

# Nasa discovers 'another Earth'

*Astronomers believe it is the closest match of our planet*

AFP, Miami

Astronomers hunting for another Earth have found what may be the closest match yet, a potentially rocky planet circling its star at the same distance as the Earth orbits the Sun, Nasa said yesterday.

Not only is this planet squarely in the Goldilocks zone -- where life could exist because it is neither too hot nor too cold to support liquid water -- its star looks like an older cousin of our Sun, the US space agency said.

That means the planet, which is 1,400 light-years away, could offer a glimpse into the Earth's apocalyptic future, scientists said.

Known as Kepler 452b, the planet was detected by the US space agency's Kepler Space Telescope, which has been hunting for other worlds like ours since 2009.

"Kepler 452b is orbiting a close cousin of our Sun, but one that is 1.5 billion years older," Nasa said in a statement.

Its star is four percent more

"Kepler 452b could be experiencing now what the Earth will undergo more than a billion years from now, as the Sun ages and grows brighter."

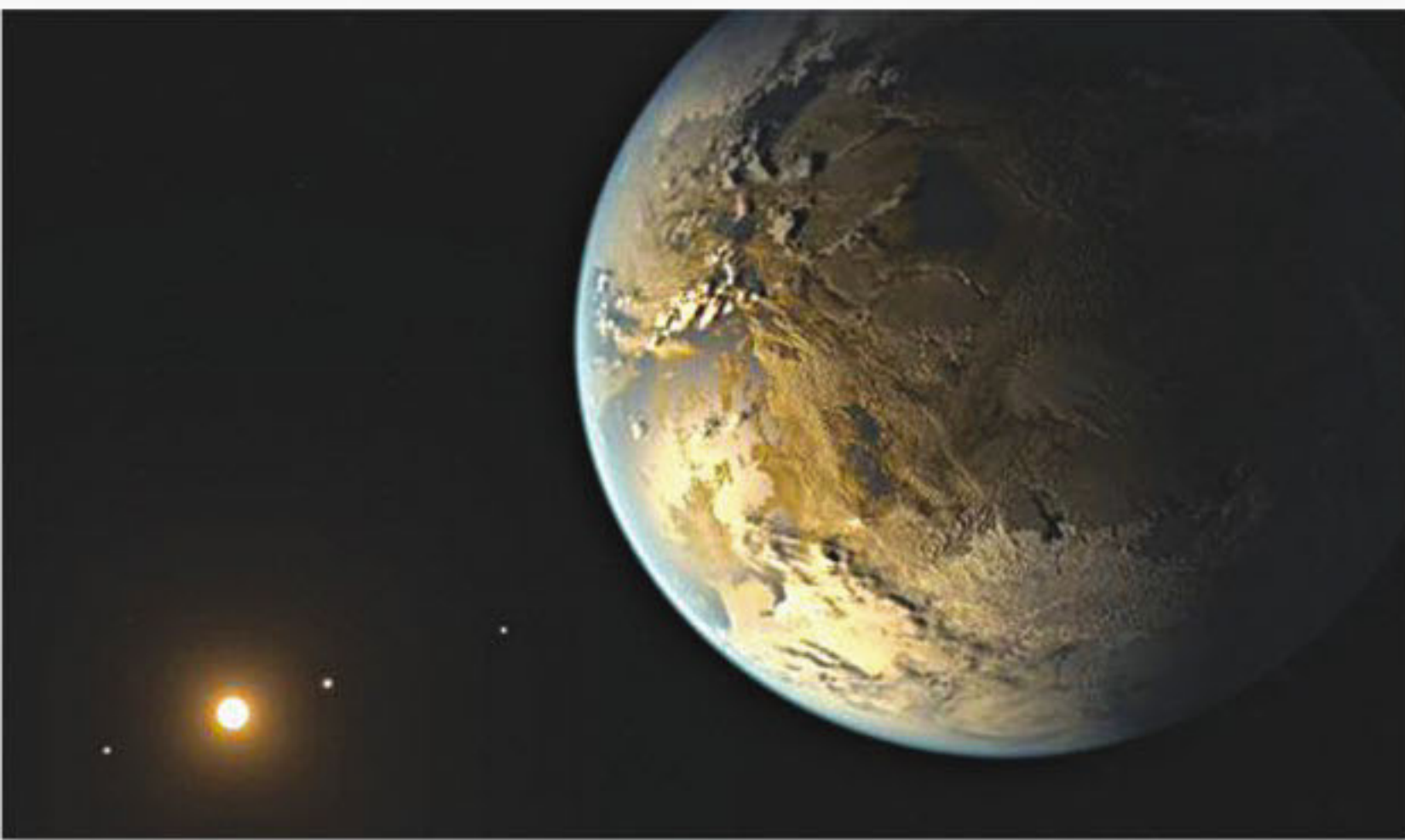
The Kepler mission launched in 2009 to search for exoplanets, which are planets outside our solar system, particularly those about the size of Earth or smaller.

