Standby Five Line

The future of Marine light attack

by Capt Brendan O'Donnell

AH-1 Cobras and UH-1 Hueys have faithfully served overhead Marine riflemen for five decades. From the jungles of Vietnam to the deserts of Iraq and Afghanistan, "Skids" have admirably served as a highly responsive and lethal close air support platform. Changes in how the Marine Corps structures itself and fights in the 21st century demand a reexamination of how Marine Light Attack fights, trains, and deploys—acknowledging the changing and increasingly lethal operational environment while continuing to refine and develop our strengths. Since the last H-1 left Afghanistan half a decade ago, the Marine Light/Attack Helicopter Squadron (HMLA) community has been intensely focused on how it can contribute to the renewed emphasis on great power competition This is a difficult problem against a peer competitor. This year, Gen Berger acknowledged the decreasing relevance—in the context of a Pacific fight—of the H-1 platform in his *Commandant's Planning Guidance* and then more directly in the *Force Design 2030* message, which characterized the H-1 as "operationally unsuitable for our highest priority maritime challenges" and called for a divestment of two of seven squadrons.

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H-1 helicopters are indeed operationally unsuitable in a mutually contested battlespace characterized by highly proliferated, long-range, modern air and coastal defense systems. The aircraft's short-range, vulnerability, and limited firepower (in the context of a Naval fight) combine to make a platform ill-suited to support the Navy and Marine Corps' concept of Distributed Maritime Operations (DMO) against a peer-level adversary.[1] DMO calls for U.S. naval forces (to include embarked Marines) to

> operate at sea in a less concentrated, more distributed manner, so as to complicate an adversary's task of detecting, identifying, tracking, and targeting U.S. naval forces, while still being able to bring lethal force to bear against adversary forces.[2]

This places a necessary design emphasis on speed and range for supporting aircraft to expand the "blanket" of fires and logistics coverage that DMO attempts to create.

Therefore, in the era of DMO, we must examine how we think the HMLA should deploy and shift our focus to where our strengths remain—close air support in a low-to-medium threat environment in the CENTCOM and AFRICOM Theaters—while still leveraging the advantages presented by seabasing: the principle character of our Service and a unique capability we can bring to the joint force commander.[3]

All H-1 helicopters have a limited capability to maintain forward presence in a contested environment. *(Photo by Petty Officer 3rd Class Ryan Breeden.)*

Range & Threat: The Challenges of INDOPACOM

H-1s have an extremely limited capability to maintain a persistent forward presence in a mutually contested environment. The countertactics required to deny acquisition and lethal engagement by 21st century surface-to-air missiles (SAMs) prevent H-1s from meaningfully contesting a peer-level competitor without significant shaping by other assets. While detailed discussions on adversary threat capabilities and required countertactics must be limited at the unclassified level, it is imperative to acknowledge the fundamental problems with seabasing H-1 Helicopters

"Visions of a massed naval armada nine nautical miles off-shore in the South China Sea preparing to launch the landing force in swarms of ACVs, LCUs, and LCACs are impractical and unreasonable."[4]

"Mobility inside the WEZ is a competitive advantage and an operational imperative."[5]

against a peer adversary in the Pacific. The threat problem is simple: Chinese anti-air and anti-ship capabilities in the South China Sea, both in static positions and on surface combatants, present prohibitive interference to ship-launched helicopters and the L-Class ships hosting them. Highly lethal, long-range, and widely distributed anti-ship and surface-to-air missiles create a weapon engagement zone (WEZ) that extends from their launch sites many times beyond the combat range of helicopters. Range—really, *standoff*—is the ultimate defense against missile systems: a capability that is better enabled by fixed-wing and tiltrotor platforms.

The relatively short combat range of H-1s and the exposure to amphibious shipping required to launch them, combined with the significant SAM threat to helicopters, creates a compelling case to prioritize longer-range platforms on the deckspace H-1s traditionally occupy to better leverage these low-density ships. Commanders should strongly consider this change to the traditional MEU/ARG structure in the Pacific fight.

