

RECOGNITION

JOURNAL.



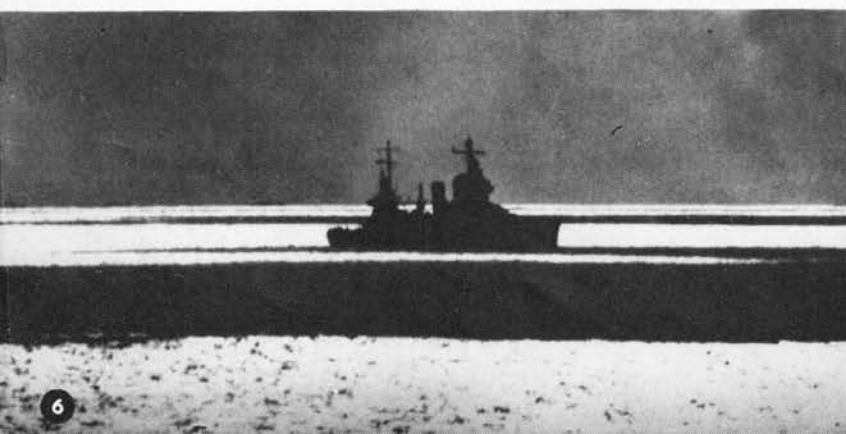
NIGHTFIGHTER

~~RESTRICTED~~
MARCH, 1945
NUMBER 19

WAR DEPT.
NAVY DEPT.



QUIZ NO. 1: WARRING NAVIES' CRUISERS



RECOGNITION

JOURNAL

PUBLISHED BY THE U. S. WAR AND NAVY DEPARTMENTS WITH THE ASSISTANCE OF TIME INC.
COPYRIGHT 1945 BY P. L. TAYLOR

THIS MUST STOP

The U. S. has now been at war for three years and three months. In the early days of the war, errors in recognition were frequent and because of the understandable confusion were to be expected. It was to remedy this tragic waste of men and matériel that a thoroughgoing recognition program was set up. Ever since then the armed forces have been slugging away at this problem, trying to get the subject across by any and all means—courses, lectures, training devices, publications like the *Journal*. No effort has been spared to give men in the field and at training bases every possible aid in knowing their friends from their foes. This is as it should be, as any man knows who has taken gun bursts from a friendly plane or ship, or has taken a pot shot at a plane only to learn later that it was someone on his own team.

In spite of the deadly seriousness of the problem and in spite of the vigorous instruction program, terrible recognition mistakes still occur. This must stop. No matter how expertly planned or carried out a course of instruction may be, it depends on the utmost cooperation of students in the classroom and in the field for final results. Pilots and gunners have got to work harder on the subject during their time at rear bases. Most important, they cannot let down on the job in the field. New information and "refresher" material must be followed closely. Above all, carelessness must stop.

This is each man's individual responsibility; he cannot depend on some superior to recognize for him. Successful recognition depends on him alone. In many recent incidents, one man, sloppy in recognition, has opened fire on a friendly plane and set off the guns of a whole fleet.

Picked at random from increasing numbers of recognition mistakes, the following prove we must tighten up:

One: "Near the Marshall Islands, three carrier-based fighters came out of clouds near the sun in a shallow dive, veered toward our CV's and were fired on by the 40-mm. and 20-mm. AA of a CV, BB and cruiser. Planes were identified as F6F's, 'Cease firing' was ordered. One F6F seen to smoke, lose altitude and land in the water."

Two: "Another officer and I were flying two captured FW-190's back from Italy. Over the Mediterranean we ran into some P-38's which paid no attention to us although they were too far away to see our U. S. markings. A flight of P-40's encountered later also went on its way. Next surprise was at a landing field where the operations officer reported us as 'Two P-47's.'"

Three: "I was careful to avoid flying over our naval craft in the bay (Empress Augusta Bay) so as not to attract their AA fire. I passed a lone destroyer some 800 yards away which opened up with a 50-cal. machine gun, and I was caught in a halo of tracers. I felt the impact of bullets hitting my aircraft. I broke away from the destroyer, heading towards the Treasury Islands. Immediately afterwards, a Corsair made a quarter-astern attack on me. I saw tracers appear behind me and took evasive action. The Corsair broke off its attack. . . ."

Four: "An LST sighted a TBF on the port bow over an anchorage area and immediately identified it. Visibility was excellent and Allied markings clearly visible. Orders were given not to fire. As the TBF approached, small craft opened fire, closely followed by other LST's. Plane attempted evasive maneuvers, but the fire was so intense he didn't have a chance. The plane crashed in flames 150 yards on the port quarter of this ship."

Five: "An F6F pilot spotted seven other F6F's and approached for a rendezvous. The division leader turned his division to meet this plane which was still too far off to be recognized. The leader put his sight on the approaching plane, waiting for it to turn aside and be recognized. When it still continued to approach head-on, he opened fire with a short burst at 500 yards. The plane ahead ducked under his tracers and was recognized as friendly. It then joined up from the rear."

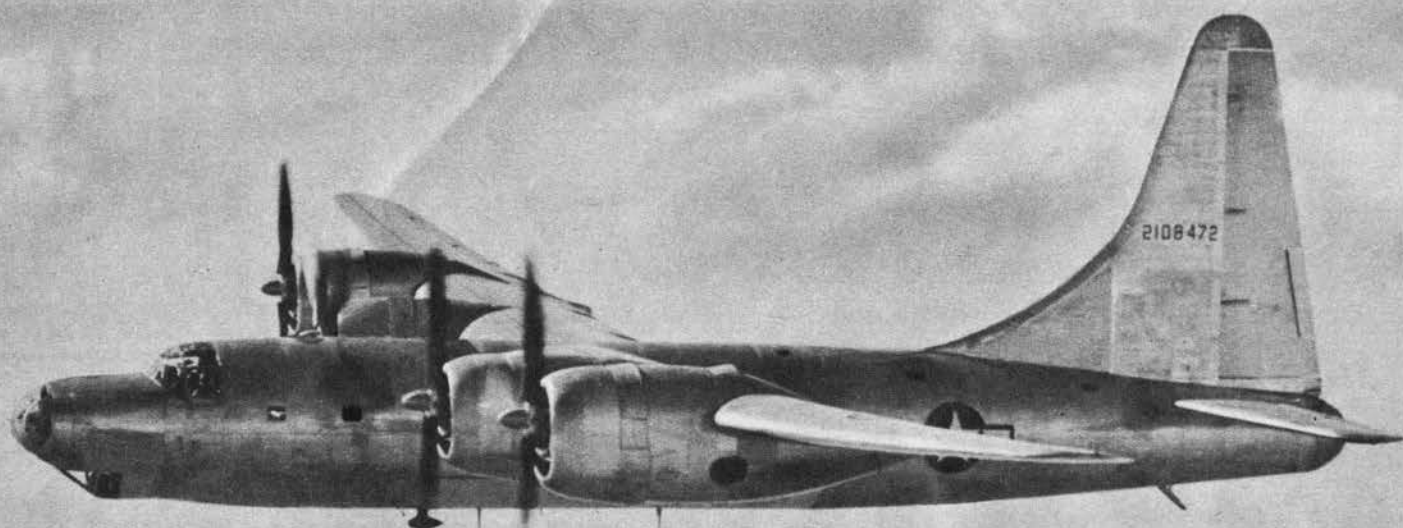
Six: "On K-2 Day a CVL dispatched two fighters, and a CA two seaplanes, to the rescue of a downed pilot. On arrival, they found a submarine conducting the rescue. Our fighters overheard, 'Oh boy, there's a sub. Let's dive on him.' Fortunately the Air Coordinator heard the transmission and prevented an attack."

And so the story goes. But it must go on no longer. Every man must tighten up on recognition to save his own life and those of his comrades and to inflict greater damage on the enemy. In a statement from Headquarters, Mediterranean Allied Tactical Air Force, Major General Cannon drives the point home: "Recognition training is an integral part of combat operations. Somewhere, sometime, you will meet the enemy and with only yourself to depend on you will either pass your final recognition test or flunk forever. . . . Be alert. Take advantage of every training opportunity and your knowledge and concerted effort will speed Victory—our target for tomorrow."



B-32's round fuselage hangs from the narrow, tapering Davis wing. The airplane's four huge nacelles barely extend beyond the wing's

trailing edge. Tremendous expanse of single fin and rudder soars upward to a rounded tip. Trailing edge is straight, rising at a steep angle.



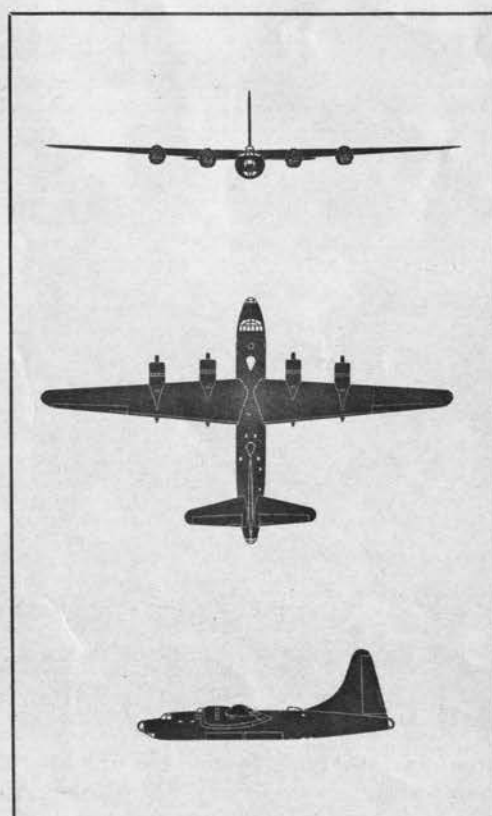
DOMINATOR'S WING, SET WELL BACK, LEAVES LONG SNOOT WITH BALL TURRET AT THE END. BOMBARDIER'S POSITION BELOW ADDS GLASSY "GRIN"

B-32

Consolidated-Vultee's Dominator is AAF's second superbomber

With an impressive battle record already behind the Superfortress, the new B-32 definitely establishes the era of the superbomber predicted by General Arnold in September 1943. Two such giants appearing within a year's time give the USAAF a commanding lead in this new phase of aerial warfare. With its span of 135 feet and 83-foot length, the B-32 is shorter each way than the B-29 but still deserves its proud name of Dominator. Four Wright Double Cyclone engines each develop 2,200 hp. and at high altitude produce a speed of over 350 m.p.h. Bombload, armament or range cannot be revealed but all are worthy of a Very Heavy Bomber.

Designed by Consolidated-Vultee, the B-32 bears the same relationship to the B-24 as does Boeing's B-29 to the B-17. Though the B-32 suggests its Liberator ancestry in overall appearance, most major components are different. The Davis wing, long and narrow, has been retained but is set very high rather than in the B-24's shoulder position. The B-32's fuselage is cylindrical, while the B-24 has a deep flat-sided fuselage with a cigarlike taper in plan view. Most important difference is in the B-32's huge, saillike single fin and rudder. Resembling those already found on the PB4Y-2 and XB-24N, it is B-32's outstanding recognition feature.





NAZIS' NOVEL ANTI-AIRCRAFT TANK CONSISTS OF FOUR 20-MM. CANNON IN A LARGE, MANY-SIDED TURRET WHICH IS MOUNTED ON A MARK IV CHASSIS

NEW VARIATIONS IN NAZI ARMOR

Germany's desperate need for quantity in her production of armored vehicles presents no insurmountable obstacle to Nazi designers. Further refinements on Nazi tanks, half-tracks and armored cars continue to appear as the Wehrmacht seeks every possible means to fight off Allied air and ground forces.

One interesting innovation is the heavy AA turret set on the PzKw IV chassis (*above*). Strafing evidently made things too hot for crews manning more open self-propelled AA mounts, with the result that the old Flakvierling's (AA quadruplet) 20-mm. cannon now have greatly increased protection.

Already equipped with a variety of anti-aircraft armament, Germany's 7.7-ton medium armored personnel carrier now has one more mount (*left*). By carrying three heavy machine guns rather than cannon, it differs from earlier German SP flak. Armored swivel mount has both horizontal and vertical traverse.

Two of the latest Nazi tank destroyers (*opposite*) are the combination of a 75-mm. gun and the Czech 38 chassis and a rebuilt eight-wheeled armored car with a high-velocity 50-mm. weapon. Previously serving as the carriage for antitank guns in tall shield mounts, the Czech chassis (*top right*) now has a low silhouette and built-in gun. The armored car (*bottom right*) has its original wheel mounting but the hull is now different, sloping down from turret to rear without any side cutaway.



Three machine guns furnish the firepower for this half-track's AA mount, point forward in traveling position. The vehicle's suspension has a front sprocket, a large rear idler, six overlapping bogie wheels.



Nazi tank destroyer wrecked by a U. S. M-10 has wallowed to a muddy end. Four large bogie wheels identify the chassis as the Czech 38. A cast mantlet on the low fighting compartment protects the 75-mm. gun.

Eight-wheeled armored car (*below*) carries a long 50-mm. gun which protrudes well beyond the bow. The cupola's lid is visible above the camouflage. A V-12 diesel engine gives the car a 50-m.p.h. top speed.





LSV CONVERTED FROM MINELAYER HAS TWO STACKS, TWO GUNHOUSES AFT. OTHERWISE IT RESEMBLES THE EX-NETLAYER LSV (OPPOSITE PAGE)



VICTORY SHIP IS LATEST PRODUCED UNDER USMC EMERGENCY PROGRAM. SPECIAL VERSION (BELOW) DOES MORE DIRECT MILITARY SERVICE AS APA



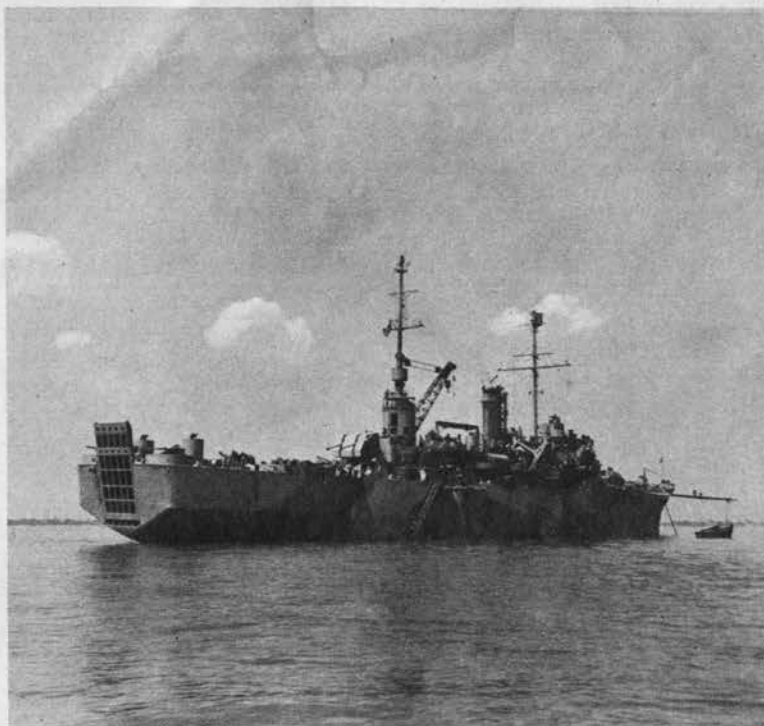
APA VICTORY SHIP NEEDS HEAVIER MASTING TO UNLOAD LVC's, LCP's AND LCVP's CARRIED ON DECK. SUPERSTRUCTURE HAS BEEN RAISED, EXTENDED

NEW ATTACK SHIPS

Amphibious attack is a relatively new military technique that is being steadily improved. Shown on these pages are two recent developments in landing matériel, the LSV (Landing Ship, Vehicle) and the Victory Ship APA (Attack Transport). Both are designed to carry more men and vehicles to battle than previous vessels and get them there as quickly as possible.

