NAVAL AVIATION NEWS

Alaska Accent
Suction Danger
Marine Reserve

OCTOBER 1948

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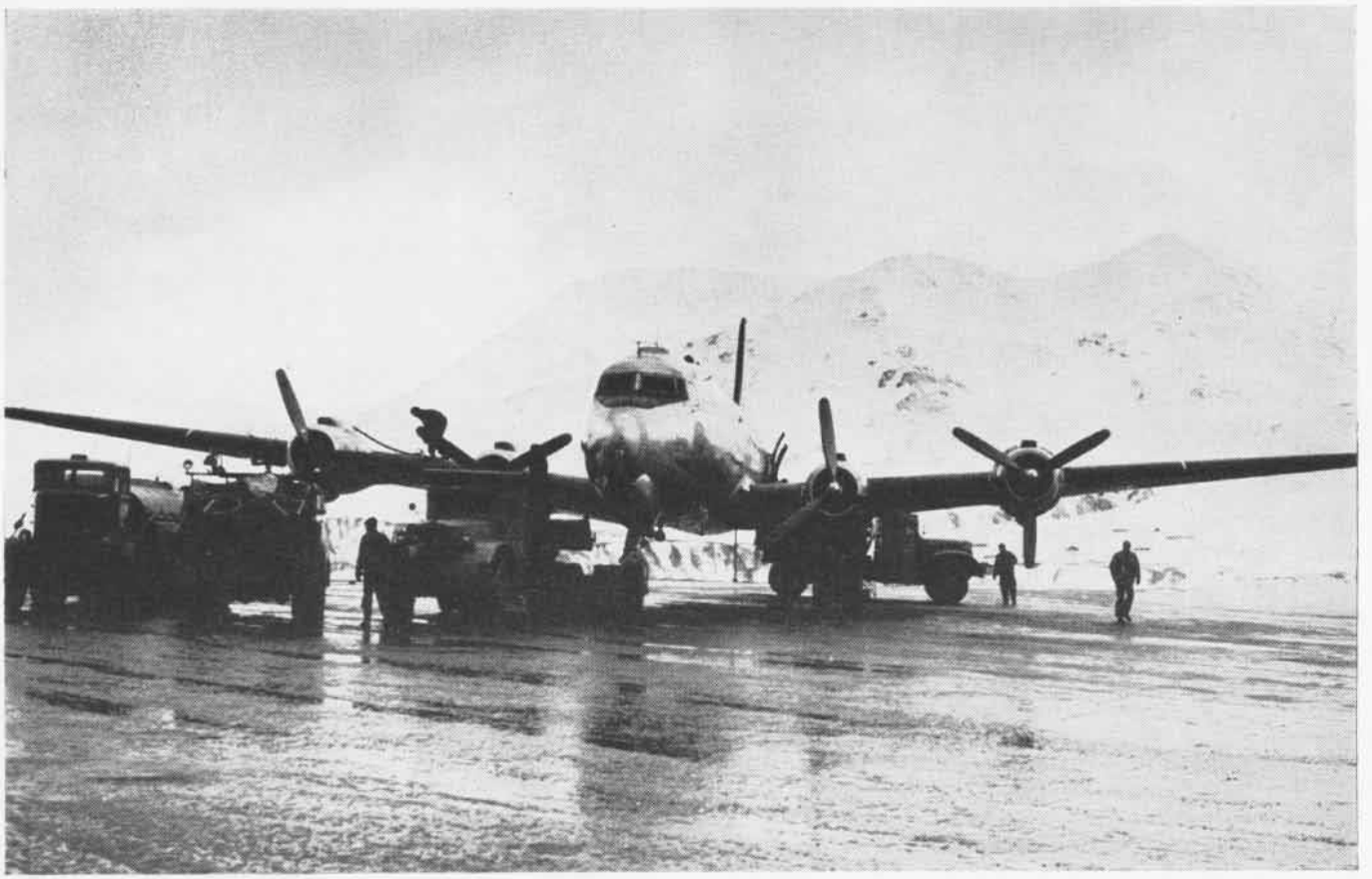
THE ARCTIC

LIBERATORS of Navy Photo Squadron 61 fly past Mt. McKinley, North America's highest peak at 20,300 ft.

'ICE CREAM' mountain the pilots of VP-61 call this odd formation in coastal range of south central Alaska

'GLACIER of Marching Men' is a river of rugged ice stretching seaward, a poor place for planes in trouble to land



ACCENT ON ALASKA

ONCE UPON a time there was a U.S. Navy pilot who found himself trapped in an Aleutian pass between two fog-bound islands. He could not turn around. He was buffeted by headwinds. Ceiling and visibility were zero. What did he do?

Throttling back his engines, he allowed the wind to blow him backwards out of the mouth of the pass.

A slight exaggeration, perhaps, but typical of Aleutian chain weather, reputedly the world's worst. The Navy today is still flying this toughest of all air routes. The tradition started by Naval Air Transport Service is being carried on by VR-5 under Fleet Logistic Support Wing and its pilots are adding to the legend, ever-growing, which is being built up about Alaskan flying. Five times a week VR-5's four-engined R5D's fly to Adak, once a week out to lonely little Attu at the extreme tip of the chain. Any time the traffic demands are great enough, FLSW rolls out an R4D and carries freight and passengers to Point Barrow where the Navy has been looking for oil. Since 1945 NATS and its successor have been the main link Pet 4 has had with the outside world. Thousands of tons of equipment and supplies have been flown over those desolate Arctic flats to Alaska's northernmost tip. In flying them, the Navy's transport pilots have built up a fabulous lot of tales about hair-raising flying weather and narrow brushes with death in temperatures of 50 degrees below zero. Equally wild are some of the stories these pilots tell of flying down the Aleutian chain with its 100-mph headwinds, steam-belching volcanoes beautiful to fly past — in clear weather — but deathly to a pilot groping his way to Adak or Kodiak in the dense fogs that blanket the Aleutians. NAVAL AVIATION NEWS recounts here some of these tales—few of them new, but told piecemeal over a period of years. They represent adventures and narrow escapes that were and are almost commonplace to Navy pilots flying this rugged route day in and day out, throughout the whole year. Alaska is still in the news and the Navy still flies a lot there.

CDR. HOLLENBECK MADE FIRST BARROW FLIGHT

PLANE ENGINES KEPT RUNNING AS SUPPLIES UNLOAD AT PT. BARROW

NAS POINT BARROW, NAVY'S PLUSHIEST AIR STATION, COMPACT HUT

BLEAK MOUNTAINS AND SUB-ZERO COLD MAKE FLYING DIFFICULT

TALES of tough flying in Alaska began building up before the war started, but they really began to come in the day NATS sent Cdr. Henry C. Hollenbeck, a veteran airline pilot and then skipper of VR-5, on the first route check and winterization flight to Point Barrow in January, 1945.

Going up, the only navigation aid was a tiny marker beacon at Barrow which could be turned on only 30 seconds at a time every 10 minutes. Coming back, things began happening. Endicott mountains, 200 miles north of Fairbanks, are about 10,000 feet high. Cruising south at 12,000, the plane's port engine began missing, cutting out badly, and finally quit entirely. Cdr. Hollenbeck pushed the feathering button. It failed, the prop windmilling meanwhile furiously. A forced descent was made to 7,000 feet despite solid IFR conditions among jagged mountain peaks up to 10,000 feet.

A proposal to abandon the R4D was rejected. Temperatures were 50 below and nobody argued for it. The plane vibrated violently, like a spaniel shaking off water, with tremors starting at the tail section rhythmically and moving forward with increasing severity. Crew members swore that open gaps three inches across appeared as the shudders passed each station.

Just as all hope was given up, the propeller gradually slowed down, and though unfeathered, froze in a fixed position. Relieved of the buffeting, Cdr. Hollenbeck was able to regain 8,000 feet, thread his way through the mountain peaks, and make it to Fairbanks.

Cdr. Hollenbeck, incidentally, made the first flight with an R5D direct across the Gulf of Alaska from Seattle to Kodiak instead of following the land route. It was found that Alaskan weather, while frequently violent over the rugged coastal ranges and along volcanic peaks of the Chain islands, could for the most part be topped by long range aircraft over the open sea. Following the land route, R4D's would be on the verge of distress with icing, static and turbulence while the R5D's offshore would be on top and enjoying clear sailing.

Regular flight schedules were started to Point Barrow in January 1945. By March, six round trips a day were made from Fairbanks to Barrow carrying vital cargo and food for the Seabee camp. Although rice replaced potatoes at meals, morale was high. Twice-daily movies and softball games in ankle deep sand or powdered snow helped in keeping

RESCUE NORSEMAN, FLOWN BY LT. BRANHAM, MAKES WATER TAKEOFF

ALASKA-BOUND PASSENGERS CLIMB ABOARD PLANE AT MOFFETT FIELD

STEWARDESS RAISCH CHECKS HER LIST IN HEAVILY-LOADED TRANSPORT

SEATTLE KEEPS SKIS FOR ALASKA RECREATION

DEVRIES, SKV3, ISSUES COLD WEATHER GEAR

ORDERLY SIMS PREPARES THE MAXSON MEALS

the morale of the men up when a long way from home.

During the spring, landings were made on the frozen snow surface of the sand beach. Operations were suspended with the first thaw in June to lay a 3,500-foot steel landing mat. Cargo averaged more than 10,000 pounds a day and a large portion of the gear had to be reflown to Umiat, 168 miles to the southeast. Also serviced was Cape Simpson, where single-engine ski-equipped planes landed on pothole lakes until one day when Ens. Rolland E. Bline landed his *Norseman* on the melting slush ice once too often. It sank, but was hauled up on the tundra beach by a tractor.

ICE FOG made for low ceilings at Barrow, but operations continued uninterrupted throughout the year. Turnarounds were made as short as possible. Frequently engines were left running during offloading to keep them warm. Weather sometimes was capricious—take the case of Lt. (jg) Joe Entrikin. He came into Barrow on his first visit to find a 50-mile crosswind over the slippery mat and 200-foot ceiling with half-mile visibility due to snow blowing down the runway.

He made a fine landing and received the plaudits of the ground crew. The next day, however, under exactly similar conditions, he failed to line up properly with the airstrip on his approach so came around again. This went on for more than an hour, with Entrikin making eight unsuccessful attempts to land. Utterly chagrined, he returned to Fairbanks while he still had sufficient fuel.

The shuttle from Barrow to Umiat, site of the oil well, was probably the most hazardous extended operation undertaken by VR-5. Since no landing field was available, a frozen lake was selected at the base of a steep bluff along the banks of the Colville river. A crescent-shaped area was cleared of snow, and the lake officially designated an airport. An utterly unreliable 40-watt portable range station was installed and the terminal put in operation. At first Umiat was extremely difficult to find, since the radio range could be heard a maximum of 20 miles and northbound flights had to find it by dead reckoning. Charts of the area were so much in error that one of the first maps issued to pilots showed the Colville, a very large river flowing northeast, as a tiny trickle flowing south. Pilots soon learned to establish positively their position over Umiat by revving up their engines a certain number of times and asking the ground parties, by radio, to count the number of blurps. If the correct answer was forthcoming, the pilot assumed he was directly overhead and began his let-down accordingly. A much-discussed Chandler lake was designated as an emergency alternate field. No one ever found the lake until it was finally determined that it was some 60 miles west of where the map said it was, and by that time the ice had melted.

RAD landing operations on the ice-covered Umiat lake required utmost precision on the part of the pilots, since the heavily-loaded craft had somewhat less than 3,000 feet of usable runway, and even with ice-grip tires, many planes continued to slide into the frozen snow banks at the end. Ski-equipped single-engine craft fared just as badly, since prevailing crosswinds made necessary the use of throttle to keep the plane straight, which of course also prevented deceleration. Pilots usually shut off their engines, crossed their fingers and offered long prayers the landing would be good.

WINDSHIELD ICING EN ROUTE NORTH COMMON EVENT ON ALASKAN RUN

NAVY TRANSPORT SKIMS PAST 14,400-FOOT SUMMIT OF MT. RAINIER

TERRAIN AROUND NAS KODIAK IS RUGGED, ANOTHER REASON WHY SKILLFUL PILOTING IS NECESSARY WHEN WEATHER CONDITIONS ARE BAD

COLD FEET, NOSES COMMON WHEN EARLY PILOTS FLEW IN ALASKA

AFTER the war started, the first survey flight was made by a Navy four-engined Sikorsky seaplane, XPBS-1, to test the feasibility of air lift to the Aleutian chain. No radio navigation facilities were available and celestial navigation was used exclusively on the non-stop flight from Seattle to Kodiak. Regular service by NATS R4D's soon started, with three of them making the trip together for safety reasons.

One of the major problems of the early operation was to keep the planes comfortably heated. Hot water heaters were installed, but the supply usually boiled out in three or four hours, leaving the cabin and cockpit below zero. Planes often were left exposed overnight. One pilot at Yakutat experimentally placed a dozen commandeered bed sheets over his plane in lieu of wing covers. They were frozen solidly to the wings by morning. Liberal hot water freed the sheets but left two inches of ragged ice on the airfoil surfaces which required several hours of scraping to remove.

From the first days of the war, hardly anyone in the Alaskan theater had anything nice to say about the flying weather there—and with reason. Adak joint Army-Navy weather station made a four-year study (1943-47) and found that cloudless days were rare. Unlimited ceiling was reported less than six percent of the time. Solid overcast is present three out of four days, with ceilings ranging from one to four thousand feet. Summer months usually are the poorest for flying. Summer fogs develop suddenly and reduce visibility to a mile or two in the late season. During winter months, skies usually are clear and fog is rare.

Deserving of their foul reputation are the Aleutian winds. Although the yearly average of surface winds is 20 mph, maximum velocities range from 70 to 100 mph in the winter. Wind directions are extremely variable. High velocities are not so much feared as the turbulence with which they are associated. Worst is the true katabatic (downhill) wind, known as the *williwaw*. Pilots stay clear of leeward sides of mountains and fly at altitudes higher than all surrounding terrain if possible. If they have to fly under the overcast, they use the top 30 percent of the existing ceiling.

One of the bad features is the swift change of weather. Lt. Johansen took off from Attu for Adak, a 470-mile hop usually taking two hours. Weather at both stations was good

CRASH CREWS READY SNOW OR SUNSHINE WHEN AN EMERGENCY ARISES

LT. SUNDBERG PASSES OUT JAVA TO ALASKAN SOURDOUGHS EN ROUTE

and forecast was for VFR for 24 hours. He took aboard a heavy cargo load and minimum fuel, as a result. While en route, the wind shifted, bringing fog and zero visibility.

He turned back to Attu but that too had closed in. Shemya and Amchitka were in the same state. He was advised to proceed to Fort Glenn, then reporting 3,000-foot ceiling. In the three hours flight required to get there, it too closed in, with heavy snow. Johansen continued east, by-passing Cold Bay because it had 100-mph surface winds. After 11 hours in the air, he made it, with exhausted fuel tanks, to the commercial field at Naknek on the Alaskan mainland.

AIRCRAFT icing normally presents little difficulty to experienced VR-5 pilots, but they draw on some hard knocks dealt out to their predecessors. Icing usually occurs between zero and minus 10 degrees Centigrade. Pilots can adjust their cruising altitude above or below the danger zone. Traffic problems along the direct routes are limited, so clearance problem is minor. On several occasions, however, icing has become a most serious problem.

Early in April, 1947, Lt. H. J. Camos was enroute to Adak from Kodiak when he requested to land at Fort Glenn. He reduced airspeed and lowered flaps for a normal descent. Again shifting fog made landing impossible and he pulled up. Because of ice on the flaps and under the wings accumulated during the low airspeed descent, the plane did not respond to normal climb throttle, and full power was required to climb 100 feet a minute.

After two hours, minimum safe on-course altitude of 8,000 feet was reached and he continued to Adak. Landing there, he saw chunks of ice measuring 8x40 inches and weighing up to 70 pounds drop off his plane.

Three cases of complete stall due to aircraft icing and airfoil disruption were reported by VR-5 pilots, two in 1944 in R4D's and one in November 1946 in an R5D.

In the latter case, the pilot Lt. Hutsell, was in the margin of an overrunning warm front just beginning to occlude with the free air temperature constant at —3 degrees C. from 4,000 feet to 15,000 feet. Heavily loaded with ice, the plane ceased flying halfway across the wide Gulf of Alaska at 8,400 feet. Airspeed was 144 mph with maximum power. Recovery was made at 6,000 feet and a gradual descent maintained until the flight encountered non-accumulating snow at 4,500 feet, where it was possible to continue level flight through the weather area.

Though once difficult because of lack of facilities, navigation along the Aleutians today is relatively simple. Four or five of the major radio ranges provide adequate reference for ADF position checks, with powerful radio beacons available to Fort Glenn, Amchitka and Shemya. Ofttimes intense precipitation static obscures range signals and makes ADF gear useless, but normally these severe weather areas are of short duration. Dead reckoning does the job in that event, with radio altimeters helping out.

Trial installations of radar equipment have been used by VR-5, and it is anticipated that future developments along that line materially will facilitate navigation along the Aleutians.

One problem not normally encountered by the VR-5 routes is that of avoiding the major peaks of the Chain itself. Since several of the volcanoes of the Aleutians are more than 7,000 feet, topped by majestic Mt. Shishaldin, the "Smoking Moses" of the Chain, which is barely below 10,000, aircraft shuttling among the islands must be doubly cautious to avoid the terrain. VR-5 flights are normally conducted at 11,000 to 12,000 feet levels and on great circle courses which lie some 60 miles north of the Chain across the Bering sea. Transport Squadron 5 boasts of a 100 percent safety record in its Aleutian operations. Much credit goes to Flight Control, and the Service GCA units, now at terminals.

KODIAK BAGGAGE ROOM SHOWS VARIETY OF PASSENGERS NAVY CARRIES

TRANSPORT CREWMEN HAVE THEIR FUN TOO, TRYING OUT A SKI SLOPE

SPECTACULAR PHOTO SHOWS KODIAK SNOWPLOW CLEARING RUNWAYS

LOW OVERCAST HANGS OVER ADAK TERMINAL AS PLANE HEADS TO ATTU

BEAUTIFUL SHISHALDIN VOLCANO NEAR KODIAK THRILLS PASSENGERS

ALASKAN PILOTS MEET STRANGE QUIRKS IN RECEPTION ON RADIO

STRANGE tales of pranks played with radio reception keep filtering out of the north from VR-5's pilots.

Take the case of a Marine R4D pilot making a simulated GCA approach at NAS Seattle. He heard a weather report indicating 400 feet ceiling and visibility one-to-two miles in snow flurries. Since he was entirely in the clear and had the runway in sight 20 miles away, he requested confirmation on the reported weather conditions.

The report came back the same again and the perplexed pilot landed. Checking up, he found he had been simultaneously receiving the GCA controllers at Seattle and at Adak in the Aleutians, both transmitting on the same frequency.

Veteran VR-5 pilot Lt. Hutsell was en route from Kodiak to Adak. Unable to contact Adak for clearance into the control area, he blindly called to any airways station guarding either 4220 or 6290 kilocycles. To his surprise, Medford, Oregon replied at once, stating its station was receiving the plane "loud and clear," and offering to relay his message. In a matter of minutes, Medford Navy radio relayed the request to Adak, obtained the desired clearance, and gave it by voice to the plane more than 2,000 miles away.

