Hearts and Wings

Mental Health in Haileybury Astana



Written by Naira



The COVID-19 pandemic has impacted us all greatly. Having spent the majority of the last two years in lockdown, engaging in online learning, we are now forced to reckon with the effects these events have had on us, both as individuals and as a society.

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Though restrictions have loosened here in Nur-sultan, COVID continues to be a problem elsewhere, and even we have not entirely moved past the pandemic as mask mandates and health regulations are still in place. One aspect of our lives most impacted by this was mental health and social wellbeing. With the start of the new academic year at Haileybury Astana, the focus is on this very topic. Open discussion about it is often stigmatised and seen as taboo, but the goal is to make it understood and accessible. The school has started multiple initiatives in regards to this, including the Clothesline Project and the addition of a full-time counsellor on campus.

The Clothesline Project



Tuesday 28th September

Originally created in 1990 by the Cape Cod Women's Agenda the Clothesline Project started as a way to address violence against women. However, it has now grown to encompass a wide range of social issues and has been done globally in schools, universities, and public spaces, becoming an international phenomenon. Our school is participating in it this year, with the focus being on none other than mental health. Not only is the project bringing the school together but also establishing a connection with the greater world around us, making us part of a global community set on addressing and bringing to attention such issues.









Organised by Mrs Fraser and Mr Madden, the Clothesline Project relies on student participation. It has been requested pupils bring in t-shirts which can then be painted to display a saying or image relating to mental health. The goal is for these t-shirts to serve as an emotional and creative outlet for pupils, to help students support each other, as well as gain agency and empowerment through sharing of wisdom they have acquired. It aims to build a community that recognises people's struggles with mental health as valid and consists of accepting individuals who support one another. Data shows that approximately 1 in 5 children and adolescents struggle with some mental health or social wellbeing issue during their school years, and most people know someone who struggles with one. In an interview in regard to this, Mr Madden has said "through the making of the t-shirts people can come to realise that even if they

themselves do not struggle with such an issue they can still show support, care and compassion towards people that do."

Though it has always existed, mental health is in some regard, a contemporary issue, as it is being discussed more in the media and awareness of its importance is growing. It is a particularly prevalent topic in schools, where young people are going through changes and transitions, which may be hard to deal with, especially without a proper support system in place. The issue is an important one to address as a collective, as well as on an individual basis. The project, through the assembly of a community, creates this sense of "spirit", being part of something bigger than oneself, something of importance. "There is transformation and power in that." Art has the power to bring people together, connect them, and the clothesline is a powerful medium through which to communicate all this.

Our School Counsellor: Mrs Bakhyt Adrysheva

Wednesday 29th September



When she began working in Haileybury Astana a few years ago, Mrs Bakhyt Adrysheva was here part-time as a school counsellor, coming in a few times a week to help and support pupils. Now that has changed, as she is working full-time from the beginning of this academic year.

Developing an interest in psychology from a young age, Mrs Adrysheva sought to understand the human psyche better. Getting to know people, communicating with them, is of great importance to humans, as we are indeed, by nature, social beings; not only does socialisation help understand those around us and their needs, but also develop a deeper understanding of the self. Having always enjoyed helping people, and being good at it, the two interests came together, resulting in her work as a psychologist. Earning a master's degree in the subject, she taught it at university and went on to start her own private practice before joining Haileybury.

Working with children came as a natural decision to her, as she herself is a mother. She is aware of the difficulties both children and parents face and through her work she hopes to alleviate some of the stress they face. Seeing the changes counselling sessions have on pupils is rewarding. Occasionally, she will ask people to rate how they are feeling at the beginning of a session and once again at the end, on a scale from 1-10. Almost always, an improvement is made, a testament to the effect even a single session can have on one's wellbeing.

Such counselling sessions look different for each pupil. However, the first and foremost thing that a counsellor does is listen to people. Through gaining a full understanding of the issue at hand, solutions can be developed more effectively to deal with the root cause and not just a symptom. What is done in a session also depends greatly on age. Younger pupils tend to engage in more tactile activities, such as art therapy or clay modelling as well as role-playing and games. With senior school pupils, sessions mostly consist of discussion and brainstorming of ideas, problem-solving activities, and stress relief methods, which may include breathing exercises and meditation. Each individual requires a different approach and the same formulaic structure will not work for everyone, so what happens in each session varies and is highly subjective.

