



A flute recital by Murtaza Kabir Murad and his troupe at a cultural programme during the 10th edition of The Daily Star-Standard Chartered Celebrating Life award ceremony at the International Convention City Bashundhara yesterday. *Top right*, lifetime achievement award winners, *from left*, actress-director Suchanda, photographer Nasir Ali Mamun, and singer Sabina Yasmin. Chief Guest at the programme, Information Minister Hasanul Haque Inu, *bottom right*, looking at pictures at the photo exhibition there.



PHOTO: STAR

## Five hurt in clash inside Ukhia refugee camp

OUR CORRESPONDENT, Cox's Bazar

A man died of his injuries yesterday morning, hours after he was hacked allegedly by a Rohingya man over suspicion of an extramarital affair with the latter's distant relative in Ramu of Cox's Bazar.

The dead, Abdul Jabbar, 35, was from Khuniapalang in Ramu.

Meanwhile, five people, including a Rohingya refugee, were wounded when they came under attack allegedly from some Rohingya criminals at Balukhali refugee camp in the district's Ukhia upazila on Friday night. Witnesses said the criminals swooped on refugees when they along with some local workers tried to resist goons from entering the refugee camp.

Abdul Mabud, chairman of Khuniapalang Union Parishad, said 26-year-old Jiabul Haque is a distant relative of Rohingya woman Dilara Begum, wife of Shamsul Alam from Headman Para.

Jiabul saw Dilara, aged about 28, secretly talking with Jabbar near her makeshift home in Khuniapalang around 11:30pm on Friday. Suspecting that the two had an extramarital relationship, he hacked Jabbar with a chopper knife, leaving him seriously injured, said Mabud.

Hearing screams, locals rushed to the scene and sent Jabbar to Cox's Bazar Sadar Hospital. Doctors later referred him to Chittagong Medical College Hospital (CMCH). The injured died in an ambulance on way to the CMCH around 10:00am yesterday, the UP chairman added.

Locals caught Jiabul and handed him over to police.

The victim's body was sent to Cox's Bazar Sadar Hospital for an autopsy.

Sub-Inspector Sana Ullah of Ramu Police Station said Jiabul is son of Mir Ahmed form Fakira Bazar in Myanmar's Rakhine State. He entered Bangladesh illegally two months ago and had been staying at Dilara's house since then.

Two cases were filed yesterday with the police station against Jiabul for committing the murder and trespassing into Bangladesh.

Law enforcers in the afternoon detained Dilara, mother of three children, for interrogation. Her husband Shamsul is an expatriate in Malaysia.

### FIVE INJURED IN CLASH

Locals and police said around 20 Rohingya criminals tried to enter the Balukhali refugee camp around 11:30pm

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## 3 cultural luminaries honoured

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tone for the grand night that was about to commence.

After the guests had been seated inside the Nabaratri Hall, a sudden hush fell over the room, in anticipation of the flute recital by the famed Murtaza Kabir Murad and his troupe. This was the first of many scintillating performances to come.

The lifetime achievement awardees -- actress-director Shuchanda, singer Sabina Yasmin and photographer Nasir Ali Mamun -- are all iconic names in their respective fields. On the 10th edition of this competition, their stellar work was honoured, adding a further gleam to the competition itself.

A number of eminent cultural personalities -- Syed Hasan Imam, Gazi Mazharul Anwar, Alauddin Ali, Monirul Islam, Alauddin Ali and Mustafa Monwar spoke about this year's lifetime achievement award winners.

Nuhash Humayun, Hasan Mahmud Prottoy, and Salma Moon received the awards as winners in the film, photogra-



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ABRAR A ANWAR

CEO Standard Chartered Bank Bangladesh

phy, and lyrics categories.

Information Minister Hasanul Haque Inu, chief guest at the event, lauded the organisers and said the culture of honouring talent and contribution was not common in Bangladesh. "If there is a cultural deficit, even a prosperous society can

lose its way."