"Today, and thousands of discoveries later, astronomers are on the cusp of finding something people have dreamed about for thousands of years -- another Earth," Nasa said in a statement.

Yesterday, Nasa released the latest catalog of exoplanet candidates, adding more than 500 new possible planets to the 4,175 already found by the space-based telescope.

"This catalog contains our first analysis of all Kepler data, as well as an automated assessment of these results," said SETI Institute scientist Jeffrey Coughlin.

The new catalog includes 12 candidates that are less than twice the diameter of Earth and which are orbiting in the habitable zones of their



massive than the Sun and 10 percent brighter.

If the planet is rocky, and scientists believe that it has a better than even chance of being just that, then it could be in the midst of a fearful scenario, as the heat from its dying star evaporates Kepler 452b's lakes and oceans.

"If Kepler 452b is indeed a rocky planet, its location vis-a-vis its star could mean that it is just entering a runaway greenhouse phase of its climate history," said Doug Caldwell, a Search for Extraterrestrial Intelligence (SETI) Institute scientist working on the Kepler mission.

"The increasing energy from its aging sun might be heating the surface and evaporating any oceans. The water vapor would be lost from the planet forever," he added.

stars.

Of those 12 new candidates, Kepler 452b "is the first to be confirmed as a planet," Nasa said.

Kepler identifies possible planets by watching for dips in the brightness of stars, which could be caused by a planet passing between the star and the telescope.

Other scientific tools are needed to judge whether the planet is gassy or rocky.

The Kepler mission has cost Nasa about \$600 million, and the US space agency said in 2013 that two of its orientation wheels had lost function, leaving the space telescope beyond repair.

But scientists have years to pore over the data it has returned in order to narrow the search for Earth-like worlds.



People remove a CNG-run auto-rickshaw from the rail line at Hyderabad in Joydevpur of Gazipur yesterday after it was hit by a train while crossing an unapproved level crossing. The vehicle was dragged 500 metres on the lines before the train could come to a halt.

PHOTO: STAR

## Deadly day on highways

FROM PAGE 1

people had lost their lives on the roads. At least 20 died on the last day of the holiday (Sunday) alone.

Eight people, including seven of a family, were killed when a train rammed a three-wheeler at an unapproved level crossing in Bakkikhan area of Gazipur. Eight more died when a bus plunged into a ditch on Dhaka-Tangail highway in Basail upazila of Tangail.

In other road accidents of the day, three were killed in Sylhet, two in Magura, two in Brahmanbaria and one in Moulvibazar. Dozens were injured in the accidents, reported our correspondents there.

GAZIPUR

Witnesses said the accident happened when a CNG-run auto-rickshaw and a diesel-electric train were crossing an unmanned and unapproved level crossing in Haydarabad area of Joydevpur upazila around 2:30pm. After impact, the train, which was at speed, dragged the three-wheeler about 500 metres before it could stop.

