



A worker spraying disinfectant in a city in India

WORLD SHUTS DOWN

Narendra Modi is India's prime minister. On 24th March, at eight o'clock in the evening, he addressed, or spoke to, the nation. Home to 1.3 billion people, India is the world's second-most populous country. Mr Modi's address was broadcast by hundreds of television companies and watched by nearly 200 million people.

The Indian prime minister outlined the dangers of the virus that has now spread to most of the world. Even though numbers of known infections in India is currently low, some fear an **impending** disaster. This is due to the country's huge population, overcrowded cities and limited medical facilities.

Mr Modi announced a 21-day lockdown. Everyone, he said, must stay in their homes at all times. After the lockdown began, the country stopped. The normally noisy streets of India's many cities, such as Mumbai,

Kolkata and Delhi, fell silent. This has never happened before. Police officers are now patrolling the streets to ensure that they remain empty.

India's lockdown is unprecedented. It follows similar actions taken in Italy, Spain and France. Many other countries have also announced lockdowns, but they are less strict. In most locked-down countries all schools, churches, hotels, restaurants, non-food shops, and other **leisure** facilities have been ordered to close. Only food and medicine stores are open. School closures are now affecting 87% of the world's schoolchildren.

Almost every government is now insisting on 'social distancing'. When visiting a food store or meeting others, people must stay at least two metres, or six feet, apart.

The coronavirus was first recorded in Wuhan three months ago. This

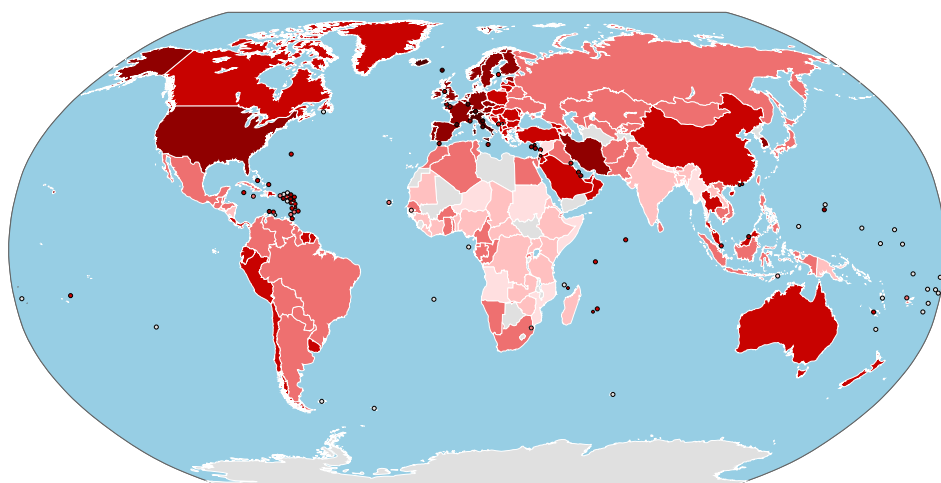
IN THIS ISSUE

- ★ Andean bear population study
- ★ Namibia's 30th anniversary
- ★ Nazareth Inscription marble
- ★ Pyramid of light explained
- ★ Ancient bilaterian ancestor
- ★ Nile dam dispute
- ★ Curing New Zealand's kakapos
- ★ Greenland's melting icecap
- ★ Amphipod warning name
- ★ First virtual G20
- ★ Comic-book artist dies
- ★ Clams and Moon drift
- ★ Nowruz: start of spring
- ★ Saint Patrick's Day
- ★ Manatee appreciation
- ★ Glossary Crossword and Wordsearch puzzle



**Learning
English as a
foreign language?**
NEWSADEMIC.COM
Newsademic is
recommended
reading for EFL
and ESL

*Shades of red show the spread of the coronavirus.
Darker areas show higher numbers of infections*



city is in central China. The virus' official name is Covid-19. No one knows where it came from. Some suspect that the virus originated in a bat or other animal. Other coronaviruses exist. They can cause ailments such as the common cold and influenza, or the flu. Over time, the human body can become immune to, or be able to resist, these viruses. As Covid-19 is new, no one has any immunity. However, medical experts believe that once a person has had Covid-19 and recovered, they are unlikely to get it again.

This coronavirus is highly contagious. It can pass from one person to another easily. The main form of transmission is thought to be water droplets. A person with the virus may cough or sneeze. Water droplets that they eject contain the virus. Others may breathe them in. Alternatively, the droplets might fall onto a hard surface. Tabletops are an example. Covid-19 may live on a hard surface for several days. Here, it can transfer to another person's hands. Then, if they touch their eyes, nose or mouth, they too will be infected.

After getting the virus, most people recover. Some have very mild, or even no, symptoms. Others may develop a headache, muscle pain, a cough, and breathing difficulties. People who have any symptoms must 'self-isolate'. This means staying at home, away from everyone else, for at least seven days. If another person in the household then develops symptoms, the self-isolation period has to be extended to 14 days.

Symptoms do not arise as soon as a person becomes infected. They may not show, or appear, for seven days. During this time, a person is unaware that they are infected. Yet, they can still pass the virus to others. This helps to explain how Covid-19 has spread so far and so fast.

If a person's breathing difficulties intensify, they will need to go to hospital. There, some people die. The majority of deaths, but not all, are people over 65 who have other unrelated medical problems. Percentage death rates are difficult to calculate. This is because the overall numbers of people who are, or have been, infected are not known. Some

suspect that the worldwide death rate is somewhere between one and three percent.

Several companies have developed coronavirus testing kits. These show whether or not a person currently has the virus. At present, most countries do not have kits to carry out mass testing. Therefore, the testing kits are used only for health workers or those who may need hospital treatment.

Most countries now understand that they will not eliminate the virus anytime soon. Their main worry is overloaded hospitals and other medical facilities. Lockdowns, self-isolation and social distancing should reduce infections. Hopefully, this will mean that hospitals can handle the number of patients. However, lockdowns cannot go on forever. Many millions of kits will be needed for mass testing. This will highlight where the virus is. Once this is known, it can be isolated and eradicated.

Some countries that were affected first, such as China, Singapore, South Korea, and Taiwan, have eased their lockdowns. Unfortunately, they are now experiencing a small rise in infections. Around the world, over 40 groups of scientists are working on a vaccine. Developing a successful one is likely to take at least 12 months.

The lockdowns are having a serious effect on countries' economies. Most companies have had to close. Where possible, people are working from home. Many organisations have had to lay off the majority of their workers. Now, governments must find extra money to help the growing number of people without jobs. On 26th March, the USA released its monthly unemployment figures. The jobless total increased by 3.3 million.

An Indian doctor has described the situation in his country as 'a war that India could not afford to lose'. Amongst all the bad reports, there was some good news. After being in hospital with the virus, a lady from South Korea recovered. Aged 97, she has now returned to her home. ■

Paddington
Bear



ANDEAN BEARS

There are eight bear species. North American brown bears (also known as grizzly bears), polar bears and China's giant pandas are well known. The Andean bear is one of the eight. It is the only one that lives in South America. This species is also known as the spectacled bear.

Andean bears are found in the northern Andes Mountains. Small populations exist in parts of Venezuela, Colombia, Ecuador, Peru, Bolivia, and Argentina. The bears are endangered. Their total number is thought to be around 10,000. Like many other animals, Andean bears are threatened by habitat loss. The animals are arboreal, or tree-dwellers. Felling trees for farmland and mining operations shrinks the forests where they prefer to live. Unlawful hunting is another problem.

Fully-grown, a male Andean bear is 1.8 metres (six feet) long and, at the shoulder, 0.9 metres (three feet) tall. The animals' fur is black or dark brown. They have lighter coloured hair on their faces, but dark rings around their eyes. This makes it look as if the bears are wearing glasses (or spectacles). The animals use their sharp claws to climb trees.

Andean bears are omnivores. They feed on both plants and meat. The animals eat fruits, unopened palm leaves, orchid bulbs, and some tree bark. Their diet includes smaller animals such as rabbits, mice, other rodents, and birds. Sometimes, the bears will attack cattle and other livestock. The creatures are solitary. They usually live on their own. However, Andean bears may gather where and when there is plenty of food. A field of corn is one example. Some bears in Ecuador **congregate** in a place where wild avocado trees grow. This gathering lasts for a few weeks once a year. It happens when the avocados are ripening.

As there have been few Andean bear studies, not much is known about them. The animals are shy and avoid humans. The animals live in separate, or fragmented, populations. Wildlife officials in Colombia have teamed up with researchers from the UK's Natural History Museum to undertake a new project. The researchers will create a genome record of each of Colombia's bear populations. Each living thing has its own genome. A complete set of DNA, it includes all of an organism's genes.

To 'map', or sequence, the bears' genomes, the researchers needed samples of their hair, or fur. To get them, the researchers and wildlife workers attached sticky tape to trees. They also collected bear faeces from the mountain tracks that the animals

use. In addition, the researchers collected skin and bone samples from specimens kept in Colombia's museums. All the samples have been taken back to the UK.

Once the genomes have been 'mapped', the researchers can work out when each population became separated. The separation may have been due to recent human activity. Alternatively, it could have happened hundreds, or thousands, of years ago. If the separation was recent, 'land corridors' could be set up between the populations. This may encourage more breeding and increase the bear's numbers. Yet, if two populations became separated hundreds or thousands of years ago, inter-breeding would be inadvisable. Any offspring, or cubs, from long-separated populations, may have serious genetic defects.

