

# THE QUEST

SPRING 2016

FULFILLING OUR NATION'S PROMISE



# THE DIRECTOR'S NOTES



Since our last edition of The Quest, published on Dec. 4, 2015, DPAA has continued to benefit from the partnership and sage advice of longtime government stakeholders in the accounting community, family and veterans service organizations, and families of the missing.

Together with other DPAA leaders, I spent a busy and inspiring week in Hawaii in early December, attending the 74th commemoration of the attacks on our nation at Pearl Harbor, and attending a similar ceremony remembering the service and sacrifice of the Sailors and Marines on the USS Oklahoma. Both events were fitting and emotional reminders of why our mission is so important: committing ourselves to the fullest possible accounting of those still missing from our nation's past wars, honoring veterans and families of those who have served and made the ultimate sacrifice, and demonstrating to those who currently serve in uniform that our nation will do our very best to bring them all home when they deploy in harm's way. Meeting many of the family members of our missing Sailors and Marines

from the USS Oklahoma helped us to reflect and re-double our commitment to complete USS Oklahoma identifications as quickly as possible.

Over the last few months, DPAA has been visited by the National Leadership of the VFW, American Legion, Military Order of the Purple Heart, the Korean War Veterans Association, and many others. All our stakeholder organizations pledged their full support, and were thankful of our efforts on behalf of veterans and POW/MIA families that are a big part of their mission. We look forward to collaborating with them in the months and years ahead.

As folks reading this update are probably aware, DPAA conducts regularly-scheduled family member updates in cities across the country throughout the year, recently in Los Angeles, Honolulu, Atlanta, and Seattle, briefing nearly 700 family members on their loved ones' cases. Austin is on April 16th, Boston on May 14th, and Green Bay on Sept. 10th. In addition, we are conducting government briefings to the Vietnam War families in Crystal City June 22-25, and Korea/Cold War families August 10-12. A busy period indeed!

On Jan. 8, 2016, DPAA reached full operational capability, as mandated by the Secretary of Defense's memo of March 2014. This declaration signifies the completion of the reorganization of the Department of Defense's legacy past conflict accounting organizations into a single, unified defense agency. Our new organizational structure has been finalized.

In February I completed a productive trip to Russia, Germany, France, and the Netherlands to cover a host of issues strategically important to our mission in Europe, and to set the agenda for a US-Russia Joint Commission plenum on POW/MIA issues early this summer – something we haven't done in many years. The rest of our trip in Europe was committed to meetings with US Ambassadors, foreign partner officials, counterpart organizations (especially the American Battlefield Monuments Commission), a noteworthy and educational visit to the Dutch Recovery and Investigation Unit, and other strategic partners -- ALL committed to helping DPAA accomplish our mission and increase the number of families to whom we can provide answers from our past conflicts in Europe. It was humbling to see the respect and appreciation displayed by our foreign partners and the profound willingness of foreign citizens to volunteer their time and effort on our behalf.

I have now been on the job for nine months, and I'm still learning intricacies of our mission every day – thank you one and all for assisting in that education. I am profoundly encouraged by the dedication of the people who work at DPAA, the organizations with whom we partner, and the families we serve. We have made some improvements in the accounting community, and will continue to do our very best to increase our ability to achieve the fullest possible accounting to their families and our nation.

Fulfilling our Nation's Promise!

# RECENTLY ACCOUNTED FOR

*As of March 18, 2016*

## WORLD WAR II

1st Lt. Leonard R. Farron, USAAF  
Chief Metalsmith Duff Gordon, USN  
Flight Officer Dewey L. Gossett, USAAF  
Chief Electrician's Mate Albert E. Hayden, USN  
Sgt. John C. Holladay, USMC  
Machinist's Mate 1st Class Vernon T. Luke, USN  
Seaman 2nd Class Dale F. Pearce, USN  
Ens. Lewis S. Stockdale, USN

## KOREAN WAR

Cpl. Davey H. Bart, USA  
Pvt. 1st Class David S. Burke, USA  
Sgt. Robert C. Dakin, USA  
Cpl. Eldon W. Ervin, USA  
Cpl. Dudley L. Evans, USA  
Pvt. 1st Class Roy A. Henderson, USA  
Sgt. 1st Class Raymond K. McMillian, USA  
Pvt. 1st Class James M. Smith, USA  
Cpl. Kenneth R. Stuck, USA  
Pvt. 1st Class Aubrey D. Vaughn, USA  
Cpl. David J. Wishon, Jr., USA

## VIETNAM WAR

Sgt. 1st Class Alan L. Boyer, USA  
1st Lt. Donald W. Bruch, Jr., USAFR  
Maj. Donald G. Carr, USAR

# *WELCOME HOME!*



# NEXT GENERATION DNA SEQUENCING

Story and Photos by MC2 Samantha Thorpe, Armed Forces Medical Examiner System

When American biologist James Watson and English physicist Francis Crick first discovered the double helix in 1953, they could not have imagined the huge strides DNA technology would take in just a few short years. From the 1977 development of the Sanger Sequencing technique by Frederick Sanger to the 1996 birth of Dolly the Sheep, the first ever cloned animal, to the 2003 completion of the Human Genome Project, which sequenced the human genome to 99.9 percent accuracy, scientists have continually improved upon their methods and techniques to lead us to the DNA Sequencing of today.

The DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL), which is part of the Armed Forces Medical Examiner System (AFMES) at Dover AFB, Del., is working with the newest innovation in Forensic DNA science, Mitochondrial DNA (mtDNA) Hybridization Capture and Next Generation DNA Sequencing (NGS).

Utilizing this new technology and process, scientists will be able to obtain mtDNA sequencing results from severely degraded DNA samples that previously failed with traditional sequencing methods.

“Over the past 15 years, AFDIL has been working with the Defense POW/MIA Accounting Agency (DPAA) to sequence mtDNA samples from 100 of 800 unknown Korean War service members interred, or buried, at the National Memorial Cemetery of the Pacific in Hawaii, also known as the Punchbowl,” said Dr. Timothy McMahon, Deputy Director of Forensic Services, Contractor with the American Registry of Pathology Sciences LLC. “The problem is that the mtDNA within the cells has been damaged by the environment and preservation methods used in the 1950’s.”



DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL) DNA Analyst, Holly Krantz, extracts mtDNA using filter columns to remove impurities.

McMahon explained that in 1953, as part of Operation Glory, North Korea turned over 4,167 deceased U.S. and NATO service member’s remains, 849 of which were not identified. The remains were sent to Camp Kokura, Japan, where they were prepared for burial using chemicals that were harmful to the mtDNA. Using new instrumentation, AFDIL was able to identify that the mtDNA obtained from these samples is far smaller than their current mtDNA sequencing testing capabilities. Once AFDIL was able to determine the size of the mtDNA, the scientists were able to develop a custom testing method using NGS technologies.



From left to right (Back row) Suzanne Barritt-Ross, James Canik, Christina Neal, Daniel Kahline, Joseph Ring, Sean Oliver, (Middle Row) Jennifer Higganbotham, Erin Gorden, Eric Ramirez, Aaron Fox, Jacqueline Thomas, (Front row) Lt. Col. Alice Briones, Kimberly Andreaggi, Bruche Trotter, Michelle Peck, Megan Poffenberger, Holly Krantz, Dr. Charla Marshall and Dr. Timothy McMahon, all members of the DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL) Next Generation DNA Sequencing (NGS) team, pose for a group picture.

“Since 2000, one hundred of the unknown service members have been disinterred from the Punchbowl by DPAA,” said McMahon. “Using current mtDNA sequencing methods, only one of the samples has been accurately sequenced. Thanks to NGS technologies, AFDIL will be the first forensic laboratory in the U.S. to utilize a laboratory developed mtDNA NGS sequencing method to conclusively sequence the smallest, most degraded forensic samples. Additionally, this method has the potential to allow for the identification of any unknown service member whose mtDNA has been chemically treated.”

Before this most recent scientific breakthrough, Sanger Sequencing was the forensic standard for

mtDNA sequencing, and had been for almost 40 years. The issue that occurred with this long-trusted technology was that it did not give AFDIL the capability to efficiently amplify small fragments, such as the remains from the Punchbowl, in order to sequence them using the Sanger method.

“These samples from the Punchbowl are unique because they were treated post-mortem and the chemicals used to preserve the remains severely damaged the mtDNA,” said Supervisory DNA Analyst, Kerriann Meyers. “Our current technology uses primers to target mtDNA fragments that are 120 base pairs in length, but our fragments from the Punchbowl are under 100 base pairs. I think a lot of analysts used to shy away from working with the Punchbowl samples because only 0.1 percent of





DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL) Research DNA Analyst, Jennifer Higginbotham, and Supervisory DNA Analyst, Kerriann Meyers, load samples onto the Next Generation DNA Sequencing (NGS) instrument.

the samples would come back conclusive and so it was very discouraging.”

In 2003, Senior Research Scientist, Dr. Odile Loreille, was hired to aid in the sequencing of the Punchbowl samples. Due to her background in ancient DNA, Loreille was able to understand the highly damaged mtDNA which then led her to begin work on a new sequencing method in 2010.

