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Promoting Conservation, Research and Education for the World's Amphibians

SPECIAL EDITION: Remembering Phil Bishop

Amphibian Reintroduction Guidelines Are Here!

The Giant of the Pampas: Conserving Amphibians in a Global Pandemic Context.

... and so much more!

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field ecology course to inspire the next generation of conservation biologists? Always on the move, he was also a good sport. He enjoyed a good prank, even at his own expense, like when the digestive juice of a carnivorous pitcher plant was poured over his head to "cure" his baldness. These are a few of the things that I remember and I cherish the moments that we travelled on the same road together. He was a dear and long-time friend who will never be replaced.

The Bishops in Borneo

By Indraneil Das

t was not the first time Phil and I met (that was at the historical 1st World Congress of Herpetology, in Canterbury in 1989, when we were both grad students), nor was it the last (the 9th version, in Dunedin in 2020). Here, I shall recount Phil's and Debbie's visit to Sarawak, for the Sixth International Bornean Frog Race, in 2017, a memorable event for all of us.

The International Bornean Frog Race is annually organised by Universiti Malaysia Sarawak's Institute of Biodiversity and Environmental Conservation. Its aim is to draw public attention to the region's rich amphibian fauna, and at the same time, to deliver messages on nature conservation and amphibian protection. Since 2012, the Race is traditionally celebrated on the last weekend of April, and eight editions have thus been held, coinciding with the annual 'Save the Frogs Day', a global event celebrated via hundreds of events in over 50 countries worldwide, to highlight conservation issues facing the world's amphibians. The Race includes a number of amphibian-related activities, from talks and workshops (photography, drawing, painting, talks, demonstrations), to mini-teaching

modules on ecology and conservation for children, exhibitions of frog-related memorabilia, live-painting and art, screening of short documentary films, and an auction of frog-related merchandise. The highlight of the event is, of course, a photographic competition that pits competitors from up to 17 countries to capture images of the most number of amphibians (within the time limit and locality mentioned) as well as the best imagery using mobile phones, compact cameras, mirrorless and DSLR cameras. The generous cash prizes are provided by the many sponsors of the event, chief amongst them being the Ministry of Tourism, Arts and Culture Sarawak.

Over the years the event has gone from strength to strength, exposing the general public, particularly the urbanites of Sarawak and Borneo, to the sights and sounds of a rainforest by day and night, and showcasing the diversity of amphibians and other life in a convivial atmosphere. Many come with their entire families. Promotional activities undertaken include a dedicated website, a Facebook page, and other social media accounts that target inter-

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national as well as local participants, particularly students from Sarawak and elsewhere. At every Race, we invite prominent local and international amphibian biologists and other conservationists to deliver talks on amphibian biology and conservation. And every year, many cool items are produced for the participants, from attractive certificates for winners and participants, to field guides, car stickers, button badges, T-shirts, medals, notebooks, mobile apps, postcards and personalised postage stamps, with the frog motif.



With the late Dr. Lim Boo Liat at the Kalimantan View Point, Borneo Highlands. Photo: Indraneil Das

At the 6th International Bornean Frog Race 2017, held at Gunung Gading National Park, our speakers were Phil, all the way from the UK (where he was on sabbatical), and Dr. Lim Boo Liat, Malaysia's foremost biologist. We were all excited both with the speakers and the venue, Gunung Gading being a dome-shaped granite massif, clothed with hill dipterocarp forest. The Park is a two-hour drive from home, where we had never had the event before. It has a wonderful fauna and flora, including both a rich diversity of frogs and Rafflesia, the world's largest flower, and a cooperative and friendly Park staff of the Sarawak Forestry Corporation.

Phil came highly recommended by the speaker from the previous year's event, Jean-Marc Hero, who must have also provided a good word about us to Phil, and in no time the response to an invitation letter (with a request to stay for a week and give several talks!) was received:

"It would be fantastic for Debbie and I to spend a bit of time with you and we would love to see the interesting sites in that half of Borneo ... of course I'd be happy to give a talk at your institute on frog locomotion or NZ frog conservation or NZ frog biology or all three!"

All were thrilled, and plans were drawn up.