Lt. Hutsell also figured in another phenomenon. After leaving Kodiak he could not pick up the Port Heiden range on the Alaskan peninsula. The copilot was tuning the range receiver trying to get any station in the area, but all signals either were too weak or obscured by static. Suddenly, a range identification signal "GZ" was intercepted loud and clear. Thinking perhaps the Port Heiden range—with "ZG" designator—had been picked up and misread, the pilot carefully turned the receiver, only to confirm the "GZ" identification. Later investigation revealed the transmitting station was a tiny 50-watt range at Gabbs Valley, Nevada.

A SIMILAR experience was reported by Lt. Camos before he joined VR-5. Flying off the northwest coast of New Guinea, Camos began receiving clear "on course" range signals from Kansas City, Missouri, complete with the scheduled weather broadcasts and approach control traffic clearances. The heading of the range leg apparently lay parallel to his course, so Camos began bracketing the east leg of the Kansas City range while over the South Pacific.

Speaking of Port Heiden, a strange phenomenon occurs in the area of the active volcano Chuginadak. Navy pilots have dubbed it the "Port Heiden Elevator" since it consists of vertically rising and descending air currents over an area of from 20 to 50 miles along the flight track.

These currents are peculiar because of their prolonged duration and intensity and the fact that they occur only when a certain set of circumstances prevail.

The flight track from Kodiak, direct to Adak, crosses the southern portion of the Alaskan peninsula diagonally, running over the Port Heiden radio range on the west coast and then proceeding westward across the Bering sea. Planes crossing the mountain ridge diagonally encounter both the downdrafts on the leeward side as well as the updrafts on the windward. There is normally not the slightest turbulence associated with the drafts. The first indication the pilot has, cruising at 10 to 12 thousand feet, is a climb or descent smooth as silk and barely perceptible at first and then increasing rapidly.

In R5D's, it is not uncommon for descents of 2,000 feet a minute to occur. The drop can be stopped and altitude maintained only with maximum climbing power. On the other hand, pilots have flown 8 to 10 minutes with throttles closed to 18 inches or less, 200 mph indicated airspeed and gained altitude all the while—thanks to the "Elevator."

Experience gained in the Alaskan fogbanks often served NATS pilots in good stead around the states. Lt. Byron Harvey was on the Sand Point base leg one time when an Army airfield reported a P-38 lost in the overcast. After an hour of trying to contact him, Harvey suggested the two rendezvous at Mt. Rainier. He then brought the plane back to Paine field with him and made an instrument let-down.

VR-5 RECENTLY reported its pilots had broken the flight speed record from Adak to Kodiak three times in two weeks, thanks to some 100-mph tailwinds. Lt. H. J. Forsgren made it in 3 hours and 49 minutes, including a normal GCA approach. Lt. Camos clipped a minute off his record a few

CREWMEN AT ADAK VIEW MOVIES FOR AMUSEMENT AT THEIR QUARTERS

CARGO RAMP AT ADAK SHOWS VARIETY OF THINGS NAVY AIR CARRIES

SEARCH AND RESCUE HELICOPTER BASED AT ADAK FOR AN EMERGENCY

TRACTOR HAULS AN R5D TOWARD TERMINAL WHEN IT ARRIVES AT ADAK

days later and he in turn saw his record cut by a full 22 minutes by Lt. (jg) Robert Ridle. The new mark is 3 hours and 26 minutes, including full GCA. Highest groundspeed between check points was 355 mph. Westbound flights which normally take five hours required eight hours to reach Adak during the same period.

Another story about VR-5's wartime exploits, not often heard, is about four flights made during August and September 1945 to carry an entire U.S. Navy weather station to Khabarovsk, deep inside Siberia. Sixty-four tons of gear and 60 officers and men were flown over a 5,000-mile Arctic route in the flights.

They went via Anchorage, Nome, and Welkal, the Siberian port of entry to Khabarovsk. There the station was set up to broadcast information to Alaskan Navy stations since weather in that area is "born" over Siberia and reaches Alaska later, much as the weather in England moves over to the continent of Europe. The NATSmen were well-received by the Russians, although talk naturally was at a minimum.

Numerous mercy missions are listed among the exploits of VR-5 over the Aleutian routes and to Point Barrow. During February, 1945, a deadly epidemic of flu gripped native Eskimos at Barrow. NATS planes flew doctors, nurses, medicines and fuel.

It also helped in a triple play—carrying a nine-year-old boy from Dutch Harbor NOB who injured an eye playing with a hand grenade. A NATS plane flew through fog to Dutch Harbor, took the boy to Anchorage and put him aboard an R5D piloted by Lt. (jg) Entrikin which carried him to Seattle. From there he was rushed to Bremerton.

Another Aleutian mercy mission involved a Coast Guardsman at the loran station at Theodore Point who developed symptoms of appendicitis. A NATS plane flew sulfa and penicillin over the isolated spot and dropped it in low-level passes. Contents were administered as directed by the Attu medical officer over the telephone and the man recovered.

Recently an epidemic of food poisoning hit Umnak, one of the Aleutian islands. A Navy flight altered its course and dropped a doctor and medical supplies at the island three hours later, despite bad weather and heavy turbulence. The assistance helped curb the ailment.

SOME interesting tales of VR-5 pilots' brushes with the wild life of the Alaskan wilds filter down to civilization. Seagulls and bison add to hazards of trying to land on icy runways in near-zero visibility with 50-mile crosswinds.

Taking off from Kodiak recently, Lt. Cdr. Douglass' R5D bored through a flock of seagulls. Several birds were caught in the nosewheel compartment. One gull passed through the spinning blades of #3 engine without being hit—and left a six-inch dent in the cowling and speed ring. Two others were ferried clear to Adak in #4 engine—between the cylinders.

Jeeps, fire trucks and shotguns are used on runways to frighten the birds away, but they refuse to be intimidated—doing a few wing-overs and landing on another portion of the runway, or coming to rest on the jeep's hood and eyeing the driver with intense dislike. Once when landing, Lt. (jg) Bline ran into a circling group halfway down the runway, damaging the starboard wing tip beyond repair and rupturing #4 fuel tank. Lt. (jg) Entrikin is "high point man" of the squadron thus far, with 14 confirmed and several probables to his credit. One of them hit within inches of the windshield in front of his face.

At Big Delta field, planes have to check the tower in advance to be sure the runways are clear of wandering herds of bison. Jeeps there also are pressed into service to chase the lumbering beasts off the concrete so the Navy transports can land. (Most of the photographs accompanying this article were taken by George T. Chapman, CPhoM, with NATS.)

SLOPPY GOING AT ADAK TERMINUS REQUIRES SERVICES OF A GRADER

WHEN THE END OF THE RUN IS REACHED AT ATTU, PILOTS TALK SHOP

GRAMPAW PETTIBONE

Borrowed Time

The pilot of a TBM-3E made a 30 degree glide bombing run and commenced his pullout at about three thousand feet, indicating 270 knots. He felt a severe jolt as if from turbulent air or slipstream. On completion of the pullout he noticed that his accelerometer indicated 6 G's. Both wings were wrinkled and a portion of the port elevator was torn away. After a safe landing the wingfold mechanism was found to be inoperative.

Grampaw Pettibone says:

Son, I wonder if you realize just *how* close you came to killing yourself. I've got a thick file on pilots who weren't as lucky as you were. The maximum allowable limits for speed and acceleration in the TBM are set forth in Technical Order 49-45. Flight Safety Bulletins 3-47 and 1-48 both contain important information for pilots who plan to do glide bombing in the *Avenger*.

Since you're on "borrowed time" from here on out I think the least you can do is carry copies of all three in your wallet and read them aloud whenever you find yourself surrounded by a bunch of TBM pilots.

Dear Grampaw Pettibone:

A few days ago at a Naval Air Station on the Gulf a TBM tow plane called the tower immediately after take-off and requested an emergency landing due to the presence of gas fumes in the cockpit. Upon receipt of this transmission the tower immediately closed the field to other planes. All airborne aircraft were given instructions both on the radio and by visual signals to clear the area at once. The TBM dropped his tow, made a tight turn, and lined up for a landing on runway 7.

Four training planes, piloted by solo students, took wave-offs as directed by the tower and cleared the area—but not old DILBERT. He lined his SNJ up for a landing on runway 2. The tower immediately gave him a red light and at the same time instructed him to take a wave-off as there was an emergency in the pattern. Naturally these instructions didn't bother DILBERT. He came right on in and landed on a converging course with the TBM which was making the emergency landing. Fortunately the TBM missed the SNJ by a few feet as the two planes reached the intersection and nobody was hurt.

I think this incident illustrates that no matter what rank DILBERT may

hold or how many hours he has at the stick or yoke, he is easily recognized by continually flying with his head in the cockpit. . .

An observer

Grampaw Pettibone says:

Thanks for these comments on this near accident. Any time a pilot approaches an airfield for a landing he should tune in to the tower frequency, and if he is unable to read the tower he should be on the look out for warning lights. We've already had one serious accident this year when two planes landed on converging courses at the same time.

Egg Size Hailstones

A Marine Major was proceeding in an F4U-4 from Pueblo, Colorado, to Denver on a routine cross country flight. He had obtained VFR flight clearance from Army Flight Service at 1620. Observing scattered storm areas to the north of Colorado Springs he requested detailed weather conditions to Denver from nearby Patterson Field.

He received the Denver weather as clear, 40 miles visibility, and so proceeded on course. At about 1635 he entered what appeared to be a light haze between two storm areas. Immediately upon entering this haze a loud drumming noise warned him that he had encountered hail. He made a hurried 180-degree turn, and reduced his airspeed to 140 knots. Total time in the hailstorm was about two minutes.

The pilot then returned to Patterson Field and circled waiting for further weather information. At this time he noticed dents in the leading edges of the stabilizers. Realizing that this indicated possible damage to the leading edges of the wings, he climbed to 10,000 feet to test the stall characteristics of his plane before landing. He found that the stalling speed had been increased by about 15 knots. A successful landing was made at an airspeed of about 95 knots.

A qualified weatherman who was on the ground in the area where the hailstones were falling states that they were from one to two inches in diameter, The leading edges of the wings and horizontal stabilizer of the F4U looked as though someone had given them a thorough going over with a baseball bat.

Grampaw Pettibone says:

This chap used good judgment in getting out of that hailstorm in a hurry, but the point that really pleases me is that he remembered to test his damaged F4U for a change in stalling speed. That's using the old noggin to good advantage.

Too Steep—Too Slow

The pilot of an F6F was cleared for take-off with a towed sleeve. He commenced his run and on coming abreast of the sleeve he pulled his plane off the runway. Take-off was made with full flap, and the plane was held in a steep angle of climb at all times. When the F6F attained an altitude of 400-500 feet it was seen to mush slightly, fall off on the left wing and dive into the ground. The plane was completely demolished and the pilot killed instantly.

Qualified naval aviators who witnessed the entire incident state that it was simply a case of not paying heed to the oft-repeated slogan "KEEP FLYING SPEED."

Grampaw Pettibone says:

The "snatching" or dragging off of banner targets for air to air gunnery has always been hazardous. Pulling up sharply at low speed and low altitude violates one of the first principles of safe flying.

The trouble usually starts when the gunnery officer warns the tow pilot that to avoid abrasive damage incident to dragging the target, the pilot must get the target and line off the deck at the earliest possible moment. Judging just where this "earliest possible moment" lies is quite a neat trick. When you do it just right you get the target off without damage and avoid spinning in to boot.

Personnel in the Bureau of Aeronautics tell me that tests are being completed now on a banner target carrier, which, when available, will eliminate the necessity for dragging off this type of target.

—KEEP PLENTY OF FLYING SPEED!

Dear Grampaw Pettibone:

We have a problem, and by sending it to you, we hope to receive an answer that will back up either one side or the other in its argument.

Here it is!!!

A plane is approaching an airstrip preparatory to landing. It is FIFTY (50) feet high and traveling at an indicated airspeed of EIGHTY (80) knots. The plane stalls at an indicated airspeed of SEVENTY (70) knots. There is a FORTY knot headwind.

SUDDENLY—the FORTY knots of wind stops—completely—and definitely —!!

WHAT WILL HAPPEN TO THE PLANE??

1. Will it stall?—or—

2. Will it continue its approach in a normal manner?

3. Will it lose FORTY knots *airspeed* at the moment the wind stops?

4. Will the airspeed indicator in the aircraft indicate FORTY knots lower at the instant the wind stops?

That is the discussion and the problem. We hope that your answer will cover all the above-mentioned points.

Respectfully,
Ens., USNR

Grampaw Pettibone says:

Your letter arrived just as we were going to press and I decided to print it to see what some of my readers have to say. I'm too smart to get caught in the middle of this argument without giving it some thought. Will give you the word in a later issue.

Better Off In Bed

The pilot of an AD-1 was approximately 20 miles out to sea on an ASW training flight when his engine began to cut-out intermittently. He received permission to return to the nearest field with another AD-1 as escort. The engine continued to cough and cut-out.

In an effort to rectify the trouble the pilot advanced mixture to "RICH," switched his auxiliary fuel pump to "ON," and increased RPM and manifold pressure. This did not improve engine operation. When the aircraft was about eight miles off-shore and at an altitude of 2000 feet, raw gasoline started spraying into the cockpit from the area of the right rudder pedal. The pilot opened the canopy.

A few seconds later the engine cut-out again with a loud cough, igniting the gasoline in the accessory section and cockpit. The pilot immediately radioed that he was bailing out. He first attempted to leave the cockpit from the left side, but was blown back against the canopy. As the plane was now in a gliding turn to the right, he then tried to leave the cockpit by the right side. He got out on this attempt, but struck the horizontal stabilizer, breaking his right leg.

The bailout was accomplished at 800 feet but the pilot had quite a little trouble finding the parachute release ring. He hit the water on his back a split second after the main canopy blossomed. With great effort he managed to inflate his pararaft and climb into it. About 30 minutes later he was picked up by Search and Rescue PBY. In addition to the broken leg, he suffered 2nd degree burns on both legs and severe body bruises.

Grampaw Pettibone says:

Some days a fellow would be better off just to stay in bed!

Since the plane was not recovered the cause of the engine's malfunctioning could not be determined. It is believed, however, that the gasoline which came into the cockpit on the right side was from a split in the gasoline line to the fuel pressure gage, since the pressure reading was about 4 lbs. lower than normal after the engine trouble developed, and did not come up when the booster pump was turned on.

After all these mishaps I'm sure you were mighty glad to see that PBY.

Congratulations on making good use of your safety equipment in spite of your injuries.

Coming or Going?

The plane pictured above isn't a new model with one conventional engine and one pusher. It's just an F7F that got into quite a bit of trouble on a landing at Mustin Field, Philadelphia.

The pilot made his landing approach at about 95 knots, which is sufficient for normal control. Over the end of runway 23 he throttled back and leveled off too high. Realizing this, he started to add power just as the plane stalled to the left. The F7F hit the runway on the left wheel and left propeller. The nose veered to the left causing the right prop to touch the runway. As the plane veered off the edge of the runway the left propeller dug in and the left wing and engine tore off and revolved to the inverted position.

The pilot had his shoulder harness tight and safety belt locked and escaped this crash without personal injury.

Spoiler At Work

The two near accidents described below were reported by Air Ferry Squadron One in recent newsletters. Both are good examples of "why pilots get grey."

Case #1: A Naval Reserve pilot reported to the squadron for a two-week tour of active duty. He picked up his first ferry aircraft, an SB2C-5, at NAS JACKSONVILLE for delivery to NAS CORPUS CHRISTI. High gas consumption necessitated a landing at NAS PENSACOLA where a check of the fuel system failed to locate any discrepancy, and the flight was resumed.

This time the pilot was forced to land at NAS NEW ORLEANS to take on fuel. At Galveston the pilot landed again. Since the delivery point was Corpus Christi, it was decided that the fuel supply would be sufficient for the last leg of the flight. A take-off was made and the maximum manifold pressure the pilot could get was 29 inches. A hydraulic failure was experienced at this point and the pilot was unable to retract his gear. He circled the field and made an emergency landing without incident.

The squadron dispatched an experienced pilot to the spot and it was found that the hinges on the direct air ramdoor had broken and closed off the direct air. Holes were found in the gas lines leading to and from the carburetor. Besides these discrepancies, the generator was found to be hanging loosely on the bolts.

Case #2: This ferry pilot landed at an air station to refuel and had station personnel fill three of his four tanks. No gas was placed in the tank he had been using at the time of landing. After refueling, the pilot took off, still using the original tank.

Shortly after take-off, he shifted to one of the refueled tanks and the engine cut out. He shifted to another refueled tank with the same result. Having by this time lost much altitude and all confidence in the refueled tanks, the pilot shifted back to the original tank and the engine caught.

A landing was made at the nearest field and when the tanks were drained the contents proved to be largely water.

Grampaw Pettibone says:

Gee, fellows, even a plane on its way to an overhaul shop deserves better treatment than this—to say nothing of the pilot who has to deliver it. Both of these cases could very easily have resulted in serious accidents. Don't release any plane for flight until it's been serviced—and serviced *right!*

Remember, aviation maintenance is one line of work where perfection pays. The pilot's life depends upon your work.

DID YOU KNOW?

Caroline Mars Sets Record

Long Distance Flight to Chicago

The Navy's latest and most powerful *Mars* set a new long distance record for seaplanes when it flew nonstop from Honolulu to Chicago with 23 newspapermen and 17 crew aboard.

The flight was a feature of the Cook County Fair, the landing being made on Lake Michigan before thousands who thronged the waterfront. In 24 hours and 9 minutes, the *Caroline Mars* flew 4,848 miles. The longest previous seaplane flight was from Patuxent to Natal, Brazil, in 1942, a distance of 4,375 miles.

The *Caroline Mars* made the trip to Chicago so fast it arrived three hours before its scheduled time so Lt. Cdr. Robert J. Hunt, the pilot, flew to NAS GROSSE ILE and circled to kill time. Reserve squadrons from NAS GLENVIEW escorted the *Mars* to Chicago.

When it landed, the *Mars* had enough fuel aboard to have flown another 1,000 miles. The JRM-2 weighs 10 tons more than the other four *Mars* planes and has more powerful engines, the R-4360, developing 3,000 hp on take-off. The JRM-1's can carry a 20,000-pound payload, compared to 35,000 pounds for the new craft. Though heavier, the new plane has the same dimensions as the rest.

The big plane was christened at its dock by Mrs. Fred W. Lester of Downers Grove, Ill., mother of a Medal of Honor winner, Fred F. Lester, a hospital apprentice, who was killed trying to save a wounded Marine on Okinawa. The plane now joins its sisters on the Honolulu-San Francisco run with Fleet Logistic Support Wings.

Adm. Lonnquest Wins Award

National Air Council Gives Platter

Rear Admiral Theodore C. Lonnquest, assistant chief of BUAER, for research and development, has been awarded a silver platter by the National Air Council for his outstanding work in the field of aviation the past year.

Presentation was made by Lawrence D. Bell, president of Bell Aircraft Corp., at the International Air Exposition, New York City, on August 5. The award will be annual, Admiral Lonnquest being the first man in the Navy to win it.

The engraved award was given to him

BELL PRESENTS PLATTER TO ADM. LONNQUEST

for "his vision, intelligence, sound judgment and his dynamic leadership . . . in prosecuting effectively the postwar research and development program of this important agency of our national defense and in solving its many and complex and difficult problems."

Adm. Lonnquest's Navy service dates through two world wars. In 1935 he became an aeronautical engineering duty officer, one of the first in the Navy. One of his most recent assignments was with *Operation Crossroads,* in which he planned, directed and evaluated the many tests of naval aircraft and aeronautical equipment which were carried out at Bikini. He was head of the initial boarding team which went aboard vessels after the two explosions.

