## Gunung Palung Orangutan Conservation Program



September 2015

# **Code RED**

An e-newsletter from your friends in West Borneo

Dear Friends and Supporters,

Welcome to our latest issue of Code Red! This month we have two very interesting articles, the first about a very timely (and urgent) conservation issue that threatens the rainforests and orangutans across Borneo and Sumatra. Every year forest fires appear in the region, but why does this happen and what does it mean for the people and animals that live there? Read on to find out.

Our second article is a flashback to a year ago, when we observed and filmed GP orangutan, Walimah, performing a rare behavior that we call a "water finger drip." The research team did a great job in documenting this amazing incident, and today we bring you the full story and video. I hope you're as excited about it as we are to share it with you!

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As always, thanks for reading, and please consider supporting our crowdfunding campaign to expand and improve our Bentangor Environmental Education Center (see right panel for details). Every little bit helps - for just \$8 you could adopt your own little piece of Borneo!

Sincerely,

Cherry moth

Cheryl Knott, Executive Director Gunung Palung Orangutan Conservation Program (GPOCP)

#### **Borneo is Burning: Version 2015**

By Cassie Freund, GPOCP Program Director

Every year it feels like exactly the same story: the dry season begins, a few hot spots pop up, the dry season continues, and more and more hot spots appear, until it feels like all of Borneo and Sumatra are on fire. The air grows thick with smoke from burning trees and peatland, causing the sun to disappear and forcing everyone to don surgical masks for even the simplest of outside tasks. Schools close and cases of respiratory illness spike, not only in Indonesia, but in Singapore and Malaysia as well. The 2015 fire season has been one of the worst in recent memory, rivaled only by the fires of 1997, during which as many as 13 million hectares of rainforest in Kalimantan and Sumatra were burned. Why does this continue to happen every year, and what are the main drivers of this conservation crisis?



Gunung Palung shrouded in smoke. Since this photo was taken in August, the haze has grown thicker and more persistent. Photo © Tim Laman.

### Project Update: Expanding Bentangor

Great news! Thanks to the generosity of a private donor, we have already raised enough funding to purchase the land and expand our Bentangor Environmental Education Center. However, we're only halfway to our goal, as we still need funding to truly transform the new land into a community learning space. For those that haven't yet had a chance to donate, please check out our campaign <u>HERE.</u> Thank you to those who have already backed our project!

#### New Grants Awarded

GPOCP has recently been awarded three new grants, continuing our long-term partnerships with these granting organizations. A huge thank you to the Arcus Foundation, the Disney Conservation Fund, and the U.S. Fish and Wildlife Creat I had a lot of time to think about this question earlier this month, when I was (somewhat foolishly, perhaps) trying to make my way back from Jakarta to our home base in Ketapang. Transportation from Indonesia's capital city back to Borneo is usually relatively straightforward: we take a direct flight from Jakarta into the small Ketapang airport, or if that isn't available, we can fly into Pontianak (the capital of West Kalimantan) and then either take another plane or boat from there. But due to the heavy smoke and low visibility in both cities, all flights in and out were canceled. In fact, on September 17th the API (Air Pollution Index) in Pontianak hit 1,000, which was pretty shocking considering that an index of 150 is normal and anything over 300 is considered unhealthy. After weighing all my travel options, it was pretty clear that my best chance to get back to Ketapang in a reasonable amount of time was to fly to Banjarmasin in South Kalimantan and then travel overland through Central Kalimantan in cars and buses. At that time, South Kalimantan was still relatively smoke-free, but as we drove north into the Central province, conditions changed quickly. The air quality began to deteriorate and the sun faded out. As I looked out the window I began to see small fires along the side of the road, until there was one stretch where all of the bushes and small trees on the left side were engulfed in flames. Thick smoke choked the air and made it impossible to see more than 10 feet in front of the car. The worst part was seeing the peat forest on fire; peat fires aren't huge, necessarily, but they can smolder for weeks, erupting randomly. Because peat soil is such an excellent carbon sink, during a fire season such as this one carbon emissions can spike drastically. In 1997, the total additional carbon emissions from fires across Indonesia alone was estimated to be 0.81-2.57 gigatons, or 13-40% of a normal year's worth.



This satellite image from NASA, taken on September 24, 2015, shows smoke from fires burning on the islands of Borneo and Sumatra. For more information, visit the <u>Earth Observatory site</u>. Photo © Adam Voiland (NASA Earth Observatory) and Jeff Schmaltz (LANCE MODIS Rapid Response).