The 451-foot LSV exists in two versions: ex-netlayers (*right*) and converted minelayer (*left*). Latter version has two stacks, chief difference between the two. DUKW's, LCV's, LVT's and SEEP's (quarter-ton amphibious trucks) are carried and unloaded over the side or floated out via the stern ramp.

In contrast to the vehicle-carrying LSV, the converted Victory Ship (*two pictures, lower left*) serves as a floating base for assault troops. A bristling array of booms, kingposts and davits enables speedy unloading of smaller landing craft. LCV's and Higgins boats are slung on the ship's davits or piled up in tiers on the deck while the bigger LCV's are carried endwise.



SINGLE-STACK LSV HAS NOVEL UNLOADING RAMP IN FLATTENED STERN



LSV IS LESS BARGE-LIKE THAN MOST LANDING TYPES. NOTE DAVITS AMIDSHIPS, HEAVY CRANE IN MAINMAST. THE STERN RAMP IS A NEW FEATURE



BULBOUS DOUBLE-DECK FUSELAGE GIVES THE C-97 GREATEST CAPACITY OF ANY U. S. CARGO PLANE. NACELLES AND WING ARE THE SAME AS ON B-29

BULKY C-97 IS AAF'S BIGGEST

Taking advantage of the B-29's enormous power and efficient wing, Boeing engineers have designed a huge cargo plane, the C-97. Able to carry about 125 soldiers 2,000 miles in less than ten hours, the C-97 foreshadows further developments in airborne attack.

Complementing C-97's enormous capac-

ity is an unusual loading system. A ramp, which enables vehicles to drive through the cargo doors located under the upswept tail, can be folded and carried along for unloading. A monorail complete with a power hoist is built under the cabin roof to load heavy gear brought up in trucks.

THE C-97's FUSELAGE IS MORE THAN 110 FT. LONG, TWELVE LONGER THAN B-29's. A COMMERCIAL VERSION IS EXPECTED TO HAVE 3,500-HP. ENGINES





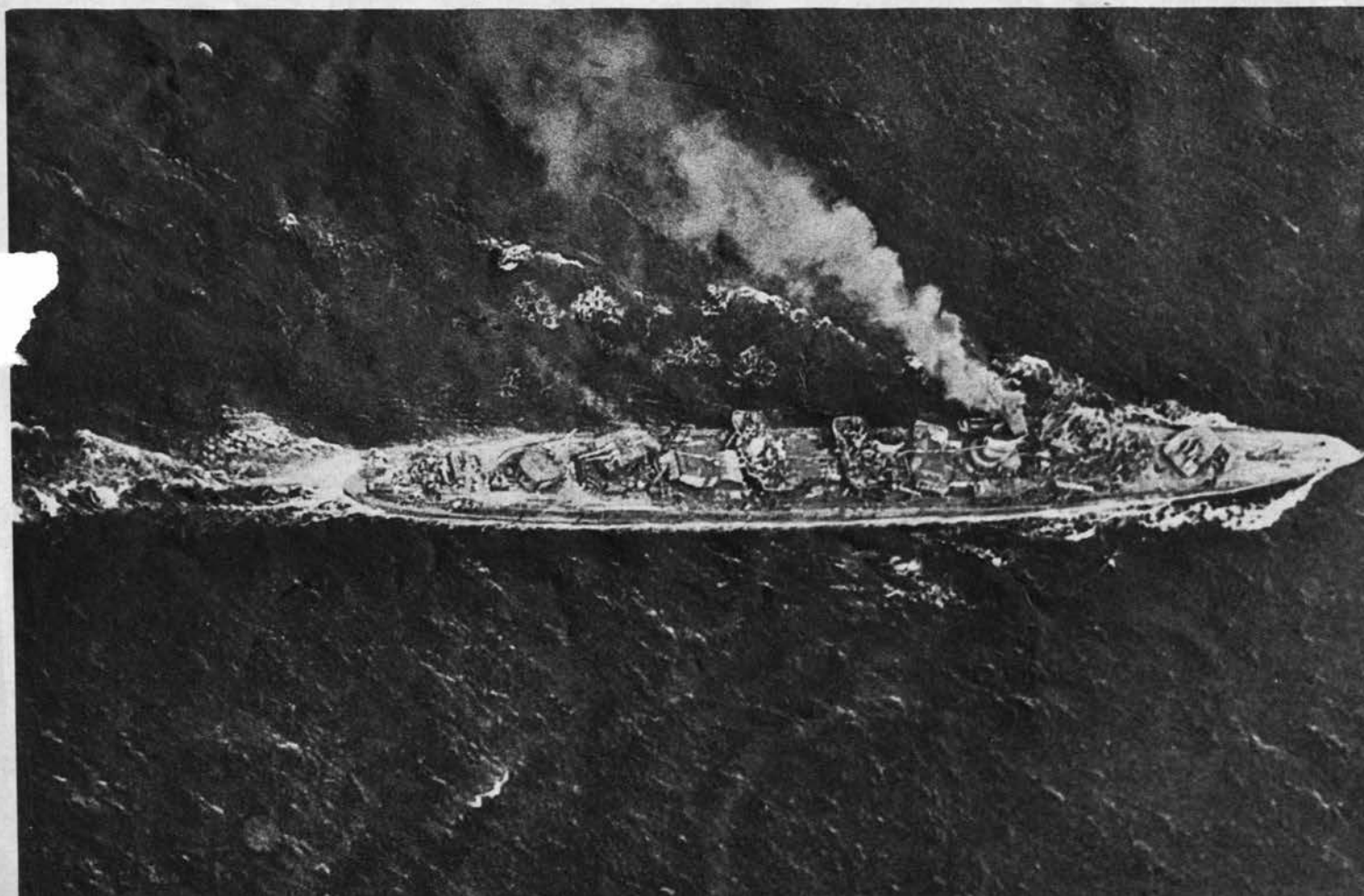
A RADIAL ENGINE FAILS TO DISGUISE JAP DIVEBOMBER JUDY WITH ITS LOW MID-WING AND RAISED CANOPY WHICH CURVES DOWN AT THE REAR

MODIFIED JUDY AND NEW JAP DD

A changed Judy powered by a radial engine was recently shot down and a clear picture of the plane (*above*) was taken just before it crashed. By replacing Judy's inline power plant, the Japanese will get a less vulnerable airplane although the round nose may cut its speed.

Flying near Ormoc Bay, Leyte, U. S. airmen got their first photo of a new Shimakaze Class DD (*below*). Closely resembling other Jap modern two-stackers in overall design, Shimakazes carry 15 tubes in quintuple mounts. This is the heaviest torpedo armament yet seen on a Jap destroyer.

SHIMAKAZE CLASS DD'S ARE ABOUT 415 FT. LONG, CARRY SIX 5-IN. GUNS. TRIPOD MASTS AND HEAVY FORESTACK FOLLOW THE USUAL JAP PATTERN





LeO-45's fuselage curves gracefully between the pointed nose and tail. Wing's dihedral stems from the roots and taper is even on the lead-

ing and trailing edges. Unorthodox tail assembly has marked dihedral and twin fins and rudders which seem to hang down from tailplane.



Ungainly snout, which mounts middle engine, should make Ju-352 easy to spot. Note angular fin and rudder and ramp under the belly.



Latest Ju-88 development, the S, has a smoothly glassed-in nose. Nacelles housing radial engines are same as on fighters Ju-88C, G.

ALLIED & AXIS AIRCRAFT NEWS

Back in French service is the Loire-et-Olivier 45 (*top*), now being used as a trainer. Popularly known as LeO-45, it had limited use by the Nazis as a transport. Luftwaffe developments include Ju-88S, first bomber version of Ju-88 to have a slender round-

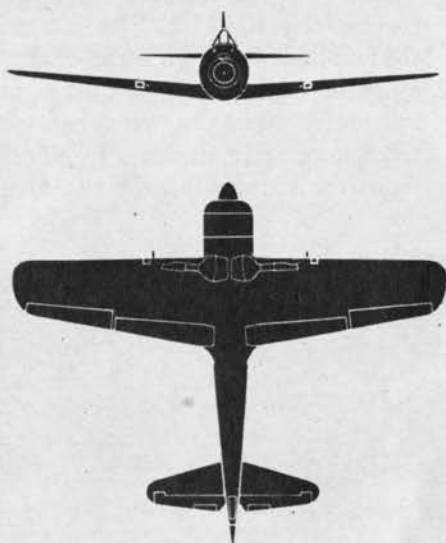
ed nose and the Ju-352, first of the greatly enlarged descendants of the Ju-52 transport to become operational. Used as an antishipping weapon by the RAF's Coastal Command is the Mosquito XVIII with its 57-mm. six-pounder mounted under nose.



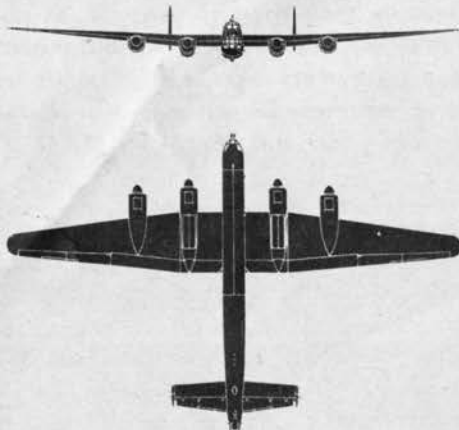
Mosquito XVIII's are striking at German coastal shipping with a six-pounder cannon (57-mm.) installed in a solid nose. Additional arma-

ment consists of the usual four .303 machine guns. Fuel tanks half way between the nacelles and wingtips add to the Mosquito's range.

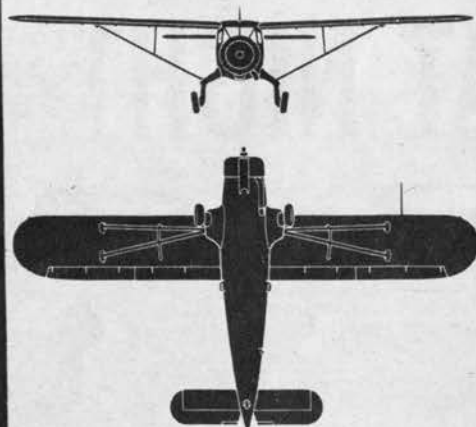
NEW AND REVISED AIRPLANE SILHOUETTES



FRANK 1
SPAN 37 FT. 1 IN. LENGTH 32 FT. 3 IN.
JAP FIGHTER'S NEW TAIL (PROVISIONAL)



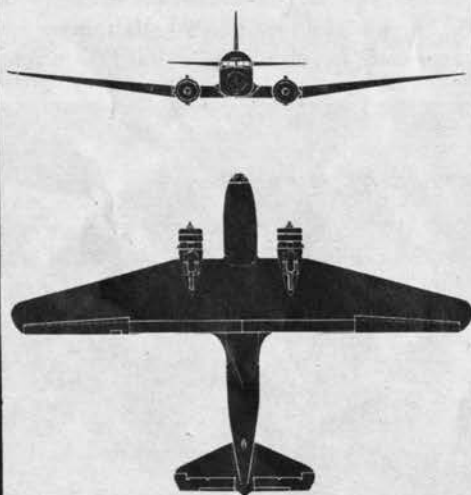
LINCOLN 1
SPAN 120 FT. LENGTH 78 FT. 6 IN.
NEW RAF BOMBER RESEMBLES LANCASTER



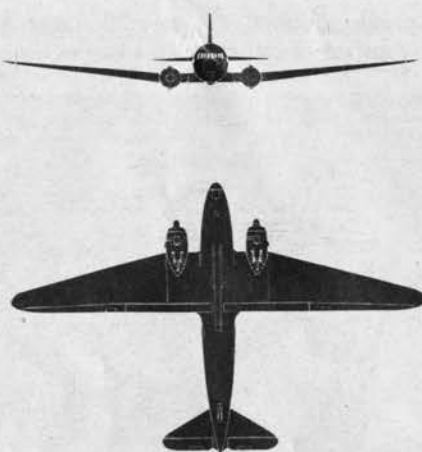
UC-64
SPAN 51 FT. 6 IN. LENGTH 32 FT.
ALLIED CARGO, COMMUNICATIONS PLANE

New silhouette of Frank shows an Oscar-type wing, Tojo fuselage and modified Tojo fin and rudder (see p. 48). First British heavy bomber since the Lancaster is its development, the Avro

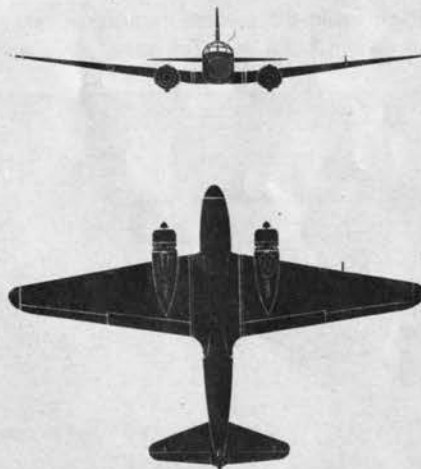
Lincoln. The new plane looks quite similar although considerably larger. The UC-64 Norseman is being used overseas as a light cargo carrier, may have floats in place of the fixed undercarriage.



