Air Operations in Low Intensity Conflict

The Case of Chechnya

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RECENT CONFLICTS in Chechnya and Bosnia indicate that for the immediate future, low intensity conflicts (LIC) will predominate over high-intensity Operation Desert Storm–type scenarios. The sober reality is that these skirmishes, according to Gen Charles Boyd, US Air Force, Retired, "can not produce an enduring solution with military force—air or ground—only one that will last until it departs" and that "a reliance on air power alone—the strike option—in this type of terrain with these kinds of targets has never held any real promise of conflict resolution."[1]

Boyd's comments appear to hold for the conflict from December 1994 to August 1996

between Russian and Chechen rebel forces. Here, one of the combatants was a former superpower and the other a loose collection of rebels armed only with ground weapons. Against no credible air threat other than antiquated ZSU-23/4 air defense artillery, the Russian air force, while effective, was unable to make a major impact on the course and outcome of the fighting. As RAND analyst Ben Lambeth noted,

> Russia's war against Chechnya was emblematic of the security challenges the air force is most likely to face in the decade ahead. The war was regional yet remote from the center of Russia. It featured a technologically unsophisticated yet determined ethnic opponent. It presented no air-to-air threat and offered a permissive environment for attacking aircraft other than at low altitude. . . . Finally, it entailed little by way of an opposing air force or target array and accordingly did not place great demands on the air force for high-technology performance. All in all, despite the occasional effective use of precision-guided weapons against key targets, quantity prevailed against quality in air force operations in Chechnya.[2]

This short assessment examines two aspects of air operations in Chechnya.[3] First, it focuses on which tactics and operations worked (within the context of a Russian military undergoing severe financial and equipment-related hardships that limit training for such operations). Second, it examines which aircraft fared better in the conflict—rotary or fixed-wing.

The Air Threat

Chechnya, a republic located in the southwest corner of Russia between the Caspian and Black Seas (the Caucasus region of the country), actually started its break from Russia on 21 August 1991, two days after the August coup in the former Soviet Union, and declared its independence from Russia on 6 September 1991. Dzhokhar Dudayev, a former general in the Soviet air force, was invited to the post of president by the Amalgamated Congress of the Chechen People from Estonia (where some Chechens were in exile). Later, he was popularly elected and advocated freeing Chechnya from Russia. Many Russians in the current regime considered the elections illegal and therefore characterized Dudayev's presidency as illegitimate.[4] Russia's Fifth Congress of People's Deputies not only decreed the elections illegal but also declared Dudayev's regime unconstitutional.[5] By the latter half of 1993, a Dudayev opposition developed in Chechnya that evolved into a small-scale guerrilla war. By the spring of 1994, the Dudayev opposition called upon Russia to support it and help establish constitutional order. Russia agreed. In November 1994, the Dudayev opposition force, supported by the Russian security services, led an attack to unseat Dudayev.[6] The operation failed dismally, and Russia decided to intervene militarily.

At the start of the conflict between Chechnya and Russia, Chechen president Dudayev had nearly 265 aircraft. Nearly half of the force had been left by the Russian army when it evacuated the Chechen Republic in 1992. The abandoned aircraft included 80 L-29 Delfin combat trainers, 39 L-39 Albatross trainers, three MiG-17 fighters, two MiG-15UTIs, as well as six An-2 and two Mi-8 helicopters.[7] Only about 40 percent of the force, however, was combat ready. According to Russian sources, Su-24mr reconnaissance aircraft observed the active preparation of Dudayev's aircraft for imminent combat in November 1994.[8] This caused Russia to preempt the Chechen preparations with attacks on airfields on the morning of 1 December 1994 with Su-25 aircraft (some say Su-27s also participated).

