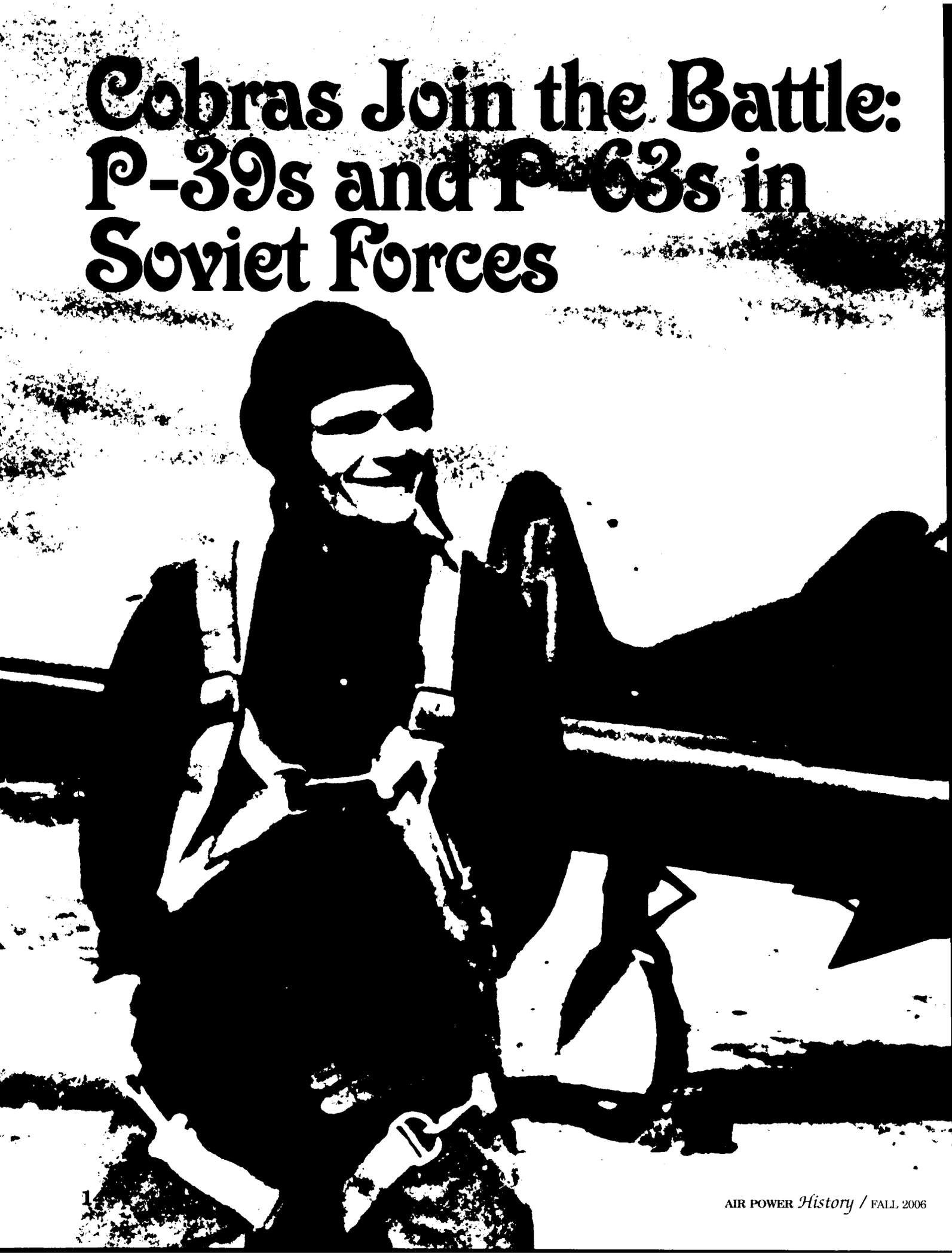
Cobras Join the Battle: P-39s and P-63s in Soviet Forces



(Overleaf) Pilot of the 19th Guard IAP, Kapitan I.V.Bochkov near Aircobra, I. Karelian front, summer 1942. Bochkov was a Hero of the Soviet Union, had 39 victories (7 personally+32 in group), and was killed April 4, 1943. *(All photos courtesy of the author.)*

(Below) P-39 Aircobra (tail number 42-4385) on a grass air field.

During World War II, the United States provided more Bell P–39 Aircobras to the Soviet Union through Lend-Lease, than any other aircraft. The P–39 became the most popular foreign plane imported because of the remarkable success enjoyed by Soviet airmen, notably by Aleksandr I. Pokryshkin and pilots of his division, who flew and fought on the eastern front.

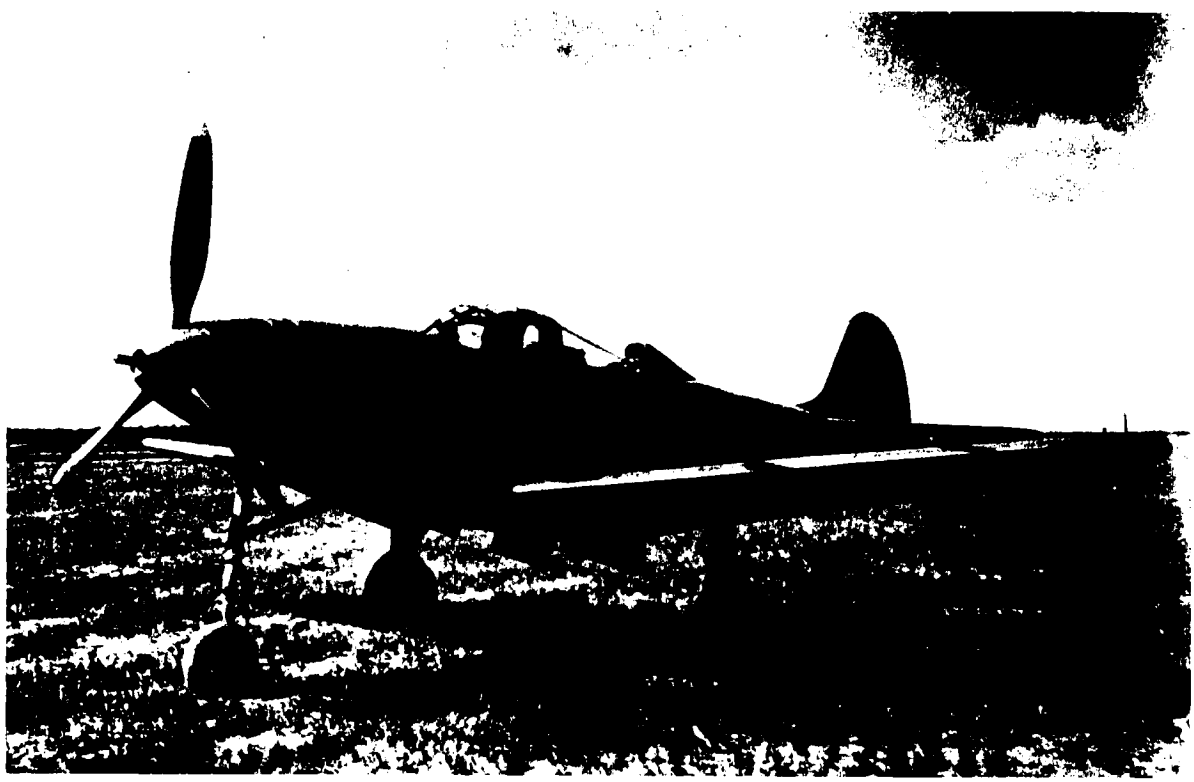
The first P–39s to arrive in the Soviet Union, were the export variants, which the Americans began to turn out for England in August 1941. These were the Aircobra Is, fitted with 20-mm guns. Even as they tried to master the new American fighter, the Royal Air Force uncovered many defects and tried hard to improve them, but after a brief period of modifications, the RAF handed over eleven of its P–39s to the Soviets, shipping the planes via convoys to the USSR through northern ports.

