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# Tony Whitten and biodiversity: personal recollections

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It seemed a lifetime ago when I received a letter in 1994 from an Englishman who was working on a book on the ecology of Java and Bali. Based in Bali, he had obtained some long-legged cave crabs from a cave in Nusa Penida off the island which looked strange. It was strange – and new to science! Tony suggested we name it after the project he was working for, "Environmental Management Development in Indonesia" or EMDI. A year later, Tony and I described the crab as new – *Sesarmoides emdi*. More importantly, it started a scientific relationship and friendship that endured till his unfortunate demise in 2017.

Tony loved his science. Loved his caves and loved his snails. He loved the science of biodiversity and had an immense appreciation and understanding of what taxonomists and field biologists do. Infused with an immense curiosity, he was always looking for this and that and wanted, needed to know what it was. He was driven – always mission oriented to get things done and for others to get things done. Not just for him but also for their own science. He genuinely helped others without expecting any returns. We returned the favour regardless because that is what friends do for each other. Beyond the science, he was always a trusted friend - the science was the glue. His was an honest broker in a mercenary world. An old school conservative whose word can be taken at face value. An honorable man. His optimism was singularly annoying – he always hoped for the best and believed in the good that can be done. Even through the many nightmares of bureaucracy, politics and sheer stupidity that occurs in so many endeavours. I remembered asking him some years ago why he was always chasing a new rainbow, a new challenge. His answer? Why not? If it was good, someone should do it. Some must do it. And he drags people along through his enthusiasm and passion. He is hard to say no too.

He went from EMDI to World Bank. Then he said he will retire. I laughed – he was not the "settling type". Of course I was right – he joined FFI shortly afterwards. His last project with me started in early 2017. He was "scheming" to develop a multidisciplinary program to save his precious caves – one that will not involve just scientists and managers but also industry and politics. The only way to change something bad is to get the whole gang together – forget the finger-pointing – just ask how best to get the job done. To save the necessary, we had to do whatever will work. Pragmatism and being realistic – not just idealism. He overcame my cynicism and persuaded me it was viable. Absolutely mad – so mad that it may actually work! In our "wicked" minds, we conceptualised an English-Singapore centre involving "Construction, Cement, Climate Change and the

Tony Whitten at 13th International Otter Congress, Singapore Zoological Gardens, 4 July 2016. Photo by P. K. L. Ng.

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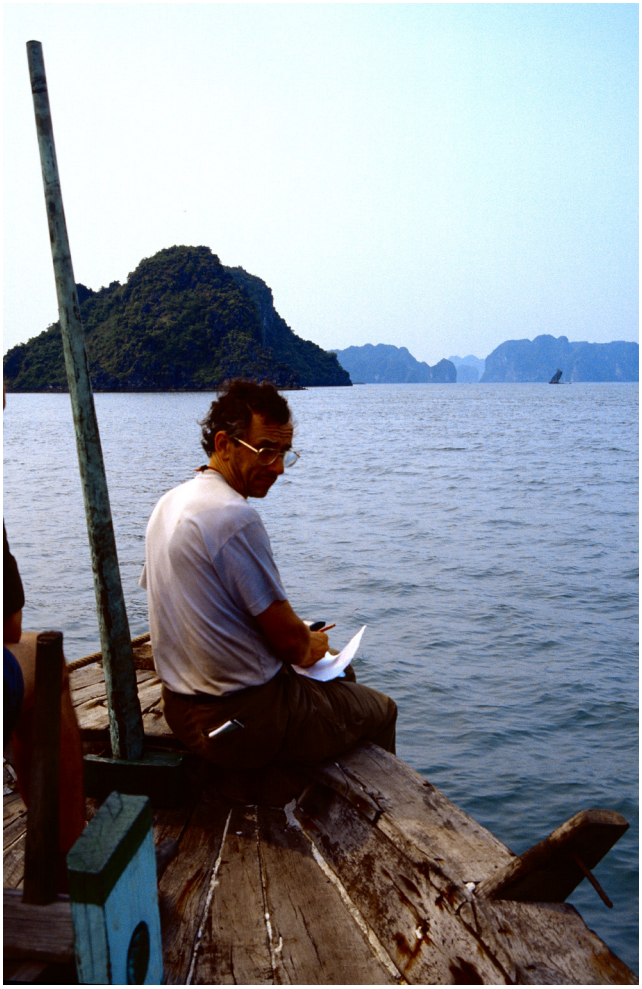

Vietnam: Halong Bay, between Cat Ba Island and Halong, 27 September 2008. Photo by M. Kottelat.

