

Obituary

Bakhtiar Effendi Bin Yahya 25 December 1973 – 24 February 2020

Bakhtiar as a student, teacher and researcher

Dr. Bakhtiar Effendi Yahya, one of the key organizers of ANeT, suddenly passed away on 24 February 2020. Due to the spread of the COVID-19 in Japan and Malaysia we could not rush to the funeral. Apparently, he was really a devoted son and took care of his sick mother (stroke survivor) for years. He decided to send her back to Johor

Bahru when he was diagnosed as Denggi/malaria and needed to enter hospital. He was discharged from hospital later and continued to go for work but later he was found dead in his house by his colleagues who came to check for him when he didn't answer calls and sms because they knew that he had just recovered from hospital and worried about his condition.



Fig. 1. Bakhtiar and Seiki found a greeny nest of *Myrmecaria arachnoides* for the first time in Poring, Sabah (13 March, 2008). A: Workers licking honeydew. B: Multiple chambers of the same nest (outer sheet removed). C: Nest on banana leaf.

Bakhtiar san was born on 25 December 1973 in West Malaysia. After having finished his BSc at Universiti Kebangsaan Malaysia Bangi in 1997, he moved to Sabah to start MSc at Universiti Malaysia Sabah (UMS) in 2001 under the supervision of Prof. Maryati Mohamed, a famous myrmecologist and one of the key persons who established the new university campus at Sepanggar Bay, Kota Kinabalu. Since 2001 to 2007 Bakhtiar worked for the Institute of Tropical Biology and Conservation as a tutor, and from 2008 as a lecturer and one of Deputy Directors (Research and Academic section) during 2008 to 2010 and 2012 to 2015.

Bakhtiar, as a PhD student, stayed in Kagoshima, south Kyushu, Japan to study *Myrmicaria* ants of southeast Asia, the group Maryati loved, because she was seeking for a student who could resolve difficult problems hanging about their taxonomy. Bakhtiar arrived in Haneda (Tokyo) on 2nd April, 2003 and came to Kagoshima University as a Monkasho scholar for doctoral course. Syaukani san, coming from Aceh, Suma-

tra, arrived together with him by the same flight to study termites for his master thesis. They learned Japanese language for half year, then entered the postgraduate course at the Graduate School of Science and Engineering.

Myrmicaria was a really difficult group comprising many cryptic species. Bakhtiar started with his specimens collected in Sabah and material at my (Seiki's) lab originating from various parts of Southeast Asia. He quickly recognized two species groups, i.e. *M. arachnoides* group (Fig. 1) and *M. brunnea* group, which are different in nesting biology as well as morphology. However, in most of old literature taxonomists studied only isolated worker specimens. Bakhtiar tried to locate colonies for getting complete sets of adults (worker, queen, male), but it was very difficult task particularly for the *M. brunnea* group species because their nests are generally constructed in the soil close to big trees. Excavation of a single nest often took whole one day with fingers swollen. In Borneo he found many forms of this group that were supposed to be cryptic species.



Fig. 2. Bakhtiar at Museum Zoologicum Bogoriense, sorting ant specimens from G. Halimun (13 September, 2004).

However, the sorting of the material into biological species was extremely difficult since every form has morphological variation (size, proportion, sculpture) and difference between the forms was often subtle.

He first published a paper in 2006 on the nesting biology of *M. arachnoides* based on observations in West Java with help of Dr. Rosikon Ubaidillah and Mr. Akhmad Rizali. All the nests were found on large leaves of plants and made of plant fiber (carton). Colonies were polydomous and polygynous. Then he compared morphological and behavioral characters between the two species groups, showing them to be distinct lineages adopting quite different nesting behaviors in spite of similar body shapes. His doctoral dissertation (March, 2007) was a synthesis treating the species of entire South-east Asia; all the adult sexes/castes, larvae and nest structure were involved in the species accounts.

