

Tennis: Coco Gauff-led USA drawn with Canada at season-opening United Cup

SYDNEY: Top seeds, the United States, spearheaded by Coco Gauff and Taylor Fritz, were drawn on Monday with Canada for the mixed-team United Cup in Australia.

They begin their 2025 season in Perth, with Felix Auger-Aliassime and Leylah Fernandez headlining the Canadians at the third edition of the tournament from December 27 to January 5.

Defending champions Germany, led by world number three Alexander Zverev, were pitted alongside Brazil and China, who have Olympic champion Zheng Qinwen.

Stefanos Tsitsipas's Greece will also play in Perth, grouped with Kazakhstan and a Spanish team missing world number two Carlos Alcaraz.

Alcaraz is yet to reveal where he will warm up for the Australian Open, the opening Grand Slam of the year.

Five-time major champion Iga Swiatek and Hubert Hurkacz once more represent Poland as they look to avenge their narrow loss to Ger-



many in the 2024 final. They face the Czech Republic and Casper Ruud's Norway in Sydney.

Like Alcaraz, world number one Jannik Sinner has opted against playing the United Cup for his country Italy, who will meet France and Switzerland in the group stage.

Britain take on Alex de Minaur's Australia in the other Sydney group.

"Everyone who plays this event absolutely loves the experience," tournament director Stephen Farrow said. "It's the perfect way to acclimatise to the Australian conditions."

Seven of the world's top 10 women and six of the world's top 12 men have signed up.

Each team -- with three men and three women -- go through a round-robin format, with ties comprising one men's and one women's singles and a mixed-doubles clash.

Group winners in each city advance to the quarter-finals, along with the best runner-up.

The semi-finals and final are in Sydney with US\$10 million in prize money and ATP and WTA ranking points at stake.

Draw for the United Cup:

- Perth - Group A - USA, Canada, TBC
- Group C - Greece, Kazakhstan, Spain
- Group F - China, Germany, Brazil
- Sydney - Group B - Poland, Czech Republic, Norway
- Group D - Italy, France, Switzerland
- Group F - Britain, Australia, TBC

Dhoni undecided over IPL 2025 participation, says Viswanathan

CHENNAI: Former Chennai Super Kings (CSK) captain MS Dhoni remains undecided on his IPL future yet, according to the franchise's CEO Kasi Viswanathan, who says that they hope he (Dhoni) gives his confirmation before the submission deadline (Oct 31). Per the latest reports, CSK's top brass is awaiting Dhoni's decision before listing their retention list ahead of the IPL 2025 mega auction later next month.

"We have still no confirmation from him, though we will like him to continue playing for us," Viswanathan said in a chat with ESPNcricinfo. "Hope he will confirm before 31st [October]."

Meanwhile, the IPL's governing council and the BCCI kept October 31 as the deadline for all teams to submit their final retention list.

With the reintroduction of an IPL rule, scrapped in 2021, any player who last played for his country at least five years ago

is eligible to play as an uncapped player. MS Dhoni, who announced his

international retirement on August 20, 2020, ticks this box, becoming eligible to play as an uncapped player for CSK should he be retained. While Dhoni's last international tournament was the 2019 ODI World Cup in England, which the hosts won, Dhoni played in the cash-rich league since.

Before the start of IPL 2024, Dhoni relinquished the CSK captaincy, handing over the baton to opener Rituraj Gaikwad. In his first season as the new CSK skipper, Gaikwad failed to guide CSK to the playoffs.



IPL 2025 mega auction to take place in Riyadh in late Nov: Report

NEW DELHI: The Indian Premier League (IPL) 2025 mega auction is set to take place in Riyadh, in Saudi Arabia, on Nov 24-25, as per reports. The Board of Control for Cricket in India (BCCI), is, thus, set to host the IPL auction outside India for the second

time in a row, and Riyadh is being considered for the two-day mega event. The previous auction took place in Dubai. A final decision, along with dates, is expected to be out soon.



However, a potential issue before the BCCI authorities is that the proposed dates coincide with

India's five-match Test series opener versus Australia, in Perth. The first Test begins on Nov 22. Notably, the match will be shown on Disney Star, i.e. the official broadcasters of the cash-rich league. Thus, all parties want to avoid any overlap.

Although due to the time difference with Australia, there is unlikely to be any clash. The auction is expected to commence in the afternoon, as per Indian Standard Time (IST).

