



DR. NURSALWA BAHARUDDIN

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QUALIFICATION

- Ph.D. (Biology), 2016, Universiti Brunei Darussalam, Brunei
- M. Sc. Hons (Environmental Science), 2010, University of Canterbury, New Zealand
- B. AppSc. (Conservation & Management of Biodiversity), 2006, Kolej Universiti Sains & Teknologi Malaysia

FIELD OF RESEARCH

- Malacology - Gastropods biology, ecology, physiology & behavioural responses to thermal stress
- Climate change biology
- Marine community ecology

RESEARCH INTEREST

Malacology (Gastropods biology, ecology, physiological and behavioural responses to thermal stress)

I am interested to explore on behavioural and physiological adaptations of tropical gastropods which includes marine, freshwater, mangrove as well as terrestrial with emphasis on their vulnerability in terms of global change and climate warming. My research interest is based on invertebrate especially tropical gastropods (Prosobranchia & Pulmonata) – model of ectothermal animals are vulnerable to climate warming. I am interested in the gastropods physiological performance, behavioural, acclimation and or adaptation in prediction of future increases of global temperature. This is in relation to mainstream theories that tropical ectotherm live close to their lethal limits and are restricted in capacity to thermally acclimate these limits. Factors such as microhabitats, environmental temperature as well as phylogenies of these gastropods may have effects to their physiological performance. Through synthesizing these factors, we will be able to understand the generality of predicted climatic vulnerability and whether this can be applied to tropical ectotherms especially gastropods. This will provide a comprehensive understanding as how semi-terrestrial and marine will respond to ecological and climate warming. I am also happy to work on marine ecological systems and contribution to the above theories.

RESEARCH PROJECTS

Title: Coral reef conservation & restoration towards sustainable ecosystem

Position: Co-researcher

Grant name & amount received: International Petroleum Corporation – RM 250,000

Project Period: 01/01/2020 – 31/12/2023

Title: Status of Marine Life of Terengganu Marine Park Post-Covid 19

Position: Co-researcher

Grant name & amount received: Department of Fisheries Malaysia – RM 120,000

Project Period: 01/07/2020 – 30/06/2021

Title: Elucidation of climatic effects on the coral reef community in Pulau Redang Marine Park, Malaysia

Position: Co-researcher

Grant name & amount received: 11th Malaysia Plan, Department of Marine Park Malaysia, Ministry of Natural Resources and Environment – RM 80,000

Project Period: 01/01/2016 – 31/12/2016

EXPERT LINKAGES

- Lee Kong Chian Natural History Museum (LKCNCNHM), National University of Singapore, Singapore
- Institute for Biodiversity & Environmental Research (IBER), Universiti Brunei Darussalam, Brunei
- Forest Research Institute Malaysia (FRIM), Malaysia
- Natural History Museum, Department of Museums Malaysia
- Universiti Teknologi Petronas, Malaysia

PROFESSIONAL MEMBERSHIP

- Young Scientists Network-Academy of Sciences Malaysia (YSN-ASM), Co-chair Science @ Media Working Group, Affiliate (2018-present)
- Southeast Asian Malacological Society, Secretary II (2017-2021)
- Unitas Malacologica, Membership (2016 – 2018)
- Malaysian Nature Society, Ordinary Membership (2016 – present)
- PADI Scuba Diver (Diver No. 0703A04752) (2007 – present)
- Asia-Europe Foundation University Network (ASEFUAN), Alumni & Malaysia Representative (2012-present)
- University of Canterbury (New Zealand), Alumni (2011-present)
- Guilds of Graduate Universiti Brunei Darussalam (Brunei), Alumni (2016-present)

AWARDS

- Compassionate & Friendly Lecturer Award: School of Marine & Environmental Sciences UMT (2018)
- Initiative for World Solidarity Ilmenau (ISWI 11th) Germany: Malaysian Youth Ambassador (2013)
- Asia-Europe Foundation University (ASEF 18th) Tartu, Estonia: Malaysian Youth Ambassador (2012)
- Sultanate of Brunei Government Research Scholarships Ph.D. Recipient for Graduate Research Studies (2011 – 2014)
- Malaysia Academic Training Scholarships M.Sc. Recipient, Ministry of Higher Education (2008 – 2010)
- Gold Medal Winner (Best Graduate Faculty of Science and Technology) KUSTEM (2006)
- Ace Technoscience Award (Best Graduate of B. AppSc. Conservation & Management of Biodiversity) KUSTEM (2006)
- British Council Young Global Citizens Project (YGCP) Davao, Philippines: Malaysian Youth Ambassador (2006)
- British Council Philippines First-Runner Up – Challenge Simulation for the Project that Will Change the World in Positive Way (2006)
- Dean's List (CGPA 3.50 and above) every semester (2003 – 2006)
- Golden Key International Honour Society recipient (2005 – present)
- Best Female Participant 1st Golden Key Malaysia Conference (2005)