Conservation of Karst" what Tony called our "C6K Consortium". As the ideas crystallised and evolved, I was confronted with the worst news possible – his untimely passing. C6K may now never realise – it will be hard to do without the energy, passion and network that Tony had in barrel-loads.

Peter K. L. Ng

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To me, the two phrases that would best describe Tony Whitten are "He managed to make me do things I did not want to do" and "He made them possible".

I first came into contact with Tony in 1984, at the time he was writing *Ecology of Sumatra*. This was quite close to the beginning of my career and I was working on Southeast Asian fishes generally, with a greater interest in northern Thailand and Borneo. Tony wanted information on, and lists of, the freshwater fishes of Sumatra, on which not much had been published since about 1916, and on which I could not contribute much. He soon came up with the suggestion to write a book on the fishes of western Indonesia. I was not attracted to the idea, but one day in 1988, an 8-cm thick, 2 kg manuscript landed on my desk. Tony had compiled such information as was available to him and bound this into what he hoped would be a book. Of course, I had endless objections with regard to size, format, content, etc… and I ended up trapped into writing a *Freshwater Fishes of Western Indonesia*.

Then, Tony started work on his *Ecology of Sulawesi*, and with it came similar requests. This time, he tried to bait me to become interested in the fishes of Sulawesi. Although it was already known that the fish fauna of the island had a number of endemic species, I had other priorities, and I did not particularly want to be involved… and, soon after, my wife and I ended up in Sulawesi and this resulted in the discovery not only of numerous new species and genera of fishes, but also a new reproductive guild and several species flocks in the ancient lakes.

The still-in-gestation book became *Freshwater Fishes of Western Indonesia and Sulawesi*. It was supposed to be mainly a compilation that included only black-and-white illustrations reproduced from the literature, but it ended up (in 1993) as a re-analysis of numerous publications, examination of material, etc. Tony managed to secure funds to add 800 colour photographs as well as the production of two versions (a bilingual Indonesian-English, and English only). Although now outdated, the book is still widely used (a replacement is in preparation).

When Tony moved to work for the World Bank, he knew how aquatic diversity was overlooked or misunderstood in the planning of most development and industrial projects. Freshwater biodiversity was perceived only as kilograms of fishes (native or not) in fisheries and aquaculture statistics, and not as communities of species. Aquatic biodiversity assumed an important position in Tony's agenda, and to promote it, it needed a document in a format and style that could be digested by 'experts', managers and bankers. For sure, I was not interested in that kind of desk work. My answer was No. So, we ended up writing *Freshwater Biodiversity in Asia etc.* (2006). Tony even managed to have me sitting for two weeks in an office in Washington, D. C., complete with jacket and tie, something I had promised myself would never happen.

Eventually, the topic of aquatic biodiversity started making its way into some projects. My name was suggested as an expert to conduct impact assessments for a huge hydropower project in Laos (Nam Theun 2). Not for me, I said — I worked on Sundaic fishes, not Indochinese ones. I even suggested other names. But to no avail. A few weeks later, I was in Laos (and, in hindsight, with no regrets). A few surveys and reports later, and Tony was into his Field-Guides-in-Local-Languages phase. He asked if parts of my reports could be compiled and translated into a book on the fishes of Laos. No way. I did not want to, there were still too many blanks on the map. And too many things we did not know. And the deadline was too close. And the funds were earmarked for translating existing books, not writing new


Tony Whitten (asterisk) at the World Bank–IUCN sponsored 'East Asia Workshop on Limestone Quarrying and its Impact on Biodiversity and Cultural Heritage', in Bangkok on 25–27 January 1999.

ones, and so on. Unsurprisingly, I ended up writing the book anyway. Tony made me an offer I could not refuse: funding fieldwork to fill in some of the gaps.

Then came a project in Vietnam which, unfortunately, had to be terminated before completion. Nevertheless, some of the allocated funds could be rescued to produce a review of the taxonomy and nomenclature of the freshwater fishes of the northern part of the country. That was followed by a review of the diversity and nomenclature of the fishes of Mongolia. This was a quite dry, technical report. Nevertheless, Tony decided it should be published. Meh, I argued that for a good publication, good pictures were needed. I thought I had escaped. But the completion of a large project was approaching, and there were some savings that Tony could utilise for getting fresh photographs from the field. The word 'field' was the clincher. But the money absolutely had to be spent in the next few weeks. I ended up touring half of the country for six weeks. Thanks to the 12-hours time difference between Mongolia and Washington, I could work in the field during the day and email pictures in the evening, and during my nights, somebody in Washington would work on them, lay out the text, and see that proofs were in my mailbox next morning. Printing began two days before the deadline, at the very moment I was taking off from Ulaan Baatar.