Even though not much is known about Andean bears, a fictional one is world-famous. A UK author wrote his first Paddington Bear book in 1958. The story is about a spectacled bear that arrives unaccompanied at Paddington Station, in London. The bear has a suitcase and there is a label around its neck. It says 'Please look after this bear. Thank you'. Within a few years, Paddington Bear books became very popular. Nowadays, millions, from all around the world, know of the bear that comes from 'deepest, darkest Peru' and likes marmalade sandwiches. ■



Young Andean
bear (Zoo Chat)

NAMIBIA'S ANNIVERSARY

Windhoek, Namibia's capital
city (Gabriel Nashixwa)



Windhoek is the capital of Namibia. On 21st March, many Namibians crowded into the centre of their capital. They gathered to celebrate their country's three decades of independence, or 30th birthday. By land area, Namibia is a large nation. Yet, it is home to only 2.4 million people. Of all the world's countries, Namibia has the second lowest population density. Mongolia is the only nation that has fewer people per square kilometre.

Most Namibians live between two deserts. The Namib Desert stretches along the country's entire Atlantic coastline. It is an area of gravel and sand. At its narrowest, this desert is 100 kilometres (60 miles) wide. The northern part is known as the skeleton coast. Many whalebones and old shipwrecks are scattered along the shore. Sailors from Portugal were the first Europeans to sail along this coast. They named it 'The Gates of Hell'.

The Kalahari is Namibia's other desert. It extends into Botswana and South Africa. This desert's name comes from a local word that means 'the great thirst' or 'a waterless place'. The Kalahari is covered in reddish sand and sparse vegetation. It has no permanent surface water. However, there is a rainy season and some desert areas are used to graze farm animals. The San people live in the Kalahari. Hunter-gatherers, they eat wild fruits, plants and nuts. The San use bows and arrows to hunt animals. Their way of life has not changed for over 20,000 years.

Between 1870 and 1914, or the beginning of the First World War, European nations took control of almost all the African continent. Historians call this period the 'Scramble for Africa'. The European countries with African colonies included: Belgium, France, Germany, Italy, Portugal, Spain, and Britain. By the late 1970s, nearly all these colonies had become independent nations.

Germany took over the part of Africa, which would eventually be named Namibia, in 1884. Then, it was known as German South West Africa. In 1904, fighting broke out between German settlers and members of two local tribes: the Herero and the Nama. The Africans were unhappy that large areas of their land were being **confiscated**.

Many of Herero people were forced to move to a desert area. Others were held in large camps. Between 1904 and 1907, it's thought that as many as 60,000 Herero and 10,000 Nama died or were killed deliberately. Many deaths were the result of disease or exhaustion. Some people describe this event as the 20th century's first **genocide**.

South Africa is a former British colony. The First World War began in 1914. For the next four years, France and the UK fought against Germany. Forces from South Africa invaded and captured German South West Africa.

The Central Powers, or Germany and the Austro-Hungarian and Ottoman Empires, lost the war. After the conflict, the League of Nations gave certain countries a mandate to control areas that the losers had governed. (The League was the forerunner of the United Nations (UN).) South Africa was asked, or mandated, to govern South West Africa.

South Africa became a fully independent country in 1931. In 1948, its governing (white) party introduced apartheid. This segregated the races. Certain places were for white people only. Black people were **discriminated** against. They were not allowed to vote in elections. The government extended the apartheid system to South West Africa.

Two rebel organisations were founded in South West Africa. Both wanted independence. One was named SWAPO (South West African People's Organisation). Angola is to the north of Namibia. SWAPO's

armed groups set up bases in Angola near the border. They fought against the South African troops in South West Africa. At that time, the USA and the Russian-led Soviet Union were rivals. Then, it was not unusual for them to become involved in proxy wars. This is when neither side directly fights against the other. In their South West Africa proxy war, Russia backed SWAPO and the USA (indirectly) supported South Africa.

In 1989, the Soviet Union began to break up. By this time, SWAPO and South Africa had arranged a ceasefire. The conflict cost South Africa large amounts of money and resources. It agreed to withdraw from South West Africa. The UN helped to organise an election in the new country. It was named after the Namib Desert. Sam Nujoma was elected as Namibia's first leader. He was one of SWAPO's founders.

Namibia's currency is called the Namibian dollar. To mark the country's



30th anniversary, the Bank of Namibia produced a new thirty-dollar banknote (N\$30). Other N\$10, N\$20, N\$50, N\$100, and N\$200 notes already exist. The new banknote features Mr Nujoma and two other presidents. These three people have led Namibia since its independence 30 years ago. ▣



Kalahari Desert in Namibia (Elmar Thiel)



Nazareth Inscription tablet (BNF)

NAZARETH INSCRIPTION TABLET

Christians believe that Jesus was the Son of God. Also known as Jesus of Nazareth, he lived 2,000 years ago in a place called Judea. It included the city of Jerusalem. At that time, the Romans controlled this part of the world.

Jesus claimed to be God's son and a king. This angered local Jewish religious leaders. They said that Jesus's claim was **blasphemy**. The Roman governor sentenced him to death for treason, or claiming to be a king. Jesus was crucified, or nailed to a wooden cross. Then, this was how the Romans normally executed rebels or criminals.

The Christian Bible explains how Jesus's body was placed in a rock-cut tomb. It belonged to one of his friends or followers. Soon afterwards, some women went to the tomb to put perfumed spices and oil on the body. When the tomb was opened, the women discovered that the body had gone. Later, Jesus was seen alive. This is known as the Resurrection. There are several stories in the Bible about what Jesus did after his resurrection. In one, he leads his disciples, or close followers, to the top of a hill. There, he ascends, or is taken up, into heaven.

Apart from the Bible, few ancient texts mention Jesus by name. Several Roman historians mention his name. However, they do not write about Jesus's teachings. They note his execution and problems that arose between his followers and Judea's Roman rulers.

Some people believe that a stone tablet indirectly refers to Jesus. Known as the Nazareth Inscription or Nazareth decree, it is 64 centimetres (25 inches) tall and 38 centimetres (15 inches) wide. The tablet is marble. A hard stone, marble is often used for buildings and statues.



An inscription, in Ancient Greek, is carved on one side of the tablet. It warns people not to move bodies from tombs. The penalty for doing so, the wording says, is death. The inscription does not have a date. However, experts say that the style of Greek suggests that it was carved 2,000 years ago. The inscription includes the name 'Caesar'. At that time, all Roman emperors were known as Caesar. Robbing, or stealing, valuable items from tombs was not uncommon. Yet, the inscription only mentions 'moving bodies'. After the crucifixion, Jesus's enemies claimed that his disciples had taken the body from the tomb.

In Roman times, emperors would send edicts, or new laws, to governors or local rulers throughout the empire. These were written on parchment (animal skin) or papyrus. The leaders may have arranged for a shortened version to be carved on a stone tablet. Then, more people could read it. It was thought that the 'moving bodies' law had come from the Emperor Claudius (41CE – 54CE). Many Christians believe that the Nazareth Inscription is a historical record of Jesus's resurrection.

However, the history of the marble slab is unknown. Wilhelm Fröhner

(1834 – 1925) acquired it in 1878. He was a collector and researcher of **antiquities**. Fröhner worked at the Louvre Museum in Paris, France's capital city. After he died, much of his collection, including the marble tablet, became the museum's property. Fröhner's notes say 'This marble was sent from Nazareth in 1878'. Nobody knows who owned the tablet before Fröhner or where it had been for 2,000 years.

Nowadays, experts can analyse rocks and stones. Using special equipment, they can work out where they came from. Recently, an American Roman historian and university professor arranged for the Nazareth Inscription tablet to be tested. The results indicated that the marble was from an island called Kos. This means that the inscription almost certainly is not related to what happened to Jesus's body.

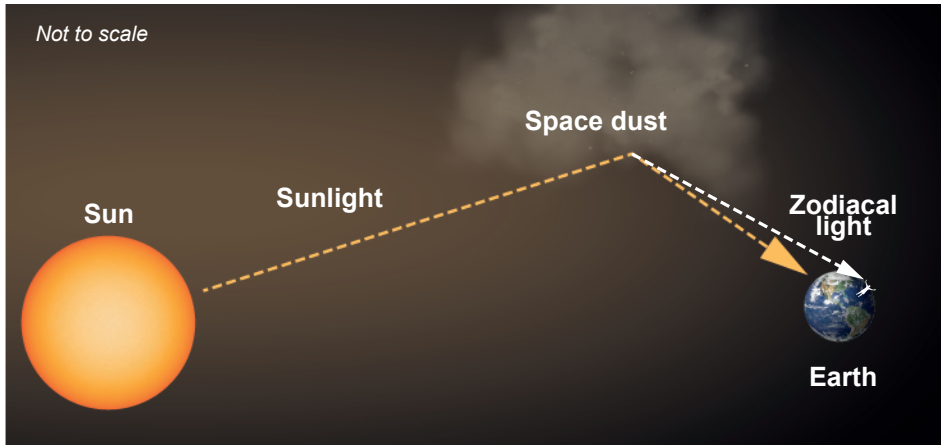
Today, Kos is part of Greece. Around 112 kilometres (70 miles) long, the island is close to Turkey. The historian and professor believe that the inscription refers to the tomb of a man called Nikias. He ruled Kos about 2,030 years ago. Then, the island's rulers obeyed the Romans. Nikias, an unpopular ruler, is usually described as a **tyrant**. He was over-

thrown and killed. People on Kos opened Nikias's tomb and scattered his bones.

If the tablet is connected to Nikias, Augustus (63BCE – 19CE) issued the 'moving bodies' decree. Born Gaius Octavius, Augustus was Julius Caesar's nephew and the first Roman emperor. ▣



Coin featuring head of Nikias of Kos (Museum of Fine Arts Boston)



PYRAMID OF LIGHT

At this time of year, or late March and early April, a natural **phenomenon** can be seen in the night sky. In the northern hemisphere, this is late winter or early spring. Conversely, in the southern hemisphere, it is early autumn or late summer.

