

PATHFINDER



AIR POWER DEVELOPMENT CENTRE BULLETIN

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METEORS VERSUS MiGs

During the Korean War, the RAAF's No 77 Squadron was the sole unit within the United Nations Command which operated the British-built Gloster Meteor Mk 8 jet fighter. In April 1951 the squadron withdrew its P-51 Mustangs from operations to re-equip with the Meteor, returning to Korean skies in July, and remaining until the armistice was signed on 27 July 1953. During this period, the Meteor flew in the air-to-air, bomber escort, combat air patrol and ground attack roles. Its performance in the air-to-air role, in which it was pitted against the Russian-built MiG-15 flown by the Chinese Air Force, is a controversial subject that bears critical assessment.



Meteor Mk 8

Before the Australians flew their first combat mission in the new aircraft, comparative (but not extensive) trials had been undertaken at Iwakuni, the RAAF base in Japan, between the Meteor and the USAF F-86 Sabre. These trials indicated that, under certain circumstances, the Meteor was equivalent in performance to the American fighter. As the F-86 was proving to be effective in combat with the MiG-15, when the first Meteor fighter sweep departed from Kimpo on 29 July 1951, the pilots had high expectations of how their aircraft would perform. Expectations and reality did not coincide.

In the first three combats, between 29 August and 26 September, a single MiG-15 was claimed as damaged, for the loss of one Meteor and three others damaged. This was taken to show that the RAAF aircraft was outclassed in the fighter combat role. A further large-scale clash on 1 December 1951 appeared to reinforce this belief: the success ratio was 3:2 in favour of the MiG-15. The next day, after discussions between the CO of 77 Squadron and the Director of Operations, USAF Fifth Air Force,

the aircraft was withdrawn from fighter sweeps into 'MiG Alley' and reassigned to bomber escort and combat air patrol over Allied fighter-bombers.

This decision has been the basis of considerable contention ever since, with even some of the pilots concerned later asserting that the change was made with undue haste and that, if the combat pilots had been given the standard of fighter combat instruction that was later applied, the Meteor could have been more successful in the air-to-air role.

In the context of the fighter pilot training scenario of the early 1950s, those making such criticisms appear to have a point. In the years immediately following World War II the RAAF had paid little attention to air combat training, and it was not until March 1952 that No 2 Operational Conversion Unit was raised to address training shortfalls that were recognised in Korea.

Pilots posted to 77 Squadron flew about 45 hours in Mustangs and single-seat Vampires before arriving in Japan and converting to the Meteor at Iwakuni. There they were expected to complete 20 training procedures: six sorties to gain familiarity with the aircraft, three ground control radar recoveries, three instrument flying sorties, and the remainder aimed at formation flying. Only two exercises were related to air-to-air combat, and one pilot who arrived in April 1952 recalls that none of these involved firing the Meteors' guns. The unit did not have any fighter combat instructors in those days to impart tactics to newcomers, and it does not appear that pilots who began the initial conversion to Meteors in April 1951 received any better preparation.

Also appearing to support the contention that the RAAF might have been too quick to bail out of the air-to-air role with the Meteor are the final shoot-down statistics. These show that in total 77 Squadron only lost four Meteors to the MiG-15, all of them on or before the aircraft was pulled from unrestricted air combat on 1 December 1951, against five MiGs confirmed as destroyed—all after that same date.

One 77 Squadron pilot who actually accounted for a MiG-15 later had the opportunity to practice in the Meteor against Sabres while on exchange with the

RAF in Europe. Based on his observations, he remains convinced to this day that at lower altitudes (up to 6000 metres) an aggressively flown Meteor could out-turn and out-accelerate the Sabre. Another 77 Squadron pilot had earlier expressed the view that the Meteor's manoeuvrability meant that no RAAF pilot should have been shot down by a MiG-15 below 9000 metres unless he made a mistake.



MiG-15

Lack of air combat training and tactics quite probably did limit the ability of 77 Squadron pilots to initially achieve success against the MiG-15. But the contention that extra time spent in the air-to-air role would have enhanced the ability of the pilots still seems questionable. The operational lessons and a critical assessment of the performance of the Meteor and MiG-15 make it obvious that an unacceptably high attrition rate in aircraft and pilots could have been expected if air-to-air operations had continued.

Compared to the Meteor, the MiG-15 was far superior in performance. The initial climb rate of the Russian aircraft was 2900 feet per minute faster than the Meteor, and it was 73 miles per hour faster in level flight; the comparative power to weight ratio (based on empty weight) was 1.76:1 for the MiG-15 and 1.45:1 for the Meteor. These latter figures support the assumption that the MiG-15 would have faster acceleration than the Meteor. Another performance figure that clearly identifies the difference between the two fighters was their critical Mach number. The Meteor was rated at 0.87, after which it developed compressibility problems, a phenomenon that was not so evident in the MiG-15.

The basic difference between the two aircraft was that the Mark 8 Meteor was the ultimate single-seat fighter

development of an obsolescent design incorporating the technology of the early 1940s, while the MiG-15 belonged to an entirely new generation of design considerations. The Meteor's twin-engine layout recognised the low power of the pioneer turbojet engines with which it was fitted, and its wings were straight and thick, whereas the MiG-15 (and the Sabre) incorporated later German thin swept wing technology.

The MiG-15 formations tactically controlled air combat over Korea. They initiated combat on their terms, and the performance of the MiG-15 enabled them to break contact in a like manner. No matter how well trained the Australian pilots may have been, the performance of the Meteor always placed it at tactical disadvantage in the air-to-air role. Analysis of the individual actions when MiGs were shot down by Meteors strongly suggest that these were simply situations where Chinese pilots made the mistakes.

The lesson of Korea was therefore twofold—pilots must be trained to the highest possible standard to give them the personal 'edge', but the aircraft they fly must be at least comparable in performance to potential adversaries.

It is easier and more effective to destroy the enemy's aerial power by destroying his nests and eggs on the ground than to hunt his flying birds in the air.

- Major General Giulio Douhet, 1921

'Pathfinder' is a fortnightly bulletin from the Air Power Development Centre. Its title is a tribute to the Pathfinder Force which operated within RAF Bomber Command from August 1942. The original Pathfinders were an elite navigational group with the role of preceding each raid and accurately lighting up the target area with incendiary fires to permit visual bombing by the main force. The first commander was Group Captain (later Air Vice-Marshal) D.C.T. Bennett, a Queenslander who trained with the RAAF in 1930-31 before transferring to the RAF, and many other Australians also flew with the force.

The emblem we have adopted is 'Fiery Mo', the unofficial insignia carried on No. 6 Squadron's Hudson aircraft in New Guinea during 1943.



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