Terming cultural activities a difficult undertaking, he congratulated the award winners and the lifetime achievement honourees for their contribution.

Abrar A Anwar, CEO of Standard Chartered Bank, said it was a proud moment to be celebrating the 10th edition of the event. He said some 45,000 people have entered the competition over the last decade, and around two lakh people attended the programmes at district levels. "This year's theme for the contest was Celebrating Diversity. Bangladesh's beauty lies in its diversity and I believe diversity and inclusion can take the country forward."

In his welcome address, Mahfuz Anam, editor and publisher of The Daily Star, said, "There are many ways to develop a country, and the practice of culture is one of the most important of these."

Terming creativity a nation's biggest asset, he stressed the need for developing personal taste and a cultured mind.



If there is a cultural deficit, even a prosperous society can lose its way.

HASANUL HAQUE INU

Information Minister

The second part of the event featured musical performances by a variety of artistes, with Rezwana Chowdhury Bannya beginning the proceedings with the Rabindra Sangeet "Tumi Kon Kanoner Phool". She performed a number of Tagore songs, followed by performances from Baul Shafi Mondal, a group of young talented musicians in a chorus and Adit and Dola. The curtain on the event fell

to the melodious tunes performed by Xefor.

The Daily Star-Standard Chartered Celebrating Life is a unique national-level contest that began its journey in 2008, aiming to discover and nurture the talents of budding filmmakers, photographers and lyricists.

Many of its past winners have attained wider success. Abdullah Mohammad Saad, for example, had his work featured at the Rotterdam Film Festival 2017. Another winner Lubna Sharmin had the opportunity of participating in Cannes Film Festival workshop this year.

Celebrating Life emphasises different themes. This year's theme was an appreciation of the country's natural beauty, diverse culture, language, ethnicity and arts.

The component of conferring lifetime achievement awards was introduced in 2010. Recipients of the honours include Mustafa Manwar, Shahidul Alam, Shubhash Dutta, AbdurRazzak, Ferdousi Rahman, Firoza Begum, Sheikh Sadi Khan, Babita and Ferdousi Majumdar.

## Axed Catalan leader urges resistance

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In a copy of his speech sent to AFP, Puigdemont signed off as "President of the Catalan government".

Spain is on a knife edge as it grapples with the worst constitutional crisis in its contemporary history, triggered by an unlawful Catalan independence referendum on October 1 that was shunned by many, and marred by police violence.

Throwing down the gauntlet in the escalating standoff, Catalan lawmakers on Friday passed a motion, by 70 votes out of 135 in the regional parlia-

ment, to declare a Catalan republic.

Opposition MPs refused to even vote on the issue and walked out in disgust.

Prime Minister Mariano Rajoy responded swiftly by axing the Catalan government and parliament, and calling December 21 elections to replace them.

In an official government notice published yesterday, Rajoy's deputy, Soraya Saenz de Santamaria, was put in charge of administering the region.

Saenz de Santamaria was due to meet secretaries of state who will likely

take charge of regional ministries.

The world is now watching to see whether Puigdemont and his team will willingly step aside for caretaker envoys to be sent from Madrid.

Analysts warn that upheaval is likely, as civil servants may defy direct orders, or worse.

"We are likely to see more sustained unrest, possibly including strikes, as well as more serious clashes between national police and pro-independence activists," said Federico Santi, an analyst at Eurasia Group, a US-based think-tank.

"We will continue to work to build a free country," Puigdemont said.

But this must be done "without violence, without insults, in an inclusive way," he insisted, and urged supporters to respect the opposition of pro-unionists -- thousands of whom marched in central Madrid.

The streets of Barcelona were largely empty yesterday after a night of fire-work-lit celebrations.

In Madrid, several thousand people gathered on the central Plaza Colon, waving the Spanish flag as loudspeakers blared the popular song "Y viva

Espana" (long live Spain).

A small child was pushed by his father in a buggy sporting a sign proclaiming: "Together", and some in the crowd waved placards calling for Puigdemont to be jailed.