Navy Aids In Berlin Airlift

VR-3 Flies Atlantic; 'Hotshot' Quits

VR-3, PATUXENT — Navy transport pilots are doing their part to assist in *Operation Vittles,* the vital airlift project to supply the blockaded city of Berlin.

R5D's from this squadron are flying about 50 trips a month across the Atlantic from Patuxent to Frankfurt, Germany, and to North African destinations. The German-bound flights go via Westover field, Stephensville, Newfoundland; Lagens, Azores, and Port Lyautey, French Morocco.

Navy planes are not going into Berlin proper, but fly cargo and personnel to points in Germany from where they are transshipped. To make planes available for the airlift, the famous *Hotshot* transcontinental flight and the U-route via Jax and Corpus to the West Coast, were discontinued. Navy squadron VR-3 had been flying the routes under MATS. Later, smaller aircraft resumed operations over the routes at less frequent intervals.

HTA Pilots To Fly Blimps

New Policy to Expand Fliers' Ability

Heavier-than-air aviators soon will be flying Navy blimps and taking flight training to become lighter-than-air pilots, under a new policy announced by Chief of Naval Operations.

A quota of 40 HTA pilots a year will be taken into the LTA program and given a year's training at Lakehurst to fit them to fly blimps. Six months of that time will be utilized for flight technical training and the last half with an LTA squadron in operational flying.

Requests for LTA flight training are desired from ensigns and lieutenants (jg) of the regular Navy, including HTA pilots. Non-aviators must meet qualifications prescribed in BUPERS Circular Letter 200-47. AVH officers qualifying in LTA may expect normal rotation between LTA and HTA duties. Their blimp duty, incidentally, will count as sea duty for rotation purposes.

Letter applications referencing the LTA flight training NAVACT must be submitted to BUPERS, Attn Pers-3116, by 15 October 1948. Flight training of men selected will begin 17 January.

The new policy was adopted to give naval aviators a broader training in their chosen field and to provide more men qualified in dirigibles, which are taking on increasing importance as antisubmarine warfare weapons.

MCAS EL TORO—VMF-223 has adopted a new ground training syllabus. Recent officer graduates of the Amphibious Warfare School, junior course, will teach the subjects.

PHOTOS WANTED

NAVAL AVIATION NEWS plans to run a squadron history on wartime exploits of VPB-119, but needs photographs to illustrate it. Any member of the unit who is willing to lend his photographs will be assured good treatment of them and an early return. If possible, identify personnel, places and events shown. Mail them, packed in cardboard, to Naval Aviation News, Room 4927, Operations, Navy Dept., Washington 25, D.C.

JET FLIGHT WAS WONDERFUL, MR. BROWN SAID

VICE ADM. PRICE AND OTHER HIGH-RANKING NAVY OFFICERS PARTICIPATED IN JET FLIGHTS

SEC. BROWN MAKES JET FLIGHT

JOHN NICHOLAS BROWN, assistant secretary of the Navy for air, recently chalked up one in the record book by becoming the first man in the secretarial level of the armed forces to fly in a jet plane.

Mr. Brown was a passenger in the TF80C, Lockheed's two-seater training version of the *Shooting Star*, in a demonstration flight at NAS PATUXENT RIVER on July 30. Tony Levier, Lockheed test pilot, flew the plane.

"It was a wonderful experience," Mr. Brown said. "After we became airborne and had accelerated to cruising speed, all the regular sense of mechanical power, of which you are conscious in conventional aircraft, seemed to dissolve. You got a feeling of 'disembodied power.' The lack of vibration and lack of noise gave a sensation of pure speed."

Mr. Brown's flight was taken on an overcast day at a relatively low altitude—about 1,000 ft. This increased the sensation of speed, he said. The plane achieved a speed of more than 500 miles per hour on the flight.

Vice Adm. John D. Price, Deputy Chief of Naval Operations (Air), also flew as a passenger in the TF80C on the same day. Among others from the Navy Department who participated in the demonstration flights at Patuxent River on July 29 and 30 were:

Rear Adm. J. H. Cassady, Rear Adm. Joseph F. Bolger, Rear Adm. L. A. Moebus, Capt. J. B. Moss, Cdr. John A. Moreno and Cdr. Harry Sartoris.

Planes Sink Battleships

NOT OFTEN in peacetime operations does a squadron have an opportunity to participate in the sinking of two battleships, but that is what happened to Fleet All Weather Training Unit Pacific (FAWTUPAC), formerly Night Composite Squadron One, based at NAS BARBER'S POINT, Oahu, Hawaii. It is one of Navy's two night fighter squadrons, the only one in the Pacific.

The ex-BB's *New York* and *Nevada*, having survived the tests at Bikini, were towed from Pearl Harbor to a spot south of Oahu, and there were subjected to an unmerciful pounding by fleet air and surface units. Planes led by the commanding officer of FAWTUPAC, Capt. Paul H. Ramsey, USN, were in on both kills.

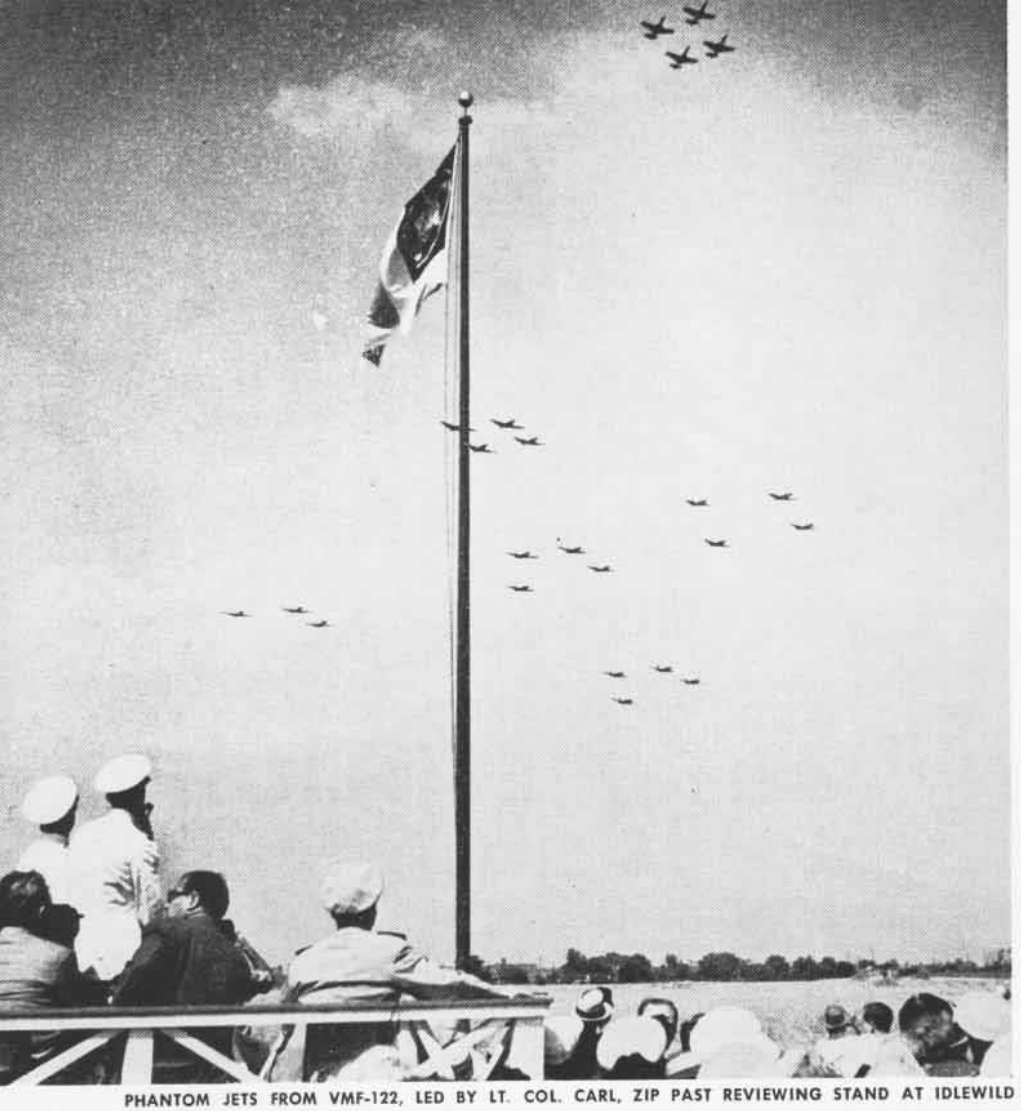
On 7 July 1948 the *New York* was the first to feel the sting of the fighters and attack aircraft. Twenty-six planes, consisting of two F7F-4N's, six F8F-1N's, twelve F6F-5N's, and six TBM-3N's, dropped a total of 48 500-pound bombs, 40 100-pound bombs, 98 5-inch HVAR's and expended 4100 rounds of .50 caliber ammunition. Twenty-one direct hits were scored with the 500-pound bombs, 20 direct hits were scored with the 100-pound bombs, and 56 direct hits were scored with the 5-inch HVAR's. While surface units stood by and submarines waited to close in for the kill, the tired old battlewagon rolled over and sank as the last participating FAWTUPAC planes recovered from their bombing attacks.

CAPT. PAUL H. RAMSEY LED BOMBING ATTACKS

On 30 July 1948, the *Nevada* fared no better, as Capt. Ramsey again led the aerial attacks by two F7F-4N's, ten F6F-5N's, and eight TBM-3N's. The fighters, armed with *Tiny Tims*, commenced their attacks at 1423 and were followed by TBM's carrying torpedoes which were equipped with new type war-heads.

The *Nevada*, listing slightly as a result of a three-day pounding by surface units, Marine fighter bombers, and special ordnance evaluation tests, could not stand up against the attack; and only 12 minutes from the time the first plane nosed over, the once proud ship sank beneath the waves. Of the 12 *Tiny Tims* fired, 5 were direct hits, and the rest were all within 50 feet of the ship. All eight torpedoes released went straight to their mark.

Primarily a night fighter and night attack squadron, FAWTUPAC gained a vast amount of excellent training in day tactics as a result of these two operations, as well as "Well Done"s from Commander in Chief, Pacific Fleet, and Commander Air Force, Pacific Fleet.



PHANTOM JETS FROM VMF-122, LED BY LT. COL. CARL, ZIP PAST REVIEWING STAND AT IDLEWILD

Navy Air On Parade

NAVAL aviation, in its largest participation in a municipal air show to date, thrilled and chilled some 750,000 persons during the nine-day International Air Exposition at New York's Idlewild airport, July 31 to Aug. 8.

The final day, designated as Navy Day, saw 400 Navy fighters, dive bombers, jets and torpedo bombers roar over the heads of the crowd in a mass attack on the airport with split-second timing that gave the show tremendous impact.

Following this the Navy put on a fast-moving demonstration of its airpower that literally "stole the show." Almost everything the Navy had that would fly participated; its newest jets making high speed runs, AD's and AM's making dive-bombing runs, its slick *Blue Angels* exhibition team staging its ballet-smooth aerial maneuvers. The Navy catapulted and made arrested landings of an F8F right on the field, shot a P2V skyward with JATO, and ferried high officials in and out with helicopters. As an added touch, three flying Admirals, D. V. Gallery, Apollo Soucek and E. A. Cruise, buzzed the field in FH-1 *Phantoms* on two days to show the public that veteran pilots could handle jets as easily as propellered planes.

Spectators who saw the Navy Day show saw Air Groups Seven and Nine from Quonset Point, CVLG-1 from the *Saipan*, Air Group 17, 60 Reserve planes from NAS NEW YORK, and VMF-122, the Marine's jet squadron headed by Lt. Col. Marion Carl. The Marines trotted out a smooth air maneuvers team of their own, flying four *Phantoms*, to give the *Blue Angels* competition. Planes that flew in the mass "attack" on the field included the FH-1 F4U, F8F, AD-1, AM-1, F6U, FJ-1, F9F-2, P2V-2, with the HRP-1 and HO3S helicopters and the giant R6O-1 *Constitution* also participating in other events.

Rear Admiral E. C. Ewen, Navy public information chief, was master of ceremonies of the day's events. Capt. LeRoy Simpler served as officer in charge of naval air participation in the exposition, coordinating the mass "attack" by radio from the control tower while two assistants, Lt. Bob J. Robison and Capt. H. L. Jacobi, USMC, kept the crowds advised of events over the loudspeaker system. Week-days during the exposition had the same air show, minus the group attack, when not rained out.

As an added feature of Navy Day, five midshipmen were flown up from Pensacola and presented their wings by Rear Adm. E. W. Litch, chief of Naval Air Advanced Training. They were J. E. May, W. V. Gillen, F. M. Nizich, W. T. Kellogg and R. P. Smith.

While the two flight teams headed by Lt. Cdr. Dusty Rhodes and Lt. Col. Carl entertained the crowds with their intricate maneuvers, new Navy jets made

P2V-2 FROM VP-ML-8 CLIMBS STEEPLY OVER IDLEWILD BY USE OF JATO

HRP DEMONSTRATES RESCUE TECHNIQUE, PICKING UP FIVE FROM A RAFT

high-speed fly-pasts. An unusual phenomenon was observed when the F9F *Panther* whizzed by at about 600 mph. Shock waves visible like vapor trails formed around the pointed fuselage just forward of the cockpit on one pass.

Also participating in the air show were *Sea Furies* and *Sea Hornets* from the Royal Navy, which based at NAS NEW YORK during their stay. The Eng-

ADMS. CRUISE, GALLERY, SOUCEK WITH AN FH-1

lish pilots showed themselves adept at aerobatics, one of them pulling up into a steep climb after flying upside down at about 100 feet altitude. RAF *Vampires*, Air Force planes of all types and Coast Guard helicopters helped round out the aerial program for the exposition.

The opening day of the exposition was featured by official visits by Pres. Truman and Republican Nominee Thomas E. Dewey. Both services put on vast aerial displays of might.

Short-Field Technique Told

VP-HL-2 Flies on Small China Strip

VP-HL-2, PACIFIC—Landing a heavy *Privateer* on short Chinese runways is a trick which pilots of this squadron have worked out by much discussion and hard experience.

On a recent flight to Tientsin and Peiping, Cdr. J. S. Gray, Jr., the CO, had a good chance to make short field practice on fields 3,800 and 3,400 feet respectively, the latter being a sworn 3,200 feet according to Chinese Air Transport pilots operating there. Post-flight discussions revealed many and varied techniques for this work.

A four-engine carrier landing approach, with the aircraft hanging on the props at 95 knots was found to permit the moderately-loaded *Privateer* to land on the shorter runway with several hundred feet to spare and with no undue use of brakes. Take-offs were made using quarter flaps and holding brake until 30" manifold pressure was reached, applying 50 inches manifold pressure relatively smartly.

At 90 knots flaps were put to three-quarters and the aircraft had gained several hundred feet of altitude by the time the end of the runway was reached. There may be better techniques. These are submitted as ones that work.

Plan To Expand Jax

PLANS ARE BEING made to develop NAS JACKSONVILLE, together with the auxiliary stations at Mayport and Cecil Field, into a major fleet aviation center, it was revealed recently by John Nicholas Brown, Assistant Secretary of the Navy for Air, in a letter to Florida's Congressional delegation.

In the letter, Mr. Brown stated:

"A study of the base facilities required to meet the Naval air expansion program recently authorized by Congress reveals that there exists an urgent need for additional fleet air operating facilities on the Eastern Seaboard, with every indication that this need will become more critical within the immediate future.

"In order to alleviate this situation, plans are being made to develop the Naval Air Station at Jacksonville, together with the auxiliary stations at Mayport and Cecil Field, into a major fleet aviation center. The first step toward that end will be the gradual replacement of the Advanced Training Units now at the Naval Air Station, Jacksonville, by carrier air groups beginning 1 November 1948.

"The plans regarding Cecil Field and Mayport are not yet firmly established. They are being studied jointly with other expansion plans prepared by the Navy and the Department of the Air Force to determine the feasibility of possible consolidation or joint usage by units of the Navy and the Air Force. However, unless the Air Force is in a position to make similar facilities available for Navy use, it is the Navy's proposal that the Naval Auxiliary Air Station, Cecil Field, be reactivated for use by Fleet Air Units on or about 1 November 1948, and the Naval Auxiliary Air Station, Mayport, be similarly reactivated in the early part of 1950.

"The complete plan for Mayport requires Congressional approval before it can materialize. A request will be included in the 1950 Navy Budget for funds to improve the channel from the mouth of the St. Johns River to Mayport, construct aircraft carrier berthing facilities and make other necessary improvements.

"It is believed that the Navy's development plans for the Jacksonville area will benefit the surrounding communities as well as provide the Navy with an urgently needed fleet air base on the Southeastern Seaboard. The realization of these plans will increase the Navy's payroll at Jacksonville and the funds spent locally for supplies and services. It is further believed that the future position of Jacksonville as a part of the Naval Aviation Shore Establishment will be made more secure.

"Although some fluctuations in the military personnel level must necessarily occur during the transition period at the Naval Air Station, Jacksonville, it is not anticipated that there will be any decrease in the civilian payroll.

"I know of no civilian interests that might be interfered with by the Navy's plans for Jacksonville and no opposition to the project is anticipated. I am forwarding this information to you so that you may be fully informed as to our overall plans in the Jacksonville area, and I should be happy to receive any expression from you as to your own view and the probable reaction of your constituents to this matter."

Local Chamber of Commerce executives hailed the plans as making Jacksonville the "San Diego of the Atlantic Coast."

Joint studies of Navy and Air Force facilities are now in progress with a view to possible consolidation of, or joint usage of, any facilities to be reactivated. No definite commitments can be made by either service until the results of these studies have been approved by the Joint Chiefs of Staff and the Secretary of Defense.

- NAS GLENVIEW—Some 504 Naval Air Reservists took cruises in June. Glenview tower beat all previous totals by handling 10,094 inbound and outbound flights. Reservists also flew some 85 planes in six local air shows.
- NAS MIAMI—Approximately 100 students from the adult night classes of Miami Technical High School and Embry Riddle School of Aviation recently received lectures on the I-16 jet engine.
- NARTU ANACOSTIA—During June the ordnance department put in long hours, working out of Webster Field, where this station's gunnery operations take place.

Visitors *aboard the Navy's biggest airplane, the Constitution, see a small model of the famous Revolutionary War frigate Constitution in a glass case in its passenger area. The ship namesake was given the crew by Cdr. Robert Montgomery, USNR, well-known movie actor*

'GUINEA PIG' AT PATUXENT, SECURED BY ANCHOR LINE AND CHUTE HARNESS, TESTS 38-KNOT SUCTION TWO FEET AHEAD OF FJ-1 JET INTAKE

Beware Jet Suction!

A CIVILIAN mechanic was killed at Muroc Air Base a year ago when he walked in front of the air intake of an F-86 jet aircraft and was sucked in by the inrushing air.

The plane's J-35 engine was operating at military power at the time and the man was reported to have been four feet from the intake. Since that time considerable question has existed in the Air Force and Navy as to the extent of the danger area around the front of a jet engine when it is running.

Bureau of Aeronautics decided to find out. It ran an exhaustive scientific test with an FJ-1 *Fury* at NATC PATUXENT RIVER. Findings of this experiment will do much to alleviate the fear that anyone within 10 or 15 feet of the intake is in danger of being drawn in by the suction.

The tests were run by Service Test division at Patuxent. The FJ-1 was operated both in a standard position and "kneeling." As a result of the tests, it was concluded that the actual danger area for this airplane extends only two feet in front of the jet intake. The area between two and five feet is dangerous only because the sudden wind may cause a man to lose his balance and stagger into the critical danger area.

