Crafty birds may be resorting to arson

Reports from Australia suggest falcons may smoke out their prey

BY MATT MCFARLAND
THE WASHINGTON POST

Humans may not be the only ones to blame for wildfires. Researchers have preliminary evidence pointing to Australian birds spreading fires in order to force out their prey from protected grassy areas.

The brown falcon and black kite are believed to pick up smoldering pieces of brush and branches and take them to new locations. These birds regularly hunt at the edges of fires, but such blazes are not always positioned over food sources. By moving the fires to areas with a heavy concentration of prey, the birds create an easy opportunity to hunt frogs, lizards and snakes.

"It's not gratuitous," said Bob Gosford, who has collected the data. "There's a purpose. There's an intent to say, okay, there are several hundred of us there, we can all get a meal."

Gosford is a lawyer who has lived in Australia's Northern Territory for 30 years. He represents aboriginal people as they negotiate land deals with cattle farmers and other groups. He's also a bird lover and has presented his findings at multiple conferences. He's working with Penn State cultural geographer Mark Bonta to publish the work in a peer-reviewed journal. They'd like to co-author the work with the aboriginal community.

Gosford said he has 15 accounts of Australian birds picking up burning pieces of brush and then dropping them in a new spot. His findings come from Australian firefighters, aboriginal people and literature. The evidence is anecdotal and mythical, including one sacred aboriginal ceremony — the Yabadurrwa — in which a person acting as a bird transports a flaming branch.

"We're not going to be satisfied until we can get this on video," Bonta said. The researchers want to crowdsource their work, and they hope people around the world will monitor birds' behavior near fires and reach out. Bonta is in touch with a remote community in Honduras, which lives in an environment prone to wildfires. Gosford said he's following up on a lead in West Africa.

They think this work may turn on its head the accepted wisdom that only lightning and humans ignite wildfires.

ROBERT GALBRAITH | REUTERS

A wildfire burns in Lake County, California, in 2015. Researchers have preliminary evidence pointing to Australian birds spreading fires in order to force out their prey from protected grassy areas.

"The birds aren't starting fires from scratch, but it's the next best thing," Bonta said. "Fire is supposedly so uniquely human."

If firmed up, the findings also raise the question of how savannas were formed, the researchers said. Birds, not humans, could have been pivotal in the clearing of those spaces.

Bonta suggested it's even possible that ancient humans learned about the potential to spread fires from watching birds. Copying the behavior would have spurred human development, as humans learned to control fire and survive in colder climates.

"Forget about the opposable thumbs and the upright stance and all that; fire is the tool that really made us human," Bonta said.

Gosford's work is motivated by a failure to recognize aboriginal knowledge.

"There's an immense amount of aboriginal knowledge of the birds in this country that I firmly believe that for science and land management, if there was greater recognition of it, we'd be a much better place," he said.

Bad heart? Bad habits? It's your Neanderthal DNA

BY AMY ELLIS NUTT
THE WASHINGTON POST

In the five years since scientists confirmed Neanderthal DNA is present in people of Eurasian ancestry, headlines have tended toward either the jocular or the melodramatic.

On Thursday, a straightforward, even prosaic headline was stripped across the top of an article in the journal Science:

"Neanderthal-Derived DNA May Influence Depression and More in Modern Humans"

The first-ever study directly comparing Neanderthal DNA to the human genome confirmed a wide range of health-related associations — from the psychiatric to the podiatric -that link modern humans to our broad-browed relatives.

"Our main finding is that Neanderthal DNA does influence clinical traits in modern humans," lead author John Capra, an evolutionary geneticist at Vanderbilt University, said in a statement.

Among the more intriguing points: Snippets of Neanderthal DNA contribute to the contemporary risk for myriad ills, including heart attack, nicotine addiction and mood disorders as well as incontinence, foot callouses and precancerous skin lesions.

Those skin conditions as well as depression are known to be influenced by sunlight exposure, which is why the researchers think Neanderthals' eventual migration from southern to northern hemispheres influenced their genetic susceptibility — and ours.

"These results establish the impact of [Neanderthal] DNA on diseases that involve traits potentially influenced by environmental differences," they write.

The researchers concluded that Neanderthals likely lived long enough in their new homelands to adapt to a new environment. Some Neanderthal genes, appearing at a much higher frequency than the scientists expected, would have provided a benefit in early human populations as they moved between continents. But those same genes became disadvantageous hundreds of thousands years later.

Neanderthals are thought to have migrated from Africa to Europe and Asia about 400,000 years ago. Interbreeding around 50,000 years ago resulted in the genomes of modern Eurasians containing between 1.5 percent and 4 percent Neanderthal DNA.

La Nina weather expected to be factor this year

Phenomenon may emerge for the first time since 2012

BY CHRIS PRENTICE
REUTERS

NEW YORK — Even as the El Nino weather phenomenon continues to affect global temperatures and crops, its counterpart La Nina is increasingly expected to emerge in the coming months for the first time in four years.

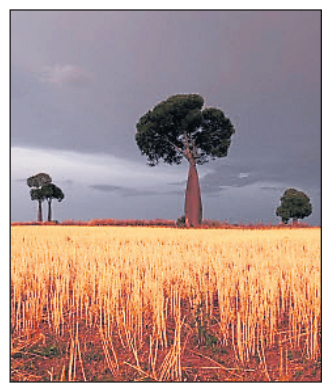
The return of La Nina, Spanish for "the girl" and characterized by unusually cold ocean temperatures, is possible later this year, the U.S. government forecaster said Thursday. It joined other forecasters in projecting La Nina could follow on the heels of one of the strongest El Ninos on record.

Weather models indicate La Nina conditions, which tend to occur unpredictably every two to seven years, may emerge in the Northern Hemisphere fall, while El Nino — which means "the little boy" in Spanish — is expected to dissipate during the late spring or early summer, the National Weather Service's Climate Prediction Center said in its monthly forecast.

The phenomenon can be less damaging than El Nino, but severe La Ninas are linked to floods, droughts and hurricanes.

Even though CPC is not on official watch for La Nina, the probability is trending towards one, said Michelle L'Heureux, a CPC climate scientist and El Nino/La Nina expert.

When La Nina last appeared from August 2011 to March 2012, it hurt corn and soybean crops in Argentina and Brazil, brought the worst drought in a century to Texas and increased the number of storms that threatened U.S. coastal regions, like Hurricane Irene.



TIM WIMBORNE | REUTERS | FILE

Recent rains have improved the outlook for wheat farmers in Australia, the world's fourth largest wheat exporter, putting them on track for a bumper crop – especially if a wet weather La Nina pattern returns as some forecasts suggest.

Energy and agricultural commodities have been roiled by the current and much-watched El Nino, which involves a pattern of warmer ocean surface temperatures in the eastern and central Pacific every few years.

Over the last year, El Nino has parched fields in the Philippines and Indonesia, brought unseasonable rains to areas of South America, driven up global food prices, and caused flash floods in Somalia that destroyed thousands of homes.

El Nino is likely to keep affecting temperature and precipitation patterns across the United States in the upcoming months, CPC said in its forecast.

"As we get into the spring, we'd still expect to see some influence. Folks need to keep their eyes on El Nino," CPC's L'Heureux said.