THE FIRST P–39s TO ARRIVE IN THE SOVIET UNION, WERE THE EXPORT VARIANTS

In mid-January 1942, two Aircobras were delivered to the 22d Reserve Aviation regiment *ZAP* (*Zapasnoi Aviatsionnyi Polk/*). Subsequently, the 22d became the training center, where the fighter regiments were retraining for foreign the foreign planes. Soviet pilots and engineers were struck by the plane's unconventional configuration, including the engine placement in the center of the fuselage, the three-wheel undercarriage with a nose-wheel, and a mobile type instead of a shift canopy. The Soviets took extraordinary measures to master the plane. The Scientific-Test Institute of Air Forces (*Nauchno-Ispytatel'nyi Institut Voenno-Vozdushnylh Sil/* (*NII VVS*) sent a group of experts, headed by an engineer (I. G. Rabkin) and a test pilot (V. E. Golofastov). While English engineers and technicians, attached to the 22d *ZAP,* helped their Soviet allies as best they could, the severe Soviet weather made the airplanes' outdoor assembly—directly on a flying field—trying, to say the least.

When the first Aircobra was assembled, Golofastov began taxiing tests and only after practicing for some time in that manner, did he lift off into the air. Having gained some experience, Golofastov began to train the instructor-pilots of the 22d *ZAP.* Major Akulenko was the first instructor pilot to take off in the P–39.

In April and May 1942, after Soviet airmen ran official tests of the Aircobra, they concluded that the American fighter was the equal of Soviet and German planes of its class. Soviet experts regarded highly the P–39's maneuvrability, takeoff and landing characteristics, powerful weapons, and good equipment. Moreover, the plane was equipped with a heated cabin—no Soviet fighter enjoyed such luxury. The *NII VVS* test reports predicted that the Aircobra would prevail in air combat against all types of German planes and was also ideal for close air support. Simultaneously with the official tests, military pilots from the aviation regiments began



THE AMERICAN FIGHTER WAS THE EQUAL OF SOVIET AND GERMAN PLANES OF ITS CLASS

A Muscovite, Viktor P. Kulikov graduated from Urals University. For the past twenty years, he has been researching and writing the history of Russian aviation of the World War I period. Mr. Kulikov's articles, Sikorsky's Fighters, Aeroplanes of Lebedev's Factory, Soviet Ship-Based Reconnaissance, 1920s–1950, *and* British Aircraft in Russia *appeared in the Winter 2000, Winter 2001, Spring 2003 and Spring 2004 issues of this journal, respectively.*

Pilot of the 17th IAP, squadron commander, Kapitan A. I. Novikov near Aircobra I. November, 1942.

ON JUNE 15, [1942] SIX AIRCOBRAS ... INTERCEPTED SIX BOMBERS AND 16 FIGHTERS OF THE LUFTWAFFE. ... SOVIET PILOTS SHOT DOWN NINE ENEMY PLANES.

to prepare for their training flights on the Aircobra. Based in Ivanov City, the 22d ZAP became the training center for the fighting regiments. Major S. I. Mironov's 153d IAP was the first to arrive. Next, the 185th IAP, from the Leningrad front arrived for refresher training. However, the 19th Guard IAP from the Karelian front—whose members independently learned to fly the Cobra—were the first to fly the plane in combat.

On May 15th, pilots of the 1st squadron under Captain Kutakhov (later Marshal of Aviation) became the first to qualify on the Cobra. The training, including personnel and regimental staffers, was completed without incident. That day Soviet Cobras from Shongui airfield encountered German fighters, but neither side sustained any losses. On the next day in a dogfight with eight Messerschmitt Bf 109s, Senior Lieutenant I. D. Gaidenko's plane was damaged, forced to land, and the pilot seriously wounded. It was the first Aircobra lost on the Soviet-German front.

Later on, pilots of the 19th Guard IAP flew cover over Kirovskaya railway and Tulomskaya hydro-electric power station from Murmashi airfield, helped the ground troops of the Karelian front. The 20th Guard IAP, in the same division, received Aircobra fighters. Soviet pilots patrolled front-lines at Murmansk. For example, on June 15, six Aircobras from the 19th Guard IAP under the command of Captain I. V. Bochkov west to Murmansk intercepted six bombers and 16 fighters of the *Luftwaffe*. In the air fight, Soviet pilots shot down nine enemy planes.

