



HMM-161 (REIN): AVIATION COMBAT ELEMENT AT THE READY

Story and Photos by Wendy Leland

When *Tarawa* (LHA 1) began her scheduled six-month cruise in the Arabian Gulf in February, it was evident that this was going to be anything but a routine deployment. The ship was abuzz with activity as the members of the 15th Marine Expeditionary Unit (Special Operations Capable) prepared to put their training to the test. After playing a key role in transporting scores of Marines to shore bases in Kuwait, the aircraft of Marine Medium Helicopter Squadron (HMM) 161 Reinforced (Rein), the 15th MEU (SOC)'s aviation combat element (ACE), returned to the ship to prepare for what is now known as Operation Iraqi Freedom.

The ACE is one of four components that make up a typical MEU (SOC), which is a type of Marine Air-Ground Task Force (MAGTF) that combines air, ground and logistic assets into a flexible fighting force. In addition to the ACE, a command element, ground combat element (GCE) and combat service support element (CSSE) comprise the MEU, which embarks three ships of a Navy amphibious ready group (ARG) under the command of an amphibious squadron. There are a



total of seven marine expeditionary units—the 11th, 13th and 15th under the 1st Marine Expeditionary Force (MEF) on the West Coast; the 22d, 24th and 26th under the 2d MEF on the East Coast, and the 31st under the 3d MEF in Okinawa, Japan. These forward-deployed forces can respond to changing threats at a moment's notice, with the ability to take a mission from planning to execution in a matter of hours.

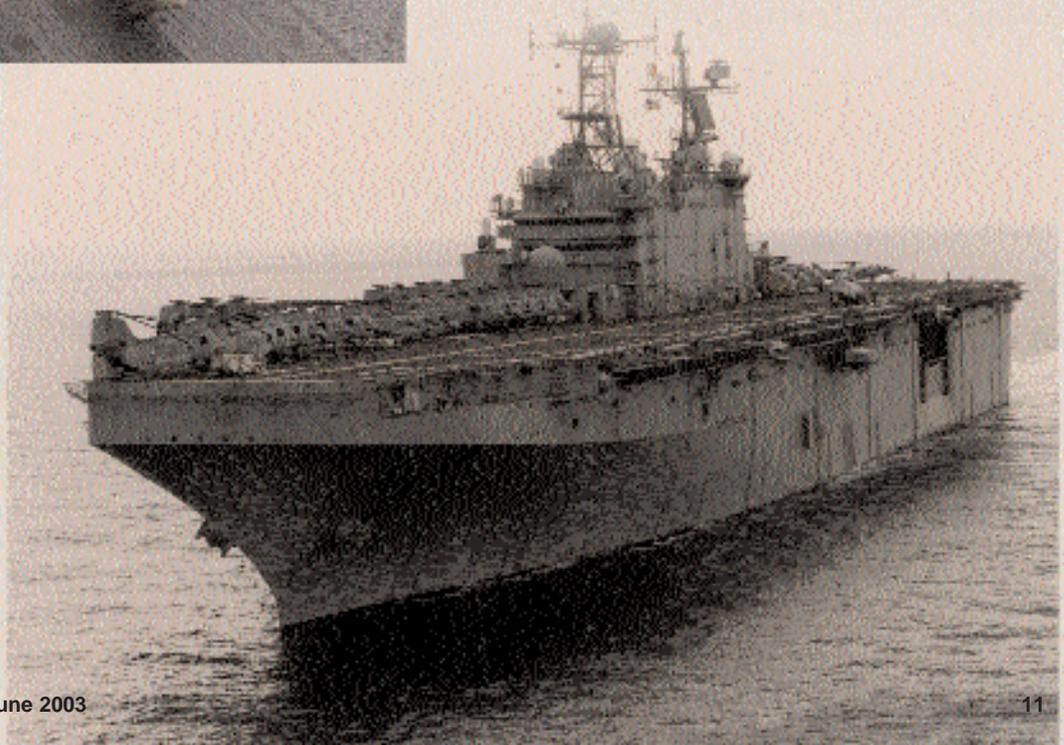
A MEU can be called upon for a variety of missions, including amphibious or expeditionary assault, security operations, noncombatant evacuations, humanitarian assistance, and special operations. Consisting of approximately 2,000 Marines, “The MEU’s really a small unit in some regards, but it’s a very capable unit,” Colonel Thomas D. Walhauser, CO of the 15th MEU, explained. “In terms of Operation Enduring Freedom or the global war on terrorism, the MEU is a very critical asset overall.”

