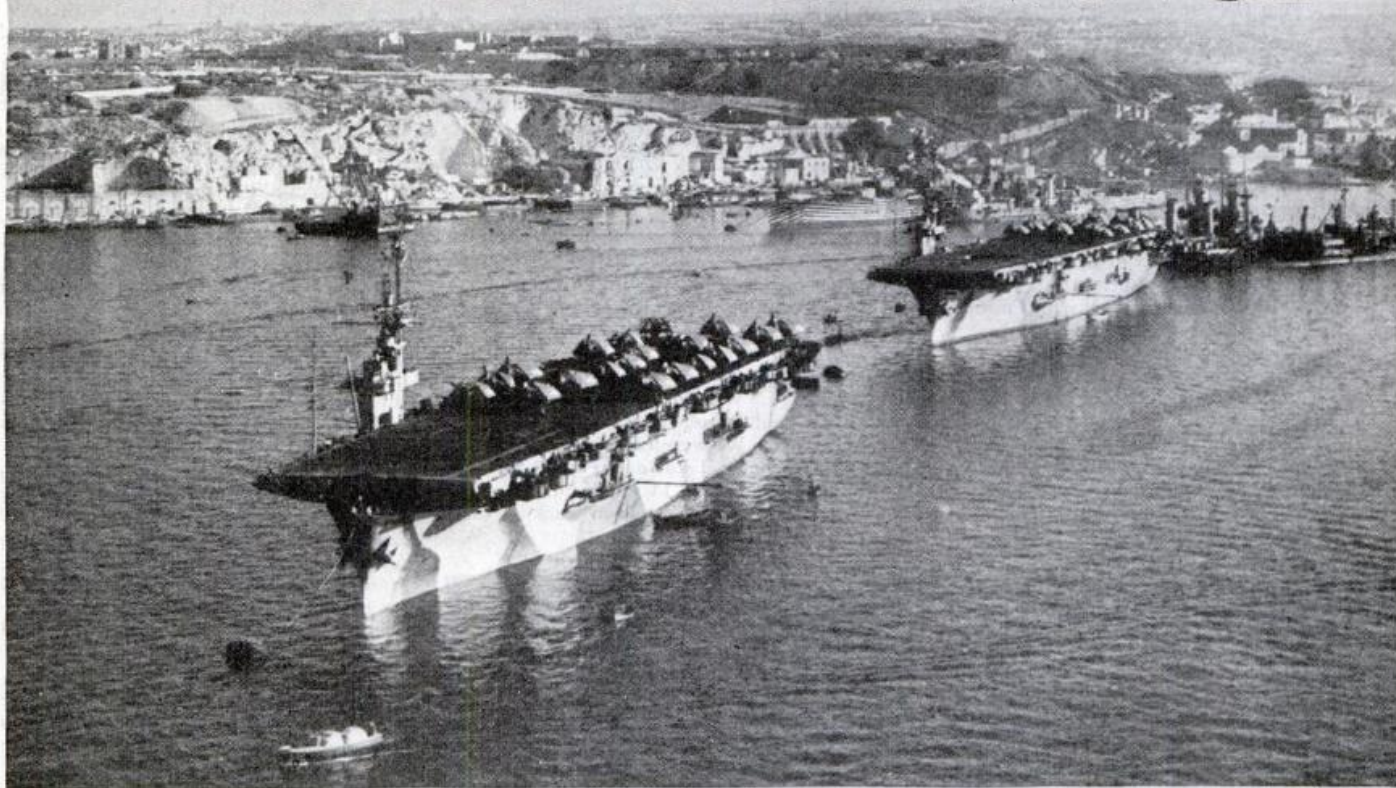


Hellcats over FRANCE



The U.S.S. Tulagi (foreground) and U.S.S. Kasaan Bay in the harbor of Valetta, Malta. Note number of Hellcats on their decks.

A NEW type of United States Naval air striking force made its battle debut during the Allied invasion of southern France.