In current ARG/MEU constructs, the H-1 detachment is usually embarked on a *San Antonio*-class LPD, the only other air-capable ship in the ARG besides the LHA/D.[6] MV-22Bs have occasionally deployed a small detachment on the LPD but are much more frequently composited as a "full up" squadron on the big deck. A return to the "split-deck" MV-22 posture by pushing some of these assets to the small deck to replace H-1s has immediate advantages for aviation flexibility within the ARG.

A two-ship of MV-22s can provide a long-range, credible contingency response package, *without interrupting fixed-wing flight operations on the LHA.* With skids embarked on the LPD, MV-22s dedicated to contingency response cannot laager on deck and still allow F-35 flight operations; they must either be "slashed" and folded, preventing alert times inside of a 60-minute response, or airborne, which leads to other complications from a fuel and embarked troop welfare perspective. Conversely, a section of Ospreys laagering on deck on an LPD can provide sustained, quick response, long-range tactical recovery of aircraft and personnel/personnel recovery support to fixed-wing strike operations, without interrupting LHA flight operations.[7] Embarked Marines can remain outside of the aircraft, keeping their legs fresh until called upon. This can extend beyond just the ARG as well, as a carrier strike group in its current construct lacks any organic capability for long-range over-land combat search and rescue/tactical recovery of aircraft and personnel.

Prolonged maintenance of L-Class ships as the platforms age, combined with the renewed emphasis on distributed operations in the Pacific, will act in concert to prioritize the MV-22 over H-1s on increasingly limited deck space. The *2019 Commandants Planning Guidance*, *Force Design 2030*, and DMO all place an emphasis on distributing long-range, shorebased anti-ship and surface-to-air missile systems while simultaneously keeping forces ashore as agile and lightweight as possible. Any long-range missile will by nature be very large and extremely heavy—the Naval Strike Missile, a top acquisitions priority and key enabler for dispersed long-range fires, weighs 900 pounds—and keeping forces ashore resupplied with missiles and fuel beyond what they debark with will necessitate aerial delivery to maintain any sort of lightweight footprint. Replacing the H-1 detachment with MV-22s on the LPD will allow the MEU commander to resupply forces ashore from two separate ships simultaneously—which themselves can distribute over a large area—multiplying the ARG's effective area of influence.

To free up space on shipping while maintaining HMLA in the AOR, a commander could elect to push H-1s ashore to forward-postured expeditionary advance bases (EABs) in the First Island Chain. This introduces more problems. Using a MEU HMLA detachment as an illustrative example, a 4 x AH-1/3 x UH-1 ashore detachment will incur a logistics footprint including food and water for at least 100 Marines, 5000lbs of fuel per section per sortie, and a very substantial ordnance, supply, and petroleum, oil, and lubricant allotment. This will all serve to hamper the EAB's mobility and create further dependence on heavy lift assets and engineering support, all for an at best suspect offensive capability against adversary surface combatants.

"The imperatives of maritime competition, deterrence, and conflict in an era of warfare dominated by the emergence of a mature precision-strike regime demand change."[8]

The Fight Beyond INDOPACOM & The Case for Skids

While the H-1's continued effectiveness is doubtful against a peer-level competitor, especially in INDOPACOM, the aircraft can still excel in other conflict areas and do so off of amphibious

shipping. But we must first rethink both how a MEU ACE is structured and how Marine aviation, in particular H-1s, are employed in support of the joint force. We must move away from compositing just for tradition's sake; a large, complex unit such as the current ACE *is not always the answer*. It is OK for the ACE's primary customer to be units beyond the MEU BLT.

