited by 20 to 40 seals. This section is also popular with waterfowl. Ducks, gulls, terns and a variety of others can be seen feeding or resting in the area. Because the inlet to the sea is located in this section, the basin supports a large number of ocean fish that feed and breed in its nutrient-rich waters, including the diamond turbot and flounder. The barrier beach between the lagoon and the sea teems with shore birds.

The western section of the lagoon consists of shallow water, extensive mud flats and a salt marsh. It is a principal breeding ground for top smelt and staghorn sculpin. Thousands of top smelt are present in the western section. During a recent research project, a 100x15-foot seine contained so many top smelt that ten husky college students could not beach it. Like the



An aerial view clearly reveals the three portions of Mugu Lagoon, above. Above right, two American avocet search the shallows for food. Sand dunes such as the one above will disappear at high tide. Below, a great blue heron waits out winter in the lagoon.



Below left, a variety of plants and grasses are found in the marsh areas. Mallard ducks are some of the less exotic inhabitants of the lagoon, below.



other two sections, the western end supports a large population of waterfowl and shore birds. Rafts of waterfowl containing upwards of several thousand birds each have been observed in both the western and central basins.

Mugu Lagoon has been the subject of numerous ecological research programs. These studies give some indication of the variety of life in the lagoon.

Dr. George E. MacGinitie, Kerckhoff Marine Laboratory, has identified 146 marine species, including 16 species of fish, 77 mollusks, 3 hermit crabs, 10 true crabs, 5 echinoderms and 16 annelids. Additionally, he reports that over 100 species of birds visit the Point Mugu area. He further states that a large number of waterfowl and shore birds winter in the

lagoon, including the black brant, various ducks and coot. During the summer months, MacGinitie reports, over 200 California brown pelicans seek refuge and food in the lagoon.

Commander Robert Baker, a marine biologist and public affairs officer for the Pacific Missile Range, estimated over 10,000 birds wintered over in the lagoon during the winter of 1971-72.

The 2,100-acre marshland lagoon also supports a large plant and plankton population. Dr. MacGinitie lists four species of algae, two flowering water plants, 11 flowering marsh plants and a rich plankton fauna.

Cdr. Baker noted that the two flowering water plants are extremely important, as they bind the soil with their root systems, providing stable conditions under which some animals can lay their eggs. The marsh plants are

also a refuge for small birds, snails, crabs and mice.

Calleguas Creek empties into the central section of the lagoon. The creek is a discharge route for any agricultural fertilizers or pesticides that are used in its watershed, as well as nutrient material from the rich farmlands upstream. The California Regional Water Control Board at Los Angeles initiated a continuing study of DDT in Mugu Lagoon in 1969. Chlorinated hydrocarbons are not used at Point Mugu by the Navy, and California has also taken steps to eliminate the use of such compounds.

The Navy maintains continuous security over the lagoon area. Frequent patrols by armed civilian guards are made on its perimeter and pilots flying into the air station report personnel sighted in the eastern section.



With a wing span of nearly 7 1/2 feet, the brown pelican is one of the lagoon's largest inhabitants, left. Below, mussels provide food for birds and fishes.



The Navy ensures that all researchers using the lagoon have the necessary state and federal permits.

The State of California Fish and Game Department is responsible for the control of all sportsmen and collections of wildlife for scientific research. Fish and Game Wardens make frequent visits to Point Mugu and maintain a close working relationship with Pacific Missile Range security personnel.

The Department of the Interior, concerned with controls over the collection of migratory birds for either sport or scientific purposes, also works closely with naval personnel.

Past and present research clearly indicates that Mugu Lagoon is a balanced ecosystem in a natural state. Should man intrude into this fragile area, the results would be disastrous.

Marine biologist Rimmon C. Fay recently stated that "Simply walking across a mudflat can destroy the burrows of ghost shrimp and reduce the population density of clams by 50 percent along the path taken."

MacGinitie says that Mugu Lagoon is the only lagoon in Southern California that has not been almost entirely depleted of its marine life. He further noted that a number of the species of animals found in the Mugu Lagoon have been exterminated in other estuaries.

