Scientists are finally identifying servicemen lost long ago.

By Peter Grier

Honolulu’s Puowaina Crater—popularly known as “Punchbowl”—serves as the site of the National Memorial Cemetery of the Pacific, a shrine to US war dead. In 1954, remains of an unidentified US serviceman, disinterred from a North Korean gravesite and repatriated, were buried there.

Some 50 years later, a scientist from the nearby Joint POW/MIA Accounting Command saw a possible mistake in the soldier’s dental records; someone, decades before, may have incorrectly marked a tooth reconstruction. It would be a simple but crucial mistake. Suddenly, this coldest of cold cases turned hot again.

And so it was that on April 18, at 10 a.m., the remains were raised anew, this time in the presence of an honor guard. They were covered with the American flag and driven to JPAC’s Central Identification Laboratory, at Hickam AFB, Hawaii. Final identification may still be months away, but JPAC was confident it would, finally, determine his name.

On average, JPAC each month identifies about six persons formerly listed as missing in action, command data indicate. The Pentagon now has regular announcements identifying previously unknown troops—and groups of troops—from Vietnam, Korea, even World War II. In some cases, no kinfolk remain, but, in other cases, family members express profound gratitude.

Three announcements in the span of a week this spring from DOD’s POW/Missing Personnel Office illustrate the success officials now have identifying long-dead servicemen. Their stories are told in briefs published with this story.

“I’ve [chosen] five sets of remains for disinterment, and four have been identified so far,” said Debra A. Prince, a forensic anthropologist at JPAC. In the first case, she said, “the sister was still living. Her grandson came out to receive the remains. He was very emotional.”

The Joint POW/MIA Accounting Command is an organization unique among the world’s militaries. No other nation mounts such a concerted effort to find, retrieve, and determine the lost names of fallen warriors. (See “The Search Goes On,” June 2005, p. 67.)

The effort owes its existence to pressure from members of the families of US servicemen and -women missing in action in the Vietnam War. A predecessor organization, the US Army Central Identification Laboratory, was founded in 1973 at the height of this clamor. Originally based in Thailand, the center later was moved to Hawaii.

Forensic Anthropology

JPAC itself was created in 2003 by the merger of this lab and the then-11-year-old Joint Task Force-Full Accounting. JPAC employs about 400 military and civilian workers. Its central lab is the world’s largest facility devoted to forensic anthropology—the study of human remains and their physical surroundings.

JPAC maintains three other permanent overseas detachments. They are in Bangkok, Thailand, Hanoi, Vietnam, and Vientiane, Laos. However, recovery missions are not limited to the tropical terrain of Southeast Asia, say JPAC officials. They take place all over the world.

James T. Pokines, a JPAC forensic anthropologist and laboratory manager, said he has been to North Korea five times. Two-and-a-half years ago, he went to Greenland to help recover bodies from the Cold War-era crash of a twin-engine Neptune patrol aircraft. That site is on an active glacier, and melting had exposed remains of the Neptune’s 12-man crew.
In 2006 Pokines worked in another unusual place: a Honolulu mountain ravine so close to JPAC that the lab was visible from the site. Ensign Harry “Bud” Warnke crashed his F-6F Hellcat into the Koolau Mountains in June 1944. The site of the accident has been known for years, but it was highly protected due to its extreme environmental sensitivity.

“We had to get permission from everybody to dig up there,” said Pokines.

Due to the presence of endangered species, among other restrictions, the JPAC team was not able to dig up soil and sift it through fine screens on-site, looking for artifacts and human remains. Instead, the team had to take the soil elsewhere for inspection. So difficult was the surrounding terrain that there was but one way to do it: vertical lift.

“There didn’t seem like there was that much dirt, until we tried to lift it by helicopter,” said Pokines.

Still, JPAC carried out the task. Warnke’s remains were retrieved, identified, and returned to his sister last year for burial in Indiana.

The delay involved in getting to the Koolau site was not unusual. Typically, JPAC keeps a constant target list of some 200 sites, scouted, assessed, and judged to be promising.

Nor do all efforts result in a successful identification. Even with spectacular advances in science, the passage of time and violent nature of warfare can preclude identification.