This recently-commissioned American aircraft carrier—employing only *Hellcat* fighters flown by especially-trained pilots—went into action for the first time and proved highly successful in a wide variety of combat assignments. The *Hellcats* not only provided air cover for the western flank of the invasion forces—remote from our landing fields on Corsica—but were given other important battle roles.

They did gun-spotting for Allied warships pounding coastal defenses and other targets ashore.

They carried out “pin-point” attacks with rockets and bombs against coastal batteries which survived continuous naval and high-level bombing assaults.

They served as the “eyes” of the Allied invasion command in the area west of the Rhone River, keeping them posted as to what the formidable German forces in that area were doing.

And when the Navy pilots reported that the Nazis in southwestern France were racing toward Germany instead of massing for a counter-attack on our beachheads—information which enabled Allied troops to strike northward to head them off—the *Hellcats* were turned loose on still another job.

Armed with rockets, 250-, 500- and 1,000-pound bombs and their battery of six .50-caliber machine guns, the carrier-based American planes struck repeatedly at the retreating German forces.

A single squadron of the *Hellcats* based aboard this carrier reported the destruction of 487 enemy motor vehicles—including troop carriers, ammunition trucks and armored cars and tanks. They damaged an additional 114 vehicles.

By Lieut. (jg) JOHN G. NORRIS, USNR

Hellcats from Navy carriers supported our advancing armies in south France.



Air chiefs watch operation. Left to right, Lieut. Comdr. A. H. Perry; Brig. Gen. G. P. Saville, commanding general, 12th Tactical Air Force; Rear Adm. Calvin T. Durgin, U. S. carrier group commander; General Bouscat, French Air Force commander; and Lieutenant Colonel Williams.

In addition, more than 200 locomotives and train coaches were destroyed or damaged, five bridges were cut, a score of trawlers and barges were blasted, at least eight forts and gun emplacements were silenced, and numerous fuel tanks and ammunition dumps exploded by the squadron's dive-bombing and rocket-firing *Hellcats*.

They ranged up and down the country west of the Rhone River. It was a strange sort of a job for Navy carrier pilots. By far the greater part of this destruction was concentrated within four days. One mission, led by the squadron commander, 30-year old Lieut. Comdr. William F. ("Bush") Bringle, USN, of Memphis, Tenn., was particularly successful. The seven pilots first discovered a Nazi troop convoy on a road west of Carcasson and immediately attacked the concentration of 100 or more trucks and armored cars with their rockets and bombs.

"Each of us made six runs apiece on the column" said Ens. John M. Denison, USNR, of Lexington, Mass. "We smashed hell out of them, averaging two flamers per pilot per run. There were several large explosions, probably from fuel or ammunition trucks blowing up.

"The Germans left the trucks when we

attacked and shot at us from the ditches. There was also considerable fire coming from a farmhouse close by so we bombed that and left it wrecked and burning."

"We discovered another motor column near Castelnaud d'Aude and made three or four strafing passes at it with the same rate of destruction," Ens. William C. McKeever, USNR, of Byesville, O., said. "Several miles west of there we sighted another column and strafed it, and near Villefranche attacked a column in which there were horse-drawn ammunition carts and weapons carriers. The horses stampeded and ammunition carts exploded. The return fire was intense. Several of our planes were hit."

The next day six of the *Hellcats* led by Lieut. Frederick F. ("Schnapsey") Schaffler, USNR, Nantucket Island, Mass., played havoc with German motorized columns along roads near Uzès, Capelle, Bagnols and Remoulins. They destroyed between 80 and 100 of them.

"Just outside of Pouzilliac," Schaffler declared, "we ran into a long column of Nazi vehicles reaching around a bend in the road. We were carrying depth bombs and rockets. I got a direct hit between three trucks just at the bend. One was apparently an ammunition truck for there

was a tremendous explosion rising 300 feet in the air. The tail of one truck flew in an arc several hundred feet and set a hay field afire. The fire on the road spread from one truck to another.