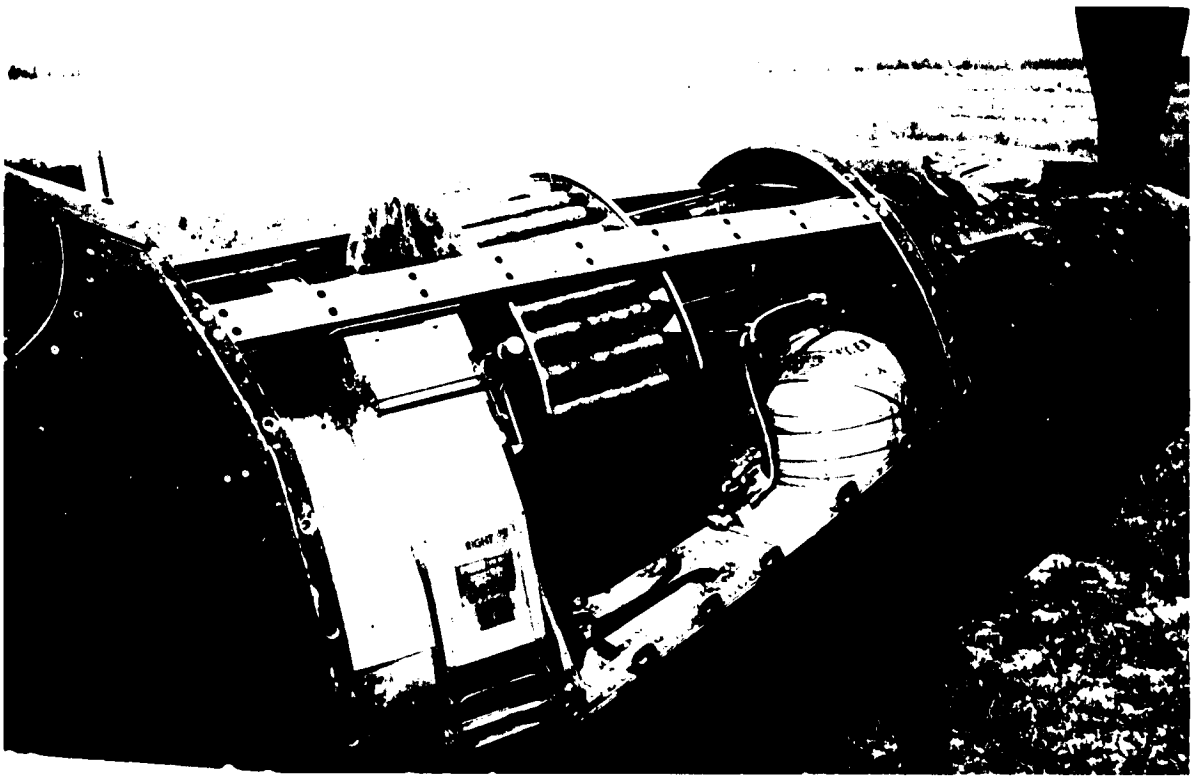
At the end of June, the 153d IAP arrived at the Voronezhskyi front in support of the 3d Shock Aviation Group. Since June 30 the regiment participated in battle operations on Aircobras. From Voronezh and Lipetsk airfields the regiment fought to the end of September. During the four months, pilots of the regiment flew 1,070 combat sorties, shot down 64 enemy planes (including 45 fighters), and lost 8 planes. The Commander of the 153d IAP Colonel Mironov attributed his unit's successes first of all to the skill of his pilots and second to the Aircobra's superior characteristics. In October, the 153d regiment was reinforced with new Aircobras and was transfered to the Northwest front. After more outstanding operations on November 22, the regiment was upgraded to the rank of Gvardeiskyi (Guard) and renamed the 28th Guard IAP.

In October, the 2d Guard SAP (Smeshannyi Aviatsionnyi Polk/Mixed Aviation Regiment) of the North Fleet naval aviation, received their first ten Aircobra I fighters. This unit's mission was to to defend the port of Murmansk. On April 14 1943, while repulsing a German air raid on Murmansk, the 2d Guard numbering ten Aircobra and six Hurricane fighters engaged an enemy force of 14 German fighters. In the ensuing battle, five German and one Soviet fighter were shot down.

The mass appearance of Aircobra fighters on the East front took place already in 1943. By that time the deliveries of the new P–39 were carried out, from the north through Arkhangelsk and Murmansk, from the south through Iran, and from the east through Alaska. Aircobra fighters were distributed to the new aviation units, out of which the whole divisions and corps were formed.

Beginning in November 1942, the United States began to deliver the P–39D model. The D, built for American forces, was transported to the Soviet Union via Iran. The D model differed from the Aircobra I mainly with respect to modified equipment. The series D-2 had also an auxiliary

Weapon bay of Aircobra. Cannon cylinder is clearly visible.



THE 100TH INCLUDED ... BROTHERS BORIS AND DMITRII GLINKA, 31 AND 50 VICTORIES, RESPECTIVELY; IVAN BABÀK (33 VICTORIES) ALSO FLEW IN THAT [GUARD] REGIMENT

fuel tank under the fuselage, the V-1710-63 engine, capable of generating up to 1,325 h.p. on afterburner, also carried a 37-mm cannon.

Beginning in 1943, the P–39 series K, M, N, and Q were shipped to the USSR along the Àlaska-Siberia (ALSIB) route. According to the Soviet data, the U.S. sent 2,593 P–39s through the Siberian city of Krasnoyarsk. The greatest number of planes were the P–39N, featuring the V-1710-85 engine and the P–39Q with more powerful armaments—37 mm cannon and six 12.7 mm machine-guns.