TESS 11
SPAN 85 FT. LENGTH 62 FT.
JAPANESE VERSION OF DOUGLAS DC-2



TABBY 32
SPAN 95 FT. LENGTH 64 FT. 7 IN.
JAPANESE VERSION OF THE DOUGLAS DC-3



TOPSY 1
SPAN 74 FT. 2 IN. LENGTH 52 FT. 10 IN.
IMPROVED DRAWING OF JAP TRANSPORT

Transport planes will probably become more important for the Japs as more of their troops are cut off in the Philippines. Two of their important Navy transports are Tess and Tabby, virtual

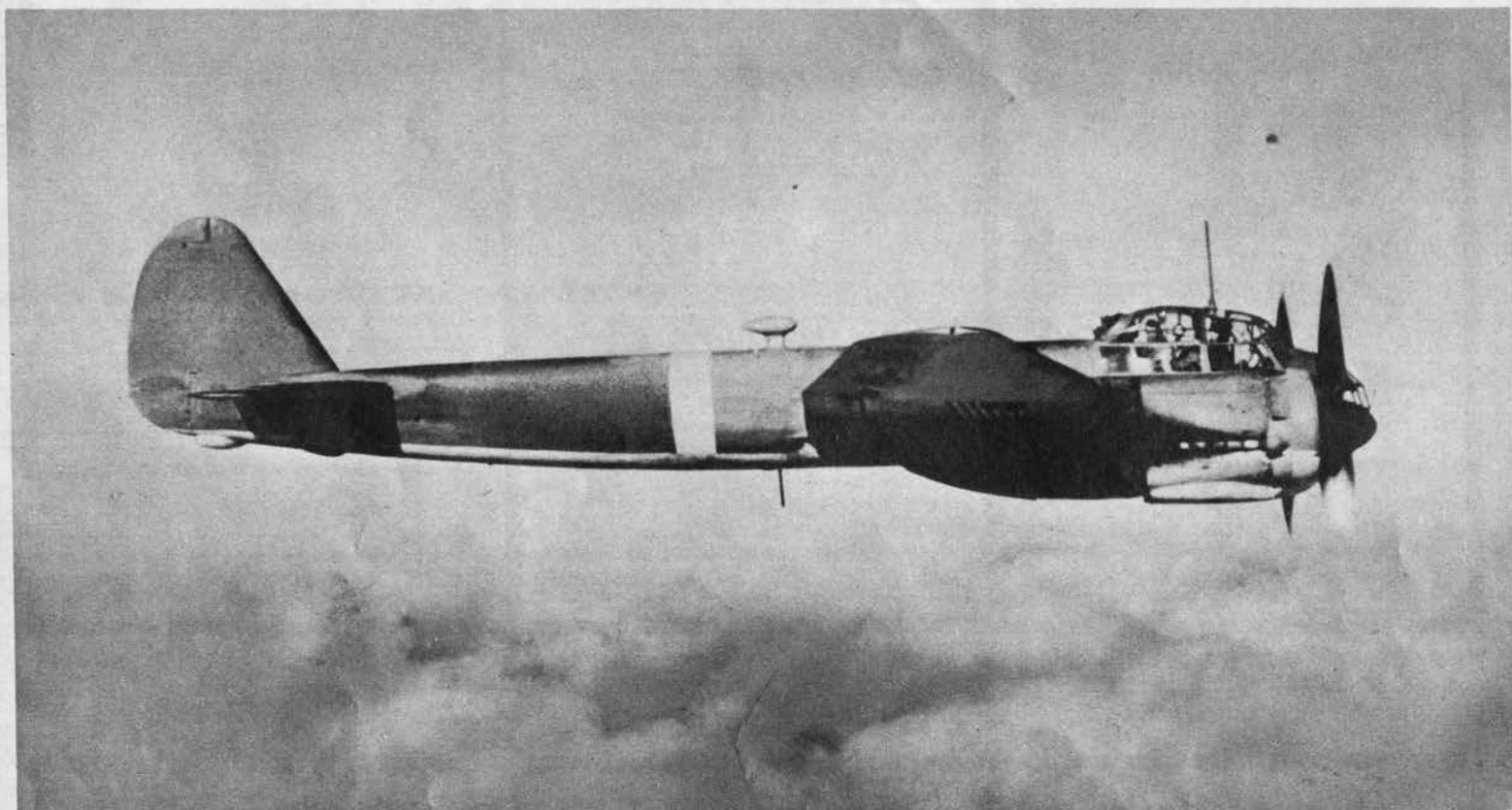
replicas of U.S. designs. Tabby, unlike Tess, has the faired fin of the C-47 but has larger spinners and a more pointed tail. Topsy, an Army plane, is smaller than the other two, has a different wing.

FIGHTERS AT NIGHT

Nightfighting demands specially equipped aircraft. Bulky radar must be carried to locate the target, while actual contact is a split-second affair calling for precise shooting. Thus the nightfighter must not only be a stable gun platform but mount enough firepower to make short bursts decisive. All these factors suggest a heavy, two-man plane and, except for the U. S.

Navy and the Luftwaffe, major air forces employ nothing but twin-engine types.

Most nightfighters are adaptations of familiar aircraft; U. S. P-61 (see cover) is the first built solely for night work. As the scope of nightfighting widens to include "intruder" attacks as well as defensive interception, more airplanes specifically designed for nightfighting can be anticipated.



Nightfighter Ju-88 retains familiar "dragon fly" profile of bomber (shown above) but has solid nose. Main armament consists of either

two 20-mm. cannon in the nose and four in a belly fairing, or four 20's in the nose and two more cannon firing upward from fuselage.



Intruder Mosquitoes prepare to take off for Germany. A powerful offensive weapon, the Mosquito has replaced Beaufighter as principal

RAF nightfighter. With its four cannon and four machine guns in the nose, the Mosquito is a good example of nightfighter armament.



U. S. Navy uses single-engine fighters (F6F, F4U) for nightfighting. Night-flying Hellcats (*shown above*) have black paint job, streamlined

radome on the starboard wing. Operating both from land and carrier bases, F6F's have high rate of climb even with heavy radar equipment.



Jet-black A-20 has flown for Britain's RAF as Havoc nightfighter, for USAAF as P-70 Nighthawk. Four cannon are mounted in solid nose.

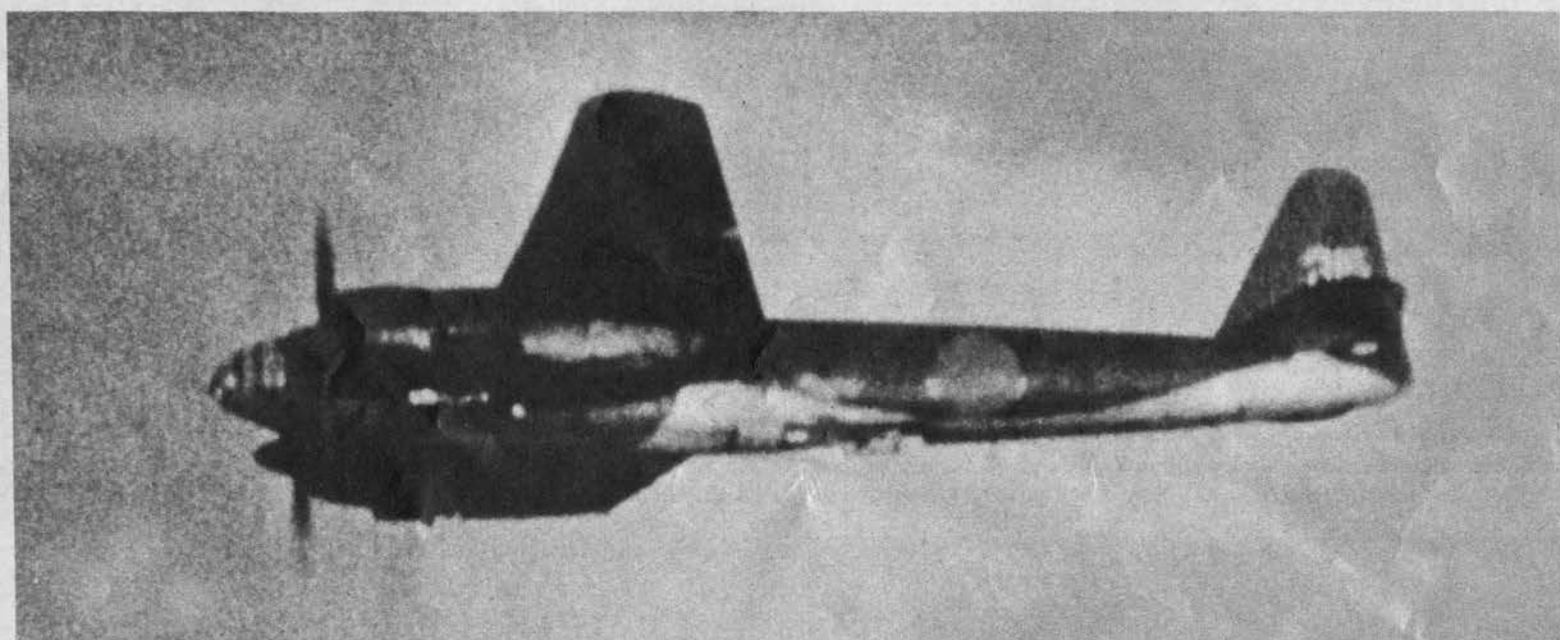


Nocturnal Beaufighter, RAF's versatile veteran, mounts four cannon in abbreviated nose. Six wing guns are unusual for nightfighter.



Square-cut wing and tailplane are dramatic contrast with the fishlike curves of the F7F's fuselage. Grumman's first operational twin-engine

design, the F7F Tigercat will fly as both night and day fighter from Navy and Marine bases. Its armament has not been revealed as yet.



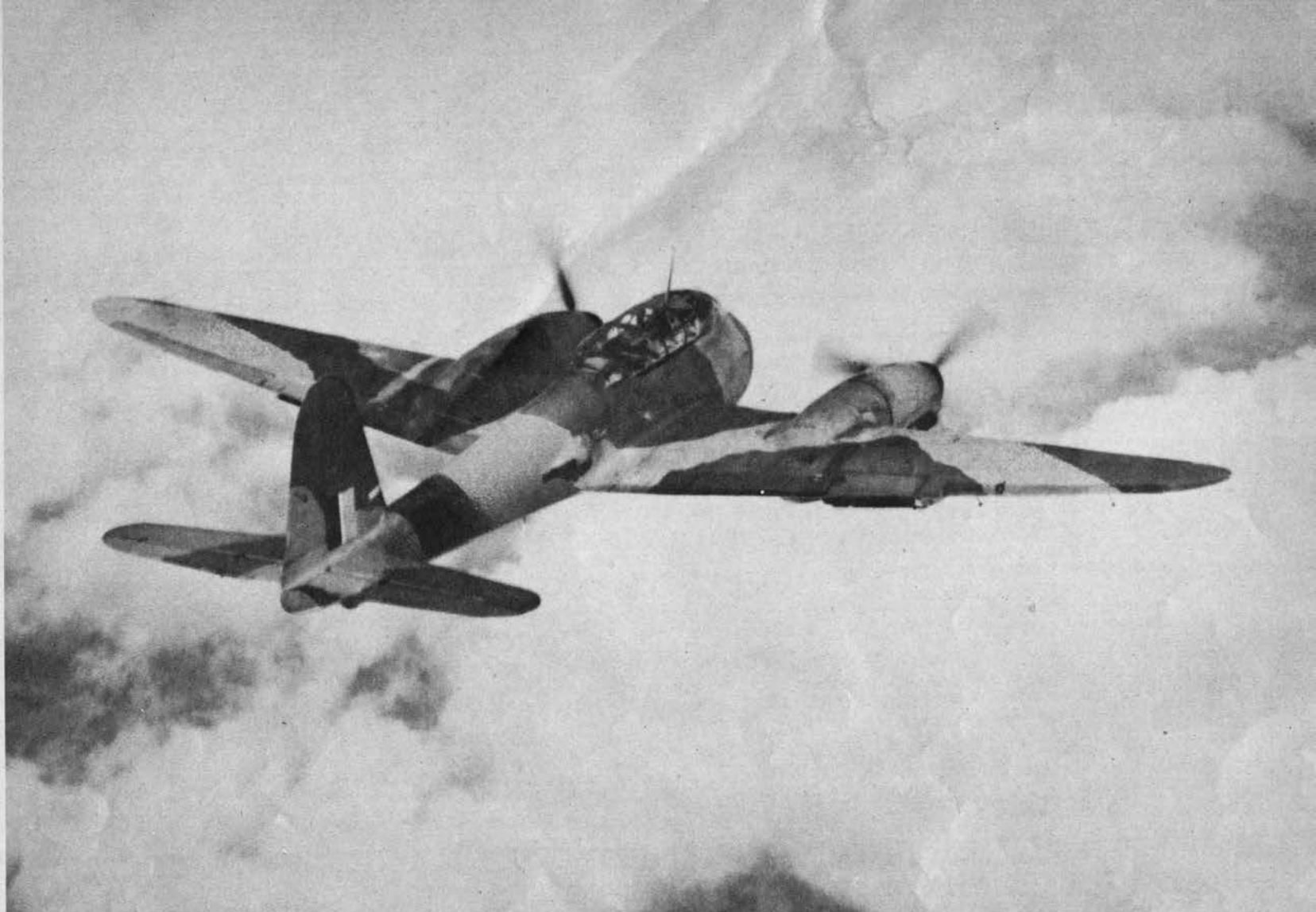
Clean and efficient in design, Frances has a triangular Jap tailplane tacked on fuselage. Multi-purpose Frances has been called Jap counter-

part of the Ju-88 and is believed to be adapted for nightfighting. No information as to changes in appearance or armament is available.



Sharp snout, bristling with radar units, replaces blunt, glassy nose on the nightfighting variation of the Do-217. Known as the J, this model

has four machine guns in the nose and four cannon below. Note the distinctive Do-217 fuselage, straight on top with upswept belly line.



High, blunt nose of Me-410 holds various gun combinations. Glass dome of the cockpit helps distinguish Me-410 from British Beaufighter.

Crashed Irving shows unique twin-level cockpit. Nightfighter model has rodlike radar appendages (one on nose, two paralleling fuselage).





AFTER SUPPORTING THE ALLIED INVASION OF SOUTHERN FRANCE, FOUR FRENCH CRUISERS RE-ENTER TOLON HARBOR IN TRIUMPHANT LINE AHEAD.



Battleship Richelieu, most powerful French warship, is stately, logical in design. Fifteen-inch armament is concentrated in two massive four-

gun turrets forward, giving the Richelieu an extremely long foredeck. Note unique combination of stack and mainmast tower set well aft.



THE EMILE BERTIN LEADS, FOLLOWED BY DUGUAY-THOUIN AND TWO LA GALISSONNIERES. A BRITISH DIDO CLASS CL BRINGS UP THE REAR (RIGHT)

FRENCH WARSHIPS

France entered the war with a fleet that was rated next to the naval "Big Three" of Britain, the U. S. and Japan. High professional standards were maintained and considerable brilliance shown in strategic and tactical thinking; *e.g.*, the French can be credited with developing the modern "task force" theory of naval warfare as opposed to the classic line of battle. Also following a highly individual path in ship design, the French developed the oversize superdestroyer, a new type of offensive weapon, in the '20's. And on recent capital ships, the French introduced a novel concentration of armament forward in two quadruple turrets.

