

# Scanning software deciphers ancient scroll

By DANIEL ESTRIN  
Associated Press



This undated photo released by the Israel Antiquities Authority shows an ancient charred scroll destroyed in a fire centuries ago. The 3D analysis is the first time experts say they have been able to read the text of an ancient scroll without having to physically open it.

JERUSALEM — The charred lump of a 2,000-year-old scroll sat in an Israeli archaeologist's store-room for decades, too brittle to open. Now, new imaging technology has revealed what was written inside: the earliest evidence of a biblical text in its standardized form.

The passages from the Book of Leviticus, scholars say, offer the first physical evidence of what has long been believed: that the version of the Hebrew Bible used today goes back 2,000 years.

The discovery, announced in a Science Advances journal article by researchers in Kentucky and Jerusalem on Wednesday, was made using "virtual unwrapping," a 3D digital analysis of an X-ray scan. Researchers say it is the first time they have been able to read the text of an ancient scroll without having to physically open it.

"You can't imagine the joy in the lab," said Pnina Shor of the Israel Antiquities Authority, who participated in the study.

The digital technology, funded by Google and the U.S. National Science Foundation, is slated to be released to the public as open source software by the end of next year.

Researchers hope to use the technology to peek inside other ancient documents too fragile to unwrap, like some of the Dead Sea Scrolls and papyrus scrolls carbonized in the Mt. Vesuvius volcano eruption in 79 CE. Researchers believe the technology could also be applied to the fields of forensics, intelligence, and antiquities conservation.

The biblical scroll examined in the study was first discovered by archaeologists in 1970 at Ein Gedi, the site of an ancient Jewish community near the Dead Sea. Inside

the ancient synagogue's ark, archaeologists found lumps of scroll fragments.

The synagogue was destroyed in an ancient fire, charring the scrolls. The dry climate of the area kept them preserved, but when archaeologists touched them, the scrolls would begin to disintegrate. So the charred logs were shelved for nearly half a century, with no one knowing what was written inside.

Last year, Yosef Porath, the archaeologist who excavated at Ein Gedi in 1970, walked into the Israel Antiquities Authority's Dead Sea Scrolls preservation lab in Jerusalem with boxes of the charcoal chunks. The lab has been creating hi-resolution images of the Dead Sea Scrolls, the earliest copies of biblical texts ever discovered, and he asked researchers to

scan the burned scrolls.

"I looked at him and said, 'you must be joking,'" said Shor, who heads the lab.

She agreed, and a number of burned scrolls were scanned using X-ray-based micro-computed tomography, a 3D version of the CT scans hospitals use to create images of internal body parts. The images were then sent to William Brent Seales, a researcher in the computer science department of the University of Kentucky. Only one of the scrolls could be deciphered.

Using the "virtual unwrapping" technology, he and his team painstakingly captured the three-dimensional shape of the scroll's layers, using a digital triangulated surface mesh to make a virtual rendering of the parts they suspected contained text. They then searched for pixels

that could signify ink made with a dense material like iron or lead. The researchers then used computer modeling to virtually flatten the scroll, to be able to read a few columns of text inside.

"Not only were you seeing writing, but it was readable," said Seales. "At that point we were absolutely jubilant."

The researchers say it is the first time a biblical scroll has been discovered in an ancient synagogue's holy ark, where it would have been stored for prayers, and not in desert caves like the Dead Sea Scrolls.

The discovery holds great significance for scholars' understanding of the development of the Hebrew Bible, researchers say.

In ancient times, many versions of the Hebrew Bible circulated. The Dead Sea Scrolls, dating to as early as the 3rd century B.C., featured versions of the text that are radically different than today's Hebrew Bible.

Scholars have believed the Hebrew Bible in its standard form first came about some 2,000 years ago, but never had physical proof, until now, according to the study. Previously the oldest known fragments of the modern biblical text dated back to the 8th century.

The text discovered in the charred Ein Gedi scroll is "100 percent identical" to the version of the Book of Leviticus that has been in use for centuries, said Dead Sea Scroll scholar Emmanuel Tov from the Hebrew University of Jerusalem, who participated in the study.

"This is quite amazing for us," he said. "In 2,000 years, this text has not changed."

