

Hearts and Wings

Issue 2: December 2021



Celebrating the Holiday Season



Written by Aniya, Bee and Naira

The Christmas Fair

A favourite time of year for many, the winter holidays are widely celebrated throughout the world, and the celebrations are as diverse as the people celebrating them. One of the ways our school decided to celebrate the holidays this year was through an event: the Christmas fair. The fair began as an idea by the HPA, and they started the administrative work to prepare for an event that would include the whole school. Later, KS4 and KS5 pupils joined the team preparing for the fair, separating into groups to design stalls, all with different objectives. Some of the stalls were more focused on crafts and services, including cookie decorating, designing Christmas ornaments and applying winter-themed temporary tattoos onto those wanting them. Some were based more on games, like darts, reindeer ring toss and cutting out shapes from dalgona candies.

The magazine team worked on one such stall. Taking inspiration from the classic game 'pin the tail on the donkey', we altered it to be 'pin the heart between the wings' -- a callback to our school logo and the name of our magazine. In preparation for the fair, our team constructed the heart and backboard, with painted-on wings and a guide for where the heart should be placed, and got a blindfold. Coordinating with our teachers,



we finalised details including prizes. We tested the game, to see how difficult it would be, and decided that those who got the heart anywhere within the area it was supposed to be would get one prize, while those who got it perfect would get two prizes.

On the day, a couple of us arrived early at the location -- the Ritz Carlton -- to make sure everything would run smoothly. There were some last-minute setbacks, like forgetting the heart cutout at school, or making signs for our stall at the last minute, but luckily we managed to get



everything done just in time for the start of the fair. We also received some things we could sell at our stall, including ornaments, baked goods and themed soap.

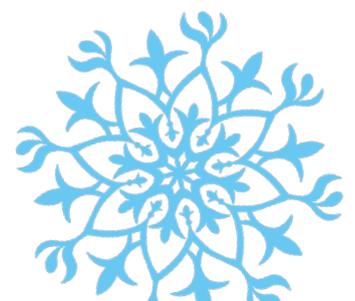
The fair started out pretty slowly; at one o'clock people started to trickle in. Soon, however, the entire room was alive with voices, music and laughs. The stall ran smoothly, and the cycle of explaining the game, putting on the blindfold and awarding prizes carried on for the entire afternoon. During more slow periods, one of us would manage to leave the stall and visit the other attractions the fair had to offer. In between conducting our game, we also sold the goods we had on offer. Our pile of tickets just kept growing, and by the end, we had managed to collect quite a hefty stack.



Performances provided a lively and festive ambience throughout the entire fair. There were dance performances, choirs and acoustic renditions of songs. In the end, there was an auction of Christmas related things, and it helped increase the total amount raised for charity by a considerable margin.



This school fair was a great way to get parents, pupils and staff into a festive mood, being one of the first events many of them would have attended this holiday season. But, this is not the only way to celebrate this time of year, and Christmas is not the only notable holiday. Being an international school, it is important to be aware of the variety of celebrations and events our global community has to offer during the winter months.



The Christmas Fair in Photos



Winter Holiday Celebrations Around the World

Christmas

December 25th

Widely celebrated around the world, Christmas is the Christian holiday celebrating the birth of Jesus Christ.

Despite the common belief that the holiday celebrates Christ's birth, the Bible makes no mention of a specific date, and historians believe that Christ may have actually been born in spring. It is believed that the date was later chosen by Pope Julius I in an effort to combine Christian faith with the pagan festival *Saturnalia*. This ancient Roman holiday was a tribute to the god of agriculture, Saturn. Derived from earlier rituals around the winter solstice, the festival employed many similar practices, including sacrificial offerings to the gods. The Roman celebration of this holiday is much like what we imagine Christmas celebrations to be; people decorated their homes with wreaths, sang, danced, gave each other gifts, lit candles, and feasted all through the day. However, there were some differences too, as the pagan festival lasted a whole week; and the *Saturnalicus princeps*, a mock king, was chosen.



Saturnalia (1783), Antoine Callet

Despite its association with religion, many places around the world have adopted a secular celebration of the holiday. In Japan, for example, the holiday has little to do with religion, but is still celebrated by many. One common practice is 'Kentucky for Christmas', an idea developed in the 1970s by Takeshi Okawara, who was the KFC store manager at the time. The tradition involves families gathering and sharing a meal from the fast food chain. Due to differences in geographical location, the ways in which the holiday is celebrated differs too. Since the holiday falls during the summer in Australia, it is common for people to go to the beach or go camping, and some people decorate a *Christmas Bush* rather than the tree popular in more snowy areas.