"A few minutes later we ran into another column. They were packed close in double lanes like five o'clock traffic back in Boston. We attacked with rockets and I saw Candler [Lieut. (j.g.) William R. Candler, USNR, Detroit, Mich.] put a pair of rockets through a line of trucks, each rocket blowing up at least two."

Another heavy "bag" of enemy motor transport was made on a 30-mile stretch of road between LeLuc and St. Maximin, east of the Rhone. Allied spearheads captured this area a day or so later and Allied Army commanders obtained a first hand view of the effectiveness of the Naval air support.

Brig. Gen. G. P. Saville, USA, commanding the 12th Tactical Air Force and in command of all units giving close air support to the operations, sent a "well-done" to the carrier task group for this achievement.

"Today I personally counted 202 destroyed enemy vehicles from four miles west of St. Maximin to two miles east of LeLuc" he radioed. "This is positive proof of an excellent job. I would be grateful if you would thank all concerned for me for an outstanding success and a definite contribution to the present rapid advance of the ground forces."

The ditches along the road gave convincing evidence of the destructive power of the *Hellcats'* rockets and machine guns. Taking a photographic party ashore the following day the writer found many of the vehicles destroyed beyond recognition. What had been large armored cars or troop carriers were simply masses of charred and twisted metal.

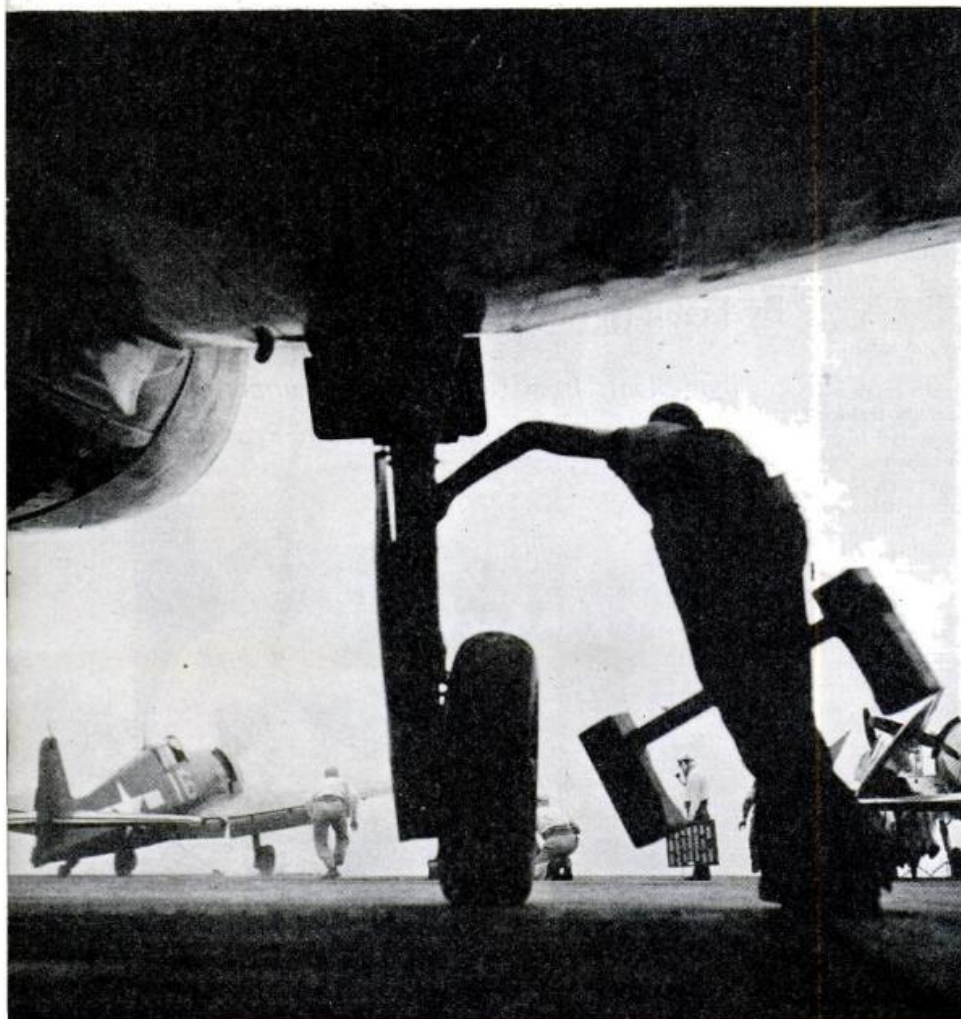
In some places there were two or three wrecks piled up together and in one ditch four within 15 yards of each other. Several ammunition trucks which had been overturned by machine gun fire striking in the engine or cab, lay on their sides in the ditch otherwise undamaged. Their deadly cargo—shells, bombs, "potato masher" hand grenades, etc., were strewn unexploded among the grape vines in the adjoining fields.