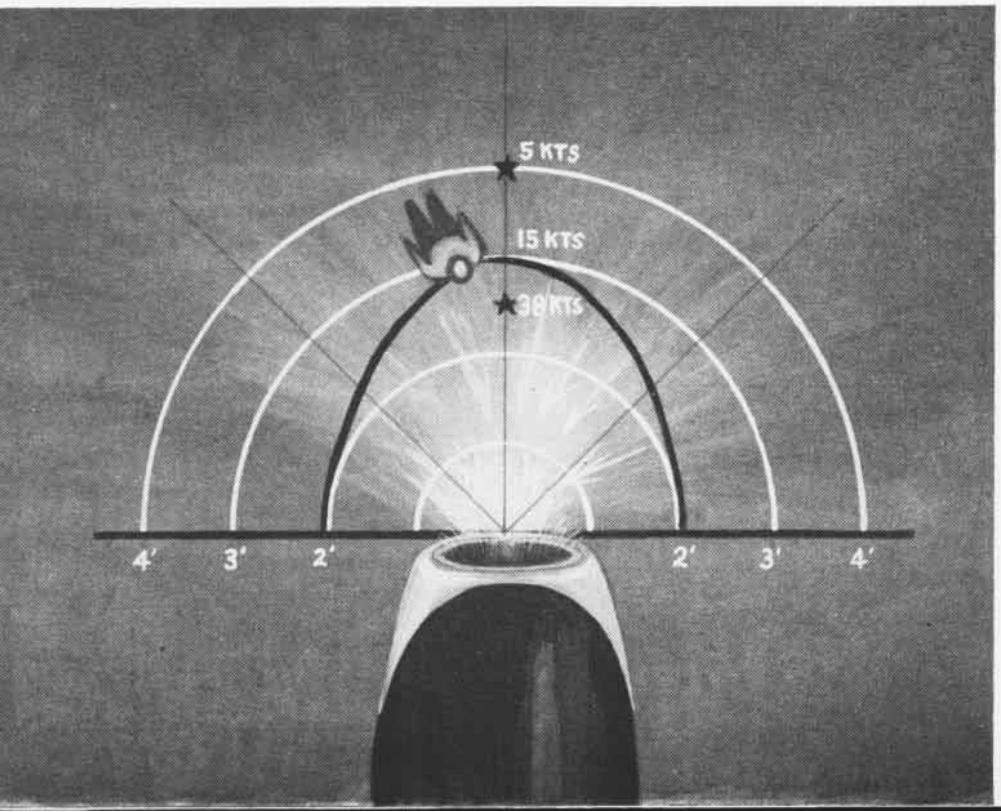
Actually, the danger area is even less when the person is standing to one side of the inlet, since the suction is greatest from straight ahead and decreases rapidly away from the center line.

● With the plane's engine turning up at maximum rpm, it was found there was an air velocity of 38 knots at 2′ 3″ distance directly in front of the jet. Three feet away this dropped to 15 knots and four feet away the "draft" was only a five-knot wind.

In making the test, a human subject approached the duct, well-secured with parachute harness and heavy line. He was able to stand within two feet without difficulty. He reported his reaction as being "only that caused by a 30-knot wind."

In a kneeled position, the airspeed was 55 knots one foot directly in front of the jet, 27 knots two feet in front, 15 knots three feet away and zero knots at four and five feet distance. A dummy figure the size and weight of a man also was used during the tests and findings on it were similar to those with the live subject. A standing dummy was not visibly affected two feet in front of the jet. Lying prone, the dummy was not visibly affected at distances of one foot.

CHART SHOWS HOW SUCTION FALLS OFF FAST AS DISTANCE INCREASES FROM FRONT END OF JET



As a part of the test, a wire screen was used in front of the jet intake duct to act as a safety guard. BUAER is experimenting with the idea that some such guard might be incorporated permanently in the duct to keep out flying caps, tools or other gear that would foul the rotors if sucked in.

Readings on the speed of air rushing into the engine were made with a special pitot head, adjusted by a cable secured to the deck ahead of the airplane *(see photo)*.

The human subject was 5′ 10″ high and weighed 180 pounds. He wore a QAC parachute harness backwards and a safety line secured him to a tie-down ring in the concrete deck.

The tests were conducted with only a slight quartering wind blowing across the field. Conditions of the flight deck, if a jet were on a carrier, wind over the deck and the type of clothing worn by deck crewmen would affect the danger area, requiring men to stay farther away to be safe.

The FJ-1 has a large intake duct and velocities were less than would be secured from a smaller duct. The speed at which the engine was turning up also would affect the air speed. Planes like the FH-1 *Phantom* and the F9F *Panther* have air intakes on both sides of the fuselage instead of one in the nose. Suction before them, as a result, might be less than from a single intake, although they also have lesser intake area.

Although the tests put the actual danger area at around two feet directly in front of the FJ's nose, personnel would do well to give a jet considerably wider berth, just as they do a whirling propeller. Keep in mind these added cautions:

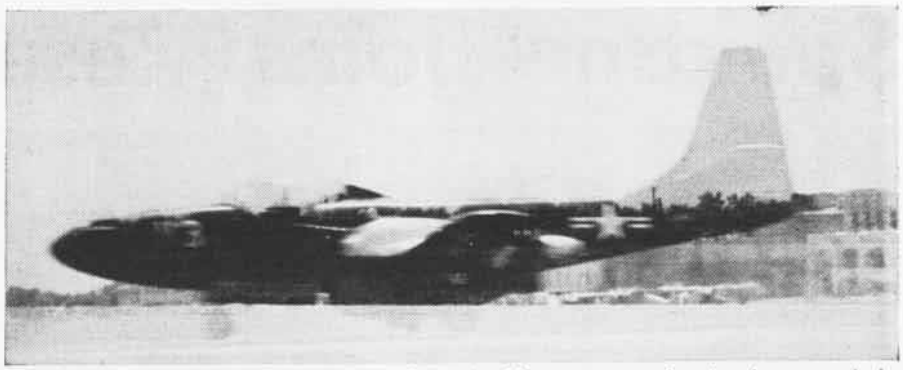
1. Heavy flight clothing creates greater wind resistance and will help "blow" a person into the danger range around a jet.

2. Wind over the deck, say 30 knots, would help shove crewmen toward the intake. Should a person accidentally stumble, he could be easily drawn inward.

3. Rate of engine turnup affects the suction. Less speed, less intake.

4. Suction is worst directly in front of the plane and falls off to the side of the jet intake centerline.

PITOT TUBE USED TO MEASURE SUCTION OF JET



One habit *photographers have is taking double exposures, but in the case of the photog at NAS New Orleans, his faux pas turned out to be something unusual. The FH-1 jet's nickname is the Phantom and by taking two pictures accidentally on the same negative, the photographer really got a Phantom effect for his trouble.*

Rusty on Aircraft Letters?

Some Changes Show Special Version

Familiarity with aircraft designations comes fairly easily as far as the basic types and classes are concerned. Some confusion still remains, however, with regard to the suffix letters which indicate special versions. Since a few changes and additions occurred during the past year, the following reference list will help to bring Naval personnel up-to-date. The suffix follows the designation, e. g., AD-1Q, radar countermeasures version of Douglas attack plane, first model.

SUFFIX LETTERS

A	Amphibious version
B	Special armament version
C	Carrier version of non-carrier aircraft
D	Drone control version
E	Special electronic version
G	Search and rescue version
H	Hospital version
J	Target towing version
K	Target drone version
L	Searchlight version
M	Weather reconnaissance version
N	Night operating version
P	Photographic version
Q	Countermeasures version
R	Transport version
S	Antisubmarine version
T	Training version
U	Utility version
W	Special search version
Z	Administrative version

Some other examples of how the letters work follow: Most people know the amphibious version of the *Catalina* is the PBY-5A and the wheeled-version of the *Mariner* is the PBM-5A. The drone *Hellcat* used for target practice is the F6F-3K. Target-towing *Avengers* are called TBM-3J and the antisubmarine version of the *Neptune* is the P2V-2S. *Corsairs* with 20 mm. guns, for instance, are F4U-4B's, the "B" indicating special armament version.

Aircraft may have installations provided in the preceding list, but it does not always show in the designation. The *Neptune* listed has a searchlight but it does not carry an "L" in its designation since its primary job is ASW work. The Navy at present has no planes with the "L" designator for searchlights. Some *Avengers* have tow reels installed but may be called TBM-3U. SNJ's with tail hooks for carrier landings are called SNJ-4C's.

PBM Saves Marooned Pair

Aground on Uninhabited Island

Two survivors of a capsized 37-foot ketch marooned on an uninhabited Bahaman island are thankful for the patrol work of VP-MS-8 operating from NAS TRINIDAD. On 12 May a PBM-5 piloted by Ensign Harry E. Edmondson, USN, rescued Dr. and Mrs. Burton C. Kaye of Honolulu, Hawaii, from what might have been a long "Robinson Crusoe" vigil.

The rescuing plane was one of many Navy and Air Force aircraft participating in the extensive, but fruitless, search for a PBY-6A which had disappeared 9 May enroute from NAS ROOSEVELT ROADS, P. R. to NAS KEY WEST. Dr. and Mrs. Kaye were located after their tent was sighted on the northern end of Lee Stocking Island in the Exuma group. Investigation revealed a ketch aground and capsized on rocks and a small camp flying the American flag upside down. A successful landing in light swells was made by the PBM in the lee of the island to effect the rescue.

The marooned couple had been enroute from Miami to Honolulu via the Bahamas, the Panama Canal and California in their small craft when they ran aground in a storm on 9 May. Although they had a 30-day food supply remaining at the time of their rescue, their fresh water was nearly exhausted and they considered themselves in perilous circumstances. They were picked up and flown to NAS GUANTANAMO BAY.

Spokane Joins Reserve Chain

SPOKANE RESERVISTS HUFF, BOHRER, SMITH SHOW INSIGNIA TO LT. CDR. PETTITJEAN (L. C.)

LATEST naval air station to join the nationwide Naval Air Reserve network is NAS SPOKANE which was commissioned during September. This station, which comprises about eight city blocks and includes three hangars as well as approximately 45 buildings for administration, training and maintenance, is located at Geiger Field, from which the former AVU(A) operated. It is the 24th station to be activated within the Naval Air Reserve Training Command.

Commissioning was expedited by the speedy action of the Spokane city council. After less than one hour's negotiations with the Navy, in fact, the council made available necessary facilities. Leading this group in their red-tape cutting operations was Mayor Arthur Meehan. Help was also given all along the line by commissioner "Duke" Taft.

Set up after a careful survey to serve the great Reserve potential in the Inland Empire, the new station will provide training for two Organized Reserve units: a CVE group and a fleet air service squadron. Forty planes, including 28 *Hellcats* and *Avengers* are being transferred for the training of pilots.

Later it is planned to add a patrol squadron and a VP FASRON, as well as 10 additional planes including 2 PV-2's and 4 PBY-A's.

The Organized Reserve allowance is set at 70 officers and 500 enlisted men. In addition, training will be available for Volunteer Air Reservists. Stationkeeper plans call for 12 officer and 130 enlisted personnel, many of whom have already reported for duty.

Sparking the new organization and the various squadrons are more than 130 members of the former Associated Volunteer Unit who came out for drill without pay for many months to train and to fly 10 planes based at the Naval Air Reserve Auxiliary, now replaced by the new station.

Geiger Field is located about seven miles from the business center of Spokane, two and a half miles beyond the city limits. Taken over during the war by the Army Air Force, it has since been transferred to the city. It boasts three runways larger than those at either the National Airport, Washington, D. C., or LaGuardia Field in New York City. The Navy has taken over buildings in the left foreground of the picture. Although Navy pilots will use tower facilities already on the field, the Navy will provide its own fire protection. The station will have Class D maintenance facilities.

Commanding officer of NAS SPOKANE is Cdr. Waldo C. Grover, USNR, who was formerly executive officer at NAS AKRON and at NARTU ANACOSTIA. During the war Cdr. Grover saw action with the *Franklin* and the *Breton*.

Jax Supports Charleston AVU(A)

ONE OF the first Associated Volunteer Units to be established in the country, the AVA(A) at Charleston, which was supported by NAS ATLANTA, has been transferred to associated status with NARTU JACKSONVILLE.

Planes are now being flown to Charleston from Jacksonville on the second and third weekends of each month to provide flight training for the more than 50 pilots in the AVU(A). Planes will be available from Friday through Sunday on these weekends.

Among the first Reservists to fly the planes from Jax were Lt. (jg) J. W. Scharpf of the Southern Bell Telephone Company; Lt. (jg) Thomas Voshell, a veteran student at the Citadel; and Lt. John D. Wilcox, who is with the Metropolitan Life Insurance Company.

Shown in the picture with one of the first three planes ferried from Jax are: Lt. Cdr. C. L. Thompson, volunteer training officer at Jax; Lt. J. M. Hestilow, operations officer; Lt. (jg) J. W. Scharpf of the AVU(A); Cdr. F. E. Schrader, Jax technical training officer; Lt. Cdr. H. C. Jipson, 6ND Air Reserve Program officer; Lt. (jg) Thomas Voshell of the AVU(A); Lt. (jg) Julian R. Simmons, CO of the Charleston unit; Lt. Cdr. E. M. Valentine, CO of the Tampa, Florida, unit; Lt. John D. Wilcox of the unit; and the plane captain, A. S. Trent.

GEIGER FIELD—NAVAL AIR STATION LOCATED AT LEFT, AIR LINES TERMINAL AT FAR RIGHT

Minneapolis Wins Conway Trophy

The Edwin Francis Conway Memorial trophy, granted each year to that station within the Naval Air Reserve Training Command which displays the greatest overall efficiency, has been awarded for fiscal 1948 to NAS MINNEAPOLIS.

Close on Minneapolis' heels in the matter of points were NARTU SEATTLE, NAS LOS ALAMITOS, NARTU NORFOLK, NAS WILLOW GROVE and NAS OLATHE, which placed second, third, fourth, fifth and sixth respectively.

Winners of the Noel Davis trophy, which is awarded annually to the squadron in each type having the best record, were VF-79-A of Willow Grove, VA-62-E of Norfolk, VP-64 of Norfolk, VR-71 of NARTU ANACOSTIA and FASRON 158 of NARTU JACKSONVILLE.

VAU 11-1 Takes the Plaque

FOR OUTSTANDING performance in the months since its organization, VAU 11-1 recently won the 11 ND Volunteer Aviation Reserve plaque. The contest covered such factors as unit membership and attendance, completeness and accuracy of records, meetings scheduled and training programs.

VAU-11-1, the first to be organized among the 16 volunteer aviation units now set up in the district, musters in the Naval Reserve Training Center at Camp Decatur, San Diego. It has 47 officers and eight enlisted men.

The Unit's program during the prize-winning year included lectures on Arctic and Antarctic flight problems and cold weather survival, motion pictures, reports on latest jet developments and training courses. Scheduled for future meetings are field trips to San Diego-based naval activities, talks on rocket and plane research, training sessions for advancement in rate, and social events.

Under present plans the number of meetings is to be increased to provide opportunity for full unit participation in the new Reserve retirement program. Coincident with this, the unit is planning a local campaign to increase membership.

In the picture Cdr. Clifford E. Smith, CO of VAU 11-1, receives the plaque from Cdr. C. P. Kerschner, Assistant Director of Naval Reserve (Air), who represented Rear Admiral B. H. Bieri, District Commandant, in the ceremony.

Station Round-Up

● NAS OLATHE—In the presence of the Governor of Nebraska and a galaxy of prominent business men and civic leaders, Captain Campbell Keene "commissioned" the unit at Omaha as a AVU(A) on 25 July.

● NAS GROSSE ILE—In response to a request from the Coast Guard on 28 July, a frantic call from a lake steamer, asking for the immediate removal of a woman who had collapsed aboard, was answered by a PBY. Transfer was made to the plane from the ship in a small boat. An Air Force helicopter stood by to take the patient to City Airport, but medical examination indicated that the woman's condition warranted immediate removal to a nearby hospital in a Navy ambulance. According to the Coast Guard, this was the first time such a transfer had been made on Lake Erie.

● NAS COLUMBUS—Carrier Air Group 53 participated in the recent Junior Chamber of Commerce Air show which was witnessed by approximately 20,000 people.

The medical department has been very busy giving flight physicals in connection with the NavCad program for the Office of Naval Officer Procurement at Cincinnati and at Pittsburgh.

● NAS ATLANTA—Approximately 30,000 people visited the aviation technical training display at the All Dixie Air Show held at Chattanooga, Tennessee.

● NAS DENVER—AVU(A) Salt Lake City pilots flew 256.9 hours during July. On the occasion of the sixth anniversary of the WAVES, 27 Denver WAVES who had performed outstanding volunteer work at the station and at the Naval Reserve Training Center, were transported on an R4D training flight to San Francisco to spend a day aboard the Reserve DE *Nickle*.

● NARTU SEATTLE—Following his visit to the NARTU, Major General John E. Upston, Commanding General of the Fourth Air Force, Hamilton Field, California, accepted the invitation of the CO to send all Air Reserve detachment commanders under the cognizance of the Fourth Air Force to Seattle. At the NARTU they learned about training and operational procedures currently in use by Naval Air Reserve activities.

During July 100 girls in the Civil Air Patrol's Girl's Encampment, held on the station, received lectures and toured training facilities.

CDR. KERSCHNER CONGRATULATES CO SMITH

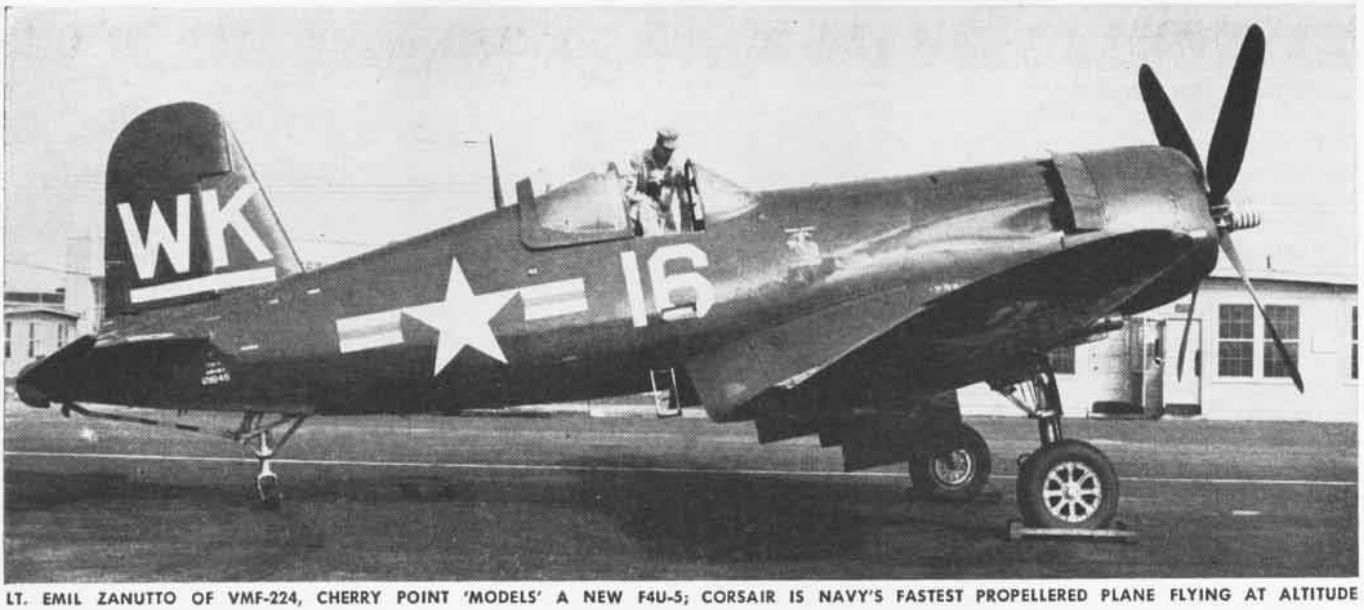
● NAS GLENVIEW—July was highlighted by the Chicago Area Plymouth Dealer's Model Airplane Contest held on the station for two days. The crowd reached a peak of 62,000 due to excellent advance publicity. In this connection 25,000 paper airplanes were dropped on the Chicago area from Glenview aircraft. The paper planes bore the legend "Naval Air Reserve Packs Peace Power" as well as an invitation to attend the contest. Numbers imprinted on them were later used in a drawing to determine winners of several model airplanes.

