BOS Australia
primates helping primates

Forest Chatter

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From the president …

At BOS Australia, my team and I feel incredibly fortunate to dedicate part of our time to a mission we are deeply passionate about: saving the critically endangered Bornean orangutans and their rainforest habitats. May and June are always particularly exciting for us as we wrap up the financial year with our largest appeal.

Last year, we asked for your help to build a new Forest School, and thanks to your amazing generosity and kindness, our little orangutan students are now back in school, gaining essential survival skills for a future life in the wild (see page 3).

This year, our cause is equally critical for our conservation efforts: we urgently need a new hospital clinic to provide state-of-the-art medical care for our injured and sick orangutans. On page 2, you will learn about the need for this new clinic and how you can **help**.

Also, in this edition, we are thrilled to celebrate the birth of our newest wild-born baby and the successful release of 11 orangutans back into their wild home. Finally, don't miss our Spotlight interview on page 4, where one of the leading researchers discusses the team's milestone achievement of sequencing the complete genome of six ape species.

Happy reading!

With endless gratitude,

K WELFORD

Kerin Welford

Inung, Indie and Baby Indro

The Post-Release Monitoring team in the Bukit Batikap Protection Forest recently observed Inung and her offspring, Indie, who frequently visit their camp. However, this time, Inung had a special surprise for them.

Inung and Indie were known for visiting the guava tree behind the camp and foraging for fruits and cassava as their primary food sources. Although Indie had grown bigger, she remained highly dependent on her mother. She frequently begged for food from Inung and clung to her whenever our team encountered them.

Then, during their last visit, our team noticed physical changes in Inung. Her belly appeared larger, and her vulva was swollen—clear signs that she was pregnant.

A month later, the rangers spotted Inung sitting on a tree in front of the camp, closely watching the activities around her. At first, only Indie was visible, clinging to her shoulders. But as Inung stood up and started moving, the team was stunned to see a tiny infant cradled in her arms.

The newborn orangutan, later named Indro, appeared healthy and was frequently seen nursing. His mother made sure he remained safe in her embrace. Meanwhile, Indro's older sister, Indie, had become more independent but still displayed protective behaviour by staying close to her little brother.

The birth of Indro represents a significant milestone in the rehabilitation journey of orangutans in the Batikap Forest. With this new baby's arrival, our 36th wild-born baby since 2012, there is great hope that the reintroduced orangutan population will continue to thrive in their natural habitat.

Inung, now a mum of four, demonstrates that reintroduced female orangutans can successfully survive and reproduce in the wild. The presence of this small family highlights the success of our conservation efforts, proving that years of dedication and protection can lead to beautiful outcomes like this.

Not just a clinic—a beacon of hope for orangutans

Every day is an adventure at Forest School—and for the cheekiest of our rescued friends, that often means trouble. When accidents happen, our veterinarians must respond quickly. Therefore, having a nearby, well-equipped hospital clinic is essential, not just for our little students but for all orangutans in our care.

What do Beni, Alexander, Bumi and Monyo have in common? They are all adorable orangutans who thrive thanks to the support of our incredible veterinary team and a readily accessible clinic. Without their help, these orangutans wouldn't be as agile and happy as they are today.

It was five years ago when the unbelievable happened. Young orangutan Lala was playing in a tree at Orangutan Jungle School when it suddenly snapped, resulting in Lala plummeting straight onto our beloved Big Boy Beni in a heart-stopping moment. The surrogate mothers rushed to their sides, and our veterinary team responded within a minute, transporting both orangutans to the nearby clinic for X-rays. The shocking results: Beni suffered a broken femur, while Lala sustained a fractured elbow.

Thanks to our veterinarians' experience and dedication, both orangutans fully recovered, supported by the crucial care provided at our clinic. Beni is now just one step away from returning to his wild forest home, a second chance he wouldn't have had without immediate medical care.

The swift actions of our veterinarians and access to an onsite clinic also saved Alexander from long-term complications. In June 2024, the male was up to his usual antics—leaping, chasing, and tumbling with his buddies. However, rough play led to Alexander losing his balance; he fell from a tree and fractured a bone in his leg. Fortunately, after weeks of tender rehabilitation, he was back at the centre, just as cheeky as ever, preparing for a future life in the wild.