Recently, COVID-19 has had a major impact on people's mental health. Five times as many people as before have sought professional help in regards to mental wellbeing as a result of it. Economic impacts have placed strain upon families and household incomes took a hit as people were fired or laid off. People were not prepared for the lockdown, there was no experience with such a situation in recent history. It made fear constant as we dealt with unknown after unknown. Stress due to uncertainty of its duration has put undue strain on everyone's mental health. Everything changed within a short timespan; suddenly families were spending all day, every day, together, and cracks grew and became more evident as time progressed. Major fear for health and safety, for people's lives, arose as the pandemic has had deadly impacts around the globe.

In coping with this change, it is first important to recognise that things have changed. Both individual lives and society as a whole have seen paradigm shifts. Awareness of this is the first step towards making a positive difference.

Routine is important. This is why Mrs Adrysheva often asks: "when do you go to sleep and when do you wake up?" Studies have shown that length and quality of sleep have a direct impact on physical and mental health, linking sleep deprivation to, most commonly, short-term cognitive impairment, decline in immunity, and increase in negative moods. A balanced and nutritious diet is just as important, as is physical activity. The WHO recommends at least 150 minutes of moderate-intensity physical

activity, and 75 minutes of vigorous-intensity physical activity throughout a week. Focusing on these key, routine elements that make up the days can help cope in difficult times, particularly in relation to the pandemic.

Socialisation is inherent in people, especially children as they need it to develop and grow. Isolation is the antithesis of that. "Life consists of contact," as Mrs Adrysheva put it, we are constantly engaging in it, in one form or another. Maintaining relationships with people is significant, and should not be neglected. Minimising stress through stress-relieving activities and socialising with friends and family also make a pivotal difference. In relation to this, it could also help to spend less time consuming troubling and distressing news, instead focusing on moments of joy, positive interactions, engaging in hobbies, and doing what you love. Mrs Adrysheva has expressed that her office, room 224, is always open. It is a safe space, one where pupils can feel comfortable and relaxed. It is not always necessary to come to her with problems, as it could be just as beneficial to talk about pretty much anything,

to share your successes or something you found interesting. Revisiting the concept of life being made up of contact, room 224 is one where you can make positive contact, have someone to talk to, and feel safe from pressures faced elsewhere in life.

Mrs Adrysheva describes her main goal as informing people. Seeking to disseminate information through a variety of mediums to reach the student body, she wants to help people tobe comfortable not only with the broader understanding of mental health but also know the role of the counsellor in school and that she is there to help. She claims that people should not be afraid to ask for help, whether this is from a licensed professional, or a trusted friend or family member. Seeking professional help should not be seen as a sign of weakness or failure, but rather as progress, and care for one's wellbeing, taking responsible steps towards bettering one's life, and recognising that improvements can be made. A counsellor's role is not to judge or give grades, but rather to help and support. A counsellor does not have pre-prepared answers to the



questions you come to them with but can provide professional advice pertaining to a specific situation. That is why the decisions that are made after consulting with a professional are always up to you.



I would like to thank Mr Madden and Mrs Adrysheva for their contributions to this article. As I have mentioned within the text, I had conducted interviews with both of them, and am grateful for the insights they were able to provide.

Mrs Adrysheva has also expressed that she enjoyed this collaboration, and looks forward to similarly working with pupils in the future to help disseminate information pertaining to mental health.

You can contact her via email at b.adrysheva@haileyburyastana.kz.

CAS, the most active component of IB

Written by Begim-Ana

The internationally acknowledged curriculum, known as the IB Diploma Programme, consists of six groups of subjects, and the programme's core. This is made up of three parts: theory of knowledge, extended essay, and CAS (creativity, activity, service). To achieve the IB diploma, students need to pass all three of these core elements.