● NAS DALLAS—Reservists held another successful cruise during July at Whiting Field. The entire operation went off smoothly despite the fact that 185 SNJ's filled with primary students were flying from the same field.

● NAS MEMPHIS — Twenty-two aviators attached to the AVU(A) at Knoxville flew 133.7 hours during July. Lt. (jg) Fred A Parker, a former employee of one of the Knoxville papers, recently took over as PIO for the unit and has been keeping unit activities in the news.

A jet engine classroom is being set up at the station. Equipment available consists of two I-16 and one British H-1 jet engines, an electrical panel, fuel panel and oil panel, together with necessary charts, pictures and drawings for carrying out instruction.

CHARLESTON AVU(A) PILOTS GET EXPERT ADVICE AS THEY MAP OUT TRAINING FLIGHT ROUTE



LT. EMIL ZANUTTO OF VMF-224, CHERRY POINT 'MODELS' A NEW F4U-5; CORSAIR IS NAVY'S FASTEST PROPELLERED PLANE FLYING AT ALTITUDE

New Corsair F4U-5

CORSAIRS have been flying for the U. S. Navy since 1926 and the newest of the famous line of Chance Vought fighters, the F4U-5, is now joining the fleet to give it its fastest propellered aircraft at altitude.

Well into the 450-mph class, the newest *Corsair* from the exterior looks almost exactly like its immediate ancestors but refinements inside the cockpit make it more than ever a pilot's plane.

Unlike most other planes, the Chance Vought fighters have always been called *Corsairs* ever since four Navy pilots, flying the original 1926 model, set four world's records in two months. *Corsairs* bearing designations ranging from O2U-1 to SU-4, continued to be made until 1934. There was a period of three years or so when *Corsairs* continued to be operational, but were not being manufactured by Chance Vought. When war shadows got darker in 1938, *Corsair* again became a household word at Vought.

Vought engineers, in answer to a Navy request for a new fighter airplane, came up with a high-powered, gull-winged airplane that answered all the specifications. The rest of the story is history—Chance Vought at its Stratford plant, turned out 6,600 *Corsairs* and licensees turned out another 4,700 identical models of the airplane.

Corsairs were flown with outstanding success first from South Pacific land bases by Marines. Later in the war, when the idea that they weren't good carrier fighters because of lack of visibility over the nose was dispelled, they swarmed over Navy and Marine carrier decks.

By the time VJ day had arrived, the series had progressed from the F4U-1D to the F4U-4. The latest one had an edge of more than 50 mph over the F4U-1 and its rate of climb had been increased by 1,000 feet a minute. Both range and ceiling also were greatly improved. Some 413 major engineering changes have been made since the *Corsair 1* and a staggering total of 12, 133 production changes have been made to bring the "Five" model up to its present performance level.

The Navy is procuring several score of the latest models, which are being manufactured at Chance Vought's new plant at Dallas, Texas. The plane is versatile, serving as a fighter, fighter-bomber or a night fighter.

Modernized from power plant to tail assembly, more powerful and of all-around usefulness, the F4U-5 is the fastest propeller-driven airplane produced for the Navy in any quantity. Let's take a closer look at this newest member in the VF fold. How does it differ from its predecessors?

1. Appearance—perhaps the best identifying feature of the F4U-5 is the engine cowl. Dead-ahead it presents the viewer with air intake scoops at 4 and 8 o'clock. From astern it may be possible to see that the last vestige of fabric has disappeared from the outer panels which now are metal covered. To improve maintenance, a large access door has been provided on the right side of the fuselage just aft of the pilot's seat (see photo).

STEPS ON FUSELAGE, WING HELP PILOT ENTER

2. Controls—High speed maneuverability has been improved by use of spring tabs for elevator and rudder controls. The control forces required of the pilot are decreased by about 40% at high speed, as compared to the F4U-4. Thus, it will be found that changes in rudder and elevator forces with changes in speed, stick forces required during dive recovery, and forces required during high speed maneuvering will be reduced. Less attention is required of the pilot for changes in trim tab.

3. Landing—Bringing the F4U-5 in for a landing is accomplished with substantially the same technique as the -4. It will be noted, however, that because of the more forward CG location, the tail will be somewhat light and more nose-up trim tab will be required during the landing. When several flights have been made and pilot familiarity gained, this small difference will be difficult to detect.

4. Versatility—Considerable versatility always has been required of Navy aircraft and the F4U-5 has its full quota of this important characteristic. Stripped of all its external stores-carrying provisions, the F4U-5 is a fast and elusive fighter, packing a terrific punch in its 20 mm. guns. To increase its range, external tanks may be installed on pyl-

ons. Its firepower can be increased by use of HVAR or *Tiny Tim* aircraft rockets. As a long-range bomber, the *Corsair* is equipped with external fuel tanks on pylons.

5. Cold Weather Operations—The F4U-5 should pose no special problems for maintenance and pilots during cold weather flying. Each airplane is equipped with an oil dilution system and provisions for an extra storage battery to simplify cold starting.

In flight, a combustion-type heater of generous capacity will, if needed, flood the cockpit with warmed air while a snug canopy fit will cut down uncomfortable drafts. The air inlet for the heater is located on the floor of the cockpit immediately in front of the stick (*see photo*).

Windshield defogging is accomplished by directing heated air from the cockpit heater, through an appropriate louvre, at the aft side of the windshield. Electric heaters on the guns and pilot tube prevent icing of this equipment.

6. Engine—The latest *Corsair* has the new R-2800-32W engine which delivers 2,300 take-off horsepower, plus greater power using water injection if required. The F4U-4's carried the R-2800-18W and -42W engines of approximately the same horsepower.

7. Cockpit—The secret ambition of every airplane designer is to provide living room comfort in a gadget-crowded fighter cockpit. The F4U-5 cockpit does not quite provide living room facilities but it has plenty of handy ideas incorporated. It is designed to minimize flight fatigue in three ways: *1.* By seating the pilot as comfortably as possible, *2.* By relieving him of much operating detail through incorporation of automatic controls, and *3.* By designing controls for easy manipulation and arranging them in logical groupings and locations.

Access to the cockpit has been simplified by incorporation of a telescoping step on the right side of the fuselage. This step is below the folding step which is common to both F4U-4 and -5 airplanes. Both steps are now cable-connected to the tail wheel and are automatically raised and lowered with the tail wheel. In addition, both steps may be closed and opened by deck men.

The F4U-5 seat is a one-piece magnesium alloy bucket seat with a high form-fitting back. The seat is adjustable through a vertical movement of 7", half of that amount either up or down from the neutral position. As the seat moves upward through its full vertical adjustment, it also moves forward one inch. Seat adjustment is accomplished by depressing a knob on the right hand console adjacent to the seat.

E. W. FLINT, AD1, SHOWS OFF BAGGAGE AREA

FIRST PLANE CALLED CORSAIR WAS THE 02U-1

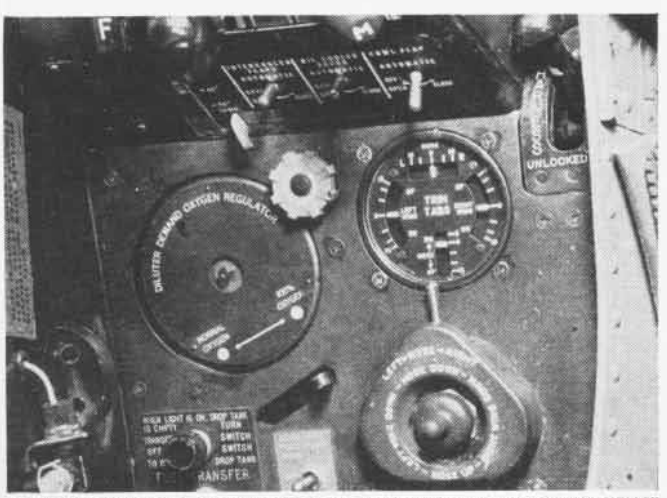
8. Trim Tabs—Another first in *Corsair* design is the electrical trim tab control conveniently close to the pilot's left hand. The controller unit and associated indicator provide an effort and space-conserving means of quickly and accurately positioning the trim tabs. (*see photo*)

Trim tabs areas and maximum deflections have been designed so that tab forces with the tabs in either extreme position may be overpowered readily during take-off operations by use of the normal controls.

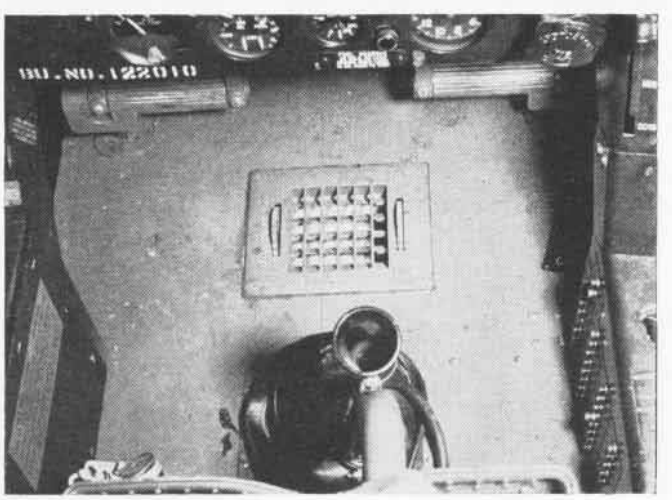
In addition to electrical trim tab actuation, the rudder and elevator tabs incorporate a spring mechanism by means of which these tabs are automatically deflected to assist in control operation when air loads reach certain high values. Consequently, it will be found that changes in rudder and elevator forces, stick forces required during dive recovery, and forces required during high speed maneuvering will be reduced.

By the same token, introduction of spring tabs will aid in spin recovery. No spring tab installation has been provided for the aileron tab, which retains its linked balance tabs in addition to the electrically-operated trim tab.

When the Navy compiled its battle score of the Pacific, listing the Japs shot down in combat by carrier-based planes, it found that *Corsairs* had accounted for 2,140 of them in aerial combat. This record is exceptional when it is remembered that the F4U's operated mostly from land bases and did not participate in carrier strikes, when the big kills were made, until late in the war. When they first reached the battle areas, the Japs soon learned to respect their speed and firepower. They quickly won the nickname "Whistling Death."



TRIM TAB CONTROLS ALL IN ONE SPOT MAKE FOR PILOT'S CONVENIENCE



HANDY LOCATION OF COCKPIT HEATER INLET NEAR THE PILOT'S FEET

MARINE AIR GAMES SHOW OFF RESERVE

Marine Reserves mass between orderly rows of *Corsairs* at Cherry Point for second annual maneuvers; pilots flew 50% more hours this year as air program is expanded

THE SECOND annual maneuvers of the Marine Air Reserve at Cherry Point and El Toro eclipsed 1947 records for hours of flight time and the number of men and officers spending their two weeks on active duty.

For 14 hot and humid days under a broiling Carolina sun, 481 officers and 1,399 men put on an impressive display of how fast Marine Reserve fighter squadrons could mobilize into a fighting unit. They flew 7,756 hours, compared to 5,235 flown by the 1,500 Marines in the 1947 maneuvers.

At El Toro, coastal fogs again hampered some morning flight operations, but the 2,072 Marines flew 9,764 hours. Both maneuvers were the largest peacetime concentrations of Reserve air power on either seacoast.

A spectacular two-day battle problem, in close support of Fleet Marine Force infantry regulars from Camp Lejeune climaxed the Cherry Point operation. Aside from the absence of live enemy forces shooting back, there was nothing mock about the battle problem. Heavy artillery opened the way, followed by Reserve fighter pilots who smashed at "enemy" strong points.

When the infantry moved in to mop up with flame-throwers, grenades and bayonets, the "enemy defenses" had collapsed. So had a bunch of Marine Reserve pilots who had hiked along with the infantry to observe the maneuvers from the ground. They returned laden with *1.* liniment, *2.* a healthy respect for the endurance of foot troops, and *3.* vast admiration for pin-point target work of Marine artillerymen.

IN THEIR own field, the Leatherneck Reserve airmen took no back seats to anyone. Close air support to them was nothing new, considering that most of them had done the same kind of fighting "for keeps" at Peleliu, Tarawa, Iwo or Okinawa.

Ground maintenance crews set up an excellent record in keeping the 186 *Corsairs* in such good condition that pilots of the 17 squadrons were able to fly 50 percent more time in 1948's maneuvers. Marine Ground Control intercept squadrons from Glenview, Squantum and Grosse Ile participated in the maneuvers, along with fighter squadrons from Glenview, New York, Miami, Squantum, Norfolk, Columbus, Grosse Ile, Anacostia, Atlanta, and Willow Grove.

Marine and Navy transport squadrons cooperated in shuttling ground personnel and non-flying officers to and from Cherry Point. In addition to their chief activity, flying, the Reserves saw displays of newest jet aircraft and engines, pilotless aircraft, new propellered planes like the AD-1, AM-1 and F4U-5, and had movies taken in color of their full maneuvers from start to finish.

Brig. Gen. Christian F. Schilt, CO of Marine Air Reserve Training Command, declared the operation proved quick movements of Marine squadrons into combat positions could be accomplished in 24 hours. He said Reserves proved themselve capable of expert full-time work under combat conditions, that effective Reserve air strength can be developed on a "part time" basis and at an economical cost to the United States.

Anacostia Marine Reserves pile baggage in transport plane to head for Cherry Point maneuvers; VMR squadrons helped

Capt. F. A. Lauderdale, ACI officer for VMF-351, briefs squadron pilots on target assignments at Cherry Point base

Brig. Gen. Schilt congratulates Miami Marines for work at maneuvers—Park, Pope, Gaskill, Ignaszewski and Parker

Chow at El Toro wasn't too bad, judging from smiles on faces of Shivler, Long and George, from Memphis' VMF-124

Like the maneuvers at Cherry Point, the Marine Reserves at El Toro also hung up some records for themselves, both in the size of the turnout and the number of flight hours.

A total of 2,072 officers and men participated in the California exercises, flying in from as far away as St. Louis and New Orleans. Last year 1,400 took part. Total flight hours was up from 5,719 to 9,764, a huge boost made possible in part by the excellent plane availability of 90.06% for the 12 squadrons.

VMF-221 from St. Louis flew the record number of hours for both the Cherry Point and El Toro maneuvers, with a total of 1,005.6. VMF-236 from Denver had the highest squadron aircraft availability for both places with 100% for the two weeks.

The El Toro maneuvers were a real test of the speed with which Marine fighter squadrons could assemble and be ready to fight in a hurry. Aided by Marine and Navy transport squadrons, they were on the spot and flying within three days. By the time the maneuvers were over on 20 August, everyone from Gen. Schilt on down was pleased with the way the operations turned out and proud of the outstanding record the men had piled up.

Squadrons from Dallas, Denver, Memphis, New Orleans, Minneapolis, St. Louis, Olathe, Seattle, Oakland and Los Alamitos flew their *Corsairs* west or south to El Toro. Ground crewmen and nonpilot personnel went via the R4D's and R5C's and returned the same way.

Highlight of the maneuvers was the final full-scale air-ground beachhead assault on "enemy" forces at Camp Pendleton, with Reserve *Corsairs* furnishing close air support to the ground troops and air cover for surface Navy operations.

In addition to their flying activities, ground school classes were held to bring newer recruits up to par with their more experienced mates of the line. New-

Actors Dennis Morgan and Jack Carson give 10-gal. hat to Brig. Gen. Schilt

Marine Air Reserve pilots at El Toro check target position maps prior to training flight; this year's maneuvers set a new record for flight hours, plane availability

type Navy planes like the FJ-1 *Fury* and the AD-1 *Skyraider* were put on display, as well as a squadron of Marine TO-1 (F-80) jets based at El Toro, so the Reserves could get the word on late developments.

With their experience from last year's maneuvers behind them for a background, the Marine Reserves this summer held their operations with greater facility and ease. The speed with which they could mobilize a whole striking force of fighting planes in a day or two, ready to go into instant operation, demonstrated the value that the Reserve training program has for the Navy and preparedness. This year's bigger maneuvers put no strain on the Marine Corps and its Reserves.

New Carrier Plane

XAJ-1, NAVY'S BIGGEST CARRIER-TYPE PLANE, HAS TWO CONVENTIONAL ENGINES, JET IN TAIL

A NEW naval aircraft for carrier operation has completed successfully its initial flight tests at the North American Aircraft Company, Los Angeles, California.

The plane is the XAJ-1, combining two (Pratt and Whitney Wasp Majors) reciprocating engines located under the wings with one GE-Allison turbo jet engine in the tail of the fuselage. Performance figures are not yet available, but it will be considerably faster and able to carry a heavier bomb load than present carrier types.

The plane will use its conventional engines for normal operations while the pilot will be able to "cut in" the jet for added speed under combat or whenever needed. The plane is heavier than present attack types used in carrier operation, yet lighter than the *Neptune* (P2V) which recently took off from the *Coral Sea*.

The XAJ-1 carries a crew of three seated in a pressurized cockpit. The plane has a tricycle landing gear, high wing, and four-bladed propellers. The propellers are designed by Hamilton Standard, to provide high take-off thrust and excellent performance at high speeds and high altitude.

For ease of deck handling and maintenance, the outer wing panels of the XAJ-1 fold inboard, and the vertical tail folds onto the right surface of the horizontal tail.

Revoking of Flight Orders

Men About to Be Separated Affected

With the tighter administration over all orders to duty involving flying currently in effect, it has been the Navy Department's policy to revoke the duty involving flying status of those naval aviators or observers who are awaiting retirement or separation from the Navy.

Decision has been made that the continuation of flight proficiency is not necessary and cannot be justified in cases wherein retirement or separation are pending, Chief of Naval Operations announces.

Accordingly, when suitable request is received or when appropriate action has been taken upon recommendations of official boards, Chief of Naval Personnel will be requested to revoke that part of the orders which specify "to duty involving flying" for those officers whose retirement or separation has definitely become inevitable.

Coral Sea Has a Busy Time

Helicopter Rescue Is Recent Feature

USS CORAL SEA, ATLANTIC—Recently a VF-18A pilot spun in on the cross-leg of his landing approach. Fortunately, he was able to extricate himself from the plane before it sank. Lt. (jg) William Schaufler, piloting a helicopter attached to Helicopter Utility Squadron 2, made a superb recovery — having the pilot safely aboard the ship in about three minutes from the moment of impact.

VA-18A, commanded by Lt. Cdr. G. Macri, believes it has set a peacetime flight record operating from a carrier. The pilots of this squadron flew a total of 1,000.1 hours during July. This is an average of 45.5 hours per pilot.