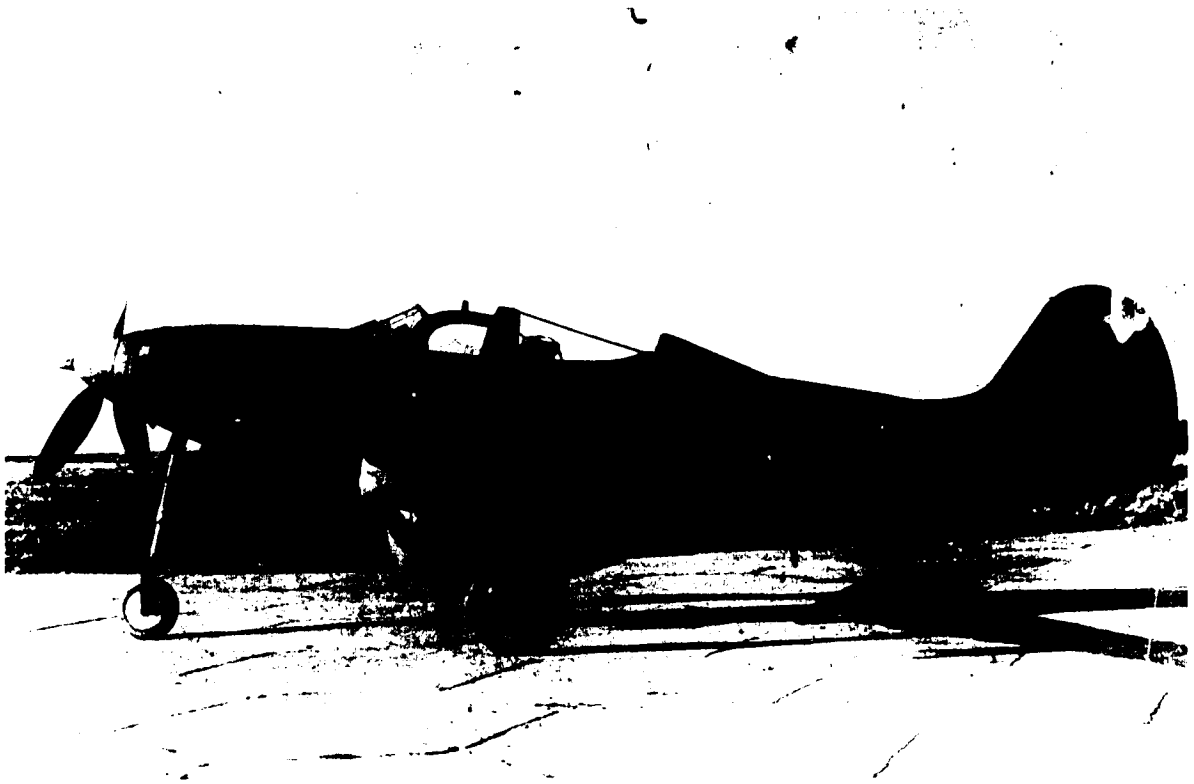
Aircobras appeared on all of the Soviet fronts from the North to South. By July 1943, there were seven times as many Aircobras in action on the Soviet front than there had been November 1942. The 258th SAD/mixed aviation division (renamed in August the 1st Guard Aviation Division) was equipped with P–39 and P–40 fighters and continued to fight on the Karelian front. In the Leningrad region, P–39Q were sent to the 102d and 103d Guard IAPs of PVO (Protivo-Vozdushnaya Oborona/ anti-aircraft defence). On the North-West front three regiments of the 5th Guard Aviation Division, under Colonel G. A. Ivanov, flew on Aircobras, and so did all of the regiments of the 1st Guard Aviation Division of Colonel V. V. Sukhoryabov on the Central front. Many P–39 were concentrated on the south sector of the Soviet front. The planes arrived here directly from Iran.

The 25th and the 11th *ZAP*s (reserve aviation regiments) were busy with pilot retraining. The 298th IAP, which received the P–39D and P–39K models, joined in air combat on Kuban from the middle of March 1943. By August its pilots had shot down 167 enemy planes, while losing 30 Aircobras. In recognition for its service, the regiment was upgraded in rank and renamed the 104th Guard IAP.

The 16th, 100th and 104th Guard IAPs belonged to the 216 IAD (later the 9th Guard IAD). The 16th Guard *IAP* (commanded by A. I. Pokryshkin) after retraining received new P–39D, K and L models from Teheran. In April 1943, the unit arrived in Krasnodar and almost at once joined heavy air fighting on Kuban. They fought through the end of the war later flying the P–39N and P–39Q, and at war's end was in Prague. Among the pilots of the 16th Guard were: three-time Hero of the Soviet Union Polkovnik Aleksandr Ivanovich Pokryshkin, with 59 victories; two pilots double Heroes of the Soviet Union: Major Grigorii A. Rechkalov, 56 victories, and Captain Aleksandr F. Klubov, 31 victories; and more than 15 other Heroes of the Soviet Union.

The third regiment of the same famous division was the 45th IAP (later the 100th Guard IAP) under the command of Polkovnik Ibragim Dzusov, who flew Aircobra and Kittyhawk fighters since February 1943. The 100th included such aces as brothers Boris and Dmitrii Glinka, 31 and 50 victories, respectively; Ivan Babàk (33 victories) also flew in that regiment.

The number of Aircobras in the naval aviation also increased. By December 1943, the 2d Guard IAP and the 255th IAP of the North Fleet had about 30 P–39s. On the Black Sea Fleet, the 11th IAP received Aircobras in March 1943. The fighters protected Gelendzhik, where part of the Black Sea Fleet was stationed. Later they supported the ground forces along the front line, escorted bombers and torpedo-boats, and took off on "free hunts" (targets of opportunity) over the enemy territory. During the second half of 1943, the 11th IAP



P–39Q (tail number 42-20561) with ventral tank at the tests in the NII VVS.

carried out 75 air combats, shot down 92 German planes (60 fighters and 32 bombers and reconnaissance), while losing 10 of their P–39. By the end of 1943 the 43d *IAP* of the Black Sea Fleet also had received some P–39s. The pilots of that regiment supported the advancing units of the Soviet Army and covered Pe–2 and A–20 Boston bombers in air raids on Constanza, Rumania. In November 1944, when battle action on the Black Sea had finished, there were 129 Aircobra fighters of different modifications in the naval aviation arsenal. The North Fleet used the Aircobra fighters as multipurpose planes. They took off to cover the ships and coastal objects, to support bombers and attack planes, and to attack enemy airfields.

SOVIET PILOTS WERE UNANIMOUS IN THEIR HIGH REGARD FOR THE AIRCOBRA'S POWERFUL ARMAMENT

Beginning in 1944, the inventory of Aircobras in the PVO system increased sharply. In late 1943, the PVO numbered only 65 Aircobras, while at the beginning of 1945, there were 597 P–39s. In 1944 the 57th, the 66th and the 101st Guard IAPs participated in covering American air bases in the Ukraine. American B–17 Flying Fortress bombers used Poltava and Mirgorod airfields during their shuttle bombing raids between Italy, England, and the Soviet Union. It is interesting to note that the regiments located closer to front, were armed with Aircoras, while the rear echelons flew the Hurricane and Kittyhawk fighters. By the end of the war there were 8 regiments in the PVO system, armed with P–39s. In total they shot down 95 enemy planes.