CAS focuses on the extracurricular lives of students, where they strive to help develop their communities and contribute their services to them. Not only does this encourage active engagement with issues within smaller communities, but also global engagement through various experiences. During their two years of IB, students will partake in CAS experiences, planned and formed by the students themselves. For these experiences, they have to actively write consistent reflections, linking them to the seven set learning outcomes. Moreover, students will have the opportunity to expand into new areas of interest, or delve into a single experience when doing their CAS project. CAS is a fundamental part of the IB which encourages students to explore their identities and their own personal interests outside of an academic setting, working with areas one may not be able to within their school studies. During my interview with the CAS coordinator, Mr Bell, he

spoke briefly about the benefits of CAS and how it will boost your potential candidacy for a university application since it has elements that universities will recognise and view highly. Universities, especially in the US, judge highly on the extracurricular activities of an applicant. CAS makes candidates stand out when applying to university as it is "showcasing that [one is] multifaceted and interesting as a person, not just as a student."

Having interviewed students from both Year 12 and Year 13, I have come to realise the variety of creative routes CAS allows us to take. For example, last year, a year 13 student organised a TEDx event at the school. As well as that, this student actively participated in a dance club, an example of an activity one could do for CAS. Other experiences include the range of CCAs organised by staff and senior students. For instance, as part of my CAS, I am participating in the swimming, volleyball, and MUN CCAs. Students can also organise their own CCAs, examples of which are the Maths and Science CCAs run by year 12 pupils, as well as the piano and public speaking CCAs, most of which are available to junior school pupils. Thus, through CAS, students can develop many leadership and initiative skills needed to excel in life. Following



on, a way in which creativity can be explored through CAS is by allowing students to reach their potential in planning creative projects which can impact the school, for example, last year the sixth formers re-decorated the IB centre as part of their CAS.

Perhaps the most important of the CAS components is service. Experiences in this area are designed to ensure that we are giving back to the community and actively helping to sustain and enrich it. When interviewing a year 13 student, they mentioned that in the past, students have assisted in various animal shelters, and opened the school's first UNESCO in order to "promote Kazakh culture and global mindedness." It is widely advised that staff allow students to take leadership roles, whilst students should be involved in searching for such opportunities. As an example, my first experience was being a library assistant. I initiated this experience by going to the senior librarian and asking her if she needed any help. Initiation of a school-based experience is this





simple because teachers and staff are always there to help pupils reach their full potential, thus catering to students' needs when they are engaged in the process of fulfilling their CAS. On the other hand, during my interview with Mr Bell, he reminded me that it is important to remember "even if your experiences may seem smaller in scale, experiences that are personal and make you want to pursue an interest in them later are highly encouraged" and just as crucial an experience. However small of a service it may be, it is still showcasing your dedication and perseverance as a member of the community.

'CAS is an integral part of IB', and aids in all-around development as an IB student and a global citizen. Through services to the community, large and small; as well as the activities we can pursue, and through this, IB students are able to reach a deeper level of creative thinking. CAS shows us as the people that our academic life may not reveal, it shows our interests and the things we are passionate about. It shows our dedication to making the world better by helping our community, actively working towards our learning outcomes, and our reflective attitude, all key to reaching our full potential.

For more detailed information about CAS, particularly at Haileybury, refer to the following website: https://sites.google.com/haileyburyastana.kz/haileyburycas/home





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Hidden in the Background – HASTMUN 2021

Written by Alima



During the last couple of weeks, I talked a lot about HASTMUN 2021. In a group of fellow MUN aficionados, also known as the Executive Committee, I presented MUN in an assembly, clutching my notebook tight as I spoke. I knocked on the door of every class and reminded students about MUN. I emailed close to a hundred schools around the globe. I put the delegates and schools at the centre of attention, and in the process, kept our work behind the scenes - hidden in the background.

If you walked in on one of our meetings, it would seem rather chaotic. You would observe clusters of students fervently discussing something. That would be our Under Secretaries replying to newly signed up delegates, exchanging delegates to fill all committees, and updating the event website. You might notice a student sitting at the back of the room, probably concentrated on typing an email. This would be our Head of Social Media, Arina Molyarenko, contacting a company with the idea of a sponsorship. And then, there would probably be me, Alfais and Bibi standing next to Ms Breckon, consulting which schools to contact and discussing the schedule of the MUN Academy between us all.

That said, our recent meetings have been centered around a single challenge: raising the needed sum for software to hold our conference online. We have been craftily plotting our plan of action for weeks, with all of us converting our roles into bake sale planners. Finally, we held our fundraising event on Friday 8th October, which to be honest, was stressful. Having to face the biggest challenge of my life so far – hungry children – I was lost when we ran out of tickets. This is while other members had to deal with huge crowds of students wanting one of the many desserts offered on the tables. That said, albeit slightly unorganised, the event brought us halfway to reaching our goal, and was a success.