“Odile’s specialty was working with ancient DNA, which is DNA from archeological and historical specimens,” said Research DNA Analyst, Jennifer Higginbotham. “That experience is what gave her the insight to begin work on the new protocol. From there Dr. Charla Marshall, Chief, Emerging Technologies Section, Kim Andreaggi, Research Scientist and I

worked tirelessly to turn that idea into a forensic protocol, validate and then implement it.”

The massive parallel sequencer used to create the new NGS protocol was originally created to sequence small fragments of DNA with fewer than 350 base pairs, but AFDIL took it even further when they began work on sequencing mtDNA that could be smaller than 120 base pairs.

“Other laboratories are also making progress on [forensically] validating NGS, however none of them are working with samples as degraded as the ones we see coming from the Punchbowl,” said Higginbotham. “What we are doing with these samples is unique thanks to our mission, and I don’t think other laboratories realize how damaged our samples really are.”

In order to begin the process of sequencing the extremely damaged mtDNA, the analysts treat the samples, which they receive from DPAA, similar to how the samples would be treated using the current method.

“The bones are sanded and ground down to a powder, the [DNA] extraction is carried out using a demineralization process and it is then allowed to incubate overnight,” said Higginbotham. “The extract then contains the isolated mtDNA which is run through a bio-analyzer instrument to ensure there are enough quality fragments to get an authentic result.”

Next, the samples are treated with a Uracil Specific Excision Reagent (USER) kit to remove damaged bases.

“While we call this step a repair, we are actually damaging the DNA more by leaving open sites and overhanging ends where the damaged bases were removed and leaving the fragments shorter,” said Higginbotham. “After this, we begin our library preparation end repair step.”

During this step, a negative control is added to the sample to monitor for any possible contamination throughout the process and a positive control is added to ensure the final reaction functions properly. Next, the open sites and overhanging ends are filled with complementary bases. This forms blunt ends on the samples to which adapters are ligated, or attached.

“We then place a unique barcode on each end of the sample fragments,” said Higginbotham. “Once the barcodes are added we can pool, or combine, all the samples in the sequencer at one time. The unique barcodes allows the computer software to later separate and group matching samples.”

When the library preparation is completed, the samples are screened by the bio-analyzer to assess the quality of the libraries. If the quality is poor, the library preparation is repeated.

“At this point samples using traditional NGS methods could be sequenced, however, the



DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL) Research DNA Analyst, Jennifer Higginbotham, begins the hybridization capture portion of the Next Generation DNA Sequencing (NGS) protocol.

Punchbowl samples have extremely high amounts of non-human DNA,” said Higginbotham. “If we were to sequence them at this time we would have around one percent of the reads mapping as human. So what we do is enrich for the human DNA using a process that the ancient DNA community calls hybridization capture.”

Hybridization capture consists of baits, or probes, which are made up of 75-base-pair sequences from the human genome DNA reference sequence (rCRS). These baits are created to be complimentary to and target specific sequences in the mtDNA genome. The baits are added to the sample and incubated for about 24 to 36 hours. Magnetic beads, which have a strong affinity to the baits, are then introduced.



