



THE DISPATCH

U.S. ARMY DUGWAY PROVING GROUND

VOLUME 4, NUMBER 12

www.dugway.army.mil

December 2018

Dugway hosts data collection with chemical simulants rounds



An AN/TPO-53 Radar, scanning for projectiles during the Early Warning Enhanced Capability data collection conducted October, 2018 at Dugway Proving Ground, Utah. Originally designed to locate the firing positions of mortars and rockets, the radar was challenged to collect flight characteristics of various 155mm projectiles, including simulated chemical rounds. Photo provided by Product Manager Radars

By Al Vogel

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Radar systems designed to determine the firing positions of hostile artillery and mortar launchers were recently used here to collect data, to determine their potential to identify a simulated chemical projectile in flight, thereby providing extra seconds for U.S. forces to respond.

In 2010 the Army began combat deploying the AN/TPO-53 Radar, to backtrack the trajectory of hostile mortar and artillery rounds to their firing point. In 2011 it began fielding the AN/TPO-50 Lightweight Counter Mortar Radar, a much smaller radar typically mounted on a Humvee to counter mortar, artillery and rockets at shorter ranges. Both have performed this mission well.

In 2017, the Joint Program Executive Office for Chemical, Biological, Radiological and Nuclear Defense, or JPEO CBRND, created an Experimentation Directorate. The directorate was tasked with increasing warning time U.S. forces would have to respond to an attack in a CBRN environment. JPEO CBRND teamed up with the radar experts

◆ Data collection.

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By Al Vogel

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Ancient high-tech admired at Dugway archaeology site

A morning busload of employees grinned as two F-35 jet fighters screamed by, a few hundred feet away. Earlier, the employees had marveled at a volcanic glass arrowhead, its ancient edge still keen.

Aside from flying, airplane and arrowhead share a distinction: in their day – a day separated by 2,000 years – they were the most advanced weapons extant.

The irony of jet and stone projectile occurred during the Nov. 6 tour of National Register of Historic Places prehistoric sites near Michael Army Airfield, in observance of National American Indian Heritage Month. The tour was sponsored by the Cultural Resources office of the Environmental Division of Dugway Prov-

ing Ground.

Morning and afternoon busloads of workers each spent about two hours visiting the site near Michael Army Airfield, and learned its significance from Dugway archaeologists Jennifer DeGraffenried, Nate Anderson, Nate Nelson, Ellyse Simons, and Rachel Quist, who is manager of Cultural Resources. "I think people were interested in it. It was well received," Quist later said.

One site, bearing the charcoal-stained remains of cooking fires, amazed visitors when they learned it was about 2,000 years old. Tiny obsidian flakes, black as

◆ Archeology site.

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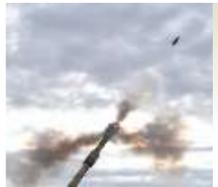


Archeologist Jennifer DeGraffenried displays a tiny arrow point found during a cultural resources survey at Dugway Proving Ground, Utah. Some 2,000 years ago, it took a master knapper to make such a small arrow point of balanced proportions from volcanic glass (obsidian). Photo by Al Vogel, Dugway Proving Ground Public Affairs

INSIDE YOUR DISPATCH



TRACKING PROJECTILES



Unique radar system increases warning time.

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GETTING TO THE POINT



Workers visit a 2,000 year old archeological site.

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Unique capabilities ...

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at the U.S. Army Communications Electronics Research and Development Center, Intelligence and Information Warfare Directorate (CERDEC I2WD), to oversee collection and analysis of the radar data.

Both radars had already shown they could distinguish between rockets, artillery and mortars in flight, but their effectiveness at identifying simulated chemical projectiles well before an air or ground burst needed to be known. In a CBRN environment, seconds are precious. A gas mask may take 10 seconds to don, and protective clothing even longer. A few extra seconds can save lives and preserve mission effectiveness.

In October, the radars and other technologies collected data in the remote Utah desert at Dugway Proving Ground, whose experience with chemical, biological and radiological defense began in 1942.

John Bartel, technology manager for the Integrated Early Warning office, explained that IEW

works with each service to determine their needs. The level of awareness and capability required for each service's system is based upon these needs and the capability of the technology.

