

## TWENTY NEW TAXA DESCRIBED IN *HOMALOMENA* SINCE 2011

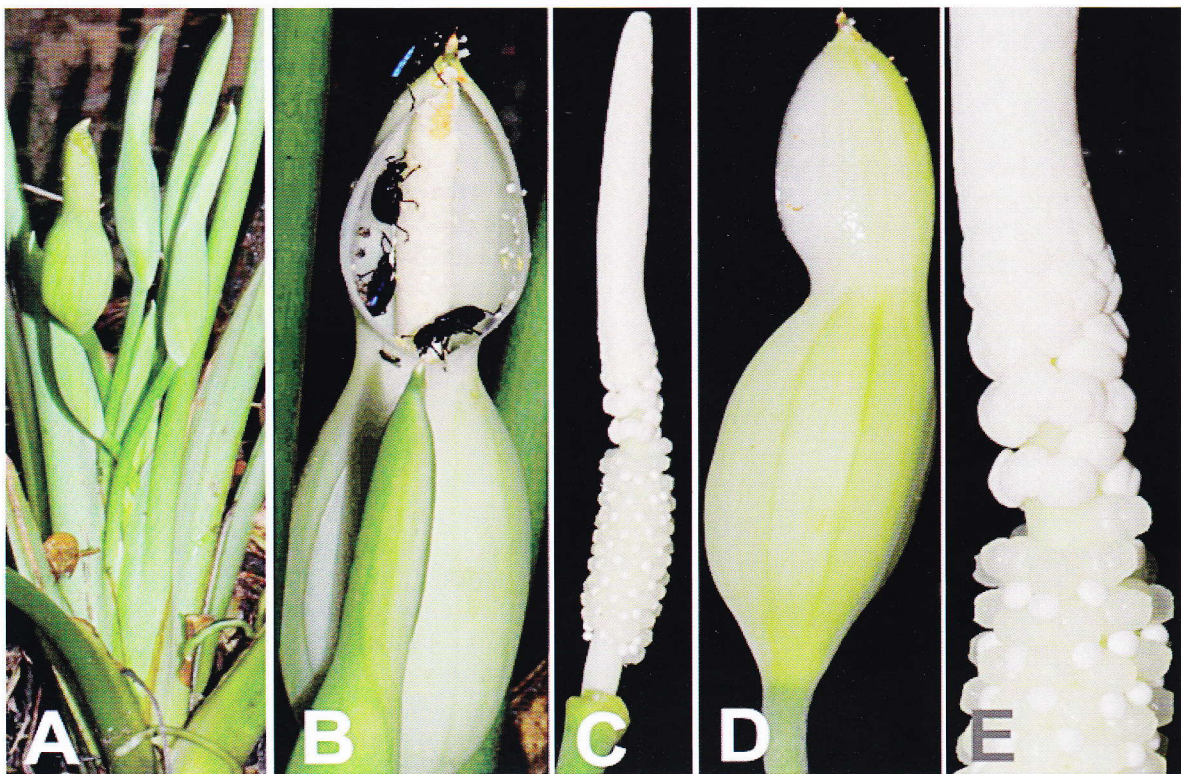
**Researchers:** Sin Yeng Wong and Yin Chen Hoe

*Faculty of Resource Science and Technology, Universiti Malaysia Sarawak*

Fieldwork on Borneo continues to reveal additional taxonomically novel *Homalomena* species. Twenty novel species were described for the genus *Homalomena* from 2011 to 2014. Amongst these are three new species of *Homalomena*, each restricted to one of the richest ecological habitats on Borneo- lowland forest over shales. *Homalomena cowleyae* Boyce & Wong, is restricted to Setap Shales in Brunei and across the Sarawak border in Limbang. Plants occur as scattered individuals or in small groups, and are decidedly uncommon. *Homalomena imitator* Boyce & Wong is so far known only from Sebauai, Kapit, Sarawak, where it is scattered, although not notably rare. *Homalomena mutans* Boyce & Wong occurs only from forest remnants in the environs of Kapit town. Extensive fieldwork in the greater surrounding area as far as Batang Balleh to the east and Pelagus to the north has failed to locate further populations of this species, although one of its associated species,

*Homalomena ibanorum* Wong & Boyce, commonly occurs throughout this area. Examination of the Araceae collections of the Herbarium, Brunei Forestry Department (BRUN), and subsequent invited fieldwork in Brunei late in 2010 confirmed two highly distinctive novel *Homalomena* restricted to forested vertical sandstone bluffs in the Teraja area. There were described as *Homalomena wongii* Wong & Boyce and *Homalomena terajaensis* Wong & Boyce, belonging to the Cyrtocladon and Chamaecladon supergroups, respectively. For *Homalomena* alone, we estimate that there are at least 150 more new species to be formally described in the next 10 years.