Lt. M. R. Etheridge attached to VA-2E made the 7,000th landing on board the *Coral Sea* on 15 July. Ens. L. A. Jones, attached to the same squadron made the 8,000th landing on 29 July. As of 4 August, 1,343 catapult launches, 6,830 deck launches and 8,125 landings have been completed on board this vessel.

Permanent NR Appointment

Reserve Officer Rank Structure Set

Officers in the Naval Reserve, who for the past six years have received only temporary appointments, are now entitled to permanent appointments in accordance with a list recently published by the Navy. This list may be found in a publication issued by BUPERS entitled "Permanent Appointments and Rank Status of Officers of the United States Naval Reserve—1 July 1948."

Not included in this new list are retired Reserve officers or those on active duty in Regular Navy billets, who received permanent appointments under the Officer Personnel Act of 1947.

Since appointments to permanent rank are not effected automatically, eligible Reservists should report as soon as possible to their nearest naval activity in order to accept their appointments.

Retired Pay for Reservists

20 Years Satisfactory Service Needed

Under the terms of Public Law 810, signed on 29 June 1948, Reservists are now entitled to receive retired pay upon reaching the age of 60 years, provided that they have performed 20 or more years of satisfactory federal service.

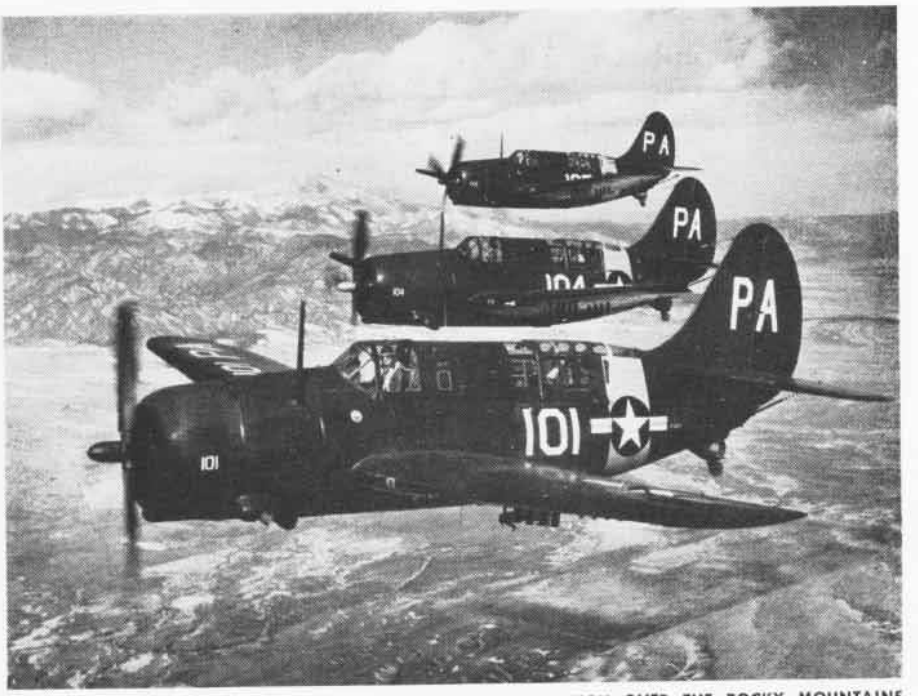
Each year of satisfactory Reserve service (active or inactive) before the effective date of the law (presumably 1 January 1949) may be counted as one of the required 20 years. However, after the effective date, Reservists must accumulate 50 points a year to count that year toward the 20-year total. They will receive 15 points just for being a member of the Reserve, one point for each day of active duty performed during the year and one point for each drill or period of equivalent instruction taken in the year. What constitutes drill or equivalent instruction for Volunteer Reservists is now being determined by the respective services.

Since one of the purposes of the law, however, is to offer an added inducement to Reservists to participate not only in Organized Reserve activities but also in the activities of regularly meeting Volunteer Reserve groups, such as Volunteer Aviation Units, it is expected that Volunteer Unit training will be credited toward retirement. Thus, although Volunteer Reservists receive no pay for drills, they will be able to earn credit towards retirement pay, provided that their drills meet the requirements now being established.

MATS ASIATIC WING—A couple near misses were scored by the elements on the 17th and 18th of May at the Guam base. A typhoon put the station on Condition II on 17th May. In less than five hours, Space Control sent out eight departures, which was something of a record. The storm by-passed Guam with nothing more than gusty winds, but Captain Dyson gave all hands a "well done" for their preparedness work. On the following day, 18 May, an earthquake rattled the dishes on the base.

NAS DENVER

Denver's Air Reservists Fly High



WEEKEND WARRIORS FROM NAS DENVER FLY THEIR SB2C'S HIGH OVER THE ROCKY MOUNTAINS

THE NAVAL air station at Denver truly may be said to sit on top of the nation. With its altitude of 5,680 feet, it is the highest naval air station in the world. It is also the farthest from any large body of water. Set against the impressive backdrop of the Rocky Mountains—just where the wide midwestern prairies begin to relinquish their hold—the station itself makes a dramatic appearance with its hangars and planes gleaming in the crystal clear air.

Contrary to popular belief, the weather at this station is good enough to permit flying 94% of the time. This figure is not based on guesswork but on an analysis covering the last five years which was part of an extensive weather charting program undertaken by the Navy, the Army and local weather stations. The worst month last year was March—the weekend warriors could only fly 89% of the time.

However, don't get the idea that flying at Denver follows the usual fair weather pattern. The difference in atmospheric pressure between sea level and Buckley Field (15 psi as opposed to 13.8 psi) requires various changes in aircraft practices. To set your plane down smoothly at this station, for example, you have to land at a considerably higher ground speed than would be feasible at sea level. Failure to do this accounts for the stalling-out occasionally performed by visiting firemen.

The rarefied air also explains the long runways at Denver, for it takes a longer run to get a plane off the ground. Carburetors have to be leaned out to overcome loading up in ground operations. Similarly, since "snatching" gunnery tow sleeves off the ground is impossible, these sleeves have to be placed in cans, from which they are pulled after take-off, for use in gunnery exercises.

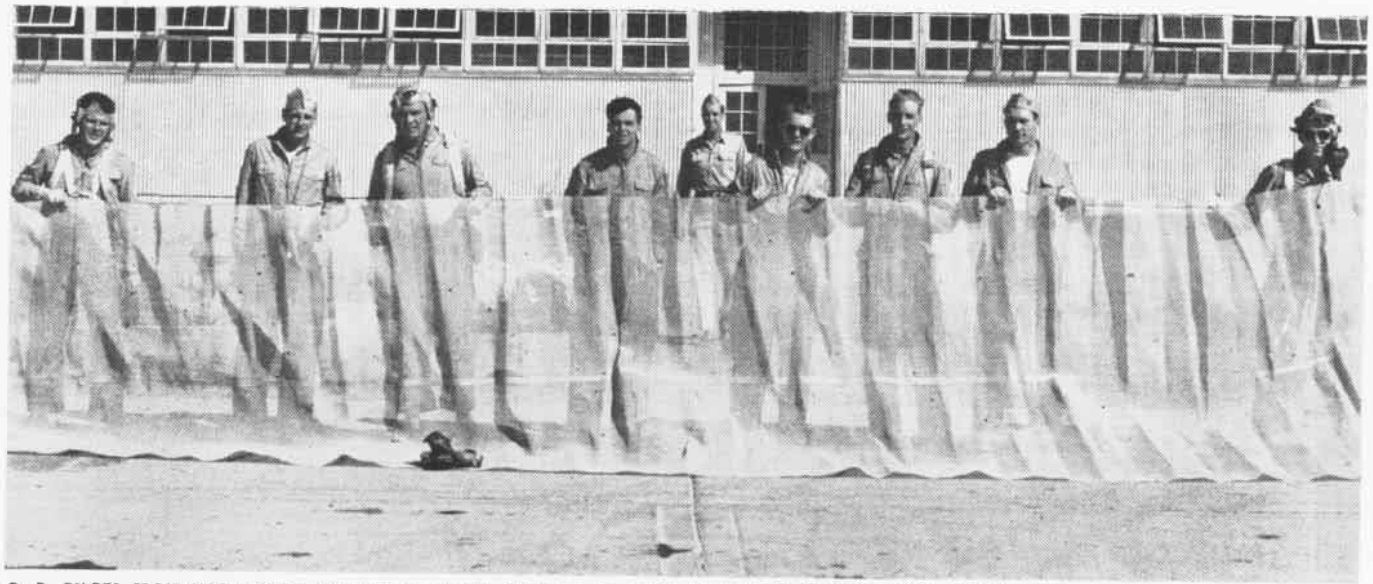
NAS DENVER is located at Buckley Field 10 miles from the city. When the Navy acquired this former Army air base in 1946, it found the field in a bad state of repair. With the public works department bearing the brunt of the assault, hangars were repainted and strengthened, runways were resealed and, in short order, the station was put in first-class condition. At this time personnel had to bring their own lunches or snatch a few bites from the solitary hot dog stand concession on the base.

On 16 February 1946, the station was officially commissioned and thus took its place among the 22 in the original Naval Air Reserve Training network. Commander Thurston H. James, the present executive officer, served as CO until the present commanding officer, Captain H. L. Hoerner, took over. Both of these men have contributed much to the smooth functioning of present operations.

During the war, Captain Hoerner, an Academy graduate of the Class of 1927, was assistant operations officer for Staff, ComSoPac and later for Staff, Commander of the Third Fleet, serving under Admiral Halsey. From 1945 to March 1947 he was air officer for Staff, ComWesSeaFron.

Cdr. James, a naval aviator who has been associated with the Reserve since 1926, fought with numerous squadrons in the Pacific during the war. He was especially selected for the job of setting up NAS DENVER on the basis of the record he chalked up in the Marshall Gilbert area in base development.

SQUADRON CO'S LINE UP WITH R. ADM. WHITEHEAD AND CAPT. HOERNER AFTER NAS INSPECTION



O. R. PILOTS FROM NAS DENVER HOLD UP GUNNERY SLEEVE THEY SHOT UP DURING PRACTICE HELD AT AIR FORCE RANGE IN WENDOVER, UTAH

RIGHT FROM the start Denver has been fortunate in having an enthusiastic and hard-working group of station-keepers. Immediately after the station was opened all billets were filled. Three months later there was a good-sized waiting list. Local businessmen claim that the Naval Air Reserve treats its personnel so well that they make well-satisfied and useful members of the communities in which they live.

The nine Organized Naval Air Reserve squadrons at Denver are virtually up to complement. They include 155 aviators, 63 ground officers and 913 enlisted men. In addition, over 50 Associated Volunteer Reserve officers, only about five of whom are in a drill pay status, take part regularly in week-end training.

NAS DENVER also has a Marine Corps Organized Reserve squadron, comprised of 54 officers and 174 men. The head of the Marine Air Reserve Detachment is Lt. Col. Wayne McElroy Cargill, who flew with a Marine Headquarters Squadron in the Pacific during the war. The detachment includes 3 officers and 37 men.

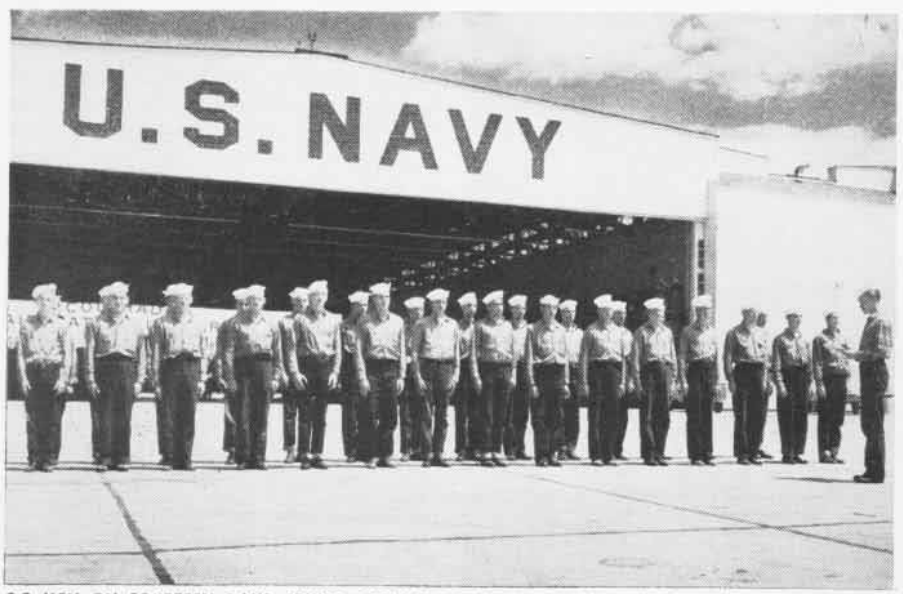
At the two weeks training maneuvers held at El Toro in August, Marine aviators averaged 30.3 hours. With plane availability hitting 100% for the entire period, VMF-236 ended up in the top spot for availability for the second consecutive year.

The station supports an Associated Volunteer Unit at Salt Lake City. This AVU(A), which is composed of 153 naval and Marine aviators and ground officers and 19 men, is one of the most active units in the country and is chalking up a fine record in its training activities.

WAVES are doing an excellent job at Denver. There are nine WAVE station-keepers. WAVE Volunteers come out regularly on weekends to help in different departments on a non-pay basis. Recently the latter were rewarded for their efforts by being flown on an R4D training flight to San Francisco for a 12 ND WAVE reunion.

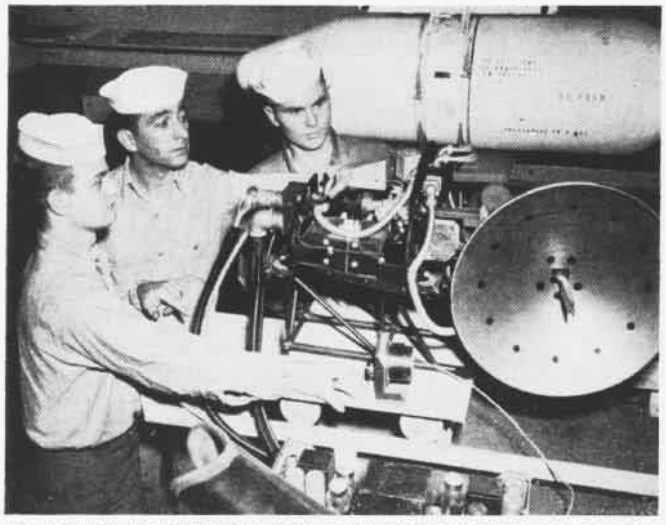
Denver has a number of Organized Reserve pilots with outstanding war records. Typical of them is Cdr. H. C. Hollenbeck, veteran NATS pilot who helped blaze air trails to the Aleutians and Pt. Barrow.

On the facilities side, the hot dog stand has long since been replaced by a large and comfortable snack bar operated by Ship's Service. From the money made in the snack bar and the ship's store, Ship's Service has contributed to the Welfare and Recreation fund, and given money to help make the Service Club a fine recreational center for the men on the station.



O-2 MEN ON FOURTEEN DAYS CRUISE ANSWER UP TO MUSTER BEFORE GOING TO THEIR CLASSES

WAVES G. LEISTER AND L. SANFORD DO A JOB



JIM BREWER, JOE PETRAGLIA AND PAUL GILMORE STUDY RADAR GEAR

CHIEFS C. W. CULBERTSON AND G. E. PENNOCK CHECK OUT PLANE RADIO

The station maintains close contact with local civic groups and holds its regular quota of open houses for visitors from surrounding communities. An interesting project has been set up for the local Boy Scouts. Once a month these scouts are brought out to the base in a station bus for practical instruction in the fundamentals of aviation. With the help of the two officers and one enlisted man, who supervise the project, the boys have built their own hobby shop where they turn out such items as gas model airplanes. Needless to say, this program has aroused great enthusiasm not only among the Scouts but also on the part of their sponsors in the community.

THINGS ARE never actually quiet at Denver. All during the week stationkeepers are getting planes and equipment geared for Organized Reserve training activities. Facilities on the station have been made available for the Colorado Air National Guard and National Guardsmen are busy training and maintaining their own planes and hangar. There is a steady succession of flights in and out of the station, for Denver is a convenient layover and refueling spot for east to west and north to south hops. On the new cross country flight operated by MATS, which replaces (temporarily at least) the *Hotshot*, NAS DENVER is a regular stopping point.

But it is on the weekends that the station really comes to life. It is then that Organized and Volunteer Reservists pour onto the base, driving their cars, riding their horses or even flying their own planes to get there. It is then that training really goes into high. If anyone ever doubted that the Rocky Mountain area would be a good place to locate a new naval air station, just let them go out and watch operations at NAS DENVER on a typical weekend.

DENVER RESERVE SQUADRONS

FASRon-155—Lt. Cdr. F. R. Clark, Jr., CO; Lt. Cdr. R. L. Norton, Exec.
CVG-85—Cdr. J. B. Espy, CO.
VF-86-A—Lt. Cdr. W. R. Frank, CO; Lt. Cdr. C. H. Fliesbach, Exec.
VF-85-A—Lt. W. C. Kelly, CO; Lt. C. J. Ray, Exec.
VR-75—Cdr. H. C. Hollenbeck, CO.
FASRon-55—Lt. Cdr. F. J. Tuck, CO; Lt. Cdr. G. W. Rienks, Exec.
VA-85-A—Lt. Cdr. R. J. Rugen, CO; Lt. S. B. Pittman, Exec.
VP-ML-75—Lt. Cdr. J. H. Kilker, CO; Lt. Cdr. T. M. Wilson, Exec.
VA-86-A—Lt. Cdr. C. H. Cheyney, CO; Lt. (jg) L. G. Jacobs, Exec.
VMF-236—Capt. Leslie C. Reed, CO; Capt. Edward G. Weber, Exec.

THE FOLLOWING officers are shown in the picture taken during the annual inspection of NAS DENVER: *left to right,* Lt. P. F. DeWees; Lt. Cdr. R. J. Rugen; Lt. Cdr. F. R. Clark, Jr.; Lt. Cdr. J. H. Kilker; Lt. Cdr. C. H. Cheyney; Cdr. H. C. Hollenbeck; Capt. G. A. T. Watson; Rear Admiral Richard T. Whitehead; Capt. Hoerner; Lt. Cdr. F. J. Tuck; Lt. W. C. Kelley; and Lt. Cdr. J. B. Espy.

Pilots holding up their gunnery sleeve are: Lt. Cdr. H. L. Thorp; Lt. Cdr. W. R. Frank; Ens. L. G. Shannon; Lt. (jg) E. W. Jones; Lt. C. H. Fleisbach; Lt. (jg) J. H. Jacoby; Lt. (jg) W. H. Martin, Jr.; Lt. R. K. Whitney; and Ens. D. C. Kirkpatrick.

A. COFFIELD MM3 AND S/SGT. A. CLOYD AT WORK IN MACHINE SHOP

J. D. SWIFT, W. MELLANG AND F. LONG CHECK DISCREPANCY SHEETS

LT. GAY TALKS SHOP WITH LT. CDR. HAMILTON AND SKIPPER ASHWORTH

CHRISTMAS PARTY ABOARD HORNET WAS WELCOME RESPITE FROM WAR

TORPEDO SQUADRON ELEVEN

TO THE regular commissioning of Torpedo Squadron Eleven 10 October 1942 at NAS SAN DIEGO was added a special ceremony, the awarding of the Navy Cross to Lt. (jg) George C. Gay. He was the lone survivor of the gallant but futile attack of Torpedo Squadron Eight at the Battle of Midway. Symbol of daring in the face of odds, Gay as a pilot of the newly formed VT-11 represented part of the past that held promise for the future.