For two reasons, Chechen aircraft allegedly presented a threat to both the impending ground-troop operations and the civilian population of the Russian Federation: (1) their potential ability to conduct kamikaze-style attacks against Russian nuclear or power plants (by filling up trainer aircraft with explosives and flying them into the structures; the presence of an ejection seat in these aircraft could allow Chechen pilots to turn them into de facto cruise missiles); and (2) their

ability to drop bombs on advancing Russian forces and disrupt their movement. To counter this threat, Russia attempted to destroy Chechen air assets on the runways and, as the war spread beyond Grozny, to use the air force and army aviation in close air support (CAS) and interdiction missions, including the bombing of smaller cities. The air force also bombed Grozny in support of combat forces there, visually turning the city into another Stalingrad.

The Russians initially gathered their forces at airfields in the North Caucasus Military District, with most of the aircraft provided by the Fourth Air Army. They employed aircraft from frontal (high-performance), army, and internal-forces aviation. Each had its own air corridor, figuratively speaking, and its own missions.[9] Aircraft included 140 combat planes (Su-25, Su-22M, and Su-24), 55 helicopters (Mi-24, Mi-8, and Mi-6), and military transport aircraft (An-12, An-22, An-124, and Il-76). The Ministry of Internal Affairs (MVD) contributed 12 Mi-8MT helicopters.

Chechen air defense weapons included ZU-23-2 mobile antiaircraft launchers mounted on KamAZ chassis and DShK machine guns mounted on Cherokee Jeeps and Toyota off-road vehicles. They also reportedly had Shilka ZSU-23/4 antiaircraft guns and Strela-3, Igla-1, and Stinger surface-to-air missile (SAM) systems. The Chechens also used RPG-7 conventional, portable antitank grenade launchers against low-flying aircraft and helicopters.

To prevent Dudayev from constructing an air bridge with a country such as Turkey, Russia's air force used A-50 airborne warning and control system (AWACS) aircraft and from two to six MiG-31 and Su-27 aircraft to conduct combat patrols and serve as an air cap. From all appearances, they were unchallenged and successful.

The Air Operation

The performance of Russia's rotary and fixed-wing aircraft in Chechnya fell below expectations against this lightly armed force. Problems contributing to the military's performance include rough terrain, harsh weather conditions, lack of training time, aged equipment, and poor stocks of supplies, all of which greatly limited the effectiveness of air operations. Russian pilots tried to offset these limitations with initiative and adjustments after the initial stages of the fighting. New methods were found to acquire targets and to find the right weapon mix. Adjustments were also made in the tactics and techniques of LIC flying against mobile targets that hid among the civilian population. This did little to limit civilian casualties, however, in that ground offensives occurred without preliminary processing of the targets of attack from the air.[10] As a result, the civilian-to-"rebel" death ratio was nearly eight to one, according to former Security Council chief Alexander Lebed.

One Russian analyst observed that the Russian air force apparently learned very little from Desert Storm air operations. The focus on Dudayev's air force deflected attention from the destruction of Chechnya's administrative and military command and control (C^2) facilities, communications hubs, and key elements of the infrastructure. Most people believed this to be an intelligence and planning failure of the Military District headquarters.[11]

Another observation was that this LIC environment offered the same opportunities for the use of information-warfare capabilities as did any large-scale conflict. For example, one recommendation early in the conflict called for dramatically increasing the role of electronic warfare (EW) units and creating a total information vacuum around Chechnya. Another called for the use of portable jammers near guerrilla bases and the suppression of satellite communication channels. Commanders were urged to train, equip, and air-drop raiding and reconnaissance parties into the rear of the Chechens to disrupt lines of communications; further, they were to utilize aircraft to the maximum extent possible to conduct strikes against guerrillas utilizing self-guided (fire and forget) or precision-

guided weapons.[12] The Chechens, however, conducted the most powerful information operations through the mass media, mobilizing local opinion while demoralizing the Russian population. As the chief of the Russian Federal Security Service noted, "Yes, the Russian authorities lost the information war. . . . How splendidly Chechnya information Minister Movladi Udugov is operating, how skillful and adroit he is at feeding the press with all kinds of lies, distortions, and misrepresentations of the facts!"[13]

