



DR LAHIRU SURANGA WIJEDASA

Consultant Botanist/Arborist with over 15 years of experience

Year of Birth
1982

Nationality
Singaporean

Education
PhD Conservation Biology/Land Use Policy– Lady McNiece Fellowship, National University of Singapore (NUS)
M.Sc. (Botany and Taxonomy)
B.Sc. (Life Sciences)

Language Capabilities
English, French, Sinhalese, Malay/Bahasa Indonesia

Countries of Work Experience
Singapore, Malaysia, Indonesia

Proposed Position:
Lead Specialist - Flora

Dr Lahiru is a freelance consultant who set up ConservationLinks Pvt Ltd in 2015. He completed his BSc at the National University of Singapore in 2006. He was previously the Senior Arborist at the Singapore Botanic Gardens and the National Parks Board between 2006 and 2013. During which time he also received the Ministry of National Development graduate fellowship to study for a Masters in Plant Taxonomy at the University of Edinburgh/Edinburgh Royal Botanic Gardens, which he passed with a distinction. He received the Lady McNeice graduate fellowship to carry out his PhD, which was completed in March this year at the National University of Singapore.

He has worked on biodiversity, agriculture, land use and policy in South and Southeast Asia since 2004 within government and in NGOs, as a research scientist and a consultant to companies. The journey to higher scales of action has been driven by an understanding that landscape sustainability needs to go hand in hand with agriculture related livelihoods and land use planning. His experience over the last sixteen years has ranged from describing six species of trees and two species of shrubs new to science, vegetation studies, remote sensing and policy related to agriculture and conservation. This resulted in over 28 scientific and policy publications on top tier scientific journals and one book. His work has been featured in international media over the years. More importantly, through his research (28 publications) and consultancies, he has worked with governments and companies to improve environmental management of biodiversity and forests within their landscapes.

The eleven multidisciplinary environmental consultancies which he has carried out have been with government agencies, private plantation companies and local developments in Southeast Asia. He has identified and developed management plans for biodiversity and vegetation to be conserved/restored prior to, during and sometimes after development. The longest duration project (two years) was for peatland restoration in a private company concession. The projects have ranged from 30ha to 700km², in primary tropical rainforest, mangrove forest, coastal forest, hill forest, secondary forests and urban areas. Nearly all fieldwork outside of Singapore have been in rural areas without phone reception, and in Indonesia without English speakers.

Representative Project Experience

Consultant Botanist for Night Safari (Wildlife Reserves Singapore), Singapore. 2020 – Present.

To identify and determine the IUCN conservation status of non-tree vegetation in the night safari area.

Consultant Botanist for River Safari (Wildlife Reserves Singapore), Singapore. 2019 – 2020.

To determine the IUCN conservation status of trees in the Mandai development areas.

Lead Field Ecologist for Pt Amman Mineral Nusa Tenggara, Indonesia. 2019 – 2020.

To carry out baseline ecological and habitat mapping of 500 km² of the island. To identify key habitats, and community habitat uses that should be conserved and managed to ensure sustainable tourism development. Study will be followed by detailed High Conservation Value Forests and High Carbon Stock studies which will lead to land use planning prior to development of tourism.

Consultant Arborist for Singapore Island Country Club (SICC) – Bukit Course, Singapore. 2019.

To identify and map conservation significant lowland rainforest plants in MacRitchie Nature Reserve, Singapore.

Lead Botanist for the Public Utilities Board (PUB), Singapore. 2019.

To identify and map conservation significant lowland rainforest plants in MacRitchie Nature Reserve, Singapore.

Lead Botanist for Singapore Zoo, Singapore. 2018 – 2019.

To identify, map and advise transplant plan for conservation significant lowland rainforest plants in 30Ha of Central Catchment Nature Reserve, Singapore.

Lead Botanist in Singapore for Housing Development Board (HDB), Singapore. 2018.

To identify and map conservation significant mangrove plants on 64ha of primary mangrove and coastal forest on Pulau Tekong, Singapore. Fieldwork was for 60 days over three months. The site involved all different mangrove types found in Southeast Asia, including critically endangered species. Seeds were collected and a transplant plan was devised.

Field Ecologist & lead Botanist for Asia Paper and Pulp (APP), Indonesia. 2017 - 2018.

