TUESDAY, JUNE 20, 2023 - 85

A jump for freedom on Juneteenth



Pasua Turner jumps double Dutch at a Juneteenth event at Black Lives Matter Plaza on Monday. Across the country, Americans celebrated the federal holiday, which commemorates June 19, 1865, when a Union general read orders in Galveston, Tex., declaring that all enslaved people in the state were free. Story, B1

With aid at stake, Ukraine clamps down on graft

EVIV. UKRAINE — The phote showed hundred-dollar bills lyin in piles on furniture and juttin out of a safe - the results of what officials from Ukraine's main anti-corruption body said last month was a \$2.7 million bribery scheme involving the chief justice of the country's Supreme Court, Viewo-led Engages.

Persistent corruption could threaten funding from wartime allies

effir" in a corruption scheme po-tentially involving other members of Ulcutan's Suppose Court and judiciary. The cash in the photos was found at his home and office, officials said. Engagery was ar-rested and dismissed from his position, and a criminal investiga-tion is ongoing.

"This is hope," said Tetiana Shavchuk, a lawyer with the Anti-Corruption Action Center, an arti-graft waterbodg in Kyte "This is not an ordinary judge in a local court taking a bribe — it's the highest judge in the system." As Ukraine meants its counter-

offensive against invaling Sus-sian forces, law enforcement off-cials in Bylv are waging a war on corruption with similarly high stalors for the country's feture. Ulcraine is arriving not only on donated weapons but also on foreign economic aid, and Western supporters want to be sure their

on the anti-corruption fight, and the political future of President Volodymyr Zelensky — who won vesseyay: zamany — was wen editer that years ago pounting its eliminate corruption — could also hang in the balance. Amid a war that has required heavy physical and emotional sacrifices, polits and emotional sacrifices, polits

FBI resisted probe into Trump's role in Jan. 6 attack

OFFICIALS TOOK A YEAR TO INVESTIGATE

Garland, deputies feared appearing partisan

Hours after he was sworn in as atterney general, Merrick Ga-land and his deputies gathered in a wood-paneled conference room in the Justice Department for a private briefing on the investigation he had promised to make his highest pictority; bringing to justice those responsible for the attack on the U.S. Capitol on Jan. 6,

steps, federal agents had conduct-ed 199 searches, changed 276 rie-ers and identified 865 likely sus-pects, and Michael R. Showin, then-acting U.S. storney for the District of Columbia, ticking through a slide presentation, Garland and some of his deputies nodded approvingly at the state,

called the progress "ternaricoble," according to people in the room. Shortest's office, with the help of the FRI, was responsible for prosecuting all crimes steaming from the Jun. 6 stack. He had made headlines the day after by ordesing to rule out the possibility that President Donald Trump himself could be culpable. We are leaking at all actors, not only the rescrice who went into the

aponne to a reporter's quantitation about Transp. Within evidence fits the elements of a crime, they're going to be charged?

But according to a copy of the briefling document, absent from Shervich II, large presentation to Garbard on March II, 2021, was a consequent to Transp.

'Candid' U.S.-China talks may herald cooperation

BBIJING — Secretary of State An-tony Blinken halled his discus-sions with Chinese President Xi Jinping and other top Chinese of-Jinping and other top Chinese of-ficials as "very candid, very in-depth" and "constructive" on Monday and raised the prospector cooperating on key global chal-lenges, including ending the war in Ulemine, curbing North Kowat's reactest program and stemming climate change. However, Hinken acknowl-edged that key differences remain

on core teenes, and U.S. diplomate did not forge an agreement with

military channels — a key objective of his trip.

"China has not agreed to move forward with that. It's an issue we have to keep working on," he told reporters at a news conference in

Beijing after the meetings.

For weeks leading up to the visit, U.S. officials emphasized the year, U.S. officials emphasized the importance of each communica-tion links to prevent accidents from turning into a military one-footation – particularly recent close calls between planes and ships in the South China Sea and the Taiwan Strait.