Next came Myanmar, a promise I have yet to fulfill.

Although Tony was not directly involved in the research, by creating the projects and the means to conduct them, his impact was crucial to advancing awareness of fish diversity in Southeast Asia as well as promoting their biodiversity value (species, not just kg or $!) in environmental impact assesments. In addition, in the projects and consultancies he organised, Tony tried to include surveys to obtain real baseline data (and not just library or on-line exploration, which is too often the practice). This is important because they often involve areas otherwise not accessible to scientists, or off-limits for political reasons; work for large industrial projects allowed permits and access to means not usually available to researchers. The scientific by-product of surveys generated by projects managed by Tony, or which he could influence, includes the discovery of about 140 new species of fishes, to mention only those already described. Plus frogs, crabs, prawns, copepods, and diverse other fauna.

Thank you, Tony, for making so much happen that would never have happened if not for you.

Maurice Kottelat

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Summer 1986. French cavers exploring the Maros karst in South Sulawesi, discovered huge underground rivers and a wonderful cave fauna. It is at this time that I first met Tony Whitten, providing him with information on these fresh discoveries for the book, Ecology of Sulawesi, he was writing with Greg Henderson. After that, I remained in loose contact with Tony for several years.

A major event occurred in 1993, when Vietnamese colleagues alerted us that the best karst of southern Vietnam, the Hon Chong hills, was to be quarried on a large scale by a cement company. We carried out two biological field surveys, and to our surprise, the collected invertebrate fauna turned out to be outstanding in the number of endemic and relict species found. This raised concerns about the risk of massive extinctions during quarrying, especially given the small size and isolated geography of the limestone hills. We

contacted several international conservation bodies and organizations to ask what can be done to avert a catastrophe. The answers we got were polite but non-committal.

April 1996. Tony Whitten, freshly appointed as Senior Biodiversity Specialist for East Asia and the Pacific at The World Bank, contacted me as he was keen to promote cave ecosystem conservation, a field largely ignored in the environmental policy of the World Bank and conservation NGOs. I sent him the documents about Hon Chong. He immediately understood how critical the risk of massive species extinction was and began to champion this through the halls of World Bank and beyond. The struggle experienced many ups and downs. Tony, however, was relentless when he gets going, explaining the case to World Bank and International Finance Corporation officers, stakeholders, environmental services, heads of mining companies as well as local leaders, incessantly trying to convince them to take action. A man of deep conviction, Tony was also a man of flexibility and of courage. He pushed discussions and negotiations as far as possible to try to save something of the unique biodiversity of the Hon Chong limestone hills, and, when necessary, he did not hesitate to argue and confront some very powerful bodies, weaker men would have simply given up. A selfless commitment that compelled admiration from all taxonomists and ecologists engaged in the Hon Chong struggle.

At the same time, Tony became increasingly fascinated by the strangeness of cave animals and was enthusiastic about all the discoveries of new genera and species at Hon Chong that happened month after month. Aside Hon Chong, he also launched several surveys related to karst conservation issues, in several of which I had the chance to be involved: in Indonesia (Nusakambangan and Kalimantan), in Vietnam (Ha Long Bay) and in China (Guangxi). The project in Guangxi was the most important ever in the field of regional cave biodiversity research, as it involved many cave biologists from China and many parts of the world and was linked to a big socio-economic project of the World Bank. This exercise contributed substantially to the breaking down of walls between basic work on biodiversity and development issues.

These surveys have generated over the last three decades, the most important advances ever, in our knowledge of cave and karst biodiversity in Southeast Asia and China. They have also resulted in the emergence of academic teams in several countries of the region, which are now at the front of biological researches on karst and cave fauna.

Species extinction risks at Hon Chong, and more recently at Gunung Kantan in Peninsular Malaysia led Tony to realize that the most serious and irreversible threat on karst biodiversity worldwide are mining of endemic-rich isolated limestone outcrops. Stemming from this evidence, he pushed me in 2013 to set up with him, the Cave Invertebrate Conservation Group at IUCN, dedicated to the red-listing of subterranean and karst invertebrate species. The vision was to provide internationally recognized tools for solving critical conservation issues in karsts across the world. The work continues today, focusing on these Chinese beetles which fascinated him so much. Today, however, the dissemination of the results is much less efficient – and the reason is simple, we have lost Tony, with his passion and magical negotiating skills. But what he has started will continue and it is a legacy that will have profound positive effects on the conservation and future of karst plants and animals!

Louis Deharveng