Then, there is the dynamic duo Bumi and Monyo. Known for their boundless energy, the eight and five-year-olds often turn playtime into a whirlwind of excitement, especially during rough play on fresh-cut grass. However, one day, their roughhousing took a serious turn when they played too close to the edge and thorny roots scratched their faces. Bumi ended up with a thorn in his eye while Monyo tore his mouth.

It was a frightening moment for all. But once again, our medical team quickly transported Bumi and Monyo to the nearby clinic and treated them promptly. Today, the two orangutans are as spirited and loving as ever, chasing each other like nothing ever happened.

Although accidents like these are rare, they are very real and emphasise the importance of having an onsite clinic. Unfortunately, due to the necessary relocation of our Nyaru Menteng Orangutan Rescue and Rehabilitation Centre to a different site, we currently lack this essential facility at our new Nyaru Menteng 2 Centre, and we urgently need to build a clinic.

Beyond emergencies, orangutans often face illnesses, injuries, and infections that require constant, expert care. Hence, we need a fully equipped and operational veterinary hospital complex to meet every challenge, including a microbiology and necropsy laboratory, an isolation building, and individual enclosures—'hospital rooms'— for adult sick orangutans.

A new, state-of-the-art clinic will allow our veterinarians to continue providing exceptional and personalised care for each orangutan. This includes screening newly rescued infants during the critical hours after their arrival, preparing adult orangutans for release, performing regular health checks and X-rays, administering vaccines, analysing sputum, blood, and fecal samples, and conducting eye, chest, and dental examinations. Our veterinarians will also be equipped to perform life-saving emergency procedures and one-time surgeries. Additionally, our medical team will benefit from improved testing capabilities onsite, allowing them to obtain results more quickly.

The welfare of the orangutans in our rehabilitation centres is our top priority and is essential for the success of our conservation efforts. Since we can only release healthy orangutans back into the wild, having a readily accessible clinic is vital to ensure that they can thrive and contribute to the survival of their critically endangered species.

We cannot build this much-needed clinic without your generous support. Please consider giving **here**.

You can also make a tax-deductible donation by **PayPal** or Bank Deposit (Westpac Bank, *BSB:* 033112, *Account Name:* Borneo Orangutan Survival (BOS) Australia Incorporated, *Account Number:* 244334).

Your support means the world to us. Thank you!

A unique ride to Jungle School

We have completed the construction of our new Forest School at our relocated Nyaru Menteng Centre, and our students are back in class. The youngest ones especially had a blast when their moving day finally arrived.

All aboard, the bus is here! The excitement was evident on our little Forest School Nursery Group students' faces as they started their journey to their new Forest School. While their older friends, like Bumi, Monita and Monyo, made the 10-minute trip in transport cages, the little ones took the bus. What a joyful ride it was!

However, little did they know that a very special guest awaited them at the Nyary Menteng 2 centre for the inauguration ceremony of their new school: the Indonesian Minister of Forestry. Dr. Raja Juli Antoni cut the ribbon and signed a commemorative plaque, and he personally accompanied the young orangutans of Group 3 to their new Forest School.

Among them were Onyer, Iqo and Jeni, all beloved orangutans of our **adoption program**. For the trio, it was a double celebration as they were promoted from Group 2 to 3, making their relocation part of the "graduation" process.

The new Nyaru Menteng Orangutan Rescue and Rehabilitation Centre provides a more suitable environment for the development of orangutans. In this natural setting, with minimal human distractions and advanced climbing and feeding structures, our orangutan students can better focus on essential survival skills, such as foraging and nest building, and sharpen their instincts for potential dangers in the wild.

"With the new and better facilities, we hope to speed up the rehabilitation process and soon return the orangutans to their natural habitat, where they can fulfil their role in nature," says BOS Foundation CEO Dr Jamartin Sihite.

Previously, the centre was located in an area now designated as a communal urban forest. The frequent human presence could disrupt the learning process of the orangutans, who need minimal human interaction to prepare for a future life in the wild.

Freedom for 11 orangutans

In two separate transfers from our rehabilitation centres in Central and East Kalimantan, the BOS Foundation team released six and five orangutans back into the wild, bringing the total number of orangutans reintroduced since 2012 to 549.

At BOS, nothing excites us more than bringing the orangutans we have cared for back to their true home—the Bornean rainforest. Each orangutan we release has a unique story, some more tragic than others. But they all share a common experience: they were once separated from their mothers, rescued, and brought to BOS, where they received a second chance at life.