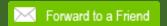
There are two main sources of this yearly fire problem, and ultimately it

Apes Conservation Fund for your support. We are looking forward to these projects and the positive impact they will have for the orangutans of the Gunung Palung landscape!



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"The true meaning of life is to plant trees, under whose shade you do not expect to sit."

> -Nelson Henderson

all comes down to land clearing for agriculture. One culprit is the very large plantations (i.e. oil palm, pulp and paper) that cover much of Kalimantan. Although developing peat forest is against the law in Indonesia, these mega growers have been given permits to do exactly that by local and regional governments. Once peat forests are drained, they essentially become an unlimited source of dry fuel. In addition to that, there is also a significant amount of clearing done by Indonesian small holder and subsistence farmers, who have traditionally used slashand-burn methods to prepare their land. Under Indonesian law, each person has the right to burn up to two hectares (about five football-field's worth) of land, and because there is little oversight of these practices at the local level, sometimes the fires set in community farmlands aren't managed well. If they spread into the peat forests already cleared by plantation companies, the problem is magnified and the fire situation spins completely out of control. These synergies and the lack of organized law enforcement at all levels of government make it difficult to say who is more at fault in this mess, but there is certainly shared culpability between the oil palm plantations, pulp and paper companies, and local people.



As forests across Borneo and Sumatra burn, so do thousands of hectares of habitat for orangutans and other biodiversity. Photo © Tim Laman.

These fires can affect wildlife, especially orangutans, in a number of ways. The first and most obvious is, of course, habitat destruction. Every year tens of thousands of hectares of rainforest are decimated. Some animals die in the fires, whereas some are forced out into human-dominated landscapes where they are more susceptible to poaching and hunting. Those that survive are confined to smaller and smaller habitats, until the populations in these forest patches are over carrying capacity (the number of animals that a particular habitat can support, which takes into account food availability and space requirements). This inevitably leads to higher mortality rates than usual. Although this "compression effect" is usually delayed, forest fires can still be considered the direct

cause of these animals' deaths. Finally, from my own casual observations from following orangutans and gibbons over the past several years, primate activity can also be negatively affected by the smoke. It seems that orangutans are more sluggish under smoky conditions, waking up later and going to bed earlier, and possibly not taking in as many calories as they should be. The gibbons sing less frequently, and it's not difficult to see how heavy smoke and poor visibility could hinder their movements.



This photo from September 19th shows the extent of the burning in Tanjung Gunung, the village closest to Cabang Panti Research Site. An area of peat forest nearly 2 kilometers wide was burning here, resulting in dangerous haze levels. Photo © Kat Scott.

So, what is GPOCP doing to help stop Borneo from burning every year? We work with the local government as much as we can to prevent the destruction of peat forests. Because we have been working in the Gunung Palung landscape for over 15 years now, our staff have productive relationships with local officials and we have been able to assist in the district-level spatial planning process. Additionally, our Customary Forest program aims to protect 7,500 hectares of orangutan habitat to the north of the National Park, much of it peat forest. Our Sustainable Livelihoods team teaches local farmers how to use their land more efficiently, decreasing the need for additional slash-and-burn land clearing. And, finally, our Environmental Education and Conservation Awareness staff help disseminate information about the dangers of forest fires and the importance of healthy rainforest habitats to local communities living around Gunung Palung National Park. This year there have been some encouraging efforts by the regional (West Kalimantan) and Indonesian national governments to sanction and arrest

large-scale growers and individuals who have broken the law by setting fires in peat forests, and we fully support further action against these offenders.



At our Bentangor Environmental Education Center we teach local people how to use sustainable, organic agriculture methods so that they can use the land they already own more efficiently and thus not need to burn more forest to plant crops.

From watching the outcry against these fires on social media and speaking with people on the ground, I think that this year has been a small turning point in public perception of the forest fire problem, from an issue that has in the past simply been tolerated and forgotten, to the true human rights and environmental crisis that it is. The significance and impact of the 2015 fire season remains to be quantified, but one thing is clear: with strict and serious law enforcement, combined with consistent community education and awareness campaigns, a forest-fire free Indonesia is not an impossible dream.

\*To learn more about the drivers and impact of forest fires across Borneo, check out <u>Erik Meijaard's recent op-ed in the Jakarta Globe</u>. The title of this piece is borrowed from a 2004 article in Nature by Peter Aldhous, also called "Borneo is Burning."

## Extraordinary Behaviors: The Rare Sighting of a "Water Finger Drip" in Cabang Panti

By Becki Ingram and Toto

The day began like any other. As with most orangutan research, our days at Cabang Panti start early and end late, sometimes with little variation and often involving long stretches without anything particularly unusual happening. But some days are indeed more exciting than others

- you can't expect or predict them, and they usually happen when you are least expecting it.