Still, the 35-minute-long meet-sex curva on ar

For many Black moms, a sadly familiar tragedy

Olympian's death carries echoes of their own pregnancy crises

BY ARTLAN JOHNSON AND PENTY NUMBER

They see themselves in her sto-ry. Not necessarily the part about being an elite athlete. But the part about being a Black woman who suffered catastrophic complica-tions of programmy and childhirth, bere being fatal. Some poured out their pain on

Some posited out their pain on social media, recounting the tran-ma they endured. Others com-miserated in group that is Back mothers or gasped in soli-tude, saying quiet prayers of thanks that they survived what hundreds annually do not. And many of the obstatricture, mid-ture of the obstatricture, midwives, doelns and reproductive-health equity researchers who said her name — Tori Bowie — with reverence also expressed ex-

asperators that the fathests were-ening maternal health crisis had claimed another victim.

"She is why we do this work," said Jota Crear-Perry, an obstatri-cian-gynecologist and founder of the National Earth Equity Collaborative, a nonprofit group dedi-cated to eliminating racial inequi-ties in birth outcomes. For her to be so seen as an athlete, and so

Crear-Perry was attending a federal advisory meeting on in-fant and maternal mortality when she checked Twitter and was sturned by the news that the 32-year-old Olympian's death had

been attributed to one of the most common cause of material mo-tality, high blood possures. In Bowie's case, the medical examiner in Florida's Grange County identified two potential contributing factors to her death: eclampeia, the most severe condi-tion on the spectrum of pregnan-cy-related hypertensive disco-zes nowic on As

If the Amazon and the Nile rivers



The Nile is the world's longest river? The Amazon would like a word.

BY TERRENCE McCov, LAUREN THERNEY AND MARINA DIAS

Britannica and the U.S. government agree: The longuest there in the world is the neighty Nile — the "Marker of African rivers," Britannica says.

But in Brazil, house to the powerful Amazon Elver, which cleaves South America more their dithers across it, the Nile's standing is slightly lower.

"Second biggost river in the world," acroff Portuguese-speaking Wildpedia.

"The Amazon is the most en-

"The Amazon is the most en-tensive in the world," declares the educational website linarii

School.
At a time when so much of the world has been measured, so many arguments settled – tallest mountain (Dornel), largest occass (Pacific), most venamous make (western taipen) – the question of which river is the world's longest remains, some-how, tantalizingly beyond our reach. What appears at first to be

a basic geographic query, a mat-ter of cold acience and hard numbers, has instead morphed into a cartographical dispute that has divided the scientific and exploration communities along the feult lines of national identity, units of measurement and even

personal pique.

The Nile – or the Amazon?

"The Nile is definitely long than the Amazon," as Sir Christopher Ondastje, English-Canadian adventu who has journeyed to what he says is the river's far-flung source. "And there is no doubt about

"The Amazon is longer than the Nile," counters Guido Gelli, the Senser proceimons director of the Brazilian Institute of Geography and Statistics. "I have no doubt in my mind."

**Associator to the U.S. Geologi-

doubt in my mind."

According to the U.S. Geologi-cal Survey and Britannics, the difference between their lengths

IN THE NEWS



Riden in California The president toured a nature preserve and unveiled \$600 million for projects to fight climate change. A3

THE NATION rch is underw for a submersible that vanished with five people aboard during an expedition to explo the wreckage of the Titanic, 46 In a new study,

assertion that Earth formed within 3 million seans - notably faster

Russian apposition leader, was put on trial inades, was put on trial on extremism charges that could see his exist-ing prison sentences on tended by decades. At A searing heat wave across india's northeast has caused nearly 100 deaths since Thursday, officials said. Att An Ecuadoran woman who was declared dead

and then found alive in-side her coffin has been critically injured in separate D.C. shootings on Father's Day, in Maryland's takeover deemed deceased for a second time. Att

