The Experiences of the Soviet Air Force in Afghanistan 1979-1989

By Thomas Withington

The Soviets did not want any upsets in their soft, southern underbelly, but the political situation in Afghanistan was unravelling in the dark days of the late 1970s. The grip on power that President Hafizullah Amin and his Socialist People's Democratic Party of Afghanistan (PDPA) had wielded from the capital Kabul was loosening, and despite signing a Treaty of Friendship and Co-operation with the USSR in 1978, the socialist agricultural and social 'reforms' which Amin was attempting to institute in Afghanistan was infuriating major sections of the Afghan population. Fiercely traditional rural communities grew highly sceptical of plans to abolish the feudal power of the countryside landlords, while the urban population was increasingly frustrated at the non-existent, yet promised, social reforms such as equal rights for women and ethnic minorities, and freedom of religion.

Amin, a prominent member of the Marxist 'Khalq' (*People's*) faction of the PDPA, began his grab for power in Afghanistan upon the assassination of Mohammed Daoud Khan during a coup led by the PDPA. Amin became a deputy Prime Minister of Afghanistan along with Babrak Karmal, leader of the rival and more moderate PDPA 'Parcham' ('Banner') faction. Meanwhile, Noor Mohammed Taraki became the President of the Democratic Republic of Afghanistan (DRA). Upon

gaining power, Amin began to flex the muscles of the Khalq faction over the Parcham grouping, eventually sending Karmal into exile in Europe, thus making Amin the sole Prime Minister. On 14 September 1979, in his final act of consolidation Amin and his supporters moved against Taraki, killing him in a palace coup and paving the way for the erstwhile Prime Minister to now declare himself President of the DRA.

General Secretary of the Communist Party and President of the Soviet Union Leonid Ilich Brezhnev looked on in astonishment from Moscow at the turmoil in the Soviet Union's mountainous neighbour. Afghanistan was supposed to be a trusted and loyal Soviet ally, but Amin was not following the script. His radical agenda was provoking widespread protest and subsequent armed revolt across much of the country. To make matters worse, the loyalty of the DRA's armed forces ebbed and flowed according to whether it supported the government or the opposition, and soon showed itself to be unwilling and unable to quell the rebellion that was gripping large swathes of Afghanistan. Amin responded in characteristic fashion to the disintegration with a harsh crackdown on political opponents with thousands being jailed, tortured and executed. As the situation unravelled, Amin appealed to Moscow for Soviet troops to help him crush the rebellion. As the demands became more frequent and more desperate, Brezhnev and his Politburo comrades pondered the issue, fully aware of the international outrage that an open invasion of Afghanistan would bring.

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On Christmas Day, 1979, they replied to Amin's demands. In the dead of night, his official residence in Kabul was stormed by Soviet troops from the 105th Guards Airborne Division. In the bitter battle for the Royal Palace, where Amin had moved believing it to be more secure than his official residence, he was killed, along with his bodyguards and the members of the Afghan National Army (ANA) who had remained loyal; 1800 of whom were killed. By the morning, Afghanistan had a new President, as Karmal was bought out of retirement and installed as Moscow's puppet. As the 105th Guards Airborne Division were finishing the job, other Soviet units were pouring into Afghanistan to assist what was left of the ANA in crushing the rebellion by the Mujahideen ('Holy Warriors') who were leading the rural uprising against the Kabul regime which they perceived as avowedly secular and intent on wrecking rural traditions. Moscow's intervention was supposed to be short: to help the ANA and Karmal to regain control of the country and then to leave. Yet it would develop into a conflict which would help to bleed the Soviet Union dry.