Phil and Debbie arrived on a long-haul flight from London on 26 April, and we, wearing Frog Race T-shirts, received them at the Kuching International Airport. We put up Phil and Debbie at the Century Hotel, located a 5 minute drive from the airport and from my own residence. Phil arrived with a bad cold, which had us worried but recovered in time for his first speaking engagement, which was the next day, 27 April, at a mini meeting (with a grand name: the Indo-Pacific Amphibian Symposium), and several Racers (from India, South Korea, Brunei Darussalam, Malaysia, and of course, New Zealand) presented papers at the campus of Universiti Malaysia Sarawak. Phil's was the inaugural talk, entitled "The Biology and Conservation of the Unique and Ancient New Zealand Frogs". To use a cliché it was an eye-opener for many of us, particularly the grad students, and even members of the audience representing conservation agencies, all remarking of the longroad ahead of us for amphibian conservation in a high diversity country as compared to the advancement made in New Zealand. Certainly coming from Phil (the lead author of the New Zealand Native Frog Recovery Plan), and with the visuals of wooden plank walks ('least frogs get crushed underfoot'), the message to us was stark. A philatelic exhibition was also arranged in conjunction with



At our drift fence in Sama Jaya Nature Reserve, where Phil discovered that the waterfilled buckets had become a breeding centre for Chaperina fusca, a new record for the site. Photo: Indraneil Das.

the Symposium, showing frogs as depicted on postage stamps and first day covers.

On the morning of 28 April we took the Bishops to Gunung Gading National Park, the Race venue. The Sarawak Forestry Corporation had kindly arranged for accommodation for all of us, including renovating the guest quarters for our speakers. After settling in Phil and Debbie looked around the Park Headquarters in the company of fellow herpetologists Ulmar Grafe and Amaël Borzée, familiarizing themselves with the local frogs.

The big day, 29 April, started early for all with a junior Race event, where the Bishops were left to their own devices, while we frantically swept away cobwebs, unpacked boxes, set up stations and signages, arranged chairs and tables, checked electrical connections, attended to 1001 queries by our guests and participants, and made sure there were no slip-ups when the Minister arrived. The first half of the day engaged all in the Junior Race, an event where local school children are invited and one which I personally felt was the most satisfying part of the event in terms of reactions and potentially long-term effects of the Race. One particular activity involved hiding tiny microphones in forested situations and asking children to recover them, as this requires finding them by listening to the calls. Both having spent time in Puerto Rico working on the Coquí, Eleutherodactylus coqui, a native to that particular part of the Americas and an invasive elsewhere, Ulmar attempted to pull Phil's leg, playing the 'co-kee' call on one of his microphones, clearly unsettling Phil!

The 'adult' portion of the Race started right after lunch, and Phil's talk was at 5:45PM, where he spoke on global amphibian conservation. Wearing multiple hats (ASA Chief Scientist, IUCN Amphibian Specialist Group Co-Chair and Executive Committee Member of the IUCN Amphibian Ark, besides Conference Director of the upcoming 9th World Congress of Herpetology, 2020), his voice was heard by all those who mattered, from young graduate students to conservationists and governmental agencies, the event being covered in the print media and on social media sites.

After spending the next day at Gading the party moved to Kuching, where we did the usual tourist things for the Bishops (sightseeing, shopping, eating and drinking). In the midst of these activities we managed to whisk Phil away to one of our study sites, the Sama Jaya Nature Reserve, a tiny protected area within the city limits and home to several heath and blackwater specialist frogs and to the very touristy Semenggoh Wildlife Sanctuary, where busloads of tourists arrive daily to have a peek at rehabilitated Orangutans, Pongo pygmaeus. On 2 May, Phil and Debbie visited the Kubah National Park, one of the premier frog-watching sites in this part of Borneo. As many as 72 species of amphibians have been recorded in the mountain range, and the Bishops got to see over a dozen in and around the famous 'Frog Pond'. One frog Phil and Debbie were particularly intrigued in was described by us in 2010 as one of the smallest in the world, the Matang Narrow-headed Frog, Microhyla nepenthicola, which breeds exclusively in the pitchers of the Pitcher Plant, Nepenthes ampullaria. Here Phil was briefed on the long-term ecological studies on frogs being conducted by our students and collaborators using automated sound recorders and other techniques. The Sarawak Forestry Corporation had requested Phil to interact with the Park staff, and a talk on the frogs of New Zealand was promptly agreed to. However, the speaker was a bit delayed on account of the untimely appearance of a coral snake outside the venue, causing cameras to be pulled out and wild scenes of herpetologists sprawling across the road trying to photograph it, much to the exasperation of the VIP guest from the Ministry.

On 4 May 2016, after an early lunch we started a 2 hour journey from Kubah to Gunung Penrissen, a submontane forest listed as an Important Bird Area. Conditions were perfect for the main quarry: the Bornean rainbow toad, Ansonia latidisca. This was one of 10 'Lost Frogs' in a campaign by Conservation International about a decade ago, that was rediscovered at this mountain summit and extensively covered by the media for its wildly colourful appearance and backstory of not being seen for nearly a century. We stayed for the nights of 4-9 May at the Jungle Cabins of the Borneo Highlands Resort, a series of cosy wooden cabins on low stilts with warm beds, running hot water and great views of the mountains. The presence of my graduate student, Pui Yong Min, improved our ability to find frogs and not get lost, and long and pleasant conversations were had into the night with Ulmar and Dr. Lim. And yes, the Rainbow toad did reveal itself to our most distinguished guests.