Every time a MEU comes together, it is a different entity than during its previous deployment. The command element may be essentially the same, but the ACE, GCE and CSSE change from one deployment to the next. A six-month workup period ensures that all components interface smoothly. “We have 23 mission tasks that we’re supposed to perform before we leave San Diego [Calif.],” Col. Waldhauser said, “and the six-month workup with our supporting elements is capped off by a special-operations-capable exercise.” The MEU is not considered special operations capable until it passes the SOC-EX, during which its performance is judged by fellow Marines. The MEU (SOC) is then ready to begin its six-month deployment, after which all the component elements disband and return to their parent organizations.

Each MEU’s aviation combat element is formed around the nucleus of a Marine medium helicopter squadron, which deploys with its



Right, *Tarawa* (LHA 1) and the ships of her amphibious ready group—*Duluth* (LPD 6) and *Mount Rushmore* (LSD 47)—began a WESTPAC deployment with the 15th Marine Expeditionary Unit (Special Operations Capable) in February 2003. The MEU’s aviation combat element consisted of CH-46E Sea Knights of HMM-161, facing page top, reinforced by detachments from other squadrons. Above, the ACE is responsible for transporting ground Marines ashore and flying support missions from ships or forward bases.

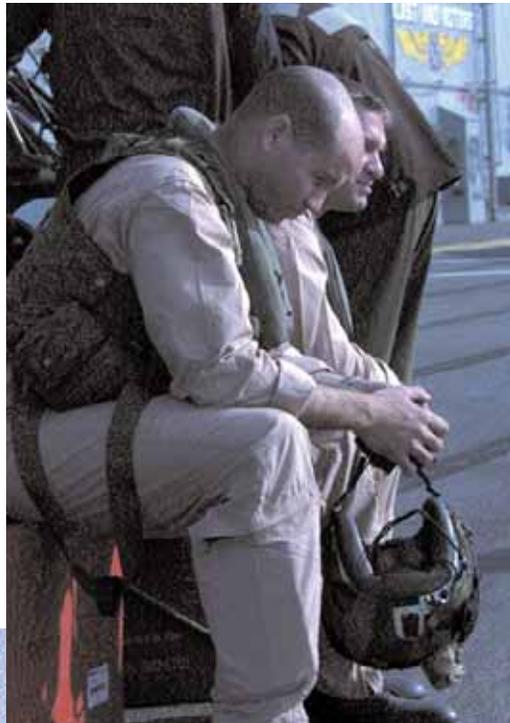


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entire complement of CH-46E Sea Knight helicopters, pilots, aircrewmen and maintainers. The Sea Knight squadron is reinforced by detachments from other squadrons, with the exact makeup determined by the tactical situation, the MAGTF's mission, and space limitations within the ARG. For this western Pacific deployment, the ACE was comprised of 12 Sea Knights of HMM-161, reinforced by detachments of 4 CH-53E Super Stallions from Marine Heavy Helicopter Squadron 361, 3 UH-1N "Hueys" and 4 AH-1W Super Cobras from Marine Light Attack Helicopter Squadron 267, and 6 AV-8B Harrier IIs from Marine Attack Squadron 311. Captain Ned Biehl, CH-46E pilot and weapons and tactics instructor for HMM-161, explained, "When everyone comes together we grow from a normal-sized 'Frog' squadron of about 120, to 400-plus Marines." In addition, two KC-130 Hercules of Marine Aerial Refueler Transport Squadron 252 support the MEU from land bases in the region.

This combination of rotor-wing and fixed-wing aircraft brings a wide range of capabilities to the table. The ACE's missions include transporting troops, defending transport aircraft as they enter a hostile zone, and providing an attack capability with both close and deep air support to the troops on the ground. With the ability to operate from any of the ships of the ARG or from forward land bases, the ACE is a

Right, a landing signal enlisted Sailor directs an HMM-161 (Rein) CH-53E Super Stallion in for a landing on board *Tarawa*. The Super Stallion provides a heavy lift and transport capability to the ACE. Bottom, with regular flight operations suspended while the ship transits the Strait of Hormuz, a UH-1N waits on emergency standby. Below, Huey pilots 1st Lt. Don McCowan, foreground, and Capt. Bryan Wittmer await the call to action outside their helo.





versatile asset that can be configured as appropriate for each particular mission.