The figure most commonly associated with Christmas is none other than Santa Claus (though you may know him by one of his many other names). Originating from the historical figure St. Nicholas, who had been famed for his kindness and generosity, the figure only started gaining popularity in the US in the late 18th century. The name

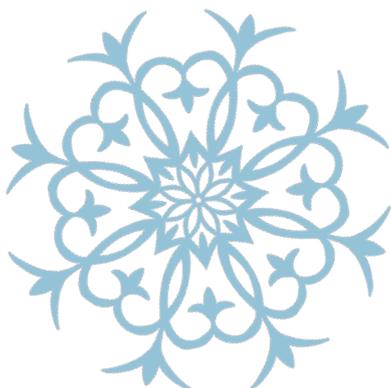
Santa Claus derives from the shortened Dutch version of the patron saint, Sinter Klaas. With the help of writers such as Washington Irving, the figure became increasingly popular though his defining characteristics were not yet ascertained. With the publication of Thomas Moore's *'Twas The Night Before Christmas*, public perception of the figure became of a 'right jolly old elf', an image that heavily inspired Thomas Nast's depiction of him. This image was further popularised by Coca-Cola, which utilised Santa Claus in their ad campaign during the 1930s.



Merry Old Santa Claus (1863), Thomas Nast



Coca-Cola ad (1931)



Another popular figure in Christmas lore is *Krampus*. With a name derived from the German word *krampen*, meaning 'claw', the creature is fittingly depicted as a large, horned, and clawed demon-like figure. Often portrayed as the opposite to St. Nicholas, who rewards children for being good, the Krampus punishes them for bad behaviour. These punishments are said to be somewhere between leaving the children a pile of sticks, chasing and hitting them with these same sticks, eating them, and taking them to hell. With a basis in paganism, the demonic figure is the son of Hel, the Norse god of the underworld. During the late 20th century, the *Krampuslauf*, or 'Krampus Run', became popular in Germany and Austria. In this tradition, people dress up as Krampus and parade around the streets, frightening and even chasing after onlookers. Some have noted that the rising popularity of the figure, not only in the aforementioned countries, but internationally, may have been a response to the rising commercialisation of Christmas.



Krampus, depicted on an Austrian postcard (1910)

Kwanzaa

December 26th – January 1st



Traditional Kwanzaa celebration

Created in 1966, following the Watts riots in Los Angeles, Kwanzaa is a Pan-African celebration designed to bring together the African-American community. Dr Maulana Karenga, the creator of the holiday, combined aspects of a few different African harvest celebrations, and the name of the holiday comes from the Swahili phrase *matunda ya kwanza*, meaning 'first fruits'. Specific traditions vary between households, but singing, dancing, storytelling and poetry reading are common practices.

Celebrated over the period of a week, Kwanzaa centres around seven principles, one for each day of the festivities. Each night, a candle on the *kinara*, the traditional candle holder, is lit, and one of the principles is discussed. These principles are: unity (*umoja*), self-determination (*kujichagulia*), collective responsibility (*ujima*), cooperative economics (*ujamaa*), purpose (*nia*), creativity (*kuumba*), and faith (*imani*). On the final day of the holiday, families join together for *karamu*, a traditional feast.



New Year

December 31st – January 1st

The most popular winter holiday in Kazakhstan is probably New Year. Here the holiday is celebrated by decorating trees, setting off fireworks, and counting down the seconds to midnight; children get visits from *Ayaz Ata*, and receive gifts. Many other countries celebrate similarly, with firework displays and champagne.



New Year fireworks in Bratislava

New Year's celebrations vary in magnitude and traditions from place to place, with many different cultures celebrating the holiday in different ways. Though celebrated in March, the Kazakh holiday *Nauryz* is itself a celebration of the New Year; of welcoming spring and new beginnings. China celebrates the New Year according to the lunar calendar, falling on February 1st in 2022.

In Japan *Omisoka* is 'the last day of the year'. During the last day of December, bells in temples across the country are struck 108 times, thus ridding people of the 108 *bonnos*, earthly human desires, believed to cause earthly suffering. Additionally, people engage in *susuharai*, cleaning and dusting their homes to start the new year with a fresh, clean slate. *Toshikoshi-soba*, long, thin noodles made from buckwheat flour, are eaten. This action symbolises wishing for a long life,



Tolling of the bell during Omisoka

like the noodles, and casting off bad luck as *soba* is cut.

As we are approaching this upcoming new year, you may have questions about what to expect. Despite further development of COVID-19 (suggesting that next year will also be a tough year for everyone) it is important to highlight some of the exciting events occurring next year; such as the Winter Olympics, and the Commonwealth games. Hopefully, the year of the Tiger in accordance with the 12 Chinese zodiac animals, will bring about a positive change (as its symbol suggests).