The impact of man's intrusion into Mugu Lagoon would be much more than just a fatal effect on the ecology of the beaches and marshes at Point Mugu. The impact on both sport and commercial fishing could be massive.

Walking along between the Pacific Coast Highway and the Pacific Missile

Range fence, one can see the problems that would be encountered should this area be opened to the general public. The road side of the fence from Mugu Rock north to Gate 3 of the Pacific Missile Range is cluttered with the debris of man.

Researchers and scientists have expressed strong opinions on the future of Mugu Lagoon. These opinions are echoed by Dr. Charles H. Peterson, Department of Biological Sciences, University of California, Santa Barbara, who said of the lagoon: "Its continued preservation for future generations should have a high priority among the ecological goals of California. Mugu Lagoon should remain untouched and protected, a place where the scientists of future generations can still see what all Southern California lagoons once resembled."

NAS Fallon

Desert Command

Story and Photos by JOC Warren Grass

Billed as the "Biggest Little Air Station in the World," NAS Fallon, Nev., offers the Navy 119,000 desert acres and over 300 sunshine-filled days in which to train and, except for a break following WW II, it has been fulfilling its mission since it was commissioned as an auxiliary air station in 1944.

From NAS Fallon's tower, you can

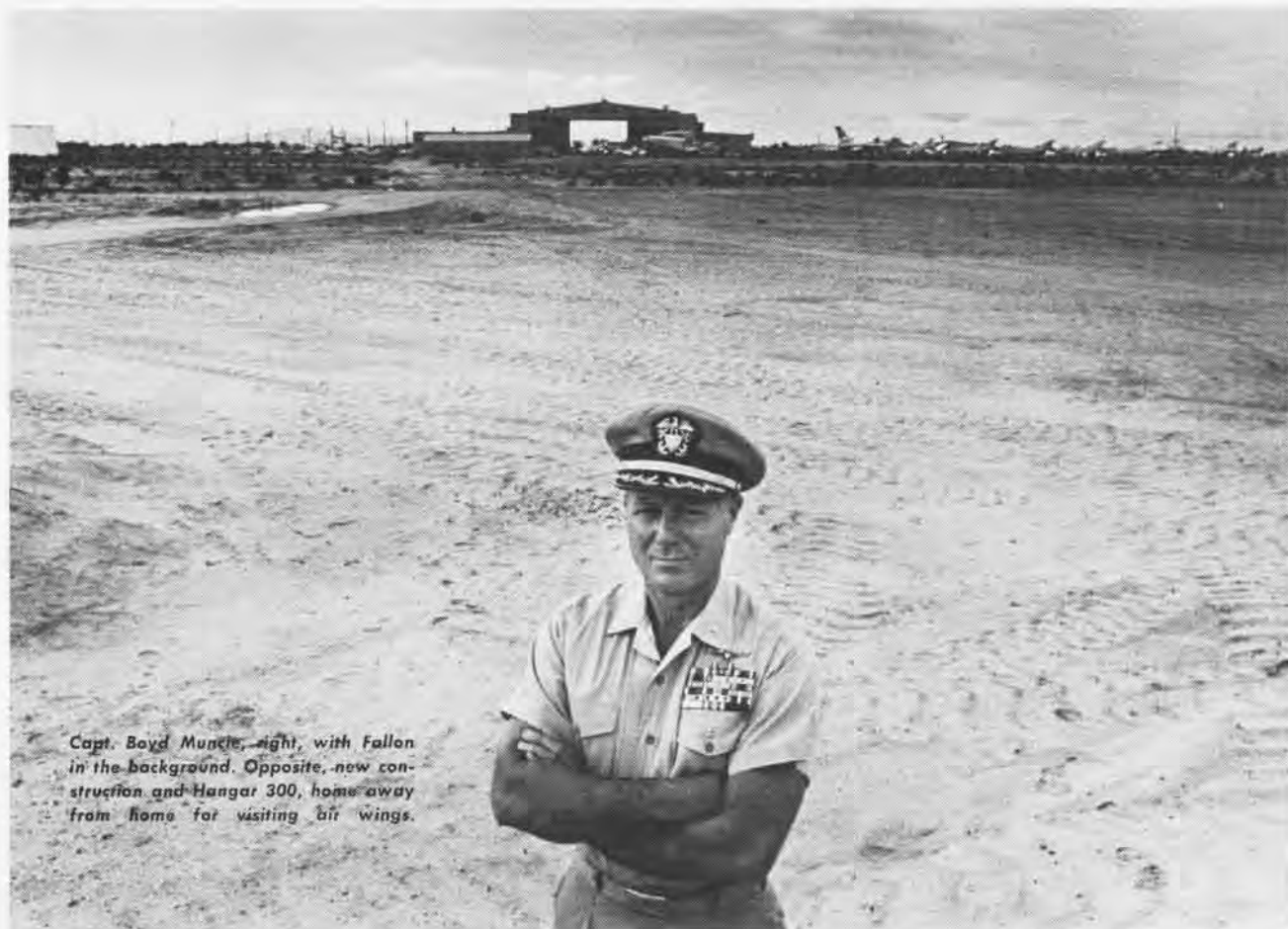
see jets loaded with fuel and practice bombs straining to take off; it's 4,000 feet above sea level at the Navy weapons delivery training ground.