Air power would be vital to the Soviet Union before the invasion got underway and until the very end, as the USSR fought its 'hit and run' war against the Mujahideen on the undulating and unforgiving Afghan landscape. Prior to the invasion, the Soviets had performed aerial reconnaissance of border regions and Afghanistan itself using Voenno-Vozdushnie Sili (VVS)[1] aircraft. However, so as to keep Soviet actions under wraps, these aircraft were festooned with insignias from the DRA Air Force (DRAAF). They were flown by Soviet ethnic Tajik and Uzbek crews so as to not to arouse any suspicions among the Afghan population lest they crash.[2] Tajiks and Uzbeks comprise 25% and 8% of Afghanistan's contemporary population respectively.[3] In November 1979 Soviet transport aircraft from the Voenno-Transportnaya Aviatsiya (VTA)[4] such as Il-76 jet heavy-lift jet freighters (NATO

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code name 'Candid') along with An-22 (NATO codename 'Cock') and An-12 (NATO codename 'Cub') heavy-lift and tactical turboprop freighters airlifted the first Soviet troops and their equipment into Afghanistan: an operation which would use no less than 38% of the VTA fleet.[5] In executing the invasion, the Soviet military emulated their invasion of Czechoslovakia in 1968; attempting to shock Amin's regime by airlifting the 105th Guards Airborne Division of the Sukhoputnyee Voyska (SV)[6] which were tasked with rapidly seizing strategic targets around Kabul as well as Amin's residence.[7]

At the start of the invasion, the profusion of transport aircraft greatly outnumbered the quantity of offensive aircraft which the VVS deployed. It is thought that in the days immediately after the invasion, perhaps only 20 attack helicopters, presumably Mi-24 (NATO codename 'Hind') from Armeiskaya Aviatsiya (AA)[8] were sent south, plus an undisclosed number of VVS fighters and fixed-wing attack aircraft. No sooner had the Soviets arrived in Afghanistan than the Mujahideen, known as the dukhi[9] to Soviet personnel, began to inflict serious damage on troops and equipment. The 40th Army, the SV unit tasked with conducting

Su-24 Fencer

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invasion and helping the ANA crush the insurrection, would soon realise that this small number of offensive aircraft would be inadequate for the task in hand.[10] It is all but impossible to give an exact order of battle for the total number of Soviet aircraft which were deployed to Afghanistan throughout the intervention. Estimates vary widely between 450 rotary and fixed-wing aircraft to 1250 aircraft of all types.[11]

This mass of air power was placed under the command of the 40th Army headquarters in Kabul with a senior VVS officer and staff section attached to help direct air operations and to coordinate them with the SV. However, the overall VVS Headquarters, logistics facility and maintenance base for operations in Afghanistan was located at Termez in present-day Uzbekistan.[12] This made sense given the situation on the ground in Afghanistan where air bases were favourite targets of the Mujahideen who would conduct regular attacks on aircraft and personnel, exacting serious damage. Therefore, the Soviets found it prudent to perform the 'deep' maintenance of their aircraft serving in Afghanistan across the Soviet-Afghan border, well beyond the range of the marauding dukhi and their rocket-propelled grenades.[13] Despite this, the Soviets did invest in Afghanistan's airfields, making them more suitable for their aircraft. Local labour was often utilised to expand runways and extend facilities, with airfields at Bagram, Kabul, Shindand, Kandahar, Farah, Jalalabad and Mazir-i-Sharif all benefiting.[14]

For military operations, the Soviets had parcelled Afghanistan into four sections. The northern region included the cities and towns of Kunduz, Khanabad, Faizabad, Puli-Kumri, Tashkurgan and Mazir-i-Sharif; the eastern region included the Khost, Asadabad, Jalalabad, Gardez, Kabul and Bagram conurbations; the southern region included Munarai, Kandahar and Lashkargah while the western region comprised the cities of Farah, Shindand and Herat.[15]

One of the biggest challenges experienced by Soviet combat aircrews was in planning their sorties. Afghanistan's rugged and elevated terrain tested a navigator's skills to the limit. Aircrews did often try to meticulously plan their missions; however, time pressures often meant the crews having to 'make it up as they went along', planning their missions on the way to their targets.[16] This would often affect the so-called desant missions where a package of cargo helicopters carrying SV troops and their equipment and protected by a phalanx of helicopter gunships, were ferried to an area of Mujahideen activity for an assault.[17]

Soviet training had a reputation for rigidity, discouraging aircrews from showing initiative and deviating from prescribed tactics and methods for a particular mission. However, to a very limited extent, this thinking was abandoned in Afghanistan and helicopter pilots in particular would often work in a 'freelance' capacity. For example: a pair of Mi-24 gunships could be joined by a Mi-8 (NATO codename 'Hip') aircraft. The Hip would act as a decoy to draw Mujahideen fire. As soon as the rebels opened fire they would expose their position, allowing them to be engaged by the gunships.[18]