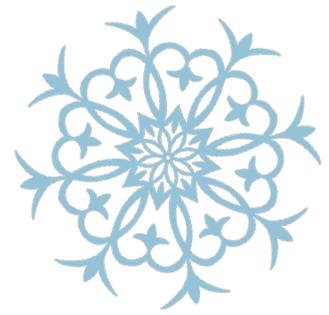


Year of the Tiger

Though these are not all the winter holidays celebrated around the world, this is a good example of the wide range of traditions that take place during the winter season. Whatever you celebrate, there is much to enjoy during this time of year! Happy holidays!



Anti-Bullying Week at Haileybury Astana



Written by Begim-Ana



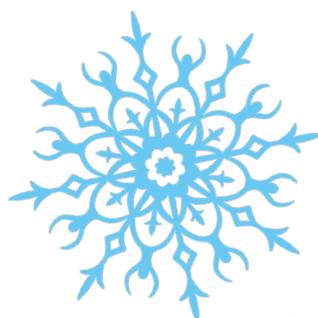
Raising awareness about bullying amongst children and young people is crucial to preventing serious psychological effects bullying can have on a child's mental health. Thus, in the third week of November, Haileybury held an Anti-Bullying Week. The week began with a very exciting odd-socks day for junior school, meant to celebrate individuality and encourage self-expression. In 2020 over 5 million children got involved in wearing oddly matched socks.

Bullying is a huge world-wide issue, as well as a national one. According to a study by a Kazakh scientist, every fifth Kazakh teenager is either a bully or victim every month. This included not only in-school bullying but also cyber-bullying. The statistics also show that schools in urban areas have higher rates of bullying than those located in rural areas.

The main theme of this year's anti-bullying week was "One Kind Word A Day". This theme focuses on the communication of kind phrases amongst each other. This was a pleasant exchange of compliments and meaningful conversations that had a big impact on our days. Personally, hearing a kind word a day felt very rewarding and my days felt much easier. When interviewing my fellow classmate, Tomiris, she expressed her gratitude for this theme, and understood the significance of kind words, reflecting that we should exchange these words everyday as part of our daily routines.

On a creative note, a couple of the art students organised an anti-bullying campaign on Instagram, wherein they showcased the consequences bullying can have on a student's mental health, portraying being overwhelmed and the feeling of being trapped, by illustrating hateful comments on the faces of students and having their mouths' shut. Showcasing the importance of raising awareness, and consequently empowering those who have experienced bullying, to speak out, by helping them feel less isolated. This expression of art highlighting social issues, was highly praised on the school's instagram post, with commentators agreeing and applauding the school's participation in anti-bullying campaigns.

Even though Anti-Bullying Week is over, we urge pupils to continuously contribute to the effort of raising awareness and bringing an end to bullying, by saying a kind word a day, or by simply talking to fellow classmates. If students ever feel as though they need someone to talk to, the school has a counselor who is always ready to listen.



Bacteria, smell and tears

Written by Alima

As his friend and classmate, I would occasionally see Serdar staring strenuously at his screen and browsing online stores in Year 12. One day, I asked him what he was doing. He looked away from the screen, laughed and told me: "I am searching for bacteria".

Frankly, this only made me more confused. I asked him to explain, and so he did.

The bacteria he was looking for were *Escherichia coli* and *Staphylococcus albus*, the species necessary for him to complete his Extended Essay. The Extended Essay is an extensive, independent piece of research work that all students aiming for the IB Diploma have to fulfill. Serdar chose to complete his EE in Biology.

"Basically, my research [topic] was to figure out whether onion and garlic are actually effective at killing these bacterias," he explained.

Serdar examined the extent to which these samples of spices kill two common bacteria species present in our food. The global significance and value of his research are clear but when I asked him to retell something interesting from his investigation, he went in a direction I didn't expect.

"My EE was interesting in that my investigation was both smelly and sad because onions, garlic, and bacteria nutrition agar stink," he revealed. "And, it's sad because I cried while cutting and slicing onions to produce the extract".

The results of his EE showed garlic being successful at tackling both bacteria, while onion was completely ineffective against *E. coli* and only effective for *S. albus*. His results supported his prior hypothesis.

Something that Serdar made explicitly clear was the connection of this Extended Essay to his dream occupation. "Well, I am planning to be a biotechnologist, therefore I will deal with bacteria in any case, because they play a significant role in genetic modification and pharmaceuticals," he said. "I wanted to know what it really means to investigate bacteria, since my future profession is quite related to this topic."