In the summer, the northwestern Nevada sun bakes the Navy's longest runway and the temperature tops out at a dry 100-plus.

There are times, local pilots say, when visiting Pacific Fleet squadron

aircraft need every inch of the nearly two-and-three-quarter mile runway which stretches through shimmering heat waves.

It does not take much imagination to see NAS Fallon as a landlocked aircraft carrier. And much like the skipper of an aircraft carrier, Captain Boyd Muncie, Fallon's commanding officer, is responsible for providing the



Capt. Boyd Muncie, right, with Fallon in the background. Opposite, new construction and Hangar 300, home away from home for visiting air wings.

basic needs and creature comforts of 2,000 to 3,000 visiting pilots and crewmen who work out of Fallon during two-week training sessions.

The air station exists as a staging area for air wings. Individual squadrons gather here to work as a team under the direction of an air wing commander; their next major step is aboard an aircraft carrier for six to nine months in WestPac.

The desert, improbable as it may seem as a proving ground for seagoing aviators, is perfect for this work.

Capt. Muncie explains why. "Fallon is an ideal location. The weather, close proximity of targets, lack of high density air traffic, and relatively wide open space make comprehensive practice of combat maneuvers practical, and with very little annoyance to the local populace."

Bombing, strafing and electronic warfare tactics training are the name of the game at Fallon.

Here is Lonerock, a 9,000-acre unmanned high explosive bombing target.

Then, 40 miles southeast of the station is the electronic warfare range, a manned complex able to simulate many combat conditions, including sophisticated anti-aircraft defense systems.

Three other target ranges sprawl across the desert floor, rounding out Fallon's contribution to sharpening bombing, strafing and evasion techniques.

But unlike aircraft carriers which have crews of over 2,300 to support an air wing of approximately 2,000, NAS Fallon has fewer than 600 officers and men to support the same air wing.

This puts a load on station personnel, the cooks and bakers, aircraft maintainers and the people assigned to the public works department.

As an example, Capt. Muncie points to his ordnance shop which provides

and arms every bomb dropped on Fallon's ranges. "Our ordnance men work 85 hours a week when the air wing is in town."

CPO Steve Youngson explained the working hours of his ordnance crew for just one day of a two-week training cycle. "We'll be working at 0530 tomorrow morning," he says. "And we'll be here until 2130 or 2200 tomorrow night when the last planes come home."

If it weren't for a concerted effort by Fallon's administrators, a tour here, whether for two weeks or two years, could be unpleasant at best.

On the visitors' side, Ltjg. Larry Austin and his fleet liaison crew help keep things running smoothly between air wing and station.

"It's just a matter of being able to shoot the breeze with people, and of knowing the base well enough to answer their questions," he explains. "If they need a typewriter or a fuel



NAS Fallon

truck, we know where it is and get it for them."