All eight passengers of the auto-rickshaw were killed on impact, our Gazipur correspondent reports quoting Sub-Inspector Md Alauddin, in-charge of Tongi Railway Police outpost.

The deceased are: Shah Alam, 36, his wife Piyara Begum, 30, their son

Yasin, 4, daughter Sadia, 6, Shah Alam's sister-in-law Safura Begum, 12, his cousins Al-Amin, 27, and Chunnu Miah, 28, and driver of the vehicle Md Mostafa, 20.

The bodies of the seven were found besides the rail lines. They were ejected from the wreckage of the three-wheeler as it was being dragged by the train. The driver's body was found inside the auto-rickshaw, Alauddin said.

There was no signal or gate there as the crossing was not approved, he said. Arifuzzaman, Dhaka divisional manager for the railway, said there were several illegal crossings in Gazipur.

Amzad Hossain, a local, claimed that the railway had put a concrete signboard there asking people to cross the lines at their own risk.

Rafiquzzaman, a former councillor of Gazipur municipality, said there were at least 12 illegal crossing between Joydevpur and Tongi and all of them were risky.

TANGAIL

An overcrowded and erratically driven bus fell into a ditch on Dhaka-Tangail highway at Basail upazila yesterday killing eight people on the spot and injuring 20 more.

Highway police said the driver of the bus, heading for Dhaka from Dhanbari in Tangail, lost control of the

vehicle while giving room to an oncoming bus in Patkhaguri area around 3:00pm.

One of the deceased could be identified as Jorina Begum, 35, wife of Dulal Miah of Sreebordi upazila in Sherpur, reports our Tangail Correspondent.

Dulal, who was travelling with Jorina, told The Daily Star that they were travelling to Dhaka on the roof of the bus with their three children since ride on the roof was cheaper.

"After the accident I found my wife Jorina dead and son and daughters injured," he added.

The injured were sent to Tangail Medical College Hospital and nearby hospitals and private clinics.

Humayun Kabir, officer-in-charge of Gorai Highway Police Station, quoting witnesses and the injured, said, "The accident happened due to reckless driving."

The driver and helpers of the bus fled the scene of the accident, he added.

MORE ACCIDENTS

In Sylhet, at least three people were killed and scores more injured when a bus plunged into a roadside ditch at Osmaninagar upazila, reports our Moulvibazar correspondent citing police.

Identities of the victims could not be known.

In Jhenidah, two people on a motorbike were killed when a bus collided with their bike head on and then ran them over on Magura-Faridpur highway near Kosondi of Magura Sadar upazila, reports our Jhenidah correspondent.

In Brahmanbaria, two passengers of a CNG-run auto-rickshaw were killed following a collision with a bus on Dhaka-Sylhet highway in Sarail upazila.

In Moulvibazar, a pedestrian was killed when a car ran him over on Moulvibazar-Rajnagar highway at Monsurnagar.

In Nilphamari, a microbus, a stone-laden truck and a motorcycle fell into the Auliakhana River after some steel plates of a Bailey bridge collapsed in Jaldhaka municipality area around 9:00pm.

Locals rescued three people in unconscious state from the river and admitted them to the upazila health complex, Officer-in-Charge Dilwar Hossain of Jaldhaka Police Station told The Daily Star without elaborating.

Members of Fire Service and Civil Defence from Jaldhaka and Dimla were yet to reach the spot till 1:10am today, reports our correspondent.

## Abductors on the prowl

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Luckily for their families, the two brothers returned home. But many never have.

Police record shows 920 people were kidnapped last year. Some of them were rescued by law enforcers while some were freed by their abductors. There is no knowing of the fate of the other victims.

And yet all abductions are not acts of criminals. Rights body Ain o Salish Kendra (ASK) said as many as 29 people fell victim to abduction by law enforcers between January and June this year.