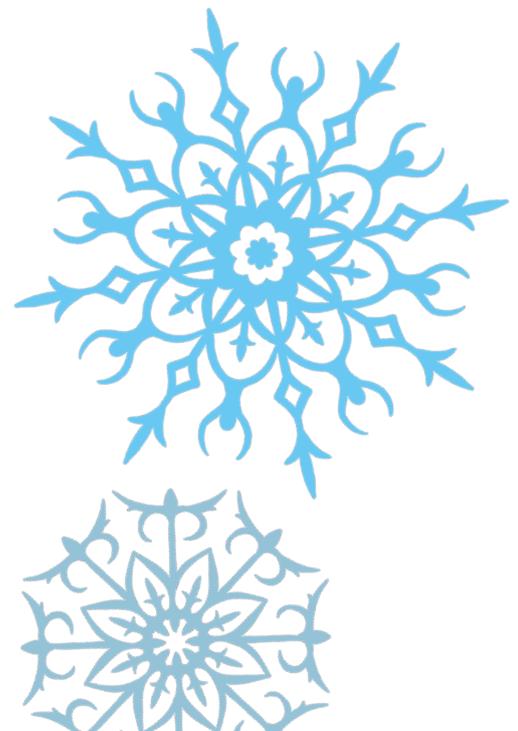
If I know anything for definite, it is that Serdar's commitment to his dream profession showed in his dedication to the Extended Essay. "I had to do 2 preliminary tests, and in total, it took about 10 hours to prepare the equipment, materials and cultivation of bacteria", "I even had to miss my lunch two times," he admitted.

Another difficulty with the investigation was the need to ensure a sterile environment, in order to minimise contamination from external microorganisms from the laboratory. "To avoid contamination, hands, equipment, and work surfaces must be sterile, meaning they must be free of living organisms," he explained. "I had to rigorously wipe the table with disinfectant and wear gloves every time when I was working with bacteria."

Despite the challenges though, the experience was rewarding. "I gained an understanding that it is crucial to arrange lab time in order to maintain track of the overall project timetable and goals, as well as the steps required to attain them," he revealed.

My final question was what Serdar wanted other students in the school to know about his work. "I suggest doing these kinds of experiments for future IB students who want to be a specialist on the sphere of biotechnology and microbiology, because you gain base knowledge in these disciplines," he replied.

Nevertheless, something that he repeatedly emphasised and you have to keep in mind is that bacteria are not cooperative creatures. "You have to ensure that everything in your experiment is perfectly arranged, including temperature and sterility," he warned.



Climate Change Isn't Fashionable



Written by Aniya

Since the industrial revolution, the concentration of greenhouse gases in the atmosphere has begun increasing, skyrocketing in the last few decades. These gases have always been present on Earth, in fact, they are vital in maintaining a livable temperature on Earth. However, the overconsumption of fossil fuels has led to a concentration of greenhouse gases so high, that it is making the Earth too warm, leading to a whole host of problems.

How does the greenhouse effect work?

Carbon dioxide and water vapour are among the most abundant and significant greenhouse gases in the atmosphere, with others like methane and nitrogen oxide playing some role in the warming effect. If you have ever warmed yourself up by getting under a blanket, you've experienced something similar to the greenhouse effect. The greenhouse gases act like the fibres in the blanket, absorbing the heat radiating from your body and passing it to other fibres. Heat reaches the Earth in the form of shortwave radiation from the sun. The Earth's surface heats up due to this heat radiation, and then the Earth itself gives out radiation, longwave radiation, and this is the type absorbed by greenhouse gases. They trap the warmth within the atmosphere, preventing all of it from going back into space. Some gases are

better at absorbing this radiation, making them more impactful.

Textiles in history



Textiles were the leading industry in the industrial revolution; today worth over 1000 billion US dollars. European countries underwent industrialisation first, and textiles were on the frontier of innovation. Machinery was invented to automate production, decrease human labour and increase productivity, all driven by steam power. Steam power requires the burning of fossil fuels to heat water and turn it into steam to turn turbines. Transportation of these textiles also required vast amounts of coal. All of this culminates in the consequences of textiles today, the textile and apparel industry is responsible for more than 10% of global carbon emissions, and moreover, for one-fifth of the world's industrial water pollution.



Textiles today

Today, the machinery required to make clothes, all operates on energy, energy more often than not, obtained unsustainably. But there is an even bigger threat, synthetic fibres, overfarming of natural fibres and overconsumption. Most fashion companies today are what are called "fast fashion", focused mainly on producing garments as quickly and cheaply as possible. These brands have about 52 micro-seasons a year, meaning a new collection comes out every week.



This is all done to keep up with the latest trends and appeal to a younger demographic, people like us. But, you can see how this sheer volume of clothing production requires a lot of resources, and to do this as cheaply as possible, companies use oil and natural gas based fabrics, like polyester, to create clothing. This not only puts pressure on the fossil fuel reserves of our planet, but also is one of the causes of microplastics in our soils and oceans. A good amount of these

clothes are never sold and are too outdated in the eyes of the company to be sold, so they are sent to a landfill, where they are either burned or where they will remain for centuries, never having been worn.