The project involved detailed botanical plot surveys and inventories to determine conservation status and health of peat swamp forests within concessions in Sumatra and continuous engagement with the company to improve management of these areas. Detailed ecological work was carried out on restoration sites to study and develop cost effective natural regeneration methods. Over 65 days of field work was carried out over two years. The company is now investing in further ecological research to understand the drivers of natural regeneration. The company has committed to restoration of the study site and the following publication is under review in the journal *Forest Ecology and Management* – ‘Natural regeneration pathways for degraded tropical peatlands’.

Lead Arborist for Home team United, Singapore. 2017.

Involved the inventory and arboriculture assessment of a secondary forest area in Bedok Reservoir National Park. This included identifying trees to be retained and proposing mitigation measures to allow conservation of the retained trees.

Lead Botanist for UNDP for Daemeter Consulting in Sabah, East Malaysia. 2016.

High Conservation Value Forest assessment for 400 km² Kalabakan Forest Reserve in Sabah, Malaysia. Detailed plots and inventories identified key areas for conservation.

Field Botanist for Danish-Cambodian Expedition to study the Prey Long Lowland Evergreen Reserve, Cambodia. 2012.

Month long expedition to inventory of the flora of the Prey Long Forest reserve. The expedition team comprised of botanists from University of Copenhagen, University of Texas, Kew Gardens, Chiang Mai University, Forestry Administration Cambodia and the Singapore Botanic Gardens.

Field Botanist (National University of Singapore), Singapore. 2012 – 2013.

Population genetics study in the Central Catchment Nature Reserve and Bukit Timah Nature Reserve. Fieldwork spread over a year.

Field Botanist, Singapore. 2009 – 2010.

Identification and inventory of 5,800 trees from 490 species in the 6Ha Gardens Jungle in the Singapore Botanic Gardens.

Accreditation

1. Co-Principal Investigator/Senior Research Fellow, Environmental Research Centre (NERI), National University of Singapore (2020 – Present).
2. Research Assistant, Future Cities Lab, Singapore-ETH-Zürich Centre (2019 – 2020).
3. Consultant, Environmental Impact Assessment/High Conservation Value Forest consultant – Singapore, Malaysia, Indonesia (2016 – Present).
4. Research Assistant, National University of Singapore (2014 – 2015).
5. Senior Arborist, Singapore Botanic Gardens (2006 – 2014).
6. Researcher, Rimba (research group), Malaysia (2011 – 2017).
7. Member, High Conservation Value Forest Network (HCVN) Quality Panel (2018 – Present).
8. Commission Member, International Peat Society, Restoration Commission (2017 – Present).
9. Founder, ConservationLinks, Singapore (2015 – Present).
10. Commission Member, IUCN SSC Global Tree Specialist Group (2013 – Present).

Publications

1. Quantifying net loss of global mangrove carbon stocks from 20 years of land cover change (2020). *Nature Communications*, 11 (1): 1-7 .
2. Paludiculture as a sustainable land use alternative for tropical peatlands: A review (2020). *Science of the Total Environment*. (In press)
3. Distance to forest, mammal and bird dispersal drive natural regeneration on degraded tropical peatland (2020). *Forest Ecology and Management*, 461: 1-10.