To view the unusual 'light show', people in the northern hemisphere need to look westward soon after sunset. They can also see the phenomenon in the early hours in October and November. Then, they need to look to the east, just before sunrise. In the southern hemisphere, viewing times are reversed. Currently, the light show is visible in the morning. In this half of the globe, it also appears during October and November evenings.

The phenomenon is a triangular-shaped glow in the dark sky. Often called the 'pyramid of light', it points upward from the horizon. When seen in the morning, the glow is also known as a 'false dawn' and in the evening a 'false dusk'. However, its scientific name is zodiacal light. The triangular glow can be seen for around one hour. Then, it fades away.

Zodiacal light is sunlight that reflects off tiny space particles. They are often called cosmic dust. The Solar System's Sun and planets formed

out of a huge cloud of dust about 4.6 billion years ago. The dust and gas cloud collapsed in on itself to create the Sun. As the cloud spun, or moved, around the Sun, it flattened into a disc-like shape. The planets formed out of this dust. Yet countless particles were 'left over'. In more recent times, dust from the tails of passing comets and colliding asteroids added to it. Each day, thousands of metric tons of cosmic dust fall to the Earth's surface.

The eight planets that orbit the Sun are roughly in the same plane. This is a result of them forming from the disc-shaped dust and gas cloud. This plane is known as the ecliptic. Zodiacal light 'follows' the ecliptic. It is easiest

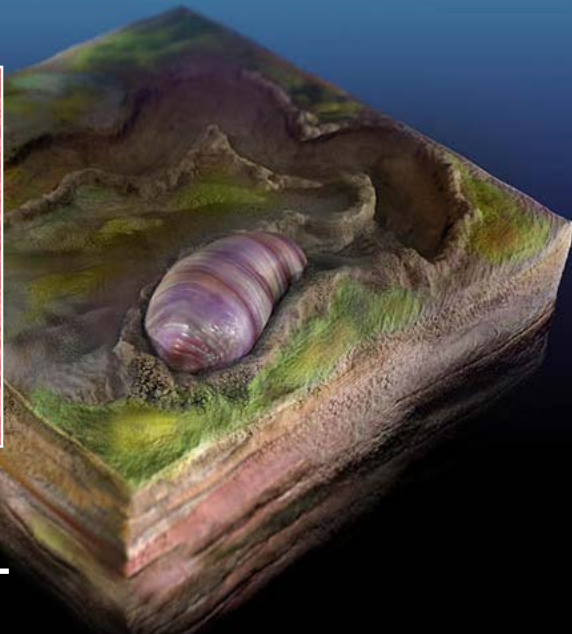
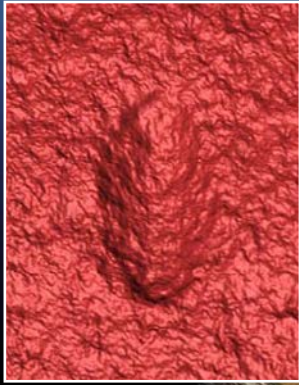
to see, at dusk or twilight, when the ecliptic is highest in the night sky. The ecliptic contains the most cosmic dust. Each particle reflects a 'tiny' amount of light. This creates the pyramid of light. If the light from all the dust particles were **concentrated** into a single point, it would be brighter than Venus. This planet does not 'produce' light. It can be seen in the night sky because Venus' cloudy atmosphere reflects sunlight.

The zodiacal light can be seen only where there is no light pollution. Normally, this is a remote area where there are no human settlements or human activity. Light pollution is the 'light haze' or 'glare' that can be seen in the night sky above towns and cities. Man-made, or artificial, lights cause it. Light pollution explains why people who live in these places cannot see the stars.

Alexander von Humboldt (1769 – 1859) was a well-known Prussian naturalist and explorer. Prussia was a German kingdom in northern Europe. Naturalists are people who study animals and plants by observing them. Humboldt spent many years exploring South and Central America. He said that the people in what's now Mexico knew about zodiacal light long before the first Europeans arrived 500 years ago.

Giovanni Domenico Cassini (1625 – 1712) was an Italian-French mathematician, engineer and astronomer. He investigated zodiacal light. Some texts suggest that he was the first person to **deduce** that cosmic dust particles create it. ▣





An artist's impression of *Ikaria wariootia*
(Sohail Wasif / UCR)

Inset: Coloured laser scan of *Ikaria wariootia*
impression, or fossil, in sandstone rock
(Droser Lab / UCR)

ANCIENT FOREFATHER?

Most animals are bilaterians. These are symmetrical organisms. Their left and right sides are mirror images. Bilaterians have a front and back end (or head and tail). They also have a gut that connects the front and back. It processes food. Mammals (such as humans), fish, birds, reptiles, and insects are all bilaterian. Jellyfish, sea anemones, corals, and sponges are non-bilaterian examples.

Scientists have often wondered what was the first-ever bilaterian animal. Recently, American and Australian researchers have uncovered the earliest known bilaterian fossils. They discovered them in Australia's outback. (Australians call the sparsely populated centre of their country 'the outback'.) The sandstone rocks in which the fossils were found are 555 million years old.

The ancient bilaterian has been named *Ikaria wariootia*. In a local language, the first part of the name means 'meeting place'. The Warioota Creek (or stream) is close to where the fossils were found. The tiny creature was shaped like a teardrop. About half the size of a rice grain, its head was larger than its tail. The tiny worm-like creature lived on the seabed. The researchers found fossils, or impressions, of at least 100. They also identified the burrows that the creatures dug in the mud, or sediment, on the seafloor.

Evolutionary theory suggests that all bilaterian life on the Earth came from a common ancestor. It existed hundreds of millions of years ago. The Earth is around 4.6 billion years old. Life on the planet began in the seas and oceans. It is thought to have started with single-celled organisms such as bacteria. These microscopic life-forms probably did not change for several billion years.

Scientists study evolution by analysing fossils. These can be found in many of the Earth's rocks. Older layers of rock are beneath more recent ones. From fossils in each rock layer, it is possible to trace how life-forms slowly changed, or evolved. The progression of fossils, from small microbes to far more complex forms of life, is known as the fossil record.

The period between 635 and 541 million years ago is called the Ediacaran. The age of the *Ikaria* fossil rocks shows that the creatures lived during the Ediacaran period. The first multi-celled organisms lived in the seas during this period. They were tubular or shaped like leaves and fronds. Together, these organisms are called the Ediacaran biota.

The fossil record shows that something unusual happened at the end of the Ediacaran. It's known as the 'Cambrian explosion'. This was a sudden 'burst' of evolution. The Ediacaran period organisms began to

change. Within a much shorter period, they evolved into far more complex life-forms. These would eventually become the plants and animals that live on the Earth today.

The Cambrian explosion name is misleading. It was not instant. The 'explosion' took place during a period of ten to 20 million years. In the history of evolution, this is very sudden. Nobody knows what caused this 'explosion of animal life'. Some scientists think that a rapid increase in oxygen might explain it.

By the end of the Cambrian explosion, the Ediacaran biota seemed to have died out or disappeared. Yet the bilaterians became far more widespread. It was not until 370 million years ago, that creatures (or bilaterians) first moved from the sea to the land.

The tree of life is a diagram. It is a simple way of showing how all the world's animals are related. The diagram highlights the animals that have common ancestors. It also shows when the ancestors split into different species. Each species has its own branch. Charles Darwin (1809 – 1892) was one of the first people to draw a tree of life. He was a naturalist from the UK. Naturalists are people who use observation to study plants and animals. Darwin became famous for his book about evolution. The first about evolutionary theory, it is called *On the Origin of Species*. The book was published in 1859. At that time, it was very controversial.

Ikaria is now one of the earliest organisms on the bilaterian tree of life. Therefore, these tiny worm-like creatures could be the forefathers of all the Earth's bilaterians: including humans. ■

NILE DISPUTE

Grand Ethiopian Renaissance Dam, under construction, in Ethiopia

Two years ago, a dispute arose between Egypt and Ethiopia. A huge hydroelectric dam is the cause. The dam, which is nearing completion, is on the Blue Nile, in Ethiopia. The USA agreed to **mediate**. Over the last three months, a series of talks were held in Washington DC, America's capital city. Government representatives from Egypt and Ethiopia attended them.

The Blue Nile flows into the River Nile. Building work on the dam began nine years ago. Called the Grand Ethiopian Renaissance Dam, it is close to Ethiopia's border with Sudan. Leaders of Egypt and Sudan fear that the dam will greatly reduce the amount of water that flows through their countries. Previous Egyptian leaders declared that they would be willing to declare war on Ethiopia to stop the dam from being built.

The Nile is the world's longest river. The White Nile and the Blue Nile are its two main tributaries. Of the two, the White Nile is much longer. It is the continuation of the main river channel. However, about two-thirds of the water that flows through the river in Egypt comes from the Blue Nile. The Blue Nile begins at Lake Tana, in the Ethiopian Highlands. It flows through several deep canyons and valleys before it crosses the Ethiopian-Sudanese border. The Blue Nile flows into the White Nile in Sudan. The rivers 'meet' just to the north of Khartoum, Sudan's capital city.

Most of Sudan and Egypt is a desert of sand and rocks. In these countries, a narrow strip of land on either side of the Nile is very fertile. When seen from space, the river is easily recognisable. The green colour of the vegetation stands out from the



yellowish-brown surrounding desert. In Egypt, the Nile has created a large triangular-shaped delta where it flows into the Mediterranean Sea. Here, the river splits into many channels. Land in this part of Egypt is very fertile. It is good for growing food crops.