Another favourite tactic of the helicopter pilots was to fake an approach to a landing zone. This was to goad the Mujahideen into believing that a

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desant was on its way and to open fire. Once the rebels began firing they would reveal their position to the fighter-bombers following the faux desant which would then offload their ordnance on the guerrillas.[19]

Fighter-bomber pilots had a fondness for confusing the Mujahideen with the so-called 'star' formation in which with attack aircraft repeatedly hit the same target while flying from different points in order to surprise the dukhi. Another tactic would see two pairs of aircraft attacking the same target on a parallel course, but from opposite directions. This would help to confuse the Mujahideen as to which direction the attack was coming from.[20]

Such 'freelance' operations were important for Soviet crews and their survival could be greatly enhanced by learning from experience. Pilots would describe the training for operations in Afghanistan as woefully inadequate and being selected for service in this difficult theatre would not entitle a pilot to any special instruction before their departure.[21] One common complaint was that a premium was placed on training the aircrews to avoid accidents while the development of initiative and independence was neglected.[22] One Soviet pilot even commented that: "in normal training we are used to acting shablomo (by textbook) . . . when the situation becomes complicated as in battle, we are not able to cope with the task before us. That is the cost of oversimplification and the lack of initiative".[23] A confidential poll of Soviet aircrew conducted between 1987 and 1989 gave some clues as to the levels of 'job satisfaction' amongst the pilots. Training was a major complaint: 87 per cent of fighter pilots, 98 per cent of fighter-bomber pilots and 50 per cent of bomber pilots said that they were dissatisfied with the training which they had received before their service in Afghanistan.[24]

However, there were parts of the air war where the Soviets excelled. For example, they made widespread use of avianovodchiki[25] who would often accompany ground units in vehicles or would be positioned in helicopters during a desant where they would direct the landing operations and attacks by helicopters and fixed-wing aircraft.[26] The Soviets compartmentalised their aircraft according to the missions that they were tasked for. For example, fighter-bombers were supposed to assist the prevailing counter-insurgency war against the Mujahideen. They would attack areas thought to be rebel strongholds prior to the arrival of a desant force. The weapons of choice for such missions were originally aircraft such as the MiG-21 (NATO codename 'Fishbed') and the Su-17 (NATO codename 'Fitter'). However, these aircraft were betrayed by their poor accuracy and performance which were unsuitable for the mountainous Afghan terrain. For example, the MiG-21 was ostensibly designed as a high-performance air-to-air fighter with a maximum speed of 1,160 knots (1,336mph/2,150 km/h)[27] This did not lend it to the twisting canyons, hidden ravines and caves, which were a favourite redoubt of the Mujahideen.[28] The Fishbed and Fitter would soon make way for the more capable MiG-23 (NATO codename 'Flogger') and Su-24 (NATO codename 'Fencer') which appeared in the Afghan skies from 1980 and 1982 respectively. Their performance and accuracy was a major improvement on their predecessors.[29]

The aircraft which really scared the Mujahideen was the Su-25 (NATO codename 'Frogfoot'). Echoing back to the legendary Il-2 anti-tank aircraft of the Great Patriotic War, the Frogfoot built upon the Shturmovik's illustrious reputation.[30] Using a more attractive nickname than its NATO moniker, Soviet troops called the Su-25 the 'Gatch'.[31] The aircraft made its combat debut in Afghanistan in 1980 when two aircraft were sent for testing. Another six aircraft arrived in 1981, and by the following year two squadrons were based at Shindand and Bagram. The high degree of accuracy and the 8,818 lb (4,000 kg)[32] payload of the Su-25 terrified the Mujahideen.[33]