Apart from Riyadh, the Indian cricket board have also narrowed down Jeddah as another option but Riyadh is likely to act as the host city for the event.

Earlier, it was being reported that BCCI have explored Dubai, Singapore and London as options. At one stage, even Vienna was being considered, however,

Charith Asalanka, Madushka, Hasaranga shine as hosts win rain-marred 1st ODI

NEW DELHI: Sri Lanka continued their dominant run at home and beat West Indies by five wickets, on DLS method, in the first of the three ODIs in Pallekele on Sunday (Oct 20). In a rain-marred clash, Nishan Madushka (69) and skipper Charith Asalanka (77) stood out for the hosts with fine half-centuries, chasing a revised target of 232 in 37 overs, before Wanindu Hasaranga weaved magic with the ball and took 2 wickets for 18 runs.

Opting to bat first, Shai Hope-led West Indies were 100-4 but the duo of Sherfane Rutherford and Roston Chase got together, for the fifth-wicket, and added an unbeaten 85 before a long rain delay meant West Indies couldn't bat their full quota of overs (ending at 185/4 in 38.3 overs). Hasaranga and Dunith Wallalage kept things tough



whereas Jeffrey Vandersay and captain Asalanka chipped in with a wicket each. As a result, the hosts were given a revised target of 232.

In reply, SL didn't start well courtesy of Alzarri Joseph's early strikes. The Lankans still kept themselves ahead throughout, mainly due to a 137-run fourth-wicket stand between Asalanka-Madushka. Spinner Gudakesh

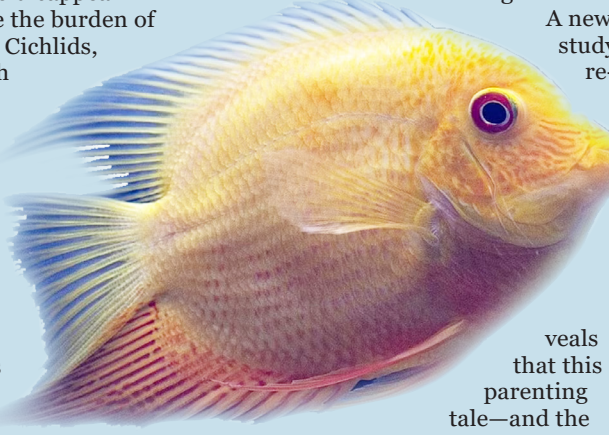
Motie removed the two set batters and Sadeera Samarawickrama (18) but the damage was long done. Eventually, Kamindu Mendis and Janith Liyanage ended proceedings for the hosts, with five wickets and 31 balls to spare.

The second and penultimate ODI will be held at the same venue, i.e. Pallekele International Stadium, Pallekele on Oct 23 (Wednesday).

A twist in genes turns fish into better fathers

In the fish world, few win the crown for being the best dads. Most are 'absentee' fathers, who disappear after mating and leave the burden of parenting to the females. Cichlids, a family of freshwater fish found in parts of Africa, South and Central America and Asia, including India, are no different. After the males fertilize the eggs, the females carry them around in their mouths to keep them safe from predators. This behaviour, called mouth-

brooding, prevents the fish from feeding until the eggs hatch and the little fish emerge.



A new study reveals that this parenting tale—and the

gene involved in the behaviour—has an unexpected twist. The researchers, studying a species of African cichlids called *Astatotilapia burtoni*, observed that when two specific genes related to detecting female pheromones in the males mutate, the absentee cichlid fathers turn into doting dads, carrying the eggs in their mouth just like the females do. In the males, two genes—Or113a and cnga2b—act like a switch in turning the nurturing behaviour on and off. When the males sense fertile female pheromones, the neural circuit responsible for mouthbrooding is switched off, and males become hands-off dads after mating. However, small mutations in

these genes can keep this neural circuit on, turning them into doting dads.

The parenting tricks of cichlids don't end there. In another study on *Neolamprologus savoryi*, also a cichlid species native to Lake Tanganyika in Africa, researchers found that the parents 'spank' their kids when they don't help with chores. *N. savoryi* is a cooperative breeding species, where the young fish stay with their parents for a long time, and the elder ones help parents raise younger broods by helping with parenting chores. However, when the elder kids slack, the parents attack them as punishment, triggering them to participate in their family duties. Fish brains, after all, deserve more credit than we give them.