Large-scale reinforcements were planned before the war. In 1940, four new battleships, two carriers, a class of CL's and a number of destroyers were at various stages between the drawing board and final commissioning. These new hulls were largely destroyed on the ways when the Germans swept across northern France to Brittany and the Channel ports. On Nov. 27, 1942 many of the finest French warships afloat were sent to the bottom of Toulon harbor by their own crews. A significant, if paradoxical,

victory over German armored columns trying to seize the great naval base, this mass scuttling was also a serious setback to the French Navy.

The French retain a hard core of good ships, units that escaped to England after the fall of France and those inactive in African ports or neutralized at Alexandria and Martinique. Many of these vessels have been refitted at Allied bases and have fought long and well at the side of Britain and the U. S. French units have borne their share of escort and patrol duty in the sustained Battle of the Atlantic and also assisted in the great landings on Normandy and southern France. Though limited in equipment, the French fleet today is still an active and significant fighting force.

With her far-flung colonies and long naval tradition, France can be expected to stage a great postwar naval revival. The powerful Richelieu, the efficient La Galissonniere CL's and superdestroyers of Le Fantasque Class can serve as nucleus for a new French Navy. The vitality shown in the face of World War II's many disasters indicates France is still potentially a major naval power.



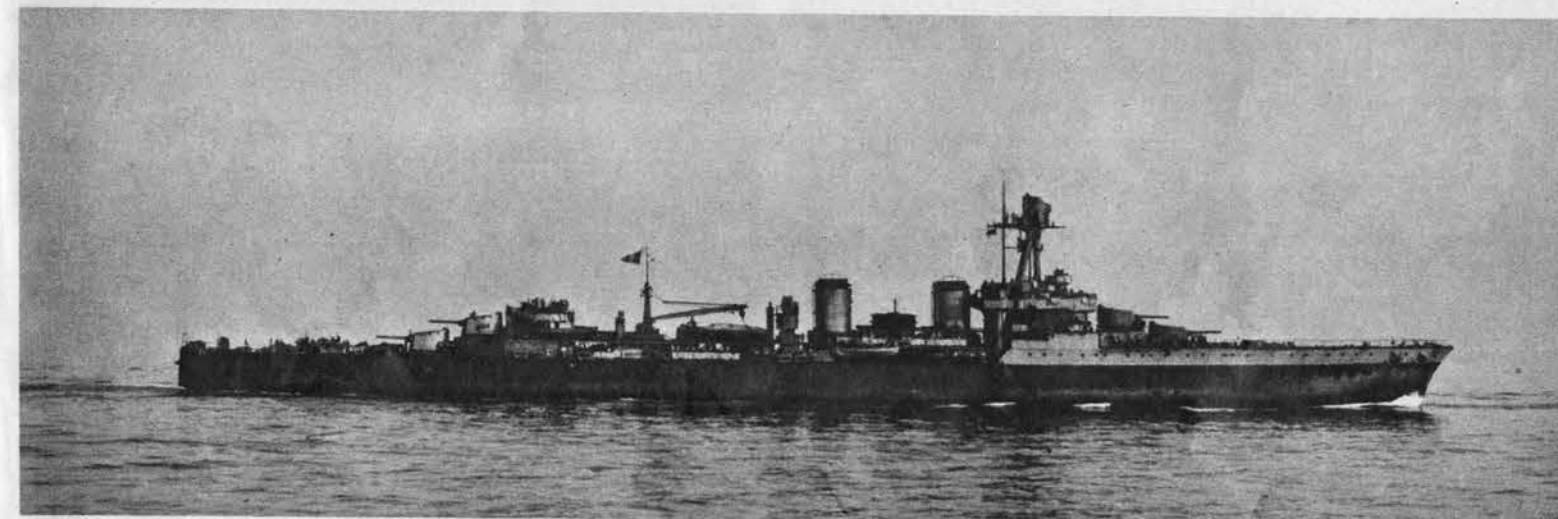
Triple turrets were introduced into French naval design by minelaying cruiser Emile Bertin. Short stacks are widely separated; the after stack is flanked by platforms and horned with radio-antennae supports. Bertin has long swift lines, sturdy tripod foremast typical of French CL's.



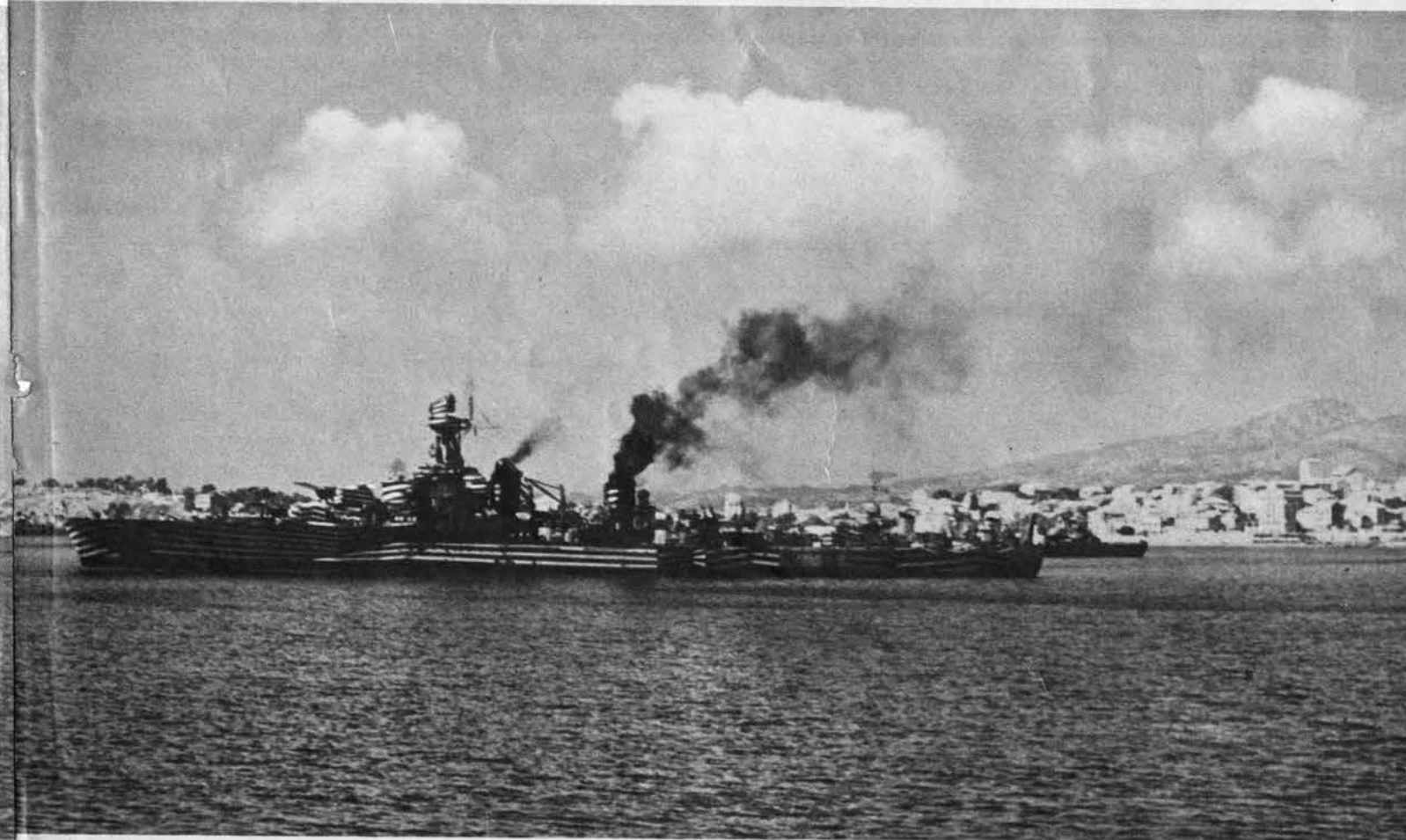
SHORT HULL, STATIC LINES OF THE OLD-TYPE BATTLESHIP ARE FOUND ON THE VETERAN LORRAINE (LEFT). ZEBRA-STRIPED CLOIRE (RIGHT) IS ONE



French CA's traded armor carried on British contemporaries for unusual speeds. The Suffren (shown above) has clean uncluttered lines, unique bridge, large stacks. Duquesne Class, predecessor of Suffren, is similar but with stacks of equal height, taller mainmast, lower bridge.



Low stacks, tripod masting and ample freeboard are French design traits clearly shown by the CL Duguay-Trouin. More anti-aircraft was added aft, mainmast removed during refit at African ports in 1943-44. Eight 6.1-in. guns are mounted in small turrets (two fore, two aft).



OF THREE LA GALISSONNIÈRE CL's. LONG AND SPACIOUS IN PROFILE, THEY CARRY NINE 6-IN. GUNS IN TWO TRIPLE TURRETS FORWARD, ONE AFT



BOURRASQUE, ALCYON DD CLASSES HAVE THREE CLOSELY SPACED STACKS



REFITTED DD TIGRE NOW HAS NO MAINMAST, LARGE CLUMP OF AA AFT



SHEPHERDING TRANSPORTS OFF SOUTHERN FRANCE, BOURRASQUE-ALCYON



DD LOOMS BLACK AGAINST SPARKLING SEA. 1,700-TON FLEET DESTROYERS, ALCYONS ARE IMPROVED VERSION OF BOURRASQUES, SIMILAR IN APPEARANCE

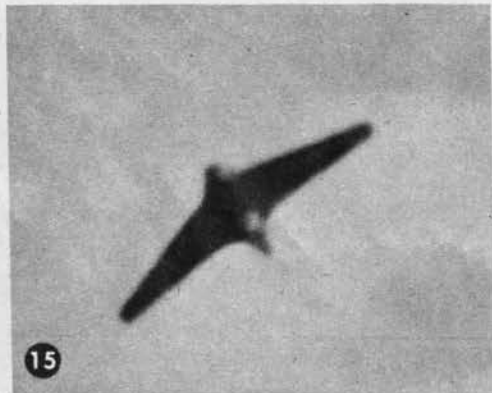
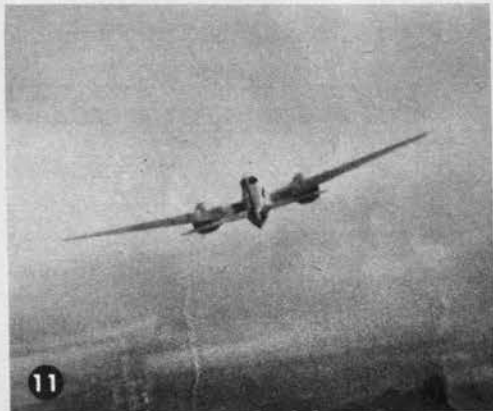
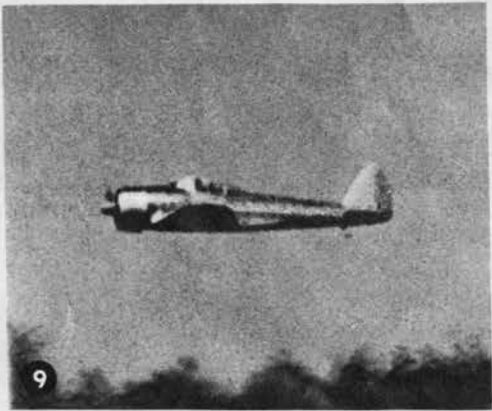
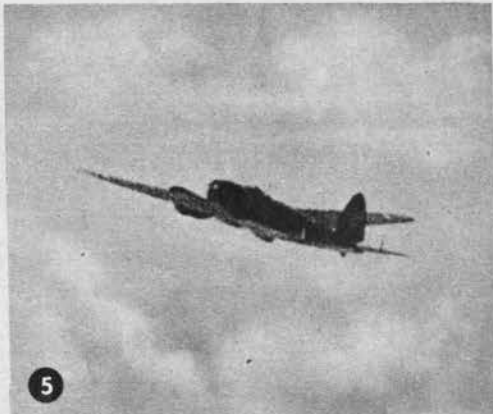
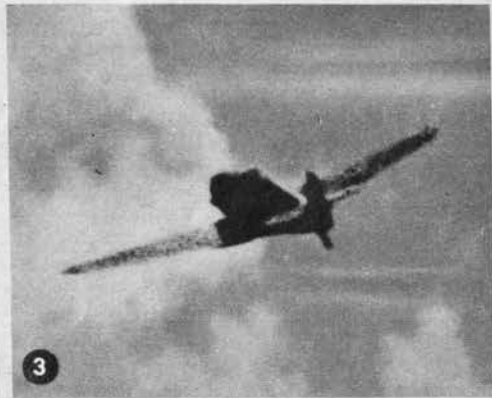
LOW, STURDY OUTLINE MARKS LE FANTASQUE SUPERDESTROYERS (NOW RATED AS CL'S BY FRENCH). NOTE SQUAT, WIDELY SEPARATED STACKS, MOUND

OF GUN POSITIONS WELL AFT. FANTASQUES CARRY FIVE 5.4-IN. GUNS

LE FANTASQUE CLASS DISPLACES 2,500 TONS, IS SMALL FOR RATING OF CL



QUIZ NO. 2: FIFTEEN FLYING ENEMIES



For answers see p. 48



ZEKE



JILL

tailplane set far forward of the fin and rudder. Jill's high greenhouse exemplifies Jap light-bomber design while its round nose and low wing follow the general Jap single-engine trend. U. S. single-engine types show chunkiness or angularity or, as in the

F6F, both. Except on the P-51, wings are low-mid rather than low. Noses are longer than the Japs' and, as on the P-47 and F6F, are sometimes oval due to airscoops. Tailplane "bite," prominent on many U. S. planes (P-47, SB2C, others), is less evident on Japs.



F6F



SB2C

JAPAN



BETTY



HELEN

TWIN ENGINE

Remarkable consistency of tail assemblies marks Japan's twin-engine types. Tailplanes are horizontal; fins and rudders appear tacked on. Their leading edges taper more than trailing edges and curved fairing forward is unknown. Nacelles, which do not

U. S.



B-25



A-26



WITH BROKEN MID-WING, THICK FUSELAGE AND ANGULAR WING AND TAIL, TBM EMBODIES TYPICAL FEATURES OF U.S. AIRPLANE DESIGN

PACIFIC CONTRAST

Combat experience has shown that even when Jap planes were too far away for positive recognition, U. S. airmen have often tagged them for enemies and could say, "It sure looked like a Jap." In many cases they could spot some definitely Japanese detail; in others they probably saw that the bogey just did not look American.

The fact is that both in specific details and overall design U. S. and Japanese combat planes are consistently different. In general Jap noses are shorter; Jap wings are set lower; Jap fuselages are more slender and trim. U. S. planes are heavier, more complex and show much more angularity of wing and tail. So regular are these contrasts that, with a few exceptions, conclusions can be made regarding single- and twin-engine fighters and bombers. For example, all single-engine planes having round noses and low wings with dihedral from the roots are Jap. All U. S. twin-engine planes except F7F have either twin fins and rudders or sharp tailplane dihedral. Though an exception as regards the empennage, the

F7F has markedly U. S. traits, namely a shoulder wing and nacelles protruding well behind the wing's trailing edge.