Throughout the Cold War, the VVS maintained a formidable long- and medium-range heavy bomber force and aircraft from Bombardirovch'nyi Aviatsion'nyi Polk (BAP)[34] flew missions during the Afghan war. One of the workhorses was the Tu-16 (NATO codename 'Badger'). Its main role was to attack areas where Mujahideen sympathy was thought to run high, and also to conduct area attacks of regions thought to be harbouring Mujahideen before ground and air offences began.[35] The former role was especially important to the Soviet political leadership. In an effort to terrorise the Afghan rural population into not giving support to the Mujahideen, heavy bombers would attack villages, towns and farming communities in areas where there had been dukhi attacks on Soviet troops. According to Lester Grau; a Military Analyst at the Foreign Military Studies Office at Fort Leavenworth, Kansas, and an expert on the Soviet Afghan war; "the Soviets believed in Mao's assertion that the guerrilla is the fish that swims in the sea of the population. The Soviets intended to drain the ocean".[36]

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In one notable instance, Tu-16s were used against the Panjshir valley in north-eastern Afghanistan, a stronghold of the late Ahmed Shah Massoud: arguably the finest Mujahideen commander and one of the finest military leaders of all time. On 21 April 1984, they attacked Mujahideen villages and bases in the valley. The raid was one of the largest of its kind for the Soviet bomber force with 36 aircraft flying between 30 and 40 sorties per day. But the Soviets had to be careful. Just over the southern border from the Panjshir valley lurked the Pakistan Air Force (PAF). The VVS and the DRAAF had already lost aircraft to the PAF after sneaking over the border to attack Mujahideen bases and infiltration

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routes close to the border in Pakistan. Loosing a bomber would be a major embarrassment for the VVS and it went to great pains to ensure that these large aircraft were not placed in undue danger.[37]

Having entered service in 1954 the Tu-16 was one of the Soviet's oldest bombers. From 1987 onwards the more modern, variable-geometry wing Tu-22M (NATO codename 'Backfire') was unleashed on Afghanistan. In one incidence, these aircraft were tasked with bombing Mujahideen positions to help to relieve the siege of Khost, a city in south-eastern Afghanistan. Tu-22M3 aircraft from the 185 BAP were deployed to the Mary-2 air base in present-day Turkmenistan. Their great advantage over the Badgers was that they could fly faster and higher than their predecessors, which the VVS hoped would put them out of range of PAF air defences, a vital consideration given that this raid would take them close to the Afghan-Pakistan border. As an additional defence, the bombers were escorted by Tu-22PD (NATO codename 'Blinder-E') aircraft, which were outfitted with powerful electronic warfare equipment. However, the PAF stayed on the ground and the force was able to drop its 6,613 lb (3,000 kg) FAB-3000 bombs undisturbed.[38]

The net effect of the area bombing performed by the VVS was not the degradation of popular support for the Mujahideen, but the creation of huge numbers of civilian casualties. Meanwhile, the use of incendiary bombs and fuel-air explosives ensured that Afghanistan's once lush farmland and orchards became charred moonscapes. Allegations that the VVS fighter-bombers dropped chemical weapons[39] have proved to be notoriously difficult to substantiate. However, the VVS did drop anti-personnel mines from aircraft[40] in the belief that

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as the weapons were designed to injure rather than kill, they would drain Mujahideen morale. Instead, these weapons have not discriminated between combatant and civilian leaving a grim legacy across the Afghan landscape with reports of up to 40 to 100 casualties being caused by landmines per week.[41]

One tactic of the fighter-bomber force was to engage the rural population in so-called 'Air Strike Diplomacy'. If, for example, Soviet Prisoners of War (PoWs) were being held by in a village, the VVS would conduct an impressive display of bombardment within sight of the village. This would be followed by a leaflet drop which would inform the villagers that they would be subjected to similar treatment unless the PoWs were released .[42]

For most of the time, however, fighter-bombers would be used for close air support during ground or desant attacks. In the early years of the war, Soviet fighter-bomber pilots were cautious, dropping their bombs from altitudes of 5,000 ft (1,524 m) often causing their weapons to drift widely off target. Yet soon the advent of more innovative techniques such as those described above would embolden the Soviet pilots to 'get down into the weeds' and press their attacks directly to the enemy.[43] During major operations, fighter-bombers would perform the opening air strikes against Mujahideen positions; they would then be followed by either Mi-24 aircraft, or the Mi-8TB (NATO codename 'Hip-E') gunship variant of the utility helicopter.[44]