In fact, the purported use of information-warfare techniques eventually allowed the Russian air force to eliminate President Dudayev. In April, while talking on a cellular phone, he was reportedly targeted by a Russian A-50 aircraft (the Russian AWACS), which is capable of searching two hundred targets at one time. The A-50 relayed the information to an Su-25 ground-attack aircraft that had laser and TV-guided bombs under its wings. A photo taken from the warhead as it approached Dudayev was printed in the newspaper *Argumenti I Fakti*, a publication thought to have close ties with Russian intelligence.[14]

Rotary Aircraft

Russia assembled close to 55 helicopters at the start of the conflict. By late March 1995, the number had risen to 105, including 52 Mi-24s. One flight of Mi-9 C^2 ships was also reportedly present.[15] Five helicopters (two Mi-8s and three Mi-24s) were lost to hostile fire in the first three months of the conflict.[16]

Colonel-General of Aviation Vitaliy Pavlov, the commander of ground-troop aviation (an element separate from the air force), had flown missions in Afghanistan and was awarded the Hero of the Soviet Union medal for his bravery. He also flew missions in Chechnya. Pavlov noted that the helicopter aviation grouping was primarily used to transport troops and evacuate the sick and wounded at the start of the conflict. They also supported the movement of columns and acted as communications relays, but only rarely served as attack helicopters—and never bombed targets in Grozny. Initially, only the most experienced pilots participated.[17]

Chechnya's terrain, mountainous to the south and on the edges, is mixed with plains throughout the center of the country. Thus, pilots could utilize both target-approach maneuvers, as in Afghanistan (for the mountains) and practice-range maneuvers (for the plains). Pilot tactics included flying at extremely low altitudes and at very high speeds to the targets, thereby limiting Chechen visual detection and response time; approaching targets from different directions; making hard maneuvers before the approach to the target; departing at low altitudes; providing mutual covering fire; and using EW equipment (as well as decoy flares and other devices).[18] For Russian pilots, there were no simulated practice runs, such as those conducted by the coalition forces in Bosnia (using PowerScene imagery software).

Helicopters integrated strikes in coordination with frontal aviation. On occasion, Mi-24 helicopters and Su-25 aircraft conducted operations against guerrilla fortifications. Army helicopters also operated alone in a mode known as "target-of-opportunity roving" and against marked targets or on requests from ground troops.[19] The most intense use of helicopter operations occurred in May 1995, when the antiquated Mi-24 carried out the majority of the fire-support missions. By the end of the month, five to six combat sorties were being flown each day. In addition to supporting advancing units in the central and southern parts of Chechnya, helicopters assisted in searching out Dudayev's sabotage/terrorist detachments that had penetrated the Russian troops' rear areas.

Coordination with ground troops was often difficult and aggravated by the absence of timely and accurate reconnaissance information—the key to the success of the helicopter's mission. Reconnaissance troops, inserted and extracted by helicopters in most instances,[20] themselves noted that they were introduced into situations with too much haste and without coordination with infantry subunits or with aviation assets. Reconnaissance missions in Chechnya included the detection of

enemy-fire positions, the covert study of the defensive systems of villages where Chechen rebels were concentrated, and the destruction of individual groups of fighters. Missions were difficult to perform due to a lack of portable radio sets, night-vision devices, silencers for weapons, and binoculars—key items for reconnaissance personnel.