Finally, it was time to let go of the Bishops. On the morning of 9 May we had an early breakfast, departed the cloud-swirling Borneo Heights at Penrissen and arrived at the airport in Kuching in time for the flight back to cloud-swirling London.

Our last meeting was in Dunedin, at the wind-swept restaurant by the beach, where Phil congratulated us for winning the right to hold the 10th World Congress of Herpetology, to be conducted here in Kuching, Sarawak, Malaysia in 2024. As I reflect back, Phil was the picture of good health and positivity. The news of his illness and the rapid decline of his health were thus completely unexpected to us.

Phil was no regular professor of zoology, but had a variety of interests outside of his specialized field. We bonded on various levels: of course amphibian diversity and conservation, as well as

John Cleese trivia and the enjoyment of beer production and consumption, and a valued contributor till the end to our 'Beer Diversity' WhatsApp Group.

The State of Sarawak will be indebted to Phil and Debbie for their participation at the Frog Race and for their huge support to Kuching as the host of the 10th World Congress of Herpetology, to be held in August 2024.

In preparing this piece remembering Phil and Debbie's visit to

Sarawak, their warmth and friendship, I thank Mohamad Hasri Al-Hafiz Bin Haba, Rahah Binti Mohamad Yakup and Pang Sing Tyan for helping with the images, and Amaël Borzée and Genevieve V.A. Gee for their comments.

Treasure Hunting With Legends

By Jude Hooson & Sara Smerdon

ahakirau Forest Estate is a mainland sanctuary located on the backbone of the Coromandel Range, on Aotearoa's north island. It's our privilege to be the guardians of many endangered species, including two of only three extant species of frog endemic to New Zealand; Leiopelma archeyi and Leiopelma hochstetteri. We have many partnerships in place to research, protect, restore and advocate for the wonders this forest holds.

Our relationship with Prof. Phil [and the University of Otago] began in 2015, but immediately he felt like a lifelong friend. Phil was one of those special human beings with deep intellect and highly specialised knowledge that could connect with people from all walks of life and sweep them into his orbit with his enthusiasm, charismatic personality and good humour. How could you not love someone who arrives to dinner bearing gifts of a t-shirt proclaiming "FACT... The survival of the earth depends on frogs", and a bottle of Arrogant Frog Cabernet Sauvignon?!

We love to share the beauty of our forest, especially the nightlife with keen nature lovers as well as specialists in the field of conservation. Many a zoologist, ecologist and herpetologist have joined us over the years for a hunt for the rare critters that call this little piece of paradise home. Only one of our guests has ended up with a highly endangered Archey's sitting on his lapel, completely by accident, and as if whispering in his ear. Welcome, Phil, to the project, literally a magnet for amphibians! We knew from this initial encounter that our relationship would be spiced by adventure, intuition, passion, serendipity, a lot of fun and most importantly with the approval of the critters we aim to protect.

In October last year Phil, Debbie and their amazing canine companion Holly spent a week with us. Holly is the first conservation dog to be trained to indicate the presence of Archey's frogs. She had already aced her studio work and city park exercises, and Debbie was ready to test her performance in true Archey's habitat. Mahakirau seemed a perfect location to undertake this course. We happened to be surveying for geckos in the same period with our research partners from the Auckland Zoo and were able to mark observations of endangered Archey's the night before Holly's daytime drill, an aid for Phil to confirm a successful find. It took Holly less than ten minutes on the job to find her first wild frog. She made it look way too easy!

Holly - the world's first 'Archeyi Sniffing Dog' - is a mascot for the many decades of work carried masterfully by the Bishops. Her success represents the great knowledge, discipline, passion, innovation and courage fundamental to her trainers' lives. She also inherited that same joyful glee in the eye, only ever evident in individuals who do what they love and accomplish miracles through purity of vision and utter determination.

One of our last conversations with Phil was on a visit to our

newly constructed field base that he had so generously endorsed in funding applications and social media for us. An inspiring discussion took place about a potential Hochstetter's frog longitudinal monitoring study here at Mahakirau, with Phil animatedly pointing out the fascinating discoveries that could be made over time and envisaging what the outcome would be in 20 years. It was so heart wrenching and incomprehensible to hear a couple of months later that he had passed away.

We look forward to working further with Debbie and Holly and know that Phil will be with us, looking over our shoulder, offering advice and murmuring encouragement, just like his first Mahakirau frog had done when welcoming him to this enchanted forest.

We are certain a little piece of Phil's soul will be ever present, here and in all the special places he has left his legacy around the globe. We only need to care for the frogs to remain close to him.