A wide range of firing data was needed to mimic varied scenarios of a chemical attack. International treaties forbid the use of chemical agents outdoors, even for defense testing and data collection. Accordingly, various 155mm projectiles were filled with simulated agent, a substance that resembles actual agent from the perspective of the data collection system.

M109 Paladin howitzers fired the simulated chemical projectiles to burst above the target or on the ground, depending upon the scenario. More than one firing point was used, to send projectiles at different angles relative to the radars. Data generated from the firing of various projectiles may be used to create program algorithms that more positively identify the kind of projectile in different scenarios.

Though radar was predominant,

other technologies collected data separately from the radars to determine the best potential instrument combinations for varied situations: particle sizers, LIDAR (Laser Imaging, Detection And Ranging), optical infrared, acoustical, seismic, point and standoff detectors. Point detectors must be exposed to the agent to identify and measure, but standoff detectors typically use a laser to identify and measure at a distance, far from exposure.

Using awareness and capability specific to their needs, based upon data collected at Dugway, commanders can make informed decisions within a CBRN environment and quickly inform higher commands of a likely chemical attack. "Basically, can you distinguish different round types and inform the military decision making process?" Bartel said.

Whatever the equipment, the goal is identical: give U.S. forces more time to prepare for an imminent chemical weapon attack.



Archeology site ...



The bus at Dugway Proving Ground was full during the Native American Indian Heritage Month Observance field trip and archaeological site visit Nov. 6, 2018. Dugway archaeologists took Soldiers and civilians on a short, walking tour of multiple sites up to 2,000 years old to appreciate the history of Indians in the area. Photo by Al Vogel, Dugway Proving Ground Public Affairs



Col. Brant Hoskins, commander of Dugway Proving Ground, Utah, and his wife Janine, listen to archeologist Jennifer DeGraffenried (right) explain a small hearth stone. It was found during a cultural resources survey. Photo taken during the Native American Indian Heritage Month Observance field trip and archaeological site visit. Photo by Al Vogel, Dugway Proving Ground Public Affairs

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night, and chips of chert the color of toffee, dotted the former wetland soil. Topaz Mountain, some 40 miles south of Dugway, provided the raw stones, which ancient craftsmen knapped into spears, arrows, knives and scrapers.

"This area has the highest density of paleo Indian sites in North America," said DeGraffenried, gesturing northwest to the flat, sage-covered plain that was a wetland bustling with game about 12,000 years ago.

In 2015, just over Dugway's border on the Air Force's Utah Test and Training Range, Air Force archaeologists unearthed projectile points about 13,000 years old - one of the oldest hu-



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man habitation sites in Utah.

Many sites within the 1.25 million acres of Dugway Proving Ground and the UTTR reveal their ancient tools because public access has been forbidden since the 1940s, curtailing theft.

"Projectile points are our only reliable time markers, so when they disappear off the land, we lose a sense of time of the site," DeGraffenried said.

Whether on federal or state land, artifacts older than about 50 years are protected and must be undisturbed. An arrowhead, 1939 penny, .44 Henry cartridge, wood from a log structure - all artifacts, all protected. Artifacts on private land belong to the owner, but the owner must give permission to search and take.

Returning on the bus in the afternoon, numerous workers ad-



A stone with one side worn flat found during a cultural resources survey at Dugway Proving Ground, Utah. Photo taken during the Nov. 6, 2018 Native American Indian Heritage Month Observance field trip and archaeological visit to a site approximately 2,000 years old. Photo by Al Vogel, Dugway Proving Ground Public Affairs

Federal protection of artifacts dates back to the Antiquities Act of 1906. The Archaeological Resources Protection Act of 1979 (ARPA) expanded that protection, and significantly increased penalties for violators who disturb or take artifacts.

An artifact is defined as anything made or used by humans.

mired how the ancient residents survived and produced the essentials to continue their lives and technology. An arrowhead and F-35 jet fighter may seem disparate, but perhaps the expert hands and knowledge required of craftsmen haven't changed that much in 2,000 years, have they?

Congressional staffers tour Dugway



Professional staff members of the U.S. Senate Committee on Armed Services -- Dr. Arun Seraphin (left) and Gwyneth Woolwine toured Dugway Proving Ground Dec. 10, 2018. Physical Microbiologist Darryll Dudley (center) related how simulated labs are used to train various groups to recognize, and deal with, biological and chemical threats. The staff members also toured Materiel Test Facility, Mustang Village, BioTesting Division, Michael Army Airfield, Rapid Integration and Acceptance Center, English Village and were briefed on current defense testing and capabilities. Photo by Al Vogel, Dugway Proving Ground Public Affairs.