In Egypt, most of the country's drinking water is taken from the Nile. Its waters are used for industry and to irrigate the farmland. Almost 100 million people live in Egypt. Without the Nile's waters, they would not survive in this part of the world.

Now, work on the Renaissance Dam is 75% complete. The Ethiopian government is yet to say when it will be finished. The dam is designed to generate electricity and store water. When completed, it will be the biggest hydroelectric plant on the African continent and the world's ninth largest. (The biggest is the Three Gorges Dam, in China.) When the dam is fully operational, Ethiopia will be Africa's biggest energy producer.

Building work on the dam is expected to cost US\$4 billion (£3 billion). After it's finished, the barrier will create a huge reservoir, or man-made lake. The dam will not block the Blue Nile. As it is a hydroelectric plant, water



will always need to flow through it. The flowing water rotates the turbines that generate electric power.

Abdel Fattah el-Sisi is the president of Egypt. When work began on the Renaissance Dam, there was political **turmoil** in Egypt. Large street demonstrations were taking place. After leading the country for 30 years, Egypt's president resigned. Further protests followed. Eventually, Mr Sisi was elected as Egypt's president. Previously, he commanded the country's army. Mr Sisi says that if there had been no disruption in Egypt, its

leaders would never have allowed work on the dam to start.

Eventually, the dam will create a huge reservoir. Ethiopia wants to fill the lake as quickly as possible. Many people in the country do not have electric power. The dam will provide enough electricity for much of the country. The Ethiopian government will also be able to sell excess power to nearby countries. As the dam fills, the amount of water flowing downstream, or to Egypt, will reduce.

Egypt says that the dam should be filled over at least 15 years. Ethiopia had wanted to create the reservoir in three years. At the Washington talks, the two sides were expected to agree to a **compromise**.

Representatives from Ethiopia failed to attend the most recent talks. They say that they can begin to fill the lake without an agreement. The USA has advised against this. Egypt insists that it will defend the 'interests of its people'. The Ethiopian representatives have warned that the country 'will **retaliate** if there are any attacks on the dam'. ▣



Work continues on the Grand Ethiopian Renaissance Dam, in Ethiopia

Male kakapo (Department of Conservation)



Department of Conservation team member holding a kakapo (DOC)

Kakapos are highly, or critically, endangered. They are large ground-dwelling flightless parrots. Often called 'fat parrots', Kakapos are found only in New Zealand. The birds are the world's heaviest parrots and the only ones that live on the ground.

New Zealand has two main islands. Even today, the islands have a unique bird population. What's now called New Zealand, became an island around 80 million years ago. Over time, the fish, insects, birds, lizards, and frogs in New Zealand evolved. Yet, bats are the country's only native mammals.

Birds in New Zealand evolved differently. Over time, many grew in size. As they were never attacked, or had no predators, many began to live on the ground. Some lost the ability to fly. Kakapos are one example. The kiwi (bird) is another.

By 12,000 years ago, modern humans had reached most parts of the world. Yet, New Zealand was different. Maori people from Polynesia were the first to land there. (Polynesia is the name given to over

1,000 small islands in the central and southern Pacific Ocean.) The Maori arrived only 800 years ago. Therefore, New Zealand was the final large land area (with a favourable climate) that humans settled.

The Maoris brought a type of Pacific rat with them. The rats were a source of food. British people began to move to New Zealand about 200 years ago. They brought other types of animals. Rats and mice lived on their wooden ships. Later, the British introduced rabbits. Then, rabbit was a popular type of meat. Rabbits breed very quickly. After they became too numerous, stoats and ferrets were released to control them.

Cats were taken to New Zealand as pets. Yet some escaped. Australian possums were introduced. These animals live in trees. Possums were brought to the country for their fur. Now, in New Zealand, rats, mice, stoats, ferrets, possums, and wild cats are classified as invasive species, or pests. Most will eat eggs laid by ground-dwelling birds. They also attack recently hatched chicks.

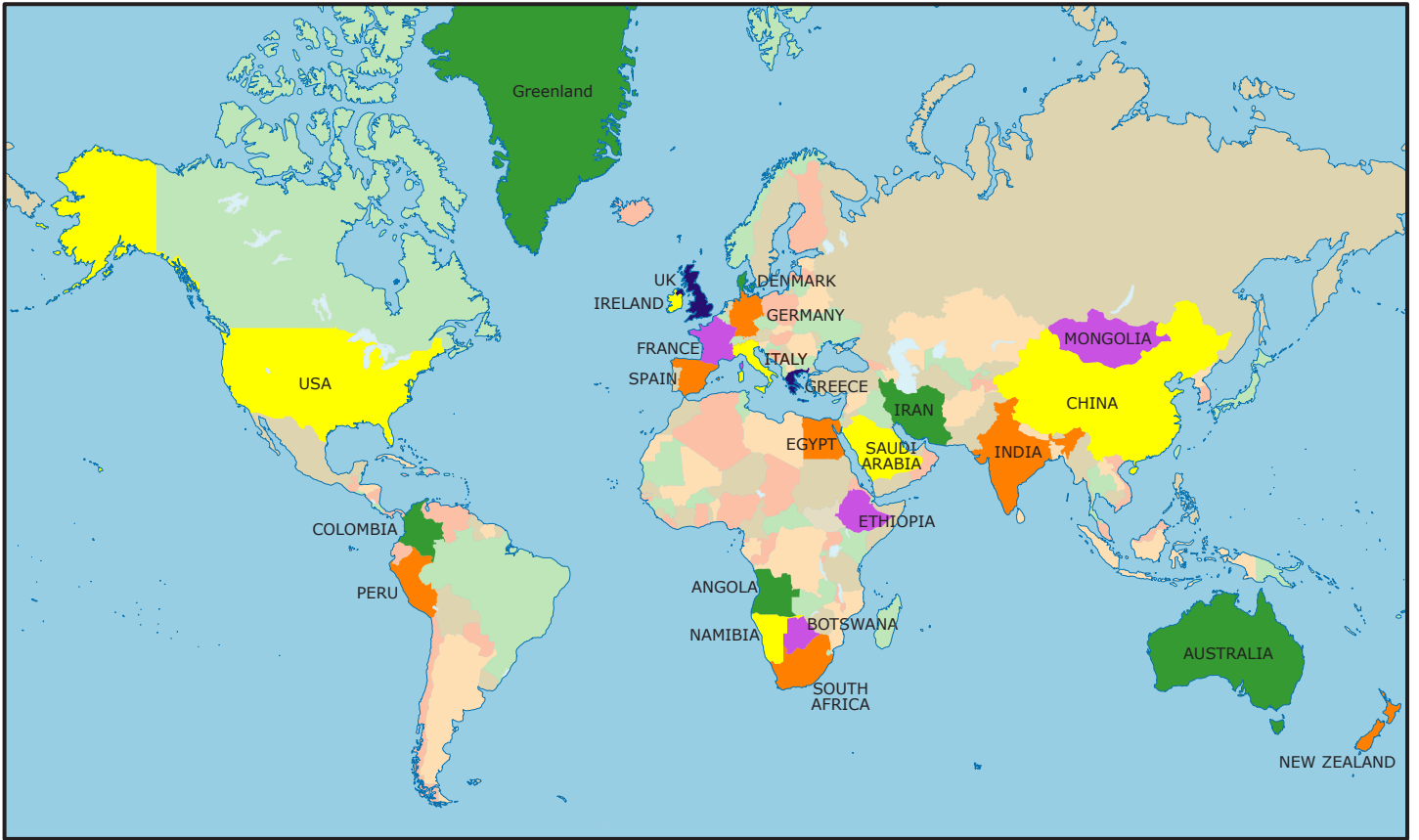
Kakapos are nocturnal, or more active at night. Males can be 64 centimetres (25 inches) long. The females are smaller. Even though they cannot fly, the parrots are good walkers. They can also climb trees. Usually, kakapos roost, or sleep, on a tree branch. Using their short wings, the parrots can 'parachute' down to the ground. Kakapos feed on fruits, seeds, leaves, and plant stems.

Twelve months ago, only 140 kakapos remained. These birds live on several small islands. They are carefully monitored. The islands are free from any predators. Last year, the island kakapos had a successful breeding season. They produced 80 chicks. However, one of the chicks died of a fungal infection. The fungus grows inside the bird's lungs. This disease is hard to diagnose. A few weeks later, two more chicks died. Then, several adult females had to be put down after they became ill.

Vets, or animal doctors, were asked to help. The birds seemed to be passing the disease from one to another. The only way to discover if a parrot had the infection was to use a CT scanner or an endoscope. CT scanners are found in hospitals. Endoscopes are tube-like devices. They are used to look inside parts of the body including the lungs. The fungal disease can be treated with a drug. However, for the medicine to work, the disease must be found early.

The vets collected parrots that lived closest to the birds that died. They were flown by helicopter to a hospital in Auckland, New Zealand's largest city. Fifty-one birds were evacuated. Scans showed that 21 had fungal infections. Nine died. Yet after they were given the drug, the other kakapos survived.

Having made a full recovery, all the birds were returned to the island. The medical evacuation meant that the majority of chicks survived. Now, the number of kakapos is over 200. ■



This map shows countries to which news stories refer in this issue. Visit www.newsademic.com for more detailed world maps.



GREENLAND'S MELTING ICE

GRACE-FO mission is a joint American-German satellite space mission. Its two satellites are circling the planet. They are designed to record differences in the Earth's gravity. Using this information, the mission's researchers calculate the amount of water stored on land surfaces. They can also measure the size and volume of ice fields.