While considered a marginal plane in the U.S. and England, the Aircobra was highly esteemed by the Soviet pilots. A. I. Pokryshkin called it a perfect, modern, and high-speed fighter. V. D. Lavrinenkov noted that Aircobras were the modern battle machine, made at the level of the best fighters of the war; E. Ya. Savitskii underlined that it conceded something to the Yak–1, but on the whole the P–39 was excellent. According to the official report of the 153d IAP, Luftwaffe pilots considered Aircobra fighters the most dangerous opponents and engaged them in battle only when they had advantages in numerical superiority, in height, and suddenness. Air combat conditions on the Soviet-German front generally saw air combat take place at an altitude of from 4,000-5,000 meters, where most air battles were fought. At these heights the Aircobra had the best flying properties in comparison with German and Soviet fighters of that time. In flight range, the Aircobra equalled Soviet fighters and with drop fuel tanks surpassed them.

Soviet pilots were unanimous in their high regard for the Aircobra's powerful armament. Even the Aircobra I, equipped only with one 20-mm cannon and 6 machine guns (including two of large-caliber) surpassed many Soviet fighters. The late modifications, for example P–39Q with 37 mm cannon and 4 Browning machine guns of 12.7 mm caliber, had the so-called shattering weapon. The Aircobra, on which Soviet ace Pokryshkin flew, had a control knob with combined firing buttons for cannon and machine guns. In the USSR, the armaments of the P–39Q modification were considered excessive and two underwing machine guns were often removed. The 37-mm cannon, as a rule, could destroy an enemy plane on one hit. That gun was used to hit armored cars, steam locomotives, river and sea vessels. From the second half of 1943 on, the P–39 was used less as a fighter and more often as an attack plane for raids on land and sea targets. During February 1944, the pilots of the 9th Guard IAP destroyed 13 planes, 110 motor vehicles, 100 horses, 5 steam locomotives and a lot of enemy

Pilots of the 30th Guard IAP on airfield Gensya-Vulka (Poland), the 1st Belorussian front, 1944. The Hero of the Soviet Union Major M. P. Rents (the third from the left in the first row) had 23 victories (18 personally and 5 in group). His Aircobra had board number "93".

THE PLANE'S MAJOR DEFECT CONCERNED THE ENGINE, WHICH WAS POSITIONED IN THE AIRCOBRA'S CENTER OF GRAVITY

infantry. From January 1 till May 10 1943, the 216th shot down 187 planes from the air and destroyed 200 on the ground. Soviet pilots were especially successful when flying Aircobra fighters during "free hunt" on railroads. The P–39's powerful gun pierced locomotive boilers with armour-piercing protectiles. In one combat sortie in September 1943, 12 pilots from the 19th Guard IAD destroyed 13 steam locomotives.

Other weapons for the attack plane variant of the Aircobra included bombs, usually demolition and incendiary bombs in the 100-250 kg range. Bombing was performed from horizontal flight, flat dive (under 45 degrees) and on the sea, at low altitude.

P–39s were used also for battlefront reconnaissance. The plane was equipped with a vertical aerial camera AFA-I. Such reconnaissance missions were carried out by the 118th ORAP (Otdelnyi-Razvedyvatel'nyi Aviatsionnyi Polk, separate reconnaissance aviation regiment), in the 67th and 98th Guard IAPs.

At low and medium altitude, the Aircobra had insufficient speed and maneuverability. But the plane's major defect concerned the engine, which was positioned in the Aircobra's center of gravity. Whenever the pilot fired the gun and the shells were expended, it affected the plane's alignment sharply, often causing the fighter to go into a spin. The spin produced a considerable load and vibration on the controls and any delay in recovering from a spin could be fatal.

The spin produced numerous failures and crashes in combat units. During two months in 1944, spins caused two accidents and four failures in the 1st Guard IAD. No one was immune, even skilled pilots found it difficult to recover from a spin. The NII VVS had three accidents: on February 2, 1943, K. A. Gruzdev was lost in an Aircobra; on January 3, 1944, K. A. Avtonomov (flying a P–39N) went down; and on April 27, 1944, K. I. Ovchinnikov crashed (in a P–39Q-10). The situation deteriorated to the point that in the Fall of 1943 Bell Aircraft dispatched a special team to Moscow.

Another problem encountered on the Aircobra was the difficulty in exiting the plane once it entered a spin. Pilots jumped out of the left door, which in an emergency was thrown off, but often struck the P–39's tail, again with fatal results. Two Heroes of the Soviet Union—N. M. Iskrin in May 1943, and B. B. Glinka in July 1944—crashed in this way. Sometimes, even if the pilot was lucky and managed to get out of the spin, he could encounter a new danger. The heavy overloads deformed the P–39's tail unit and tail, jamming the plane's elevator and rudder.

The Soviets acted to contain the problems by implementing an extensive safety program. Flight tests demonstrated specific pilot actions that caused spins. The NII VVS held meetings and practices where skilled pilots demonstrated safe methods of piloting the American fighter. An educational film was made about the problem and distributed for screening at combat units. These efforts helped reduce the accident rate at the front, although it was impossible to eliminate losses completely.

Also, the chief engineer of the Soviet Air Forces ordered several modifications made and imposed restrictions. For example, aerobatic flying without ammunition was categorically forbidden. Engineers replaced the armored oil tank to improve the fighter's forward the alignment and reinforced the tail. As a result of the modernization—which

Pilot of the 16th Guard IAP, twice Hero of the Soviet Union, Major G. A. Rechkalov near his Aircobra at the 1st Ukrainian front, August 1944. He had 62 victories (56 personally and 6 in group).

THE P–39'S COMBAT RECORD WAS: ONE AIRCOBRA LOSS PER 122 COMBAT SORTIES AND 4 ENEMY PLANES DESTROYED

affected 326 planes—the P–39 successfully passed the NII VVS tests.

Another problem concerned the P–39's Allison V-1710 engine.The engine's expected operational life of 250 hours fell short under battle conditions, where it lasted only between 60 and 70 percent of the flying hours predicted. The degraded performance was attributed to excessive afterburning that overheated the engine oil and fused and jammed bearings. Connecting rods came off and pushed the engine out of action. The use of poor quality oil and gasoline also reduced the engine life. Because of shortage of the American spare engines at least 100 P–39s were refitted with the Soviet M-105P engine.