THE ECONOMY
The latest AI advances
are unhering Photoshop
into a new era, letting
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A 600-pound marila
almost won a gamefishing erew \$2.5 million — then it was
disqualified. Art of the state's toushled college surings agency is off to a tooky start, parents say, its Artington County soint will be the first in Virginia to use a ranked-choice system in a publicly run elec-tion, a switch that has loft some perplexed. It

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A scientist says
anti-sacrine activists
"stalked" him at his
borne after Joo Ragan
challenged him to
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proponent Robert F.
Kennedy Jr. Ct

INSIDE



HEALTH & SCIENCE On clinical trials and tribulations The roller coaster of life after a cancer diagnosis plus other stories about

Can be deliver? Teamsters head Sean O'lirion has big plans. C1

The Nile is the world's longest river? The Amazon would like a word.

By <u>Terrence McCoy</u>, <u>Lauren Tierney</u> and Marina Dias June 12, 2023 at 5:00 a.m. EDT



An international team of researchers and explorers is preparing to journey the length of the Amazon to determine which river is the world's longest. (Video: The Washington

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Gift Article

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RIO DE JANEIRO - Guinness World Records, Britannica and the U.S. government agree: The longest river in the world is the mighty Nile - the "father of African rivers," Britannica says.

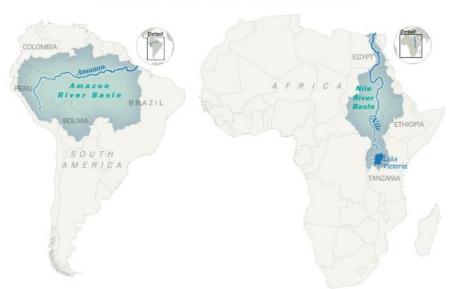
But in Brazil, home to the powerful Amazon River, which cleaves South America more than slithers across it, the Nile's standing is slightly lower.

"Second biggest river in the world," scoffs Portuguesespeaking Wikipedia.

"The Amazon is the most extensive in the world," declares the educational website Brazil School.

A Tale of Two Rivers

The Nile flows north from sub-Saharan Africa to Egypt and the Mediterranean Sea. The Amazon flows east from the Andes mountains of Peru to Brazil and the Atlantic Ocean.



At a time when so much of the world has been measured, so many arguments settled — tallest mountain (Everest), largest ocean (Pacific), most venomous snake (western taipan) — the question of which river is the world's longest remains, somehow, tantalizingly beyond our reach. What appears at first to be a basic geographic query, a matter of cold science and hard numbers, has instead morphed into a cartographical dispute that has divided the scientific and exploration communities along the fault lines of national identity, units of measurement and even personal pique.

The Nile — or the Amazon?

"The Nile is definitely longer than the Amazon," said Sir Christopher Ondaatje, an English-Canadian adventurer who's journeyed to what he says is the river's far-flung source. "And there is no doubt about that."

"The Amazon is longer than the Nile," counters Guido Gelli, the former geosciences director of the Brazilian Institute of Geography and Statistics. "I have no doubt in my mind."

According to the U.S. Geological Survey and Britannica, the difference between their lengths is just 132 miles — less than the drive from Washington to Philadelphia. They have the Nile's 4,132 miles barely edging out the Amazon's 4,000.

If the Amazon and the Nile rivers both ended in Washington, D.C.



To try to settle the dispute — a task that some assert will never be possible — a team of international researchers and explorers are now planning to voyage the length of the Amazon. Backed by organizations including the Explorers Club, which has supported some of history's most daring expeditions, and other groups, the team is to set out next spring in the most distant reaches of the Peruvian Andes, the mountains where the Amazon is said to begin. For the next seven months, members will map and measure the river's entire course until it reaches the Atlantic Ocean.

Then, if all goes smoothly, a journey down the Nile — which might, after all, also be mismeasured — could be next.