CHAPLAIN'S CORNER

By Chaplain (LTC) James Lester

Hope at Christmas.

As we approach Christmas I can't help but marvel at the story of the Birth of Jesus. It's a story of Hope that brings some unusual characters that you wouldn't think would be part of the story. In Matthew chapter 1 we have the genealogy of Jesus, you have the regular people that you would expect, Abraham, Isaac, Jacob, and of course David, but you also have three women that you would not expect to see. Three women who normally would have been glossed over because they don't fit the image of a Savior or a king. The first is Tamar, the daughter in-law of Judah who he slept with thinking that she was a temple prostitute. The next one is Rahab who protected the spies in Jericho, who we discover is in actuality a prostitute. Lastly we have Ruth who of the three seems the most normal, but she had been married before and lost her first husband and then marries Boaz.

So why include these three in the story? I mean these are not your stellar picks that you would choose to be a mother of a future king of Israel or even the future Messiah. They had some serious issues not least of all was the way they lived their lives. I realize that the world was different, but if I'm telling a story I wouldn't add them to the list. The author of Mathew intentionally adds them to the list to show us that God looks beyond the outside and sees the potential that the person has. He sees that Tamar was desperate for a child and that she would be a good mother. He saw how Rahab risked her own life to protect the Jewish spies

and her willingness to let go of her old life and follow God. He saw how Ruth who could have easily left her mother in-law Naomi and stayed in her own country, instead chose to follow her back to her home. He sees that her character was such that she was willing to care for someone who wasn't even her own Family.

Wow! These are incredible stories, which you can read about in the Bible. When I think about my own circumstances I realize that if God could care so much for them that he must also care about me. He cares about you. He surrounds us literally with a Painting as my son likes to say. We live, and work at one of the most remote military installations in America. We are literally in the middle of nowhere. Each day you drive through a pass, or down a long stretch of highway to arrive in the dark and leave in the darkness. It's easy to miss the beautiful landscape of snow covered mountains, or the amazing sunrises. It can be easy to give up hope during the long winter months or even at the time of Christmas. It's easy to get bogged down with the doing that you miss out on what is around you. Each one of us has great potential and an amazing story. We are not defined by our past, our past is part of our history, but it is not the full story. I pray that you find Hope this Christmas season that you enjoy the times with family and friends. That you can step outside on a cold winter day and see the beauty that surrounds you. Merry Christmas and Happy New Year!



On a very chilly evening, Dugway friends and families gathered on the grounds of the old gymnasium to usher in the holiday season with the lighting of the Dugway Community Christmas tree. An invocation by Chaplain (LTC) James Lester began the festivities, followed by welcoming comments from Dugway Commander, COL Brant Hoskins and CSM Kyle Brinkman, Installation Command Sergeant Major. Following the tree lighting, a choir of young voices sang several carols for the crowd. The final treat for all was the arrival of St. Nick himself aboard a DPGFD fire truck. To beat the cold evening, cookies and hot chocolate were served inside the Community Club, just across the street.



All photos by Al Vogel, Dugway Proving Ground Public Affairs

Holiday Hours

USAG Dugway Proving Ground
DFMWR/AAFES/Commissary

Shocklee Physical Fitness Center

24 December: 8:00 AM - Closed

25 December: Closed

31 December: 5:00 AM - 3:00 PM

1 January: Closed

AAFES Express (Shoppette)

24 December: 10:00 AM - 4:00 PM

25 December: Closed

31 December: 10:00 AM - 4:00 PM

28 December through 1 January: 10:00 AM - 4:00 PM

Commissary

24 December: 11:00 AM - 4:00 PM

25 December: Closed

1 January: Closed

ACS/CYS Programs

25 December: Closed

1 January: Closed

Community Club & Ditto Diner

20 December - 1 January: Closed

Library

24 December: 9:00 AM - 3:00 PM

25 December: Closed

31 December: 9:00 AM - 3:00 PM

1 January: Closed

For more information call:

(435)-831-2093

CYBER AWARENESS QUESTION OF THE MONTH

SENSITIVE INFO

QUESTION: Does sensitive information, since it is not classified, require any protection?