In the winter, oil lines and cooling systems were heated. With the beginning of cold weather, the planes' lubricants were partially replaced with more cold-resistant Soviet products. The rupture of fuel system pipes caused fires in the air. Thus, while ferrying not far from Gudermes, the Hero of the Soviet Union N. E .Lavitskii was lost. In that connection American duraluminum pipes were replaced with specially processed copper from Soviet stocks.

The North and Baltic Fleet tried to outfit the P–39 on a ski undercarriage. However, that innovation did not gain much acceptance and Aircobras continued to fly on wheels the year round.

To speed up training, the Soviets built a two-seat trainer, with the second cabin ahead of the main. That plane resembled the American P–39. Pilots complained that the front cabin was close and uncomfortable. The propeller rotated 40 cm before the pilot's eyes and, in case of emergency, a pilot would inevitably get under the rotating propeller.

In 1944, Bell Aircraft stopped production of the P–39. The last five P–39Q passed along the Siberian *ALSIB* air route early in 1945. The totals produced vary according to different sources. The U.S. delivered to the USSR between 4,719 and 4,746 Aircobra fighters of all models. England re-exported 212 to the USSR, but of those only 158 P–39 arrived at Soviet northern ports. On the whole, in accord with Soviet sources, the USSR accepted 4,952 Aircobras. The following models of Aircobras were sent from the USA: 108 P–39D, 40 P–39K, 137 P–39L, 157 P–39M, 1113 P–39N, 3291 P–39Q.

Many regiments and divisions of the Soviet Air Forces flew Aircobras until the end of the war. Soviet pilot G. G. Golubev flying combat in Czechoslovakia early in May 1945, shot down one of the last enemy aircraft (a Dornier Do 217) in the European theater of operations. By war's end, Soviet Air Forces and aviation of PVO (anti-aircraft defence) had an inventory of 3,078 Aircobra fighters, including 700 planes in the PVO system. At the same time, Soviet naval aviation had 691 Aircobras. Aircobras appeared in the Pacific Ocean Fleet in July 1945, when the Soviet Union was preparing for war against Japan. The 27th IAP from the North Fleet and the 43d IAP from the Black Sea Fleet were transfered on the Far East. Both regiments had approximately 100 Aircobras.

According to the Soviet data, by the end of the war the P–39's combat record was: one Aircobra loss per 122 combat sorties and 4 enemy planes destroyed. Many pilots were credited with destroying 20 enemy planes. Major Grigorii Andreevich Rechkalov, an Aircobra pilot of the 16th Guard IAP, shot down 50 German planes and is designated a "champion."

Pilots of the 298th IAP greet Vasilyi M. Drygin, who returned from combat flight. North Caucasus front, 1943.

THE P–63 KINGCOBRA WAS A FURTHER DEVELOPMENT OF THE AIRCOBRA

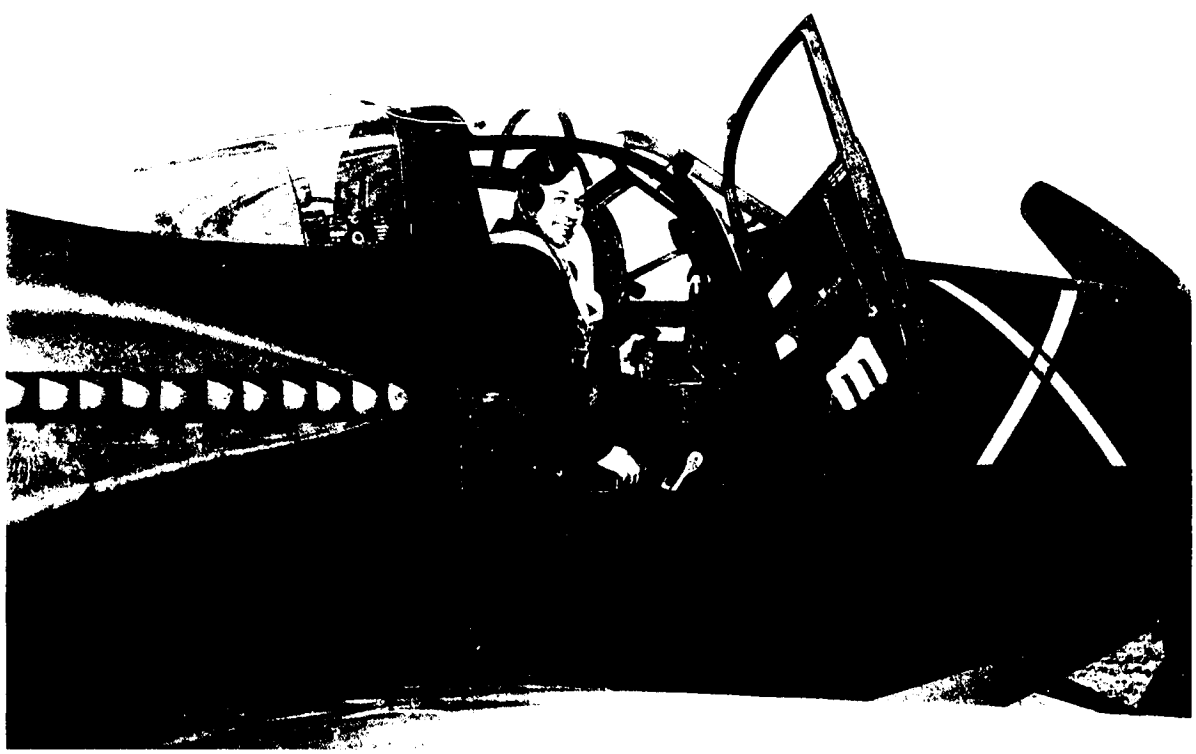
Aircobras remained in the Soviet aviation arsenal until 1950 and could be found in flying schools until about 1955. On the whole, the Aircobra was a good, reliable combat plane that left a significant mark in the memory of Soviet pilots.

Bell P–63 Kingcobra

The P–63 Kingcobra was a further development of the Aircobra. It had the same general arrangement as its predecessor. The Bell Aircraft designers somewhat increased its dimensions, and changed the tail unit and wing. Out of 3,303 Kingcobra fighters constructed from 1943 to 1945, 2,400 went to the Soviet Union.