The CH-46E Sea Knights make up the majority of the squadron's aircraft complement. "Our main mission is assault support, basically to get troops in and out of combat zones," explained pilot Capt. Ray Ozambela. Assault support can have many facets, such as resupply, casualty evacuation, tactical recovery of aircrew and personnel, or visit-board-search-and-seizure missions. "That all encompasses assault support because we are supporting the people doing the assault by getting them where they need to go," Ozambela said. Compared to their Navy counterparts, the MEU's CH-46Es carry more fuel and are outfitted with aircraft survivability equipment such as infrared countermeasures and chaff and flare dispensers to help them survive in a hostile zone.

Like its rotor-wing brethren, the CH-53E Super Stallion can conduct a variety of missions. Primarily considered an assault support platform, the huge helicopter provides a significant long-range capability that is enhanced by its ability to aerial refuel. Its internal carrying capacity and external lift capability make it the

platform of choice for heavy lift missions. In addition, "We have what we call the Robertson System, a tactical bulk fueling system. We can carry bladders in the back that can refuel other types of aircraft," explained Major Jason Gerin. "We can take fuel from a C-130, land on the ground and then refuel CH-46s or AH- or UH-1s so they can get further inland and be self-sufficient fuel-wise."

Outfitted solely with medium-range suppressive weapons such as 50-caliber machine guns, when operating in a tactical scenario the Sea Knights and Super Stallions would typically be escorted by platforms with more firepower. The ACE relies on two helicopter types to perform the escort role, the UH-1N Huey and the AH-1W Super Cobra, collectively known as the "skids." UH-1N pilot Capt. Chris Chown explained, "The escort's job is to protect the assault support helicopters while they're going to the zone. Once the ground guys are on the zone, we roll into close air support for them." As a utility helicopter, the Huey can also conduct other missions, such as transport, medevac and special operations support. The UH-1Ns bring a



Above, deck crew personnel confer with the pilots of an AH-1W Super Cobra to ensure all systems are go before launch. Right, ordnancemen load AGM-114 Hellfire missiles on a Super Cobra. Facing page, Marines enjoy a lighter moment in the cabin of a UH-1N Huey chocked on one of the portside spots during a break in flight operations on board *Tarawa*.

variety of firepower for suppressive fire, such as 2.75" rockets with various warheads, 50-caliber and 7.62mm machine guns, and the GAU-17 minigun. What makes the Huey unique is that "in a typical mission you would have a command and control Huey," ACE CO Lieutenant Colonel Mark Peters explained. "We'll put the ground mission commander and the air mission commander in the same aircraft, the idea being they can talk back and forth and hopefully make better decisions because they're collocated."

The Super Cobra provides the ACE with an all-weather, day and night attack option to support the Marines on the ground. With an array of ordnance—including tube-launched, optically tracked wire-guided missiles; Hellfire missiles; unguided rockets; and a



20mm cannon—the Super Cobras can operate in antitank roles and perform armed and aerial reconnaissance. Close air support, in which air assets are firing in close proximity to friendly troops, and deep air support further behind enemy lines are also on the Cobra's mission profile. Capt. Seth Wolcott said, "We're really flexible because we can operate through very austere conditions. For instance in Afghanistan, it was just dust essentially,

and all we had to do is get a CH-53 to come in there with ordnance and fuel. We can, in the middle of nowhere, refuel ourselves and rearm ourselves with ordnance and get back into the fight on very short notice.”

Both the Hueys and the Cobras can be designated as airborne forward air controllers (FAC-A). The forward air controller on the ground, who is terminally controlling all the ordnance being employed, can pass control to the FAC-A in the Cobra or Huey as needed. The airborne controller can then “coordinate air strikes, call in rotor-wing fires and integrate that with fixed-wing fires, and get on the radio to the artillery battalion and coordinate air, ground and surface fires,” explained Capt. Chown.