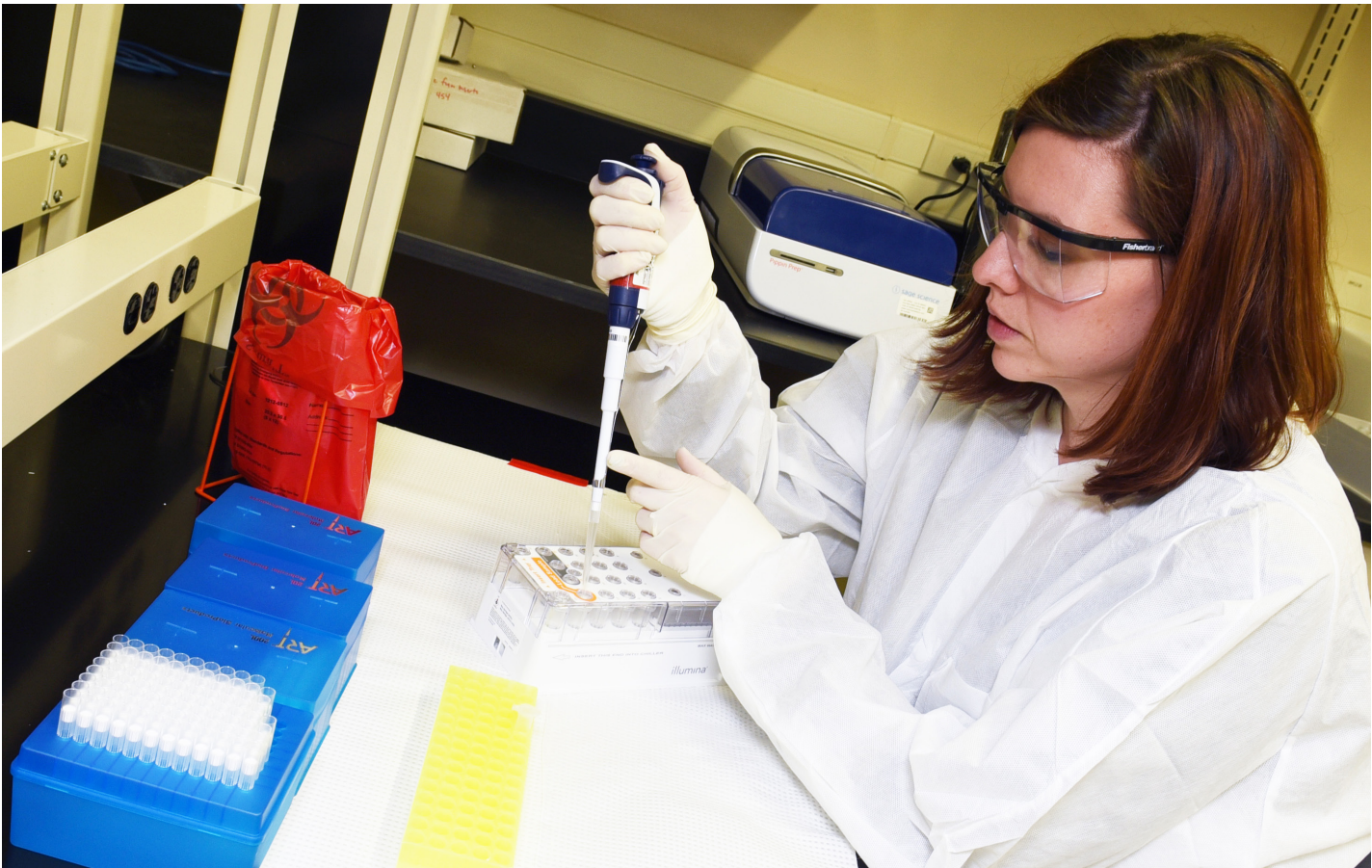
When removed, the magnets pull the baits out and with the baits come the sections of the mtDNA fragment they were attached to. This process, which is also called target capture, allows the non-human DNA in the sample to be removed from the human mtDNA being targeted.

Next, a Polymerase Chain Reaction (PCR) copies the target mtDNA in order to increase its yield, giving the sequencer more fragments to work with and a better chance at sequencing them.

“The last step is to combine our samples in equal volume to create a pool which is loaded on the sequencing instrument,” said Higginbotham. “Included in the pool is the reagent blank from the extraction process, a negative control which we added in library preparation, three samples and a positive control which is used to ensure the reaction, in whole, is successful.”

The pool is then placed in the sequencer and takes approximately 24 hours to complete sequencing.

DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL) Supervisory DNA Analyst, Kerriann Meyers, places samples in a cartridge before loading it on the Next Generation DNA Sequencing (NGS) instrument.



Once this is accomplished, a profile is made for the service member’s mtDNA in order for it to be later compared to possible familial matches already on file.

“The whole NGS process from beginning to end takes approximately two weeks to complete and is extremely labor intensive with very low throughput compared to AFDIL’s current past accounting processing methods,” said Lt. Col. Alice Briones, Deputy Chief Medical Examiner and Director of the DoD DNA Registry. “Although it has taken 10 years of research to develop a method for getting mtDNA forensic results from chemically modified samples, I am extremely proud and honored to be a Medical Examiner and the current director of the DoD DNA Registry as we bring new hope to numerous families of our nation’s fallen who thought their loved ones would never be identified.”

Over the years, technology and science has continued to evolve and with this growth comes the great opportunity to not only discover new possibilities but also make a difference in many people’s lives.

“When I was asked to be part of the NGS team I immediately said ‘yes, absolutely’ because after all the inconclusive results I have had to report, it will be amazing to get the opportunity to report positive results from the Punchbowl mtDNA samples,” said Meyers. “I also think the families of these fallen service members have been waiting a very long time for technology to catch up to their unique situations, so I think that it’s huge for the families in helping them get answers and maybe some closure. To be part of this process has been just amazing.”

As technologies in mtDNA sequencing continue to rapidly grow and evolve, who knows where we will be another 40 years from now. What we do know now, is that the families of our fallen service members from the Korean War are this much closer to getting the answers they have been searching for, for so long.



DoD DNA Registry, Armed Forces DNA Identification Laboratory (AFDIL) Research DNA Analyst, Jennifer Higginbotham, and Supervisory DNA Analyst, Kerriann Meyers, work on the hybridization capture portion of the Next Generation DNA Sequencing (NGS) protocol.





