

China's new aircraft carrier : shape of things to come?

Bitzinger, Richard A.; Mitchell, Paul T

2011

Bitzinger, R. A., & Mitchell, P. T. (2011). China's new aircraft carrier : shape of things to come? (RSIS Commentaries, No. 074). RSIS Commentaries. Singapore: Nanyang Technological University.

<https://hdl.handle.net/10356/94003>



RSIS COMMENTARIES

RSIS Commentaries are intended to provide timely and, where appropriate, policy relevant background and analysis of contemporary developments. The views of the authors are their own and do not represent the official position of the S. Rajaratnam School of International Studies, NTU. These commentaries may be reproduced electronically or in print with prior permission from RSIS. Due recognition must be given to the author or authors and RSIS. Please email: RSISPublication@ntu.edu.sg or call (+65) 6790 6982 to speak to the Editor RSIS Commentaries, Yang Razali Kassim.

No. 74/2011 dated 6 May 2011

China's New Aircraft Carrier: Shape of Things to Come?

By Richard A. Bitzinger and Paul T. Mitchell

Synopsis

China may soon acquire its first aircraft carrier through the reconstruction of the ex-Soviet Varyag. This could presage the rise of a carrier-based Chinese navy, which has significant implications for the balance of power in the Asia-Pacific.

Commentary

China may soon, at long last, get its first aircraft carrier. After years of renovation, the former Soviet carrier Varyag could, as early as this year, take to the sea as the largest and grandest ship in the People's Liberation Army Navy (PLAN). The Varyag will not be the last carrier in the PLAN; rumours persist that China will likely build four to six aircraft carriers. Yet, while PLAN is on its way to being a carrier-based navy, it will not happen easily or anytime soon.

Enter the Varyag

A casualty of the post-Cold War, the Varyag was laid down in the early 1980s, but construction was halted in 1992 when the vessel was only 70 percent complete. Ukraine, which inherited it after the breakup of the Soviet Union, stripped the ship bare and left it exposed to the elements for several years. When the Varyag was finally sold and delivered to China in 2001 – ostensibly to be turned into a Macau casino – it was a rusted shell, without engines, rudder, weapons systems, or electronics. In addition, the process of removing sensitive equipment from the vessel had resulted in damage to its structure, so that even its seaworthiness was questioned.

Undaunted, in mid-2005 the Chinese moved the Varyag to a drydock at the Dalian shipyard in northeast China, where it was painted PLAN grey and its flight deck repaired. Subsequently, engines and electrical systems have been reinstalled and its bridge reconstructed. At the moment, China still lacks carrier-capable aircraft. The PLAN is reportedly interested in the Su-33 fighter jet, which is flown off Russia's lone remaining carrier, the Admiral Kusnetzov. Rumours abound that it may buy up to 50 Su-33s from Russia or that it has already acquired a couple from Ukraine and is in the process of reverse-engineering the aircraft.

Next Steps

The Varyag will likely be used more as a research and training platform for future Chinese carrier designs and crews, rather than as a fully functioning carrier. At the same time, China is expected to begin construction of

several indigenous carriers. At one time, the authoritative Jane's Information Group speculated that the PLAN could build up to six aircraft carriers, commissioning the first by the middle of this decade.

If and when that happens, it would likely mean the reorientation of the PLAN around Carrier Battle Groups (CVBGs), with the carrier at the heart of a constellation of supporting submarines, destroyers and frigates – an amalgamation of power projection at its foremost. Such CVBGs are among the most impressive instruments of military power, in terms of sustained, far-reaching, and expeditionary offensive force.

The Challenge of Carrier-Based Operations

Possessing an aircraft carrier, however, does not automatically translate into being a carrier-based navy. For one thing, it could be 15 to 20 years before China could have a full fleet of four to six CVBGs. Moreover, few things are more challenging than carrier operations. Landing an aircraft on a carrier deck, moving in all three axes, is one of the most stressful aspects of flight operations. At the same time, the carrier deck is a highly dangerous work area, given its relatively small size and the number of activities all taking place at the same time. Consequently, the potential for mishap resulting in the death of the pilot or those supporting him is very high.

Carrier operations carry additional burdens. More than any other surface combatant, a carrier is a “system-of-systems” in and of itself. Carriers typically have several different aircraft types aboard in a “carrier air wing”. A US carrier air wing has four separate fighter squadrons, an electronic warfare squadron, a squadron of anti-submarine and search-and-rescue helicopters, an early warning squadron, and a cargo aircraft detachment. Moreover, so-called “cyclic operations” – the continuous launch and recovery of air missions over the space of a day – requires the careful orchestration of men and machines, all of which requires continuous practice to even begin to approach any degree of proficiency. Not only does this require a large shore-based training institution, but also a commitment to regular sea-based exercising.

Consequently, it is doubtful that the PLAN will attempt to duplicate the complexity of a US aircraft carrier. For one thing, the Varyag uses a “ski-jump” design, which obviates the need for complicated catapults; on the other hand, this greatly reduces the number of aircraft it can carry (the Kusnetzov carries only a dozen or so fighters), and how many it can operate at any one time. Additionally, these fighter aircraft have to sacrifice weapons loads and fuel in order to take off, greatly limiting their firepower and range of operations.

The Shape of Things to Come

Despite these challenges, the PLAN is obviously intent on becoming a carrier-based navy. If the last decade has shown us anything about the Chinese military, it is its resolve and determination to build up its armed forces. China continues to plow considerable resources into military modernisation – most recently by boosting its defence budget by 12.7 percent, to US\$91.5 billion. If China does succeed in acquiring not just one, but a fleet of aircraft carriers, it would constitute a revolutionary turn of events in terms of expanding Chinese military power. That, in turn, could greatly alter the balance of power in the Asia-Pacific.

Richard A. Bitzinger is a Senior Fellow with the Military Transformation Programme at the S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University. Paul T. Mitchell is a Professor of Defence Studies at the Canadian Forces College in Toronto, Canada.