The *Hellcats* had an equal amount of success attacking trains. The squadron destroyed or damaged 23 locomotives and 185 coaches, scored bomb hits on five bridges and made 17 other railroad cuts or blocks.

On one occasion Bringle noticed what appeared to be a forest moving. He swooped low and saw it was a 15-coach train covered with branches. The *Hellcats* attacked and left the troop train smashed and flaming.

The retreating Germans tried many such camouflage tricks in an attempt to escape notice during the day so they could move at night, but the low-flying Navy fighters detected the branch-covered trains and trucks. One ruse might have fooled them had it not been for the keen eyes of farm-bred Ens. Dale N. Dieterich, USNR, of Clayton, Kans.

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One of the Tulagi's F6F-5's, apparently being launched by a deck catapult, takes off for France.

Hellcats Over France

(Continued from page 54)

Flying low over a plowed field, Dieterich was puzzled by something peculiar about the clump of trees and bushes in the center. Then it dawned on him. The plow-furrows ran straight into the clump instead of around it. He called to his mates and down they went—strafing a group of cleverly concealed German cars and trucks!

The work of the Hellcats against German forces trying to escape from southern France was easily the most spectacular phase of the carrier planes' activities in the campaign. It was of inestimable importance in slowing down and bottling up the retreating enemy army.

But this new use of carrier aircraft was not the primary purpose of their inclusion in the south France amphibious operation. In the advance plans for the invasion their principal roles were to provide air protection to the left flank of the landing and to direct the gunfire from

the battleships and cruisers in softening up the German shore defenses.

As it turned out, there was little air opposition to the invasion—and consequently not much need for fighter cover—and a highly important but smaller job of gun-spotting than had been expected. Thus the Hellcats were able to devote much time to profitable attack missions behind the German lines.

This use of a single type of plane to perform so many functions is new to United States Navy carrier aviation. Normally our big battle carriers contain striking teams composed of Curtiss Helldivers (dive-bombers), Grumman Avengers (torpedo bombers) and Grumman Hellcat fighters, while "baby flat-tops" usually have a team of Avengers and fighters. The only prior one-type carriers have been ships providing fighter protection for a large carrier task force.

In introducing a new kind of Naval air

"punch"—a small carrier equipped with one type of airplane which is at once a good fighter, gun-spotter, dive-bomber and rocket-firing attack plane—the United States Navy may have devised a weapon of great potential value.

The planes themselves were the new F6F-5's, which have at least six principle improvements over their predecessors, the F6F-3's. The engine cowling has been further streamlined, the rough-surfaced paint has been replaced by a waxed mirror-smooth polished aluminum surface, new engine cowlings make it possible to maneuver the plane with greater ease, the new Hellcat has an improved windshield with two metal braces on the old windshield removed for better visibility, the tail and stabilizer surfaces have been strengthened, and a larger sheet of armor-plate has been placed behind the cockpit giving the pilot greater protection. The armament of the two versions is identical.

The new Navy tactics used in southern France would seem to have a definite place in future amphibious operations, particularly for spotting gunfire during Naval bombardment of the landing area.