# UP AGAINST THE ODDS

by MC1 Vladimir Potapenko



“WE’VE BEEN LOOKING FOR THE ENEMY FOR SOME TIME NOW. WE’VE FINALLY FOUND HIM. WE’RE SURROUNDED. THAT SIMPLIFIES THINGS.”

“We’ve been looking for the enemy for some time now. We’ve finally found him. We’re surrounded. That simplifies things.”

That was the assessment of U.S. Marine Corps Col. Lewis “Chesty” Puller as he and other men comprising a 30,000 person United Nations fighting force stared down imposing odds against the nearly 120,000 Chinese soldiers that surrounded them in all directions. From Nov. 27 to Dec. 13, 1950, the two forces engaged in a furious battle in the Chosin Reservoir of North Korea that created a lasting impact on both sides.

The introduction of Chinese forces under the banner of the People’s Voluntary Army created a dynamic shift in the current of the Korean War. Until that point in 1950, the United States was confident that a victory in the war was imminent. But after numerous warnings regarding encroachment into its territory and sphere of influence, China became an active participant in support of North Korea’s Korean People’s Army. The Battle of Chosin Reservoir was the high-water mark of their assistance, as the battle proved to effectively push UN forces out of North Korea for the duration of the war.

“In all, roughly 17,000 UN troops and 60,000 Chinese troops became casualties as part of the battle. While a success in repelling UN forces back across the 38th Parallel, the Chinese victory proved too costly as it depleted nearly 40 percent of their available fighting force, allowing for UN forces to maintain a presence in South Korea,” said U.S. Army Spc. Colton Dunnivant, a DPAA analyst who works on the Chosin cases.

The UN forces endured frigidly cold temperatures during some of the worst winter weather of the Korean War. Medical supplies, vehicles and munitions all froze, leaving the men with less than optimal provisions. Gangrene and frostbite was a ready fear in the minds of the combatants already shocked by the totality of the military carnage. Neither the enemy, nor the weather, nor the frozen earth could provide soft comfort. And it was only the will of the men fighting the battle that afforded the hope for relief. Relief that finally came by way of the 7th Marines breaking through opposing forces and

leading the march to the port of Hungnam. UN forces reached the port on Dec. 11, where the final skirmishes of the battle took place.

In total, there are more than 1,100 service members still unaccounted for from the battle. The Defense POW/MIA Accounting Agency works to recover these remains, already having conducted 13 separate Joint Recovery Operations in the area. Though diplomatic relations with North Korea currently prevents accessing the battle field, DPAA continues to strive towards the fullest possible accounting of the brave men who gave their lives in defense of their nation.

“Conducting research and investigations for losses at the Chosin Reservoir is incredibly humbling,” Dunnivant said.

As part of its efforts, DPAA conducts regular meetings with family members of those unaccounted-for, providing for the greatest possible transparency on the accounting mission and the dissemination of information that brings families closer to finding the loved ones they have lost.

“To be able to go to Family Updates and speak with family members of the men who were lost at the Chosin Reservoir is a great honor,” Dunnivant said. “It’s a huge privilege to be a part of the mission to recover our nation’s heroes that gave the ultimate sacrifice for freedom.”



Archive photos



# DPAA REACHES FOC STATUS

Story by DPAA Public Affairs



The new DPAA facility, completed in late 2015, stands tall and houses over 300 service members and DoD civilians working toward making the fullest possible accounting of America's missing.

*Photo by MC2 Clifford Bailey*

In the year since being established as a Defense Agency on Jan. 1, 2015, the Defense POW/MIA Accounting Agency (DPAA) has accomplished a critical milestone, reaching “full operational capability” or “FOC” on Jan. 8, 2016. This declaration signifies the completion of the reorganization of the Department of Defense’s legacy past conflict accounting organizations into a single, unified defense agency.

During the reorganization efforts of 2015, the DoD never ceased its efforts to account for missing personnel from past conflicts and provide information

to the families of our missing, but the full establishment of DPAA as a defense agency now enables the mission to be done more effectively and efficiently.

“I’m very excited about achieving FOC status as it postures the [Defense] Department’s accounting community in a better position to fulfill our noble and important mission,” DPAA Director, retired Army Lt. Gen. Michael Linnington, said. “Now is the time to sharpen our focus, increase our efforts, and maximize all aspects of our accounting efforts to better provide answers to the families of our missing.”

Over the last year, DPAA has steadily attained many milestones that have led to FOC.

The Secretary of Defense approved the name and establishment of the agency on Jan. 29, 2015, and the next day the interim director, now Vice Adm. Michael Franken, held a small ceremony declaring that DPAA had achieved “initial operational capability,” or “IOC.”

Since then, the agency consolidated many administrative functions and developed a new organizational structure. DPAA is now anchored around two regional, multi-disciplinary teams that enable collaboration among researchers, planners, operators, scientists, and a host of other professionals. One region is focused on Asia and the Pacific while the other is Europe-focused.