Last year, parts of the northern hemisphere were much warmer than normal. Several Arctic temperature records were broken. For example, on some summer days, temperatures at Ilulissat were in the high 20s

(centigrade). This is twice as warm as the average for this time of year. Ilulissat is a small city of 5,000 people on Greenland's west coast. It is close to the Jakobshavn Glacier. This huge ice flow produces ten percent of all the icebergs that come from Greenland.

Greenland is said to be the world's largest island. Some argue that Australia is bigger. Yet others counter that Australia is so large that it is a continental landmass and not an island. Today, Greenland is home to about 56,000 people. A self-governing territory, it is within the Kingdom of Denmark.

A large ice sheet covers about three-quarters of Greenland. It is the only permanent ice sheet not in Antarctica. In most places, Greenland's ice is at least two kilometres (1.2 miles) thick. Yet thick ice has not always covered this part of the world. Scientists believe that ice first began to build up over Greenland around 1.8 million years ago.

About seven years ago, scientists used radar recordings to make a new image of Greenland. It is a three-dimensional (3D) 'map' of the shape of the rocks beneath the ice. It shows that Greenland is shaped a bit like a

bowl. Its outer part is higher than its central area.

The scientists who made the 3D map were surprised to discover a huge canyon. The shape of its sides shows that running water, and not ice, created it. In places, the canyon is around 800 metres (2,600 feet) deep and ten kilometres (six miles) wide. The newly discovered canyon is roughly 750 kilometres (466 miles) long. In comparison, America's Grand Canyon is about 363 kilometres (227 miles) long.

The GRACE satellite mission began 18 years ago. Data collected by the satellites show that between 2002 and 2019 Greenland lost 4,550 billion metric tons of ice. On average, this is 268 billion metric tons per year. Yet, the ice-loss figure for two months last summer was 600 billion metric tons. This is over twice the annual average.

The overall annual ice-melt figure in Antarctica is around 100 billion metric tons. When it's midsummer in Greenland (or the northern hemisphere) it's midwinter in Antarctica (or the southern hemisphere). During Greenland's warm summer, snowfall in Eastern Antarctica added additional ice. However, this amount did not offset Greenland's loss.

Ice at the North Pole floats on the sea. When sea ice melts, it does not affect the sea level. The Antarctica and Greenland ice sheets are on land. When a large volume of their ice melts, it can raise the level of the sea. The researchers say that, last summer, Greenland's 600-billion-metric-ton ice melt added 2.2 millimetres to global sea levels.

Throughout the Earth's long history, sea levels have varied greatly. During past ice ages, large areas of sea, which exist today, were dry land.

Then, a greater volume of water was 'locked up' in much larger North and South Pole icecaps. Then, glaciers among the world's highest mountains contained far more ice.

It's known that sea levels have been rising gradually over the last 100 years. Most scientists believe that this is due to an increase in average world temperatures. In some parts of the world, the climate has been changing. In the past, trying to measure a rise in sea level was difficult. Now, satellites have been designed to make accurate calculations.

Many of the planet's biggest cities are close to the sea. A large percentage of the world's population lives in coastal areas. Therefore, a large sea-level rise would cause many problems. Scientists calculate that if all of Greenland's ice were to suddenly melt, the sea level would be 7.2 metres (24 feet) higher. ■



The city of Ilulissat, in Greenland; the front edge of the Jakobshavn Glacier is in the background

Amphipod
*Eurythenes
plasticus*
(Johanna Weston,
Alan Jameson)



AMPHIPOD POLLUTION NAME

There are many types of amphipod. Most are small shrimp-like creatures or crustaceans. A few amphipods live in fresh water or on land. However, almost all are found in the sea. Several years ago, researchers from a UK university discovered a new marine amphipod. Recently, they gave it a scientific name. It comes from what was found in one of the new creature's stomachs.

The new amphipod was recovered with the use of an underwater ROV (remote operating vehicle). The amphipod was found in the Mariana Trench. In the western part of the Pacific Ocean, this deep under-sea trench is close to the island of Guam. The deepest part is called Challenger Deep. Here, the seabed is 11 kilometres (6.8 miles) beneath the surface. This depth is roughly the same distance below sea level as the height at which passenger aircraft fly above the ground. Mount Everest is the world's highest mountain. If it were put at the bottom of Challenger Deep, the mountain's top, or summit, would be 1.6 kilometres (one mile) under the water.

The pressure at the bottom of the Mariana Trench is 1,000 times greater than at the sea's surface. If a person stood at its deepest part, they would be crushed instantly. What's more, water temperatures at this depth are very cold. Below 200 metres (656 feet), there is no light. Fish and other marine creatures that exist in the Mariana Trench live in total darkness.

Marine scientists divide the ocean depths into five layers, or zones. Different types of marine creatures live

in each. The uppermost layer, or one closest to the surface, is called the Epipelagic zone (or sunlight zone). It goes down to a depth of 200 metres (660 feet). This is where most marine activity takes place. The deepest ocean layer is known as the Hadalpelagic, or Hadal, zone. The Mariana Trench is within this layer. It is named after Hades. In Ancient Greece, he was the god of the dead and king of the underworld, or hell.

Around 150 years ago, a British navy ship called *HMS Challenger* sailed around the world. Several scientists were on board. The voyage was the first global marine scientific expedition. It made several discoveries. One was the deepest part of the Mariana Trench. Challenger Deep was named after the ship.

Surprisingly, the first people to dive to the Mariana Trench's deepest section did so in 1960. One was an American and the other came from Switzerland. The pair stayed at the bottom for about 20 minutes. Their submersible craft created a cloud of silt, or mud. Therefore, the men were unable to see anything. In 2012, a film director spent seven hours exploring the trench around Challenger Deep. At these depths, no living things were seen. Both submersibles were designed to withstand extreme pressures.

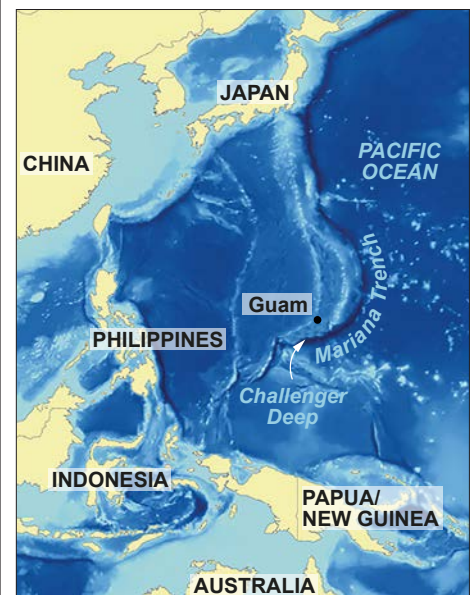
In 2014 and 2017, marine scientists used an ROV to catch several fish in the Mariana Trench. A type of snailfish, they were living at a depth of 7,966 metres (26,135 feet). Currently, they are the world's deepest known fish. Where they were found

is 3.2 kilometres (two miles) from the bottom of the trench. Scientists think that finding any fish that live at greater depths is unlikely.

The university researchers found the new amphipods 6,500 metres (21,300 feet) below the surface. They caught four. The creatures are about five centimetres (two inches) long. Later, the researchers discovered that the contents of one amphipod's stomachs were 84% PET (polyethylene terephthalate). PET is a type of plastic. Most plastic bottles that contain water and non-alcoholic drinks are made from PET. It is also used for plastic films and some textile fibres.

Worldwide, about one million plastic bottles are sold every minute. Studies say that eight million metric tons of plastic are dumped in the seas and oceans every year. There, it slowly breaks down into smaller and smaller bits. These can harm fish, seabirds, and other marine creatures. Thinking that it is food, they eat the tiny plastic pieces.

The researchers were surprised that one of the deep-sea amphipods had found and eaten the plastic. These creatures belong to a **genus** called *Eurythenes*. The researchers decided to name the amphipod *Eurythenes plasticus*. They hope that its name will further highlight the plastic pollution problem in the world's seas and oceans. ■



King Salman of Saudi Arabia making the opening address of the G20's first virtual summit (Bandar Algaloud / Saudi Royal Court)



VIRTUAL G20

The G20 (or Group of Twenty) are the nations that have the world's 19 most successful, or largest, economies. The European Union (EU) is the G20's 20th member. It is made up of 27 European countries. Germany, France, and Italy are both G20 nations and EU member countries.

An emergency G20 meeting took place on 26th March. Unusually, the members' leaders did not travel to the host country. A virtual meeting, it was conducted with 'video conference' equipment. This had never been done before. The meeting, or online summit, was arranged to discuss the coronavirus outbreak or pandemic.

Each year, one of the G20 leaders acts as the organisation's president. Last year it was Shinzo Abe, Japan's prime minister. Currently, Saudi Arabia's monarch, King Salman, holds the presidency. He gave the opening address, or speech.

Around two-thirds of the world's 7.7 billion people live in G20 nations. The two countries with the biggest populations, China (1.4 billion) and India (1.3 billion), are members. Three of the next four, the USA (327 million), Indonesia (268 million) and Brazil (210 million), are all G20 nations. Pakistan (212 million) is the country with the

most people that is not a G20 member. Combined, G20 nations represent 85% of global economic output, or the world's economy. They are also responsible for 75% of all international trade.

The coronavirus pandemic is now affecting nearly every country in the world. It is a global crisis. The G20 was set up in 2008 to find solutions for another worldwide crisis. This event began in 2007. Unrestrained risk-taking by large banks in some countries caused severe economic problems.