Including me, most of our **Executive Committee** members are Year 13 students, which sometimes becomes evident. I remember at the time of our Extended Essay first draft deadline, I couldn't contact our Under Secretary members regarding the Study Guides. Last week, stressed about my Internal Assessments and particularly – my university application, I couldn't commit myself to working on the HASTMUN conference. But all in all, the realisation that we are working on something bigger than ourselves and can have an impact on a number of students' lives, drives me to keep going.

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"Building peace in the minds of men and women" The Establishment of the HAS & HAL UNESCO Club

Written by Korkem-Ay

The recent announcement of the UNESCO club coming to Haileybury Astana was great news for the whole school, as it meant that we are one step closer to being a UNESCO Associate. The project was a joint effort between the Year 13 students, Kamilla Azhigulova and Aigerim Pirmatova who took initiative to establish a program that would involve the whole school, to "create something that would unite all students together, to be a part of a mutual organisation".

During an interview with Kamilla, it was mentioned that the main drive to proceed with the club came from a want to "make it a huge part of students' extra-curricular learning process, encouraging students to continue the actions of the club by forming CCAs, hosting and participating in events and helping our students to grow as global citizens." But this doesn't just stop at the boundaries of Haileybury Astana. The UNESCO Club is a combined effort of both Haileyburys here in Kazakhstan, as a "perfect way to unite all students across the two schools to share information and learn together." Therefore, helping us to establish a bridge of connection between the sister schools in order to bury the hatchet of rivalry between them.



Nevertheless, the venture did not come without its difficulties. One of which was "the process of creating the official application" as there was a multitude of documents that had to be collected in order to be eligible for the prestigious title of being a UNESCO Associated School. A timeline of all of the school's participation events had to be curated, which led the two founders to contact the previous graduates of HAS in order to retrieve the relevant information. Overall, Kamilla remarked that "it took us quite a long time to collect all the data, but eventually we were able to present the chronology" thereby enabling them to "prove that our schools are worthy of holding the name of UNESCO Club

Candidates." It is to be noted that another meeting is scheduled to take place in November, where the title of UNESCO Club will hopefully be officialised by the UNESCO agents.

Though the making of the club was tedious, it was a lovable job as it gave the IB pupils an opportunity to meet with a range of different people, from fellow students, to the UNICEF Director of Kazakhstan Arthur van Diesen. Therefore, in the end, they left with a crucial lesson in mind, "all these people came from different backgrounds, yet one thing that unites them all is their desire to bring something extra to our community, to share their experiences, and to teach us of what we're yet to see". Thus, the involvement of HAS and HAL in the UNESCO project is a reflection of the determination to help the pupils to "represent their cultures, learn about the world



Forming Connections

Written by Aniya

At the start of September, a new competition was announced by the housemasters: the University Challenge. The Haileybury Astana inter-house rounds took place during morning assemblies and all of the houses battled it out, testing their general knowledge in a bracket-style tournament. The audience thoroughly enjoyed and played along with the quiz, assuring those around them that if they were playing, they would have gotten the answer correct; but from personal experience, being up on the stage makes you forget even the most basic of facts.

This was a great way to start the school days for a couple of weeks. Bartle Frere ended up being victorious, with Kipling being runners-up, and both teams were due to go off to Almaty to compete against our sister school. Joining them would be a girl's and boy's football team, who would each play a match against the other Haileybury school's teams.

After an extremely early start, the entire group going to Almaty was in the airport at five-thirty, and after getting checked in and through security, everyone was feeling excited. Naturally, most of us slept on the plane, hoping to be fresh and in peak condition, mentally and physically, for the competitions, but the early wakeup was already taking its toll, and many of us were not in the greatest moods or ready for great performance. Nonetheless, we persevered, and



we arrived in Haileybury Almaty just in time for morning snack and the start of the girl's football match at eleven.