Finally, several misunderstandings occurred between ground-force commanders and helicopter personnel simply because commanders tried to keep their own missions secret, issuing only specific instructions to units working together. As a result, one unit often did not know what the other was doing in an operation.[21]

At the start of the conflict, Russian pilots had only a poor understanding of Chechen tactics, which included controlling mobile air defense weapons via radio and changing these systems' positions constantly. The Chechens also tried to integrate and synchronize the employment of these weapons, attempting to engage targets with the full set of weapons in the inventory: small arms, heavy-caliber machine guns, cannons, and grenade launchers. The Chechens made wide use of ambushes, trying to pin down a helicopter once it entered a zone of effective fire by massing fire from several points. Dudayev's personnel also made good use of communications and intelligence from covert agents. As one pilot noted, "One had the feeling that they knew a great deal. And how many times did it happen where the appearance of helicopters in a particular area was no surprise to the enemy?"[22] Dudayev clearly had his forces well rehearsed in Russian air tactics and capabilities based on his experience in the Russian air force.

Russian pilots, on the other hand, had no reliable data on the disposition of Chechen weapons, forcing crews to operate from maximum possible ranges when employing their armament. Some helicopter crews employed a new tactic, that of launching their S-24 unguided rockets with a pitch-up maneuver, increasing the range of the weapon by six to seven kilometers. This allowed pilots to fire without entering the kill zone of the air defense weapons of Dudayev's forces.[23] Although the tactic reduced accuracy, it probably was a key factor in increasing the number of civilian casualties.

One of the primary Chechen targets for intelligence information was forward air controllers (FAC), always the objects of a special hunt, according to Russian specialists. The Chechens were able to "pinpoint the place where the FAC was going on the air. Only later did motorized riflemen seize the equipment with which Dudayev's personnel were direction-finding the FAC's radio."[24] Aviation commander Pavlov noted that FACs were poorly trained for their jobs at the unit level, contributing to such disastrous results.[25]

One analyst, writing in the Russian air journal *Krylya Rodiny,* noted that helicopter crews had it more difficult than anyone, flying very low in terrible weather and often returning to home base with bullet holes in the cockpit windshield. Statistics indicate that every 10th helicopter participating in the conflict was lost and every fourth was damaged. By the start of August 1995, the Russians had conducted more than 16,547 flights over Chechnya. Nearly 36 percent of the sorties were fire missions, 44 percent were transport-assault (with over 90 percent of the wounded evacuated by army aviation), 8 percent were reconnaissance flights, and the other 12 percent were for special missions such as search and rescue, propaganda, or radio relay.[26] This information indicates how the mission posture for helicopters changed as the war continued and the Russians adapted to the situation.

After nearly a year of fighting, Russian pilots made some assessments of their equipment, judging the Mi-24, Mi-8, and Mi-6 helicopters as technically obsolete. These aircraft had limited deployment capabilities in terms of time of day and weather conditions. Newer helicopters, such as the Ka-50 and Mi-28, were not used. The Mi-8MTV2, Mi-8MTV3, and Mi-26 turned in good performances. At the heart of Russia's helicopter modernization effort over the next few years will be the Ka-50 (NATO "Hokum," Russian "Black Shark"), whose signature characteristics are

extremely hard to detect. It is designed to provide accurate data on targets, can move covertly into the attack area, and can move into an enemy's visibility zone only for the flight time of onboard antitank guided missiles (ATGM), which have an 8 km range due to an automatic laser-beam guidance system. The Ka-50 can receive target designations over closed-circuit communications channels and can exchange them with helicopters in proximity or with a ground facility. Last year, the Russian aviation branch had enough money to buy only two—none were used in Chechnya. If Russia is to remain modern and fight these kinds of wars, it needs to acquire 60 Ka-50s annually, according to one analyst.[27]

Chechnya held many other lessons for rotary-wing pilots. These included limiting damage to residences and civilian installations; overcoming the poor combat flying proficiency of many pilots (due to a lack of flying time, now at one-tenth that of most Western nations); adjusting to an inability to conduct reconnaissance freely (since any village might bristle with fire at any moment); overcoming the reluctance of higher headquarters to supply unmanned assets, such as the Shmel remotely piloted vehicle; and, most important, making corrections to their tactics. One retired Russian colonel blamed pilot performance on the tactics of retaliatory strikes against an enemy who used the principle of attack-withdrawal-attack. This took the initiative away from Russian pilots and led to belated actions and decreased combat capabilities. On the other hand, the colonel added, using precision weapons for destroying small targets logically fits such tactics.[28]