ANSWER: YES, sensitive information must be protected.

Tips for Protecting Sensitive Information:

- Sensitive information includes For Official Use Only (FOUO), Controlled Unclassified Information (CUI), Personally Identifiable Information (PII), financial information, Protected Health Information (PHI), and operational information.
- The Army has mandated that cordless phones will not be used to discuss sensitive information. Never discuss sensitive information over a cordless phone. If your office routinely discusses sensitive information, do not have or use cordless phones.
- Avoid sharing sensitive information using shared folders unless access controls are established that allow only those personnel with an official need-to-know to access the information.
- Always verify an unknown caller's identity before giving them personal or sensitive information
- Never allow sensitive data on non-government-issued mobile devices.
- Follow your organization's policy for retention or disposal.
- Ensure all receivers have required clearance and/or official need-to-know before e-mailing sensitive information or replying to e-mail distribution lists.
- If faxing sensitive information ensure recipient is at the receiving end, use correct cover sheet, and contact the recipient to confirm receipt.
- Properly mark and secure all CDs/DVDs, portable media that contains sensitive data - FOUO. Sensitive data requires more stringent security than unclassified data.

NEC Dugway

Security Shorts

Welcome to Security's new monthly column, Security Shorts, or "Since you Asked".

The Security Team at Dugway includes Lynn Brothersen, Installation Security Manager, and the ATEC Team: Jedediah Smith, Chief Security Manager, Debbie Keefe, Security Specialist and Jessica Hansen, Security Specialist. If you have any questions you would like answered in this column, please send us an email and we will be happy to address it in a future issue.

Topic for December: Packages
We all love receiving packages in the mail. However, not all packages are what they appear to be. Recently, packages containing ricin and explosives were sent through the mail. This is a good time to remind everyone the protocol on handling suspicious packages.

Refrain from handling the package, isolate the area, notify authorities, and wash any part of the body that has come in contact with the package with soap and water.

If you observe someone placing a package outside an office building or a home, and cannot confirm that the individual is an employee of either the USPS, FEDEX, UPS, or other official delivery service, call 911 whether you are on or off Dugway. If you see something, say something!



COMMUNITY CALENDAR

December 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 Monday Night Madness - 1815 - Dugway Hope Chapel - Football & Food	4 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club Garrison Staff Meeting - 0800 - CR 52	5 Story Time - 1100 - Post Library West Desert Staff Meeting - 0800 - Ditto - Roth CR	6 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club ATEC Awards Ceremony - HS. Auditorium - 1400-1630	7 Wendover Casino Dinner Trip - Departs 1500 - Returns 1200	8
9	10 Monday Night Madness - 1815 - Dugway Hope Chapel - Football & Food	11 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club	12 Story Time - 1100 - Post Library Command Staff Meeting - 0830 - Kuddes CR	13 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club Holiday Lights & Christmas Concert - 1500 - 2230 - Temple Square	14	15
16 Children's Christmas Pageant - 1100- Dugway Hope Chapel - Potluck Lunch	17 Monday Night Madness - 1815 - Dugway Hope Chapel - Football & Food	18 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club Garrison Staff Meeting - 0800 - CR 52	19 Ladies Christmas Tea - 1130 - 1300 - Post Chapel - Free Nutcracker Ballet - 1830 - 2030 - HS Auditorium - Free West Desert Staff Meeting - 0800 - Ditto - Roth CR	20 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club	21	22
23/30	24/31 Monday Night Madness - 1815 - Dugway Hope Chapel - Football & Food	25 Christmas Day	26 Story Time - 1100 - Post Library Executive Steering Committee - 0900 Ditto - Roth CR	27 Dinner and a Movie - 1800 (PG) - 2000 (R) - Community Club	28	29

THE DISPATCH

Published bi-monthly by the Public Affairs Office, Dugway Proving Ground. While contributions are solicited and welcomed, Dugway PAO reserves the right to edit all submitted materials and make corrections, changes or deletions to conform with the policies of this publication.

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Currently playing on the Dugway YouTube Channel

- **Disabilities Awareness**
- **Newcomers: Jessica Hansen**
- **Hispanic Heritage Observance**
- **ATEC Commander Visits**

www.youtube.com/channel/UCPjFIEBY7j7ay6m7FouadqQ

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