The girls played great, but after the first half, they were three-nil down. ut, they were tough and resilient, managing to score two goals in the second half and having a number of close calls. The girl's match ended with a score of three-two to Haileybury Almaty, but our team was delighted with their efforts and in great spirits. Next came the boy's match. By this time, the boys had plenty of time to warm up



and they were feeling optimistic about their chances. The HAS boy's team was phenomenal, scoring five goals, and winning the match. After the football games, there was an award ceremony, where the boys received a trophy, and most valuable players on each team were awarded individual trophies. For our Astana teams, this title went to Lucia from Year 12 for the girls and Ben from Year 11 for the boys.

After heading inside, and eating lunch, emotions were running high as the University Challenge was about to begin. Haileybury Almaty had set up their small theatre for the challenge, and it looked professional, they even had buzzers for each person that lit up to ensure only one person answered. Some of the Haileybury Almaty students also came along to watch, and the first round was between the runners-up, Kipling from Astana and Bartle Frere from Almaty. It was a close game, but Almaty won with a small point lead. The final showdown was between the same houses, but this time from different schools, Bartle Frere playing for Astana and Kipling playing for Almaty. I was on this team, and it was honestly nerve-racking, as the environment was pretty competitive because our team felt like we had something to prove. Almaty played a good







game, but before the last question, we had already gathered enough points to secure ourselves the win.

There were a few more activities before we headed home. We got a snack consisting of pizza, sushi and doughnuts, and then some of the Almaty pupil leadership team gave us a tour of their facilities. It was really interesting to see the similarities and differences between our schools, and even get a few ideas for features to implement back at home. Everyone headed home happy with their performances and glad they went on the trip, even if it felt a bit hectic and fast-paced at times. The whole experience was enjoyable, and hopefully school trips similar to this one can happen more often, as the world slowly returns to its pre-pandemic state.





A Cape Cod Diver Was Just Swallowed — And Spit Out — By A Humpback Whale

For 30-40 seconds, Michael Packard struggled to escape the whale's mouth and wondered if he would be swallowed whole.



Packard Family Photo Michael Packard from his hospital bed on June 11, 2021.

In this story, a man was swallowed by a whale. And no — it didn't happen in the pages of the Old Testament to a man named Jonah. It happened to a lobster diver named Michael Packard off the coast of Provincetown, Massachusetts.

Packard had set off early in the morning on Friday, June 11 to dive for lobsters with his fishing partner, Josiah Mayo. After a disappointing first haul, Packard dove under the water to try again just before 8 a.m.

But as he scoured the sandy bottom of Herring Beach Cove, something suddenly struck him from behind. "All of a sudden, I felt this huge shove and the next thing I knew it was completely black," Packard later recalled.

From the surface, Mayo watched as Packard's air bubbles suddenly vanished. But he couldn't have possibly guessed what had happened to his partner below the waves.

A humpback whale had accidentally swallowed Packard in one huge gulp.

"Everything went dark," Packard said. "I was like, 'Oh, my God, did I just get bit by a shark?' Then I felt around and I realized there was no teeth and I had felt, really, no great pain.

"And then I realized, 'Oh my God, I'm in a whale's mouth. I'm in a whale's mouth, and he's trying to swallow me."

For a terrifying stretch of 30-40 seconds, Packard struggled in the darkness. Questions raced through his head. He still had his breathing apparatus on — would he be stuck in the whale's mouth until he ran out of air? What would happen to his wife and teenage children? "I thought to myself, 'OK, this is it... I'm going to die,' And I thought about my kids and my wife. There was no getting out of there." Packard said, recalling that he could feel the whale squeezing the muscles of its mouth.

But then the whale started to shake its head. Packard felt himself zoom toward the surface. And, like that, he was free. From their ship, Mayo saw a burst of white water. Then he spotted Packard — soaring through the air. A charter boat captain named Joe Francis saw the same thing.

Michael Packard has also survived a plane crash that left him stranded in the Costa Rican jungle for days, encounters with great white sharks, and nearly getting lost on the open ocean.

"I saw Mike come flying out of the water, feet first with his flippers on, and land back in the water," Francis said. He jumped aboard Mayo's boat and helped pull Packard out of the water.

"I was inside it. I was inside its mouth," Packard gasped once they had him aboard. "It tried to eat me."

Although Mayo worried that his fishing partner had suffered broken bones or an embolism which can happen when a diver surfaces too quickly — Packard miraculously survived with few injuries.That's in part because whales aren't generally aggressive toward humans. The whale who swallowed Packard likely did so by accident while trying to feed.



