

From July 15-23 July 2021:  
A Compendium of Recent Articles on  
*Second Line of Defense* and *Defense Information*



July 23, 2021

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# VADM Lewis: Shaping a Way Ahead for C2F and Allied Joint Forces Command, Norfolk

07/23/2021

By Robbin Laird

Recently, I had a chance to talk with VADM Lewis, Commander of Second Fleet and of Allied Joint Force Command Norfolk. We spoke one day after the full operational capability ceremony held on the USS Kearsarge for Allied Joint Force Command Norfolk.

Together, the two commands represent a key capability for shaping a way ahead for North Atlantic defense, and the challenge will be to continue to build out capabilities to enhance crisis management and deterrent force integration over the next few years. The Russians and the Chinese are certainly focused on encouraging disunity among nations, and conflict within those nations as well.

We started by discussing the recent series of exercises held in the North Atlantic and worked with Sixth Fleet as well. In those exercises, in effect, different modules were worked in shaping an overall North Atlantic maritime-focused defense capability. Two major North Sea maritime exercise, namely the Royal Navy's Strike Warrior Exercise and the U.S. Exercise Ragnar Viking occurred first; then Steadfast Defender; then Formidable Shield 2021, and then BALTOPS-50.

In his prepared remarks at the July 15, 2021 ceremony, this is how VADM Lewis highlighted the Steadfast Defender exercise:

"During STEADFAST DEFENDER, this team showed that they are prepared to operate together as a NATO JFC, as we stood up our Joint Operations Center for the first time and executed a robust battle rhythm and crisis scenario, augmented by an expert team of U.S. Reservists from across the joint force. From here on out, we will build on that success as we connect Allied and Partner nations operating in the Atlantic.

"With our inaugural commanders' conference in June, we solidified the enhanced relationships that have been fostered with National and NATO headquarters that share our common aim of trans-Atlantic security. This Command Network sits at the core of JFC Norfolk. It unites diverse expertise and capabilities through coordination and guidance to better meet SACEUR's Strategic Direction. It also allows us to remain adaptable in our own staff and utilize resources in the most efficient way to meet complex problems.

"It is this sustained high performance that gives me the assurance and confidence that JFC Norfolk is FULLY OPERATIONAL. As a fully operational NATO command, we are executing our peacetime mission in line with SACEUR's direction and guidance. We will continue to provide All-domain situational understanding, both lead and contribute to NATO planning... and participate in exercises like STEADFAST DEFENDER and STEADFAST JUPITER."

During the interview VADM Lewis underscored the multi-domain aspect of the exercises which allows for the nations to work more effectively together for crisis management, war-fighting and deterrence. VADM Lewis noted that what these efforts are providing is "connecting the blue dots. It is about

coordination of efforts, as the Nations are going to do what they are going to do. But by more effective coordination we can take those efforts and deliver a more significant capability for deterrence.”

Having just returned spending time with 2nd MAW and II MEF, I asked him about how he saw the contribution of the USMC to his efforts. He noted that he had recently visited II MEF for the retirement ceremony of Lt. General Beaudreault and had met with the new CG of II MEF, Lieutenant General William M. Journey, while there. He noted: “I think typically we’re going to be integrating task force efforts and exercising how best to use USMC capabilities in an integrated manner with the fleet.”

When I visited II MEF recently, Lt. General Beaudreault highlighted the efforts underway to shape an integrated task force whereby 2d MEB would stand up an integrated headquarters working with 2<sup>nd</sup> ESG, potentially based at Camp Lejeune that would work integrated operations between the fleet and the MEB. This was reinforced by VADM Lewis as well.

The final point we discussed was about the Nordics. In the period in which 2<sup>nd</sup> Fleet was re-established, the Nordic nations have clearly ramped up their defense efforts and cooperation with each other and with the United States and NATO. In my visit to 2<sup>nd</sup> MAW, I discussed their recent exercise in Finland with the Finnish air force. There the Marines worked closely with the Finns and worked tactics guided by Finnish capabilities and combat approaches. It was a Finnish lead to combat learning for the Marines when operating in their country and in the region.

This learn from others approach is also a key part of how VADM Lewis has led his command. As he commented: “That has been my mantra from day one here: learning from our regional operations. As we work how best to operate in the region, we are learning from our regional partners some of the best ways to do so.”

In his remarks on July 15th, VADM Lewis underscored this “mantra” as well as follows: “Those personnel with Arctic and Atlantic expertise on my staff have been critical to shaping our understanding of this rugged geography, both in the waters and in the littorals.”

In short, watching the ceremony on the 15<sup>th</sup>, reflecting on what Ed Timperlake and I have learned in Norfolk, and after talking with VADM Lewis on the 16<sup>th</sup> of July, I could not but be reminded of the famous quote from Ben Franklin at the time of establishing our country. On September 17, 1787, as the delegates left the Constitutional Convention in Independence Hall in Philadelphia, Benjamin Franklin was asked what kind of government do we have? “A Republic,” he replied, “if you can keep it.”

What VADM Lewis and his team and the allies have launched is clearly a template for change and can shape a way ahead for effective direct defense of our interests.

Will those who follow be able to meet the challenges of keeping pace with what I believe is the pacing threat for the United States, Russia, China and the explosive forces of terrorism and authoritarianism coming from the Euro-Med region. While China may well be a pacing threat, the Russians spearhead a continuous direct challenge with political-military capabilities underlying that challenge.

# An Update on the Coming of the CMV-22B to the Fleet: July 2021

07/20/2021

By Robbin Laird

Recently, I had a chance to talk with Captain Dewon “Chainsaw” Chaney, the Commander of COMVRMWING (or Fleet Logistics Multi-Mission Wing).

My last conversation was in April of this year, and the first one last year.

With the CMV-22B to be first deployed on the USS Carl Vinson later this year, the pairing of the F-35C with the CMV-22B providing a significant upgrade to the air wing onboard the carrier is close to becoming a reality.

According to Captain Chaney, “operational test requirements for the CMV-22B are almost complete.”

**And they are on track for deployment with the Vinson.**

We then discussed the challenge for the flight deck personnel in preparing for the CMV-22B.

Unlike the C-2, the new aircraft is not a catapult aircraft, and we discussed how the flight deck personnel are adjusting to the coming of the Osprey to the flight deck.

Captain Chaney noted that the major adjustment was to being prepared for the downwash generated by the landing of the Osprey on the flight deck.

“Because of the downwash created by a helicopter, some similar things happen when a V-22 lands.

“That requires canopy disciplines, panel disciplines, in terms not having have open panels, and any loose gear on the deck as the Osprey comes in.

“That’s the biggest mindset shift for the flight deck personnel.”

In the scheme of things, the Navy’s Osprey then is not providing unknown challenges for flight deck operations.

And because the aircraft can land day or night, it comes, and it goes. It is not anticipated to be spending its time on the flight deck in any case.

**This reaches into the maintenance side of the equation as well.**

The vast majority of maintenance will be done ashore at Navy maintenance facilities.

Indeed, “Chainsaw” had just returned from an overseas trip working with ashore installations and personnel to prepare for the coming of the Navy’s Osprey.

I did suggest that the commonality between the USMC and U.S. Navy’s Ospreys provided some options for how to manage at sea maintenance as well.