"Mount Everest has been climbed thousands of times," said Brazilian explorer Yuri Sanada, who is leading the mission. "More than 1,500 people have rowed or paddled across an ocean. But to kayak down the entire Amazon? That has been done fewer than 10 times, and all of them were for adventure's sake. To document the entire river, its geography and biodiversity — this has never been done."



According to the U.S. Geological Survey and Britannica, the Nile is 132 miles longer than the Amazon. (Video: The Washington Post)

The journey will not be without its dangers. Drug traffickers use the Amazon as a smuggling route. Sections are pervaded by river pirates. In 2018, six men were charged in the murder of British canoeist Emma Kelty, who was sexually assaulted and killed halfway through a solo journey down the river's length.

But, Sanada said, the risks are worth the expected results. Not only to showcase the extraordinary wildlife of a river that anchors a region being pushed to the brink of collapse by illegal deforestation, but also to try to solve one of the world's last geographical mysteries.

"Which river," he asked, "is the longest in the world?"

The Amazon, Undone



Takeaways from The Post's investigation of deforestation in the Amazon



As the Amazon rainforest goes dry, a desperate wait for water



We traveled a Amazon to in deforestation

A controversial science

It's not an easy question to answer. Rivers, more than most geographic features, are ever changing and prone to multiple interpretations. Floods wash away bends. Shorelines swivel. Man-made canals divert their paths.

Then there's the question of where a river begins. Is it at the headwaters of the largest channel of water — the "source stream?" Or is it the "most distant source," the faraway birthplace of the most distant tributary? Equally controversial is deciding where the river ends. Many geographers think it's where the mainstream hits the mouth. But others say it's where the longest distributary comes to its end.

"It's the wild west," said Matthew Hanson, a remote sensing scientist at the University of Maryland. "Who's going to say, 'No, you can't measure a river that way?' ... It's crazy. It's fun. It's weird."

Any deviation in measurement, any change in the river's course, natural or otherwise, can yield different lengths and reshuffle the ranking. In 1846, according to the atlas "Maps of Useful Knowledge," the Amazon was the world's longest river, at 3,200 miles; the Nile came in at 2,750.

Which river is the world's longest?



More recently, Brazilian researchers have argued, the Amazon is more than 1,000 miles longer - and 87 miles longer than the Nile. Or maybe, according to the U.S. Geological Survey, it's 132 miles shorter than the Nile.

"It's a complicated science, and that has created leeway for people to make bold claims and to assert different points of view," said Angela Thompsell, a historian at the State University of New York at Brockport who has studied the Nile's history. "We would like to have a nice pinpoint answer, somewhere we can point to on the map, that this is where the river begins."

But for the two most famous rivers in the world, that has not yet been possible.

[An Indigenous TikTok star takes Amazonian culture viral]

Searching for the Amazon's source



A decade ago, the neuroscientist James Contos wanted a change. Burned out in his profession, he hoped to pursue his passion: Kayaking. Knowing Peru had some of the world's best rivers to run, he was looking at maps of the Andes mountains when something odd stuck out to him.

For centuries, people believed the Amazon's source was the Marañón River in northern Peru. Then explorers argued that following another remote tributary, Apurímac River, led to an even more distant source. A 1971 expedition led by the American explorer Loren McIntyre traced the river to a faraway brook in the Andes and crowned it the Amazon's headwaters.

But looking at the maps, Contos focused on a third affluent, the Mantaro River, that appeared to twist farther than the Apurímac. So he set out with a GPS, hiking books and kayak to find out if the maps were true. He ventured into the inhospitable environment — arid, cold, thin mountain air — that couldn't have been more different from the low, flat, hot Amazon basin.

After days of hiking, Contos found a new most distant source: A modest spring near the base of a mountain.

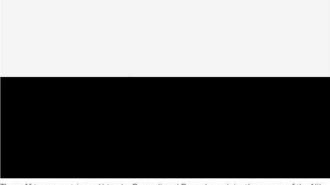
He <u>published</u> his research in 2014 in the scholarly journal Area. "I thought I'd made a big discovery, and it would be big news," he said.