At the start of the Soviet intervention, the tactics used by helicopter gunship crews were the opposite of those adopted by the fighter-bomber pilots. While their fixed-wing cousins were flying high and often missing their targets, the Hind pilots were hugging the ground with 'nap of earth' flying which displayed scant concern for the Mujahideen.[45] But Afghanistan was not the environment for helicopters. Heliports could be positioned up to 5,605 ft (1,800 m) above sea level, while summer temperatures could soar to 125° Fahrenheit (52° Celsius) – such 'hot and high' conditions can be a nightmare for helicopters, reducing engine power and lessening the load that the aircraft can carry.[46] Helicopters were not restricted to fighting the dukhi; they also played a vital role as a 'beast of burden', re-supplying isolated garrisons in inaccessible regions or those which had become surrounded by Mujahideen. Incidents such as these occurred in 1983 and in 1987 when the Soviet garrison near the city of Khost was besieged by rebels on two separate occasions. Rotary aviation was used to airlift supplies and reinforcements to the garrison, allowing it to break out of its base from the inside.[47]

Moreover, helicopters were also tasked with airlifting casualties, conducting reconnaissance, carrying avianovodchiki and performing general utility flights.[48] Reconnaissance missions were especially important. Helicopters would drop illumination flares for night operations or target identification. They would also patrol Afghanistan's various international borders to check for Mujahideen infiltrations, along with surveying rebel targets to be attacked. Other roles included route reconnaissance and path-finding for advancing troop convoys, a role often performed by Mi-8 aircraft.[49]

Having a similar psychological effect to the Su-25, and the Soviet's signature weapon of the conflict, the insect-like Mi-24 looked as fearsome as it was ugly. Well-defended with armour plating, this aircraft was highly resilient to small arms fire. Yet the aircraft had its weak points. Its engine air intakes were exposed, along with its tail rotor and oil tank, which for the Mujahideen was conveniently located behind the large red star on either side of the aircraft's fuselage, giving something highly conspicuous for the dukhi to aim for. Once again, the helicopter crews showed their initiative. According to Dr Mark Galeotti, an expert on the Afghan war at Keele University, they would "move the position of the red star or simply paint over it during combat operations. The stars would then be replaced before official inspections".[50]

However, Hinds were especially vulnerable to the licence-built Egyptian and Chinese versions of the SA-7 (NATO codename 'Grail') Man Portable Surface to Air Missile System (MANPADS) which was based upon the Soviet 9K32M/SA-7 MANPADS, and which were covertly supplied to the Mujahideen by the United States. The

administration of President Ronald Reagan had decided to arm the rebels to fight a proxy war against the Soviets soon after the invasion. The missiles could be outfoxed with low-altitude flying, although this heightened the strain on the Mi-24's airframe and increased losses.[51] Furthermore, when performing sharp manoeuvres, the Hind's main rotor could strike the tail boom with catastrophic results. Also, given the hot, thin mountainous air of Afghanistan, the Mi-24 would sometimes have to make a rolling take-off to get airborne when fully laden with fuel and weapons.[52]

Although the Hind can carry troops, contrary to popular belief, it was not used in this role by the Soviets during the Afghan war, in order to save weight.[53] The crews preferred to fly their machines relatively light, because of the peculiar environmental conditions in Afghanistan and because of the need for the Mi-24s to be relatively agile. In some cases, machine guns were installed on either side of the aircraft to allow a technician to fire on Mujahideen rebels when the aircraft was exiting an attack, as the helicopter was vulnerable from the rear.[54] The Soviets did perform experiments to see if a machine gun, which could be reached by the technician via a small gangway, could be fitted in the rear of the fuselage.[55] However, the location of the weapon in an area of the fuselage awash with exhaust fumes was unbearable. The idea was eventually abandoned when during one demonstration an overweight Soviet General got stuck in the gangway.[56]

