

IRAN'S WILDLIFE

On the web of Iran's new arachnid genus

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Arachnids are joint-legged invertebrate animals that have eight legs. The term "arachnid" is derived from a Greek word meaning "spider".

There are eleven orders of arachnids. These include the scorpions; mites and ticks; harvestmen; pseudoscorpions; whipscorpions; solpugids; and spiders. It's like the relation of beetles with insects: beetles constitute one order of insects, the Coleoptera, but not all insects are beetles.

Similarly, not all arachnids are spiders. Each arachnid's leg has seven segments. The legs are powered by sets of muscles and blood pressure. At the end of each leg are usually 2 or 3 sharp claws for gripping surfaces.

From the outside, arachnid's body is very different from ours. It has eyes and mouth, but no ears, nose or tongue. Instead, it relies on a variety of "hairs" and bristles to touch, taste and hear things with microscopic pores on its feet. Inside, arachnids have many features common to other animals, such as blood, nerves, brain and a digestive system. They also have special glands for spinning silk (notice not all of them! Only spiders, pseudoscorpions and certain groups of mites) and for making and storing venom (again, not all of them, only spiders, scorpions and pseudoscorpions).



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Sticky traps of a widely distributed family

Hersiliidae is a relatively small (181 species in 16 genera), widely distributed family, mostly restricted to temperate, subtropical and tropical zones. This family is relatively well studied due to large-scale revisions of Australasia, Asia, Africa, New World and several regional surveys in Yemen, the Iberian Peninsula, Iran, the East Mediterranean and Turkey. Currently, 10 species of four genera of Hersiliidae are known from Iran.

Omid Mirshamsi, Alireza Zamani and Yuri M. Marusik in the article of "A survey of Hersiliidae (Arachnida: Araneae) of Iran" that was published in "Journal of Natural History" addressed to description of one new genus and two new species: genus Bastanius, with the type species of B. kermanensis and Hersilia talebii from south and south-eastern Iran. In addition, Hersiliola macullulata (Dufour, 1831) was recorded for the first time from Iran, and Hersiliola foordi was transferred to Bastanius.

The importance of new genus in Iran

The fauna of Iran, especially in the case of arachnid's taxonomy remains poorly studied. Arachnids are often confused with insects, but they belong to a completely different group. An arachnid has 8 legs, but an insect has 6. Its body has 2 parts while an insect's has 3. Many insects have wings and antennae, but arachnids do not.

Spiders are some of the most feared and least understood creatures in the animal world. These hairy hunters are famous for spinning webs and giving a venomous bite. There are more than 46,000 known species of spiders, with scientists discovering new ones each year. Only about 200 species, however, are dangerous to people. All spiders are very useful to humans, because they eat insect pests and keep their numbers in check.

Although there are several recent publications about arachnids and Hersiliidae of the Middle East, the fauna of the region remains poorly studied. Alireza Zamani, who has recorded more than 120 species of arachnids as new to the fauna of Iran and has described about a dozen of new taxa, about the importance of description of this new genus (Bastanius) said: "The fauna of the region remains poorly studied in regards of Hersiliidae and the same is true for Iran."

"Its fauna was considered in four publications, with ten species of four genera being reported from the country," he said, adding, "The current studies of spiders of Iran conducted in Ferdowsi University of Mashhad and University of Tehran revealed two species new to science, and another species previously unrecorded from Iran."

"Of the two undescribed species, one belongs to a genus previously unknown from Iran, and the other represents an undescribed genus, in addition we have at least two more new species of this family which are under progress of being described."

Zamani also mentioned "the genus name is a patronym, suggested by my colleague, good friend and the first author of the paper, Dr. Omid Mirshamsi, honoring the late emeritus professor of the University of Tehran, Dr. Mohammad Ebrahim Bastani Parizi (1924-2014), who was an Iranian historian, translator, poet, essayist and author of non-fiction books whose numerous publications are mostly popular reads on the history of Iran and the history of his hometown, Kerman, where this new species was collected."

Great gain from a poorly studied family

Zamani as a second author of "A survey of Hersiliidae (Arachnida: Araneae) of Iran" told the Tehran Times "According to the literature, the fauna of Hersiliidae in Iran should be considered poorly studied as the first records of these spiders in the Iranian Plateau have been provided only recently."

"In spite of this lack of data, our recently published works have shown the highest species diversity of Hersiliidae in the whole Palaearctic region," he added.

The results of this study and another recently published faunistic paper increase the number of hersiliids of Iran to ten species in four genera: Bastanius kermanensis, B. foordi, Duninia baehrae, D. darvishi, D. rheimsae, Hersilia talebii, Hersiliola sternbergi, H. simoni, H. turcica and H. macullulata.

Although all of the above species are morphologically distinct, the application of molecular markers, such as cytochrome c oxidase, subunit I (COI), may lead to the discovery of more new species of this taxon in this geographic area. Furthermore, considering the fact that comprehensive faunistic studies on spiders in much of the Iranian Plateau and Zagros Mountains have not been conducted, any newly collected material from these regions is therefore valuable and may represent new records or species.

# Climate change brings about harmful effects on species

**ENVIRONMENT** TEHRAN — Species diversity have sharply fell under the negative impacts of climate change either directly or indirectly, director general for natural history museums and genetic data storage division of the Department of Environment (DoE) has said.