Another major issue related to textiles is the depletion of ozone. This often gets confused with greenhouse gases, but it is another issue entirely. The ozone layer protects the Earth's surface from harmful UV radiation. Without it, humans would be more prone to skin cancer, have impaired immune systems, develop cataracts, among a host of other problems. A solvent called carbon tetrachloride has long been used in this industry as a powerful stain remover, but it is an ozone-depleting substance. It can cause the ozone layer to develop 'holes' allowing dangerous UV radiation from the sun to reach the Earth's surface. However, this topic has a lot of other nuances which is worth looking into.

The future and sustainability

So how can we move towards sustainability in textiles and apparel? To transform the industry, the change has to come from companies. It's not enough to have sustainability pledges that will be achieved by a certain year or have one collection that is labelled as ecologically friendly, the entire system and industry need reformation. A good first step would be to slow down the production of clothes, and sell off as many clothes as possible, and if any remain, to donate them instead of sending them to landfills. Instead of always following trends, companies need to stock their stores with higher quality basic pieces, which will last consumers years, if not a lifetime. Even raising awareness through established names in the fashion world can drive change. Even here in Kazakhstan, Kazakhstan Fashion Week has started placing emphasis on reducing textile waste, reusing fabric scraps to make new garments and has started working with up and coming brands who focus on more sustainable production.

Consumers can also start changing their habits. Buying clothes only when you feel they are necessary, taking good care of the clothes you already have, buying second-hand apparel and buying from sustainable, "slow fashion", brands are all ways each individual can start making change. Instead of throwing out your clothes, look up clothes donation spots near you, or reuse the fabric as rags, towels, or even get crafty and make an entirely new garment (for example, using patchwork). Some may dismiss greenhouse gas emissions as not a threat, but the alarming rate at

which concentrations are increasing affect us, and all other organisms on this planet, both on land and water.



If you find the topic of climate conservation interesting, I encourage you to join the Eco Warriors club next term, even as a leader if you are an IB student. If you would like to do some further reading, some good resources are below:

- <https://courses.lumenlearning.com/boundless-worldhistory/chapter/textile-manufacturing/>
- <https://www.nrdc.org/issues/encourage-textile-manufacturers-reduce-pollution>
- <https://www.belfasttelegraph.co.uk/life/fashion-beauty/fast-fashion-may-be-in-vogue-but-what-happens-to-all-the-clothes-left-on-the-rack-39011024.html>
- http://changingmarkets.org/wp-content/uploads/2021/01/FOS-SIL-FASHION_Web-compressed.pdf
- <https://kfw.kz/page/eco-talks>
"Next In Fashion" on Netflix, Episode 9



The HASTMUN 2021 Journey

Written by Korkem-Ay



It is safe to say that the long awaited Haileybury Astana Model United Nations was an overwhelming success. The main theme of the MUN was “Confronting the Crisis for a Renewal of Hope”, and included 4 committees of UNHCR, CPD, UNCSTD and DISEC, each with their own motions relevant to the issues that plague the world today.

The first day started off more slowly but gained momentum as the time went on. The opening ceremony featured an esteemed guest, Dr Caroline Clarival the representative of World Health Organisation in Kazakhstan that shared her powerful story of affecting and being affected by people’s lives, which allowed her to become the person she is today. It helped solidify the cause of this MUN, which was to inspire the younger generation to take on a more active role in helping the current world become a welcoming place that flourished without discrimination, egoistical self-interest and the ostracising of minority groups.

The rest of the day focused significantly on moderated debates, that were submitted by the delegates themselves. These debates explored the respective objectives of each committee and gave the delegates time to ponder about the solutions to their motions and also gauge the stance of other delegates in the room. As the Under-Secretary General for DISEC my observation was that a majority of the delegates felt reserved and were reluctant to debate and rebut the ideas of others, however, towards the second session of the day many embraced the newly warmed atmospheres of the committee and gained the confidence they needed in order to commence with fruitful discussions. It was truly wonderful to see the sense of kinship flourish between the delegates, which led to the creation of inside jokes and compliments given in the chat.

The second day was arguably more arduous as it consisted of writing draft resolution papers, which are documents proposing the solutions to the issues that

were brought up during the first day. The resolution papers are the end goals of all MUNs and a committee cannot officially be closed if no resolution is passed. The delegates divided into blocks based on their countries opinions and got to writing. All worked tirelessly in order to provide detailed answers that could gain the favour of the house, while still keeping to the format and to the ideals of their own country. It was during the second day that the Chairs overlooking the committees were finalising their nominations for the awards of Best Delegate, Honourable Mention and Best Position Paper.

The aforementioned awards were announced during the closing ceremony on the third day of the MUN after the resolutions were debated upon. We were incredibly proud to see Haileybury Astana pupils, Zere Zaiten and Safiya Salikbayeva receive delegate awards while Ayaleem Tukentegi succeeded as Best Chair. All the Haileybury students that participated in the MUN represented the school beautifully with their professionalism and dedication to their cause and deserve to be congratulated for the commendable effort that they put into their participation.