Further examples of U. S. and Japanese design differences are shown on the following pages. These examples can be an extremely valuable recognition guide as well as a foundation for plane-by-plane study of Jap airplanes. Extreme care, however, must be shown in noting exceptions and interpreting these observations. Simply because all planes answering a set description are Jap, it does not follow that all others are U. S.

Moreover, no system of national variations in design can tell a pilot or gunner what he most needs to know, the exact identity of his opponent. B-29 crews over Japan have no trouble recognizing planes by nationality. Yet for accurate shooting they must know Japanese types for proper fire-control adjustment. Despite the obvious shortcomings of any general rule as a cure-all, awareness and application of airplane national characteristics in any set theater of war is a definite recognition asset.

JAPAN VS. U.S.

NATIONAL DIFFERENCES IN PLANE DESIGN

RESTRICTED

SINGLE ENGINE

JAPAN

ZEKE 52



TONY



GRACE



HEAD ON, Zeke is good example of the round nose and unbroken low wing with dihedral from roots found on most Jap single-engine planes. Tony, Grace are obvious exceptions.

U. S.

F6F

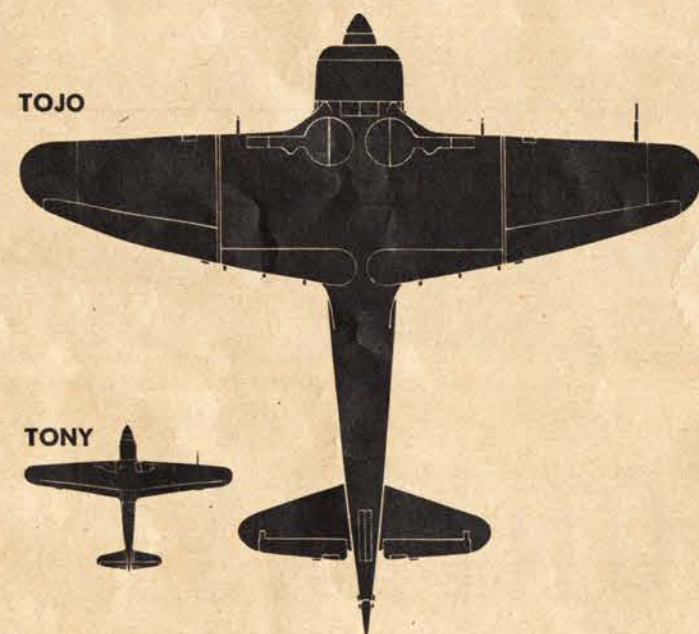


P-51



U. S. WINGS are either broken as on F6F, F4U, TBM, SBD or more mid than low (FM-2, P-47). P-51 has low, straight wing, however, and head-on closely resembles Jap Tony.

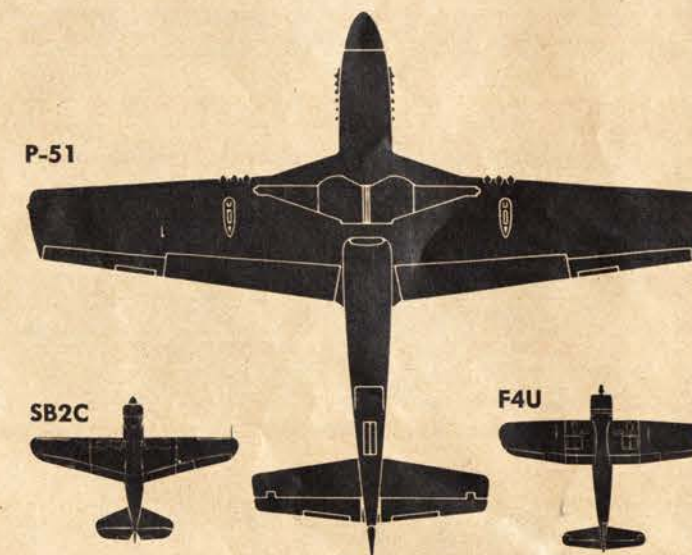
TOJO



TONY



P-51



SB2C



F4U



PLAN VIEW of Tojo shows Japanese trend to short, stubby nose. Tailplanes are neatly triangular, often set forward of fin, rudder. Inline engines set Tonys and most Judys apart.

U. S. TYPES are individual in appearance but often have long noses, irregular-shaped wings (P-51). Tailplanes often have wide "bite" (SB2C). F4U has brief nose but unusual wing.

OSCAR

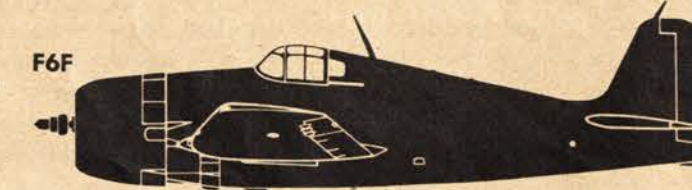


JACK



COCKPIT ENCLOSURES, small but prominent, are usually far forward on Jap single-engine fighters; light bombers have long greenhouse. Jack has faired cockpit amidships.

F6F



P-47



BEAM VIEWS of U. S. single-engine types do not follow any consistent pattern. In general, fuselages are less evenly tapered than Japs'. In side view P-47 is most like a Jap fighter.

TWIN ENGINE

JAP

IRVING



NELL



LOW OR MID-WING is featured by all Jap twin-engine fighters and medium bombers. All have low, flat tailplane. Except obsolescent Nell, all have a single fin and rudder.

U. S.

P-61



A-26

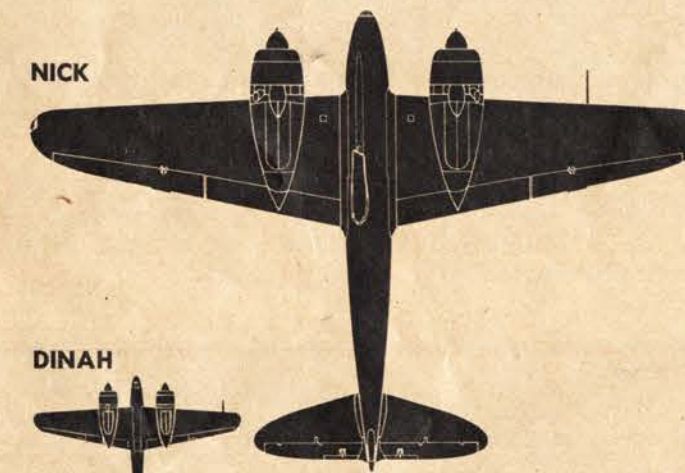


F7F



MID TO HIGH WING is found on all U. S. twin-engine aircraft. Most have twin-tail assemblies. Single fin-and-rudder types have tailplanes with marked dihedral, except the F7F.

NICK

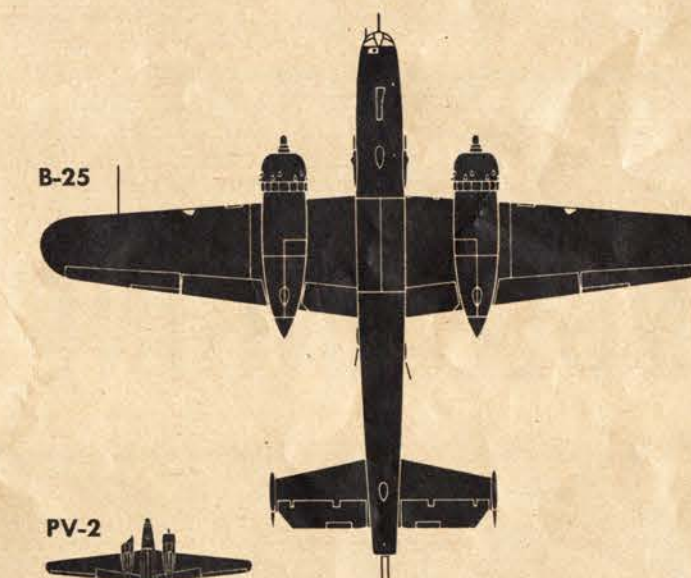


DINAH



WING is set well forward on most Jap twin-engine aircraft, giving them short noses and long, trim rear fuselages. Dinah is only Jap aircraft with nacelle projection abaft wing.

B-25



PV-2



BOOMS OR NACELLES projecting beyond wing's trailing edge are distinctive trait of U. S. twin-engine planes. PV-1 and PV-2 are the only types lacking some rear projection.

FRANCES



LILY



UNFAIRED FIN AND RUDDER with sharply tapered leading edge is "tacked on" the long, straight fuselage of Jap twin-engine aircraft. Belly break gives Lily slightly upswept tail.

A-26



B-25



UPSWEPT TAIL usually crowns unsymmetrical fuselage of U. S. twin-engine types. They never have nacelles extending perceptibly below belly. B-25 is straight, deeper than Japs.

JAPAN



OSCAR



TOJO

SINGLE ENGINE

Oscar, Tojo and Zeke illustrate the short nose, trim fuselage and bubble canopy typical of Japanese fighter planes. Although the wing's curved trailing edge on Tojo is somewhat unusual, the plane emphasizes another characteristically Jap fighter feature—

U. S.



P-47



P-51



LILY



DINAH

extend beyond the wing's trailing edge (except imperceptibly on Dinah 3), and relatively short noses stand out in plan views. Except for Lily, fuselages have long, unbroken sweep. On U. S. twin-engine combat planes, wing is usually shoulder-high. Noses are

long and, except on both PV's, nacelles stab cleanly behind the wing. U. S. tails are upswept except on the B-25 which differs from important Japs in its twin fin and rudder. All twin-boom planes are U. S. although the Japs may have a twin-boom pusher type.



F7F



P-61



IMPROVED SOVIET T-34s APPEAR TO HAVE NEW TYPE TURRET MOUNTING A LARGER, MORE POWERFUL GUN CHASSIS APPARENTLY IS UNCHANGED

SOVIET TANKS AND SP GUNS

On Jan. 12 the Red Army surged into what has been called the greatest land offensive of all time. Richly equipped with armored vehicles, the Russians bulled their way west of the Vistula, swept toward Cracow, then overran Nazi defenses from East Prussia to the Carpathians as five Soviet armies strove for final victory. By the middle of February they stood 30-odd miles from Berlin, were threatening both Saxony and Germany's Baltic coast. German communiqués spoke of overwhelming Russian superiority in men and matériel, claimed that new armor with 122-mm. guns, called Joseph Stalin, was destroying highly touted King Tigers.

Aside from several new types of Soviet SP artillery, the most powerful Soviet armor now in action is the KV-85 tank, the latest

VISION CUPOLA, TWIN PERISCOPES AND BULGING GUN MANTLET MARK AN EARLIER T-34 TURRET. THE WHEELS, ORIGINALLY DISK, ARE NOW RIBBED





AN SP 122-MM. HOWITZER IS PROTECTED BY INFANTRY. ITS T-34 CHASSIS CARRIES THE LARGE, ANGULAR FIGHTING COMPARTMENT WELL UP FRONT

in the heavy KV series. It gets its number from its long 85-mm. gun which gives it great firepower. The big KV chassis, with its six bogies and three prominent return rollers, also serves as a mount for the 122-mm. gun and the 152-mm. gun howitzer.

The standard Soviet medium tank is the T-34 in several models. The chassis for the various models are identical except for the bogies, of ribbed pressed steel in the later versions, and can best be distinguished by the Christie suspension and long, smooth glacis plate sharply angled at the bow. The turrets, however, are different. That on new models is longer and carries its long-barreled gun in a cast mantlet with no visible recoil housing. In addition a cupola has been added. Older T-34 turrets have angular recoil

housing. Since its first appearance the T-34 has been one of the war's finest medium tanks and its clean lines and forward turret impressed the Germans sufficiently to be copied for their Panther. Two SP guns can be seen on the T-34 chassis: a short 122-mm. howitzer (*above*) and a long-barreled 85-mm. gun (*below*).

Russia's standard light tank is the ten-ton T-70, powered by two Ford V-8 engines and armed with a 45-mm. cannon. It can be recognized by its long, sloping front plate and a modified Christie suspension like that of the U. S. M-18. A T-70 chassis with a sixth bogie wheel is the carriage for a 76.2 mm. SP antitank gun. In keeping with the Russian practice of supporting tanks with SP guns, the T-70 and 76.2-mm. SP gun are frequently seen together.

THE 85-MM. SP TANK DESTROYER HAS LONGER GUN AND OFF-CENTER MANTLET. LOW SILHOUETTE COMPARES FAVORABLY WITH NEW NAZI GUNS





T-70 light tank rolls past the wreck of a Nazi PzKw IV. Only Russian tank with a front sprocket drive, T-70 has five bogies, three return rollers and wide gun mantlet.



Red tank destroyers park outside a Karelian village. A sixth bogie wheel has been added to T-70 chassis to carry rear fighting compartment and 76.2-mm. antitank gun.



Original KV design is shown by KV-1 with its six big bogies, three return rollers and large, blocky turret. KV-1's helped repel the German threat to Moscow in 1941.



HUGE KV-85 LEADS RESERVES TO FRONT NEAR LENINGRAD.