Though climate change is an issue of importance, its connection with the biodiversity has not been much discussed so far, Asghar Mobaraki said, Mehr news agency reported on Saturday.

Temperature rise affects fetal gender

Mobaraki went on to explain that "a temperature of 28.5 centigrade would result in male green sea turtle and a temperature of 30.5 centigrade in female ones."

In other words, a one-centigrade temperature change can affect fetal gender in these species, he said, warning, "if the temperature rise or fall merely one centigrade for an hour in one habitat we would only have male or female green sea turtles in that site."

"If it keeps happening over a 10-year



period in a habitat then you'll see that in one habitat there are 2,000 female and 2 male turtles and the habitat will be totally ruined," he lamented.

Unseasonable immigration

Mobaraki also noted that climate

change can have some damaging impacts on the animals as it leads to unseasonable immigration.

"Normally when the temperature reaches 25 centigrade in [Iranian calendar] months of Esfand and Farvardin (February

20 to April 19) many of the species would immigrate," he said, stating "if the temperature rises to 25 centigrade in the middle of the winter this will constitute some challenges for the animals."

For instance, he said, the birds which are flying from north to south would face cold weather and can't find any food and ultimately die.

Islands may disappear

As announced by International Union for Conservation of Nature (IUCN) the sea levels may increase by one meter which means many islands can disappear into the seas, he pointed.

Mobaraki regretted "we may lose all of our islands to rising seas as the climate change hits and since they are habitats to some species we would lose them all as well."

Recurrent environmental disasters

"It is projected that such unexpected disasters will happen more frequently and subsequently we don't have much time to make up for the loss in the future," he warned.

## Trump resumes fight against windfarm near Scottish golf course

Donald Trump has vowed to continue fighting the windfarm development off the coast from his Aberdeenshire golf course, branding the project an act of "public vandalism".

The US presidential candidate returned to the fray after Swedish Energy Company Vattenfall confirmed on Thursday that it is going ahead with its £300m investment, despite last month's EU referendum vote.

The offshore windfarm has been dogged by years of bitter legal wrangles between Trump and the Scottish government over its impact on his golf course, which the tycoon ultimately lost in the courts last year.

A spokesperson for the Trump Organization insisted that several of planning conditions associated with the project had yet to be fully satisfied. They said that the New York-based billionaire would be lodging formal objections with Marine Scotland, as well as pursuing addi-



tional remedies before the European courts if necessary.

Vattenfall said on Thursday that it had all the planning consents in place for the development.

The 11 turbines in the development will send clean

energy back to the grid, but will also be a key testing ground for reducing the cost of the technology, which is around twice as expensive as land turbines.

But Trump has long argued that the technology has become outdated due to the length of time taken to reach an agreement on the scheme. The spokesperson added: "We remind those who care about this coastline that the European Offshore Wind Deployment Centre (EOWDC) was promoted as an experimental test station, and after more than 10 years of floundering through the planning process, the technology behind the scheme is exceptionally outdated.

"The gross incompetence demonstrated by Aberdeen city council officials is disturbing and they have failed to protect the safety and best interests of their residents, which will become their tragic legacy should the EOWDC proceed."

(Source: The Guardian)

## Tigers maul woman to death and wound another at Chinese Wildlife Park

Siberian tigers at a wildlife park in Beijing have mauled a woman to death and wounded another when they stepped out of their car in an enclosure, a Chinese state-run newspaper said.

A tiger pounced on one of the women after she got out of a private car in which she was touring the Beijing Badaling Wildlife World on Saturday, the Legal Evening News reported.

The second woman was killed by another tiger that leapt at her after she stepped out of the vehicle to try to help her companion, the report said.

The Yanqing district government con-

firmed in an official microblog post that the tiger attack took place at the park, which lies at the foot of the Great Wall. It offered few details but said the injured person was being treated.

Visitors are allowed to drive their own vehicles around the park, but are forbidden from getting out while in certain enclosures, the report said.

A woman who answered the phone at the park refused to comment on the attack, saying only that the park was closed for two days due to forecasts of heavy rain.

(Source: Fox News)

## Surfer survives crocodile attack after friend fights it off with his bare hands

A surfer in Costa Rica has survived a crocodile attack after his friend fought off the reptile with his bare hands.

The two men were crossing a river by a popular tourist beach in Tamarindo when the crocodile struck.

Pat McNulty, a lifeguard in the area, said the victim — a US citizen named locally as 59-year-old John Becker — remained conscious after the attack and was taken to the provincial capital for emergency medical attention.

"He was bitten several times in the leg as well as the head," Mr McNulty told the Associated Press. "They were able to get him

free, swim him to safety and then trained lifeguards responded... and we administered first aid and called an ambulance."

The victim was said to be in a serious but stable condition following the attack.

"His friend saved his life... and then we the lifeguards helped keep him alive," said Mr. McNulty.

Costa Rican news site The Tico Times reported that the victim has had his right leg amputated and remains in a critical condition. He is also said to have lost large quantities of blood and suffered minor injuries to his face.

(Source: Independent)

IN FOCUS IRIB/ Ehsan Jazini



Isfahan Birds Garden with an area of 17000 square meters hosts more than 5000 birds from 130 different species. The birds belong to the different parts of Iran and also other countries like Australia, Indonesia, China and Tanzania.