It was melancholic saying good-bye, but every MUN is a unique and unforgettable experience and this one was phenomenal all because of the IB Haileybury Astana Pupils that formed an executive team and alongside the support of the staff facilitated its success. More information on the past HASTMUN could be found on the “haileyburyastana_mun” instagram that provides a more in depth journey to the success stories and inner workings of HASTMUN 2021.

World News

Compiled by Korkem-Ay

Archeologist Uncovered Mummies with Golden Tongues

It's no secret that untold treasure lies beneath the city of El-Bahnasa, Egypt. An archaeological mission from Spain has now excavated the site for 30 years and found many tombs from different dynasties and papyrus texts that still puzzle experts. And last week, they unearthed two 2,500-year-old mummies with golden tongues.

According to The Times of Israel, the two mummies, a man and a woman, were each laid to rest in a limestone sarcophagus in what was then called Oxyrhynchus. They died around 525 B.C. at the tail-end of the Saite dynasty, which was the last time native Egyptians reigned over their kingdom before the Persian conquest in the 6th century B.C.

The Ministry of Tourism and Antiquities said golden tongues allowed the dead to speak to Osiris, the god of the underworld who judged travelers to the afterlife. While the 402 funerary figurines, amulets, and scarabs found within the tombs were also stunning, the state of the male sarcophagus captivated experts the most.

"This is very important because it's rare to find a tomb that is totally sealed," said excavation director Esther Pons Melado on Sunday.



One of the 2,500-year-old limestone sarcophagi discovered inside the tomb.

According to Egypt Today, the Oxyrhynchus dig site is situated in the Minya Governorate about 100 miles from the capital of Cairo. Although the woman's tomb appeared to have been previously opened, said Secretary-General of the Supreme Council of Antiquities Mustafa Waziri, the man's tomb and sarcophagus were entirely untouched.

When the team opened the unsealed tomb for the first in history, researchers found an exceptionally well-preserved male mummy and four canopic jars that were used to retain its internal organs. It also held hundreds of figurines made of an earthenware called faience, as well as one scarab and various amulets.

"One of the pots contained 402 Ushabti figurines made of faience, a set of small amulets and green beads," said Hassan Amer, a professor in the Department of Greco-Roman Archaeology at Cairo University who co-directed the excavations.

The woman's sarcophagus had been unsealed in ancient times and plundered, although archaeologists did recover a well-preserved stone amulet and an "excellent quality headrest." Both limestone structures had been situated beside each other, with the golden tongues still found inside the mouths of one well-preserved mummy and another that had largely decayed.

Researchers also found three other golden tongues outside the tombs that dated to Ancient Egypt's Roman period, which began in 30 B.C.