"They do what we call gulp feeding, and they can open their mouths up incredibly widely." explained Peter Corkeron, a senior scientist at the New England Aquarium.

According to Jooke Robbins, the director of Humpback Whale Studies at the Center for Coastal Studies in Provincetown, when a humpback whale opens its mouth to eat, its mouth expands like a parachute.

"When they do that, they don't necessarily see everything," she said.

Thus, a whale can swallow something by mistake — like a lobster diver. But experts say that what happened to Packard is extremely, extremely rare.

"It's a very unusual accident," said Corkeron. "This is a one in a goodness knows what trillion chance. He was just unlucky enough to be in the wrong place at the wrong time."

As for Packard, he's not hanging up his diving gear anytime soon. In addition to his encounter with the whale, Packard has survived a plane crash, confrontations with great white sharks, and almost getting lost at sea. In other words, he's not too shaken by nearly getting swallowed. Packard says he'll get back to diving as soon as he's fully healed.



New Moth Species Discovered In Madagascar Has The Longest Tongue Of Any Insect

The moth, called "xanthopan praedicta," or "Wallace's sphinx moth," has a tongue that stretches nearly one foot long.



Wallace's sphinx moth, top, has a much longer tongue than the similar Morgan sphinx moth.

While studying the long-necked Madagascar star orchid in 1862, Charles Darwin suddenly had an exciting thought. Some insects, he mused, must have a tongue long enough to feed on the plant. "Good heavens," he exclaimed to a friend, "what insect can suck it!" Though such a moth — called Wallace's sphinx moth or Xanthopan morgani praedicta was subsequently identified in 1903, it was categorized as a subspecies of the Morgan's sphinx moth, a hawkmoth found in Africa. Now, researchers say that the two moths are different species.

Of all their differences, their tongue lengths are the most striking. While Morgan's sphinx moth has a tongue length of about three inches, Wallace's sphinx moth's tongue stretches nearly one foot. Now dubbed xanthopan praedicta, the moth has the longest tongue of any known insect. "Imagine my excitement as I unrolled and measured the proboscis [tongue] of a male Xanthopan in the Madagascan rainforest, realizing that it was probably the global record holder," exclaimed Dr. David Lees, a moth curator at the National History Museum in London and one of the authors on a recent paper about the moth.

He added, "The taxonomic change we now propose finally gives long-deserved recognition, at the species level, to one of the most celebrated of all Malagasy endemics."

In other words, Darwin was right.

Alongside Joël Minet, an entomologist at the Institut de Systématique, Évolution, Biodiversité in Paris, Lees examined the differences between Morgan's sphinx moth and Wallace's sphinx moth. The latter was named for British naturalist Alfred Wallace Russel, who, like Darwin, speculated that a moth had evolved to feed on Madagascar star orchids.

"That such a moth exists in Madagascar may be safely predicted, and naturalists who visit that island should search for it with as much confidence as astronomers searched for the planet Neptune," Russel declared, "and they will be equally successful." Though the subsequently named Xanthopan morgani praedicta (or predicted moth) was thought to be a subspecies of Morgan's sphinx moth, Lees and Minet determined that they're actually different species. For starters, the two moths have a 7.6 percent genetic difference.

"This is much more than what you would expect between different species," Lees explained.

Lees and Minet identified 25 physical differences as well, including the moths' tongues. To determine their length, researchers dipped moth specimens from around the world in water overnight. Then, they carefully unrolled (and measured) the tongues. On average, the tongue of Wallace's sphinx moth was 6.6 centimeters longer than Morgan's sphinx moth. Because the tongues were too long to be displayed, researchers subsequently rolled them back into the moths' heads.





The Madagascar moth differs from the African moth in a number of significant ways.

In addition, Lees and Minet identified other differences between Morgan's sphinx moth and Wallace's sphinx moth. The two moths have different male/ female genitalia, wing shapes, and color patterns. "The underside of the hawkmoth from Madagascar is pinkish. while the underside of the hawkmoth from Africa is whitish or yellowish," explained Lees.