In the latest amphibious operations in Europe—including the landing in Normandy—land-based fighters were used for spotting. In the south France invasion, however, our available land bases were relatively remote from the beaches and the spotting came from aircraft carriers.

The Navy was ready with such carrier-based fighter-spotters. Lieutenant Commander Bringle's VOF squadron had been in training for months for an assignment of this nature. The unit was assigned to the U.S.S. *Tulagi*—one of the Kaiser-built "baby flat-tops." The captain is a Naval Academy graduate of 1921 and has been flying in all types of planes since 1926.

A sister ship of the *Tulagi*—the U.S.S. *Kasaan Bay*—with a squadron trained in fighter tactics, dive bombing and rocket-firing, though not spotting, also was selected for the operations.

The two carriers, with escorting destroyers and two American-built small British carriers—H.M.S. *Hunter* and *Stalker*—were formed into a task group and placed under command of Rear Adm. Calvin T. Durgin, USN, of Palmyra, N. J. Admiral Durgin is a veteran sailor and airman. He was graduated from Annapolis in 1916, served on destroyers in the last war and has been flying for 25 years. He commanded the aircraft carrier *Ranger* in the North Africa landings.

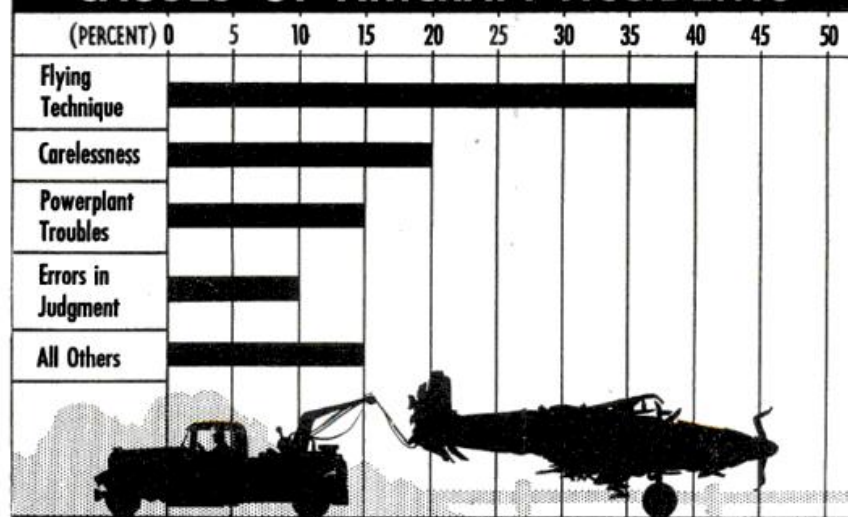
Another task group of five American-built British baby flat-tops under Rear Adm. Thomas Troubridge, R.N., also joined Vice Adm. H. K. Hewitt's naval forces for the landing. They were equipped with Supermarine *Seafires*, American Grumman *Wildcats* and a few *Helldivers*.

When the Naval bombardment preceding the landing began, the carrier-based Navy pilots were over the German fortifications. They stayed over them in the face of heavy flak, directing the warship fire as the coastal guns were knocked out one by one.

Perhaps the outstanding spotting job was done by Ens. David E. Robinson,

(Continued on page 144)

CAUSES OF AIRCRAFT ACCIDENTS*



THE trouble with planes is people. People cause accidents. Of course, aircraft themselves have structural failures. So do their engines. And there are other causes of accidents such as darkness, poor landing fields, and so forth. But mainly the trouble is people.

The CAB has recently completed a detailed study of aircraft accidents in 1942. It covers 3,871 accidents and of these, 2,720 or 70.2 per cent were caused by the purely human factors of faulty technique (1,567), carelessness (764), and poor judgment (389).