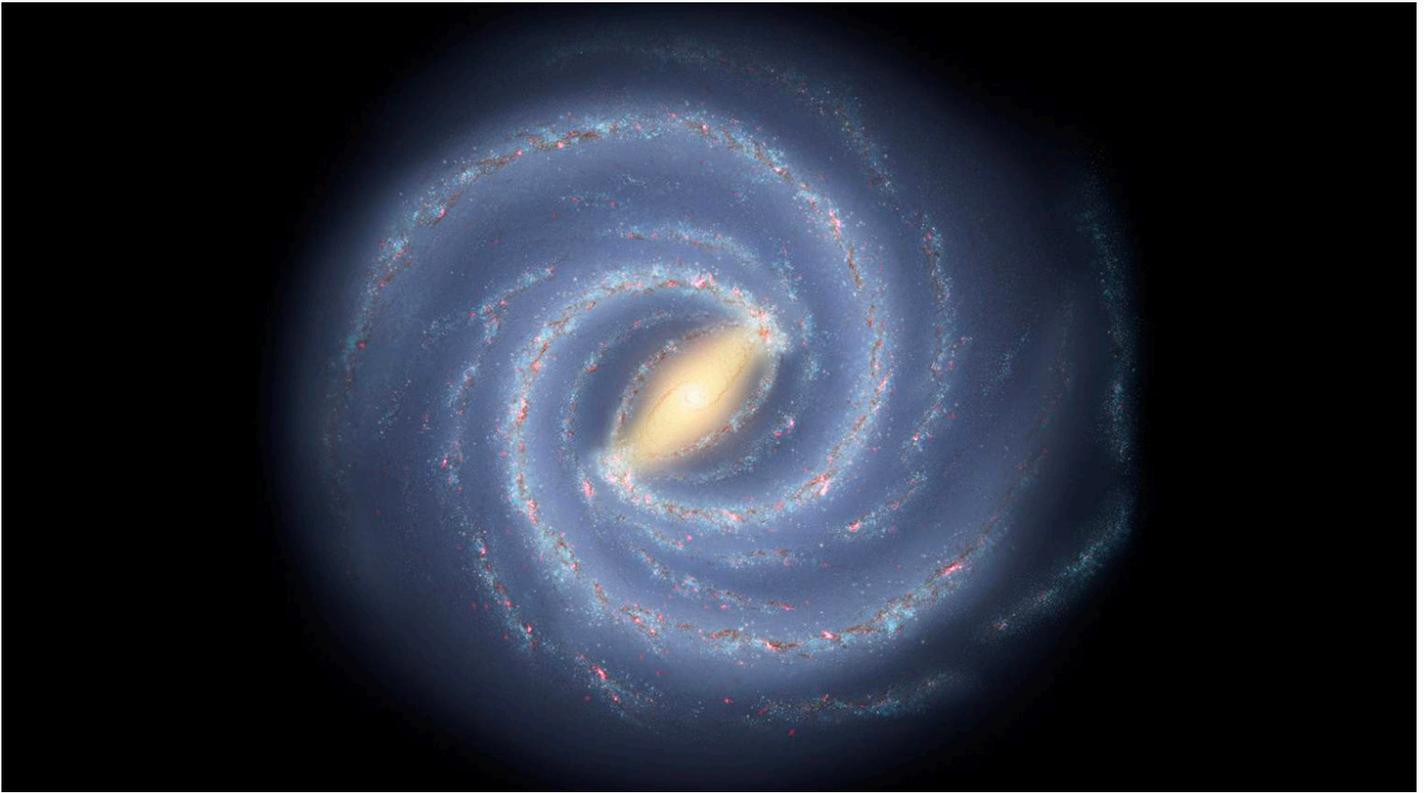


The international research team consisted of 14 experts from Egypt, Italy, Spain, France, and the United States.

Ultimately, the team found the sarcophagi themselves most remarkable of all. While the rarity of uncovering an unsealed coffin from Ancient Egypt was stunning on its own merits, the fact that the Saite dynasty tombs architecturally differed from any previously found at El-Bahnasa made this dig an invaluable success.

source: <https://allthatsinteresting.com/oxyrhynchus-mummies-golden-tongues>

Astronomers have found the Milky Way's first known 'feather'



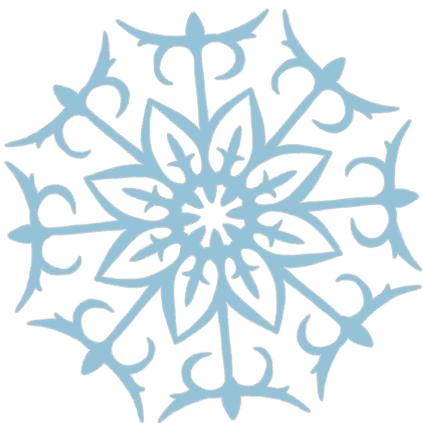
The Milky Way's spiral arms, shown in this artist's illustration, may have feathery bridges of gas connecting them, a new study suggests.

A long, thin filament of cold, dense gas extends jauntily from the galactic center, connecting two of the galaxy's spiral arms, astronomers report November 11 in the *Astrophysical Journal Letters*. This is the first time that such a structure, which looks like the barb of a feather fanning off the central quill, has been spotted in the Milky Way.

The team that discovered our galaxy's feather named it the Gangotri wave, after the glacier that is the source of India's longest river, the Ganges. In Hindi and other Indian languages, the Milky Way is called Akasha Ganga, "the river Ganga in the sky," says astrophysicist Veena V.S. of the University of Cologne in Germany. She and colleagues found the Gangotri wave by looking for clouds of cold carbon monoxide gas, which is dense and easy to trace, in data from the APEX telescope in San Pedro de Atacama, Chile. The structure stretches 6,000 to 13,000 light-years from the Norma arm of the Milky Way to a minor arm near the galactic center called the 3-kiloparsec arm. So far, all other known gas tendrils in the Milky Way align with the spiral arms.

The Gangotri wave has another unusual feature: waviness. The filament appears to wobble up and down like a sine wave over the course of thousands of light-years. Astronomers aren't sure what could cause that, Veena says. Other galaxies have gaseous plumage, but when it comes to the Milky Way, "it's very, very difficult" to map the galaxy's structure from the inside out, she says. She hopes to find more galactic feathers and other bits of our galaxy's structure. "One by one, we'll be able to map the Milky Way."

source: <https://www.sciencenews.org/article/astronomy-milky-way-galaxy-feather-gas-spiral-arms-gangotri-wave>



After a 52-year chase, authorities ID the man behind an infamous Ohio bank heist



Theodore John Conrad was only 20 years old when he robbed the Society National Bank in Cleveland on July 11, 1969, according to the U.S. Marshals Service.

After more than 50 years, the man responsible for one of the most notorious bank robberies in Ohio history has been identified.