The SV troops were fond of the Hind and its ability to provide them with devastating aerial firepower. The Mujahideen, on the receiving end of the Mi-24, were less enamoured christening it Shaitan-Arba.[57] This was an apt nickname given that the weapons payload of the 'Krocodil' - as it was called by the Russians - could consist of ten 220 lb (100 kg) bombs for well-defended targets, while more robust installations could be hit using either four 551 lb (250 kg) or two 1,102 lb (500 kg) iron bomb.[58] Other weapons included 3.14 in (80 mm), 4.8 in (122 mm) and 9.8 in (250 mm) rockets. The helicopter was also outfitted with either a 0.5 in (12.7 mm) Gatling gun, two 0.3 in (7.62 mm) Gatling guns or a 1.18 in (30 mm) grenade launcher. Twin-barrelled 0.9 in (23 mm) cannons could also be mounted on hardpoints of the aircraft's wings.[59]

The Hind crews soon earned the same hard-bitten reputation as their mounts. AKS-47 Kalashnikov assault rifles with a collapsible stock to save space were the self-defence weapon of choice for the Hind crews. Food and water rations were often left back at base to make way for extra 0.3-in ammunition and grenades for self-protection. Starvation was considered a small concern compared to fending off vengeful dukhi in the event of being found after a crash landing. The life of the Hind flyers gave them a certain caché within the Soviet Army with their commanding officers nicknaming them the 'flying hooligans' .[60] One particularly nerve-racking mission for the Mi-24 crews would be the so-called 'Mandatory Matsurov'. Named after a hero of the Great Patriotic War who flung himself across a German machine gun to allow his comrades to advance, the helicopters would be tasked to escort jet transport aircraft as they arrived and departed from Kabul International Airport. The Hinds would dispense flares to confuse the heat-seeking MANPADS of the dukhi. If a missile was launched, then the helicopter was to fly into its path and absorb its impact, the Krocodil sacrificing itself for the jet.[61]

The Mandatory Matsurovs were no doubt appreciated by the VTA given that the transport fleet had to fly an 'air bridge' from airfields such as Termez, Kushka and Mary in Soviet Central Asia to Afghanistan, ferrying troops and materiél.[62] Fixed-wing transport aircraft would also supply isolated garrisons by airdrop such as those at Khost and Gardez in south east Afghanistan.[63]
One of the most important roles performed by the VTA was the evacuation to the Motherland of personnel who had been wounded in action. This was greatly appreciated by the troops. Dr. Galeotti notes that "most Soviet soldiers would point to casualty evacuation as being the most important element in the air operations. It had a major effect on morale".[64] Operations to rescue downed aircrews and wounded soldiers could last for days. Sometimes, the Soviets would even

negotiate with the Mujahideen for the return of their fallen comrades. The rebels were known to mutilate the bodies of Soviet soldiers.[65] They would also strongly resist any attempts to rescue captured Soviet PoWs. To increase their chances of survival, Soviet troops were given radio homing beacons and survival kits in case they were shot down, however the dukhi were known to use captured homing beacons to lure Soviet troops into an ambush.[66]

VTA assets were also used as airborne observation posts to watch Mujahideen movements , yet the use of such aircraft could be counterproductive, giving the rebels prior warning that an assault was imminent[67]. There were reports that the Airborne Warning and Control Systems (AWACS) variant of the Il-76 freighter, the A-50 (NATO codename 'Mainstay'), was used along the Afghan-Pakistan border to monitor the movements of the PAF.[68]

The VVS did not always restrict its role to attacking the Mujahideen in Afghanistan, it would occasionally perform lightening raids into Pakistani air space to attack Mujahideen supply caravan routes from Pakistan. To this end, between 1981 and 1984, the VVS, along with the DRAAF, were reported to be conducting up to 200 violations of Pakistani airspace per year. Invariably the PAF were in the skies to meet the intruders, and both the Afghan government and the Soviets may have lost up to ten aircraft to the PAF between 1986 and 1989.[70] A smaller number of sorties were conducted against Mujahideen bases on the Iranian side of the Afghan-Iranian border but it is unknown how many aircraft were lost to the Islamic Republic of Iran Air Force during such missions.[71]