Less than a third—29.8 per cent to be exact—were caused by external factors. Powerplant difficulties caused 585 accidents; structural failures 213, terrain 91, weather 61, darkness 1 and miscellaneous causes 146. Of course

a good many of these also were caused by poor judgment, or what the statisticians are pleased to call "the human element."

In 1943 there was much more instructional flying than pleasure and commercial flying. Indeed, there were 2,589 accidents in instructional flying compared with 525 in pleasure flying and 716 in commercial flying. Most of these accidents occurred when the pilots were landing, taxiing, practicing or in forced landings. Take-off, collision and spin-stall were next on the list—all traceable to people.

There seemed to be no difference between WTS and non-WTS instructional accidents. Seventy-five per cent of the WTS accidents and 74.5 per cent of the non-WTS accidents were due to the same cause—people.

(Continued from page 88)

USNR, of Chicago. He went out with Lieutenant Commander Sandor on D-plus-5 to direct fire on some guns that were still firing at our ships. Sandor was to do the spotting, with Robinson flying on his wing to watch for flak or fighters, but the former had trouble with his radio so they reversed positions.

Robinson first located a battery of four medium guns on Cap Sicie. He had the ship on the target in five salvos and the battery was completely destroyed. Then he directed fire from the U.S.S. *Nevada's* 14-inch guns on a six-gun battery in a concrete revetment. An intense anti-aircraft barrage was put up against the two American planes but Robinson spotted the target for the battleship until it was destroyed.

Then they tackled a third target—six

or seven heavy guns on Cap Capet. They were well-camouflaged and visibility was none too good. Robinson could not see them from the altitude he had been flying—1,000 to 3,500 feet—so he dropped down to 100 feet. He located the guns and directed the ship's batteries on them until they were silenced.

"Robinson put on the finest exhibition of spotting I have ever seen," said Sandor on returning to the ship. "At the complete disregard of his own personal safety he flew right down to the targets to make his observations. His spots were faultless."

Sometimes, however, enemy guns would keep on firing despite the heavy bombardment. Then *Hellcats* loaded with rockets and bombs went into action.

There was one fort on Port Cros, a small island off the coast, that kept shoot-

ing at our troops landing on the beaches despite every attempt to knock it out. An eight-plane flight led by Lieutenant Commander Sandor attacked the fort, dive-bombing from 7,000 feet out of the sun. Two runs were made with depth bombs and rockets and many hits were scored. Planes from the *Kasaan Bay* and *Seafires* from the British carrier followed up the assault. The fort surrendered in a couple of hours.

During the landings and the fighting to secure our beachheads there was little opposition from the *Luftwaffe*. But although the Navy fighter pilots failed to encounter any Nazi aircraft while spotting or flying air cover over beaches and fleet, they did not go scoreless in the operation. They had to fly nearly 150 miles inland to find enemy planes but they got them.

On a reconnaissance mission over Lyons, a group of the *Hellcats* ran into three Heinkel He-111's. Lieutenant Commander Sandor and Ensign Robinson tackled one. The latter got in the first burst with a full deflection shot and then both pilots followed the enemy bomber down and finished destroying it.

Lieut. Rene E. Poucel, USNR, of New York City, whose parents were born in the area over which he was flying, and Ens. Alfred R. Wood, USNR, of Yonkers, jumped the second plane and quickly sent it down in flames. Wood got the third Heinkel with one burst of his machine guns.

Later, Lieut. (jg) Edward W. Olsewski, USNR, of Richmond Heights, Mo., and Ens. Richard V. Yentzer, USNR, of Sheridan, Wyo., ran into three Junkers Ju-52's over the Rhone River. Both American planes had previously been damaged by flak in attacks on Nazi motor columns and had used up most of their ammunition. Olsewski had only one of his six guns firing but he shot down two of the enemy planes and Yentzer got the other.

This made a total of six enemy planes for the squadron—all they saw in the air during the entire operation.