In early October, Cdr. T. C. Watson, CAW-9, cited Austin's office for doing "a great job" while seeing his unit through its two-week session at Fallon.

For permanent and temporary station residents alike, the nearest town, from which the air station draws its name, is six miles away. There is a single main street and the garish blinking lights of a few gambling establishments. Seventy miles further down the road is Reno—a long drive just for an evening on the town.

Despite this, according to most people you talk with at the bowling alley, the commissary, or in some of the offices and barracks around the base, NAS Fallon is pleasant.

The major complaint, mostly from young single people, is isolation. At the same time, there are few objections to base living. New barracks, paint and a lot of self-help are part of the answer.

As SN Jerry Hasting sees it: "Two months ago this was a gray base. All the buildings were gray concrete block. Now it's colorful. That helps. It makes you feel better somehow."

Over the past several months, self-help teams from every division on the base have repainted the four barracks, the dining hall, exchange and gymnasium complex, and the operations building. Now, instead of gray exteriors, the buildings are dark cream with blue, red or green trim.

More meaningful than paint, how-

ever, is the station's acknowledgment that it must provide much of the assets for off-duty activities.

"We're out in the boondocks and we know it," says LCdr. Tom Anderson, the station's administrative officer. "So, what we're trying to do is use our environment to create something for ourselves."

From this outlook has come a long list of self-help projects already completed. The trap and skeet ranges have been revamped. There are four power boats on nearby Lahontan Reservoir for fishing and water skiing. A temporary swimming pool was built early this summer when the old one gurgled its last. A new, permanent pool, complete with sliding roof, for year-round use should be ready soon.



Above, Carrier Air Wing Nine aircraft on the ramp at the naval air station wait for their turn on one of the station's four firing ranges. At right, an aerial view of the desert command.



The list is much longer. It covers 65 separate items on two handouts published by the air station.

Capt. Muncie takes a broad view, considering both his own station people and those of the visiting air wings. Both, he says, benefit from the work the station is doing for itself.

"We're trying to make Fallon as appealing as possible for the air wing people," he states. "They are the reason we're here."