But other researchers immediately tried to discredit it.

"A moot point" was how <u>one geographer described the finding</u> to National Geographic.

A dam had been built along the Mantaro that diverts enough water during the dry season that the riverbed empties. Some scientists argued that this should disqualify it from consideration as a source. Others countered that it shouldn't matter — the river's seasonality was caused by human intervention.

The argument started to sound a lot like another river squabble: The one surrounding the source of the Nile.



Three African countries — Uganda, Burundi and Rwanda — claim the source of the Nile. (Video: The Washington Post)

There, controversy goes back centuries. In the mid-1850s, at the height of the global exploration craze, when fame and fortune rested on bold announcements, an explorer named Jack Speke came out with one of the biggest. He argued in 1858 that he'd found the river's source: Lake Victoria. That proclamation has been debated ever since,

and today, three separate countries — Uganda, Burundi and Rwanda — claim the source of the Nile as their own.

But the controversy quiets as the Nile winds its way north, flowing into Egypt and onward to the Mediterranean Sea.

With the Amazon, it hasn't been so simple.

'Print the legend'



The Amazon river in Ilha de Marajo, Brazil. (Pedro Vilela/Getty Images)

The waters of the Amazon travel thousands of miles before coming to Marajó Island, half the size of Portugal, wedged between the river and the Atlantic. Most of the Amazon's water gushes northward, the shortest route to the sea. But some of it tracks south, beginning a long, circuitous path toward the Atlantic.

Most people consider the north stream to be the Amazon's final say. Not Paulo Roberto Martini, 76. To prove his point, the longhaired scientist traced a map on a recent Monday morning at the Brazilian Institute of National Spatial Research in São Paulo state.

"Here's the Breves canal," he said, indicating a narrow blue squiggle.

His finger followed it as it banked South, then merged into waters that flushed eastward toward the Atlantic. This path — which goes around the Marajó rather than past it — was what his team selected to measure when it set out in 2008 to compare the lengths of the Amazon and the Nile. To make things fair, they measured the Nile by the same standard, selecting its longest path to the mouth.

In the final count, the Amazon came out on top, narrowly: 4,344 miles to 4,257. Headlines <u>declared</u> the Amazon the longest river the world. But victory was fleeting.

Other scientists criticized the decision to use the Breves canal. Some alleged the Brazilian researchers were looking for any way to make their river appear longer. "Gaming the measurement in order to be #1," one remote sensing scientist remarked.

Martini said his team was surprised by the reaction. "We felt very attacked," he said. So they moved onto other areas of research, the study was never peer-reviewed, and the issue was largely forgotten.

But even now, Martini thinks about the day he questioned the Nile's place as the world's longest river. It reminds him of the ending to the John Ford Western "The Man Who Shot Liberty Valance," when James Stewart admits that the success of his life has been built on a lie. His plea to set the record straight is ignored. "When the legend becomes fact," an editor tells him, "print the legend."

Martini wishes that next year's expedition would finally settle the debate. But he's not hopeful.

"The issue of the longest river in the world still isn't resolved," he said. "And it won't ever be."

Map data sourced from <u>Natural Earth</u> and <u>HydroSHEDS</u>. Chart data sourced from "Maps of Useful Knowledge" (1846), <u>USGS</u>, the <u>National Geographic</u> <u>Society</u>, and Post reporting. The maps in the story represent what are considered the <u>longest measurements</u> of each river, and do not represent all disputed starting points for each river.





By Terrence McCoy

Terrence McCoy is The Washington Post's Rio de Janeiro Bureau Chief. He has twice won the George Polk Award and was named a finalist for the Pulitzer Prize in 2023. ▼ Twitter



By Lauren Tierney

Lauren Tierney is a Senior Graphics Reporter at The Washington Post. Before joining the Post in 2017, she was a Graphics Editor at National Geographic Magazine.

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