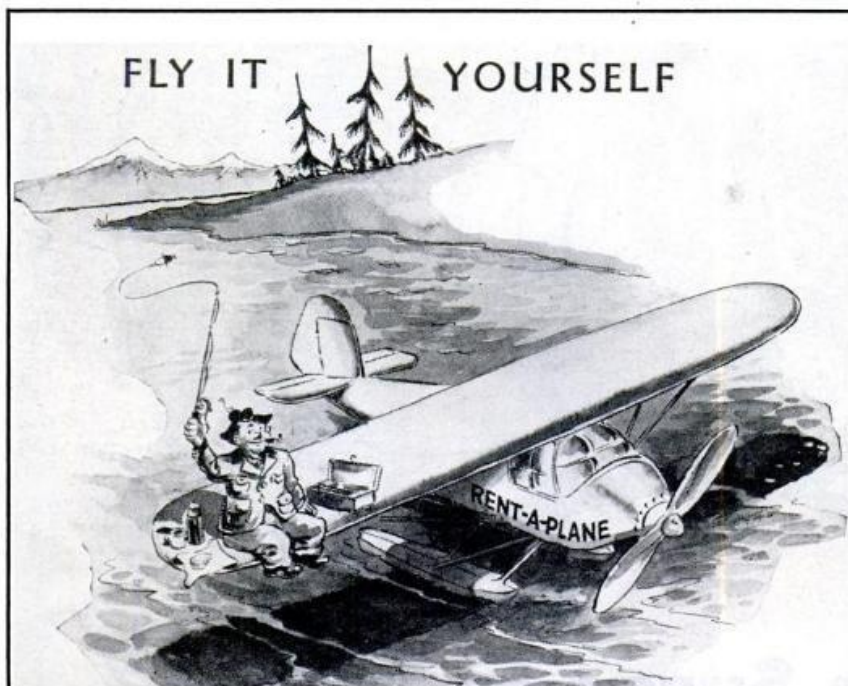
But though the *Luftwaffe* gave them little trouble, the anti-aircraft fire was something else. Planes going out on spotting or attack missions a large portion of the time returned with flak holes in them. Some of them did not return, although in all but one or two instances the pilots parachuted safely.

A veteran Fighting French pilot taking part in the operation declared that the ack-ack over Toulon was the heaviest he had ever seen, and he had flown over Berlin and many other targets in Germany.

The beating the *Hellcats* took from flak and yet kept flying was a tribute both to the ruggedness of the airplane and the job done by the Tulagi's plane maintenance crews.

The "mechs" and other plane repairmen under Lieut. Edward O. Hudson, Jr., USNR, of Mexia, Tex., would grab the shot-up planes as they came down on the Tulagi's elevators and work on them all night. Almost invariably the damaged planes would be ready for operations the next day.

Once a *Hellcat* received a 20-mm. shell
(Continued on page 150)



THEORIZING that the trends in air travel will parallel those of automobile travel, the American Drive-yourself Association is preparing to promote a fly-it-yourself plane rental program.

The association claims it can provide cheaper flying than the private owner can get from his own plane. Average private plane operating costs are about \$12 per flying hour on a basis of 100 hours of flying per year and the ADA points out that its planes would be used from 1,000 to 2,500 hours per year. Thus the heavy fixed costs of insurance, depreciation and storage, etc., which accounts for perhaps three-fourths of the private owner's cost, can be averaged out over 10 to 25 times as many flying hours.

Eventually the nationwide system of ADA operators expects to be so well organized that its planes might

be interchangeable, and travelers to one destination might not even have to fly the plane back. First planes would be single-engined 100-h.p. jobs equipped with three-way radio and blind-flying equipment.





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equally well at their jobs, thus disposing of the contention sometimes heard that one group or community has an inherent superiority over others for specialized work. The fact of the matter is that the Air Force demands only three things of its personnel: perfect health, keenness, and intelligence."

He particularly emphasizes one tradition of the service—"that all Indian Air Force personnel must be prepared to eat at the same table. This is a proud convention laid down by the officers and men of the Indian Air Force since its formation. Nothing is going to break it, you may be sure of that."