"We have had one framework, one construct for a MEU: all seven of them had to be mirror image for the last couple of decades because they were largely flowing to the Middle East to do a mission in Central Command. Going forward, what they were originally designed for, where they're global, now we should have the latitude for a Marine Expeditionary Unit in one place may look different than another Marine Expeditionary Unit." (Eckstein, 2020)

Other Marine Corps aircraft have precedent for deployments as a single squadron or detachment—notably the TACAIR and MV-22 community, which have provided consistent support to Operation INHERENT RESOLVE since its inception within the Special Purpose MAGTF structure. However, outside of major combat operations, the Marine Corps has had a relative hesitance to "package" rotary-wing aviation support to the joint force outside the traditional composite ACE built around a Marine Medium Tiltrotor Squadron (VMM) or to hange up the traditional ACE structure outside of small adjustments to numbers of aircraft. While a return to a full-squadron "dirt det" is certainly the dream of many HMLA ready rooms (and should not be completely ruled out as a capability), there are challenges of intermediate-level maintenance support, diplomatic clearances, political optics, force protection, and logistics support outside the capabilities organic to a squadron. Many of these issues are mitigated or altogether eliminated at sea. This ability to provide flexible, sustained, rotary-wing close-air support fires within the littorals is unique in the armed forces. We must leverage this capability and enable support to the customer—whether he is wearing MARPAT or MultiCam—from seabased platforms.

Many of the world's population centers, especially in the Middle East and Eastern Africa, lie within the combat range of seabased H-1s in international waters. A MEU expected to spend most of its deployment tasked in support of CENTCOM and AFRICOM can make a good case to retain the H-1 detachment as an extremely effective CAS aircraft in a low-to-medium threat environment while mitigating the challenges of a "dirt det." Are low-intensity conflicts in these areas the primary focus on the *National Defense Strategy* and the *Commandant's Planning Guidance*? No, they are not, but the last twenty years have repeatedly shown us that great harm can be done to Americans as much from the Syrian and Libyan deserts as it can be from Beijing. While the Marine Corps can and should posture for the pacing threat, we cannot turn a blind eye to maintaining our substantial capabilities to fight elsewhere.

Indeed, in one of the only combat operations conducted by H-1s since Afghanistan, 22nd MEU H-1s successfully conducted dozens of strikes against ISIS-Libya in 2016 as a part of Operation ODYSSEY LIGHTNING. With the exception of this admirable example, Marine Corps rotary-wing aviation's contributions to the primarily SOF fight in CENTCOM and AFRICOM have been sparse compared with our sister Services. While there has been a persistent joint demand for conventional rotary-wing CAS in both CENTCOM and AFRICOM— Army AH-64s have been consistently present in Western Iraq and Syria supporting Operation INHERENT RESOLVE—H-1s have been absent from this theater in favor of maintaining a seabased presence on a MEU to support contingency response. While a MEU is characterized by persistent, flexible contingency response, requests for joint support should be realistically explored—in some sense, contingencies in and of themselves.

A potential compromise to maintaining a seabased HMLA and freeing up deck space for more capable assets for the INDOPACOM fight is the *Lewis B. Puller*-class expeditionary mobile base. These ships provide hangar space and deck spots similar to that of a *San Antonio*-class LPD, which would allow sustained operations afloat in essentially the same posture as on a traditional amphib. If threat to shipping is not a major concern, these ships could provide seabased H-1s with an excellent capability to provide prolonged contingency response packages. This has not been lost on the Army, who have experimented with basing AH-64Es on the *Puller* in a demonstration of the capability.

"Two skids in the overhead—ready for work!"

Over their 50-year operational history, H-1s have performed with distinction in "every clime and place." Many Americans under fire lived to fight another day because of accurately delivered fire support from a section of H-1s. This mission endures. Joint operations in Western Iraq, Africa, and Syria have demonstrated a persistent need for forward deployed rotary-wing fire support. The continued deployment of AH-64s in support of OIR, including National Guard units, have demonstrated this. H-1s could be a viable supplement to this enduring mission and future conflicts in CENTCOM and AFRICOM.