For example, I was struck when onboard the LHA-6 class how the Osprey can be maintained below the flight deck. Although the Navy has not yet focused on this idea, it clearly could be done, notably as the focus on wider fleet operations encompassing the amphibious fleet gets worked.

As Captain Chaney noted: “There is much in common between the two Osprey variants.

“Structurally, there are not many parts different between the two variants.

“The biggest difference between the two variants are the fuel cells.

“The fuel cells on the Navy’s version are larger and thus require different parts.”

“Chainsaw” did note that because the preparation for deployment onboard the Vinson was being worked off the coast of Southern California, there were lessons yet to be learned in the challenging waters of the wider Pacific.

“You have to remember that most of the training has happened off of the coast of Southern California.

“There really hasn’t been a lot of bad weather or pitching and rolling decks.

“But I don’t anticipate that with all of the years of Osprey experience under the Marine Corps and Navy’s belt that these challenges are show stoppers.”

Having spent significant time at the Navy’s air warfare center or NAWDC, I asked “Chainsaw” where he thought the Osprey would fit in.

It must be remembered that NAWDC is in transition as the Navy works the broader blue water fleet combat operations.

With the new non-N programs, MISRs and dynamic targeting, how would an Osprey affect fleet operations?

According to “Chainsaw,” the CMV-22B and its impact on the fleet and NAWDC are cleverly works in progress.

He believed that the aircraft would be slotted into the rotary wing segment of NAWDC initially.

But the Osprey is anything but a rotorcraft and here Captain Chaney noted that the coming of the Osprey provided a significant opportunity for innovation for both the fleet and NAWDC.

With the Osprey TTP development at NAWDC, it will significantly impact fixed and rotorcraft thinking about the current force and the future force.

In other words, it is part of what I have referred earlier as the integratable air wing, or as the air wing gets new platforms, it is expanding options, not simply adding replacement aircraft to current wing or carrier ops.

It is part of the template for change for the Navy's tiltrotor and rotorcraft communities.

Operating in concert with the CMV-22B will help the Navy's rotorcraft community reshape their template to get better now and to prepare for the future more effectively.

A final issue we discussed was the way ahead for the CMV-22B within the fleet.

Numbers of aircraft are an issue as the Navy has to train their maintainers and to be able to have aircraft involved air wing transformation in places like NAWDC.

I have focused in other articles on ways the CMV-22B could support wider fleet operations, as it does not need to land only on carriers enabled with special launch and recovery systems.

As "Chainsaw" put it: "The Osprey provides flexible options for austere support.

"I think we're going to need that as we look toward the future and where we're potentially going to operate, where we may be forced to operate, depending on the evolving combat situation."

## **Looking Back and Looking Forward for the USMC: The Perspective of Lt. General Beaudreault, II MEF**

07/15/2021

By Robbin Laird

I first met Lt. General Beaudreault during my visit to II MEF in April 2021. I returned on June 29, 2021 prior to the General's retirement in July. We discussed the evolution of the II MEF with the U.S. Navy and a recent agreement to shape a joint task force between 2<sup>nd</sup> ESG and 2<sup>nd</sup> MEB and that is discussed in a separate article.

At the end of the meeting, I asked him to look back on the evolution of the USMC during his time of service, and to provide some thoughts about the challenges going forward. As his career spanned the end of the Cold War and the global competition with a peer competitor, through the long period of the priority on the Middle Eastern land wars, and now with the return of global competition but this time now with peer competitors, his thoughts are especially helpful as we refocus on the new strategic context.

Lt. General Beaudreault: "As I reflect on my time with the USMC, the most capable USMC during my time of service was the force in being we had in the 1988 through 1991 period. I should be clear at the

outset I am not suggesting the Marines of today are not as capable as those in that period. I am referring to the size and capabilities we had available to us at the end of the Cold War.

“We were very lethal, agile, and combat flexible. In terms of naval integration, we had MEB elements which Saddam had to consider to be a serious threat of amphibious invasion. We could do either deception or forcible entry. We had a much more robust amphibious capability than today.

“We had a significant Force Reconnaissance capacity organic to the USMC. They embarked as part of the force and relationships are important in this business. There was nothing like having them eat in the wardroom or on the mess decks and interact with those that they supported. They were trained in *in-extremis* hostage rescue, ship take-downs, gas-oil platform seizures and in combination with the embarked SEALs were a tremendously capable force. Some of those skills have migrated to special operations forces which are not always co-located or physically present for integrated crisis planning.”

“That was a very, very capable Marine Corps. For example, Force Reconnaissance had an ability to conduct insertion operations out of submarines, that might come in handy in the future. We need to recover some of that capability.”

With the coming of 9/11 and the focus on counter-insurgency and counter-terrorism, the mission focus changed significantly. The Marines, out of necessity, supplemented what the U.S. Army and the nation required in order to be successful in those wars.

**But as the Marines now re-focus on the challenge of dealing with peer competitors, how best to do so?**

Lt. General Beaudreault: “The Commandant is dealing with the challenge of making hard choices about the way ahead. But the nation needs to realize that we need a larger USMC to do our job more effectively. We need a bigger Marine Corps. We need a bigger amphibious fleet. We need a bigger Navy.

“We are a maritime nation, but with the force we have, we have limited shock absorption capability. Where’s the shock absorption capacity? If we have to replace the number of combat losses we might experience in a peer to peer conflict, how are we going to do so? How do you sustain the fight? That gets into the industrial base and all other areas. We don’t have enough shock absorption capacity in the department right now, in my view.

“We have just enough to meet requirements and get to a one to three deployment to dwell ratio under the current steady state environment. We’ve got enough to generate combat replacements. But creating whole cloth units is going to be challenging. And I’m very concerned about if we take losses, the ability to rapidly replace those losses. And the affordability and time factors that go with our modernization and fielding in having to replace our damaged equipment.

“What I worry about, it’s insufficient capacity. And after your initial salvos, what’s the buy look like?

“I do like the conceptual pieces of where the Commandant’s going under his Force Design 2030 initiatives. I think you can complicate the adversary’s targeting with some discreet units that are out there. But not everybody can be like MARSOC with small teams that are going to have this effect. I do share some of the concerns on how you sustain distributed forces.



“I think the strength of the Corps, as compared to the Army, is our relationship with the Navy and the organic mobility we get out of our sea lift. We are facing a declining amphibious fleet with potential decommissioning of the LSDs, that’s a concern. What impact will this have on the nation and the nation’s ability to have the Marine Corps-Navy team deploy to the crisis with sufficient shock absorption capability in the event we take some losses due to adversary action?”

The air power transformation the Marines have gone through over the past twenty years, with the coming of the Osprey, then the F-35B and now the CH-53K transforms what an integrated Marine Corps-Navy team can bring to crisis management, but II MEF does not yet have F-35s in its force and currently is relying on allied F-35s to play their role.

Lt. General Beaudreault: “By 2024, we start replacing our fighters at 2<sup>nd</sup> MAF with F-35s and should be full up by 2030. USMC F-35s have been prioritized for the Pacific, but this creates some challenges for us. The Harriers and the F-35s are not the same at all, and our deployments in the Atlantic region without F-35s creates a gap. But we are getting the CH-53Ks into our force as the initial operating force which will clearly augment our ability to provide greater capability to operate in the air-sea-ground domain as well.”