The collapse of these banks had several world-altering adverse economic effects. Many companies had to close or lay off a high percentage of their workers. Governments were forced to borrow huge sums of money. It was needed to rescue banks and prevent the world's financial system from breaking down. Afterwards, far less money was available to pay for services that governments normally supply. Less wealthy people who rely on these services suffered.

In normal times, the leaders of the G20 meet for an annual two-day summit. This year's meeting is due to be held in November. Then, to take part, the G20 leaders will travel

G20 MEMBERS

Argentina
Australia
Brazil
Canada
China
France
Germany
India
Indonesia
Italy
Japan
Mexico
Russia
Saudi Arabia
South Africa
South Korea
Turkey
UK
USA
European Union (EU)

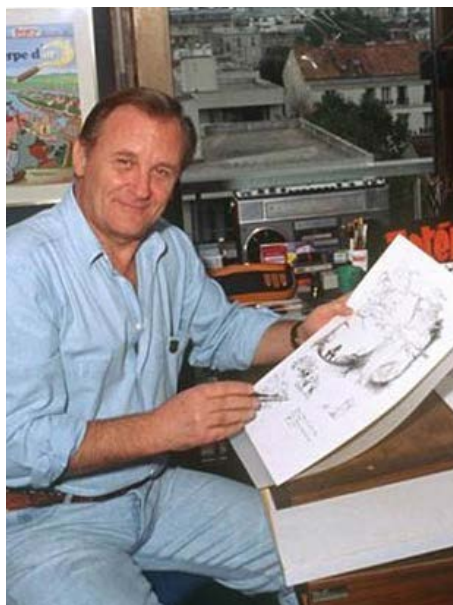
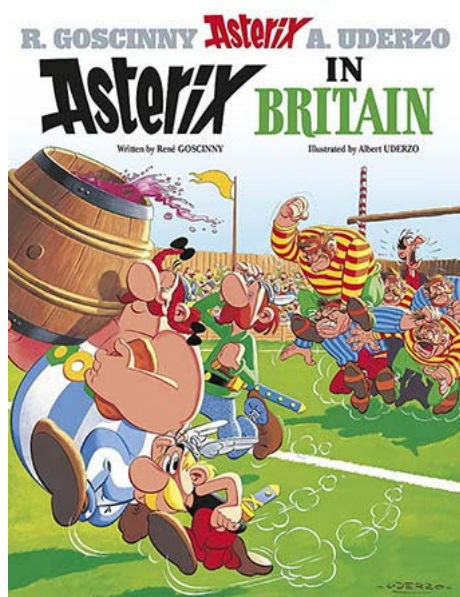
to Riyadh, Saudi Arabia's capital city. Usually, hundreds of government advisers and news reporters travel to the city where G20 summits are held. Extra security is needed. Often, soldiers are deployed and additional police block the roads around the summit's **venue**.

The virtual summit was very different. Due to the coronavirus outbreak, international travel is either on hold or been cancelled. The summit was set up as a two-hour videoconference. Usually, several topics are discussed at G20 meetings. Often, they are about expanding trade, finance and the environment. Only the pandemic was discussed at the emergency summit. Soon after it ended, the offices of several leaders released photographs. They show their president or prime minister sitting at a desk looking at a large television, or computer, screen.

At the end of G20 summits, a communiqué is released. This is a statement that lists the actions that the leaders have agreed to. The emergency summit's communiqué stated that the G20 had agreed to minimise the economic and social damage the pandemic is likely to cause. Extra money, it said, would be provided for the world's less developed, or poorer, nations. Medical scientists in G20 countries would agree to share information and data about the virus. This will help to slow its spread and increase the likelihood of developing an effective vaccine or other viral medicines. ■



Shinzo Abe, Japan's prime minister, speaking with the American president, Donald J Trump, during the G20s virtual summit (PM's Office of Japan)



Albert Uderzo over 20 years ago

ASTERIX CO-CREATOR DIES

Asterix, or Asterix the Gaul, is a world-famous comic-book character. René Goscinny (1926 – 1977) and Albert Uderzo created him over 70 years ago. Goscinny wrote the scripts, or **dialogue**, for the books. Uderzo illustrated them. After Goscinny's early death, Uderzo undertook both tasks. The Asterix comic-book artist died on 24th March, aged 92.

Uderzo was born in 1927. His parents were Italian. Uderzo's father worked as a carpenter. When Uderzo arrived, the family was living in France. He demonstrated a talent for drawing at an early age. As a young man, Uderzo became interested in American comic books and the early Mickey Mouse and Donald Duck cartoons. He met Goscinny in 1951. At that time, they both worked for a Belgian printing company. It had set up a new office in Paris, France's capital city.

Goscinny and Uderzo created several cartoon figures. These appeared in comics that the Franco-Belgian company printed. In 1961, they were asked to start a new 'older children' magazine. Goscinny was the editor and Uderzo the artistic director. The magazine's first issue featured an Asterix story. It was an 'instant hit'. Later, the two men

left the magazine to produce full-length Asterix comic books.

Between them, Goscinny and Uderzo wrote and illustrated 34 Asterix stories. Translated into many languages, they have sold over 370 million copies. The dialogue includes many jokes and the artwork has 'hidden' meanings. The names of the main characters are often a play on words. For example, a bard, or singer, is called Cacophonix. In English, the word cacophony is used to describe a loud and unpleasant sound. Dipsomania is a bar owner. Dipsomania is another word for alcoholism, or an addiction to alcohol.

The Asterix comic books are equally popular with children and adults. The stories are set in Roman times. Then, what is now France was called Gaul. In the books, Rome has conquered all of Gaul except for one village. This is where Asterix lives. The local druid, or priest, makes a magic potion. For a while, after they have drunk the potion, a person has superhuman strength. This is why the Romans could never capture the village.

Asterix's companion is a large character called Obelix. He is not allowed to drink the magic potion. As a child, Obelix fell into a large pot, or vat, of the liquid. This means

that his superhuman strength never wears off. Obelix is always interested in food. He has a small pet dog called Dogmatix.

In each book, Asterix, Obelix, and Dogmatix set off for an adventure in another part of Europe. They always come into conflict with the Romans who are led by Julius Caesar. When this happens, Asterix drinks some magic potion. No one dies in the fights. Yet the Roman soldiers are always beaten up or knocked unconscious.

Often, the Asterix books make use of funny **stereotypes**. For instance, in *Asterix in Britain*, people are always drinking warm beer or hot water with milk. (In Roman times, tea leaves had yet to be discovered.) The Romans deliberately choose to attack the British at five o'clock on a Sunday. They know that, at this time, the British stop doing everything to drink hot water and milk.

The story also includes a rugby match. Asterix and Obelix are supposed to take a barrel of magic potion to a British village. They too are fighting against Roman occupation. The barrel gets lost. Before he left his home, the druid gave Asterix some dried leaves. Not to disappoint the villagers, Asterix pretends that the leaves give superhuman strength. He adds them to their hot water and milk. Unbeknown to Asterix, the leaves come from a tea plant. After drinking the hot water and milk (or real tea), the British fight off the Romans easily.

Uderzo retired in 2011. Previously, he had said that Asterix would end with his death. However, after a disagreement with his daughter, Uderzo sold his majority share of the Asterix comic-book rights to a French publishing company. Using a different writer and illustrator, the company has produced four more Asterix books. The last was published in 2019.

Three years ago, a signed early Asterix comic-book cover was auctioned in France. It sold for €1.4 million (£1.3 million). ■



The Earth and the Moon, photographed by the Galileo spacecraft (NASA)

SHORTER DAY CLAMS

There are 24 hours in one day. This is the time that it takes the Earth to rotate, or spin, once. The Earth goes around, or orbits, the Sun. Each year has 365 days (or 366 in a leap year). This is the time that it takes the Earth to travel around, or orbit, the Sun. Researchers from a university in Belgium have found evidence that, long ago, days were shorter and years longer.

The first Moon landing took place in 1969. While on the lunar surface, the American astronauts set up a small mirror-like device. Similar devices were left on the Moon during the two following American landings. Together, they are called the Lunar Laser Ranging experiment. Many years later, the devices continue to operate. This is because they do not need any power

The devices reflect laser beams. The lasers are bounced back in the same direction from which they came. Space scientists on the Earth direct, or fire, the beams at the devices. Instruments record the time that it takes the laser beams to return. Using this information, the scientists calculate the exact distance between the Earth and the Moon. Roughly, it's 400,000 kilometres (248,548 miles).

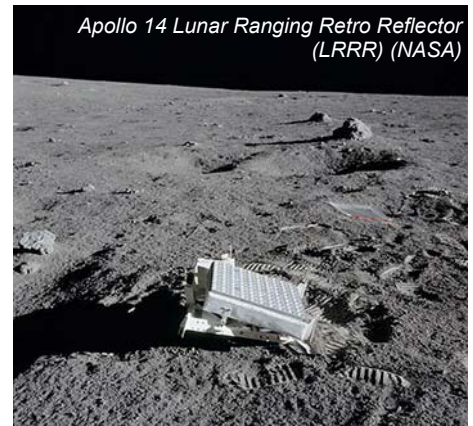
The accurate measurements show that the Moon is, very gradually, drifting away. Each year, the distance between the Earth and its only companion increases by 3.8 centimetres (1.5 inches).

Scientists know that as the Moon moves farther away, the Earth's rotation speed decreases. This slowdown can be compared to a fast spinning figure skater. When the skater stretches out their arms, their spinning speed slows. Throughout the Earth's and the Moon's long history the drift was not constant. In the past, there must have been no drift, or it was far slower.