In December 1943, the Bell company sent detailed information about the new fighter to Moscow. In February 1944, representatives of NII VVS, engineer-pilots A. G. Kochetkov and F. P. Suprun, were sent to the U.S. to carry out all-round

Test pilot A. G. Kochetkov in cockpit of P–63A, in the United States, 1944.



Preparing to fly P–63 Kingcobra (tail number 42-69239) in Fairbanks, Alaska.

tests of the plane before its mass delivery to the Soviet Union.

Having crashed one Kingcobra during the spin-tests, Kochetkov managed to convince the Americans of the necessity to modify the airframe. The shipment of P–63s was planned to begin in the first half of 1944. Early that summer American ferry-pilots delivered the first Kingcobras to Fairbanks and began to train Soviet pilots on them. In Alaska only the squadron commanders of the ferrying aviation division were trained. All other pilots would master the new plane directly in their regiments at the front. The P–63 ferrying went along the Siberian *ALSIB* air route. The first plane was handed over in June 1944. Beginning in September 1944, while still in the American aircraft factory, the P–63A began to be painted with the symbol of the Soviet Air Forces—red stars with white edging.

THE INITIAL KINGCOBRAS WENT TO UNITS THAT HAD BEEN ARMED WITH AIRCOBRAS

The new fighter did not arrive at the front immediately since there was no Soviet aviation shortage at that time. This permitted careful flight testing of the P–63. From the end of 1944 until March 1945, the planes of the series A-1, A-5, A-7 and A-10 were consecutively tested in NII VVS and LII NKAP (Letno Ispytael'nyi Institut Narodnogo Kommissariata Aviatsionnoi Promyshlennosti/ Flying-Test Institute of People's Commissariat of Aviation Industry). On the whole, the P–63 performed well. Among its positive attributes were: high speed, good maneuverability, powerful weapons, and safe controls.

The P–63A was at a speed disadvantage to the Messerschmitt Me 109G-4 (9 km/h at a height 5,000 meters) and in rate-of-climb (2 m/sec) at the same height. But in horizontal maneuver the American fighter outstripped both the Me 109G-4 and Focke-Wulf FW 190A-4.

Testing revealed other lacks compared with P–39s: the P–63's useful loading and fuel capacity were lower and its defensive armor was not as good. Also, wing covering deformation appeared on the A-1, A-5 and A-6 series aircraft. Consequently, Bell increased the thickness of the covering and strengthened the wings from the A-7 series on. The aerodynamic instability also emerged while pulling-out and during aerobatics. The latter problem was addressed on the P–63N with the installation of a more powerful engine, the V-1710-117, and a ventral fin. Despite all of the designers' efforts, both the Kingcobra and Aircobra suffered from spins. When the cannon and fuselage machine guns ammunition were spent, the trim of the planes was disturbed, requiring immediate correction by trimming the tabs. Otherwise, the P–63 went into a spin. Therefore, Soviet pilots flying the Kingcobra were forbidden to execute a sharp pull-out and input in vertical figures.

Beginning in the spring of 1945, the P–63 began to arrive at frontline PVO aviation units. The P–63 was best suited for search and interception missions. At altitudes above 7,500 meters, the Kingcobra overtook English Spitfire Mk. IX and Soviet Lavochkin La-7. It had good ceiling of 13,105 meters. The standard equipment of all P–63 was radio semi-compass MN-26Y, that essentially facilitated navigation at night and in clouds. Early in 1945 one P–63-A-10 arrived, equipped with radar. The radar was intended to prevent attacks from behind. By May 1, 1945 51 PVO regiments were equipped with P–63s.

The initial Kingcobras went to units that had been armed with Aircobras. The first to receive P–63s was the 28th IAP of PVO, based near

P–63C-5 BE (tail number 43-11133) during ferryng along ALSIB air route.

SOVIET MISSION IN ALASKA STOPPED IMMEDIATELY AFTER JAPAN'S CAPITULATION

Moscow. By August 1945, P–63s arrived at the 17th and the 821st IAPs, ten planes in each. In autumn several Kingcobras came to the 39th IAP. All these regiments entered PVO of the Moscow region.

The P–63 began to be delivered in to Soviet Air Forces in the summer of 1945. As preparations were made for the war with Japan, the new fighters were sent to aviation units of the 12th Air Army in the Far East. The 190th aviation division under the command of Major General Fokin was the first to receive P–63A. The division was transfered to Trans-Baikal in June 1945 and by August 2 finished retraining on the new American fighter. During air operations in Manchuria it flew from two airfields—"Ural" and "Leningrad"—located not far from Choibolsan in Mongolia.

The 245th IAD, which included the 940th and the 781st IAP regiments also flew P–63s. In July and August Kingcobras arrived at the 128th SAD (mixed aviation division), based on Kamchatka peninsula. At the beginning of air operations 97 P–63s arrived at the 9th and the 10th Air Armies.

During the brief military campaign against Japan, Kingcobras were used to provide air cover from air ground troops and ships, to attack and bomb, provide escort, and conduct reconnaissance. For example, on the second day of the offensive 40 Il-4 bombers, escorted by 50 P–63s bombed the fortifications at Suchzhou. Pilots of the 190th and the 245th IADs working as attack planes and light bombers supported the advancing Soviet and Mongolian troops. They also covered transport planes, delivering fuel to the advanced tank and mechanized units. The P–63s carried two Soviet FAB-100 bombs externally. Underwing large-caliber machine guns were not usually mounted. The 888th and the 410th IAPs from the Kamchatka peninsula inflicted considerable damage to Japanese bases on the Kuril Islands, and then covered the landing of Soviet troops on them.