And I would add that when 2nd ESG and 2nd MEB were operating together in the recent BALTOPS 50 exercise that included the F-35 piece of integrated operations, they were provided by a core ally. Brigadier General Marcus Annibale, Chief of Staff, Naval Striking and Support Forces NATO provided details on this development in an interview during the exercise. Brigadier General Annibale is an experienced Harrier and F-35B operator, and he noted that the F-35 participated for the first time in a BALTOPS exercise, and the F-35s in the exercise were Norwegian.

He noted not only did they participate and provide the unique capabilities of fifth generation aircraft, but are providing data into the operating force networks. “They were completely included in our link network. The fact that they were in our link architecture was almost as big a win as just having the airplane play.”

In short, Lt. General Beaudreault has lived through the last peer fight and led the II MEF in its initial process of adapting to the new strategic context. As he underscored: “We’re all watching China, but you know what? There’s another actor out there who merits watching.”

## **An Update on the French Navy: July 2021**

07/16/2021

By Pierre Tran

Paris – The French navy has “excellent relations” with the Australian navy, which shares the French view of the importance of the Pacific region, Admiral Pierre Vandier, navy chief of staff, said July 12.

Australia is acquiring submarines and combat systems with “oceanic capability,” with an operational range of 10,000 km, he told the association of defense journalists.

The Pacific is seen as a region of rising conflict, with media reports of China building military bases on small islands in the South China Sea, and making claims of control over international waters disputed by other Asian nations.

There is also growing concern over China seizing Taiwan, prompting the U.S. Navy to raise the option of forming the 1st fleet command, creating a second Pacific fleet to boost the capability of the 7th fleet based in Japan.

Part of Australia's pursuit of military means is a plan to acquire 12 diesel-electric attack submarines, with French shipbuilder Naval Group as prime contractor.

NG is negotiating a contract for the basic design of the boats, which will be built in Australia. That deal has stirred much controversy in Australia, pressing NG to guaranteeing creation of local jobs and ensuring 60 percent of local content in the submarine program worth €30 billion (US\$36 billion).

The French offer of submarines to Australia went through a tough time last year, requiring change of staff, Vandier said. The project went through a "difficult period," with "a lack of understanding" last year.

Naval Group executive chairman Pierre Eric Pommellet told journalists April 1 he had flown to Australia and spent a month there while observing strict quarantine rules, and conducted talks on the submarine program.

The significance of the Pacific for France – and the Navy – could be seen with the seven-month Marianne mission of the Emeraude nuclear attack submarine, leaving Toulon last September, sailing around the world to the Pacific before returning to the French naval base on April 7.

That submarine sailing "showed the strategic interest to France of the Indian-Pacific zone and shows the navy's capability to deploy its units," vice-admiral Jean-Philippe Chaineau, commander of the French submarine service told *Cols Bleus*, the navy staff magazine.

"The relations struck with the American and Australian navies in this operation were remarkable," he said.

The sailing confirmed the capability for a French attack submarine to deploy at great distance and for a long period, with change of crew at the Guam U.S. navy base.

The Emeraude also worked with the Indian and Indonesia navies, the report said.

The magazine shows a picture of the French boat sailing next to the U.S. attack submarine Asheville, signaling close cooperation with the US navy.

"France is the first ally for our nation," for the Pacific region, Admiral Samuel Paparo, commander of the U.S. Pacific fleet, told the navy magazine.

Cooperation between French and American forces boosted the capacity to work together closely in crises.

A French submarine sailing in the South China Sea, followed by the Tonnerre helicopter carrier, severely upset the Chinese government, as will the Royal Navy when the Queen Elizabeth aircraft carrier sails through those waters, said Chris Cavas, a naval commentator.

That one-two delivery begged the question whether the French and British had coordinated sailings in the Pacific.

The Queen Elizabeth and Charles de Gaulle aircraft carriers sailed together in a three-day exercise dubbed Gallic strike in February, in the Mediterranean.

The French carrier was returning from its Clemenceau naval exercise, while the UK vessel was sailing out on its mission to fly the Union Jack flag around the world.

The Tonnerre sailed with the Surcouf, a frigate of the La Fayette class, in the annual Jeanne d'Arc training mission.

### **The Global Commons**

The open seas, along with the domains of space and cybersecurity, were part of the concept of global commons, Vandier said.

There was stiff economic competition for control of those domains, whether they be straits of water or computer servers.

The Admiral told a story of when he commanded the Charles de Gaulle carrier in 2014-15, when the capital ship was waiting for passage through the Suez canal and was being followed the Russian navy.

He sailed the carrier in the form of the cross of Lorraine, the sign of the Free French forces in the second world war, in expectation the Russians would eventually see the maritime message.

That was a reply to a Russian intelligence ship which had previously sailed in the form of the St Andrew's cross outside Toulon naval base, he said.

Incidents at sea sometimes took time to interpret the events, he said.

There were different versions of what happened when the British destroyer Defender sailed June 23 in the Black Sea through territorial waters off the Crimean peninsula.

That sailing was reported in UK media as a political signal of support to Ukraine, as Russia seized control of Crimea in 2014.

The UN convention of the law of the sea allows "innocent passage" of ships through territorial waters "so long as it is not prejudicial to peace, good order or security of the coastal state."

Russia said warning shots were fired and a Russian jet dropped four bombs near the British warship, in response to what was seen as a naval incursion.

The British defense ministry denied that account, while a BBC reporter onboard the Defender said the Russian forces “harassed” the warship, with more than 20 aircraft flying overhead and two Russian coastguard ships sailing close by, with one approaching to some 100 meters.

French interests in the Pacific include New Caledonia and French Polynesia, territories with a combined 2.4 million square kilometers of exclusive economic zones.

Vandier was appointed navy chief of staff Sept. 1, 2020, succeeding admiral Christophe Prazuck, who retired from service. Vandier flew the Super Etendard fighter jet in combat missions in Bosnia and Kosovo, and switched to the Rafale naval fighter in 2001, among his postings.

## **From Aspiration to Combat Capability: Unmanned Systems Integrated Battle Problem 21**

07/16/2021

By George Galorisi

The U.S. Navy is committed to integrating unmanned systems in the Fleet for a host of reasons. This is seen in the Navy’s official Force Structure Assessment, as well as in a series of “Future Fleet Architecture Studies.” In each of these studies: one by the Chief of Naval Operations Staff, one by the MITRE Corporation, and one by the Center for Strategic and Budgetary Assessments, the proposed Navy future fleet architecture had large numbers of air, surface, and subsurface unmanned systems as part of the Navy force structure.

America’s new maritime strategy, *Advantage at Sea*, reconfirms the Navy’s commitment to unmanned systems as an important part of the Sea Service’s assets, noting, in part, “Cost-effective platforms and manned-unmanned teaming will increase the capacity of the fleet and expand our ability to distribute our forces...Naval forces will mix larger platforms with standoff capabilities and smaller, more-affordable platforms—including optionally manned or unmanned assets—that increase our offensive lethality and speed of maneuver.”

In January 2021, the Chief of Naval Operations issued *CNO NAVPLAN* (Navigation Plan) designed to chart the course for how the Navy will execute the Tri-Service Maritime Strategy *Advantage at Sea*. Not surprisingly, this document identifies unmanned systems as an important part of the Navy’s future plans.

Most recently, in March 2021, the Department of the Navy released its *UNMANNED Campaign Framework* describing the Service’s vision for integrating these platforms into the Fleet.