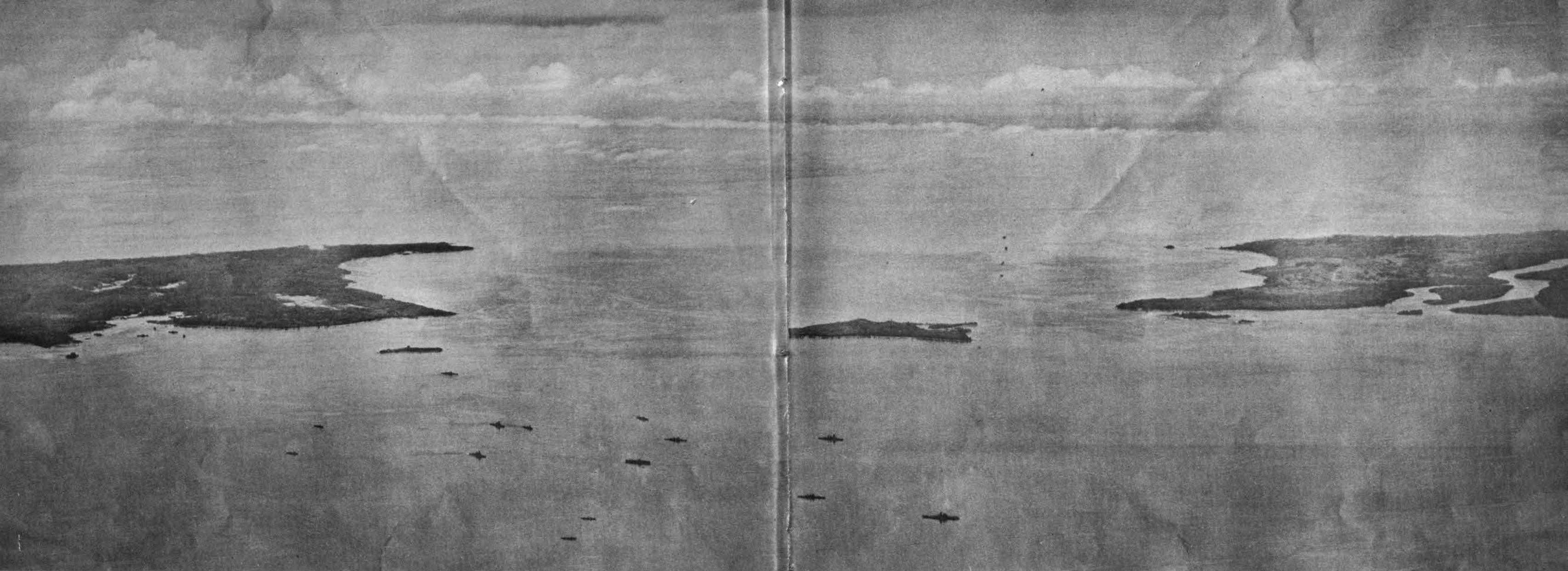


LONG, STREAMLINED TURRET HOUSES AN 85-MM. GUN WITH MUZZLE BRAKE. AS ON ALL OF THE LARGER SOVIET TANKS, DRIVING SPROCKET IS AT REAR

EMERGING FROM STREAM, THIS 152-MM. SP GUN HOWITZER

SHOWS REMARKABLY LOW SILHOUETTE. FIGHTING COMPARTMENT IS SET AT FRONT OF KV CHASSIS AND HEAVY MANTLET PROTECTS THE BIG GUN





AFTER PHILIPPINE SEA BATTLE, SCOUTING BOMBER RECORDED RENDEZVOUS OF DEFEATED JAP FLEET IN BRUNEI BAY. BATTLESHIP YAMATO (RIGHT)

IS FIRING (NOTE ACK-ACK BURSTS). OTHER SHIPS ARE NAGATO CLASS BB, HAYATAKA CLASS CV, TWO KONGOS, THREE CA's, TWO CL's, FOUR DD's.

AMERICAN BOMBERS HARASS JAP FLEET

Striking pictures of important Jap warships continue to pour in from the intensive campaign now being waged in Philippine waters and the China seas. Now that the Pacific front has been pushed close to Japan itself, the enemy can no longer hide behind the tremendous distances which separated his movements and matériel from our forward bases. Reconnaissance planes, both Army and Navy, are able to reach the Japanese Navy's inner bases and catch photographic glimpses of shifting major units.

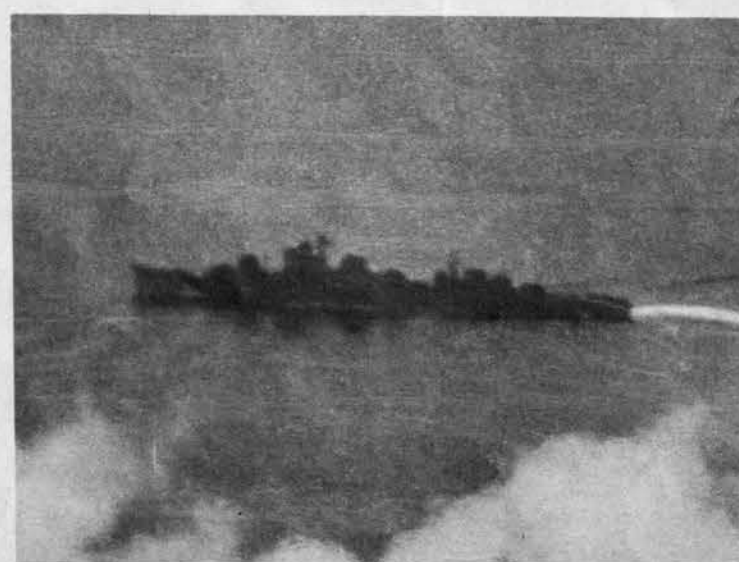
Perhaps the most remarkable of the many pictorial reports brought in by these long-range scouts is the panorama printed above. This vast view of Brunei Bay in North Borneo shows the remaining portion of the Japanese fleet which attacked our Leyte covering forces through San Bernardino Strait. Reinforcements including a carrier had joined up with this force.

In the Philippine theater, Third Fleet aerial cameras brought in a fresh, dramatic set of Japanese warship views—sequel to the

great wealth of recognition material gathered during the Second Battle of the Philippine Sea. In the softening-up period before we went ashore on Luzon, carrier task forces ranged freely out of their advanced island bases. Manila Bay and other Japanese anchorages were hammered repeatedly from the air; convoys attempting to reinforce beleaguered Japanese garrisons were brought under slashing attack. Four of the numberless ship targets pounded by the Third Fleet during these intensive sweeps are pictured below.



In Manila Bay, Nachi Class heavy cruiser burns furiously before being sunk by torpedoes. Nachis have flat-faced bridge, two raking stacks.



Weaving Terutsuki ducks behind smoke screen. Large and powerfully gunned, Terutsukis are heavy in profile, have single trunked stack.



Heavy platforming around stacks, elevated AA position forward of the bridge set modern Takanami Class apart from older Jap destroyers.



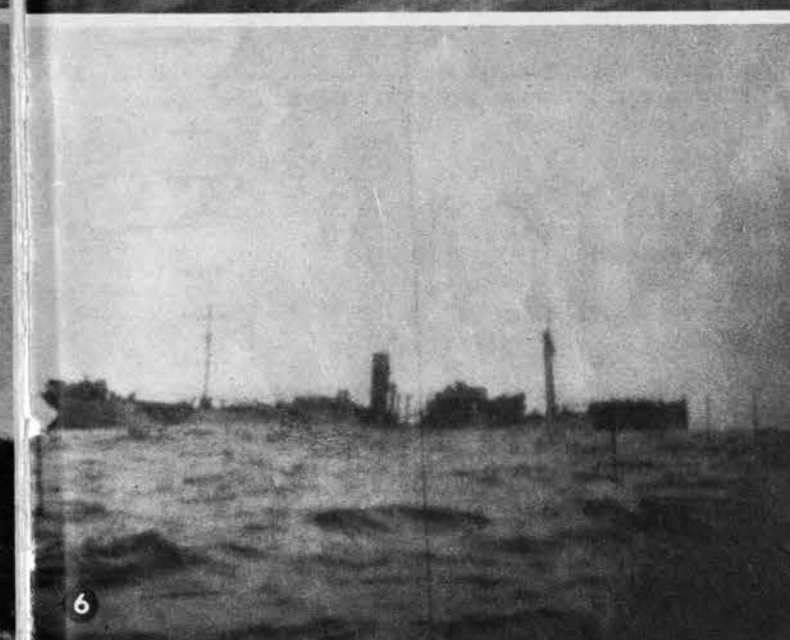
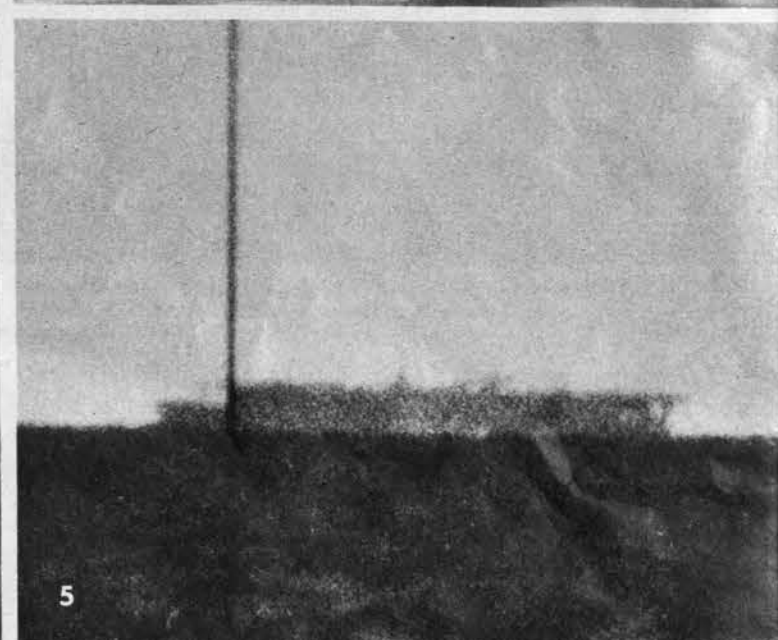
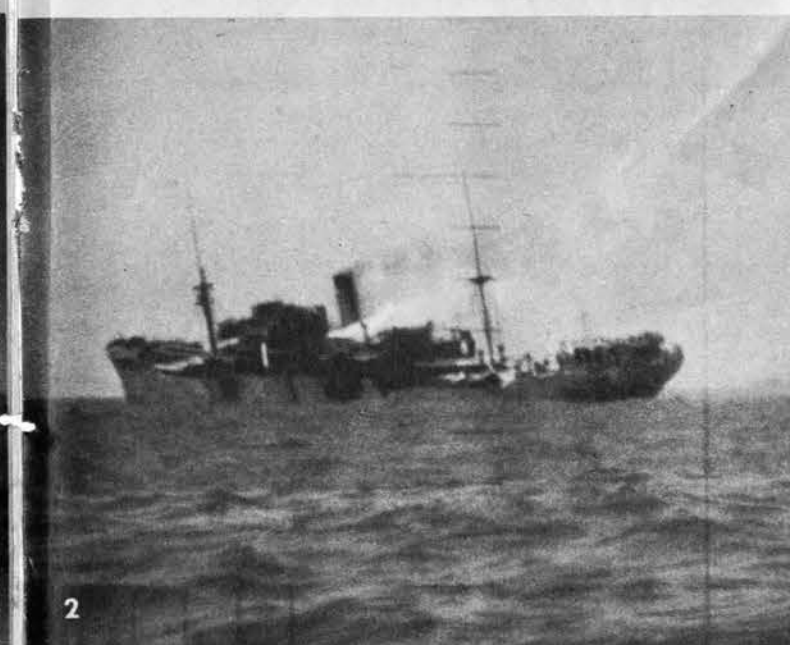
Large subchaser of PC-1 Class has a flush deck. Compact bridge is widely separated from stack which is always amidships on Jap PC's.



QUIZ NO. 3: A SUB'S EYE VIEW

Prowling through coastal waters not yet approached by surface vessels of the Navy, U. S. submarines are in a position to see numerous enemy merchant types including those which do not venture into the open sea. Submarines also serve as extremely valuable fleet scouts. In the Second Battle of the Philippine Sea, they were the first to spot Forces B and C of the Japanese Navy.

Equipped to photograph their victims at various stages of the attack, U. S. subs have provided excellent picture coverage of Jap shipping. The quiz on these two pages shows an interesting cross section of the enemy's war and merchant fleets as encountered in the U. S. undersea campaign. Answers will be given according to the JMST system, fully explained in the *Journal* for last January.





U. S. ARMY OBSERVATION PLANE, O-47, WAS DEVELOPED FROM NORTH AMERICAN'S FIRST MODEL. A CAMERA BAY IS SET IN THE DEEP BELLY

NORTH AMERICAN

One of U. S. aviation's most specialized firms is North American Aviation, Inc. Since its origin in 1934, it has never produced a civilian plane. North American has, however, given the Allies the greatest number of advanced trainers, their most reliable medium bomber and one of the world's greatest all-around fighters to date.

North American's first product was the GA-15, begun by the General Aviation Manufacturing Corp., of which North American was the holding company. Completed by North American in 1935, this plane became the U. S. Army's well-known O-47 (above). Also produced in 1935 was the NA-16, a low-wing, two-seat basic trainer which sired North American's entire trainer line—the BT-9, BC-1, BT-14, Australia's Wirraway, the AT-6 and its Navy version SNJ. These planes, together with other NA-16 variations have been flown by student pilots of 28 foreign nations.

In 1938 the NA-40, grandfather of B-25, appeared. It had B-25's familiar tail but the wing was high and the fuselage considerably deeper. The B-25 came along in 1940. Except for increasing and rearranging armament, the Mitchell has undergone no major changes since then. With three firsts to its credit

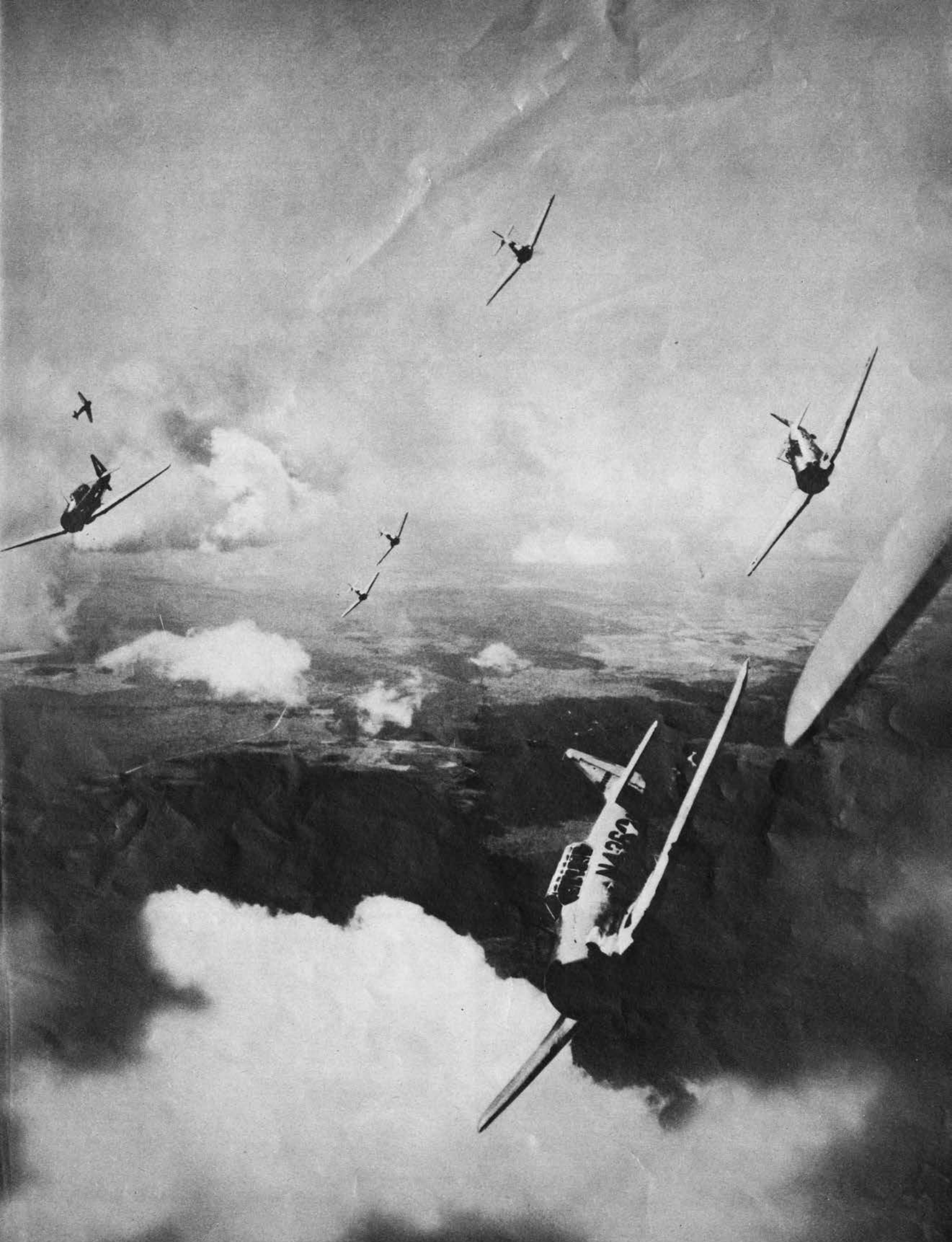
(first plane to sink a sub in U. S. waters, to bomb Tokyo and to carry a 75-mm. cannon in combat) it is still a star performer on all fronts. Though built as a medium-altitude bomber, it has amazing speed (330 m.p.h.) and agility at low altitudes.