We were following Walimah, one of our best known and most followed individuals. Followed on and off since birth, she is extremely habituated, and thus totally undisturbed by our presence. And what made her even more interesting was that she was pregnant for the first time in her 16 years. Innovative and intelligent, Walimah has provided us with a detailed and impressive database of orangutan behavior over the years.



Adolescent female, Walimah, takes a break from foraging to look across the canopy.

This particular day involved a very lazy morning - she slept late, and once risen, continued into the neighboring tree which soared high above us, blocked by a swarm of tangled lianas and vines, for her first feeding bout. After three hours of eating, and very little sight of her, Hassan, Toto and I were resigned to the fact that today might just be a particularly slow day. We couldn't blame her - it couldn't have been easy to travel long distances at her stage of pregnancy. Once finished, she finally came down from the tree into our line of sight, and began making her way onwards through the forest. Suddenly she came to a halt and swung around a particularly exposed tree. Hassan was busy taking data, and Toto was tracking her movements with his GPS unit.

After a few moments' pause, Walimah started to take an interest in a hole in the tree, and all three of us could sense that something exciting was about to happen. Toto (during the three hours that she had been feeding) had cleverly made his own monopod out of a fallen branch, and attached his Handi-Cam to it improve the quality of his video. Our team had just recently been given these video cameras through a National Geographic Expedition Council grant to Tim Laman and Cheryl Knott. We now carry these video cameras during every follow with the aim of documenting the full range of interesting, but rare, behaviors that we are sometimes privileged to witness. All we needed now was a good vantage point. Toto and I scrambled up the hill and found a beautiful break in the trees just as Walimah began demonstrating a particular behavior that is

rarely ever seen in Cabang Panti - a "water finger drip" from a tree hole.



Field assistants, Toto and Hassan, take orangutan behavioral data at Cabang Panti Research Site. In addition to constantly collecting data, the assistants also always have their Handi-Cams at the ready to capture rare orangutan behaviors.

And so began this curious string of events. Walimah initially began trying to drink by sticking her head down the hole. The depth of this tree hole however, was a problem, and on top of that, her huge pregnant belly was getting in the way. After her first try, she tried a second time, this time pulling a vine closer toward her for balance as she hung upside down over the hole. The effort appeared extraordinary. Alas, she seemed unable to reach the water source, so after a third attempt, she used her hands to scoop the water out of the hole, and drip the liquid into her mouth. She did this four times in a row, successfully drinking the water on every occasion. She then removed some leafy debris from the hole, before leaning back in the canopy, and pausing from quenching her thirst. She wasn't quite finished yet though - she decided to go back in for three more drip drinks, letting the water fall onto her bottom lip, which she stuck out to strategically catch the falling liquid.



Walimah's "Water Finger Drip"

The aftermath was pure excitement. Toto flicked the camera shut, turned his head and looked me in the eye with a huge smile on his face. As unprofessional as it sounds, we both broke into a celebration dance - this was one of the most impressive and important videos we had ever managed to capture, and we simply couldn't contain our excitement. Although Walimah is known for her intelligent drinking techniques in Cabang Panti (she has been recorded doing this exact behavior twice before, in 2010) we've never been able to document it in such a way. As Toto put it, "This day was one of the most exciting days I've experienced since coming to work at Cabang Panti. We follow Walimah a lot and as the day was going slowly, I assumed it would just be another normal follow. Luckily when I am GPS person I always have my camera ready, and this time I managed to film the whole of Walimah's drinking! It was so cool - I have never seen her, or any other orangutan drinking, and I feel very lucky to have experienced it."



Research Director, Wahyu Susanto, demonstrates use of the stick monopod method for attaching a video camera, as he keeps a lookout for interesting orangutan behaviors to capture on film.

Indeed, orangutans rarely drink water. They seem to be able to get what they need from the liquid that is already contained in the foods they eat. This particular behavior, the "water finger drip" has only been seen eight times, by six individuals in the population of orangutans in Gunung Palung. Of these eight occurrences, four were performed by Walimah alone. Interestingly, all of these occasions were adult females except for one sighting from flanged male orangutan, Codet. We don't yet know if this behavior represents a cultural 'innovation' at Gunung Palung that has spread through social learning, or whether, given the right circumstances, orangutans at many other sites also do this. However, with over 70,000 hours of observations of wild orangutans at Gunung Palung, this is certainly a very rare behavior and we were thrilled to be able to document it on film!

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Orangutan Photographs © Tim Laman All other photographs © GPOCP staff