Commanded by Lt. Cdr. Frederick L. Ashworth, the squadron was made up, for the most part, of personnel who had had no combat experience. Thus the insigne of the squadron designed by Walt Disney portrayed a baby hurling a torpedo, a skull on the warhead.

On 23 October, the squadron embarked for Hawaii, and after some time there headed for NAS NANDI, Fiji Island, 15 February 1943. Two months later they were stationed at Henderson Field, Guadalcanal, for combat operations. From the middle of April to the middle of July, VT-11 pilots extended the area of destruction as they engaged in almost daily strikes against the enemy. Again and again they left areas in the condition defined by two words in one of their action reports, "completely plastered."

One of the brilliant accomplishments of the tour was a night mine-laying mission in which 14 TBF's of VT-11 participated, cooperating with 12 BTF's of VSMB-143, 14 B-17's and a New Zealand PBO, the latter plane carrying flares for navigation. Twenty TBF's carried one mine each while the other planes were loaded with bombs. The target was Kahili Harbor from Buin to Tonlei on Bougainville, an area which was softened up by four B-24's the night of 23 May at 2400, just three hours ahead of the main and highly successful attack.

The force was over the target at 0300. The approach to the harbor was made at 1800 feet by the mine-carrying planes. These dropped to 1200 feet for the crucial run. The mission was an unqualified success; the mines were dropped accurately and safely on the first run. This completely coordinated operation effectively befuddled the enemy so that there was only a token opposition of light AA. All planes returned undamaged.

Every pilot deserved credit for his part. VT-11 pilots had nothing but praise for the B-17 pilots who laid string after string of bombs along the beach to put searchlight and AA positions out of commission. Similar targets on two nearby islands were attacked by four supporting TBF's who used dive bombing tactics to accomplish their mission.

In strikes against Munda and Vila airfields, Kolombangara, the Rekata Bay area and Kahili Harbor, all of which they struck again and again, VT-11 pilots carried out hazardous missions. Marc A. Mitscher, at that time ComAirSols, in commending Air Group 11 at the end of the tour wrote, "No unit has excelled you in exacting . . . the maximum toll for your honored dead."

On 19 July, the squadron flew to Espiritu Santo, and exactly one month later arrived at NAS ALAMEDA.

September 25, 1943 marked the reforming of the squadron under the command of Lt. Cdr. Radcliffe Denniston Jr., USN, as well as the opening of a year of training—six months at Alameda and six months at Hilo. In Hawaii, training in group attacks, live bomb loading, radar bombing and navigation was emphasized. By 29 September 1944, VT-11 was ready and eager to add its stinger strength to the *Hornet*.

VT-11 PILOTS engaged in several training exercises before the squadron hit Okinawa on 10 October. On that day, they made three strikes against Naha airfield and one strike against Naha town. Devastation was meted out sufficient to crater the airfields, knock planes and installations out of commission, and destroy or damage buildings in the town. The enemy's AA fire, heavy though it was, failed to damage the VT-11's.

In seven strikes on the 13th and 14th of October, VT-11 hit three airfields as well as shipping and installations in Takao Harbor, Formosa. These strikes marked three important "firsts" in the squadron's second tour: first encounter with enemy aircraft, first damage by AA fire and first water landing in combat operations.

On the 18th and 19th of October, four strikes against the three largest Japanese airfields on Luzon—Clark, Nichols and Nielson—dealt heavy damage to planes and hangars. In the attack on Nichols, anti-aircraft fire sent Lt. William H. Winner's plane down. It was the first VT-11 crew lost in enemy operations on their second tour.

AFTER another strike 20 October on the beach at Dulag, Leyte, in support of the landings there, the *Hornet* headed for port, but on the 24th, it was ordered to intercept the Japanese Fleet headed east toward the San Bernardino Straits. At 1040 the 25th, a strike was launched at a distance of 340 miles from the enemy force which was attacking CVE's off Leyte.

VT-11 planes carried four 500-lb.

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THIS IS the eleventh of a series of short sketches of squadrons in World War II. It is based on reports filed with Aviation History and Research DCNO (Air).

bombs each. Although they carried no wing tanks, they made a 600-mile round trip combat flight without the loss of a single plane. Success crowned the flight, for VT-11 made five hits on a battleship and two hits on a *Nachi*-class cruiser. A second strike spelled damage to two other cruisers. On the following day three strikes were launched against the scattered units of the Japanese Fleet, resulting in damage to a light cruiser off Mindoro and a destroyer west of Panay.

On 5 and 6 November, the squadron again hit Clark field in five strikes. A few days later on the 10th, a convoy was reported heading for Ormoc Bay, and on the morning of the 11th, a strike was launched. By the time VT-11 planes arrived, there remained only three destroyers and one DE of the original convoy, other air groups having accomplished the destruction of the other vessels. Air Group 11 went into action, sank one destroyer, left one dead in the water, slightly damaged the third, and left the DE burning heavily.

On the 13th and 14th of November, the squadron participated in six strikes against shipping in Manila Bay. Anti-aircraft fire was intense. In this action, the squadron commander, Lt. Cdr. Deniston, Ensign Burton T. Oberg and their crews were lost. Retribution was exacted to a small extent in that the squadron sank or helped to sink 18,000 tons of shipping and damaged an additional 22,500 tons during these strikes.

The squadron made its eighth strike on Clark Field the 19th of November.

The *Hornet* returned to port 23 November, and there were no squadron operations until 10 December. By that time it was clear that from now on it was largely a fighter war. On the 14th, 15th and 16th of December, there were 18 daylight fighter sweeps and strikes against airfields and shipping in the Bataan area and only four VT strikes. Even those strikes lacked suitable targets.

COMBAT CREWMEN HEAR JUST HOW IT HAPPENED

On 25 December 1944, Lt. Cdr. John A. Fidel reported aboard as the new skipper. Five days later the *Hornet* sortied on what was to prove the most rigorous, most profitable and most disastrous period of operations in the history of VT-11. The mission of Task Group 38.2 was the support of the Luzon lands.

Strikes on 3rd and 4th of January against shipping and airfields in southern Formosa were hampered by foul weather. While planes were forced back on one strike, a few strikes were accomplished on instruments. Continued bad weather blocked strikes on the 6th and 7th of January when only one of five strikes got through to the target, Malabat airfield on Luzon.

On the 9th, two strikes against Takao Harbor netted one medium cargo vessel and three luggers sunk and damage to 31,500 tons of shipping. But the cost to the squadron was high . On the first strike, a small caliber bullet penetrated the fuselage of David Mangum's plane, wounding Roy Balcombe who died within 15 minutes despite instant first aid. On the second strike, Lt. (jg) Gordon Bell and his crew were knocked down by AA fire. They were seen in a rubber boat about a mile off shore but were never seen afterward.

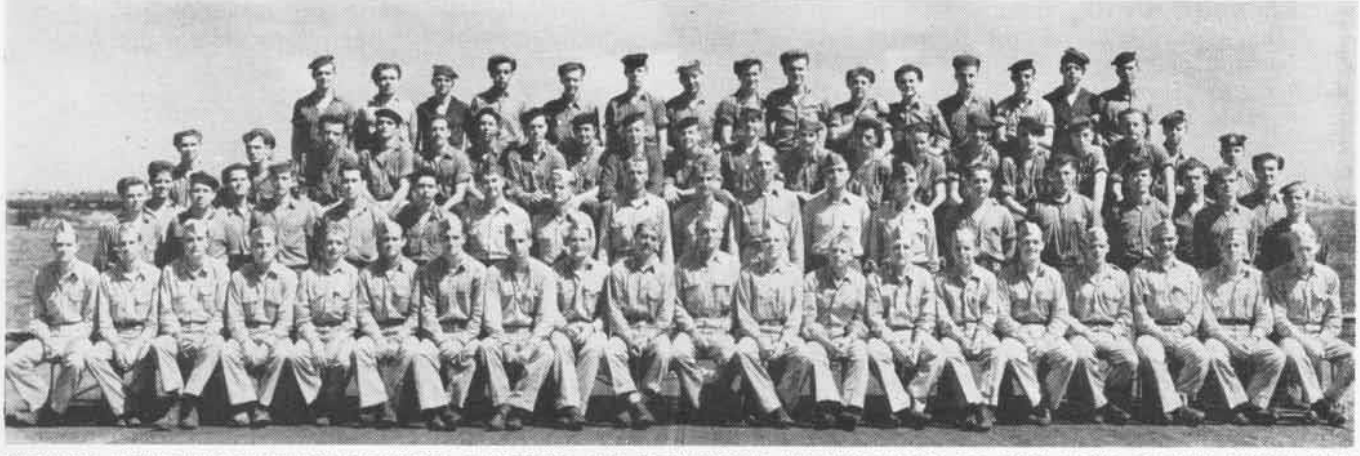
On 12 January, four strikes were made on shipping off Phan Rang and Qui Nhon, Indo-China. The first strike scored two torpedo hits on a 2500-ton tanker, one torpedo hit on a large tanker and four hits on a medium cargo vessel, all of which sank. Two DE's were damaged by strafing, one of which exploded. The second strike was unable to reach its target because of low ceiling. During the third strike a *Katori*-class cruiser was sunk by two torpedo hits. During the final strike a destroyer escort was damaged with one bomb hit, but misfortune again dogged VT-11 in the loss of Lt. (jg) William Maier and his crew.

On the 16th, strikes against Hong Kong spread destruction over a dockyard. On the third strike, the target ships were surrounded by DD's and DE's which put up intense AA fire and downed Lt. (jg) Edwin McGowan and his crew. Another plane was hit, but there was no injury to personnel. On the fourth strike, VT-11 damaged 3 enemy tankers.

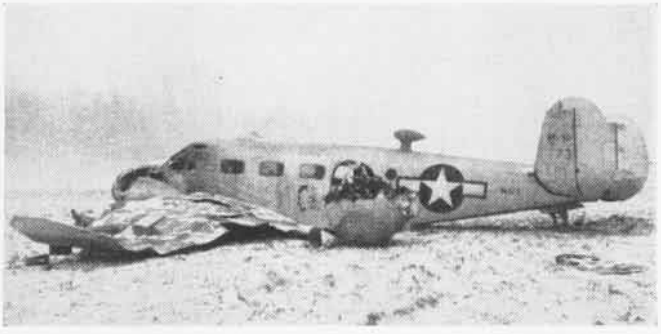
Strikes on Formosa on the 21st which netted 21,000 tons of shipping damaged or sunk concluded the tour. The *Hornet* headed for port.

In support of the Leyte, Mindoro and Luzon invasions, VT-11 had sunk 51,400 tons and damaged more than 100,000 tons of shipping, flown 68 strikes and made a formidable record of destruction in ground installations. In addition to sinking a light cruiser and a destroyer, VT-13 could list as "probably sunk" or damaged 13 Japanese war vessels.

On 1 February 1945, VT-11 left the *Hornet*. Battle-proved warriors of the Philippines and China Sea, they had played their part valorously in the Pacific. And now due east—and home!



WHEN THIS PICTURE WAS TAKEN FOR THE RECORD, 8 DECEMBER 1944, BATTLE-PROVED VT-11 WAS READY FOR FINAL ROUND OF THEIR SECOND TOUR



SNB - JRB Takeoff Accidents

THE SNB/JRB type is a safe airplane and a very easy airplane to fly, but it can be easily overloaded, and failure to set the elevator tab for take-off can result in a dangerous situation as soon as the plane becomes airborne. In the crashes pictured here seven persons were killed, three were seriously injured and several others suffered minor injuries. In all cases the planes were destroyed or were damaged beyond economical repair.

Case 1

The pilot of an SNB-3 filed a VFR clearance from the Naval Air Station Olathe to Columbia, Missouri, listing himself, his copilot, and three passengers. After a take-off run of about 1220 feet the SNB became airborne in what was described as "an almost vertical climb."

It appeared to level out momentarily at an altitude of about 100 feet. Then one wing dropped rapidly and the plane rolled to an inverted position. The nose dropped sharply and the plane hit the runway in a vertical dive. Despite heroic action on the part of the first persons to reach the flaming wreckage, only one passenger survived. The pilot and copilot were wedged in the demolished forward compartment and could not be removed until the fire was extinguished.

It was discovered after the crash that there were six persons aboard instead of the five listed on the clearance. Extra baggage had been stowed in the after compartment. A computation of the weight and balance of this aircraft showed that the center of gravity was aft of the rear allowable limits for a safe take-off.

A check of the pilot's log book showed that he had only 10.1 hours of multi-engine time and that he had not flown a JRB for more than 10 months. The directive requiring that members of the Volunteer Reserve have 100 hours of multi-engine time in order to qualify in the SNB/JRB was violated, as was the requirement that a check-out be given if more than two months had elapsed without flying.

Case 2

SNB-2 took off in a normal manner, becoming airborne at about 70 mph. Wheels were retracted and power was reduced to 30" and 2000 rpm. As speed built up, steady back pressure on the yoke forced the plane into an extremely nose high condition. The SNB continued to climb in this attitude until the stall occurred, at which time it fell off to the left, rotated 110 degrees, and hit on the left wing in a fairly horizontal position.

The plane slid 150 feet to a stop and began to burn at once. The board of investigation conducted tests in a similarly loaded plane and determined that it could not be held in a normal take-off attitude with an elevator tab setting of 0 degrees at approximately 100 mph due to excessive back pressure produced by the tab effect. The tests further revealed that with the application of full forward yoke, the plane continued to climb rapidly in a dangerously nose high attitude.

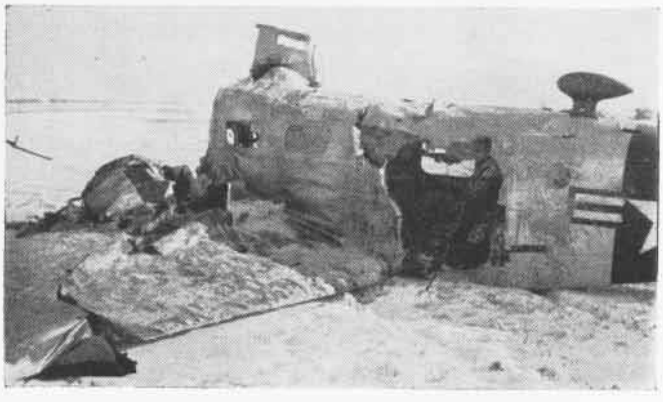
Once in this attitude, the airspeed fell off so rapidly that the rolling of full forward tab had no effect on the pressure on the yoke until after the plane had stalled and regained flying speed. In the above case the plane was loaded within allowable limits, but the accident board was of the opinion that the pilot neglected to set the elevator tab for take-off.

Case 3

In an attempt to recover from the start of a ground-loop, the pilot of a JRB-3 applied full power on both engines. The plane left the runway at an angle of about 60 degrees to the landing path in a steep climbing turn to the left. After completing about 180 degrees of the turn the JRB rolled to an inverted position and crashed.

The pilot and copilot were killed and one passenger was seriously injured. The plane was not overloaded and the elevator tab was found in a slightly nose down position. The board was of the opinion that the pilot pulled to the left when he sighted buildings ahead in his voluntary wave-off, and continued the sharp left turn until the aircraft reached a dangerous attitude and stalled out.

It should be noted that the tab was probably adjusted for landing and that the pilot may have been too busy trying to recover from the ground-loop to make the necessary tab correction in the early part of the take-off attempt. It appears likely that the elevator tab was not rolled to the forward position until the plane approached a stalled condition.



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Volunteer Air Reservists in 4ND

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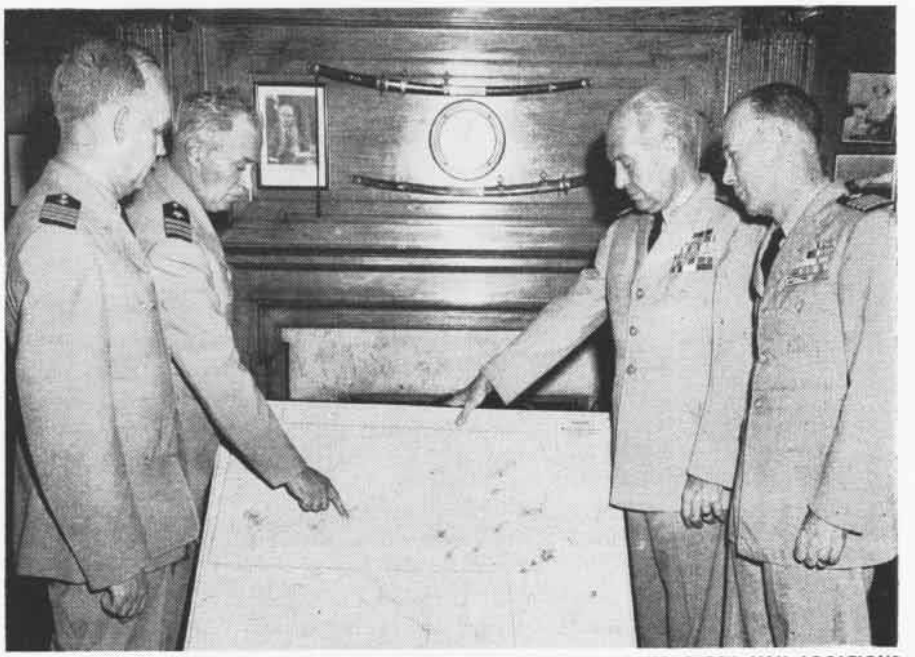


CAPT. STEVENS, CDR. EWAN, REAR ADM. KAUFFMAN AND CAPT. KORNS CHECK VAU LOCATIONS

PHILADELPHIA, home of Independence Hall and the Liberty Bell, is the focal point for the many varied Volunteer Naval Air Reserve activities in the Fourth Naval District. Into the office of the Assistant Director of Naval Reserve (Air), a steady stream of letters from the thousands of Volunteer Reservists in the district pours each day.

Many Reservists request two weeks training duty. Others inquire about joining Volunteer Aviation Units, while still others express their continuing interest in the Reserve program and their willingness to serve in any way they may be needed.

In the scope of its contacts, this Volunteer Air Reserve program is big business, but from the point of expenditure, it is very small business, indeed, for most of the training undertaken by these Reservists is on a voluntary, non-pay basis.

Under the direction of Rear Admiral J. L. Kauffman, Commandant of the Fourth Naval District, the Volunteer Naval Air Reserve program got off to a flying start in April 1947. With the cooperation of the director of Naval Reserve, Captain V. E. Korns, and the director of training, Captain H. R. Stevens, in the district and of Captain C. B. Jones, CO at NAS WILLOW GROVE, arrangements were squared away for considerable numbers of Volunteers to take cruises at that station. By 1 July, no less than 535 Volunteer officers and 152 enlisted men had completed their two-week tours.

In 1948 the pattern for this Volunteer training expanded. Willow Grove streamlined its program to take in as many of these Reservists as possible. Other Volunteer pilots were ordered to NARTU NORFOLK for their training cruises under a special quota system set up by Captain Oscar Pederson, CO of that unit, which provided for 20 Volunteers per month.

Training for VR pilots and naval aviation observers (navigation) was concentrated at Patuxent River. NARTU LAKEHURST provided training for Volunteer LTA pilots, more than 50% of whom took cruises last year. Ground officers received the latest word on their specialties at various stations and commands, such as the Naval Air Development Station, Johnsville, Pa., whose facilities were made available for this training through the cooperation of Captain E. W. Rounds.