In a recent report, the ASK said bodies of four of them were recovered; one was released later and another was

shown arrested. The 23 others just vanished as if they never existed.

In public, law enforcers usually deny that they abduct people. But off the record, one police official told The Daily Star that they had a hand in a "very small number" of abductions.

"Sometimes it's for politics and sometimes for money," he said, requesting anonymity, given the gravity of the matter.

Due to the professional or political identities of these victims, their abductions draw much attention and get widespread media coverage, the official added.

Monirul Islam, joint commissioner of Dhaka Metropolitan Police, went a step further.

"In the past, we have seen that members of some agencies, identifying themselves as detectives, picked up some accused persons and later showed them arrested," he told a press conference on July 13, the day cops arrested the three fake detectives in connection with the two brothers' abduction.

In the past six months alone, police arrested about 100 such bogus detectives, Monirul added.

Criminologists and rights activists say that with allegations of abduction against law enforcers rising, criminals are impersonating law enforcers to take advantage of the situation.

"We investigated 20 to 25 percent of all the incidents of abduction [this year]. All our facts point to law enforc-

ers. So, it suggests that law enforcers are involved in all the 29 cases we reported," ASK Director Noor Khan Liton told this correspondent yesterday.

At times, law enforcers in the guise of criminals abduct their targets while real criminals kidnap people posing as cops, he said, adding that the tactic served their purpose well.

Azizur Rahman, associate professor of criminology and police science at Mawlana Bhashani Science and Technology University, said although a section of law enforcers were abducting people, the criminal justice system were failing to bring them to book.

"They are enjoying impunity thanks to their power and political clout," he said.

This culture of impunity encourages criminals, who also continue to prey on their targets, he added.

In the meantime, the victims' families suffer.

Tahmina Aktar has been waiting for the last one month for her husband to come home.

Fazlul Haque Rahim, a real estate businessman, was kidnapped from the capital's Mirpur on June 25 for a second time in four months.

Tahmina is convinced law enforcers have a hand in this. Fazlul was supposed to testify before a police committee on June 29 in connection with his February 28 abduction allegedly by plainclothes cops, including Sub-inspectors Abdul Alim and Nazrul Islam.

After his first abduction, Fazlul was shown arrested in an arson case, said Tahmina, a mother of two kids.

Back then, she had to pay some cops Tk 10 lakh as they allegedly threatened to kill her husband in the name of "crossfire". Police also allegedly did not return Fazlul's SUV -- a Toyota Land Cruiser Prado (Dhaka Metro Gha -11-1610).

The police headquarters is now investigating Fazlul's disappearance. But contacted yesterday, Alamgir Alam, an additional DIG (discipline), said he had no updates on the inquiry.

"I tried my best to trace my husband in vain. Now I've resigned to my fate. What else can I do?" she told this newspaper on Wednesday.

## No one left to mourn

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their laps sitting on a CNG-run auto-rickshaw.

They were not the only ones in the small three-wheeler. Shah Alam's sister-in-law Safura Begum and cousins Alamin and Chunnu Mia also rode with them. All might have been in a better mood in their short-trip from Narsingdi sadar to Board Bazar.

But their journey ended abruptly before they could reach their destination. A DEMU train rammed the vehicle while it was crossing at Haidarabad point of Tongi at about 2:30pm, killing the seven and the driver.

Locals said the spot was only one kilometer from Khailpur of Board Bazar where Shah Alam worked as a sewing machine operator at MM Fashion.

"Shah Alam used to share everything with me. On July 16 afternoon, he came to my grocery shop and said he got his salary and was going to Narsingdi. He didn't seem happy," Yunus Ali, a cousin of Shah Alam, told The Daily Star over the telephone last night.

"I am not happy with my job and salary. I want a better job and pay to rent a better house," he quoted Shah Alam as saying.