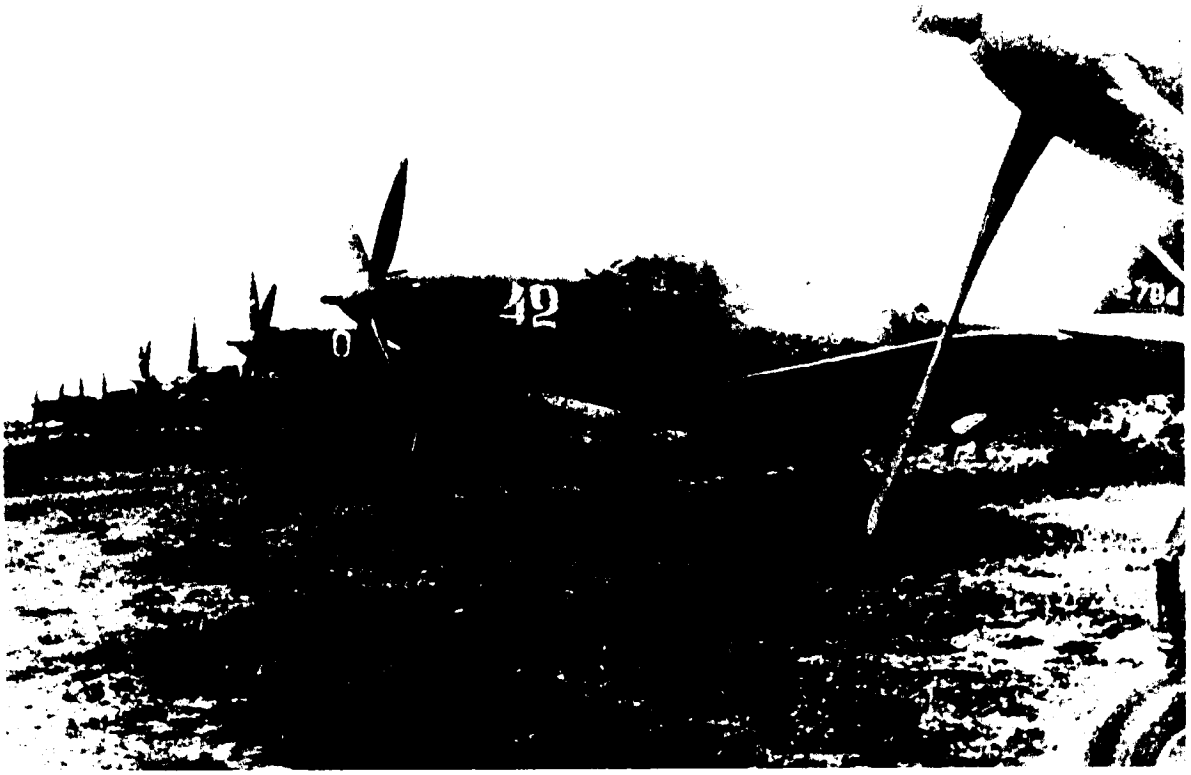
The Japanese aircraft did not offer serious resistance to the advancing Soviet armies, therefore it was impossible to assess the Kingcobra's performance in air fights. One unique air combat in a P–63 was flown by Junior Lieutenant I. F. Mirîshnichenko of the 17th IAP. On August 17 he and V. F. Sirotin (a Hero of the Soviet Union) attacked two Japanese fighters, who were attacking transport planes coming in for a landing not far from the ship Vanemyao. One Japanese pilot was shot down, another managed to disappear on low-level flight among nearby hills. Miroshnichenko probably shot down the Japanese Ki–43 Hayabusa fighters.

Concurrently, the first P–63s arrived at the 7th IAD naval aviation unit of the Pacific Ocean Fleet. At the beginning of the war with Japan, the division had only 10 Kingcobras. Anether twenty arrived during the battle actions. However, they didn't participate in combat operations.

The lease of the American fighters to the Soviet mission in Alaska stopped immediately after Japan's capitulation. The last Kingcobra was delivered to Kamchatka peninsula on September 29, 1945. The Soviet Union managed to receive 2,400 P–63 of the total 2,450 ordered. After the war the most advanced lend-lease fighter occupied a firm position in Soviet aviation. Kingcobras were sent not only to aviation units in the USSR, but also to Soviet occupation armies in Germany (the 1st Guard IAD in Neuhausen), Austria, China (the 83d IAK in Port-Artur).

The exact number of P–63s in Soviet naval aviation is not known, but there were many of them.

P–63A-10 of a certain IAP after the war.



Kingcobras came in aviation regiments of the North and Black Sea Fleets, earlier armed with P–39 Aircobra. Pilots of the 314th and the 246th IAPs flew on these planes in the Baltic Fleet.

Soviet pilots liked the P–63 for its ease of operation, and spacious, heated cabin with a perfect view, good devices and a shooting sight. However, after 1948 the problem of engine wear appeared. It was forbidden to fly the planes at extreme speeds. This edict was enforced by locking the throtle limiter quadrant. Kingcobras remained in action right up to the introduction of jet fighters. Their replacement began in 1950. In the end they played the important role in training pilots on jet engineering fighters MiG–9, and then *MiG–15*. Like the P–63, the jet fighters had a similar undercarriage with a nose-wheel. All Soviet fighters had an undercarriage of the old circuit with tailwheel. Here and there the task was sometimes complicated. For example, the landing approach was mastered without releasing the landing flaps at speeds of 400-500 km/h, imitating the MiG–15. When P–63s were removed from the inventory of combat units, they still remained in flying schools, as transitional plane.

Three times Hero of the Soviet Union, Commander of the 9th Guard aviation division, Polkovnik Aleksandr Pokryshkin. He had 65 victories (59 personallyand 6 in group). He later became Marshal of Aviation.

The two-seat trainer variants of P–63 were produced in the USSR. Their first variants were made by hand air workshops and repair bases. The standard project of alteration was offered by TsNEB VVS (Tsentral'naya Nauchno-Experimentalnaya Baza Voenno-Vozdushnykh Sil/ Central Scientific-Experimental Base of Air Forces). The second cabin was placed instead of weapon bay. One machine gun was preserved to perform exercises in aerial gunnery. One two-seat P–63, altered by the 321st repair base, since December 1948 till April 1949 passed tests in NII VVS. V. E. Golofastov flew on it. The changes in alignment improved antispin characteristics of the plane. Program of tests included also parachute jumps to prove the safety of leaving the faulty plane. The jumps were fulfiled by the well-known parachutist V. G. Romanyuk. After that began a mass alteration of fighters into an educational variant on repair bases of air armies and fleet began. At present only one plane has been preserved in Russia. This strange hybrid of a P–39 and P–63 assembled from fragments of several planes that crashed on the Siberian air route *ALSIB,* is displayed in the Air Forces museum in Monino. ■