Theodore John Conrad was only 20 years old when he robbed the Society National Bank in Cleveland on July 11, 1969, according to the U.S. Marshals Service. Conrad worked as a teller at the bank, and on the day of the robbery he stashed \$215,000 — or around \$1.7 million in 2021 dollars — in a paper bag and simply walked out the door. Because the robbery happened on a Friday, the bank was not aware of anything amiss until the following Monday morning, when they checked the vault and found the money gone, the Marshals said.

Conrad, unsurprisingly, did not show up for work that Monday. He had a two-day head-start on law enforcement, and managed to avoid capture for 52 years.

It wasn't until earlier this month that U.S. Marshals based in Cleveland discovered that a man named Thomas Randeke was, in fact, Conrad. Randeke lived in Lynnfield, Mass., and had been living in a suburban neighborhood since the 1970s until he died of lung cancer in May at the age of 71. The Marshals said they made the discovery after matching paperwork that Conrad had filled out in the 1960s with documents that Randeke had filled out later in life — including a 2014 filing for bankruptcy.

According to the Marshals, Conrad's heist was inspired in part by the 1968 Steve McQueen film *The Thomas Crown Affair*. The movie follows a high-powered businessman who pulls off a bank heist for the fun of it. Conrad watched the movie a half dozen times the year before the robbery, according to authorities. After watching the movie, he told friends that he believed it would be easy to rob a bank and that he planned to do so.

His friends never believed him at the time, according to Cleveland.com. One friend, Russell Metcalf, had even had lunch with Conrad on the day of the robbery.

"I had no idea," Metcalf told the outlet. "He always said the security was lax. He said it wouldn't be hard."

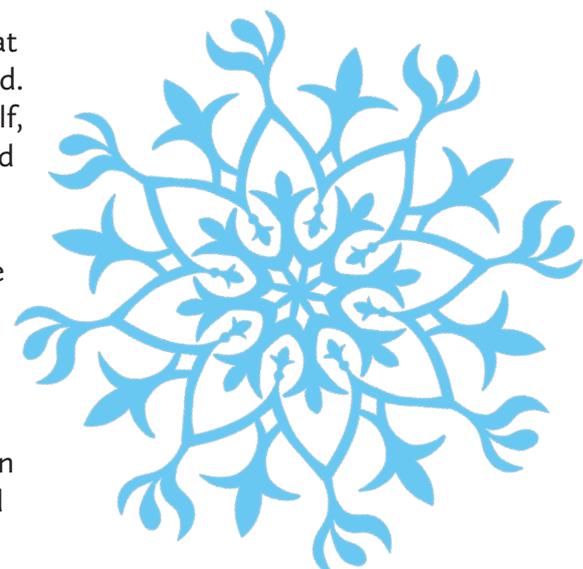
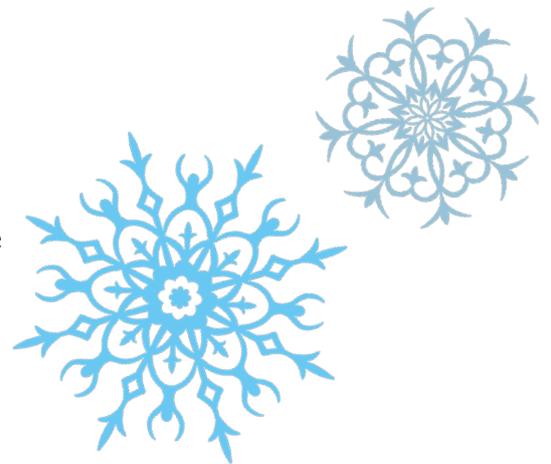
In Massachusetts, Conrad began a new life as a car salesman and taught golf lessons, according

to the Cleveland.com report. He also got married and had a child.

Solving the case provided closure to Peter J. Elliott, a U.S. Marshal whose father, John K. Elliott, also worked on the investigation, according to a statement from the Marshal's service.

"I hope my father is resting a little easier today knowing his investigation and his United States Marshals Service brought closure to this decades-long mystery," Elliott said. "Everything in real life doesn't always end like in the movies."

source: <https://www.npr.org/2021/11/14/1055659885/cleveland-ohio-bank-robber-identified-marshals-service>





Haileybury Astana

Featuring contributions from

Writers:

*Alima
Aniya
Begim-Ana
Korkem-Ay
Naira*

Editor:

Aniya

Cover Illustration:

Anara

Photography:

*Maria
Merey T*

Design:

Naira

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Serdar

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Mr Bell

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Play a wordsearch themed after this issue of *Hearts and Wings*:



For more information contact

Aniya
Editor-in-Chief
aboranbay@haileyburyastana.kz

Mr Bell
Teacher Supervisor
d.bell@haileyburyastana.kz