Although the Mujahideen were able to use their SA-7 MANPADS against the VVS and DRAAF, at the beginning of the conflict they were equipped with a lacklustre collection of simple air defences. These consisted of various heavy machine-guns either captured from the Soviets or Afghan government forces or supplied from China. To make matters worse, the jets tended to fly too fast to be hit by machine-gun fire, while the Hinds tended to be fairly resistant to such weapons.[72] The Mujahideen began to receive the SA-7 from 1982. In October 1984, a Grail missile hit an An-22 transport with the loss of up to 200 Soviet troops and aircrew.[73] But this was no 'wonder-weapon' and the Grail had its foibles which lessened its effectiveness. According to the author James Adams, the missile could "be easily distracted by reflections hitting snow or heading for the sun instead of the aircraft's engine".[74] Despite this, the Grail did enjoy some success. It forced Soviet pilots to fly higher and more defensively than before to avoid the missile. Yet every weapon has a counter and the Soviets soon fitted their aircraft with countermeasures or flew very low: the missile would not work properly if fired downwards from a mountainside into a valley where an aircraft was hugging the ground.

While the VVS were learning to adapt to Afghanistan's peculiarities, their enemy was also developing innovative air defence tactics. One fairly standard practice was to set up an ambush near a major airbase in order to attack aircraft as they flew into and out of the airfield. Rebels would rapidly move, with their MANPADS, to and from airfield perimeters on motorcycles and trucks. Another favourite tactic saw the dukhi mounting a ground ambush. Once Soviet aircraft appeared to give their comrades close air support, a second, hidden Mujahideen team armed with a MANPADS would then attack the VVS aircraft.[75] A third technique was to hide several anti-aircraft positions over a wide area. When an aircraft approached, a single anti-aircraft gun would open fire. If the target was a helicopter it would usually move out of range of the gun, but unbeknownst to the pilot, into the range of another hidden weapon which would begin firing. The more weapons were hidden the more difficult it would be for the helicopter to escape hostile fire.[76]

From 1986 onwards the Mujahideen received increasing sophisticated air defence weaponry as the covert US-led arms supply increased. One of the first Western air defence weapons to arrive was the 0.8 in (20 mm) Oerlikon cannon, along with the British-made 'Blowpipe' MANPADS. Blowpipe was a qualitative improvement upon the SA-7 except its

In Afghanistan, air power could not win on its own; it was supporting a largely conscript army which did not want to be fighting a ruthless, determined enemy in this unforgiving land

sophistication resulted in the operator requiring a high level of training as the missile had to be remotely steered towards its target with a joystick. However, the missile could not be outfoxed by the flares which the Soviets had fitted to their aircraft for self-defence.[77]

While the Hind was the signature Soviet weapon of the conflict, then for the Americans it must be the FIM-92A 'Stinger' MANPADS which achieved iconic status. Stingers began to arrive in Afghanistan from September 1986 and were supplied to the Mujahideen by the United States. Guided by infrared, the missile was immune to basic flare countermeasures and evasive action. Jet pilots responded by flying higher, while their rotary counterparts flew closer to the ground, meanwhile some close support operations were increasingly undertaken by ground-based rockets and artillery. The Soviets also increased their efforts to equip their aircraft with electronic countermeasures to jam the missile. On the ground, extra effort was taken to increase the interception of Stingers being smuggled over the Afghan border from Pakistan. Any area where the Stingers were used could also be subjected to high-altitude retaliatory bombing.[78]
The role of the Stinger has reached almost legendary proportions with claims that the missiles exacted such a high toll on Soviet aircraft that it became almost impossible to provide the SV with close air support. Was the missile that good? It is impossible to say for certain. The difficult nature of Afghan terrain and the hazards of war hardly made it feasible to conduct a field study of the missile's effectiveness. We will probably never know exactly how many Soviet and DRAAF aircraft the missile was responsible for destroying. However, what the Stinger did do, according to Dr. Galeotti, was to confirm "to the Soviets that this was a counterproductive war".[79]

In terms of the complete Soviet losses for the war, exact figures are almost impossible to find. Prior to 1986, it was reported that the Soviets lost 600 aircraft of all types to all causes including hostile action and accidents. Total losses for the Soviets and for the DRA Air Force have been quoted as 2,675 aircraft, yet this contradicts widely with the sporadic air power orders of battle which are available. Other estimates are comparatively lower with 451 Soviet aircraft being lost throughout the entire conflict. After 1986, following the introduction of Blowpipe and Stinger, reports circulated that the Soviets may have lost an average of 450 aircraft per year to the weapons.[80] In reality we probably will never know the true figure given that it may not have been known by the Soviets and is therefore unknown to the Russians.