In February 1996, General Pavlov noted at a conference that Russia had fallen 15 years behind the leading countries in the manufacture of helicopters and that "within the next few years army aviation could cease to exist as a branch of the Russian Armed Forces."[29] By the summer of 1997, he talked more optimistically about starting production of the Ka-50, Ka-52 Alligator (based on the Ka-50 and capable of reconning targets and distributing information among helicopters in a battle group), the Mi-28N night version, and a modernized Mi-24; he also spoke of continued research on an unmanned reconnaissance aircraft that will work in tandem with other helicopters.[30]

Perhaps the reality is that army aviation has a limited role in LIC as a combat element, since ground-attack aircraft like Su-25s offer more protection (both for the cockpit and for preventing the release of information that might give away their position) and versatility. For example, with mobile weapon platforms, a combatant can sit and listen for the sound of a helicopter blade and ready his weapon for employment. As the chopper passes overhead, it is vulnerable to an RPG or small-arms attack as well as 20 mm rounds. An Su-25 does not offer enemies this pleasure. They hear only the sound of the jet engine as it passes over at two hundred feet and do not have sufficient time to react; further, the 17 mm of titanium around the cockpit deflect even 20 mm rounds. Unmanned reconnaissance aircraft may represent a way of lengthening the service of army aviation in the absence of means to hush rotor noise.

Fixed-Wing Aircraft

Without a doubt, the workhorse of the Russian aviation effort in Chechnya was the Su-25 (NATO "Frogfoot," Russian "Rook"). One analyst succinctly summarized the value of this aircraft:

> The experience of air combat operations in the Chechen conflict demonstrated the increased role of close support to ground troops. The participation of attack helicopters in it was limited, and front fighters and bombers could not operate effectively at low altitudes and so were not used due to their high airspeed and the shortage of time to search for targets, aim and employ weapons. . . . This is why the Su-25C—a small, subsonic, reliable and maneuverable aircraft of simple design with a good view from the pilot cockpit—basically was used to support ground troops and for ground-attack operations. . . . Moreover, it has powerful armament, rather reliable navigation and targeting avionics, and armor protection

and can operate both from airstrips with an artificial surface as well as from dirt airstrips.[31]

Missions for the aircraft in Chechnya included CAS of troops against small targets in the mountains or on the plains. The Su-25 can attack in mountain gorges due to its special aerodynamic configuration in combination with a high thrust-to-weight ratio. Moreover, it can stay over a battle field for a lengthy time, making several passes at targets in one sortie. This factor also led the designer to concoct a special titanium armor cockpit to defend the pilot from 20 mm and 23 mm projectiles. Such aircraft proved their resilience in Afghanistan, where attack planes suffered one loss for 80–90 damaged versus 15–20 losses for other types of aircraft.[32] However, some Russians put the Su-25 in the same class as the USAF's A-10 and look instead to the Su-39 as the fighter of the future for LIC. They note that experience from LIC and peace operations indicates that attack aircraft should be used

- in direct fire support,
- for selective and precise destruction of enemy pockets of resistance,
- as emergency assistance and fire support for friendly subunits in ambushes or encirclements,
- for air reconnaissance in real time,
- to combat enemy combat helicopters, and
- to block or destroy mobile enemy combat groups.[33]

The Su-39 can fulfill these and other missions using advanced day/night sight and navigation systems, advanced electronic countermeasures, precision weapons, and advanced maneuverability and reliability.