With radial engines and horizontal inboard wing panels, North American's first single-engine fighters, the NA-50 and NA-68, followed the trainer types in basic design. But in 1940, in answer to an RAF plea, North American designed and built an entirely new fighter in 100 days. This was the great P-51 Mustang.

With its revolutionary laminar-flow wing and extremely slender fuselage, the Mustang was in the 400-m.p.h. class from the start. It made a fine showing over Dieppe, was later adapted for dive-bombing in Sicily as the A-36. In December 1943 Peter Masfield, British air expert, said that the Mustang was not only a great low-altitude plane but with a Merlin engine it would outstrip the Me-109G and Spitfire in the stratosphere. On Jan. 5, 1944 the first Merlin Mustangs escorted B-17's deep into Germany to open a new phase in the European air war. Flying in relays, U. S. fighters could accompany bombers all the way and blunted the threat of the Luftwaffe's rocket-launching planes.



Australia's Wirraway is built from North American designs. Note the wing's sweepback and outboard dihedral.



North American's Texans have trained almost every U.S., British and Canadian fighter pilot. Called Harvard by the British and AT-6

(Army) and SNJ (Navy) by the U.S. services, it is an ideal plane to provide the transition from slow basic trainers to the fast fighters.



A recent Mitchell bomber is the B-25J with a raised tail gunner's position, casemate waist guns and top turret set forward of the wing.

The latest B-25J has a solid nose packing eight machine guns, giving the plane a total of 18, 14 of which fire forward for strafing attacks.



Without its guns, first production model of the B-25 gives unbroken view of angular fins and rudders, straight dorsal line and gull wing.



RAF's Mitchell II, like USAAF's B-25C, had belly turret but no tail stinger. Dorsal turret was about halfway between the cabin and tail.



Attack version of the Mitchell is B-25H with four machine guns and 75-mm. cannon. Ten additional guns in turrets, waist and side pack-

ages make B-25H one of the world's most heavily armed airplanes. The B-25H also serves as a bomber with a B-25J plotting bomb run.



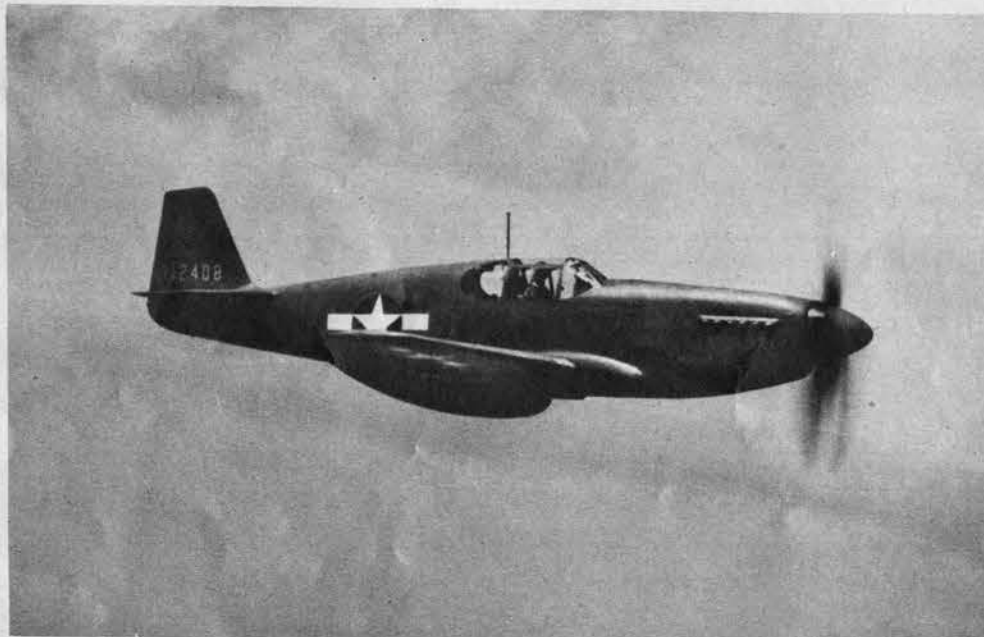
Navy's Mitchell, PBJ-1H, often has radome bulging from starboard wingtip. Otherwise this airplane is identical with the B-25H (*above*).



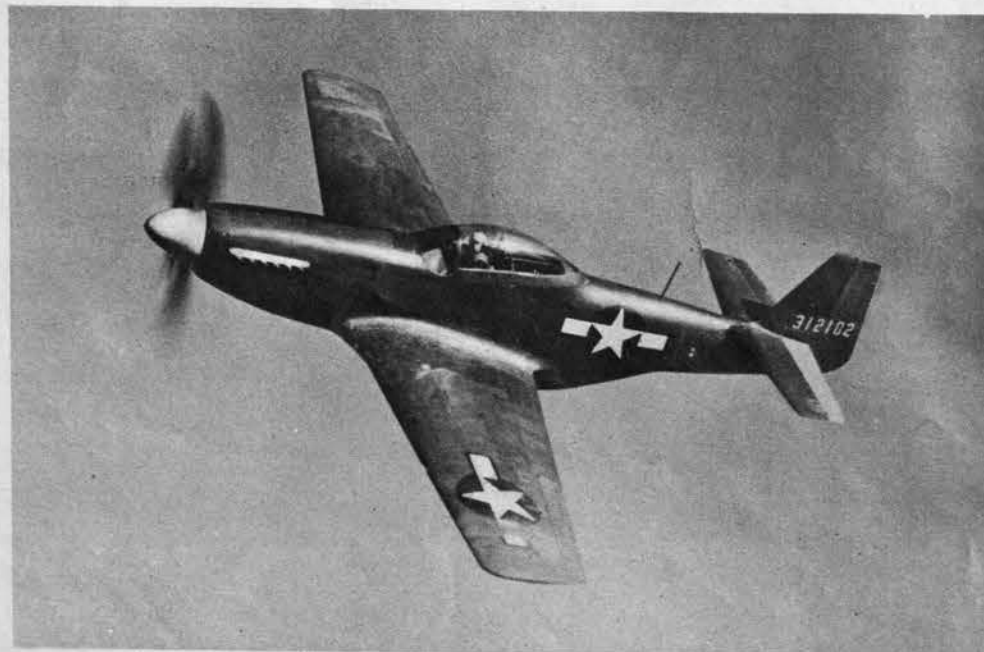
XB-28 was built as high-altitude bomber. Never produced, it had features later used in B-29 (remotely controlled turrets, pressure cabin).



P-51A over Burma has Allison-powered Mustang's shallow nose and belly airscops. Dive-bomber A-36 was similar in appearance but had diving flaps in upper and lower wing surfaces.



Merlin engine on P-51B required much deeper belly scoop but no air intake over the nose. It changed the Mustang from a low-altitude plane into a great high-altitude escort fighter.



P-51D's bubble canopy reflected the Allied trend away from the fighter's faired cockpit cover in 1944. The Mustang now has a straight dorsal line broken only by bubble canopy.



LATEST VERSION OF THE P-51D HAS DORSAL FIN WHICH GIVES IT ADDED LATERAL STABILITY. WING SHAPE HAS ALSO BEEN CHANGED SOMEWHAT BY MORE PROMINENT FILLETS AT BOTH FRONT AND REAR

MERLIN-POWERED MUSTANGS CAN BE RECOGNIZED BY ANGULAR WING AND TAIL, ROUNDED COCKPIT COVER AND BELLY AIRSCOOP. THEIR STANDARD ARMAMENT CONSISTS OF SIX .50-CAL. MACHINE GUNS





First Division Marines, mopping up enemy positions in Palau, scorch a Japanese entrenchment from an LVT(4) to ferret out possible survivors.



The Crocodile, a flame-spitting Churchill, rolls forward in the final battle for Brest. It retains its big gun, tows a trailer to fuel its flame thrower.



Flame thrower's nozzle replaces machine gun in M-4's ball mount. This flame can shoot out from the moving tank for a range of some 70 yards.

FLAME THROWERS ARE MOTORIZED

One of the war's most devastating weapons, the flame thrower, has been put on wheels. Introduced in World War I to sweep out enemy dugouts, it is being used with increasing frequency to smash through strong points and mop up caves and pillboxes.

Flame-throwing equipment was formerly carried only by infantrymen who had

to creep close to the target. Now, however, the flame thrower is mounted in tanks or other motorized vehicles giving its operator some degree of protection.

Allied flame-throwing vehicles range in size from the Universal Carrier to the Churchill heavy tank. In light vehicles the flame units are carried in place of cargo or personnel. Heavy and medium tanks retain main

armament, squirt flames from an MG port in the hull. A specialized flame thrower is the U.S. M-3 light tank whose turret gun has been replaced by a flame unit.

German flame-throwing vehicles are the Mark II light and Mark III and IV medium tanks. In the mediums flame throwers are in the turret, while on PzKw II a nozzle is mounted over each track guard near bow.



A LONG TONGUE OF FLAME LASHES AT ITS TARGET FROM A WASP IIC (BRITISH UNIVERSAL CARRIER). IT CAN BE RECOGNIZED BY 75-GAL. FUEL TANK AT REAR. SIMILAR VEHICLE, WASP II, HAS TWO 50-GAL. TANKS INSIDE

A CROUCHING MARINE WATCHES AN M-3'S TURRET ADD FUEL TO THE FLAMES AROUND A JAPANESE PILLBOX ON SAIPAN. SAVED FROM THE SCRAP HEAP FOR USE AS A FLAME THROWER, THE M-3 IS SIMILAR TO THE M-5



QUIZ ANSWERS

QUIZ NO. 1

1. Cleveland Class CL's
2. Agano Class CL
3. Nachi Class CA
4. Emile Bertin CL
5. Arethusa Class CL
6. New Orleans Class CA
7. Brooklyn Class CL

QUIZ NO. 2

- | | |
|-----------|------------|
| 1. Me-262 | 9. Oscar |
| 2. FW-190 | 10. Judy |
| 3. Me-109 | 11. Me-410 |
| 4. Tabby | 12. Betty |
| 5. He-111 | 13. Dinah |
| 6. Ju-88 | 14. Zeke |
| 7. Val | 15. Me-163 |
| 8. Jake | |

QUIZ NO. 3

1. Small armed trawler
2. Fox Baker
3. Wakatake Class DD (Old Two-Stack)
4. Fox Tare Charlie
5. Otaka Class CVE
6. Fox Baker
7. Hospital Ship, Tare Two Stacks (not a target)
8. Fox Tare Charlie
9. Hatsuoharu-Shigure Class DD (Modern Two-Stack)
10. UN-1 (DE)
11. Fox Tare Able

QUIZ NO. 4

- | | |
|-------------------------------------|--|
| 1. L to R: U.S. M-7; German PzKw IV | 6. L to R: U.S. Tank Recovery Vehicle M-31; U.S. M-5A1 |
| 2. Russian T-34's | 7. German King Tiger |
| 3. German PzKw V Panther | 8. U.S. LVT(4) |
| 4. British Churchill | 9. Japanese Medium Tank 2597 |
| 5. Japanese Light Tank 2595 | |

QUIZ NO. 5

- | | |
|--------------|----------------|
| 1. F7F-2 | 9. FW-190 |
| 2. Me-410 | 10. Tempest II |
| 3. Warwick | 11. FW-200 |
| 4. Firefly I | 12. B-29 |
| 5. SC-1 | 13. Lily 1 |
| 6. Pe-2 | 14. PB4Y-2 |
| 7. B-17 | 15. Myrt 11 |
| 8. Ju-188 | |



This month's cover is an Army picture of the USAAF's Northrop-built P-51 nightfighter. Known as the Black Widow, this three-man plane has been in action in both the Pacific and European theaters, intercepting bombers and strafing enemy positions. Pictures of other nightfighters appear on pages 14-17.

CREDITS

The pictures used in the *Journal*, unless otherwise specified (see below), came from the Allied Armed Services.

- 10—Top, Boeing Aircraft
- 14—Bottom, Copyright Planet News Ltd.
- 15—Bottom right, Douglas Aircraft Co. Inc.
- 22—Top center, A.P.
- 23—Top, Carl Mydans
- 24—Second row center, Paramount News from A.P.
- 29—Bottom left, Hans Groenhoff
- 32—Top, Sovfoto
- 33—Top and bottom, Sovfoto
- 34—Top and center, Sovfoto
- 35—Top and bottom, Sovfoto
- 42—Bottom left, Hans Groenhoff
- 43—Bottom right, North American Aviation, Inc.
- 44—Left center, North American Aviation, Inc.
- 46—Left center, David Scherman
- 51—Top left, Robert Capa; first row right, Sovfoto; second row right, Sovfoto; third row right, Johnny Flores; fourth row center, Int.; fourth row right, Peter Stackpole

Abbreviations: A.P., Associated Press; Int., International

NEWS & MISCELLANY

NEWS

Sugar Able Sugar (below) has been added to the JMST method of reporting Japanese merchant ships. Smallest of the Sugar Ables, this mass-produced tanker, with a gross tonnage of 1,000 to 2,500, has a very sharp, raked bow, trunked deck, small square stern, bridge aft and no catwalk.

Peggy 1, forerunner of a new type of Jap Army bomber, was first encountered over China and more recently in raids on Saipan. Important data are now available. Peggy's speed of about 340 m.p.h. at 20,000 ft. is somewhat greater than that of Sally, Helen or Betty and almost equals Frances'. Span is 73.8 ft.; length is 61.3 ft. Top bomb load is believed to be about 3,500 lb.