**However, it is one thing to state aspirational plans for unmanned systems in high-level documents and statements by Navy acquisition officials, but quite another to bring unmanned systems that can support the Fleet and Fleet Marine Forces out of the factory or laboratory and actually put them in the hands of Sailors and Marines.**

That is why, in order to accelerate the integration of air, surface and unmanned systems into the Fleet, in April of this year, the Navy organized its Inaugural Unmanned Systems Integrated Battle Problem 21 to showcase these innovative unmanned capabilities.

Led by U.S. Pacific Fleet and executed by U.S. 3rd Fleet, Unmanned Systems IBP 21 sought to generate warfighting advantages by integrating multi-domain manned and unmanned capabilities into challenging operational scenarios.

One of the primary objectives of the exercise was to help the U.S. Navy determine how to remake the Fleet as it brings unmanned systems aboard to be warfighting partners with manned ships and aircraft.

Rear Admiral Robert Gaucher, Director of Maritime Headquarters at U.S. Pacific Fleet, put the objectives of IBP-21 this way:

“Building off advances achieved over the past decade in unmanned aviation, Pacific Fleet is answering the Chief of Naval Operations’ drive to put the Navy’s Unmanned Campaign Plan into action. By exercising our full range of unmanned capabilities in a Pacific warfighting scenario, UxS IBP21 directly supports U.S. Indo-Pacific Command’s warfighting imperative of driving lethality through experimentation. The goal is to integrate our unmanned capabilities across all domains to demonstrate how they solve Fleet Commander operational problems.”

One USV platform highlighted during the IBP 21 event was the Maritime Tactical Systems Inc. (MARTAC) T38 Devil Ray, a 38-foot, catamaran-hull, unmanned surface vessel recently introduced as part of the MARTAC “Expeditionary Class” USVs.

One of the reasons the Navy decided to feature the Devil Ray in Unmanned Systems IBP 21 was that earlier, smaller cousins of the Devil Ray (called MANTAS) performed well in Navy and Marine Corps exercises, experiments, and demonstrations over the past several years.

These included RIMPAC, Trident Warrior, Bold Alligator, Valiant Shield, and others. More recently Devil Ray was a featured platform during the Navy’s 2020 Trident Warrior exercise.

The T38 Devil Ray USV, powered by twin high-speed diesel engines and vector thrust surface drives has the ability to transit at burst speeds in excess of 80 knots and operate in up to sea state five. With a range greater than 3000 nautical miles at a cruise speed of 25 knots, the craft is capable of carrying up to a 4500 pound payload on its rear deck as a ship-to-shore logistics delivery vehicle. In its aft well deck configuration, the craft can launch and recover onboard UUVs and USVs, as well as operate as a tow vehicle for onboard tow-sensors and ROVs. All configurations have the ability to carry, deploy and recover gyrocopter UAVs on its main deck forward.

In IBP 21, the T38 Devil Ray performed a high-speed autonomous round trip transit from San Diego to San Clemente Island as a demonstration for unmanned intelligence, surveillance and reconnaissance (ISR). It performed this demonstration while operating in a sea state 3. The Devil Ray also demonstrated the ability to serve as a high-speed payload delivery mine warfare asset, thereby enabling the Navy to achieve a long-desired goal to “Take the Sailor out of the minefield.”

The Devil Ray can quickly transit at high speed to any AOR. Upon arrival, the craft can slow to conduct its mission. Even in a total EMCON condition, the preprogramming of the autonomous mission of the Devil Ray allows for performance of any mission without any radio transmission

interface with the supervisory controller onboard the mother ship or ashore. With high resolution gyro-stabilized cameras, the Devil Ray has the ability to video and data record key aspects of the mission for playback to the mission controller or upon return to base.

**As the U.S. Navy is challenged by Congress regarding its ambitious plans to develop families of large, medium and smaller unmanned systems in all domains, one way to alleviate these concerns is to move forward with the fielding of proven commercial-off-the-shelf systems that have been thoroughly tested in a wide range of Navy and Marine Corps exercises, experiments and demonstrations.**

The T38 Devil Ray is the best unmanned surface vehicle candidate to meet the Navy's needs today. Unlike many USVs that are in various stages of development, the Devil Ray is certified as Technical Readiness Level Nine (TRL 9), meaning it is ready for deployment *now*. Further, integrating Devil Ray into the Fleet requires no special accommodation to field today, since it matches the size of the eleven meter RHIB currently carried by many U.S. Navy ships. The Navy will be well served to put Devil Ray into the hands of our Sailors in order to meet urgent operational needs.

## **Training, Skill Sets and the High-End Fight**

07/21/2021

By Robbin Laird

In my last article focused on training for the high-end fight, I addressed the challenges which need to be addressed in training for full spectrum crisis management operations or for the high-end fight.

But what skill sets are required and how proficient can our forces become through training?

Training is focused on TTPs, or the Tactics, Techniques and Procedures which the force is being shaped to deliver.

But really it can be understood somewhat differently with the shaping of a kill web enabled crisis management force that can scale up through the full spectrum of conflict: what skill sets are crucial to deliver the desired combat or crisis management effect with the distributed integrated force?

**How do we measure or assess our ability to deliver the full spectrum of options for the Combatant Commander?**

**How do we conduct training against the backdrop of a capable adversary and their changing behaviors in a crisis up to and including during the high-end fight?**

**How to we execute effective decision-making at the proper point of combat effect?**

These are all considerations of what needs to be an effective and adaptive training regime for today's combat force.

To understand the nature of those skill sets or proficiencies, I talked recently with Paul Avera from Cubic Mission and Performance Solutions. Avera is an experienced naval aviator who has worked on training systems for many years, and he supports the U.S. Navy and Industry's strategic development and transition of the next generation Synthetic Inject To Live LVC capabilities for the DoD Air Combat Maneuvering Instrumentation (ACMI) systems, an upgrade for US and Coalition partners to train to the High End Fight (his biography is found at the end of this article).

**Avera highlighted some key features of the skill sets required for training in the new strategic environment.**

**The first is the team nature of delivering the desired combat effect.**

According to Avera: "Force capability is taking the key elements of the force and blending them together to deliver the desired effect at the right time and the right level. And to be able to anticipate reactions from the red side, and to evaluate how the red side has been impacted by the combat effect delivered."

The challenge is to not only work proficiently with one's platform but to be able to work in an integrated, coherent, mutually supportive manner in delivering the desired combat effect while staying inside the reactive enemy's ability to respond. The peer fight revolves around the competition to disrupt each side's ability to aggregate, integrate, and deliver effects enabled by secure C2 and ISR networks.

The use of Joint and Coalition exercises as a training venue is a key part as well. The goal of exercises expressed in training is to demonstrate to adversaries the blue sides capabilities to operate effectively in the high-end fight.

As Avera put it: "Training is a lever for the combatant commander because he is able to selectively demonstrate that he can deliver effects when and where he wants with a team which is both U.S. and coalition in character.

"Understanding how rapidly to integrate and deliver multi-domain effects, particularly when those capabilities are distributed is a critical feature of the needed skill set. For the last 20+ years we have had the luxury of conducting operations at will from a persistent sanctuary. This battlespace sanctuary afforded us the time and space to observe, target, mass effects, and assess results in a manner with little concern for the threat's ability to disrupt, degrade, or otherwise hold us at risk.