PUBLICATIONS

2020

- Basir, N. H. M., Jasni, M. N., Azhar, H., Redzuan, N. S., Idris, M. S., Ahmad, A., and ***Baharuddin, N.** (2020) Marine gastropods dredged from Peninsular Malaysia: an overview of species diversity, abundance and conservation status. Prosiding Seminar Nasional Moluska IV: Moluska dalam Penelitian Konservasi dan Ekonomi. Universitas Atma Jaya Yogyakarta & Universitas Diponegoro Semarang, Indonesia.

2019

- ***Baharuddin, N.**, Basir, N. H. M., and Zainuddin, S, N. H. (2019). Tropical intertidal gastropods: insights on diversity, abundance, distribution, and shell morphometrics of Pulau Bidong, Malaysia. AACL Bioflux 12(4): 1375-1387.
- ***Baharuddin, N.**, and Jasni, M. N. (2019) Marine gastropods dredged from the Southern South China Sea: an overview of species diversity and abundance. 3rd. South China Sea Conference (SCS 2019), 24th-28th June, Kuala Lumpur, Malaysia (Oral Presentation).

2018

- ***Baharuddin, N.**, and Zakaria, N. A. (2018). The biodiversity and conservation status of the marine gastropod (Mollusca; Gastropoda) in Pulau Bidong, Terengganu, Malaysia. AACL Bioflux 11(4): 988-1000.
- ***Baharuddin, N.**, Basri, N. B., and Syawal, N. H. (2018). Marine gastropods (Gastropoda; Mollusca) diversity and distribution on intertidal rocky shores of Terengganu, Peninsular Malaysia. AACL Bioflux 11(4): 1144-1154.

2017

- **Baharuddin, N.**, Martin, M. B., Nagappan, T., and Borkhanuddin, M. H. Checklist of mangrove snails (Mollusca: Gastropoda) in Setiu Wetlands. In: *Prosiding Seminar Ekspedisi Saintifik Tanah Bencah Setiu 2016*. Abdullah, D. M., Nasir, M. Z., Mazlan, N. M., and Jusoh, W. F. A. W. (eds.) WWF Malaysia Publisher, 2017.
- Mohammad, F., Ibrahim, Y. S., **Baharuddin, N.**, Azmi, A. A. A. R., and Borkhanuddin, M. H. (2017) *Invertebrates of Setiu Wetlands*. Universiti Malaysia Terengganu Publisher, Malaysia. 209 pp.
- **Baharuddin, N.**, Jiksing, C., Juli, F. O., and Mohamad, F. Diversity and abundance of mudsnails (Phylum Mollusca, Class Gastropoda) in mangrove forests, Setiu Wetlands. In: *Invertebrates of Setiu Wetlands*. Mohammad, F., Ibrahim, Y. S., Baharuddin, N., Azmi, A. A. A. R., and Borkhanuddin, M. H. (eds.) Universiti Malaysia Terengganu Publisher, Malaysia, 2017.
- Mohammad, F., Juli, F. O., Jiksing, C., and **Baharuddin, N.** Seven genera of climbing gastropods of Setiu Wetlands. In: *Invertebrates of Setiu Wetlands*. Mohammad, F., Ibrahim, Y. S., Baharuddin, N., Azmi, A. A. A. R., and Borkhanuddin, M. H. (eds.) Universiti Malaysia Terengganu Publisher, Malaysia, 2017.
- Mohamad, F., Halim, A. S. A., Zakariah, N. A., and **Baharuddin, N.** The fiddler crab *Uca* sp. at two locations in Setiu Wetlands. In: *Invertebrates of Setiu Wetlands*. Mohammad, F., Ibrahim, Y. S., Baharuddin, N., Azmi, A. A. A. R., and Borkhanuddin, M. H. (eds.) Universiti Malaysia Terengganu Publisher, Malaysia, 2017.
- Mohamad, F., Zakariah, N. A., Halim, A. S. A., and **Baharuddin, N.** Hermit crabs, *Clibanarius longitarsus* in Setiu, Terengganu and their shell hosts. In: *Invertebrates of Setiu Wetlands*. Mohammad, F., Ibrahim, Y. S., Baharuddin, N., Azmi, A. A. A. R., and Borkhanuddin, M. H. (eds.) Universiti Malaysia Terengganu Publisher, Malaysia, 2017.
- **Baharuddin, N.**, Basri, N. B., and Syawal, N. H. (2017) Biodiversity of gastropoda in intertidal zones of East Coast, Peninsular Malaysia, 3rd Southeast Asian Gateway Evolution (SAGE), 28th Aug – 1st Sept, Bogor, Indonesia (Oral Presentation)
- **Baharuddin, N.**, Idris, I., and Zulkifli, S. Z. (2017) Population structure using shell morphometric and carbonate growth of corallivorous gastropods *Drupella rugosa* in Pulau Redang. Research Seminar Department of Marine Park Malaysia, 7th – 8th Mar, Terengganu, Malaysia (Poster Presentation).