While the majority of the ACE’s assets are rotor-wing, it includes one fixed-wing platform serving in the fighter-attack role, the AV-8B Harrier II. Pilot Capt. Michael J. Black explained, “As a jump jet we’re designed to be close to the battlefield, go out short distances, drop bombs, come back and reload. We can get closer to the battlefield than anyone.” The unique thrust vectoring that gives the Harrier its vertical/short takeoff and landing ability also enables the aircraft to conduct rolling takeoffs at short distances. “With a typical loadout we can take off in about 700 feet,

whereas the average F-18 would probably require about 3,000 to 5,000 feet,” Capt. Black said, “so we can go to a much smaller, more obscure airfield.” Like the skids, the Harrier can provide close air support for ground troops, deep air support and helicopter escort, but it is unique in its ability to conduct offensive missions against enemy ground-to-air defenses. Its firepower can include an array of smart weapons such as guided bomb units (GBU), and conventional weapons such as Rockeye, MK 82 or MK 83 bombs and Sidewinder and Maverick missiles.

The Harrier is an even more potent bombing platform with the addition of the global positioning system-coupled inertial navigation system and the Litening pod. “The frustration that our guys had when they did Operation Enduring Freedom was that they had GBU’s but they had no self-lasing capability,” Capt. Black said. In order to drop their smart weapons, the Harrier pilots had to wait for another aircraft, such as an F-14 Tomcat, F/A-18 Hornet or F-16 Fighting Falcon, to arrive on scene to laser-designate the target. Now, they can use the Litening pod to designate their own targets, enhancing their value to the mission planners. “Nobody really wanted us because we couldn’t lase for ourselves. Now it’s like, ‘Where are the Harriers? We want these guys. They have an incredible platform for self-designating and