In our laboratory in Kagoshima he was always cheerful to other students and always diligent. He had many Japanese friends and had good relations with other foreign students (*ryūgaku-sei*). His fluent English was a model for Japanese students, and he quickly mastered Japanese language for daily conversations with laboratory mates. Although as a muslim he cannot drink with us, he enjoyed small parties at the lab and in restaurants. The presence of Bakhtiar and Syaukani should have helped our Japanese students learn Islam culture; I (Seiki) even read a Japanese translation of al-Qur'ān to understand them. He also joined activities in Indonesia, e.g., sorting ant specimens at Museum Zoologicu Bogoriense (Fig. 2) and field surveys with us (Fig. 3). When the late Dr. Rudy Kohout and his wife visited Kagoshima, he joined an excursion to Chiran, a famous special attack sortie base during the Asia-Pacific war (Fig. 4).



Fig. 3. Field trip in Aceh, Sumatra, Indonesia; from left: Bakhtiar, Rijal Satria, Seiki and Syaukani (19 September, 2012).



Fig. 4. Eva, Rudy and Bakhtiar at Kagoshima Central Station, before leaving for Chiran (2 July 2006).



Fig. 5. Bakhtiar, Maryati and Petherine talking about ANeT management at 5th ANeT meeting (Kuala Lumpur; 30 November, 2005).



Fig. 6. Exploring Maliau Basin ant fauna. From left: Bakhtiar, Seiki and Anati on a walkway (9 November, 2011).

After coming back to Sabah, he continued to study *Myrmecaria* ants, and published the second paper on the morphological and behavioral differences between the *M. arachnoides* group and *M. brunnea* group. He also tried to complete revisions of these two groups; unfortunately, before the completion of the manuscripts we lost him suddenly. At the same time he was busy to collect ants from various habitat types in Sabah to develop the ant collection at BORNEENSIS, Institute of Tropical Biology and Conservation, UMS. Rural areas were preferred as a target because most previous researches were biased towards primary forests and plantations.

Bakhtiar joined ANeT from the first meeting held in Bangkok, Thailand in 1999. At that time the president of ANeT was Prof. Maryati Mohamed, under whose supervision several students, including Erwin Widodo from Indonesia, were studying arthropods in Sabah. Bakhtiar participated ANeT meetings until 2015 (8 times; he was absent from 3rd and 4th meetings) as a right-hand person of Maryati (Fig. 5). From 2011 he worked as a secretary of ANeT with Ms Petherine Jimbau to manage its office and arrange biennial meetings. His fluent English helped Asian members to communicate with Westerns in oral sessions and committee meetings.

As my (Anati's) supervisor Dr. Bakhtiar was a great teacher at UMS, really being passionate in passing on fascination of ants and his own works to students. When I finished my Bachelor thesis in 2010, he recommended me to work on the taxonomy of *Pachycondyla* (sensu lato) ants for my master study. I started this topic in 2011 under his guidance and had the chance to work with Yamane sensei in both laboratory and field (Fig. 6). He let his students be involved in a lot of projects on ants including scientific expeditions with many people gathered around from government sectors (Sabah Forestry Department and Sabah Park) and NGOs (WWF and SAFE Project). He also helped his students join the International Conference on Ants–Borneo program in 2013 (hosted by IBTP, UMS) as participants as well as voluntary staff. He let us experience how to work together with different organizational parties and this certainly helped us in increasing our career for the future.

Most of his students know that he was compassionate, strict and quite perfect, worked on schedule and systematically. He stayed overtime with all of his master students, i.e. Afif, Musa, Afifi, Hasrin and myself (Anati) in the lab and monitored their research. That ensured us to finish our research and graduate on time. We also

enjoy eating out and celebrating birthday party together. We all had just occasionally a tea time together in the afternoon after a hectic work in the lab. During our field sampling together, he always pushed our potential to the limit and made us become more independent and physically fit.

We lost an able key person of ANeT, and the only professional ant taxonomist in Borneo. We hope young people in Sabah will follow him to clarify the ant fauna of Borneo and improve the ant collection at BORNEENSIS.

We would like to thank the editors of Asian Myrmecology for useful comments, and Ms Petherine Anak Jimbau of the Institute of Tropical Biology and Conservation (UMS) and Dr. Arthur Y.C. Chung of the Forestry Department of Sabah for kind help in improving the publication list.

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