The Afghan war was a harsh teacher for Soviet air power. Lessons were learnt; one of the most important being that the Soviets were able to project power beyond their borders in a short space of time by using airlift, which may have rung some alarm bells in the countries bordering the Soviet Union and also in NATO headquarters.[81]

The AA helicopter force came of age earning its spurs in a baptism of fire comparable to that endured by their slick American counterparts in their UH-1 'Huey' utility helicopters in the US Army and Marine Corps during the Vietnam War. The Soviets learnt how to operate rotary aviation in hot, high and rugged environments. Furthermore, they successfully integrated the fire support available from the gunships with the ground forces thanks to the use of Forward Air Controllers. One official US Army document noted that: "(t)he most significant development in air support for Soviet ground operations in Afghanistan was their use of armed helicopters".[82]

The same cannot be said of offensive VVS fixed-wing aircraft. High altitude bombing from Tu-16 aircraft was often wildly inaccurate. While this may have been of little concern to the Soviet top brass, given that they were trying to bludgeon rural support for the Mujahideen into submission, it was woefully ineffective and civilian loyalty to the rebels could not simply be bombed into smithereens. Fighter-bombers were not used in an imaginative fashion. There is little evidence that such aircraft were organised into a 'cab rank' system - loitering near the area of operations to provide rapid on-call air support when required. Fighter-bombers and their heavier counterparts

were instead restricted to softening up areas prior to an assault on the dukhi, following the familiar Soviet practice of a highly choreographed offensive adhering to a textbook formula.

Training, where it was available, failed to both learn lessons from the war and pass them down to the pilots and crews earmarked for the Afghan theatre. Pilots who did show initiative were not rewarded for their efforts. Dr. Galeotti says that "groups of pilots which did show initiative were dispersed across the VVS infrastructure" upon their return from Afghanistan rather than being ensconced in the Staff Colleges and Academies to disseminate their wisdom. The military became prisoners of their own doctrine, Dr. Galeotti believed that they followed a "chess mentality, where the last thing you wanted was your pawns doing their own thinking".[83]

The break-up of the Soviet Union two years after the Soviet withdrawal from Afghanistan saw Russia inheriting much of the VVS infrastructure, manpower and materiél, however many of the pilots who flew combat missions over Afghanistan left the service, preventing the lessons learnt being passed to a new generation of pilots who are now fighting a similar enemy on the ground in the breakaway Russian province of Chechnya. The net effect, according to Dr. Galeotti, is that in some ways the present-day Russian Air Force "is in an even worse position" to fight these kind of guerrilla wars than it was in the Soviet days.[84] In his seminal study *Soviet Air Power: Tactics and Weapons used in Afghanistan* (Air University Review, 1985), Lieutenant Colonel Denny R Nelson argues that the VVS learned "the same hard lessons (the United States) learned in Vietnam. Fighting guerrilla forces with conventional forces is a long, arduous affair".[85]

It was not the VVS pilots and aircrews who were at fault. They did the best they could with inadequate training and textbook tactics. But that was not enough; the VVS adopted the ostrich position as far as the experiences of its pilots was concerned. In Afghanistan, air power could not win on its own; it was supporting a largely conscript army which did not want to be fighting a ruthless, determined enemy in this unforgiving land. At home, initial enthusiasm for the war within political circles and the general population began to ebb once the coffins on the 'Black Tulips'[86] began to trickle home, eventually becoming a deluge as the casualties returned en masse.

It is over 15 years since the last Soviet soldier returned home across the Friendship Bridge spanning the historic Amu Darya River which demarcated the border between the USSR and its restive neighbour. Today Afghanistan's skies once again reverberate with the thump of rotor blades and the screams of jet engines as the US-led coalition battles Al-Qaeda and Taliban remnants in the graveyard of the Soviet military machine. Instead, the West have ultra-advanced technology and highly professional troops, aircrews and innovative tactics which form and mould to the situation. They have also, we hope, learned their lessons from history.

Notes

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