Noam Mizrahi, a Dead Sea Scrolls expert at Tel Aviv University who did not participate in the study, called it a "very, very nice find." He said the imaging technology holds great potential for more readings of unopened Dead Sea Scrolls.

## BOARDMAN'S LIMY PASTOR

# Norwegians, Norwegians

It was a God moment early in the morning this last Sunday; a tingle down the spine, a shortcut to blessing. I opened the door of my car, and Peggy the Innkeeper came toward me.

"You're a pastor, a Lutheran pastor?" she asked.

"Yes," I said, "I am."

"There are Norwegians here — and they want to go to church today!" she said. She pointed to some very tall people who also looked quite rugged behind her.

For a Lutheran pastor in Boardman, this was an amazing thing. Until just recently Lutheranism was the state religion of Norway and Norway's royal family had to be Lutheran by law. Lutheranism had provided the soul formation of pretty much everyone in their population. You can't get



COLIN BROWN  
Faith

anybody more Lutheran than a Norwegian. It was a delight and an honor to meet these far-traveling faithful.

I didn't think that the Norwegians were members of the royals, here visiting in the land of windmills and potatoes, and they weren't. They were two married couples, and one son, Johannes. They were farming families who had obviously recognized the agrarian flavor of Boardman traveling through and felt the call of a Lutheran church that must be hiding on a slope on Locust Road.

I felt very gifted to have these guests show up at our church. Their English was pretty good — 1,000 percent better than our flock's Norwegian — but I slowed my sermon down when I saw their brows furrow. I

repressed any Viking jokes that came to mind, as jokes can be taken the wrong way in translation. They seemed to like the service. They said that in their culture many more people participated in the actions, standing up and reading texts, and playing roles in the service. It appears more casual there than we are used to.

Afterwards, we had Church Council. There was a discussion about the assisted living development on our land I discussed in this column last week. It was agreed to move forward with discussions with the city, which has an interest in this idea. It is like watching a photograph develop. Slowly things begin to move, much like God moves nature, first to shed seeds, then to begin developing tiny roots in the soil. The need for such a thing, the demand of that need that calls from the future is God's way of

working. A teacher of mine said that it is a future baby's need to enter existence that pulls a couple together, a God's eye way of looking at things with the dream and the promise being the foreshadowing of the spirit's movement into the world.

Joe Taylor, our treasurer and port commissioner who happens to be a farmer himself, was ecstatic to meet the Norwegian farmers. He took them away to see his farm and show them the city, creating a future international relationship, planting a seed.

I remembered Paul's verse in Hebrews 2:

"Do not forget to show hospitality to strangers, for by so doing some people have shown hospitality to angels without knowing it." (NIV)

Colin Brown is the pastor of Boardman's Good Shepherd Lutheran Church.

## BRIEFLY

### Free concert features gospel singer

IRRIGON — A country gospel singer from Joplin, Missouri, will perform at Columbia View Community Church in Irrigon.

Eldon Potts will sing Saturday at 7 p.m. at 1230 Highway 730, Irrigon. There's no admission charge and everyone is welcome.

The musician is said to present a unique style of country gospel, which appeals to everyone. Potts, who has a degree from Ozark Bible College, shares in word and song. Potts and his wife, Sue, have worked with Christ To The Nations Ministries, mainly in the Philippines.

For more information, call the church at 541-922-4531.

### Catholic church to serve Polish dinner

HERMISTON — In

recognition of Saint John Paul II and to raise money for the building fund, Our Lady of Angels Catholic Church will host a traditional Polish dinner.

The menu includes Polish sausage, appetizers, soup, cucumber salad, tossed salad, dumplings, meatballs and traditional Polish desserts. Open to adults only, the dinner is Saturday, Oct. 1 with the doors opening at 7 p.m. in the church's parish hall, 565 W. Hermiston Ave., Hermiston. Tickets are \$15.

Tickets will only be sold in advance. For more information, stop by the church office or call 541-567-5812.

### Peace Lutheran hosts animal blessing

PENDLETON — In celebration of the Feast Day of St. Francis, people are invited to have their animals blessed.

St. Francis of Assisi is the

patron of animals, merchants and ecology. Known for his kindness to all people and creatures, his life is commemorated by Catholics and others each year in October.