"When facing a peer threat, we will have to consider how to create sanctuaries dynamically in both space and time as a precursor to or in conjunction with our afore mentioned operations. That adversary will work to constrict or pressure the blue side "sanctuary" understood as a maneuver force."

**How to aggregate effective force within dynamic sanctuaries?**

Operating within sanctuaries to be able to generate force to get a desired combat or crisis management effect requires integration of non-kinetic and kinetic capabilities and an ability to operate with resilient and effective C2 and ISR connectivity.

A significant part of the fight as the blue side sanctuaries operate as a maneuver force is keeping combat integrity and disrupting the peer competitor's ability to fight while maintaining signature control and superior understanding of the environment.

**Another core skill set is to be able to deliver effective dynamic targeting.**

As Avera put it: “a key challenge for operations in the sanctuary context is to be able to develop effective targeting. The goal here may not be to destroy kinetically, but to disrupt, and disaggregate the adversary’s ability to fight. It is not just a classic kill chain; it is dynamic targeting within a kill web.”

As Avera highlighted “I may not want to destroy, I may want to just disrupt and degrade him long enough for the crisis management situation to de-escalate. This is a huge problem for lots of the people I’ve talked to who are still thinking the goal of the kill chain is a kinetic kill. And in an all-out war, I get that. But if we’re really talking about crisis management and controlling the escalation, we need to train for cross domain effects appropriate to control the crisis.”

**An additional set of required skills is learning how to operate your platform within the context of flexible and agile modular task forces.**

Rather than working a set piece task force, the platform operator needs to become accustomed to working in almost Lego block-like task forces which may well contain ground, air, space, cyber, and maritime elements to deliver the desired combat or crisis management effect.

As Avera noted: “We are now able to aggregate information from a variety of air, sea, land, and space platforms to give us a better picture of what’s going on in the environment and to shape effectively the grand scheme of maneuver and leverage capabilities such as the electronic order of battle that will determine the limits of my operational sanctuary.

“How quickly can I aggregate capabilities and deliver the desired effect, and then measure whether or not I was successful in delivering that effect?”

**Another key skill set is to operate in a C2 environment where both the decision at the edge and at the strategic level operate in a very fluid and dynamic way.**

On the one hand, tactical decision making at the edge is being empowered by new capabilities such as F-35 wolfpacks.

On the other hand, C2 at a more strategic level is crucial to shape the deployment (long lead-time) tasks and evaluate overall combat effects.

How do we train to ensure effective decision making at the edge and a strategic level as well?

The C2 and ISR revolution we are now facing is reversing the logic of platforms to infrastructure; it is now about how flexible C2 and available ISR systems can inform the force elements to shape interactive combat operations on the fly.

That is, the new capabilities are enabling tactical decision making at the edge and posing real challenges to traditional understandings of how information enables decision making.

It is about learning how to fight effectively at the speed of the network to achieve combat dominance.



This obviously requires rethinking considerably the nature of decision making and the viability of the classic notion of the OODA loop.

If the machines are fusing data or doing the OO function, then the DA part of the equation becomes transformed, notably if done in terms of decision making at the tactical edge.

The decisions at the edge will drive a reshaping of the information about the battlespace because actors at the tactical edge are recreating the information environment itself.

In effect, chaos theory becomes a key element of understanding of what C2 at the tactical edge means in terms of the nature of the fleeting information in a distributed combat space itself.

The new C2 and ISR infrastructure enables new warfighting approaches which need to be shaped, exercised and executed, and in turn affect how the forces train for the high-end fight.

### **How indeed do you train these skill sets?**

By focusing on the sanctuary concept, Aversa explained that C2 operating within a sanctuary or managing several operational sanctuaries is a core capability which needs to be built, trained to, and evolved as well.

According to Aversa: “Who’s going to be the battle commander and be able to have the confidence that they have the full picture of information.

“In some cases, the F-35 may have better situational awareness than say on the E-2 or the Wedgetail. Who’s going to make that call?”

In an interview with Lt. Col. (Retired) “Juice” Newton, a combat veteran, test pilot, and airpower expert, highlighted the nature of the impact of the kill web on skill sets for combat dominance.

What is required is the capability to dominate an adversary through distributed engagement. Such a capability allows the blue side to multiply the effects which they can have for the time necessary to gain tactical and strategic advantage over the red side. And by gaining a key advantage, then leveraging that advantage for escalation control and dominance.

For example, by gaining control of spectrum through distributed kill-web engagements a force may freeze the adversary’s ability to detect and respond.

In other words, that force can blind and dominate that force for critical periods of time.

Mission command guides a diversity of modular task forces which deploy into the areas of interest and provide engagement density. Sensor networks and C2 enable the modular task force to execute its mission and to do assessments to ensure that the mission effect is being achieved.

### **How do you train to shape such an outcome?**

**How do you learn to use the evolving sensor networks, and to make C2 decisions rapidly enough to shape the desired combat effect, and to have rapid battle damage assessment to ensure that they dynamics of the combat situation are working in your advantage?**

In short, the challenge of preparing and engaging in full spectrum crisis management requires new skill sets and capabilities.

The training challenge is to shape such skill sets and capabilities.

## **Paul K. Aversa**

Paul Aversa currently serves as Senior Director of Strategic Development for Cubic Mission and Performance Solutions. He brings over 30 years of mission results for his customers and partners across commercial and government sectors. In his current role, he identifies, architects, and aligns fit-for purpose Enterprise training solutions for Navy and Coalition customers in the Defense Sector. He leads the US Navy and Industry's strategic development and transition of the next generation Synthetic Inject To Live LVC capabilities for the DoD Air Combat Maneuvering Instrumentation (ACMI) systems, a \$1.5B upgrade for US and Coalition partners to train to the High-End Fight.

Prior to the Cubic Corporation, he served as Vice President for the Fozzie Miller Group, a National Security Consultancy focused on training and cybersecurity solutions for domestic and international customers. Before serving at the Fozzie Miller Group, he served as Senior Vice President, Enterprise Sales for Three Wire Systems, a 150 employee Service-Disabled Veteran Owned Small Business headquartered in Falls Church, VA. With 12 direct reports, he led a matrixed organization delivering Information Technology solutions across the company's four technology lines of business: Application Development, Legacy Application Modernization, Cyber and Information Assurance, and Network Infrastructure and Operations Support.

Prior to joining Three Wire Systems, he served as Vice President, Enterprise Solutions North America for Micro Focus, a FTSE 100 publicly traded global Top 15 Infrastructure Software company. With 10 direct reports and 25 functional reports, he was the P&L leader for one of four core lines of business (COBOL Development and Mainframe Solutions) for North America delivering results that fueled the company's stock valuation growth by 229% over 4 years.

Prior to Micro Focus, he was a partner with Addx Corporation where he led the Acquisition Support Services Group. While at Addx, he facilitated several strategic client engagements in the information and management sciences arena, including teambuilding, strategic off sites and leadership development programs for the Energy Information Administration, the development of the Strategic Communications Plan for the GSA's Federal Acquisition Service, and the Program Management Certification syllabus for the Department of Homeland Security's Acquisition workforce. From 2007-2012 he served as the Program Manager for the Secretary of the Air Force's CIO Portfolio Management support team.