The Earth began to form about 4.6 billion years ago. The Moon is thought to be slightly younger, or 4.5 billion years old. If they were ever too close, the Earth's gravitational force would 'rip' the Moon apart. Using the annual 3.8 centimetres (1.5 inches) figure, this would have happened 1.5 billion years ago. As the Moon is 4.5 billion years old, the drift cannot have always existed. When the Moon's drift began is a mystery.

The Belgian university researchers have studied a 70-million-year-old fossil. It was alive when dinosaurs walked on the Earth. The fossil is a large mollusc. Called rudist clams, these marine creatures grew together and formed undersea reefs. They died out, or disappeared, alongside the dinosaurs 65 million years ago. Later, the corals of today took over the rudist clams' reef-building work.

The researchers managed to identify growth lines on the ancient clam's fossilised shell. They are similar to tree rings. These marks can be seen in a tree's trunk after it has been felled, or cut down. Also known as growth rings, they are concentric circles. Each ring, or circle, represents the tree's growth during one year. Experts use the rings to calculate a tree's age. The rings are also



a record of year-by-year changes in the local climate.

The fossilised clam's shell shows growth differences on a tiny scale. They highlight the difference in growth between day and night. During the day, these shells grow more than they do at night. By counting the lines, the researchers discovered that the clam lived in a world where there were 372 days in a year. Therefore, 70 million years ago, a day (or each of the Earth's spins) was 23 hours and 30 minutes long.

The researchers' work will help scientists who are studying the Moon's drift. If the speed of the Earth's spin is known, the scientists can work out the yearly rate of drift. One 70-million-year-old clam fossil will not solve the mystery. However, the study could be repeated on a range of older clam fossils. If this were done, an accurate timeline of the Moon's drift could be calculated. ■

NOWRUZ: START OF SPRING

On 20th March, people living in Iran, and surrounding countries, celebrated the start of the Persian (or Iranian) New Year. In Farsi, or the Persian language, the New Year is called Nowruz (pronounced no-rooz). This word means 'new day'.

Nowadays, most people in Iran follow the Islamic faith. Nowruz dates back over 2,500 years. This was the time of the Persian Empire. Centred on modern-day Iran, it included parts of Turkey, Iraq and Central Asia.

Long ago, most people in this part of the world were Zoroastrians. This religion is based on the teachings of a prophet called Zoroaster. (He is also known as Zarathustra.) It is one of the world's oldest monotheistic faiths. This means that its followers believe in one, or a single, god. Christianity and Islam are other monotheistic religions. Today, there are 2.6 million Zoroastrians. Most live in Iran and India.

Today, at least 300 million people observe the start of the Persian New Year. As well as most Iranians and some Indians, many people in countries such as Turkey, Azerbaijan, Afghanistan, Kazakhstan, Uzbekistan, and Turkmenistan celebrate Nowruz. In Iran, the festivities last for 13 days. The New Year begins on the first day of Farvardin. This is the first month in the Solar Hijri, or Iranian, calendar.

The first day of the Iranian calendar is the spring equinox. (In the



international, or Gregorian, calendar this is either the 20th or 21st March.) In the northern hemisphere, many people say that this day is the start of spring. The name equinox comes from two Latin words. They mean 'equal' and 'night'. There are two equinoxes each year: one in the spring and the other in the autumn. They mark the days on which the hours of darkness and daylight are roughly the same. After the spring equinox, daylight becomes longer and the hours of darkness get shorter.

For most Iranians, Nowruz is the year's most important festival. A few weeks before it begins, people 'spring clean' their homes. This cleaning is more thorough than at other times of the year. Many make or buy a new set of clothes. On one evening just before Nowruz, people light small fires in the streets. Parents and their children jump over the fires. This is known as the Persian Festival of Fire. Jumping over the flames is supposed to take away problems and sickness and replace them with energy and warmth.

After the New Year begins, many people visit their family elders and friends. They make sure that they have plenty of food to share with those who come to see them. Presents are usually exchanged.

One important part of the celebrations is setting a table with a collection of symbolic items. This is known as Haft-Seen, or seven S's. The items are: candles, decorated eggs, water, a goldfish in a bowl, an apple, a mirror, and a bowl of sabzeh. Sabzeh are small wheat or barley seeds that have just sprouted, or begun to grow. In the Persian language, all these items begin with the sound of the letter S.

Each of the seven items is a symbol. For example, the mirror represents the sky, the goldfish, animals, the candles, fire, and the apple, the Earth. The decorated eggs are a symbol of fertility and rebirth after the winter months. The bowl of sabzeh represents plants, new growth and the arrival of spring. Other items such as fresh fruits, garlic, coins, sweet pastries, and a holy book might also be placed on the Haft-Seen table.

The sixth day of the festivities is Zarathustra's birthday. Some special celebrations are held on this date. Sizdah Bedar (or Nature Day) is the 13th day of the New Year. Many Iranians spend this day outdoors. They organise picnics in parks and the countryside. Staying inside on Sizdah Bedar is thought to bring bad luck. This year, Sizdah Bedar was affected by the coronavirus outbreak. Many parks were closed and people were told not to gather in groups.

Some Iranians believe that whatever a person does during the New Year holiday will affect what happens for the rest of the year. Therefore, if a person is kind to everyone they meet at Nowruz, the following year will be good. Yet, if they argue and disagree with others, it will be a bad year. ■

Church window showing Saint Patrick banishing the snakes from Ireland



FEAST OF SAINT PATRICK

Each year, many people in Ireland, and around the world, look forward to 17th March. It is Saint Patrick's Day. In several big cities, such as New York City, there are large Saint Patrick's Day events. For some, the Feast of Saint Patrick is an important religious day on which they attend special church services.

Saint Patrick's Day is one of the Christian calendar's many feast days. This type of feast is not a large meal. A feast day is one that is dedicated to a saint. It is usually the day on which

they died. In the Christian faith, a patron saint is in charge of, or responsible for, something. This could be a country, a city, a group, or an activity, such as mining or travelling.

Saint Patrick is Ireland's main, or primary, patron saint. The island of Ireland is made up of the Republic of Ireland (an independent country, commonly known as Ireland) and Northern Ireland, which is part of the UK.

Even though there are many legends about Saint Patrick, he was a real person. He is believed to have lived between the years 380 and 460, or about 1,600 years ago. It's thought that Patrick was born in Britain. As a young man, he was captured and taken to Ireland as a slave. Eventually, he escaped and returned to Britain. Later, Patrick became a Christian priest. He then decided to return to Ireland. Patrick wanted to teach Christianity to the people living there.

A famous Saint Patrick legend says that he **banished** all snakes from Ireland. Today, a few types of snakes live in the UK. Yet there are none in Ireland. One symbol of Saint Patrick's Day (and Ireland) is the shamrock. Also known as a clover, each stem of this small, low-growing plant has three leaves. Saint Patrick would use the shamrock to explain Christianity. Christians are taught that there is one God, but that he has three parts: the Father (God), the Son (Jesus) and the Holy Spirit. This is known as the Holy Trinity. The three-leaved shamrock is used as a symbol of this belief.

Throughout history, people from Ireland have travelled to and settled in many other countries. This is why Saint Patrick is celebrated in many nations. They include: New Zealand, Australia, the Caribbean, North and South America, and the UK. Tens of thousands of people left Ireland during the 1800s. They hoped to find a better place to live where they could get a job and earn a living. In the 1800s, there were several deadly famines in Ireland. These increased the numbers of people who chose to leave.

The ancestors of millions of Americans and Canadians came from Ireland. There are about 80 million people, in many different countries, of Irish descent. Their ancestors left Ireland between the late 1700s and early 1900s. These people are known as the Irish **Diaspora**. Today, the population of Ireland and Northern Ireland combined is only about 6.6 million. In both, Saint Patrick's Day is a national holiday.

The colour green is associated with Saint Patrick and Ireland. The island of Ireland is often called the Emerald Isle. Emeralds are precious, green-coloured gemstones.

Many cities around the world organise annual St Patrick's Day parades. New York City's is the largest. Other big events are held in London, the capital of the UK, and Sydney, Australia's largest city. In Chicago, in the USA, dye is put in the river that flows through the city. It turns the river bright green. The water in the fountain in front of the White House, in Washington DC, is dyed green on Saint Patrick's Day. The White House is the home of the American president.

This year, nearly all Saint Patrick's Day events were called off. Due to the coronavirus outbreak, most governments ordered them to be cancelled. However, there was one small celebration. It took place 400 kilometres (248 miles) above the Earth. An American astronaut on the International Space Station (ISS) performed it. As the ISS circled the globe, he fixed an Irish flag to an inner window. ■



Irish flag displayed in the International Space Station (Andrew Morgan / NASA)



This year, Manatee **Appreciation** Day was on 25th March. An annual event, it is marked on the last Wednesday of March. Manatees are an endangered species. Everyone is encouraged to appreciate these large sea creatures on this date. This especially applies to people who live near to their habitats.

The first Manatee Appreciation Day was 30 years ago. Its main purpose is to make people more aware of the need to better protect the large **aquatic** mammals. At first, it was aimed at people who live in the American state of Florida. The manatees that are found around Florida's coast also live in the Caribbean. There, they are known as West Indian manatees. Two other species exist. One inhabits the River Amazon and its main tributaries. The other, called the West African manatee, is found along the African continent's western coast.

Manatees are herbivores, or plant-eaters. They feed mainly on underwater seagrasses, algae and weeds. Manatees in Florida are found in rivers, shallow coastal waters, and estuaries. Manatees can live in both fresh water and saltwater. Fully-grown, they are around three metres (ten feet) in length. Manatees can weigh as much as 545 kilograms (1,200 pounds). The creatures are known to eat one-tenth of their body weight within 24 hours.