“This new regional, multi-disciplinary approach will ensure improvement in operations, as team members are not only focused on their specific region, but are also working together in the same location,” said Army Col. Chris Forbes, director of the Europe-Mediterranean regional directorate. “We are now able to work face-to-face, making it easy to interact and conference as needed.”

Another key decision for the new POW/MIA accounting agency was the Deputy Secretary of Defense’s April 2015 decision to clarify the DoD’s policy on disintering American Unknowns from cemeteries around the world. This decision addressed multiple family concerns about the difficulty of gaining approval to disinter their loved one’s remains, for the purpose of individual identification. The immediate result of this decision was the disinterment of the Unknowns associated with the sinking of the USS Oklahoma at Pearl Harbor, on Dec. 7, 1941.

Establishing unity of purpose under a single agency director for the accounting community was one of the drivers for the Secretary of Defense and Congress’s decision to reorganize. With the appointment of Linnington as the first DPAA Director (in June 2015) and subsequent arrival of his two deputies, Army Brig. Gen. Mark Spindler and Mrs. Fern Sumpter Winbush, this critical objective was met.

“I’m proud of all the hard work our team members have put into this reorganization,” Linnington said.

“Their dedication and passion for their work made the past year undeniably successful.”

While the reorganization tasks are complete and the agency is operating at full strength, there is still much work to do. The merging of different organizational cultures from the various legacy organizations will take some time to cultivate.

“Each of the three separate organizations naturally had their individual ways of approaching the accounting task,” said Army Lt. Col. Eric Bjorklund, consolidation team leader. “But there was never any dispute about the importance in accomplishing this mission. Now as one team, we can focus on the same priorities and perform the mission better than ever.”

Some of the key recommendations for the new agency to implement will take more years to be fully integrated. For example, the case management system that will communicate case information to the families of the missing has begun development, but is expected to take several months to become fully functional.

Another key initiative that is now under development, and is expected to grow significantly in the coming years is the agency’s strategic partnerships with external organizations (public and private) to augment and assist current capacities in all areas of our accounting mission. The Strategic Partnership office was established last summer and is implementing several partnership programs for 2016.

“Our goal is to have many additional professional organizations helping us with the recovery process,” Dr. Tom Holland, director of Strategic Partnerships, said. “We greatly appreciate their expertise, resources and enthusiasm for bringing home the remains of our missing war heroes.”

As DPAA starts 2016 as fully operational, there is great optimism that the agency is better positioned to fulfill its mission to provide the fullest possible accounting for our missing personnel to their families and the nation.



# GONE, BUT NEVER FORGOTTEN

Story and photos by Staff Sgt. Kristen Duus



Natalie holds photos of her father.

“My dad was in the Air Force and always wanted to be a pilot,” said Rauch. “He was in for about 11 years before he went to Vietnam.”

Col. Warren Anderson and his copilot, 1st Lt. James Tucker, were flying an RF-4C Phantom conducting reconnaissance when they disappeared from the radar, April 26, 1966.

Rauch said it was normal for the plane to go off the radar at a certain point, but that night they never came back. Due to the conditions of where the pilots went missing, she is still unsure, nearly 50 years later, if they crashed on land or in water, or what their ultimate fate was.

“It wasn’t until 1973 and the prisoners of war were released that we knew for sure they weren’t coming home,” said Rauch. “My mom hoped for seven years that he was a POW -- that he was coming home. She even stayed in the same house.”

Rauch is married to an Army chaplain, and has lived in Honolulu for about 18 months. She lives only a few miles from Glenda Tucker, the widow of her father’s copilot.

Tucker and her husband were high school sweet-hearts. She was 25 and a mother of two when her husband’s plane went missing. She remembers him as the football jock who was adored by all the girls and worked hard.

“He was at the top of his class in pilot training, so he got to pick the plane he wanted to fly,” said Tucker. “It was such a hard decision; we had a dartboard and we put the pictures of what he thought he might want to fly on there, and we threw darts on it to decide.”

Tucker’s dart landed on the Phantom, which was known for its high visibility due to heavy exhaust, making their plane virtually defenseless in enemy territory.

Rauch and Tucker met for the first time just over a year ago and have kept in contact ever since, sitting next to each other and connecting again at a government update briefing held by the Defense POW/MIA Accounting

Agency, in Honolulu, Jan. 25. Briefings are held throughout the country several times a year to update families of missing personnel of their loved ones’ cases.

Though they both are hoping for closure, and to bring home their loved ones, they are not holding onto expectations that a recovery will ever be made. The plane went missing in a tumultuous area, and with little information of the exact location, there is not enough information to begin a recovery operation, said Rauch.