Both the AH-1Z and UH-1Y are well-suited to low- to medium-threat CAS:

- Powerful engines and a large power margin, allowing carriage of a full complement of precision and unguided munitions, including up to 16 AGM-114 Hellfire on the AH-1Z.
- High fidelity sensors: the Target Sight System on the AH-1Z is one of the highest-fidelity helicopter mounted sensors in the world, capable of detecting targets up to 30km away.
- The "mixed section" capability, unique in American aviation: the Cobra-Huey team provides a ground force commander with two fully-capable CAS aircraft replete with both PGMs and low-collateral door guns, as well as an inherent capability to provide limited utility support, troop lift, and CASEVAC.
- The *only* conventional force RW forward air controller (airborne) (FAC) (FAC[A]) capability, which is core mission essential task. As legacy fixed wing platforms transition to the F-35, the AV-8, and F/A-18 FAC(A) mission essential task will move to a core (plus) status, leaving the H-1 as the *only* Marine Corps platform with FAC(A) as a core mission essential task.

Admittedly, there *are* substantial capability gaps with several mission systems: the lack of SATCOM radios, active IR countermeasures, joint datalinks, and video downlink are significant obstacles to joint integration. However, H-1s have the capability, right now, to perform and excel in this mission set, and procurement efforts are underway to close these gaps.

The Apache's continued Operation Inherent Resolve deployment is the largest example of the ongoing demand for a capable, low-intensity CAS asset. SOCOM also has an active request for proposal (February 2020) for an armed overwatch program with the following capabilities:

> Will provide Special Operations Forces deployable and sustainable manned aircraft systems fulfilling CAS, Precision Strike, and SOF Intelligence, Surveillance & Reconnaissance in austere and permissive environments.[9]

While this program is framed in the context of a hypothetical fixed-wing platform (this request for proposal was announced shortly following the Air Force's cancellation of the AT-6/A-29), it should be noted that specifically delineated mission sets are CAS, armed reconnaissance, strike coordination and reconnaissance, and forward air controller (airborne).[6] *All four of these* are HMLA mission essential tasks. Discussions on integration of Marine Corps aviation fires in support of SOF are available at higher classification levels.

Persistent demands for rotary-wing fire support in Operation Inherent Resolve as well as the Armed Overwatch program demonstrate that the desire for an "H-1-like" capability is clearly present. Marine commanders should consider more aggressively advertising H-1 support, whether from a MEU or dirt det, on a strictly defined basis to theater commanders if there is a demand.

Recommendations

We must acknowledge the limitations of the H-1 platform in the future fight in INDOPACOM, especially within the construct of DMO. We must also realize its untapped potential supporting joint operations in other conflict areas throughout the world and the community's low-density, high-demand capabilities—in particular rotary-wing CAS and FAC(A). The following efforts would leverage these capabilities while making necessary changes to force structure elsewhere to best enable the Marine Corps' contribution to DMO:

- Continue the demand signal for mission system improvements to better enable contributions to the joint fight and aircraft survivability—namely, SATCOM, Link-16, and DAIRCM.
- Replace the Okinawa Unit Deployment Program with established "packaged" HMLA detachments, of a similar Squadron (-) construct, structured to support specific close air support force requests as they are developed.
  - Beyond tactical considerations, the divestment of two squadrons, if current deployment structure remains unchanged, will begin to create issues with MET proficiency maintenance among remaining squadrons. Decreased CONUS dwell time will aggravate existing issues, particularly with FAC(A) certification.
- Particularly in 2d MAW, the consolidation of Marine Corps Special Operations Command in Stone Bay creates an excellent opportunity for MAG-29 HMLAs to build and foster a continued, mutually beneficial relationship in CONUS. Predeployment training for both an Marine Special Operations Battalion and a hypotheti-

The H-1 Cobra-Huey mixed section provides a ground commander with two flexible CAS platforms with multiple complementary capabilities. *(Photo by Cpl Claudia Nix.)*

Continued deployments of the AH64 Apache gunships to Operation INHERENT RESOLVE shows the ongoing need for a RWCAS capability. *(Photo by Sgt Thomas Stubblefield.)*

cal supporting HMLA could mirror each other, providing the supported commander a team of highly trained raiders with an existing relationship with an HMLA. Predeployment training would provide both elements with a level of air-ground familiarity without equal across the joint force.