As mammals, manatees need to come to the surface to breathe. If resting, manatees can stay under the water for about 15 minutes. When swimming, they need to take a breath of air every three or four minutes. Often, the only visible part of a manatee is its nose sticking out of the water. When a manatee breathes in and out, it replaces 90% of the air in its lungs. When humans take a breath, only ten percent of their lung capacity is exchanged.

Even though manatees are large animals, they swim gracefully. The animals are 'powered' by their strong tails. They also have two front flippers. Manatees never leave the water. Females have one calf every two to five years. They help their newborn to the surface to take their first breath of air. The calves can swim when only one hour old. Many manatees live alone. Some swim in pairs or groups of about five animals.

Nowadays, Florida's manatees are protected. This population is thought to number about 6,000. Each year, boat engine propellers kill some manatees. Cold water is another danger. Manatees can migrate over long distances. Yet many stay in the waters around Florida due to their warm temperatures.

Marine scientists say that manatees can die if the surrounding water

becomes too cold. The animals lose fat, which is important for keeping them warm. This problem is known as 'cold stress'. Manatees look as if they have large amounts of **insulating** body fat. This is untrue. Their big bodies are mainly filled with intestines and a large stomach. Manatees prefer water temperatures of at least 20°C (68°F). If they have to travel away from warm water to find food, the animals are more likely to suffer from cold stress.

In Florida, some human developments help manatees. For example, several large factories in Florida use seawater to cool their equipment. This water becomes slightly warmer from being used in this way. Manatee populations often gather around the places where factories pump the warmer water back into rivers.

Christopher Columbus (1451 – 1506) is best known for sailing across the Atlantic Ocean. He set out from Spain 500 years ago. At that time, many sailors believed in mermaids. Legendary figures, they were said to have a woman's upper body and the lower body of a fish. Columbus and his fellow sailors landed on several Caribbean islands. On their return to Spain, they spoke of seeing mermaids swimming in the coastal waters. These 'mermaids' were probably West Indian manatees. ▣

**Editor:
Rebecca
Watson**

Newsademic is published every other week, or fortnightly, throughout the year.

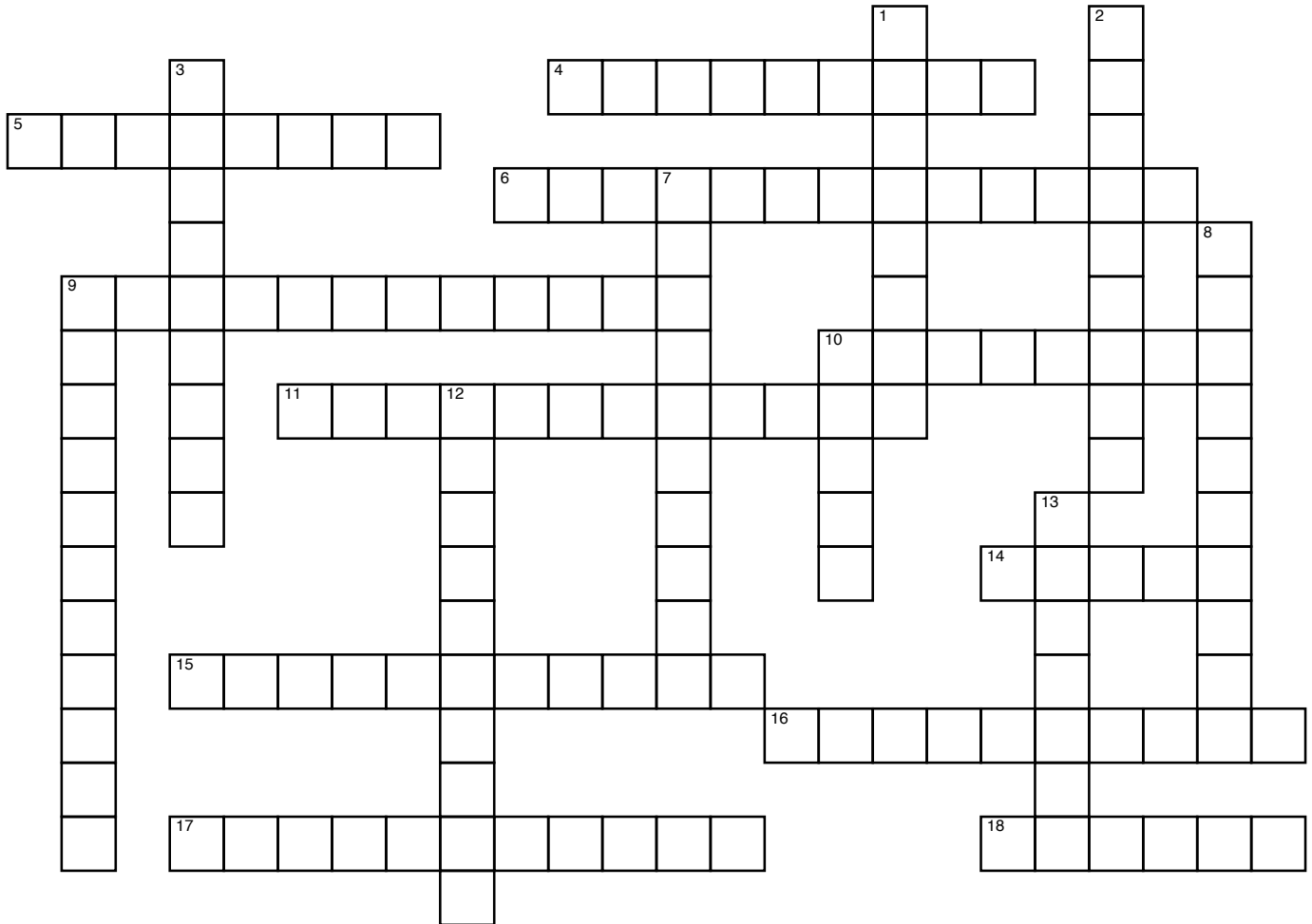
For further details, please visit **www.newsademic.com**

© 2020 Newsademic



ISSUE 376 GLOSSARY PUZZLE

Complete the crossword. The answers are highlighted in orange in the news stories. There are 25 words highlighted and you need 20 of them to complete the crossword. Once you have solved the crossword go to the word search on the next page.



ACROSS

- 4 Verb:** React to someone's action to harm or upset you by doing something to hurt them back
- 5 Noun:** Conversation or lines which are spoken by people in a book, play or film
- 6 Verb:** Treated people differently from others or unfairly
- 9 Noun:** An expression of gratitude
- 10 Noun:** The murder of a large number of people from a particular ethnic group or country
- 11 Adjective:** Large number of items, or particles of a substance, together in one area
- 14 Noun:** A place in which events are held
- 15 Noun Plural:** Characteristics or oversimplified ideas considered to represent a particular kind of person
- 16 Adjective:** Describes something that provides protection from the cold or from noise
- 17 Verb:** Took something away from someone as a punishment
- 18 Verb:** Work something out based on what you already know

DOWN

- 1 Verb:** Ordered to leave a country as a punishment
- 2 Adjective:** About to happen
- 3 Noun:** Disrespect for God or sacred things
- 7 Verb:** Gather together
- 8 Noun:** An unusual or remarkable event or occurrence
- 9 Noun Plural:** Items of great age and value
- 10 Noun:** In biology, a taxonomic group that contains one or more species
- 12 Noun:** An agreement reached by both sides giving up something
- 13 Verb:** Talk to two separate people or groups involved in a disagreement to find a solution to their problems

ISSUE 376 GLOSSARY PUZZLE (CONTINUED)

Find 19 of the 20 crossword answers in the wordsearch. Words can go vertically, horizontally, diagonally and back to front. After finding the 19 words write down the 20th (or missing) word under the puzzle.



GIVE AS A GIFT

*Newsademic has subscribers
in over 100 countries*

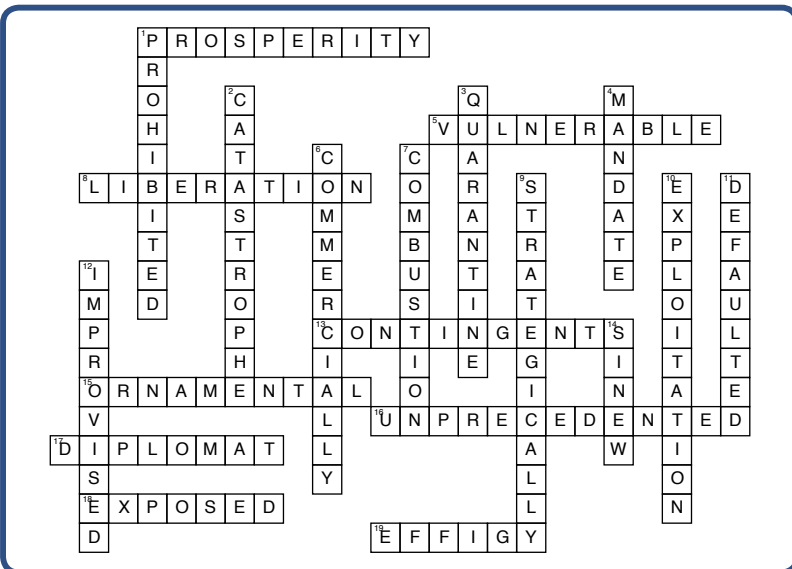
These include

- Schools
- Universities
- Families
 - Adult learning centres
 - Homeschoolers
 - Tutors
- Academies teaching English as a second language (ESL)
 - Students learning English as a second language

You can gift a subscription to a family member, friend or school.

Please e-mail us for full details at
subscriptions@newsademic.com

ISSUE 375 GLOSSARY PUZZLE ANSWERS



MISSING WORD: PROSPERITY