And nothing has broken it. When the Raja Saheb of Jawhar joined the Volun-

teer Reserve in 1941, he gladly gave up the luxurious life of a prince to become one of the boys. "We pilots regard it a great privilege to be on convoy duty," he explains.

The mark of merit is often the awards and honors bestowed upon a military unit by senior authority. From the Crown, the Indian Air Force can point with pride to the Distinguished Flying Crosses bestowed upon "Jumbo" Majumdar and "Aspy" Engineer for their service during the Burma campaign, and to the Distinguished Service Order recently awarded to Mehar Singh, leader of the Hurricane squadron in Arakan. Members of the Indian Air Force have proven their ability to handle war's newest weapon. **END**

Hellcats Over France

(Continued from page 144)

hit in its engine, the missile going through three cylinders. The plane was flown back to the ship and made a normal landing. The next day it was back in service.

Besides proving the ruggedness of the Hellcat, the campaign also demonstrated that the fighter plane was an admirable dive bomber and rocket-firing attack plane. The rockets caused terrific damage to most any sort of target.

One of the most effective weapons used by the Hellcats was an antisubmarine depth charge equipped with a contact fuse. They were the only bombs available after the planes had been slugging the Nazi trains and trucks west of the Rhone for several days. But the missiles—with their tremendous blast effect—proved admirable for dropping within forts or on motor columns.

The unexpected expenditures of bombs against so many targets in the fighter-bomber sweeps gave rise to another expedient. A considerable quantity of British bombs was obtained but they would not fit into our bomb-racks. Ordnance officers Lieut. Ralph K. Andrist, USNR, of Minneapolis, and Ens. Edward F. O'Brien, USNR, of Rockford, Ill., met the problem by grinding the lugs on the bombs to fit—while everyone on the ship got as far from the ordnance shops as their duties would allow.

Other divisions of the Tulagi's air de-

partment, headed by Lieut. Comdr. Adrian H. Perry, USN, of Pasadena, Calif., as well as the entire ship's company did their part of the team job necessary to get the Hellcats on the target.

The landing deck crew under Lieut. Leonard L. Brannan, USNR, of Auburn, Wash., smashed their own speed marks in getting the Hellcats into the air and down again. Brannan claims an all-Navy record for catapulting planes.

After the destruction or surrender of the last of the enemy coastal defenses and the retreat of the German armies to central France, there was little left for Admiral Durgin's force to do and orders were received to withdraw from the south France area.

Before we left, however, General Saville made a personal visit to this ship to thank Admiral Durgin and his airmen for their support. Accompanying him was General Bouscat, commanding general of the French Air Force.

General Saville also sent a dispatch to Admiral Hewitt commending the carrier task group for its work.

"I would like to express my appreciation," he stated, "of the outstanding work they have done and of their perfect co-operation. I consider the relationship and co-operation of the force to be a model of perfection and a severe standard for future operations." **END**

Report from Washington

(Continued from page 42)

have devised two tests to determine the extent to which individuals are subject to the difficulty, one test to show its effect upon co-ordination and the other to determine the technical aspects of the condition and its detailed effects. It is reported that co-ordination is extensively affected, especially at high altitudes. . . . Study of hyperventilation came about when 16 physicians at Mayo's took flying lessons in order to fit them better for aerial research. One of them began to feel faint, dizzy, weak and anxious while trying to learn to land. He immediately recognized the symptoms as those of hyperventilation and the research followed. CAA has passed the findings on to the

fighting forces for study in connection with combat flying, especially in the stratosphere.

Pacific Notes

It would be impossible to keep up with the new words and phrases being added by combat pilots to the aviation vocabulary, but here are a few from the Pacific: "Duty happy"—an officer who insists on having his pilots fly overtime; "Winks"—bursts of Japanese anti-aircraft guns . . . Even more colorful are the ways in which the words are used. Take a recent report from Lieut. Richard E. James, USNR, 26-year-old Helldiver pilot from Chicago, who attacked the Japs in a pow-