The Russians utilized other aircraft during the conflict, as mentioned above. These included aircraft from long-range aviation, frontal aviation, and transport aviation: the Su-22M, Su-24, and Su-27 (because of the lack of an air threat, one rarely saw the MiG-29), as well as the An-12, An-22, An-124, and Il-76. MiG-31 Foxhounds and Su-27 Flankers performed combat air patrol functions, while Tu-22M3 Backfires reportedly dropped night flares and propaganda leaflets.[34] The Su-24 seems to have been the fighter-bomber used most often. By December 1995, Russian pilots had flown more than nine thousand sorties, with more than fifty-three hundred devoted to the conduct of bombing/ground-attack strikes and 672 to aerial reconnaissance (nearly 8 percent). Principal weapons included S-5, S-8, and S-24B rockets and FAB-250 and FAB-5000 high-explosive bombs. When weather permitted, the Russians employed Kh-25ML guided missiles, KAB-500L and KAB-500KR smart bombs, and KAB-1500L bombs.[35]

Like aviation commander Pavlov, the commander in chief of the air force, Col Gen Petr Deinekin, served as the air force's primary spokesman. He noted that the general thrust of modern-day equipment and armament developments is to cut back to one or two aircraft types in each air component and to rely heavily on precision weaponry. Deinekin assessed the performance of the air force in August 1995 by commenting, "I can attest to one thing—Russian pilots, despite objective difficulties, coped fully with their missions, demonstrating the high effectiveness and reliability of Russian weapons and aviation equipment and their own high skills."[36]

Not all assessments were so praiseworthy, however. What troubled most pilots was the financial situation of the air force and its direct impact on combat readiness. By some accounts, the lack of funds reduced combat strength by nearly 40 percent. Tactical proficiency constituted another area of concern. One pilot noted that tactical air training had been overcautious for too long, indicating that training went by the credo "take no risk, do not do anything to complicate matters, and avoid innovations." This belief impeded the support of ground troops and will limit the ability of pilots to survive in dogfights with other aircraft. To rid itself of this type of thinking, the air force needs new and improved practice ranges as well as exercises in which "enemy" aircrews are imported and their tactics utilized.[37] Finally, many pilots noted the need for a modernization effort to develop some twenty-first-century aircraft

and put them into the sky in the next few years.

One of the newest fighter-bombers in the Russian inventory is the Su-34, whose characteristics indicate that it will be able to fight in LIC environments. Intended for combat at low and very low altitudes, this aircraft can attack ground targets at any time of day, regardless of weather, and can use its navigational and special equipment to track the aerial situation as well as discern point targets on the ground. A 17 mm skin of titanium on the cockpit along with a titanium covering on the plane's engines and fuel tanks protects the Su-34 from ground fire. The plane also has some stealth characteristics; a secondary control that allows the navigator to land the plane if the pilot is killed or injured; a standard range of 4,000 km; and a rest area and toilet behind the cockpit.[38]

Conclusions

"The air force had a golden opportunity in Chechnya to see that air power cannot invariably work its reputed magic in circumstances where the target set is elusive, problems predominate in target location and identification, and there is an ever-present danger of unintended harm to noncombatants."[39] The war in Chechnya focused Russian attention on two areas: (1) the effectiveness and future potential of air power in a LIC environment and (2) the many areas in which Russian aviation needed improvement—from training to equipment and tactics.

Russia's air force and ground aviation now are two of the most experienced forces in the world for this type of conflict, as were the US Air Force and ground aviation after Vietnam. Russian pilots have learned many techniques and tactics that deserve close study. Some of the lessons underscored by the fighting include the following:

- Air superiority is no guarantee of victory, even against a foe with no air force!
- Guerrillas can use high-tech information assets (cellular phones, etc.) as easily as modern armies nowadays, allowing them to quickly contact others, mobilize assets, and access information. Plans for suppressing these capabilities need to be made in advance.
- The deterioration of the Russian air force due to a lack of money, training, and supplies greatly affected the course and outcome of the fighting and may have contributed to an increase in the number of civilian casualties.
- Civilian populations will be part of any LIC environment and make an excellent area of operations for any rebel force.
- Ground-attack aircraft, according to the Russian experience, appear to have more utility than helicopters when striking targets in LIC environments.
- Flying in LIC environments will mean finding and defending against mobile targets spread throughout the country and among the civilian population.
- Realistic training is essential to overcome LIC threats. Training hours in the air must be stressful and challenging, and must be supplemented by hours on simulators just before flying a mission.
- Timely and accurate reconnaissance information is vital for pilots.
- Guerrilla tactics must be studied closely.
- Helicopter and frontal aviation strikes must be integrated, and ground commanders must learn to work closely with and put more confidence in pilots.
- FAC training must be integrated into subunit training plans at the earliest possible time. FACs must remain sensitive to guerrilla attempts to capture, mortar, or intercept their positions.

In short, the fighting in Chechnya created another historical chapter in the annals of warfare that will merit study for decades. It represents one of the first examples of a protracted conflict involving one of the former superpowers and is worthy of close attention and consideration. □

Notes

1. Charles G. Boyd, "Making Peace with the Guilty," *Foreign Affairs*, September–October 1995, 37–38.

2. Benjamin S. Lambeth, "Russia's Air War in Chechnya," RAND draft, December 1995, 35. Lambeth's account provides an excellent summary of air operations up to the time he wrote his draft.

3. This view is admittedly Russian. Unfortunately, there simply is not enough information presently available to write on the Chechen view of the problem.

4. "Chechnya," *Moscow News*, no.50 (16–22 December 1994): 1–2.

5. Valeriy Vyzhutovich, "Chechnya Will Spurn Kremlin's Representatives," *Izvestiya*, 20 December 1994, 2, in Foreign Broadcast Information Service (FBIS)-SOV-94-244, 19.

6. "Chechnya," 2.

7. For the L-39 and the L-29, performance data is as follows:
   - range of flight: 850 km (with auxiliary tanks: 1,115 km)
   - minimum flight altitude: 50 m
   - maximum flight altitude: 11,599 m
   - minimum flight speed: 200 km/hr
   - maximum flight speed: 810 km/hr

Both aircraft have two aerial bombs of 100 kg each or two OB-16 clusters with 32 NURS (unguided missiles) in each. Vladimir Georgiyevich Mukhin, "Military Lessons of the Chechen Campaign: Part One," *Nezavisimoye Voyennoye Obozreniye*, no. 18 (22) (26 September 1996): 2, in FBIS-UMA-96-216-S. For information on the other Russian equipment (aircraft and air defense weapons), see John W. R. Taylor, "Gallery of Russian Aerospace Weapons," *Air Force*, March 1996, 66–80.

8. Vyacheslav Kondratyev, "The Awesome Sky over Chechnya," *Krylya Rodiny*, no. 1 (January 1996): 1–5, in FBIS-UMA-96-055-S, 20 March 1996; on-line, Internet, 21 November 1996, available from http://fbis.fedworld.gov/cgi-bin/retrieve. The *Krylya Rodiny* reports are some of the best writings on air operations during the conflict. After the intervention started, Russian authorities uncovered a purported Chechen plan known as "Lasso" that included the destruction of several targets throughout Russia by the Chechen air force. For more information on Russian helicopter support of the Dudayev opposition from September to November 1994, see Vladimir Georgiyevich Mukhin, "Military Lessons of the Chechen Campaign: Part Two," *Nezavisimoye Voyennoye Obozreniye*, no. 19 (23) (10 October 1996): 2, in FBIS-UMA-96-216-S.

9. Sergey Babichev and Vitaliy Strugovets, "Air Carriers," *Krasnaya Zvezda*, 25 October 1995, 2, in FBIS-UMA-95-226-S, 24 November 1995, 36–37.