4. Estimation carbon biomass in forests using incomplete data (2020). *Biotropica*. (In press)
5. Height-diameter allometry for the management of city trees in the tropics (2020). *Environmental Research Letters*. (In press)
6. Carbon emissions from Southeast Asian peatlands will increase despite emission-reduction schemes (2018). *Global Change Biology*, 24 (10): 4598-4613.
7. Unique Southeast Asian peat swamp forest habitats have relatively few distinctive plant species (2018). *Mires & Peat*. 22 (1), 1-13.
8. J.F. Maxwell's contribution to botanical specimen collection and the taxonomy of the Melastomataceae (2017). *Natural History Bulletin of the Siam Society*, 62 (1): 35-41.
9. Denial of long-term issues with agriculture on tropical peatlands will have devastating consequences (2016). *Global Change Biology*, 23 (3): 977-982.
10. Time for Responsible Peatland Agriculture (2016). *Science*, 354 (6312): 561.
11. *Memecylon maxwellii* (Melastomataceae) a new species of Limestone endemic shrub (2017). *Natural History Bulletin of the Siam Society*, 62 (1): 43-47.
12. *Hanguana thailandica* – a new peat swamp forest species of *Hanguana* (Commelinales – Hanguanaceae) from Thailand (2016). *Phytotaxa*, 280 (2): 195-199.
13. *Memecylon cerasiforme* (Melastomataceae): a poorly known species rediscovered, re-described and newly recorded for India (2016). *Gardens Bulletin of Singapore*, 68 (2): 319-326.
14. James F. Maxwell: Classic Field Botanist, Inimitable Character (2016). *Biotropica*, 48 (1): 132-133.
15. Two new records for Cambodia's forest flora, *Memecylon corticosum* var. *kratense* and *M. paniculatum* (Melastomataceae) (2015). *Cambodian Journal of Natural History*, 2015: 139–143.
16. Conservation status and lectotypification of *Alangium ridleyi* (Cornaceae) in Singapore (2014). *Gardens Bulletin of Singapore*, 66 (2): 233-239.
17. *Hanguana neglecta* (Hanguanaceae): a new plant species from a heavily collected and visited reserve in Singapore (2014). *Phytotaxa*, 188 (1): 14-20.
18. A new species and new combinations of *Memecylon* in Thailand and Peninsular Malaysia (2012). *Phytotaxa*, 66: 6-12.
19. Biodiversity and conservation of tropical peat swamp forests (2011). *Bioscience*, 61 (1): 49-57.
20. Tall Tales - Heritage Trees Trail Guide of SBG (2014). Stallion Press Pte Ltd, Singapore. Pp 96

Video Interview

1. 2019 Jun 9. THE STRAITS TIMES. Audrey Tan. Video interview – Impact of El-Nino: A peek into a changing world.
(URL: https://www.straitstimes.com/world/a-peek-into-a-changing-world?fbclid=IwAR2AatgSwONyGU6w4_iL1-QszKqahVDEdMhd3Kg_jImA98I3FNRS243n0-Y)

Media Coverage

1. 2020 September 5. THE STRAITS TIMES. Audrey Tan. Mangrove loss may not mean release of all carbon stock: Study.
(URL: <https://www.straitstimes.com/singapore/environment/mangrove-loss-may-not-mean-release-of-all-carbon-stock-study>)
2. 2020 June 10. ECOBUSINESS. Neo Chai Chin. Study finds widespread damage to Southeast Asias peatlands and palm oil plantations are not the only ones to blame
(URL: <https://www.eco-business.com/news/study-finds-widespread-damage-to-southeast-asias-peatlands-and-palm-oil-plantations-are-not-the-only-ones-to-blame/>)
3. 2020 March 12. THE STRAITS TIMES. Audrey Tan. Cooling power of the humble tree.
(URL: <https://www.straitstimes.com/singapore/environment/cooling-power-of-the-humble-tree>)
4. 2020 Feb 12. NATURE. Virginia Gewin. How peat could protect the planet.
(URL: <https://www.nature.com/articles/d41586-020-00355-3>)
5. 2019 Oct 30. THE STRAITS TIMES. Vanessa Liu. A bit of help for tree that saw Singapore from a small port.
(URL: <https://www.straitstimes.com/singapore/a-bit-of-help-for-tree-that-saw-singapore-grow-from-a-small-port>)
6. 2019 Sept 30. THE EDGE SINGAPORE (Magazine). Xinghui Kok. Damage Control
(URL: <https://www.pressreader.com/singapore/the-edge-singapore/20190930/282389811215769>)
7. 2018 Jun 18. NATURE 558: 477. Virginia Gewin. A deforestation detective rethinks how industry can quell emissions. (URL: <https://www.nature.com/articles/d41586-018-05450-0>)
8. 2018 Jan 31. SCIENTIFIC AMERICAN. Virginia Gewin. (URL: https://www.scientificamerican.com/article/rewetting-the-swamp-indonesia-s-bold-plan/?wt.mc=SA_Twitter-)
9. 2018 Jan 23. THE STRAITS TIMES. Audrey Tan. Coney Island makes room for campers. (URL: <http://www.straitstimes.com/singapore/environment/coney-island-makes-room-for-young-campers>)
10. 2017. THE SUNDAY TIMES. Shaadya Ismail. 'Treetise' to prevent Colombo's shade from casting shadows. (URL: <http://www.sundaytimes.lk/171203/news/treetise-to-prevent-colombos-shade-from-casting-a-shadow-271500.html>)
11. 2017. THE STRAITS TIMES. Audrey Tan. Singapore the No. 1 tree city.
(URL1: <http://www.straitstimes.com/singapore/environment/not-a-concrete-jungle-singapore-beats-16-cities-in-green-urban-areas> ;
URL2: <http://www.tnp.sg/news/singapore/singapore-no-1-tree-city>)
12. 2017. THE STAR. Unlikely tree fell due to lack of space, says former arborist.
(URL: <https://www.thestar.com.my/news/regional/2017/02/14/unlikely-tree-fell-owing-to-lack-of-space-says-former-arborist/>)
13. 2017. THE STRAITS TIMES. Audrey Tan. Tree failure at Botanic Gardens unlikely due to lack of space: Former NParks arborist.
(URL1: <http://www.straitstimes.com/singapore/environment/tree-failure-at-botanic-gardens-unlikely-due-to-lack-of-space-former-nparks> ;

