

Seljuk Yakutiye Madrasah draws numerous visitors to Erzurum

Yakutiye Madrasah, which is placed among the most unique examples of Seljuk architecture and symbols of the Erzurum region, Turkey, has recently become a popular haunt for local and foreign tourists.

The historical building, which was built by the order of Jamal-ud-Din Yaqut in 1310 CE on behalf of Mahmud Ghazan and Bolgan Khatun in the period of

ends.

Mehmet Doğan Öz, the tourist guide of a group coming from Denizli said that there are many historical buildings in Erzurum.

Reminding us that the Yakutiye Madrasah was a flourishing university in its day, Öz continued, "The tree of life, leopard and one-headed eagle motifs in the madrasah are the most striking and extraordinary works of art.

"They really show how superb the stonemasonry in this construction is.

"There is a cultural and mythological richness here.

The part which draws attention most is the minaret.

"The madrasah was closed as restoration work was being conducted here until very recently. When the work was completed, we added it to our tour program."

Sedat Efe, who from the Ordu region, said that the weather of Erzurum is really perfect.

"I was wondering about Erzurum as I have never visited it before. There are many historical buildings in the city.

"We visited the Çifte Minareli [Double Minaret] Madrasah and Yakutiye Madrasah.

"The work which is on display at the museum here is very interesting and there are many things that I have never seen before. We examined them with great interest."



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Ilkhan Sultan Oljeitu in the district of Yakutiye, both reflects the traditional Seljuk architecture and is among the madrasahs featuring a closed courtyard which have four ivans, which are vaulted or domed spaces set back from the central court, according to dailysabah.com.

The tiles on the minarets and doors of the madrasah reflect the importance placed on balance and symmetry. Their symbolic descriptions and beautiful vegetal and geometric motifs on the front are unique.

The Yakutiye Madrasah draws the attention of both local and foreign tourists and features a precious Turkish Islamic Museum within its walls and therefore is flooded by a constant stream of visitors, especially on week-

Asian residents exposed to nine times more air pollution than Americans or Europeans

According to World Health Organization, about 88 percent of premature deaths in low- and middle-income countries in Asia can be attributed to air pollution.

The number of road vehicles in Beijing increased from 1.5 million in 2000 to more than five million in 2014 and the number in Delhi, India, is expected to increase from 4.7 million in 2010 to 25.6 million by 2030, phys.org reported.

In a review published by the journal Atmospheric Environment, Surrey's Global Center for Clean Research (GCARE) looked at studies of pollution exposure and concentration levels in Asian transport microenvironments (walking, driving, cycling, motorbike riding and bus riding).

Researchers focused on the levels of fine particles, black carbon produced by carbon-rich fuels such as gasoline and diesel fuel, and ultrafine particles (UFP) small enough to travel deep into a citizen's lungs.

The review found evidence that pedestrians walking along busy roadsides in Asian cities are exposed to up to 1.6 times higher fine particle levels than people in European and American cities.

Car drivers in Asia are exposed to up to nine times more pollution than Europeans and Americans, while black carbon levels were seven times higher for Asian pedestrians than Americans.

The study reported that in Hong Kong, UFP levels were up to four times higher than in cities in Europe. In New Delhi, average black carbon concentration in cars was up to five times higher compared to Europe or North America.

Professor Prashant Kumar, lead author of the study and the director of the Global Center for Clean Air Research at the



phys.org

University of Surrey, said, "Care should be taken in directly comparing and contrasting the results of different studies due to varied amounts of information available on personal exposure in studied regions.

"However, there is compelling evidence that people travelling in urban areas in Asian cities are being exposed to a significantly higher level of air pollution.

"A noticeable gap still exists in studies that focus on the Asian population living in rural, semi-rural or smaller

cities, where pollution exposure could be as harmful as in urban areas owing to several unattended sources.

"There were rare data on cyclist and motorcyclist exposure despite substantial use in Asian cities; studies were limited for other transport modes too.

"It is important that this knowledge gap is filled if we are to get a complete picture of the pollution exposure challenge that the Asian population faces."

Professor Chris Frey of North

Carolina State University, coauthor of the study, said, "There are increasing efforts in Asia to install properly designed and calibrated portable monitoring systems to measure actual exposures, using the data to better understand why high exposures occur and how to prevent them.

"These measurements of personal exposures will help individuals, businesses, and governments to develop and implement strategies to reduce such exposures."