Sometimes no remains are found. Last year, an 18-member JPAC recovery team dispatched to Vostenhof, Austria, recovered personal artifacts but no physical trace of a US bomber pilot and gunner who on May 10, 1944 went down in their B-17.

On other occasions, the remains of multiple service members are so commingled their separation is impossible.

Finally, even the most advanced of JPAC’s techniques don’t always work. For instance, many of the unidentified remains buried in Punchbowl were treated with formaldehyde, which does a great job preserving the skeleton, but is very damaging to the mitochondrial DNA necessary for DNA identification.

“There are some cases, there is nothing we can do,” said Prince.

Even for those unknowns initially deemed unidentifiable, though, there can still be hope. In a sort of cold case process, JPAC reviews unidentified cases every year to see whether new developments warrant their reopening.

“Every year cases are revived just because new technology is emerging,” said Army Maj. Brian DeSantis, a JPAC spokesman.

To date, JPAC has identified the remains of more than 1,300 American service personnel. Yet much work lies ahead. Some 78,000 US personnel are still missing from World War II, according to JPAC. Searchers could conceivably recover about 35,000. The others were lost at sea or otherwise entombed in sunken vessels.

(The Navy considers individuals missing at sea to be honorably buried and does not list them as MIA, pointed out JPAC spokesman DeSantis.)

Approximately 8,100 US military men and women who served during the Korean War are also missing, according to JPAC figures. Some 1,800 from Vietnam remain missing, as are 120 from various Cold War actions.

There remains one MIA from the 1991 Persian Gulf War: Lt. Cmdr. Michael S. Speicher, an F/A-18 pilot who was shot down over Iraq. His status was changed from KIA to MIA in 2001.

At any given time, JPAC has about 1,000 case files under active investigation. Each year JPAC undertakes about 10 missions to Southeast Asia for Vietnam War cases and 10 missions elsewhere to look for World War II and Cold War cases.

JPAC typically also conducts five Korean War missions annually, but that varies according to the degree of cooperation received from the North Korean government. It is helpful to have the same JPAC personnel return to large sites requiring multiple missions, so Pokines has been to North Korea’s Chosin Reservoir, site of a brutal Korean War battle, three times.

JPAC teams are escorted by the North Korean military the entire time they are in the country, said Pokines. They live in tents—and Chosin Reservoir seems always cold.

“We’ve got lots of real restraints on what we can do there,” said Pokines.

“And it’s just a very poor country.”

Identifying Korean War-era remains can be a technical challenge as well as a political one. Remains provided by the Pyongyang government are often commingled and in poor condition. During the war itself, the US military did not keep scrupulous personnel records due to the chaos of the fighting and the numbers of ground units involved.

**The Hardest Parts**

Dental records for World War II MIAs, on the other hand, are “not too bad,” said Prince. Most of the remaining Vietnam-era MIAs are pilots for whom JPAC can obtain good records and often X-rays.

Dental records remain important today because teeth are the hardest part of the body and thus survive when bones and other physical items may not. Absent identifiable teeth, mitochondrial DNA analysis may become the best chance to identify remains.

“DNA analysis is really huge for us,” said Pokines.

Today JPAC uses mitochondrial DNA in about three-quarters of its cases. Though DNA samples are taken to the central lab in Hawaii, they are analyzed at the Armed Forces DNA Identification Laboratory in Rockville, Md.

Mitochondrial DNA patterns are not unique in the general population, so JPAC scientists combine mtDNA results with other evidence to make a positive identification. Last year, for instance, JPAC used both mtDNA and identifica-

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**Five World War II Airmen**

On May 2, five Army Air Forces airmen missing from World War II were publicly identified by the Department of Defense. They were 1st Lt. Cecil W. Biggs, 1st Lt. William L. Pearce, 2nd Lt. Thomas R. Yenner, TSgt. Russell W. Abendschoen, and SSgt. George G. Herbst.

All were crew members aboard a C-47A delivering Polish paratroopers Sept. 21, 1944 to a dropzone near Arnhem, Holland, for Operation Market Garden. Their Skytrain crashed after the drop. All were presumed dead.

German forces then “opened the dikes in the region where the plane crashed and flooded the area before any remains could be recovered,” DOD stated. After the war, Dutch citizens recovered and buried the remains. A US team later disinterred them, and they “were reburied as group remains in 1950.”