After years of learning at Forest School and honing the acquired survival skills on pre-release islands, the long-awaited moment for another 11 orangutans had finally arrived. The first six embarked on 22 April 2025, the 27th release operation from our Samboja Lestari Centre. In a collaborative effort, the Indonesian Ministry of Forestry, the East Kalimantan Natural Resources Conservation Agency, and the BOS Foundation successfully released Buigis, Mikhayla, Moris, Sie-Sie, Siti, and Uli into the Kehje Sewen Forest. The Minister of Forestry personally opened Mikhayla's cage and watched her leap out energetically before swiftly climbing the nearest tree.

The second release, the 45th from Nyaru Menteng, happened on 21 and 22 May 2025 and involved five orangutans—Hanau, Jumbo, Pirang, Radmala and Rongda—who found their new home in Central Kalimantan's Bukit Baka Bukit Raya National Park.

While the two events represent a significant milestone in our conservation efforts, BOS Foundation CEO Jamartin Sihite emphasises that there is a long way to go: "While releases continue, the challenges remain immense. More than 350 orangutans are still awaiting their future in BOSF's rehabilitation centres. Therefore, orangutan protection must be pursued with a spirit of building a just and sustainable Earth for all living beings. Strong collaboration between the government, communities, private sector, and conservation organisations like the BOS Foundation is key to ensuring forests remain safe havens for orangutans and all life that depends on them."

SPOTLIGHT

HELLO, I AM KATERYNA MAKOVA

Dr Kateryna Makova holds the Verne M. Willaman Chair of Life Sciences and is a Professor of Biology at Pennsylvania State University, USA. She is also the co-author of a groundbreaking study that, for the first time, reveals the complete genome sequences of five great ape species—chimpanzee, bonobo, gorilla, Bornean orangutan, and Sumatran orangutan—and one lesser ape species, the siamang gibbon.

Sequencing the complete genome sequences of six ape species is a major genetic milestone. What makes this achievement so special?

I honestly thought this would never be possible in my life. Studying the genomes of non-human apes can provide valuable information about what makes us human, what differentiates us from other apes, and what DNA sequences are important for diseases. In medicine, for instance, scientists frequently study the variation in ape DNA that makes the animals resistant to certain diseases, such as AIDS. We had the ape genomes before, but they were not complete. Substantial portions were excluded as they were very difficult to reconstruct. Understanding how these portions evolved has only become clear now.

You have worked on this study for over two decades, and the team spanned borders and disciplines.

Why did it take so long to sequence the complete genome of great apes?

Our goal was quite ambitious; we wanted to assemble the genomes completely without any gaps. Previously, we used short sequencing reads to assemble genomes. These reads could only analyse DNA in small segments, for example, 300 DNA letters (As, Cs, Ts, and Gs) at a time. Now, with long sequencing reads, we can process hundreds of thousands of letters at once. This advancement makes it much easier to piece together larger segments of DNA. We often use the analogy of assembling a jigsaw puzzle to describe this process. Just as it is challenging to fit together the repetitive parts of a puzzle, assembling genomes can be complex. However, with long reads, which function like a small number of large puzzle pieces, we can much more easily connect these regions.

You also produced complete sex chromosome sequences for the six great ape species, which were previously incomplete or unavailable for the siamang gibbon and Bornean orangutan.

The Y chromosome is important for human fertility, and the X chromosome harbours genes critical for reproduction, cognition, and immunity. Our study opens doors for many future investigations of sex chromosomes, how they evolved, and diseases associated with them. The living non-human great ape species we studied are all endangered. The availability of their complete sex chromosome sequences will facilitate studies of their sex-specific dispersal in the wild and of their genes important for reproduction and fertility.

How could your findings help save the critically endangered orangutans?

The accurate reference genome sequences of two orangutan species will provide important scaffolds to map genetic variation of orangutans in the wild for years to come. We will be able to study how variable, and thus genetically healthy, the contemporary orangutan populations are in the world. By monitoring the genetic diversity of orangutans in the wild, we can formulate conservation genetics strategies for managing these populations.

Yoo, D., Rhie, A., Hebbar, P. et al. Complete sequencing of ape genomes. Nature 641, 401–418 (2025). **https://doi.org/10.1038/s41586-025-08816-3**

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Your donations provide food, shelter, protection, medicine and companionship for orangutans in our care. Visit **www.orangutans.com.au** to help us help them.

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