

BOOK REVIEW

Red Dragon Flanker: China's Prolific 'Flanker' Family, by Andreas Rupprecht. Houston: Harpia Publishing, 2022. 253 pp.

This is an in-depth overview of one of the most capable fourth-generation fighters. The Shenyang Aircraft Corporation's twin-engine J-11 fighter jet (NATO name Flanker) was developed by the People's Republic of China. The J-11's airframe is derived from the Soviet-designed Sukhoi Su-27 and was selected by the People's Liberation Army Air Force's (PLAAF) as an early twenty-first-century air superiority fighter. Since the early 1990s, the J-11 has served as the foundation of the PLAAF's national defense strategy. Its significance has only increased with the advancements in twenty-first-century technology, surpassing the expectations of even its original Russian designers.

The Sukhoi Su-27, which serves as the foundation for the J-11 Flanker, is regarded as one of the most capable fourth-generation fighters, yet it remains enigmatic. While it may not have achieved the same level of success as its American counterpart, the F-15 Eagle, the Su-27 is often revered for its elegance, spectacular performance, and enigmatic nature. This reputation stems from the Flanker's sleek aerodynamic design, complemented by the well-known Russian attributes of "brute power" and rugged construction. Originally developed without intentions for export, unlike its lighter counterpart, the MiG-29 (NATO name Fulcrum), the Flanker has become one of the most sought-after fighter jets by nations like China, Indonesia, and Vietnam, since its approval for international sales.

During the latter half of the twentieth century, the PLAAF relied on jet fighter aircraft like the Shenyang-produced J-6 (NATO name Farmer), J-8 (NATO name Finback), and the Chengdu J-7 (NATO name Fishcan). Many of these fighter aircraft, with some exceptions, were based on Russian designs through technology transfer arrangements. The J-11 Flanker shares a similar pedigree, as in the early 1990s, the Soviet Union proposed the sale of Su-27s to the PLAAF to a visiting Chinese delegation. China's interest in acquiring aircraft like the Su-27 stemmed, in part, from the realization of the Western approach to aerial warfare, prominently demonstrated during the 1991 Gulf War. This conflict served as a wake-up call for the PLAAF leadership, underscoring the service's lag behind the world's leading air powers. The initial purchase comprised of 24 Su-27SK (single-seat) and Su-27UBK (two-seat) models, making China the first foreign operator of the Su-27 and the sole nation to acquire the fighter prior to the Soviet Union's dissolution.

The 1991 sale of the Su-27 to China proved to be mutually beneficial for both parties. Russia, in need of economic recovery following the collapse of the Soviet Union, secured a significant multi-billion-dollar contract. Meanwhile, the PLAAF

gained access to a truly advanced fourth generation fighter for the first time. *Red Dragon 'Flanker'* tells the complex story of China initially obtaining a contract for manufacturing licenses of the Su-27 and subsequently realizing that their indigenous version, now known as the J-11, no longer met the operational requirements of the PLAAF twenty-first century.

In response, China embarked on the development of a significantly enhanced variant of the Flanker, featuring improved avionics, weapons, and engines. Russia considered this development a breach of the formal technology transfer agreements. Whether these “Sino-Flankers” were illegal copies, evolved clones, or indigenous versions, the Chinese Flanker series eventually evolved into a wide range of variants, some of which had no direct counterparts in Russia. Readers of *Red Dragon 'Flankers'* will find detailed descriptions of the J-11's development across five chapters and an appendix covering the various Flanker models.

In chapter 3, various models beyond the standard single-seater and two-seater configurations like the J-11 are explored. This includes the J-16, which serves as a versatile multirole and strike aircraft, as well as the J-15 Feisha (Chinese for Flying Shark), designed specifically for the People's Liberation Army Navy (PLAN) aircraft carriers *Liaoning* and *Shandong*. These carriers, each equipped with 24 J-15 fighters, symbolize China's commitment to enhancing its maritime capabilities, including advanced weaponry and radar systems. Consequently, this poses an increasing challenge to US naval forces operating in the littoral regions near Japan, the Philippines, Taiwan, and South Korea.

The book's extensive coverage also delves into the debate surrounding the operational effectiveness of J-15s launching from short take-off (STO) decks, as utilized by the two Chinese aircraft carriers, in comparison to the US Navy's F-18 Hornets, which are launched via catapults from *Nimitz*-class carriers. This discussion holds historical significance, drawing parallels with the 1981 Falklands War. During this conflict, the Royal Navy's Sea Harriers, operating from STO carriers, engaged in combat against the Argentine Air Force and Navy's A-4 Skyhawks and IAI Dagger fighters. The author skillfully addresses this debate, highlighting its relevance and historical precedent.

Of particular interest to Chinese airpower experts is chapter 4's description of the Flanker onboard weapons and stores. While the J-11 and its subsequent variants are often referred to as multirole fighters, the PLAAF designates this label specifically to later variants, namely the J-15 and J-16 models. It is important to note that the regular model J-11 series are primarily designed as pure fighters, even though they possess limited capacity to carry “dumb” bombs. Their primary armament remains focused on air-to-air engagements.

Nevertheless, an observable trend in modern air forces is the increasing usage of dedicated electronic countermeasures pods, and Flanker variants are no exception. These pods can be seen on various Flanker models, reflecting the evolving nature of air warfare. In addition to Chinese and Russian air-to-air and air-to-ground missiles, Flanker models are also equipped to carry Chinese-made CHETA YingJi-83 and HAIG YingJi 91 antiship missiles. These missiles possess capabilities comparable to the French-made AM-39 Exocet or the US-made AGM-84 Harpoon missiles. With the potential to deploy such systems, Flankers pose a significant challenge to any coalition forces involved in the defense of the Taiwan Straits.

Chapter 5 serves as a valuable resource for military air planners, offering a detailed unclassified account of the training, personnel, and organizational structure of both PLAAF and PLAN J-11 and Su-27 squadrons. This chapter features high-quality photographs and color prints showcasing various models of PLAAF and PLAN Flankers. Additionally, the book provides detailed family trees and identification guides that include aircraft markings, serial numbers, and unit organizational charts. These comprehensive elements make it an essential reference for those studying Chinese airpower.

However, it is worth noting that the book lacks a chapter dedicated to Flanker maintenance and support units responsible for fueling and ammunition. These supporting organizations play a crucial role in the effective deployment of modern combat aircraft. Including information about the PLAAF and PLN Flanker support units would offer a more comprehensive understanding of how Chinese commanders might utilize these exceptional aircraft in future conflicts.

Harpia Publishing has once again produced an excellent book with high quality images, charts, and maps. As with Andreas Rupprecht's previous books like *Modern Chinese Warplanes: Chinese Army Aviation—Combat Helicopter Units*, the author takes considerable effort ensuring that his sources of important information and images are properly credited. The primary objective of this book is to elucidate the distinctiveness of the J-11 Flanker in comparison to its Russian counterparts, examining their evolutionary paths. Furthermore, it serves as an accessible identification guide for both military analysts and aviation enthusiasts alike. With its comprehensive coverage of Chinese military airpower and aviation development, this book is an indispensable addition to the collection of anyone with an interest in these subjects. ✪

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