Hybrid cars to be exempt from UK 2040 petrol and diesel ban

By Gwyn Topham*

Petrol and diesel hybrid cars will still be permitted to be sold in 2040, the government has conceded, in a move that has angered environmental campaigners but was welcomed by the car industry.

Ministers last year pledged to ban new cars powered by fossil fuels by 2040 but the transport secretary,

50 percent of new cars to be ultra-low emission by 2030.

However, it stops short of outright commitments for the decades ahead, saying it expects all new cars and vans to have significant zero-emission capability by 2040 and 'almost every' car and van to be zero-emission by 2050.

Grayling said he believed the best method was to influence car buyers,

summer to help expand infrastructure across the country, with hundreds of thousands more charging points on streets, in new homes and in workplaces.

He said that as well as reducing pollution, the strategy set out a clear path for Britain to be a world leader in zero-emission transport, which represented 'a huge global opportunity for industry and business' worth

international standards.

The Campaign for Better Transport said it was disappointing, describing it as a step backwards, giving concessions to keeping hybrids on the road, which will water down the already inadequate 2040 target.

But Grayling said, "I don't think it's watered down at all... We want to get rid of classic petrol and diesel engines.

"It's about supporting the industry to deliver it and encouraging changes to consumer behavior. I expect by 2040 every vehicle to have substantial zero-emission capability and most to be 100 percent zero-emission."

The motor industry had argued that the 2040 targets were contributing to consumer fears over diesel cars, whose UK sales have slumped in the last 15 months.

Mike Hawes, the chief executive of the Society of Motor Manufacturers and Traders, said the strategy recognized the vital role conventional engines, including diesel, will continue to play in the transition to 2040 and beyond.

He said the industry welcomed the 'technology neutral approach' and the news that hybrids would not be banned but remained concerned over 2030 targets for ultra-low emission vehicles.

He said, "We need realistic ambition levels and measures that support industry's efforts, allow manufacturers time to invest, innovate and sell competitively, and provide the right incentives and infrastructure to take the consumer with us."

* Gwyn Topham is The Guardian and Observer's transport correspondent.

Rising CO₂ levels threaten monarch butterflies



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Monarch butterflies face a new threat — rising CO₂ levels.

Rising levels of CO₂ are reducing the medicinal benefits of milkweed for monarch butterflies, new research showed.

Monarch butterfly caterpillars only eat milkweed leaves. The caterpillars accumulate bitter toxins found in the leaves, called cardenolides, helping them ward off would-be predators, UPI reported.

In field experiments, scientists at the University of Michigan grew four milkweed species under varying atmospheric conditions.

The plants were exposed to different levels of carbon dioxide concentration. Afterwards, the plants' leaves were analyzed before being fed to monarch butterfly caterpillars.

Researchers found the species of milkweed with the largest cardenolide concentrations under normal growing conditions produced lower amounts of the protective compounds when exposed to greater CO₂ concentrations.

Scientists found caterpillars fed the milkweed exposed to elevated

CO₂ levels were less able to tolerate a common parasite. The monarch butterflies' lifespan was also reduced by an average of a week.

Researcher Leslie Decker said, "We discovered a previously unrecognized, indirect mechanism by which ongoing environmental change — in this case, rising levels of atmospheric CO₂ — can act on disease in monarch butterflies."

Researchers suggest rising CO₂ levels could reduce other medicinal compounds found in different plants, which include compounds used by humans for a variety of drugs.

Michigan ecologist Mark Hunter said, "When we play Russian roulette with the concentration of atmospheric gases, we are playing Russian roulette with our ability to find new medicines in nature."

Monarch butterflies are already plagued by a loss of habitat and other environmental threats. Now, the latest findings — published in the journal Ecology Letters — suggested they will be more susceptible to parasites in the future.



theguardian.com

The government's Road to Zero strategy to reduce car pollution now includes a further target for at least 50 percent of new cars to be ultra-low emission by 2030.

Chris Grayling, confirmed that hybrid cars — powered by electricity and diesel or petrol — would be exempt, theguardian.com wrote.

The government's Road to Zero strategy to reduce car pollution now includes a further target for at least

"I want it to be easier for electric vehicle drivers to recharge than for motorists to visit a filling station. I want them to choose electric cars because they are so convenient."

He said a delayed £400 million charging fund would be launched this

£1 trillion a year by 2030.

However, environmental groups accused the government of weakening its commitments.

Greenpeace said the car industry was 'yet again being given a free pass' and the targets were weak by