Though there are hundreds of species of similar hawk moths in the tropics, Wallace's sphinx moth is found only in Madagascar. There, it has evolved to have a close relationship with the Madagascar star orchid. The moth's long tongue can be hazardous, however. It cannot fly with its tongue extended — the moth only extends its tongue once it lands on an orchid — and the moth is vulnerable to predators like bats. Still, Wallace's sphinx moth seems to have flourished in Madagascar, where researchers found that moths across the island have the same DNA.

"The fact that I found one of these moths in a remote forest in the southwest of Madagascar suggests it can fly hundreds of kilometers," Lees explained.

In that way, Wallace's sphinx moth embodies many of Darwin's theories of evolution. After evolving to feed on the Madagascar star orchid, its long tongue allowed it to survive and thrive — in the jungle.

Squamish Nation Plans Ultra-Dense, Carbon-Zero Development On Reservation Land In Downtown Vancouver

The Squamish Nation expects that Senakw will provide a revenue of up to \$10 billion and provide housing for Indigenous Canadians.



A representation of what the Senakw development will look like.

In 1913, members of the Squamish Nation were forcibly removed from Senakw, a village in present-day Vancouver, Canada. Now, having won the land back, they plan to build an ambitious 11-tower development named for their lost village.

"We want to bring our people back home to that part of our territory," explained Khelsilem, a Squamish Nation councilor. The Senakw development, projected to include 6,000 housing units and housing for up to 10,000, will soon rise from the unused land around Vancouver's Burrard Street Bridge. Its 11 towers will range from 17 stories to a whopping 59, and will include nods to Indigenous culture.

Some buildings, for example, are designed like "mountains"; others are inspired by Indigenous longhouses.

"We were inspired by the traditional villages of the Squamish Nation, their deep embrace of nature—the mountains, forest and water, their carving and weaving traditions, and cultural connection with salmon," explained Venelin Kokalov, the design principal at Revery Architecture, who came up with the plans. The development is unique in a number of other ways as well. For one, Senakw will be extremely dense — more like Hong Kong than Vancouver — and will include a number of towering buildings. Its highest projected building, at 59 stories, would be the third-tallest building in Vancouver.

All of this is by design. Kokalov envisions a "village in the park" and noted that Revery Architecture came up with a plan that "invited [nature] into our site." Indeed, the towers will only take up 15 percent of the land. The rest will be green space. In an attempt to discourage car use, the development will also include far fewer parking spaces than most Vancouver buildings. Instead of parking garages, it will offer biking garages.

Senakw stands apart in other ways as well. Very few First Nation tribes own land in urban areas like Vancouver. Most of them are in more rural parts of the country.

"If you look at where reserves have been placed in this country, they're largely on the outskirts," explained Ginger Gosnell-Myers, Vancouver's first Indigenous Relations Manager, who served from 2013 to 2018.

"That's by design ... we're looking at a deliberate history of exclusion."

Indeed, the history at the heart of Senakw is a painful one. The Squamish Nation owned the land for generations and benefited from its abundance of fish, elk, deer, salmon, and other wild animals. But as the city of Vancouver grew, its residents increasingly pushed onto tribal land. In 1913, Vancouver's premier Richard McBride ordered the 150 people living in Senakw to vacate the village. They were given two days to gather their belongings and board a barge that took them north.

Then, Vancouver officials razed what remained of the village.

In the aftermath, the Canadian Pacific Railway (CPR) set up a terminus at the former site of Senakw. But when CPR tried to sell the land in 1989, the Squamish people argued that they should get the land back. After a lengthy legal battle, they succeeded in doing so.

"This is our jewel of developable land and we're only going to get one chance in the next 100 years to develop it," noted Khelsilem.

To criticism from Vancouver locals who wanted to be consulted about the project, one tribal member noted, the Squamish Nation was "never consulted and we still are not."

Although the development is expected to raise billions of dollars in revenue for the Squamish, the significance of reclaiming the land goes much deeper. On the development website, it's noted that "Senakw represents an opportunity to heal."

After all, Senakw is more than the name of the lost village. It also means, "The start of something beautiful; respect for nature, for indigenous peoples, for healing, and for a new path forward."



Senakw's design principal envisions it as a "village" filled with greenery.



How the Burrard Street Bridge may be repurposed.





Photographs from around School





Mrs Hakobyan and Mr Palmer playing table tennis Are they preparing for the upcoming competition?



What a beautiful view



Empty classroom, everyone is off at lunch





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Featuring contributions from

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