10. Kondratyev, no. 2, 1–4.

11. Igor Korotchenko, "The Operation in Chechnya: Success or Defeat of the Russian Army?" *Nezavisimoye Voyennoye Obozreniye*, no. 1 (February 1995): 1–2, in Joint Publications Research Service (JPRS)-UMA-95-008, 28 February 1995, 1–4.

12. Ibid.

13. Valeriy Vyzhutovich, interview with Sergei Stepashin, in FBIS-SOV-95-043, 6 March 1995, 36.

14. E. Kando, "The Secret of Dudayev's Assassination," *Argumenti I Fakti*, no. 18 (May 1996): 7.

15. Adam Geibel, "The Cruelest War," *Armed Forces Journal*, November 1996, 30.

16. Kondratyev, no. 1.

17. Vitaliy Pavlov, "Pertinent Interview: I Admire My Lads' Courage," *Armeyskiy Sbornik*, no. 4 (April 1995): 4–5, in FBIS-UMA-95-139-S, 20 July 1995, 1–2.

18. Anatoliy Surtsukov and Sergey Prokopenko, "Lessons of Combat Operations: A Shooting Sky," *Krasnaya Zvezda*, 18 July 1995, 2, in FBIS-UMA-95-153-S, 9 August 1995, 3–5.

19. Kondratyev, no. 1.

20. Oleg Blotskiy, "Chechnya: A War of Professionals," *Nezavisimoye Voyennoye Obozreniye Supplement*, no. 16 (22 August 1996): 2.

21. Yet another potential problem for army aviation was a planned curtailment in the radio technical-support force. The pilots had protested that a reduction in radio technical-support subunits would lead to a sharp drop in the combat potential of army aviation.

22. Kondratyev, no. 1, p. 4.

23. Ibid.

24. Ibid.

25. Pavlov, 1.

26. Kondratyev, no. 2.

27. Sergey Prokopenko, "Russia Has Built Strike Helicopters, Let Our Army Have Them," *Krasnaya Zvezda*, 8 February 1996, 1, in FBIS-UMA-96-040-S, 28 February 1996, 63.

28. Aleksandr Borisov, "This Is Not Afghanistan, the Climate Here Is Different. . . ." *Armeyskiy Sbornik*, no. 8 (20 July 1995): 38–39, in FBIS-UMA-95-244-S, 20 December 1995, 19–20.

29. Moscow 2x2 TV, 4 February 1996, in FBIS-UMA-96-031-S, 14 February 1996, 4–5.

30. Vitaliy Yegorovich Pavlov, interview, "Army Aviation on the Verge of Reorganization," *Krasnaya Zvezda*, 16 July 1997, 1–2.

31. Viktor Bezborodov, "The Su-25: A Formidable Aircraft," *Armeyskiy Sbornik*, no. 8 (20 July 1995): 34–35, in FBIS-UMA-95-244-S, 17–18.

32. Ibid.

33. Vladimir Bobak, "Su-39 in Local Conflicts," *Military Parade*, September–October 1996; on-line, Internet, 7 January 1997, available from http://www.milparade.ru/18/62-65.htm.

34. Lambeth, 9, 25.

35. Kondratyev, no. 2.

36. Pavel Anokhin, interview with Petr Deinekin, "Flying in Your Dreams and in Reality," *Rossiyskiye Vesti*, 17 August 1995, 3, in FBIS-UMA-95-163-S, 23 August 1995, 24–27.

37. Valeriy Veshnikov, "If Flying, Then How to Fly, If Shooting, Then How to Shoot. . . ." *Armeyskiy Sbornik*, no. 7 (22 July 1995): 26–27, in FBIS-UMA-95-188-S, 28 September 1995, 13–14.

38. Igor Alekseyev, "The Su-34: Without Analogues," *Technika-molodezhi*, no. 5, iii, in FBIS-UMA-95-153-S, 6–7.

39. Lambeth, 33.