Science and Digital Briefs

By Shopper Editor Dave Bunting

Apr. 20, 2022

Northern Gannets
Image: Alaska Fish & Game Dept.

Heat, no food, deadly weather: Climate change kills seabirds

by Patrick Whittle, Phys.org

The warming of the planet is taking a deadly toll on seabirds that are suffering population declines from starvation, inability to reproduce, heat waves and extreme weather.

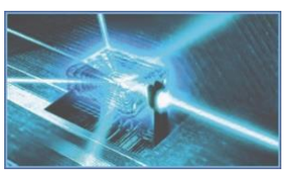
Climate-related losses have hit albatrosses off the Hawaiian islands, northern gannets near the British Isles and puffins off the Maine coast. Some birds are less able to build nests and raise young as sea levels rise, while others are unable to find fish to eat as the ocean heats up, researchers have found.

Common murres and Cassin's auklets that live off the West Coast have also died in large numbers from conditions scientists directly tied to global warming.

With less food, rising seas that encroach on islands where birds roost and increasingly frequent hurricanes that wipe away nests, many seabirds have been producing fewer chicks, researchers say.

And tern species that live off New England have died during increasing rain and hailstorms scientists link to climate change. Some species, including endangered roseate terns, also can't fledge chicks because more frequent severe weather kills their young, said Linda Welch, a biologist with the U.S. Fish and Wildlife Service.

Includes excerpts from phys.org
Info: shpr.fyi/warmkillsbirds



New 127-qubit quantum processor

by Bob Yirka , Phys.org

Communication at electrons' speed of light takes infinitesimal but nevertheless real time between even the microscopic spaces between components on the printed circuits in the central processing units in our computers and other devices such as phones.

Quantum communication is between photons or electrons (qubits) that are "entangled" such that a change in one causes a change in the other instantly even if they are separated by immense distance. Quantum computing will speed computers by eliminating that tiny time spent in computing.

Decryption of all coded messages is possible but is made impossible for our presently most secure codes because it would take years for the time to get through jillions of these tiny code steps. Quantum computing would make such decryption almost instantaneous making even the best coded messages no longer secure. Secrecy and privacy could be ended with disastrous consequences for banking and every other activity in our lives where privacy is necessary.

IBM has announced the development of a 127-qubit quantum processor. As part of its announcement, IBM also announced that computers running the new processor will be made available to IBM Quantum Network members and that the company has plans for launching two other, presumably more powerful processors it has named Osprey and Condor over the next two years. The current processor has been named Eagle.

Over the past decade, several technology companies have been working hard to develop a truly functional and useful quantum computer.

Such efforts have fallen into two main camps—those attempting to create a quantum computer using entangled photons and those using superconducting materials. Those announced by IBM are all based on superconducting materials.

The announcement by IBM marks a record for superconducting quantum computers—the prior record for number of qubits was 60, in a machine made by a team at the University of Science and Technology of China. The new mark of 127 suggests a massive increase in computing power, though IBM has yet to make public any data regarding the performance of its new machines. But that has not stopped the company from claiming that it has created the world's largest superconductor-based quantum computer. Representatives for the company have also claimed that the Eagle is the first processor that cannot be simulated on a traditional supercomputer. They herald its development as a major step toward the development and use of quantum computers that will be able to not only outperform classical computers but tackle some problems that would take traditional computers thousands of years to process.

Includes excerpts from phys.org
Info: shpr.fyi/quantum127

Iditarod Finished

Veteran musher Brent Sass of Eureka, Alaska, formerly of Minnesota, holds his lead dogs Slater and Morello after winning his first Iditarod.

The world's most famous sled dog race started for 49 mushers March 6 north of Anchorage. The nearly 1,000-mile trail took them over two mountain ranges, along the frozen Yukon River and then along the Bering Sea ice on Alaska's western coast.

Twelve mushers scratched, half of them on Friday during a vicious storm that hammered mushers with high winds as they attempted to make the final 77 miles to Nome.

The last musher arrived in Nome, ending the 50th running of the Iditarod Trail Sled Dog race across Alaska. Musher Apayauq Reitan of Kaktovik, Alaska, crossed the finish late at night, winning the Red Lantern award and $1,000 for being the final sled dog team to reach the Bering Sea coastal community on Alaska's western coast.

Reitan also extinguished the widow's lamp on the burled arch that towers over the finish line, a tradition that means there are no other mushers on the trail.

Includes excerpts from mynorthwest.com
Info: shpr.fyi/iditarod

WE CAN HELP Ukrainians with charitable donations:

Food, medical, etc. help:

Ukraine Red Cross:
shpr.fyi/ukraineredcross

Samaritans Purse:
shpr.fyi/samaritanpurse

Mercy Corps:
mercycorps.org/donate

Military help:
war.ukraine.ua/donate/

Check out this week's Bible Readings on page 6 which includes Timothy ending his unbelief: ***"Then [Jesus] said to Thomas, 'Put your finger here; see my hands. Reach out your hand and put it into my side. Stop doubting and believe.'***

Thomas said to him, 'My Lord and my God!'

Then Jesus told him, 'Because you have seen me, you have believed; blessed are those who have not seen and yet have believed.'"

John 20: 25-29 NIV

Dave Bunting, Apr. 18, 2022
References in links below items.
See these columns on my blog
daverant.com