Peggy incorporates two new features never before used on any Jap plane—full-feathering propellers and a radio altimeter—and two features never before used on a Jap Army plane—a 20-mm. hydraulic dorsal turret and torpedo racks. There is improved armor for the crew and protection for most fuel tanks. It is possible that Peggy carries radar gear.

Frank 1, Jap Army fighter, participated in defense of the Philippines. It is definitely established that Frank's empennage is similar to Tojo's and that wing shape is similar to Oscar 2's. Because of its increasing importance Frank should be stressed by combat recognition officers.

Oscar 3 is now known to be operational in China and the Philippines. Recognitionally the new version is similar to Oscar 2 but individual exhaust stacks replace collector rings of the earlier model. Armament is reported to be four 12.7- or 13-mm. guns. Oscar 3's range may be greater than that of the 2 model and slightly improved speed and climb are expected.

TBM-3 standard production model is recognitionally similar to earlier models. Special modifications on some TBM-3's include a

radome on the starboard wing and/or a curving greenhouse replacing the familiar ball turret (see *Journal* for January 1945, page 8).

Matsu class DD construction is apparently well standardized and rapid. Matsus are now believed to be operating with large fleet ships.

New Jap transport is marked by simple, clean lines with superstructure rounded at both bridge and after end. Length is about 450 ft.; gross tonnage, 8,000. Armament consists of two 3-in. guns and possibly machine-gun platforms at the bow, smaller gun and two MG's at fantail.

Irako, Jap (AF) provision ship, has unusual cargo-handling equipment. Eight deck cranes are used with two added booms for foremast and mainmast. This is an attempt to speed loading and unloading to an extent not apparent on any other Jap ship. Light tripod mast is located just forward of stack. Ship carries two 5-in. shielded mounts.

DISTRIBUTION

For extra copies of the *Journal* address:
For AAF: Training Aids Division
1 Park Avenue, New York, N. Y.

For Army Ground & Service Forces:
Appropriate A. G. Depots

For Navy: DCNO (Air)
Training Literature Section, OP-33-J
Navy Dept., Washington, D. C.

Ground & Service Forces' comments should be addressed to:

Training Literature & Visual Aids Division
Army War College, Washington, D. C.
Material published herein may be reproduced in any RESTRICTED publication sponsored by the Army or Navy if the private source credited in the *Journal* is acknowledged and the *Journal* copyright notice is printed on or below any pictures used.



Sugar Able Sugar, spotted off Cebu, is a small Jap tanker without the custom-

ary catwalk (see text above). Hull design is simple, angular for mass production.

FIGHTER

JAPAN

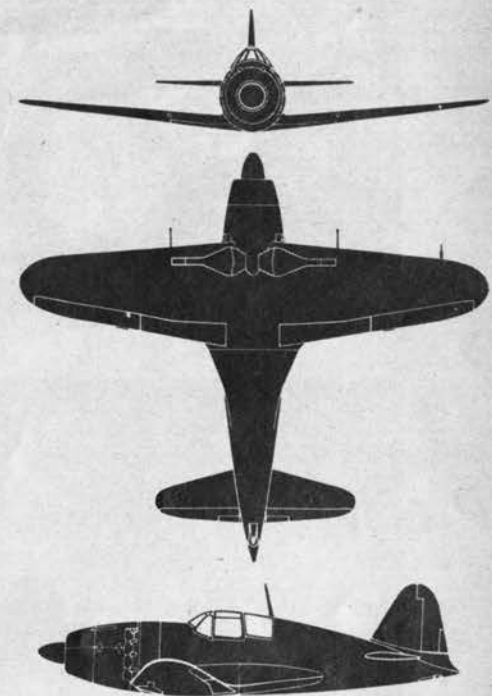


DISTINGUISHING FEATURES: Single-engine, low-wing monoplane with single fin and rudder. Fuselage, fat and stubby, is bowed throughout, extends slightly beyond a triangular fin and rudder. Cockpit is set low and about amidships. Leading and trailing edges of wing have slight taper. Wingtips are unusually well rounded, fillets are wide and long. Circular fuselage extends pointedly beyond tailplane which has great-

er taper on leading edge. Medium dihedral to wing throughout. Horizontal stabilizer set at medium height. **INTEREST:** Jack called Raiden or Thunderbolt by the Japanese is more powerful and heavily armed than previous Jap single-seat fighters. It will become operationally more important in 1945. It was built for either carrier or land-based service with landing hooks on all aircraft placed just forward of the tail wheel.

FEBRUARY 1, 1945
FROM DATA CURRENTLY AVAILABLE

WAR DEPARTMENT FM 30-30
NAVY DEPARTMENT BUAE 1



SPAN: 35 ft., 4 in.
LENGTH: 31 ft., 8 in.
APPROX. MAX. SPEED: 350 m. p. h.
SERVICE CEILING: 37,500 ft.

RESTRICTED

NOTE. This page is to be cut along dotted lines (above and below), added to the proper nation's section in the Recognition Pictorial Manual. The dots indicate perforations.

FIGHTER



U.S.A.



DISTINGUISHING FEATURES: Single-engine, low mid-wing monoplane with single fin and rudder. Small spinner protrudes from an oval fuselage which is thick and heavy in nose and center section. Cockpit is small, blister type. Tail is triangular although rudder curves slightly. Leading edge of wing is almost straight, trailing edge curved, and wingtips blunt and slightly raked compared to earlier models. Leading edge of tailplane has distinct taper with trailing edge curved,

broken by bite. The wings have dihedral from roots. **INTEREST:** P-47N is the latest model of the Thunderbolt. Earlier models proved outstanding and the N should enhance the P-47's enviable record by great performances in the Pacific. The N, with 2,100 hp, is the fastest P-47 to reach full production. Its greatly increased gasoline capacity makes long-range escort missions possible. Its wing span is almost two feet greater than earlier D model. Firepower is the same.

FEBRUARY 1, 1945
FROM DATA CURRENTLY AVAILABLE

WAR DEPARTMENT FM 30-30
NAVY DEPARTMENT BUAE 1

P-47N



SPAN: 35 ft., 4 in.
LENGTH: 31 ft., 8 in.
APPROX. MAX. SPEED: 350 m. p. h.
SERVICE CEILING: 37,500 ft.

RESTRICTED

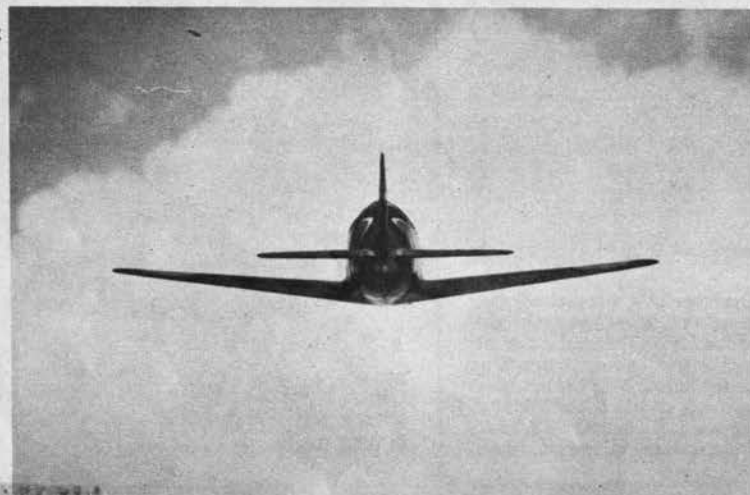
A



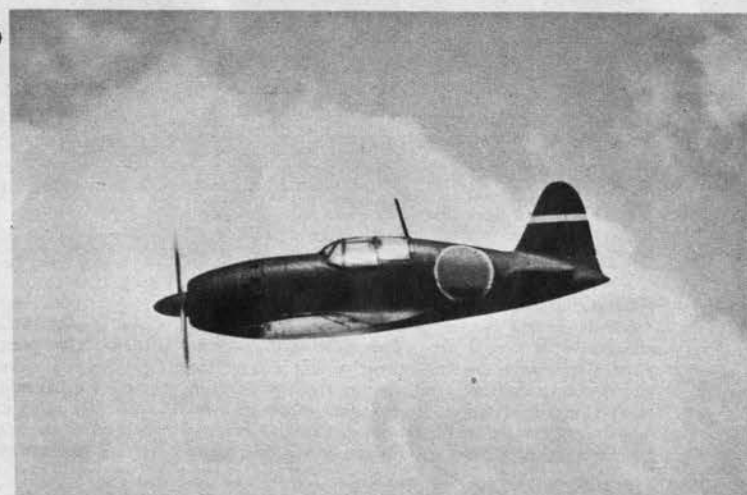
B



C



D



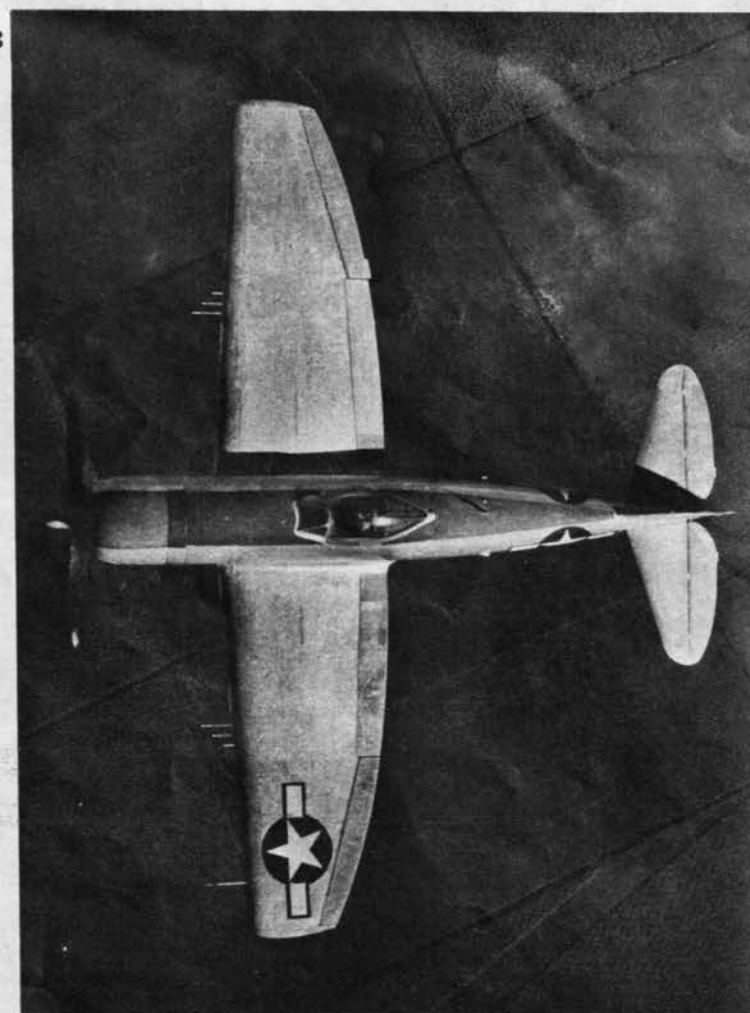
↑ **JACK**, the Japanese Navy's new short-range interceptor, is superior to Zeke in performance and will probably be seen in increasing numbers. Tubby and compact in design, Jack lacks the long, tapering fuselage found on many Jap fighters.

P-47N differs recognitionally from previous Thunderbolts in the shape of its wing. Wingtips are now bluntly raked but span is actually increased. When serving as a short-range fighter-bomber, the P-47N can carry a 2,500-lb. bomb load.

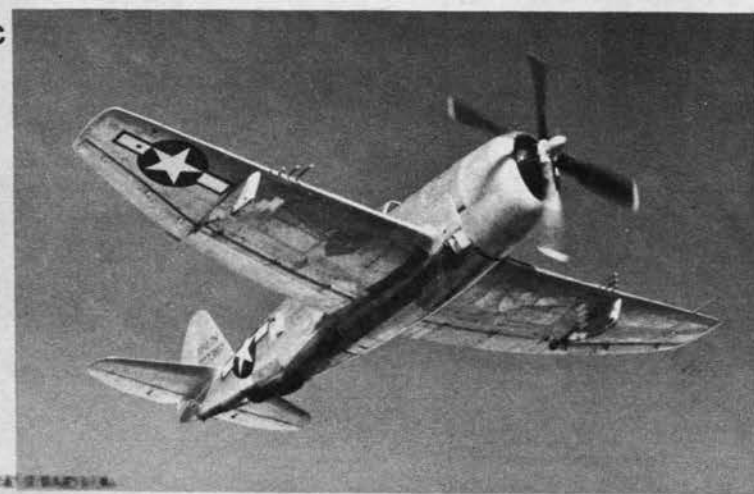
A



B



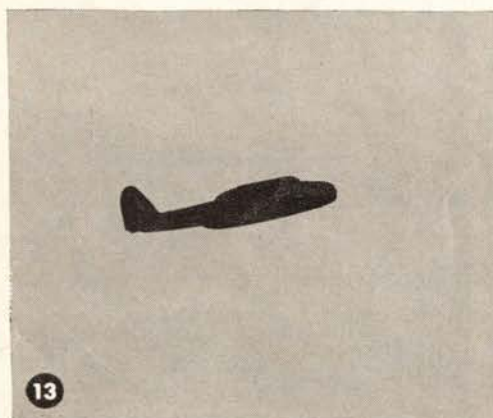
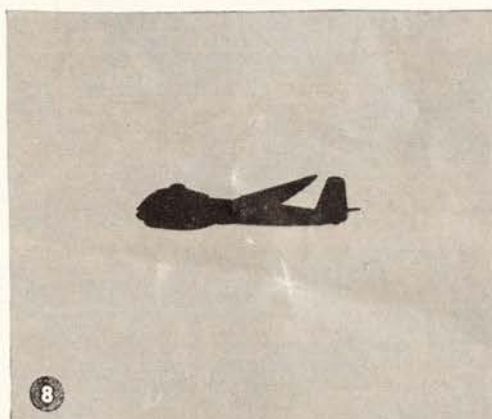
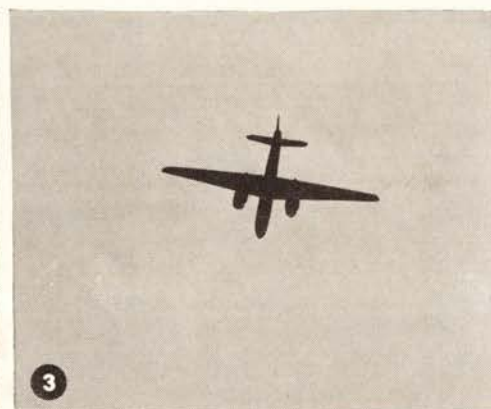
C



QUIZ NO. 4: VEHICLES OF FIVE ARMIES



QUIZ NO. 5: THIS MONTH'S SILLOGRAPHS



LIBRARY
COMMAND
AND
GENERAL
STAFF

MAR 12 45