"It is a shame what happened in Catalonia," lamented anti-secessionist protester Carlos Fernandez, a 41-year-old mining engineer.

Rajoy received sweeping powers from the senate Friday under a never-before-used constitutional article designed to rein in rebels among Spain's 17 regions, which enjoy vary-

ing levels of autonomy.

He used these to also fire Josep Lluís Trapero, the highest-ranking officer in the Mossos d'Esquadra police force, which will now fall under the interior ministry in Madrid.

Roughly the size of Belgium, the region of 7.5 million people accounts for about 16 percent of Spain's population, a fifth of its economic output, and attracts more tourists than anywhere else in the country.

Before the current crisis, it enjoyed considerable autonomy, with control over education, healthcare and police.

## Onion prices soaring

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Mosharaff Hossain, a trader of the kitchen market, said he had bought local and Indian onions at Tk 75 and Tk 54 a kg from Shyambazar wholesale market the day before.

"Today I came to know that local onions are being sold at Tk 80-82 per kilogram at wholesale. I am yet to increase the prices because my purchase prices were lower," he said yesterday.

Onion is the latest item taking away a larger slice of the budget for grocery items, particularly of low income families who have already been experiencing squeezing of their purchasing capacity for high prices of rice and vegetables. Very few vegetable items are now available in the markets at below Tk 50 per kilogram.

"My income is not increasing, but prices of daily essentials are going up every day. We cannot afford the living cost," said Md Faruk, a cobbler at Jamal Khan of Chittagong.

Asadul Islam, an onion importer at Bhomra Land Customs Station, said the recent rainfall had damaged crops that were supposed to be harvested now in Nashik, one of India's main onion producing regions.

"Growers there are selling onions from their stocks," he said, adding that import costs, including transport and other expenses, amounted to Tk 50 per kilogram at Bhomra.

Asked about the chances of traders hoarding the food item, he said onion is a perishable commodity and one could stock imported onions only for one or two days.

Onion prices in the local markets

largely depend on the prices in India, as Bangladesh does not produce enough to meet its annual requirement. Domestic production has risen in recent years though.

Between July and August, two lakh tonnes of onion have been imported. The total import in fiscal 2016-17 was 15.01 lakh tonnes, according to Bangladesh Bureau of Statistics.

Narayan Chandra Saha, a wholesaler at Shyambazar market, said prices were high in India, and the stock of locally-grown onion had almost been exhausted.

Azizul Haque, a wholesaler at Karwan Bazar, said heavy rains had affected cultivation of early varieties of onion in the main producing districts such as Pabna. "Farmers are re-growing onions now after suffering from losses."

Mohammad Idris, proprietor of M/S Bacha Miah Saodagor, a wholesale shop at Khatunganj wholesale market, Chittagong, said onion prices had gone up in the local market due to increasing import costs.

The price of Indian onion has increased by Tk 3 a kg since Friday last, he said, adding, "As Indian onion shares almost 80 percent of the local market, the prices of onion here are determined by ups and downs of that."

However, regulation of the retail market is necessary. The government should monitor the retail market so that retailers cannot hike the prices illogically, Md Afsar Uddin, proprietor of Sonali Traders at Khatunganj wholesale market, Chittagong, said.

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help meet the food needs of billions of people around the world, including Bangladesh.

During photosynthesis, plants take carbon dioxide, water, and light, and turn them into sugar and oxygen. The sugar is then used by the plants for food, and the oxygen is released into the atmosphere.

Rice uses the C3 photosynthetic pathway, which in hot and dry environments is much less efficient than the C4 pathway used by other plants such as maize, sugarcane and sorghum. Scientists thought that if rice could "switch" to use C4 photosynthesis, its productivity would increase by 50 percent.

Scientists and researchers drawn from 12 institutions in eight countries declared on October 19 that they have achieved a major breakthrough by being able to engineer the rice plant accordingly. They are involved with the C4 Rice Project, often dubbed as "grand challenge" of the 21st century.