URL2: <http://www.asiaone.com/singapore/botanic-gardens-tragedy-not-likely-tree-fell-owing-lack-space>)

14. 2017. THE STRAITS TIMES. Audrey Tan. Not a concrete jungle: Singapore beats 16 cities in green urban areas.
(URL: <http://www.straitstimes.com/singapore/environment/not-a-concrete-jungle-singapore-beats-16-cities-in-green-urban-areas>)
15. 2017. THE STRAITS TIMES. Audrey Tan. Tree failure at Botanic Gardens unlikely due to lack of space: Former NParks arborist.
(URL: <http://www.straitstimes.com/singapore/environment/tree-failure-at-botanic-gardens-unlikely-due-to-lack-of-space-former-nparks>)
16. 2017. THE NEW PAPER. Adeline Tan. First sign of trouble - when trees shed their leaves.
(URL: <http://www.tnp.sg/news/singapore/first-sign-trouble-when-trees-shed-leaves>)
17. 2017. THEGOODYFEED. Wen Xianda. 10 facts about the unfortunate Botanic Gardens Accident you've got to know.
(URL: <http://goodyfeed.com/10-facts-unfortunate-botanic-gardens-accident-youve-got-know/>)
18. 2016. SINGAPORE INSTITUTE OF INTERNATIONAL AFFAIRS. Regional peat restoration workshop.
(URL: <http://www.siaonline.org/regional-peat-restoration-workshop/>)
19. 2016. SCIENCEDAILY. Palm oil plantations devastating to tropical peat swamp forest.
(URL: <https://www.sciencedaily.com/releases/2016/10/161006221929.htm>)
20. 2016. MONGABAY. Lorren Bell. 139 scientists shoot down 'misleading' reports from Malaysia peat congress.
(URL: <https://news.mongabay.com/2016/10/139-scientists-shoot-down-misleading-reports-from-malaysia-peat-congress/>)
21. 2016. THE STRAITS TIMES. Audrey Tan. Can Peatland turn into oil palm fields and not haze?
(URL: <http://www.straitstimes.com/singapore/environment/can-peatland-turn-into-oil-palm-fields-and-not-cause-haze>)
22. 2016. KOMPASS. Pengelolaan Gambut: Pakardari 20 Negara Luruskan Isi Kongress di Sarawak.
(URL: <http://print.kompas.com/baca/sains/lingkungan/2016/10/03/Pakar-dari-20-Negara-Luruskan-Isi-Kongres-di-Saraw>)
23. 2016. THE NEW PAPER. Hariz Baharudin, Ng Jun Sen & Arifin Jamar. Walking for the wild site
(URL: <http://www.tnp.sg/news/singapore-news/walking-wild-side>)
24. 2016. THE NEW PAPER. Shammir Osman. Getting to the ROOT of the problem
(URL: <http://news.asiaone.com/news/singapore/getting-root-problem>)
25. 2016. YAHOO NEWS. Stephanus Ian Tan. Activists concerned over more damage to Central Catchment Nature Reserve.
(URL: <https://sg.news.yahoo.com/activists-concerned-over-more-damage-to-central-060214281.html>)
26. 2015. CITYSCOPE.ORG. Grace Chua. How Singapore makes biodiversity an important part of urban life.
(URL: <http://citiscope.org/story/2015/how-singapore-makes-biodiversity-important-part-urban-life>)

27. 2014. THE STRAITS TIMES. Feng Zengkun. Renewed research in local plants.

28. 2007. THE STRAITS TIMES. Climbing trees instead of the corporate ladder.