The break in the case came in 1994, when a Dutch citizen “located more human remains and other crew-related materials” at the original crash site. These were turned over to the United States.

Despite the passage of 62 years, a flooding, separated remains, and burials and disinfectants on two continents, the JPAC scientists were finally able to positively ID the five crewmen, using what can now be called the usual methods.

Plans call for burial of the five in separate ceremonies this summer, with full military honors.
Cpl. Pastor Balanon Jr.
The Department of Defense on April 30 announced it had identified the remains of Army Cpl. Pastor Balanon Jr. In 1950, Balanon was with the Army’s 8th Cavalry Regiment near Unsan, North Korea, when the unit was surrounded by Chinese forces. Some US soldiers escaped, but Balanon went missing.

In 2001, a JPAC-led US-North Korean team was excavating a burial site south of Unsan when “a North Korean citizen living near the site told the team that the remains were relocated” after they had been discovered during a construction project. They proceeded to the second burial site.

Scientists later were able to use circumstantial evidence, mitochondrial DNA, dental comparisons, and other forensic tools to positively identify Balanon. He was buried in May, by his family, in Arlington National Cemetery.

Cpl. Clarence R. Becker
Army Cpl. Clarence R. Becker had been missing since Dec. 1, 1950, the day that his truck convoy was ambushed near Kunuri, North Korea. He was captured and taken prisoner, and troops held in captivity with Becker “said he died in the North Korean Pyoktong POW Camp 5 around May 1951 from malnutrition and disease;” DOD stated in a news release.

The Chinese Army later exhumed remains from several POW camp cemeteries and “repatriated them in 1954 to the United Nations forces,” DOD explained. Becker’s remains were unidentifiable at the time and were buried in the National Memorial Cemetery of the Pacific in Honolulu.

In 2005, after further analyzing records, JPAC exhumed what it thought might be Becker’s grave. “Among other traditional forensic identification tools and circumstantial evidence,” JPAC scientists used dental comparisons for Becker’s identification.

Becker was buried by his family on April 25 in Indiantown Gap, Pa.

The Importance of mtDNA
Mitochondrial DNA (mtDNA) is genetic material that is passed directly from generation to generation by a mother. All persons of the same maternal line share the same mtDNA sequences.

Identification of unknown remains can be aided by matching the patterns of mtDNA extracted from the remains with similar patterns in blood samples—if investigators have a hunch about whose remains they are looking at.

mtDNA can be obtained from the unknown’s mother, sister, or brother or his sister’s children, among others.

The 1950s, clerks often used different colored pencils to distinguish between cavities and crowns, inlays, and other restorations.

Could someone simply have used the wrong color, with that mistake carried forward in subsequent copies of the dental records, down to the present day?

The casket of case No. 3 was raised at Punchbowl and listed as unknown. Virtually all of them were shipped to Hawaii through Operation Glory, an exchange of the fallen between UN and communist forces in 1954.

Ron Broward, a Korean War veteran who serves as an unpaid and invaluable JPAC consultant, pointed Prince to a group of three sets of remains that had been disinterred from Korean soil by Chinese forces—not the Koreans themselves.

Compared to the North Koreans, the Chinese were more organized and thorough about such tasks. For this and other reasons, this particular group of remains might be relatively easy to study, and contain more relevant material, including personal effects saved and kept with the bodies.

Indeed, case No. 3 of this group was found with two identification tags, according to its file. Before reburial in Hawaii, the remains had been fingerprinted and those prints studied by the FBI. The result: a match with prints known to have come from the individual whose name was on the ID tags.

This was powerful circumstantial evidence. So why weren’t the remains identified back in the 1950s?

“Dental and physical discrepancies,” explained Prince.

Researchers decades ago had decided that the dental records for case No. 3 showed restorations—fillings—in places where the recovered remains did not have them. But the disinterred remains did have unfilled cavities in the teeth that were marked as restored on the records. Prince knew that, in

Peter Grier, a Washington editor for the Christian Science Monitor, is a longtime defense correspondent and a contributing editor to Air Force Magazine. His most recent article, “Constant Peg,” appeared in the April issue.