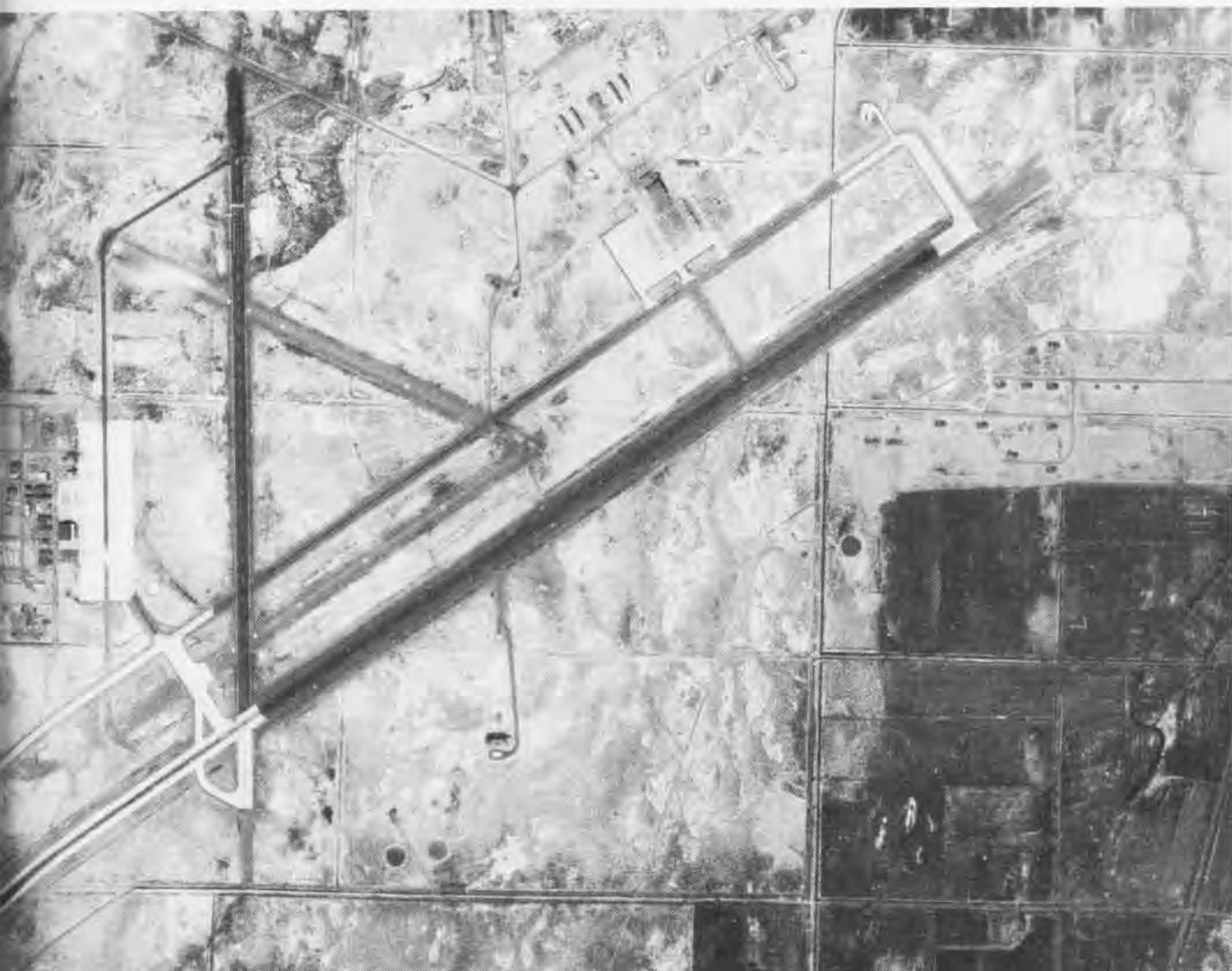
A year ago last January, NAS Fallon took on every appearance of being around for a long time. After 29 years of serving as everything from auxiliary air station to caretaker status (under the Bureau of Indian Affairs) to auxiliary landing field, the base was made a naval air station.

Van Voorhis Field

NAS Fallon's Van Voorhis Field was dedicated on November 1, 1959, in honor of LCdr. Bruce A. Van Voorhis, commanding officer of Bombing Squadron 102. On July 6, 1943, during the Battle of the Solomon Islands, LCdr. Van Voorhis volunteered to fly his PB4Y-1 on an urgent mission to prevent the Japanese from launching a surprise attack against Allied forces.

Taking off in total darkness, Van Voorhis flew his aircraft on a perilous 700-mile flight to his objective without escort, and successfully evaded enemy antiaircraft fire and aircraft.

Forced lower and lower by enemy fighters, LCdr. Van Voorhis abandoned all chance of returning safely and executed six bold, ground-level attacks, demolishing the enemy's vital radio station, antiaircraft guns and installations with bombs and machine-gun fire. The attacks also destroyed one enemy fighter in the air and three more on the water. Caught in his own bomb blast, LCdr. Van Voorhis crashed into a lagoon, sacrificing his life and ending a single-handed fight against insuperable odds. For this action, he was posthumously awarded the Medal of Honor.



Letters

GMGRU-1

I would like to contact former members of Guided Missile Group One and other persons involved with GMGRU-1's *Regulus One* operations. The information is needed for an historical article on the squadron.

R. L. Lawson, PHCS(AC)
5126 Central Avenue
Bonita, Calif. 92002

German Aircraft

In your December 1972 issue, the picture in the top left-hand corner on page 14 shows several of the Smithsonian Institution's aircraft. The one I'm questioning is a Dornier DO 335 Pfiel (directly behind the F-8 *Bearcat*), a Luftwaffe fighter from late WW II. The picture you printed shows the aircraft in American markings. The airplane really has German markings. Who fixed the picture?

Thomas Hawkins, ADR3
NAF Washington, D.C.

The U.S. markings were put on this plane after WW II when it was undergoing test and evaluation by American forces.