Prior to joining Addx, he held various C-level positions for small companies and provided Executive Coaching to corporations supporting the Military Industrial complex. He has led numerous Concept of Operations projects, projecting capabilities and concepts and their performance potential in future environments utilizing several cutting-edge methods to deliver requisite understanding to client engineering and requirements teams. Before beginning his corporate endeavors, Mr. Aversa served a distinguished U.S. Navy career as a Naval Aviator, and recently retired as a Captain in the Navy Reserve, with his last assignment as the Commanding Officer of the Navy Reserve Center for Personal and Professional Development (CPPD). He is a 1989 graduate of the U.S. Naval Academy with a Bachelor's degree in Aerospace Engineering.

## **Russia's Emerging Hypersonic Strike Systems**

07/20/2021

By Richard Weitz

In recent years, Russian President Vladimir Putin and other senior Russian officials have emphasized their military's progress in developing various hypersonic weapons.

Russia's hypersonic delivery systems now include both hypersonic glide vehicles (HGV) launched on ballistic missiles and air-breathing hypersonic cruise missiles (HCM).

These systems combine sustained rapid speed (Mach 5 or faster), unpredictable flight paths due to their maneuverability, and other militarily advantageous characteristics.

Russia's Strategic Missile Forces are deploying the first intercontinental-range nuclear-armed hypersonic missile, the Yu-71 Avangard HGV. Its primary purpose is to overcome U.S. homeland missile defenses.

The first of these missiles went on combat duty at the end of 2019 with the Yasnenskaya missile division in the Orenburg Region.

The Avangard has a reported 6,000km-range, a maximum speed of more than Mach 20, and a maneuvering re-entry vehicle. The Russian media says the Avangard has a multi-megaton warhead.

Russia plans to deploy several dozen Avangards in coming years, initially on some of the 30 unused (never fueled) RS-18 (SS-19 Stiletto) ICBMs Moscow acquired from Ukraine in the 1990s.

When the next-generation RS-28 "Sarmat" ICBM becomes operational, the SMF may use it as an Avangard booster as well.

The Russian armed forces are placing theater-range hypersonic missiles, capable of delivering nuclear and conventional munitions, on numerous air and naval platforms.

The Russian Air Force is equipping its most modern fighters and bombers with air-to-ground, air-to-sea, and soon air-to-air hypersonic missiles to attack a diverse set of targets.

These fighter and bomber capabilities would be complementary. While fighters generally have superior survivability, bombers have larger payloads and longer flight ranges.

The Russian Aerospace Forces have deployed the new Kh-47M2 Kinzhal "Dagger" Air-Launched Ballistic Missile (ALBM) on a modified version of the 1,000km-range MiG-31BM ("Foxhound") supersonic aircraft. The upgraded plane is designated the MiG-31K.

Though a Soviet-era plane, the Foxhound has both a rapid speed (up to Mach 3) and a large bay for carrying missiles, making the MiG-31 well-designed for standoff strikes against ground and maritime targets.

The solid-fueled Kinzhal, which can fly at up to Mach 10 for approximately 2,000km, benefits from being released at a high altitude by the fast-moving MiG-31.

An inertial navigation system linked to the Russian Global Navigation Satellite System (GLONASS) guides the Kinzhal, which can carry a nuclear or conventional fragmentation warhead, to its ground or maritime target.

A dedicated group of MiG-31Ks are presently experimenting with the new missile to refine the tactics, techniques, procedures, and concepts of operation for its employment.

A fully operational MiG-31K Fighter Aviation Regiment is expected to enter service in Russia's Central Military District by 2024.

From this location, the planes could rapidly re-deploy throughout the Russian Federation to support offensive and defensive operations along any front, including in the High North. The military has recently upgraded some bases in the Arctic to operate these planes and missiles.

The Russian Aerospace Forces are also interested in placing hypersonic missiles on strategic bombers, which generally fly slower but farther than fighters.

One option is to equip Russia's Tu-160 Blackjack supersonic bombers, which have a large payload and 15,000km range, with the Kinzhals.

Another possibility is to deploy hypersonic missiles on its modernized 2,000km-range Tu-22M3 "Backfire" supersonic bombers.

Launched from a strategic bomber, the Kinzhal could attack any ground or sea target in Europe.

The Russian armed forces would also like to deploy a hypersonic missile on its Su-57 "Felon" multi-role fighter, which is entering into serial production. The Aerospace Forces intends to have a fleet of 76 Su-57 fighters in service by 2028.

A high-speed missile on a stealth plane could prove advantageous in disabling an adversary's air and defense networks in a clandestine first strike.

Yet, since the Su-57, which has a single pilot and twin engines, has smaller internal bays than the MiG-31, Russian designers would need to build a smaller missile than any of its existing hypersonic weapons.

A smaller missile could also fit better with some of Russia's older warplanes. The Russian Aerospace Forces could backfit these platforms with hypersonic missiles. Russia could also offer them for sale to the many countries whose air forces have Soviet and Russian fighters in service.

The Russian Navy is arming its cruisers, destroyers, frigates, and submarines with a standard 16-cell 3S-14 universal vertical launch platform that can fire multiple subsonic, supersonic, or hypersonic land-attack and anti-ship cruise missiles.

The Tsirkon [Zircon] 3M-22/3K-22, which serves as both an anti-ship and a land-attack cruise missile, has a speed of approximately Mach 8. Its range is likely 700-1,000km, depending on the altitude of its flight and the weight of its warhead.

The Tsirkon complex includes a ship-based launch system, a solid-propellant booster rocket, a scramjet-powered delivery vehicle, and a conventional or nuclear warhead. Scramjet technology mixes fuel with oxygen drawn from the air to attain sustained hypersonic speed.

The Russian media reports that the third Project 22350 missile frigate, *The Admiral Golovko*, will become the first platform equipped with Tsirkon missiles. The vessel, presently in service with the Navy's Northern Fleet, successfully test-launched Tsirkon missiles in the White Sea several times last year.

If the missile operates well on this ship, the Navy will likely equip the eight other 5,000-tonne, 135-meter-long Admiral Gorshkov-class frigates, two of which are already on active service, with the Tsirkon. These frigates currently deploy with land-attack Kalibr cruise missiles and anti-ship Oniks cruise missiles.

The Project 22350 frigates, currently in serial production, will likely become a more prominent surface ship of the Russian Navy as long as Russian shipbuilders continue to struggle to construct and maintain larger vessels.

The Navy will likely eventually place the Tsirkon, which will reportedly enter into serial production next year, on other warships, including the Pyotr Veliky and Admiral Nakhimov nuclear missile cruisers as well as the Project 20380 Steregushchy-class corvettes and Project 885 Yasen-class attack submarines.

Furthermore, the Navy has since announced that its Project 21631 Buyan-M-class and Project 22800 Karakurt-class corvettes will be equipped with a smaller version of the Tsirkon, which may carry a smaller warhead or less fuel.

Both types of ships are equipped with several 3S-14 shipborne cruise missile launch systems, which already can employ Oniks or Kalibr; the Navy could swap the Tsirkon, once deployed, for some of these slower missiles.

The Navy also hopes to equip even smaller ships, such as coastal defense ships, with hypersonic missiles to endow them with long-range precision-strike capacities.

Russian military analysts appear to see hypersonic missiles as a valuable naval equalizer that will enable Russia's smaller vessels, reinforced by submarines and land-based aircraft, to defeat larger adversary warships in the main bodies of water surrounding Russia.