Yusuf said Shah Alam rented a tin shanty. "He was forced to stay in such a shanty to support his four-member family," said Yusuf who consoled him by saying that the bad times would be over one day.

But his bad times were not about to end. His eight-month old kid died in pneumonia that put a big dent in his wallet. Nothing was going well for him, said Yusuf.

Shah Alam had another sad part in his life. He wanted to send his daughter to school but could not because of poverty. "Even then he was planning to send Sadia to school from next year," said Yusuf.

Yusuf never thought that the day before Eid would be the last he would ever see Shah Alam. The whole family perished in the accident.

## SA close in on 'Tigers' lead

FROM PAGE 1

And to see three-fourths of that lead getting wiped out by the end of the day must have hurt them. However, the captain would be more disappointed with his batsmen rather than his bowlers, for none of them managed to make the most of their starts.

Mushfiqur himself continued his lean patch in Test cricket, after he got trapped in front by Dale Steyn. A fierce in-swinging delivery beat Mushfiqur's bat and rammed his pads. While the skipper and the on-field umpire seemed to suggest that there was an inside edge, the Decision Review System went against him.

Mushfiqur has now failed to post a 50-plus score in his last ten Test innings. Only once did he go through such a disappointing streak and that was in 2008, two-and-a-half years after he began his career.

The nervous period, following Mushfiqur's dismissal though was calmly seen off courtesy of an 82-run stand between Shakib Al Hasan and Litton Das for the sixth wicket. Both

batsmen played cautious knocks and focused more on the singles. In fact, the first seven overs of their partnership saw them just nudge deliveries around a bit. It was only after Stiaan van Zyl was brought in that Shakib decided to up the tempo. He pulled and drove one back past the bowler for two consecutive boundaries in the 81st over.

Skipper Hashim Amla retorted by bringing in both his frontline bowlers Vernon Philander and Morne Morkel after that. And that move again led to a dry spell for the batsmen, as the bowlers kept a tight leash. They barely provided the batsmen with any room to free their hands.

The only odd boundaries that came were courtesy of some brilliant on-drives from Litton. The youngster, who seems to love the hits down the leg-side, beautifully timed one over mid-wicket in the 85th over when Morkel bowled one on the middle and leg.

His best shot of the day, an easy-going straight drive against Steyn in the 93rd over took the hosts past South

Africa's total. A few overs after that, Shakib decided that he was going to take on the bowlers and smacked a few short deliveries from Simon Harmer and JP Duminy for boundaries over mid-wicket. However, he ended up paying for that intent as a similar delivery from Harmer -- a slightly short-ball -- saw him sky the ball for an easy catch at mid-wicket in the 103rd over. He was gone for 47.

The wicket came against the run of play and suddenly the hosts, who were at that point of time looking good to reach their target of 400 runs, realised that they didn't have any more batsmen to come in.

Aware of that fact, Mohammad Shahid, who came in next, decided to go all guns blazing and smacked Harmer for three fours and a six in over number 104. It was something that perhaps no one, including the Bangladeshi contingent would have expected.

The first one was an edge, the second one was a down-the-track hit, the third beat mid-wicket, while the

fourth boundary went all the way back over the bowler's head.

He even smacked the dangerous Philander for a boundary, before getting caught on the boundary in the same over for an entertaining 25.

Meanwhile, Litton fell a ball after reaching his maiden half-century in the 109th over. Harmer got some extra turn from the wicket which surprised the batsman and got him caught behind.

After that it was all about survival. Steyn was brought in and he knocked down Taijul Islam and Mustafizur Rahman to take his total tally of wickets to 399.

After the exchange, van Zyl and Dean Elgar negotiated 21.1 overs successfully and set a good foundation for what is expected to be an exciting last two days.

The match was interrupted due to rain twice. The first interruption was from 12:10 to 12:40 pm while the second was at 4:21 pm, after which play was ultimately called off for the day.