Tucker spoke of how much her husband adored flying, that it was his passion, which kept her from ever really seeing the dangers of it.

“He lived to fly,” said Tucker. “I don’t think I ever realized how dangerous it was- I was young. He never indicated that it was anything other than a holiday.” Both pilots’ names are etched into the Court of the Missing at the Punchbowl Cemetery in Honolulu. Rauch was able to take one of her brothers to see their father’s name when he visited for Christmas. And though they may never know the circumstances of their loved ones’ loss, they still have come to their own personal closure.

“Being in Hawaii is quite an experience as far as bringing closure -- just knowing that it’s going to stay there, that marble etching,” said Rauch. “That’s going to stay there forever.”

A photo display shows Col. Warren Anderson, a pilot missing from the Vietnam War.





# RETURN TO DIEN BIEN

*Story and photos by Tech. Sgt. Kathrine Dodd*

A specialized recovery team comprised of 15 joint service members and a forensic archaeologist resumed excavation operations for the Defense POW/MIA Accounting Agency (DPAA) at a rice paddy in Dien Bien province, Vietnam. The team's efforts lasted five weeks, Nov. 11-Dec. 6, 2015, searching for an F-4C Phantom aircraft lost during an armed reconnaissance mission with two airmen unaccounted for in the spring of 1966.

The recovery team and local workers built two holding ponds and a wet screening station that utilized a pump and pipe system to run water over soil through mesh screens. When the team processed the 214 square meters of soil excavated during the mission, water pressure became an issue.

"The pressure of the water [was a difficulty]," said Sgt. 1st Class Benito Segura, DPAA team sergeant. "The water we are getting from a well is not enough, so we tend to use the same water over and over which causes the fittings on the hoses to clog up."

As soil was washed through the screens, possible aircraft wreckage was found. The possible evidence may positively identify the recovery site as the suspected area of loss for the aircraft.

A life support investigator, working in conjunction with a forensic archaeologist, reviewed aircraft wreckage as it came up piece by piece. Together they determined if the wreckage could indicate which aircraft the material came from.

"There are certain data plates on various components of the aircraft that can be traced through a parts manual to get you a specific classification of aircraft," said Dr. Kimberly Maeyama, DPAA forensic archaeologist. "Then you have other artifacts within the plane that will get you a specific tie to a very specific plane which is fixed to the loss of a particular service member."



*U.S. Army Sgt. 1st Class Benito Segura, Defense POW/MIA Accounting Agency (DPAA) team sergeant, checks pipes leading to a wet screening station during excavation operations in Dien Bien province, Vietnam, Nov. 21, 2015. Segura is deployed as part of a recovery team in the search of two crew members of an F-4C aircraft lost during the Vietnam War.*

*Local workers secure frames for a wet screening station at a site that will be excavated by a recovery team from the Defense POW/MIA Accounting Agency, Dien Bien province, Vietnam, Nov. 13, 2015.*





A SON, A BROTHER, A VIETNAM VETERAN LAID TO REST

# COMING HOME



Story and photo by  
Staff Sgt. Erik Cardenas



*Bill Hill with photo of his son Billy Hill.*

**B**ill Hill didn't want his son Billy to go to war in Vietnam, but the need to keep his younger brother, Bobby, safe was too strong for his eldest son.

"Billy was afraid Bobby would go to Vietnam and get himself killed, and it turned out to be just the opposite," said Hill.

On Jan. 21, 1968, Sgt. 1st Class Billy D. Hill, assigned to the 282nd Aviation Battalion, 17th Aviation Group, 1st Aviation Brigade in his second tour to Vietnam, volunteered to be the door-gunner in the lead helicopter on a mission to Khe Sanh transporting South Vietnamese soldiers into the advisory headquarters. As the helicopters approached the landing zone, the lead helicopter was shot down by a rocket propelled grenade. Hill was believed to have died in the initial attack and was declared missing in action shortly thereafter.

Nearly 57 years after that fateful day, Billy Hill's remains were recovered and identified by the Defense POW/MIA Accounting Agency. Billy Hill was then returned to his family and buried at the Central Texas State Veterans Cemetery, Killeen, Texas, where nearly 1,000 mourners came to honor him.

"It's been a long time," said Dick Messer, a retired U.S. Army Chief Warrant Officer 2. "I was there that day, flying, and saw all the action going on. Just to have him back is pretty special."

Billy Hill was buried on what would have been his 69th birthday. And though his father said the ceremony did not provide him closure over his son's death, it was at least one last opportunity to celebrate his birthday and who he was as a man.

"It's something I never expected in my entire life," said Bill Hill. "I figured I'd be dead and gone before they found him."