## **French Hypersonic Cruise Missiles: A Work in Progress**

07/22/2021

By Pierre Tran

Paris – Onera and European missile builder MBDA are due to conduct the first test flight of a full-scale prototype of a French hypersonic cruise missile in the U.S., with help from NASA and the U.S. Air Force, an official of the French research agency said July 9.

The test flight of a four-meter long missile aims to study hypersonic propulsion in the Lea flight experiment project, backed by Onera and MBDA, the official said. The test flight is due to take place “in a few months,” at a US air force base on the East coast.

The propulsion system, powered by a hydrogen-methane fuel, is due to perform five to 10 seconds in flight, allowing calculation of the performance. Work on Lea has been conducted on the ground, including wind tunnels, over the last 20 or so years.

The official was standing at a small-scale model of a Lea experimental cruise missile, one of the displays at a showcase of Onera’s work on civil and military technology at the Aero Club de France, an association of French aerospace.

That was the first time a model of the Lea project has been publicly displayed, an Onera spokesman said.

There would have been a high level approval and security clearance for that public display of Lea, and the small-scale model would be different from the missile due to fly in the flight test, a source familiar with the project said. Any published pictures of the ASMP/A have been airbrushed to remove details of the airborne nuclear-tipped missile built by MBDA.

Onera “has never stopped working” on upstream studies on the missile vehicle and engine, to design hypersonic propulsion, the official said. The flight test will help define base options on the missile, expected to fly at Mach 6 in the flight tests.

The ground tests included those conducted at the Onera wind tunnels at Modane in the French Alps.

Work on Lea is intended to help MBDA design and build a scramjet cruise missile which will succeed the ASMP/A, the airborne nuclear deterrent carried by the Dassault Aviation Rafale fighter jet.

The successor to the ASMP/A missile will be fitted on the next generation fighter, a key element in the European future combat air system backed by France, Germany and Spain.

Onera and MBDA said in a 2009 Nato research note, planned flight tests of Lea were to use a Russian Tupolev Tu-22 M3 bomber to launch the test missile, which would have flown 20-30 seconds at Mach 4 to 8 over 30-40 km before crash landing. The booster on the test missile would have been based on the Russian Raduga AS4 missile.

The Tu-22 is also known as Backfire bomber.

Lea is a “French R&T effort for hypersonic air-breathing propulsion ... focusing on needed technologies for the propulsion system and acquisition of aero-propulsive balance prediction capability,” the note said.

While much of the work on Lea could be conducted in combustion chambers on the ground to test “performance and thermo-mechanical strength,” a flight experimental program (was) “a mandatory step towards future operational developments,” the note said. The flight test program started in January 2003 and had been due to end in 2015, after four flight tests flying between Mach 4 and 8.

Another Onera display was a Simagaz infrared camera for multi-spectral gas detection, mounted as a one-kilogram payload on a UAV. The research agency has three prototypes of the gas detector.

The camera sees gas emissions in four IR spectral bands and uses software to give an overall image in color. Onera developed the software, and worked with IR camera specialist Noxant, oil company Total, as well as Lynred, a specialist on infrared technology, and Bertin Technologies, a high tech company.

A military application would be to detect gas weapons, while civil companies such as Total could detect gas leaks. The IR camera, which can be fitted to any commercial UAV, is at technology readiness level 5-6, and calls for a further two to five years of development, an Onera official said.

Primagaz is one of 18 high tech projects Onera is backing with partners Ecole Polytechnique, SATT, and Starburst in the Blast campaign. The Blast program offers support to companies working on high tech projects for aviation, defense, space, and enabling technology. BPI France, a state-owned investment bank, also supports the campaign.

Ecole Polytechnique is an élite university, whose students in uniform marched in the military parade on the Champs Elysées on the July 14 Bastille Day celebration. SATT seeks to help university researchers find a market for technology, and Starburst helps business start-ups find financial backers.

## Lessons Learned from the Land Wars for the Future of Airpower

07/23/2021

By Robbin Laird

Two recent assessments of airpower in the land wars have reached very opposite conclusions. In some ways, these assessments can be characterized as old RAND versus new RAND. Old RAND represented by Ben Lambeth who has warned about the dominance of the U.S. Army over airpower and continuing Army domination of U.S. military power. New RAND is represented by the RAND assessment of Operation Inherent Resolve and finds lessons learned for the way ahead for an airpower which fits into the Army dominated way ahead.

But there is little doubt about which one is on the correct path. For Lambeth, airpower against peer competitors is radically different from Army dominated airpower; for the new RAND, the lessons learned in the Middle East should still shackle the USAF and the US Navy and core allies when shaping the way ahead for dealing with peer competitors.

The Lambeth view is well laid out in his recent book, *Airpower in the War Against Isis*.<sup>[1]</sup> Lambeth concluded his book by quoting a mutual friend, the late Colin Gray, who certainly was Old RAND (he worked with Herman Kahn at the Hudson Institute and Herman was the quindecagonal RAND founder) as well: A country's overall campaign strategy can be so dysfunctional that it "cannot be rescued from defeat by a dominant airpower, no matter how that airpower is employed."

Lambeth then went from this point to summarize his book: "That was precisely the situation that was created by the Obama administration's and CENTCOM's entirely preventable underemployment of

U.S. and coalition air forces for more than two years until the effort was finally rescued by ensuring leadership decisions that padlocked unerringly on the campaign's most overarching goal and applied the right strategy and force mix toward achieving it as quickly as possible. This is the ultimate campaign teaching from OIR that we should all take greatest care never to forget."

When one contrasts his assessment with the new RAND, for the team that did their assessment of Operation Inherent Resolve, there are very few lessons learned about the way ahead for airpower than simply a fine tuning of the airpower experience under Army domination.[2] As one former senior USAF officer commented to me: "The RAND Report basically accepts the administration's and CENTCOM's party lines without challenge regarding why things played out as they did. It therefore offers little by way of an effective and instructive telling of the OIR story."

More troubling is that the RAND report suggests that somehow what was done far too slowly and dominated by Army counter-insurgency thinking is useful as a guide going forward with regard to airpower in dealing with China or Russia. In the summary of the report, this conclusion was highlighted: "The overarching strategy of Operation Inherent Resolve, which put ground-force partners in the lead, created several challenges and innovations in the application of airpower, which have implications for future air wars. To be prepared to meet future demands against nonstate and near-peer adversaries, the U.S. Air Force and the joint force should apply lessons learned from Operation Inherent Resolve."

The RAND report puts forward as its main "finding" that "although airpower played an essential role in combatting ISIS, airpower alone would not have been likely to defeat the militant organization," but instead that "the combination of airpower and ground forces ... was needed to destroy the Islamic State as a territorial entity."

Yet the issue was never whether airpower could "do it alone," but whether airpower was applied most rationally, economically, and effectively toward the goal of neutering ISIS as quickly as possible. And the answer to that seminal question, which RAND completely ducked, is a resounding no, at least until then-Lt Gen Brown arrived in the CAOC as the war's second CFACC a year into the effort and began fixing things that were long in need of fixing.

I recently interviewed Lambeth about his book and how he saw the way ahead for airpower. He noted in that interview that "Clearly, as counterinsurgency operations became the predominant American way of war after 2003, the USAF lost a lot of muscle memory for doing much of anything else by way of higher-end force employment. And the predominant Army leadership at U.S. Central Command continued to apply its long-habituated Army thinking going forward into an entirely different situation that was presented by the rise of ISIS. A more assertive leadership in CENTCOM's air component at the time would have pressed for a different response to the challenge it was handed in 2014 by arguing for targeting ISIS not as an insurgency, but rather as a self-avowed state in the making."