Leapin' Lizards

In the interest of aviation safety, the following comments are submitted relative to the front cover illustration of the January 1973 issue of *Naval Aviation News*.

The canopy is open, subjecting the pilot to wind blast injury or possible bird strike on himself or his cockpit interior. His beard is outside the cockpit in the full airstream where it may accumulate severe static charge, which might even cause an inflight fire (since it is dubious that this individual is wearing the regulation Nomex Goatee). His helmet visor is up, or missing . . . or perhaps he has not been provided with the special visor required to contain this individual's ample proboscis. His left arm is fully extended into the airstream, with two digits extended. In spite of all rumor to the contrary, this is not the authorized method of checking true wind, especially at velocities in excess of 600 KIAS. One

finger, moistened to the second joint from the extremity, is the proper technique. Finally, the right wing of the aircraft appears to be deformed in that the leading edge is missing. If the pilot is still airborne, he should be notified at once, as this may cause loss of control on the approach. Since MINIMIZE is in effect, a speedletter to his squadron will have to serve.



If this guy doesn't improve his flight technique, he'll wind up in Grampaw Pettibone's column someday.

Yours sincerely, for many more years of *Naval Aviation News* and Grampaw Pettibone.

Warren M. McLaughlin
NavAirSysCom (Air 415B1)

Nuff said.

F-14 Trainer

Alas, your fine December 1972 issue erroneously indicated that the new Miramar F-14 operational flight training building, containing weapons system trainers, closed circuit television and classrooms, was assigned to VF-124. While VF-124 is a major user, the facility is in the custody of the Fleet Aviation Specialized Operational Training Group, Detachment Miramar. They provide a valuable service in the operation and maintenance of specialized operational training equipment (such as flight simulators) principally for the use of all NavAirPac fighter squadrons.

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EDITOR'S CORNER

Continued

Curtis N. Metcalf — 22,000th landing on *Philippine Sea* — was awarded a 650-pound, 12-layer that was eight feet long and 2½ feet high. Metcalf, naturally, shared it.

Even the lowly midshipman occasionally gets into the act. It so happened that when G. E. Strickland arrived pea green in the fleet off Korea in 1950, he made his first combat flight, also his first with his new squadron, VF-54. On his safe return, he was presented with a cake because he happened to have made the 24,000th landing aboard *Valley Forge* — all that called for a celebration.

Pilots know their lives may depend on how well the plane captain does his job. So, when Lt. W. P. Sullivan got a cake for making the 1,000th landing on newly-recommissioned *Wasp*, he had his plane captain help him cut his cake.

Sometimes the cakes are given in gratitude. In the early days of the Korean war, Capt. V. A. Armstrong, USMC, used his helicopter to rescue dozens of downed pilots and lost infantrymen. One day, after he picked a Navy helo pilot from an island in the Han River, *Philippine Sea* made him a cake and flew it to his inland base. Then when Armstrong's squadron, VMO-6, rescued its 1,500th wounded man, squadron bakers baked a cake, something seldom seen by "dough-feet" on the front lines.

Boxer came up with a new wrinkle — a cake to each helo pilot who rescued a carrier pilot from the water. Atop each was a windmill. (Helicopters sometimes are called windmills.)

When AD3 Joseph Mazzone turned up at a hospital to donate a pint of blood, Captain E. H. Eldridge presented a cake to him — he was the 2,000th man to donate.

Although *Philippine Sea* has been mentioned several times for being "cake conscious," *Essex*, famed in WW II as the "fightingest ship in the Navy," has laid claim in recent years to being the "cake bakin'est ship."

And so it goes.

Reunion Rescheduled

The U.S. Naval Test Pilot School's 25th annual symposium and reunion has been rescheduled for April 28, 1973, at NATC Patuxent River, Md. (*NA News*, January 1973, p. 3).



Fleet Air Reconnaissance Squadron Four is a communications squadron, providing a mobile backup for Navy's shore communications. Based at NAS Patuxent River, VQ-4 operates in the North Atlantic, flying C-130 Hercules fitted with complex communications gear. Cdr. Donald W. Kellerman is the squadron's C.O.





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