Luckily Bill Hill was proven wrong on his assumption of never seeing his son return home. Already 91 years old at the time of his son's funeral, he did not have much more time to wait. Five days after his son was laid to rest, Bill Hill passed away in Gatesville, Texas.

"I was very proud that he served; he was a gung-ho soldier," said Bill Hill.





# WHAT'S HAPPENING WITH DPAA?



William A. Heidt, U.S. Ambassador to the Kingdom of Cambodia, visits Defense POW/MIA Accounting Agency team members on a recovery mission in Banglung, Cambodia, in late January.

*Photos by Spc. Crystal Madriz*

On January 28, Hawaii Governor David Ige toured the Senator Daniel K. Inouye Defense POW/MIA Accounting Agency Center of Excellence on Joint Base Pearl Harbor-Hickam.

*Photos by Sgt. Eric M. LaClair*



Fern Sumpter Winbush, Defense POW/MIA Accounting Agency (DPAA) principal director, left, digs with U.S. Air Force Master Sgt. Sirot Martin, DPAA linguist analyst, during her visit to recovery operations in Xekong province, Lao People's Democratic Republic, Feb. 2, 2016. During her visit, Winbush toured excavation operations of the recovery team's search for a U.S. Air Force pilot and navigator lost in an F-4D aircraft crash in the spring of 1971.

*Photo by Tech. Sgt. Kathrine Dodd*



U.S. Army Staff Sgt. Lorena Contreras assigned to the Defense POW/MIA Accounting Agency (DPAA) dry screens soil sediment with a local villager as part of a DPAA recovery mission in Attapeu province, Lao People's Democratic Republic, Feb. 11, 2016. DPAA teammates deployed to the area in hopes of recovering the remains of a pilot unaccounted for from the Vietnam War.

*Photo by Sgt. Richard DeWitt*

Defense POW/MIA Accounting Agency (DPAA) team members work side by side with local villagers from the Attapeu Province during an excavation in the Lao People's Democratic Republic, Feb. 3, 2016. Members of DPAA deployed to the area in hopes of recovering the remains of two pilots unaccounted for from the Vietnam war.

*Photo by Staff Sgt. Jocelyn Ford*





# MISSION TO PALAU

Story and photo by MC1 Vladimir Potapenko

A ten-person team from the Defense POW/MIA Accounting Agency (DPAA) recently completed a recovery mission in the Republic of Palau. The mission, spanning more than fifty days, centered around DPAA's efforts to return the remains of a Navy pilot whose plane crashed on one of the Republic's islands during World War II.

Working in hot and humid conditions, the DPAA team worked laboriously to excavate the site of the crash. Daily, team members traversed a steep hill in order to reach the remote site that featured a combination of clay-like dirt as well as a marsh.

"No matter the obstacles--heat, humidity, long hours--our mission requires us to put forward our best effort," said U.S. Army Capt. Joe Murillo, the mission's team leader. "It is an honor to be able to support this mission and work to bring solace to the families of those who have sacrificed their lives in defense of the freedoms I enjoy today."



Defense POW/MIA Accounting Agency (DPAA) personnel construct a sediment pond as part of a DPAA effort to recover the remains of a Navy pilot unaccounted for from World War II in Airai, Palau.

In order to complete the excavation of the site to its fullest archaeological boundaries, the team extended the length of the mission, working an additional week past initial timelines to close the site.

"Our team worked great together," said U.S. Army Sgt. 1st Class Jerry Hughes. "We had to think on our feet to solve problems and establish the best conditions possible. Diligent and enthusiastic, this team gave everything they had to the mission, choosing to stay on-site for another week in order to accomplish our goal."

Led by forensic anthropologist Dr. Nicolette Parr, the mission saw the excavation and screening of 384 square meters of earth. The exhaustive effort was rewarded with the discovery of life support equipment and evidence that may help in the accounting of the missing pilot.

Palau was also home to the famous Battle of Peleliu where more than 2,000 Americans were killed in combat on the small island. While deployed, the team was able to visit the island state and accept other found remains believed to be American.





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<http://www.dpaa.mil>

## For your information

Family members seeking more information about missing loved ones may call their respective Service Casualty Office:

U.S. Army  
(800) 892-2490

U.S. Marine Corps  
(800) 847-1597

U.S. Navy  
(800) 443-9298

U.S. Air Force  
(800) 531-5501



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### Cover photo information:

Koge Bay, Greenland (July 22, 2014) – Rob Ingraham, a forensic archaeologist with the Defense POW/MIA Accounting Agency (DPAA), looks from above as the personnel cage descends into one of the excavation holes made during a special mission between DPAA and the U.S. Coast Guard. The purpose of the mission was to locate aircraft lost during World War II. (DoD photo by Mass Communication Specialist 3rd Class Clifford Bailey U.S. Navy/Released)