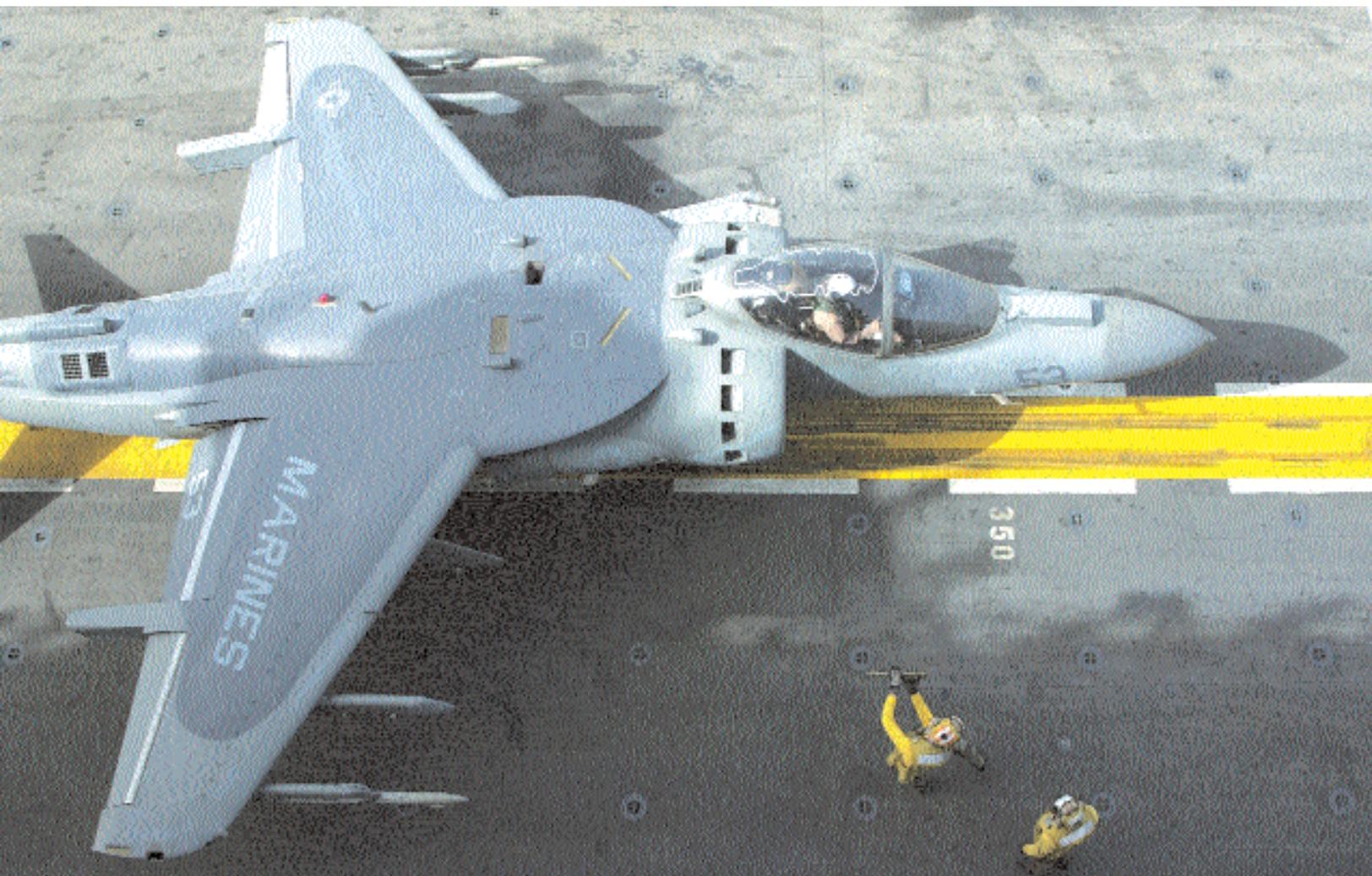


they're very accurate bombers.”

Keeping this variety of aircraft flying requires a dedicated maintenance effort. Marines in the flightline shop provide operational-level maintenance, troubleshooting and repairing aircraft components while they are still on board the aircraft. For intermediate-level maintenance, the ACE is augmented by detachments from each Marine Air Logistics Squadron that supports a particular aircraft type—MALS-13 from MCAS Yuma, Ariz., for Harriers; MALS-16 from MCAS Miramar, Calif., for H-46s and H-53s; and MALS-39 from MCAS Camp Pendleton, Calif., for the AH-1Ws and UH-1Ns. These Marines integrate with the Navy work centers aboard ship, but are still administratively connected to the ACE.

A single maintenance control shop located close to the squadron's ready room serves as the interface between the maintainers and the pilots. “The maintenance controller is a senior guy who looks at an aircraft from the paperwork side to make sure there are no outstanding aircraft gripes or maintenance action forms before it goes out and flies,” Capt. Biehl said. Maintenance control, the pilot and, if

Right, an enlisted Marine prepares the cockpit of an AV-8B Harrier II as pilot Capt. Michael J. Black arranges his survival equipment prior to takeoff. Below and facing page top, the Harrier utilizes its unique thrust vectoring to assist in rolling takeoffs from the relatively short flight deck of an amphibious ship.





Above, the aviation combat element is augmented by personnel from Marine Air Logistics Squadrons, who join with the ship's company to provide intermediate-level aircraft maintenance. Below right, an aircrewman carries a 50-caliber machine gun across *Tarawa's* flight deck.

there is one, the crew chief all review the maintenance books and sign off on the aircraft before flight. Pilots and crew chiefs are both responsible for preflighting the aircraft on the deck as well.

Enlisted aircrew personnel are integral members of the team for all the helicopter platforms except the two-place Super Cobra. Dual-hatted from other shops such as flightline, they fly with Sea Knights, Super Stallions and Hueys as aerial observers and/or gunners. An enlisted crew chief ensures that all the systems and processes aft of the cockpit are running smoothly. "They can also assist when things go wrong inside the cockpit," Capt. Biehl said. "They're the duty experts, and if something

should go wrong with the aircraft they know all the ins and outs of it."

This spirit of teamwork is not only the hallmark of the aviation combat element, it is also representative of how the MEU integrates with the Navy ships on which it is embarked. By transporting the Marines and their equipment to the operational theater, supporting them while on shore and providing a moveable base of operations for Marine aircraft, the ARG and its Sailors are integral contributors to the MEU's success.

Operational requirements during the current conflict in Iraq may change the backdrop against which the 15th MEU and its aviation combat element operate. But whatever challenges may come, it is clear that HMM-161 (Rein) will continue to do what it does best: support the warfighters on the ground. As Lt. Col. Peters concluded, "We've got a great group of folks and they're ready to do whatever we need to do." ✈

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