A Blessing of the Animals is planned Sunday, Oct. 2 at 3 p.m. on the lawn at Peace Lutheran Church, 210 N.W. Ninth St., Pendleton. Everyone is invited to bring a pet on a leash, in a cage, carrier or trailer. For those that can't transport their pet, bring a photo or plush version for the blessing.

For more information, visit [www.facebook.com/events/1302764383081713](http://www.facebook.com/events/1302764383081713).

### Hermiston church plans Hymnspiration

HERMISTON — A time of singing with old and new friends is planned at New Hope Community Church.

The Hymnspiration is Sunday, Oct. 2 from 6-7 p.m. at 1350 S. Highway

395, Hermiston. Everyone is invited to attend.

For more information, call 541-567-8441.

### M-F church embarks on Biblical journey

MILTON-FREEWATER — A Milton-Freewater church plans to take a Biblical journey in learning more about God's word.

Using "The Story," a Zondervan best seller, readers can better understand the Bible from Genesis to Revelation. Rev. Steve Lyons said some people are intimidated by the scope and size of the Bible and "The Story" provides a simpler way to learn more about God.

The 31-week program begins Sunday at 10:45 a.m. at the church, 518 S. Main St., Milton-Freewater. For more information, call 541-938-3854 or visit [www.miltonfreewatercc.com](http://www.miltonfreewatercc.com).

# Worship Community

**First United Methodist Church**  
Pendleton/Hermiston  
352 SE 2nd Street, Pendleton OR  
Sunday Worship 9am • 541-276-2616  
191 E. Gladys Ave, Hermiston OR  
Worship Broadcast on KUMA 1290 @ 11am  
Sunday Worship 11am  
541-567-3002  
Worship Livestream at [herfumc.com](http://herfumc.com)  
Open Hearts, Open Minds, Open Doors  
Rev. Dr. Jim Pierce, pastor

**Peace Lutheran Church** ELCA  
210 NW 9th, Pendleton  
Join us Sundays  
9:30 am Sunday Worship  
10:30 am Fellowship  
11:00 am Sunday School & Adult Class  
~Come and be at Peace~  
on 1290 KUMA noon each Sunday

**Faith Center Church**  
Worshiping God Loving People  
108 S. Main • 276-9569  
Sunday School 9:30 am  
Sunday Worship 10:30 am  
Sr. Pastor, Ray O'Grady  
[pendletonfaithcenter.org](http://pendletonfaithcenter.org)

**NEW HOPE COMMUNITY CHURCH**  
1350 S. Highway 395, Hermiston  
Sunday Worship Services  
English- Pastor Dave Andrus 9:00 & 10:45 am  
Spanish- Pastor Genaro Loredano 9:00 & 10:15 am  
Classes for kids during all services  
For more information call 541-567-8441

**Seventh-Day Adventist Church**  
Saturday Services  
Pendleton  
1401 SW Goodwin Place  
276-0882  
Sabbath School 9:20 am  
Worship Service 10:45 am

**Community Presbyterian Church**  
14 Martin Drive, Umatilla, OR  
922-3250  
Worship: 10 AM  
Sunday School at 11:30

**St. Johns Episcopal Church**  
Join Us On Our Journey With Jesus.  
Scripture, Tradition and Reason  
Family service 9am Sunday  
N.E. Gladys Ave & 7th, Hermiston  
Fr. Dan Lediard, Priest. PH: 567-6672  
We are an all inclusive Church who welcomes all.

**Grace Baptist Church**  
555 SW 11th, Hermiston  
567-9497  
Nursery provided for all services  
Sunday School - 9:30 AM  
Worship - 10:45 AM  
6:00 pm  
Wed Prayer & Worship - 7:00 PM  
"Proclaiming God's word, growing in God's grace"

**FIRST CHRISTIAN CHURCH**  
(DISCIPLES OF CHRIST)  
215 N Main • Pendleton  
Sunday Worship 10:40a  
Bible Class: 9:30a  
Office 276-5358  
M-F 8:30-12:30  
[www.FCCPENDLETON.ORG](http://www.FCCPENDLETON.ORG)