University of Oxford, one of the 12 institutions which are at the forefront of this multi-billion dollar 15-year mega project, has issued a press release, saying the scientists have been able to infuse a single maize gene into rice leaf thereby finishing off the first step of converting rice into a C4 plant.

The same day, one of the world's leading scientific journal -- Current Biology -- tweeted, "a key step in engineering #rice #plant with more efficient C4 #photosynthesis has been achieved."

Jane A Langdale and Peng Wang of the Plant Sciences Department of the University of Oxford along with eight other scientists involved with the C4 Rice Project published an article in the



current issue of the Current Biology.

They declared in the journal that a key step towards engineering C4 rice has been achieved through introducing a maize gene (GOLDEN2-like) in C3 rice leaves that is reminiscent of proto-Kranz anatomy, an intermediate state in the evolutionary trajectory from C3 to C4. A C4 has a special leaf anatomy called 'Kranz anatomy' and C4 plant is better adapted than a C3 plant in an environment with high daytime temperatures, intense sunlight, drought, or nitrogen or CO2 limitation.

Over three billion people, including 160 million in Bangladesh, depend on rice for survival, and owing to predicted population increases and a general trend towards urbanisation, land that provided enough rice to feed 27 people in 2010 will need to support 43 by 2050.

"In this context, rice yields need to increase substantially over the next 35 years. Given that traditional breeding

programmes currently achieve around a 1% increase in yield per annum, this is not a trivial endeavour," said Oxford University's Prof Jane Langdale, current principal investigator of the C4 Rice Project.

Prof Julian Hibberd, who teaches photosynthesis at the University of Cambridge and also a member of the C4 consortium, said, "The C4 pathway is an extremely complex and remarkable piece of evolution..."

He said, "Although engineering the efficient C4 pathway into C3 crops would enable a step-change in agricultural productivity, the large number of changes required to convert a C3 leaf to one that uses C4 photosynthesis has rightly been seen as a major challenge to implementation."

The C4 Rice Project is an international collaboration between 18 research groups, from the 12 institutions in eight countries. The institutions are: Australian National University (Australia), University of Toronto (Canada), Chinese Academy of Sciences (China), Max Planck Institute of Molecular Plant Physiology and Heinrich Heine University (Germany), International Rice Research Institute (IRRI) (the Philippines), Academia Sinica Institute of Molecular Biology (Taipei), University of Cambridge and University of Oxford (UK), Donald Danforth Center, Washington State University, and University of Minnesota (USA).

Bangladesh Rice Research Institute's (BRRI) Director General Shahjahan Kabir told The Daily Star that this breakthrough in rice engineering ushered in a new hope for countries like Bangladesh, where growing more food from increas-

ingly scarce land and water resources is getting difficult.

"We'll engage our rice scientists in the C4 rice research in partnership with the IRRI [International Rice Research Institute] as we did in the past in the case of developing submergence-tolerant rice," Kabir added.

Zeba Islam Seraj, who teaches biochemistry and molecular biology at the University of Dhaka and has a long experience of rice breeding, said, "Maize, sorghum and sugarcane are C4 photo-synthesisers, while rice is C3. C4 photo-synthesisers are more efficient in energy uptake."

She also termed this breakthrough as a first step towards converting C3 rice to more efficient C4 rice. She said C4 species such as maize and sorghum are more efficient at carbon assimilation than C3 species, and in addition they display greater water use efficiency, better nitrogen use efficiency and higher-temperature tolerance.

The C4 Rice Project was first conceived by John Sheehy, a plant physiologist who was the head of the Applied Photosynthesis Group at the IRRI from 1995 to 2009. The costs of the project were estimated to be about \$5m per year. In October 2008, the Bill & Melinda Gates Foundation awarded IRRI a grant of \$11.1 million to begin the research. Currently the project is into its phase-III (2015-2019).

Experts noted that successful completion of engineering rice into a C4 plant would be a "game-changer" since the '60s of last century when scientists had first developed semi-dwarf rice varieties heralding the famous "Green Revolution".