• Continue to foster relationships with non-Marine Corps fires support agencies. Both 3d MAW and 2d MAW HMLAs already do this at the squadron level, with frequent detachments for training supporting the Airforce Joint Terminal Attack Controller Weapons School, U.S. Army Special Forces training, and Naval Special Warfare deployment workups. This should be sustained and enabled at a MAG-level, with invitations extended to these agencies to attend Service-level evolutions like Weapons and Tactics Instructor Course and the semi-annual FAC(A) exercises hosted by MAG-39.

• Explore the long-term viability of HMLA deployment onboard *Puller*-class ESBs to provide seabased contingency response outside the construct of a traditional MEU. This support would be OPCON to a theater-level MEB and TACON direct to the supported commander. This frees up more L-class ships while maintaining the advantages seabasing confers.

The capability of the H-1 platform to fight and excel in the Pacific is at best as a secondary enabler, providing force protection to EABs or ship point defense. These are important tactics, techniques, and procedures that must be explored at the squadron, group, and wing level, as well as at MAWTS-1. But the aircraft's significant capability as a joint CAS asset in theaters beyond INDOPACOM cannot be denied and should be enabled by all levels of command, up to and including task organized reinforced HMLAs to deploy supporting specific force requests.

Marines want to fight. While the changing operational environment must force us to realistically assess our capabilities to do so against a peer competitor, history has shown us that future conflict will not be limited to great power competition. Marine Light Attack remains a highly capable close-air support asset and is ideally suited to fill operational demands in CENTCOM and AFRICOM. They need only to be set loose.

Notes

1. DMO has two additional enabling concepts: EABO and littoral operations in a contested environment. While these operational concepts merit extensive discussion on their own merit, this paper will focus on the specific application of HMLA within the broader DMO framework and assume reader familiarity with expeditionary advanced base operations and littoral operations in a contested environment.

2. Ronald O'Rourke, "Navy Light Amphibious Warship (LAW) Program: Background and Issues for Congress," (Washington, DC: Congressional Research Service, May 2020).

3. Low-to-medium threat refers to an operating environment where the adversary's air defense capabilities, or lack thereof, allow friendly aircraft to either freely operate or with a minimal impact on tactical employment.

4. Gen David H. Berger, *38th Commandant's Planning Guidance,* (Washington, DC: July 2019).

5. Headquarters Marine Corps, *Force Design 2030,* (Washington, DC: March 2020).

5. An "Air Capable Ship" refers to an L-Class surface combatant specifically designed to sustain long-term aviation operations. In the current ARG structure, the *San Antonio*-class LPD, *Wasp*-class LHD, and *America*-class LHA are considered air-capable. LSDs can accommodate aircraft for a short time but lack the facilities to perform all but the most basic maintenance. They also typically cannot support aircraft ordnance operations.

6. While MV-22s can temporarily laager on the *Whidbey Island*-class LSD—and will be able to on its replacement class—LSDs are not air capable ships, and deck space is frequently not available to fit a two-ship. This capability is nothing close to what permanently basing the aircraft on the LPD affords.

7. Department of Defense, *Armed Overwatch Other Transaction for Prototype Industry Day Announcement*, (Washington, DC: February 2020).

8. Gen David H. Berger, "The Case for Change," *Marine Corps Gazette,* (Quantico, VA: June 2020).

9. Megan Eckstein, "Marines' Force Design 2030 May Allow MEUs Tailored for Different Geographies, Adversaries," *USNI News,* (April 2020), available at https://news.usni.org.