As Lambeth added: "However, CENTCOM's commander, U.S. Army General Lloyd Austin III, simply assumed ISIS to be a regenerated Islamist insurgency of the sort that he was most familiar with, which it was not at all, and accordingly proceeded to engage it as just another counterinsurgency challenge. Eventually, his air component's second successive commander, then-Lieutenant General C. Q. Brown, finally prevailed in arguing for deliberate strategic air attacks against critical ISIS infrastructure targets in both Iraq and Syria, not just for on-call air "support" to be used as flying artillery for the ground fight.



He added: “One must remember that the vast majority of today’s serving U.S. Air Force airmen are only familiar with Operation Desert Storm from their book reading. And even much of the USAF’s more senior leadership today has never really been exposed to higher-end aerial warfare as we last experienced it over Saddam Hussein’s Iraq in 2003. Only now are we slowly coming to realize the opportunity costs that were inflicted by this neglect for nearly two decades, during which time we fixated solely on less-intense counterinsurgency warfare.”

I have been focused for several years on what I see as a clear and dramatic shift from how civilians and the military have looked at the land wars in the Middle East to now dealing with adversaries who have built forces for contested operations across the spectrum of operations.

We have a generation of civilian and military leaders who have not lived in the context of dealing with peer nuclear powers with significant conventional capability. It is not surprising that understanding of escalation management has atrophied.

The strategic shift has a very dramatic impact on maritime and airpower, which clearly should be the ascendent services in the Pentagon to sort through the way ahead. And integration of air and maritime power is the key to meeting the strategic interests of the United States. But the U.S. Army still predominates with a Sec Def from the Army, a Chairman of the Joint Chiefs from the Army and two 4 Army Four Stars in a theater where the U.S. Army does not have the central, perhaps even a central role to play, namely in the Pacific.

So how do we make the transition? How do we shape a relevant concept of operations?

And how do we stop ground pounders from thinking that they can put missiles into the first island chain or on allied soil ringing China without even considering their impact on escalation management with nuclear powers?

Lambeth assessment of the airpower in the war against ISIS provides a way ahead to answer these questions; new RAND does not. Or put bluntly, if we have not learned the lessons from the land wars, namely, not to follow the US Army dominated path going forward, we will lose in any sustained confrontation with either Russia or China.

As we face the challenges of full spectrum crisis management, it is not the lower end of the spectrum shaped by counter-insurgency which provides a template to deal with the peer competitors. It is integrated air and maritime power able to leverage higher end capabilities early in crisis which can provide for escalation dominance. This has nothing to do with how to manage a slow-mo counter-insurgency control the ground campaign. It is about the right tools, managed in the right way, to achieve escalation control. It is about compressed time operations; it is about understanding that when dealing with nuclear powers, the counter-insurgency model has really no relevance whatsoever.

[1] <https://www.usni.org/press/books/airpower-war-against-isis>

[2] [https://www.rand.org/pubs/research\\_reports/RRA388-1.html](https://www.rand.org/pubs/research_reports/RRA388-1.html)

## **2nd MAW Marines Train with Finnish Air Force at Exercise ILVES**

07/18/2021

By Robbin Laird

Since 2018, the Marines have ramped up their efforts to train in the Nordic region and to operate in Cold Weather.

With the Nordics ramping up their defense capabilities, and working greater integration with each other and with their North Atlantic partners, there are enhanced opportunities for Marines to work in the region as well.

As VADM Lewis made clear last week in his speech at the FOC ceremony on July 15, 2021 aboard USS Kearsarge for Joint Allied Command Norfolk, the expertise of the Nordics is certainly a valued part of reworking North Atlantic defense. And for the North Carolina-based Marines, this means expanded opportunities to learn from our Nordic partners.

During my visit to 2nd MAW last week, I had a chance to talk with VMFA 115 about their time in Finland and will report on that later this month.

But for now I would simply highlight that what I learned during my 2018 visit to Finland about how the Finnish Air Force operates was reconfirmed as a core defense capability in the defense of Europe.

**I will focus in the interview piece on the cross-fertilization between Marine Corps and Finnish approaches going forward for regional and North Atlantic defense.**

In this article, I simply wished to highlight some of the photos from VMFA 115s visit to Finland.

In the featured photo, U.S. Marines with Marine Fighter Attack Squadron (VMFA) 115 are seen with Airmen from Finnish Air Force Fighter Squadron 31 at Rissala Air Base, near Kuopio, Finland, June 17, 2021.

Marines with VMFA-115 deployed to Kuopio, Finland in support of Squadron Visit ILVES (Finnish for “Lynx”).

According to 2nd MAW: “The purpose of Squadron Visit ILVES was to conduct air-to-air and air-to-ground training, improve proficiency in joint and multinational tactics, and enhance partnerships with international allies. VMFA-115 is a subordinate unit of 2nd Marine Aircraft Wing, the aviation combat element of II Marine Expeditionary Force.”

## **HMLA-169 Long-Range Self Deployment: H-1s in the Indo-Pacific Region**

07/18/2021

By 1st Lt. John Hardin and 1st Lt. Tess LaBossiere

KINAWA, Japan. – Marines with Marine Light Attack Helicopter Squadron (HMLA) 169 executed one of the longest maritime HMLA self-deployment flights in 1st Marine Aircraft Wing history during exercise Tiltrotor/Rotary Wing (TR/RW) 2107. TR/RW 2107 is a unilateral exercise at Misawa Air Base, Japan that demonstrates 1st MAW's capabilities to maintain combat-readiness in a maritime environment.

“The significance of self-deploying HMLA-169 over 1,200 miles demonstrates our ability to execute Distributed Maritime Operations under the Expeditionary Advanced Base Operations (EABO) construct,” said LtCol Eric Fleming, Commanding Officer of HMLA-169.

TR/RW 2107 is part of the Aviation Training Relocation Program designed to integrate air capabilities in unfamiliar environments and further develop and refine tactics, techniques, and procedures within EABO operations. Marine Aircraft Group (MAG) 36, to include Marine Medium Tiltrotor Squadron (VMM) 262 and HMLA-169 are supporting with MV-22 Ospreys, UH-1Y Venoms, AH-1Z Vipers and 300 Marines and Sailors.

For this iteration of TR/RW, the squadrons are conducting a range of training evolutions from close air support (CAS) to Ground Threat Reaction (GTR). CAS is an offensive air support mission that integrates aviation with ground combat efforts; enabling swift and mobile firepower against enemies near friendly forces. GTR is designed to help Marines develop tactical maneuvering techniques.

“This exercise is an excellent example of the capabilities of the H-1s in the Indo-Pacific. It proves that we can range any adversary in the Pacific theater and conduct missions such as command & control, close air support, deep air support, and aerial reconnaissance with expeditionary and distributed sustainment support,” said Fleming.

EABO's are not tied to any specific piece of terrain. The forward posture and advanced level of readiness means that 1st MAW can establish expeditionary advanced bases at the time and place of its choosing.

1st MAW trains continuously in challenging and realistic environments and scenarios. The TR/RW events provide an opportunity for 1st MAW to train in different environments and benefit from the advanced training ranges and capabilities in mainland Japan.

This article was published by 1st Marine Aircraft Wing on July 15, 2021.