J. L. LOVITT, C. E. EBERT, D. MCMULLIN LOOK OVER PHILADELPHIA TRANSPORTATION ROUTES

TRAINING was also provided for large numbers of enlisted men in class V-6. Here, considerable emphasis was placed on training for advancement in rate. Through the district volunteer training officers and the Naval Reserve training centers, training courses were made available for study. With the excellent technical training courses given at NAS WILLOW GROVE, many V-6er's were able to qualify for advancement during their cruises and were given their tests at that time. The fact that 188 V-6 personnel took training duty at Willow Grove last July indicates the amount of interest shown by this group in Reserve activities.

WAVES were not overlooked in the program. On 7 December 1947, a large party was given with the object of stimulating interest in Volunteer activities. More than 200 former WAVE officers and V-10 personnel attended this affair. On that occasion some 40 WAVES signed up with the squadrons.

CAPT. RICHARD S. MILNE AND CDR. WILLIAM H. GINN DISCUSS CHARACTERISTICS OF PANTHER

THE FIRST Volunteer Aviation Unit to be set up under the commandant in 4 ND was activated at Philadelphia on 25 June 1947. Today seven VAU's are going concerns in the district and two more are in the process of being formed. These units hold regular meetings each month (usually in the evening), and members include Marine Corps and Navy Volunteer Air Reservists.

Heading up VAU-1 is Lt. Cdr. John B. H. Carter, an attorney, who served during the war on the *Intrepid*. Due to his initiative and hard work, this unit has maintained one of the finest attendance records in the district. Lt. Cdr. Eugene C. Cheston, also an attorney and a former ACI officer, is exec of the group. If additional ACI information is ever needed, Cheston can certainly supply it—he served on the *Enterprise, Lexington, Yorktown,* and *Bunker Hill.*

CDR. EWING IS PROMINENT MEMBER OF LAW FIRM

Volunteer activities are not confined to the Philadelphia area. All over the district leading citizens, although busy with community life, somehow find time to devote to Reserve activities. Despite the pressure of their everyday affairs, they find time to head up local recruiting drives, Navy League doings and Navy Day programs.

In the northeast corner of Pennsylvania, an interested group of Volunteers has set up Volunteer Aviation Unit 4-8 which meets at Bradford. Lt. W. J. Buffington, formerly with VPB-148, a bombing squadron very busy in the Solomons, is CO of this unit. His exec is Lt. Joseph F. McAmbley, former electronics officer with Combat Unit 9 in the Philippines.

A nearby organization is VAU 4-6 in Altoona, which is led by Lt. Robert Shaffer and Lt. (jg) Samuel R. Brooks, Jr. Shaffer, who recently completed a graduate course at Cornell University, is interested in aerial photography, and Brooks is a former LTA pilot.

Along the Susquehanna are two other units, VAU 4-4 at Williamsport and VAU 4-5 at Harrisburg. The former is headed by Lt. Cdr. Wilson Y. Phillips and Lt. William B. Pfeifer, who was awarded three air medals in the battle of the Philippine Sea. Lt. Cdr. Hugh Roberts, Jr., formerly connected with the Pennsylvania State School of Aeronautics, is CO of VAU 4-5. This unit meets in the Naval and Marine Corps Reserve Training Center at Harrisburg.

EARNSHAW GETS MEDAL FROM ADM. KAUFFMAN

The coal region has another progressive unit in VAU 4-2 at Wilkes-Barre, the second unit to be activated in the district. Leader of this group is Lt. Cdr. James D. MacWilliam, an investment broker, who was operations officer at NAS WILDWOOD and then assistant flight officer of VR-11.

Johnstown is headquarters for VAU 4-7, which is now headed by Lt. (jg) Harold P. Mishler. With VF-29, aboard the *Cabot*, Mishler saw combat duty from Luzon to Okinawa.

THROUGH the initiative and enthusiasm of Capt. R. S. Milne, a Volunteer Aviation Unit (Pilotless Aircraft and Guided Missiles) was scheduled for activation at Johnsville during September. Capt. Milne, now a civilian, is assistant director of the aeronautical and electrical laboratory at the Naval Air Development Station. A pioneer in the field of naval aviation electronics, Capt. Milne has published more than 250 technical articles and has done much to further the development of this phase of electronics. He was an aviator during World War I.

Many Reservists are well-known in business, industrial and professional fields. Cdr. Bradley C. Algeo Jr., for example, who has been in the Reserve since 1936, is an electronics engineer at the Naval Air Development Station. Cdr. Algeo has made many experiments in making the airplane a better weapon by means of radar and radio gadgets. Cdr. E. M. Hartley of Philadelphia, who organized the radio and electrical section of the maintenance division in BUAER is a radio engineer, who also doubles as a sales manager.

Developing jet engines for aircraft is the particular job of Cdr. Walter E. F. Zeppke, an engineer associated with Pratt and Whitney. Cdr. Zeppke has done research in Europe with naval technical missions and is well known in England as Pratt-Whitney liaison with Rolls Royce, Ltd.

Similarly Cdr. Mario A. Guerrieri of Wilmington, who has done much to develop rotary aircraft, is an aeronautical engineer in the research and development department of the Kellett Aircraft Corporation. A Reservist since 1936, he was attached to the *Chenango* at Guadalcanal and was with Fleet Wing Squadron 39 at Majuro.

The engineer who executes projects in connection with Navy contracts at the Chance Vought Aircraft Division of United Aircraft Corporation is Reservist Thomas L. Blakemore. During the war Cdr. Blakemore was engineering superintendent at NAS LAKEHURST. Another aeronautical engineer who has

CDR. ALGEO EXPLAINS EQUIPMENT TO ED TIETZ

LT. CDR. BRYAN IN HIS BUCK COUNTY STUDIO

LT. CDR. CARTER AT WORK IN HIS LAW OFFICE

returned to his civilian occupation is Cdr. Nicholas C. Richard who was BAR in charge of all private contracts for the Navy in the Philadelphia area during the war.

A specialist in aeronautical equipment is Cdr. John W. Jackson, formerly CO of Shelton Air Station near Seattle, who after the war went to North Africa, Tunis and Algiers to set up airline operations for TWA for CAA approval.

AMONG Reservists who are well known in banking circles are Cdr. James M. Large, president of the Tradesmens National Bank and Trust Company in Philadelphia, and Cdr. William H. Ginn, an investment banker in Atlantic City. Cdr. Ginn, who commanded CASU(F)-17 during the Tarawa invasion, flies his own plane. Cdr. Large was air operations officer on the *Princeton* from its shakedown until it was sunk in the battle of Leyte Gulf. He has been in charge of the Navy recruiting drive in Philadelphia and is prominent in many community activities.

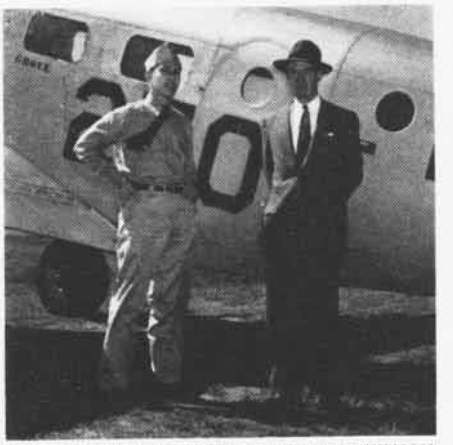
Representative of Reservists in the advertising field is Capt. Karl L. Lange, vice-president of a sky advertising company in Lakehurst, N. J. Capt. Lange, who was in the first student officer class for pilot training and who is recognized as an authority on LTA, served as chief of staff to Rear Admiral C. E. Rosendahl at Lakehurst.

A Naval Air Reservist is president of the Wilmington Navy League Council. He is Cdr. Samuel E. Homsey, an architect, who during the war was assistant director of the Special Devices Division of the Office of Research and Inventions. Also an architect is Cdr. George W. Sloan of Philadelphia, who was CO of the naval air base at Yonabaru, Okinawa.

Other well-known Reservists in professional fields include Cdr. John K. Ewing, an attorney in Philadelphia, who served as aide and flag secretary to ComAirLant, and Lt. Cdr. Joe Bryan, III, the author of Admiral Halsey's biography. Although he is kept busy autographing copies of this best-seller, Lt. Cdr. Bryan frequently finds time to come out to Willow Grove and help squadrons with their publicity problems.

One of baseball's candidates for the hall of fame is a Reservist who served as gunnery officer aboard the *Yorktown* and the *Princeton*. He is Cdr. George Earnshaw, now director of farm system instruction with the Philadelphia National League Baseball Club.

In the business field Reservists include: Cdr. J. H. Swope, formerly personnel officer at Mustin Field, who operates his own automobile agency in Philadelphia; Cdr. James A. Draper, formerly exec at NAS DELAND, who is with a Wilmington brokerage firm; Cdr. L. L. Owrey, assistant operations manager for the Standard Oil Company in Philadelphia, who saw active duty in the southwest Pacific and later was in charge of CASU-23 at Wildwood; Cdr. Lorne C. Bayless, an insulation specialist with the Armstrong Cork Company, who had a wartime tour of duty as executive officer in the Office of the Naval Attaché for Air, London; Lt. Cdr. David McMullin, an executive with the John Wanamaker Company; and Cdr. John B. Huhn, an MIT graduate, who during World War I flew DH-4's on the Flanders front and during World War II served on the staff of ComAirPac.



DICK LEWELLYN AND VAU 4-2 CO MACWILLIAM

R. M. KROBOTH VISITS SHRINE DURING CRUISE

OTHER BUSINESS leaders who have supported the Naval Reserve program are Charles E. Ebert, president of the Philadelphia Transportation Company, and Cdr. James L. Lovitt, personnel manager for the same company. Mr. Ebert is an outstanding figure in 4 ND naval affairs and has done a fine job in connection with recruiting drives and Navy Day programs. He comes by his interest in naval aviation naturally, for his company established the first passenger airline service between Philadelphia, Washington and Norfolk.

The Assistant Director of Naval Reserve (Air) in the Fourth Naval District now is Cdr. William W. Townsley, who formerly held the same billet in the Seventh Naval District.

His predecessor, Cdr. Charles M. Ewan, who did much to make the Reserve an integral part of the community picture, recently took over as executive officer at NAS MIAMI. In having material for this article assembled Cdr. Ewan, who had served as CO at NAS WILLOW GROVE after the war, received expert assistance from Cdr. John Miller, the public information officer there.

LETTERS

SIRS:

Being an Army man (now Air Force) perhaps I have no voice in naval affairs, but since I work direct with VPP-1 at Big Delta, Alaska, I would like to voice an opinion.

I read the NAVAL AVIATION NEWS cover to cover. In the July copy it states that it once required "a dozen soldiers in four jeeps more than three hours to clear the bison off the runway at Big Delta." I wish to state that this is a gross exaggeration. Of course we understand that this happened before the Navy landed here and probably was relayed by spoken word, which grows like an avalanche.

Now, the truth. I have been here more than a year and have chased them several times in one jeep by myself and am still an amateur compared to the regular "Follow Me" jeep driver who has chased them a dozen times himself.

Say, maybe that's the slip. Somebody said he chased them a dozen times and the listener interpreted it to be a dozen men one time. To err is human. Thanks for a swell magazine and we here at Big Delta shall miss our blue-uniformed friends.

EUGENE W. MURRAY, M/SGT.
AIR FORCE
BIG DELTA, ALASKA

SIRS:

Having been an ardent reader of your magazine for the past two years, I feel more or less entitled to send this 'gripe' in to you —not that we of HL-6 are hard to get along with, but nevertheless a gripe which I consider to be well-founded, and which would be an improvement to your already fine record.

How about running an article or so on a few of the VP-HL squadrons that the Navy now has operating on both coasts of the U.S. and across the oceans.

Hell's bells, the old 4Y-2 won't be with us much longer, judging from the reports of success drifting in from all the P2V *Neptune* outfits, and I think that it would be quite appropriate if something real nice was said about the 'old gal.'

It's really quite an aircraft, this *Privateer,* and I don't think that any squadron could ask for a much safer plane with which to operate. In the two years that I have been attached to this squadron, the nearest accident that we've had was a blowout on landing, or maybe the loss of an engine in flight now and then.

So how about it, Mr. Editor? Live up to *Grampaw Pettibone's* own motto of "Giving credit where credit is due"—namely, to the PB4Y-2.

NEDD FLEMMING, AL3
VP-HL-6 DETACHMENT
NAVY #214

¶ Your idea for an article on the battle-tried *Privateer* is a good one. We hope to have one in an early issue.

SIRS:

The round-the-world cruise made by Air Group 11 aboard the *Valley Forge* was completed in San Diego on 11 June. Following a 30-day leave period for all hands, the Group was reorganized on the three VF squadron basis—and VF-113 was commissioned on 15 July.

Lt. Cdr. R. M. Voris, USN, former leader of the Blue Angels, is the squadron's executive officer.

A well rounded nucleus of experienced pilots transferred from VF-111, and VF-112 is combined with a sharp looking group of new pilots from the training command to make up the squadron's pilot complement. The crew was gathered together by 'robbing the other four squadrons in the group, and they are turning to in a manner which will put VF-113 "way up front."

Our first two weeks were hectic and filled with organization woes. All hands have turned to in a grand style, however, and the squadron is already operating efficiently. The new pilots have met the F8F and are building up their time in tactics, navigation, etc., prior to getting started on gunnery, bombing and rockets. The engineers are working hard to grind out good aircraft availability. The material gang is busy drawing supplies and spare parts, and the office force is grinding out reams and reams of paperwork.

Such an ambitious outfit can't miss, so we're serving notice as of now to the other VF squadrons to "stand by." We are out to give them a run for their dough!

R. S. MERRITT, LT. CDR.
VF-113, PACIFIC

SIRS:

Your August issue carried a photograph on page one of two PBY's apparently flying in the area near the national capitol. I am wondering if this is a montage photograph or if the planes actually were over this area, which is restricted to flying.

LT. CDR. H. S. YOUNG

¶ The photograph was taken from a photo plane in safe territory using a telephoto lens. The two planes were superimposed to make a picture which showed naval aviation with a background of legislative buildings, to go with the article on Congress. Incidentally, the space is restricted to flying. Pilots should avoid it, just as they must not fly over Atomic Energy Commission installations at Los Alamos, N. M., Hanford, Wash., or Oak Ridge, Tenn. In addition to the above banned airspace reservations, there are numerous danger areas like Aberdeen Proving Grounds, Maryland, which should be avoided.

MAG-24, PACIFIC—Since Marine Ground Control Intercept Squadron Seven's last report, its location has been changed from South Field, Peiping, China to NAS OROTE, Guam.

VMR-152, EL TORO—One Reserve pilot this squadron was glad to have back on active duty for a couple of weeks was Lt. Col. F. S. Angstadt. An airline transport pilot with 18,000 hours, he passed on valuable dope on accident prevention, ice prevention and deicing at a squadron pilot meeting.

NAVAL AVIATION NEWS

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CONTENTS

● THE COVER

Although their days as operational planes are limited, TBM's are being flown in large numbers by Reserve aviators. The old *Avengers,* whose gunners shot down 98 Jap planes in combat during the war, are being replaced by AD's and AM's with the fleet. The cover photo was taken aboard the CVE *White Plains* during the war.

● RECOGNITION QUIZ

(Inside back cover)
Top—HS-2, Curtiss-Navy flying boat designed in 1917. Carried crew of two, one machine gun and two 180-lb. bombs. Bottom—Martin XB-48.

● THE STAFF

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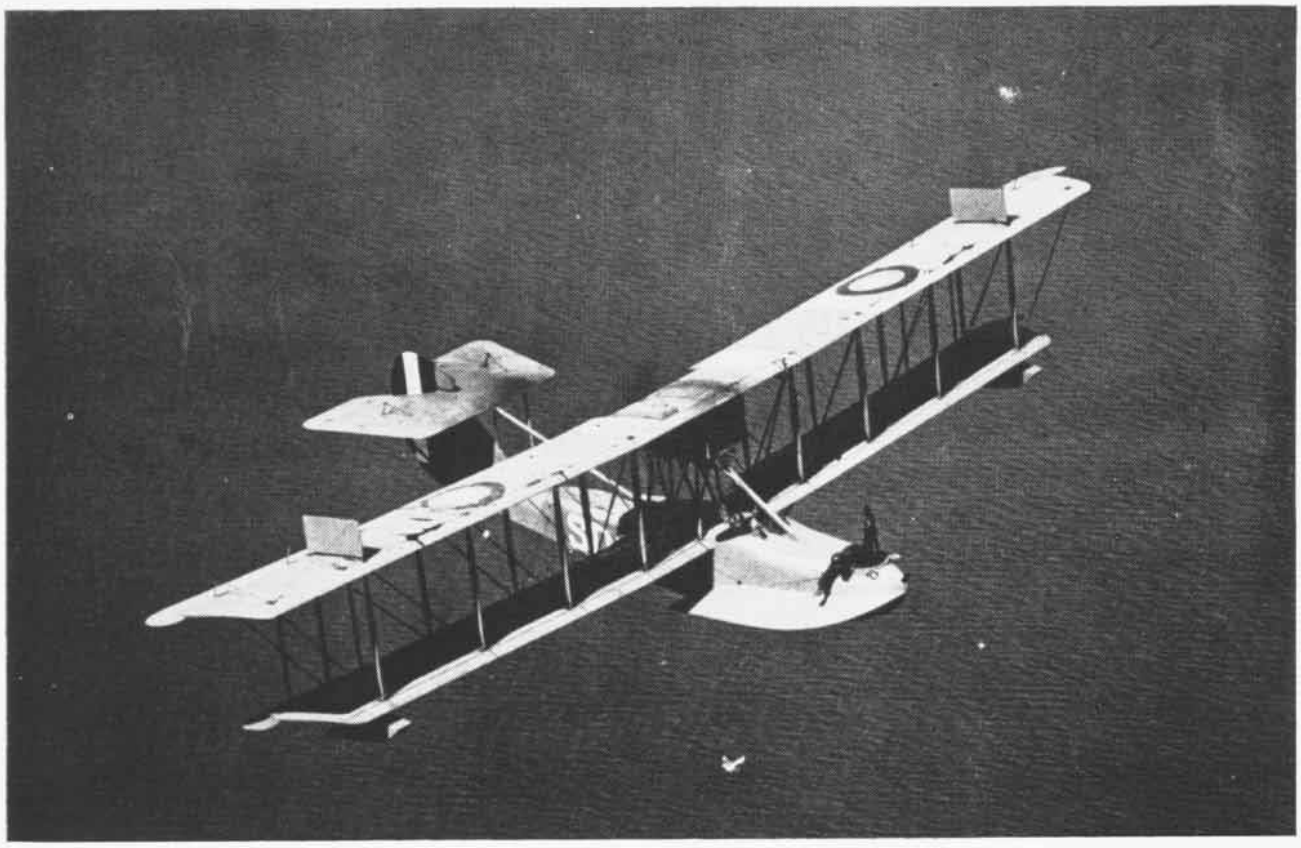

30 YEARS' PROGRESS

The two planes shown here are not exactly sisters but they had one thing in common, they both flew. The one on top was a World War I flying boat. Below is first 6-jet bomber to fly. Recognize them? Answers on opposite page.

KEEP UP WITH THE JET AGE IN NAVAL AVIATION NEWS

AVIATION progress moves swiftly these days. The Navy is expanding its program to build more planes, train more men. Keep abreast of developments in the 'News'. It's for the 'Old Fliers' of Grampaw Pettibone's Legion as well as the Reserves, the USN's and trainees. The latest word on what the Navy is doing, its new planes, its squadrons and carriers, is told in newsy, readable form.

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