Genome sequencing developed to trace Covid now protecting babies in intensive care from infectious diseases

WELLINGTON: Anyone who has spent time inside a neonatal intensive care unit (NICU) knows it's intense.

For the tiny babies cared for in these wards, any infection could prove fatal. Great care is taken to prevent the spread of pathogens, but outbreaks still occur.

Traditionally, detecting outbreaks within a NICU has been reactive — only after multiple babies fall ill at the same time. Our research is advancing the use of whole-genome sequencing technologies to detect outbreaks early and stamp out bacteria before they threaten more babies.

From reactive to proactive NICU outbreak surveillance usually involves monitoring rates of illness and identifying spikes and long-term trends that may point to a pathogen circulating on the ward.

When a potential outbreak is identified, bacteria are cultured and



retrospectively sequenced to determine if they can be linked to a shared source or transmission on the ward. Wellington Regional Hospital has changed its approach to infection surveillance in the NICU. Rather than waiting for infants to fall ill, they are using the same sequencing technology we developed at the Institute of Environmental Science and Research (ESR) for genomic contact tracking during the COVID pandemic.

Infants in the unit have diagnostic swab samples taken as part of routine practice. If any key bacteria are cultured from

these samples, they are sequenced promptly to identify possible transmission events in near real time. This allows us to monitor the situation closely and respond quickly to emerging outbreaks.

Because not all infants carrying a particular bacterial strain will experience a severe infection, this proactive approach can detect an outbreak before any babies fall ill.

And because whole-genome sequencing decodes the entire genetic makeup of bacteria, it also provides the NICU team with information on how pathogens are related to each other.

How early humans evolved to eat starch

NEW YORK: As soon as you put starch in your mouth — whether in the form of a dumpling, a forkful of mashed potatoes or a saltine — you start breaking it down with an enzyme in your saliva.

That enzyme, known as amylase, was critically important for the evolution of our species as we adapted to a changing food supply. Two new studies revealed that our ancestors began carrying more amylase genes in two major waves: the first one several hundred thousand years ago, possibly as a result of humans starting to cook with fire, and the second after the agricultural revolution 12,000 years ago.

"This combination of adapting to diverse environments and modifying our diets is a core tenet of what makes us human," said Omer Gokcumen, a geneticist at the University at Buffalo who led one of the studies, which published Thursday in Science.

As ancient societies developed different diets, the new research suggests, they evolved to have different numbers of amylase genes. Gokcumen speculated that people today who have fewer amylase genes may be more vulnerable to diseases such as diabetes that are fueled by a starch-heavy modern diet. Down the line, the findings could point to potential amylase-based treatments for these diseases.

"This is obviously in the future, but I think our studies are really setting the stage for doing this," Gokcumen said.

The first clues to the extraordinary his-



tory lurking in our mouths emerged in the 1960s, when scientists discovered that some people made extra amylase in their saliva. But only in the past few years has DNA-sequencing technology become accurate enough to decipher the amylase genes people carry in their cells.

"We've been looking at a shadow, and now we're looking at the real thing," said Peter Sudmant, a geneticist at the University of California, Berkeley, who led the second new study, which was published last month in Nature.

Sudmant and Gokcumen's teams cataloged a wide range of amylase copies in people's DNA. Some had a single amylase gene on each copy of chromosome 1, whereas most people had many more — in some cases, as many as 11 copies.

More than 20% of Earth's plant species found only on islands — and time is running out to save them

SYDNEY: Islands have long intrigued explorers and scientists. These isolated environments serve as natural laboratories for understanding how species evolve and adapt.

Islands are also centres of species diversity. It has long been speculated that islands support exceptionally high amounts of global biodiversity, but the true extent was unknown until now.

In world-first research published in Nature today, my colleagues and I counted and mapped the diversity of plant life on Earth's islands. We found 21 per cent of the world's total plant species are endemic to islands, meaning they occur nowhere else on the planet.

These findings are important. Island plants are at higher risk of extinction than those on mainlands. Detailed knowledge of plants species, and where they grow, is essential for monitoring and conserving them.

Mapping island floras worldwide The study involved an international team of scientists. We developed an unprecedented database of vegetation information from more than 3,400 geographical regions worldwide, including about 2,000 islands.

The definition of an island is somewhat arbitrary. Conventionally, an island is a landmass entirely surrounded by water and smaller than a continent. This means Tasmania and New Guinea are islands, but mainland Australia — a continent in itself — is not. This is the definition we used.



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