

## 6k-year-old sandals found in Spanish cave



New analysis has identified the oldest shoes ever discovered in Europe, according to a study published in the journal *Science Advances*.

The 22 woven sandals date from 6,000 years ago, radiocarbon analysis found in the study led by researchers at the Autonomous University of Barcelona and Alcalá University in Spain, CNN reported.

The ancient footwear, along with Mesolithic baskets and other tools, was first discovered back in 1857, when a cave in southern Spain was looted by miners. However, when the artifacts were first dated, in the 1970s, they were identified as being about 1,000 years more recent than this latest analysis found.

The very dry conditions within the cave were ideal for preserving perishable materials, the researchers said, and allowed the preservation of a prehistoric burial site complete with partially mummified corpses, accompanied by baskets, wooden tools, sandals and other goods.

The objects are "the oldest and best-preserved set of plant fiber materials in southern Europe so far known," María Herrero Otal, one of the study's authors, said in a statement, adding that they demonstrate "the ability of prehistoric communities to master this type of craftsmanship."

When Spanish archaeologist Manuel de Góngora y Martínez visited the cave in 1867, 10 years after the looting, he gathered the remaining artifacts, including the sandals, and gave them to museums in Madrid and Granada, where they have been studied by researchers, the study added.

The sandals were made of grasses as well as other materials, including leather, lime and ramie bast, a type of natural fiber.

Using the descriptions provided by Góngora, the study hypothesizes that the bodies were buried wearing the sandals.

Some sandals had clear signs of wear, while others appeared never to have been worn, suggesting that some people had clothing made especially for their burial. The researchers also studied several baskets and other wooden artifacts in the collection. These objects "open up groundbreaking perspectives on the complexity of Early-Middle Holocene populations in Europe," they said, adding that most knowledge of past societies is drawn from durable artifacts rather than perishable ones such as baskets. The Holocene is the current geological epoch, which began 11,700 years ago.

Both the baskets and sandals suggest that the makers had an extended knowledge of the plant resources in the local environment as well as a high level of expertise, the researchers noted.

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# Tourism industry could replace oil revenues: *Minister*

## MoUs signed on ecotourism projects

### Arts & Culture Desk

Iran's Minister of Cultural Heritage, Tourism, and Handicrafts Ezzatollah Zarghami is of the opinion that the tourism industry could help the country replace oil revenues.

Speaking at a ceremony to mark World Tourism Day in Tehran on Sunday, the minister said if tourism income takes the place of petrodollars, the Ministry of Oil will definitely enjoy better conditions, CHTN reported.

Also present at the ceremony were the head of the Department of the Environment, Ali Salajeqeh, deputy oil, energy and agriculture ministers, as well as the heads of guilds of the tourism sector.

"I would like to thank the Ministry of Oil for its support in the field of tourism," Zarghami added. "Regarding the importance of tourism, Minister of Oil Javad Owji has done everything we asked him urgently."

The minister noted that by the incorporation of the private sector and state-run organizations of the country, a greater prosperity of the tourism sector will be achieved.

He also expressed appreciation for the efforts made by the Ministry of Energy and the Water and Waste Water Management Organization, and the Ministry of Agriculture for their good cooperation with his ministry.



On the sidelines of the ceremony, the Ministry of Cultural Heritage, Tourism, and Handicrafts inked three memorandums of understanding (MoUs) on the development of ecotourism. The first MoU was signed with the Water and Waste Water Manage-

ment Organization, as a trilateral agreement was inked with the Iran National Environmental Fund and Iranian Hoteliers Association. Renewable Energy and Energy Efficiency Organization (SATBA), Union of Ecotourism Residences of Iran and Alavi Foundation signed a

memorandum of understanding with the ministry on ecotourism projects. Two books on tourist guides and green investment as well as a digital book on sustainability in ecotourism houses were unveiled at the ceremony.

## Iran, Uzbekistan sign MoU on cinematic affairs

The head of Iranian Organization of Cinema and Audiovisual Affairs, Mohammad Khazaei, and director general of Uzbekistan's cinema agency, Ferdavus Abdul Khalikov, signed a memorandum of understanding (MoU) on boosting cooperation in fields related to cinema. The Iran-Uzbekistan agreement on cooperation was signed regarding deep cultural relations based on mutual respect and national interests between the two countries, the public relations office of the

Iranian cinema body said on Sunday, IRNA reported. The agreement includes exchange of films, participation in film festivals in the two countries, facilitation of the presence of filmmakers in the two countries for filmmaking, etc. According to the report, the two countries have agreed to form a committee to pursue the implementation of the memorandum of understanding and remove obstacles to this end.



## Puzzling archeological discoveries in north-eastern Iran

### Arts & Culture Desk

Archeologists started their first explorations in Kalekoob in South Khorasan Province; they found several artefacts dating back to 6,000 years ago, and were left with the question of when urbanization had started in this area.

This is the fourth phase of archaeologists' explorations in this region, and based on what the director of the research team says, this is one of the rare prehistorical monuments in South Khorasan that reflects cultural transition from the Copper Age (5th millennium BC) to the Bronze Age (2nd millennium BC). Researchers in the area discovered

a cultural transition from prehistory in eastern Iran, which is a considerable achievement since the beginning of this research in 2018. Azizi Kharanaqi, member of Scientific Institute of Archeology, said the discovery of cultural items which belong to the beginning of the urbanization era (4th millennium BC), or the beginning of the Elamite culture, is the most important accomplishment of this process. Archeologists have discovered the remarkable works of pottery belonging to this era, which proves the presence of a civilization in Iran's Central Plateau and Kerman. He said that the discovery shows how widespread this culture was

in the eastern part of Iran in the 4th millennium BC, adding that the exact cultural layer of this finding is yet to be determined with the help of Tokyo University. The fourth phase of the archeolog-

ical work in Kalekoob is predicted to be about identifying the remaining layers of the urbanization era and getting more details on the prehistorical cultures in that location.