**PILOT ROCK BAPTIST CHURCH**  
585 SW Birch  
Pilot Rock, OR 97868  
(541) 443-2500  
[prbconline.blogspot.com](http://prbconline.blogspot.com)  
Sunday School: 9:30 am  
Worship Service: 10:45 am  
Kids' Club: 6:00 pm  
Wednesday Services:  
Youth Group: 7:00 pm

**Redeemer Episcopal Church**  
241 SE Second St. Pendleton  
(541)276-3809  
[www.pendletonepiscopal.org](http://www.pendletonepiscopal.org)  
Sunday Holy Communion 9:00 a.m.  
Wednesday Holy Communion Noon  
Weekly Adults Spiritual Life Group  
All Are Welcome

**GRACE AND MERCY LUTHERAN CHURCH, ELCA**  
OPEN HEARTS - OPEN DOOR  
[www.graceandmercy.lutheran.org](http://www.graceandmercy.lutheran.org)  
Sunday Worship 9:00 a.m.  
Sunday School 10:00 a.m. (Nursery Provided)  
Fellowship, Refreshments & Sunday School  
Check Out our Facebook Page or Website for More Information  
541-289-4535  
Tom Inch, Pastor  
Grace and Mercy Lutheran Church, ELCA  
164 E. Main St. / P.O. Box 1108  
Hermiston, Oregon 97838

Come meet Jesus at  
**PENDLETON BAPTIST CHURCH**  
3202 SW Nye Ave Pendleton, OR  
541-276-7590  
Sunday Morning Worship 11:00 AM  
Sunday Bible Classes 9:45 AM  
Sunday Youth Group 6:00 PM  
Mon. Community Women's Study 9:30 AM & 6 PM  
Awana Kids Club (K-6th grade)  
Wed Men's Study 6 PM  
MOPS meeting the 1st Thur of the Month 6 PM

**FIRST PRESBYTERIAN CHURCH**  
-Presbyterian Church (USA)-  
201 SW Dorion Ave.  
Pendleton  
Service of Worship - 10:00 am  
Children's Sunday School - 10:20 am  
Fellowship - 11:00 am  
[www.pendletonpresbyterian.com](http://www.pendletonpresbyterian.com)  
Open Hearted...  
Open Minded

PENDLETON FIRST  
**CHURCH OF GOD**  
FIRST SERVICE 8:30 AM  
SECOND SERVICE 10:30 AM  
712 SW 27<sup>th</sup> ST.  
541-276-1894  
[www.fcogpendleton.com](http://www.fcogpendleton.com)

**The Salvation Army**  
Center for Worship & Service  
Sunday Worship Service  
9:30 - Sunday School  
10:30 - Worship Service  
Wednesday Bible Study  
5:30 Family Fellowship Meal 6:00 Bible Study  
COME AS YOU ARE  
150 SE EMIGRANT  
(541)276-3369

**FAITH LUTHERAN CHURCH**  
in Mission for Christ LCMC  
Bible Study.....9:00 AM  
Sunday Worship.....10:30 AM  
Red Lion Hotel  
( Oregon Trail Room )  
[www.faithpendleton.org](http://www.faithpendleton.org)

a place to belong  
**Pendleton First**  
INVITING ENRICHING  
INVOLVING EMPOWERING  
SUNDAY SERVICES  
AM Celebration-10:00am  
AM Kids Place -10:00am  
The Connection-6:00pm  
Groups for all ages:  
Adults, Children, Youth, & College  
Thursdays  
Celebrate Recovery-6:00pm  
Celebration Place-6:00pm  
Other Groups Available Weekly  
For more info visit  
[WWW.PENDLETONFIRST.COM](http://WWW.PENDLETONFIRST.COM)  
1911 SE Court Ave  
541-276-6417  
Assembly of God Church

**Living Word Christian Center**  
Sunday Worship 10:00am  
Wednesday Bible Study 6:00pm  
Youth Classes:  
Nursery - 6th grade Sun & Wed  
Jr & Sr High Discipleship Program Wed  
Overcomer's Outreach  
Tuesday at 6:00pm - Annex  
A Christ-centered, 12-Step  
Recovery Support Group  
Pastor Sharon Miller  
401 Northgate, Pendleton  
541-278-8082  
[www.livingwordcc.com](http://www.livingwordcc.com)

To share your worship times call  
Terri Briggs  
541-278-2678