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*Homalomena wongii* Wong & Boyce. A. Immature inflorescences. B. Inflorescence at pistillate anthesis with two genera of visiting Coleoptera: Chrysomelidae. C. Spadix (spathe removed artificially). D. Detail of the lower spathe exceeding spathe limb in length. E. Interstice.



## FIFTY NEW TAXA DESCRIBED IN SCHISMATOGLOTTIDEAE SINCE 2011

**Researchers:** Sin Yeng Wong, Shook Ling Low and  
Im Hin Ooi

Faculty of Resource Science and Technology,  
Universiti Malaysia Sarawak

A new genus, *Schottarum* Boyce & Wong was described in 2014. *Schottarum* is endemic to the Kanowit-Song-Ai drainages, Sarawak, and probably beyond to the Bentuang Karimum National Park in Kalimantan. The generic name honours the Austrian botanist and plantsman Heinrich Wilhelm Schott (1794–1865), one of the founding fathers of Araceae systematics, the first monographer of the family, and the first botanist to make careful comparative studies of aroid inflorescences, flowers and fruits, through which he created the basis of Araceae taxonomy for succeeding generations. In addition to this, ca. 50 novel species were described for the tribe Schismatoglottideae from 2011 to 2014. Amongst these novelties, 19 new species of *Bucephalandra* Schott were described with these changes taking *Bucephalandra* to 27 species. For the genus *Aridarum*, the recognition of 11 new taxa has increased the number of described species to 21. *Aridarum montanum* Ridl., the type species of the genus, had not been recollected since Cecil Joslin Brooks gathered a single specimen, purportedly on Gunung Santubong in 1909, has been refound on exposed shales in Sri Aman Division, and Sarikei Division, Sarawak. The most recent review of *Piptospatha* recognized 14 species, including four additional species described from Borneo since 2012. This included recollection of the type species, *Piptospatha insignis* N.E.Br., which was first gathered from an unspecified locality by Burbidge, for the first time since 1877.

We estimate that there are at least 350 more new species to be formally described in the next 10 years.

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The enigmatic *Aridarum montanum* Ridl. on a shale waterfall. Picture courtesy of Mike Lo.

## A STUDY OF BACTERIAL SPECIES FROM WILDLIFE AND ENVIRONMENTAL SAMPLES FROM SELECTED NATIONAL PARKS IN SARAWAK, MALAYSIA

**Researchers:** Lesley Maurice Bilung, Micky Vincent,  
Kasing Apun and Mohd Tajuddin Abdullah  
Faculty of Resource Science and Technology,  
Universiti Malaysia Sarawak

Wildlife species are known reservoirs of potentially pathogenic microorganisms. Some of these pathogens may cause contagious diseases due to the potentiality of transmission from one person or species to another. Due to the presence of these potential threats, it is important to determine the presence of these pathogens in the environment. This study discusses the occurrence of three commonly found pathogens (*Salmonella typhimurium*, *Listeria monocytogenes* and *Escherichia coli* O157: H7) in wildlife species and environmental samples (soil and water) from three selected national parks in Sarawak, Malaysia. The samples were enriched in various enrichment media specific to the microorganisms, followed by isolation on selective media. Polymerase chain reaction (PCR) targetting species virulence genes (*S. typhimurium*-*fliC* gene, *L. monocytogenes*-*hlyA* gene and *E. coli*-four shiga toxin genes) were then performed to confirm the results. Representative isolates were subjected to antimicrobial susceptibility test. Overall, *S. typhimurium*, *L. monocytogenes* and *E. coli* O157: H7 were detected from all three national parks but with low occurrence, while the results from the antimicrobial susceptibility test showed that some isolates had higher ability to resist multiple antibiotics. Thus, the data collected through this study can serve as vital information in performing microbiological risk assessment on zoonotic pathogens in Sarawak, Malaysia. This study could also provide the baseline data for future epidemiological surveillance and preventive medicine studies.

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