2016

- **Baharuddin, N.**, Martin, M. B., Nagappan, T., and Borkhanuddin, M. H. (2016) Checklist of mangrove snails (Mollusca: Gastropoda) in Setiu Wetlands. Setiu Wetlands Scientific Expedition Seminar, WWF Malaysia. 13th Oct, Terengganu, Malaysia (Oral Presentation)
- **Baharuddin, N.**, and Marshall, D. J. (2016) Upper temperature limits of mangrove snails: deviation from the general prediction of tropical ectotherm vulnerability to climate warming. World Congress of Malacology 2016, 19th International Congress of Unitas Malacologica (UM), 18th – 24th Jul, Penang, Malaysia (Oral Presentation)
- Mohamad, F., Juli, F. O., and **Baharuddin, N.** (2016) Climbing gastropods of Setiu Wetlands, Terengganu. World Congress of Malacology 2016, 19th International Congress of Unitas Malacologica (UM), 18th – 24th Jul, Penang, Malaysia (Poster Presentation)

2015

- Marshall, D. J., Rezende, E. L., **Baharuddin, N.**, Choi, F., and Helmuth, B. (2015). Thermal tolerance and climate warming sensitivity in tropical snails. *Ecology and Evolution* 5(24): 5905-5919. DOI 10.0102/ECE3.1785.
- Marsden, I. D., and **Baharuddin, N.** (2015). Gastropod growth and survival as a bioindicators of stress associated with high nutrients in the intertidal of a shallow temperate estuary. *Estuarine, Coastal and Shelf Science* 156: 175-185. DOI 10.1016/j.ecss.2014.05.032.

2014

- **Baharuddin, N.**, and Marshall, D. J. (2014). *Common aquatic gastropods of Brunei*. Educational Technology Centre (ETC) Universiti Brunei Darussalam Publisher, Brunei. 20 pp.

2013

- Marshall, D. J., **Baharuddin, N.**, and McQuaid, C. D. (2013). Behaviour moderates climate warming vulnerability in high-rocky shore snails: interactions of habitat use, energy consumption and environmental temperature. *Marine Biology* 160: 2525-2530. DOI 10.1007/s00227-013-2245-1.

2009

- **Baharuddin, N.**, and Marsden, I. D. (2009) The effects of nutrient concentrations on the distribution and abundance of *Amphibola crenata* in the Avon-Heathcote Estuary. The Annual Biology Conference, School of Biological Sciences, College of Science, 22nd Oct, Christchurch, New Zealand (Oral Presentation).

Theses

- Ecological and evolutionary thermal physiology of mangrove gastropods in the context of global change. (2016). Ph.D. Biology thesis. Faculty of Science, Universiti Brunei Darussalam, Brunei
- Distribution and factors affecting the abundance of *Amphibola crenata* in the Avon-Heathcote Estuary 2008-2010. (2011). M.Sc. (Hons) Environmental Science thesis. School of Biological Sciences, University of Canterbury, New Zealand
- Taxonomy of harpacticoid copepods in Tok Bali mangrove forest, Kelantan. (2006). B. AppSc Conservation & Management of Biodiversity thesis. Faculty of Science & Technology, Kolej Universiti Sains dan Teknologi Malaysia

SUPERVISION

POST-GRADUATES

- Siti Nur Hakimah Zainuddin (P4448). M.Sc. Marine Ecology. Ecology of corralivorous snails in East Coast Islands, Malaysia. (Sept 2020 – present).
- Noor Hamizah Mohamad Basir (P3762). M.Sc. Ecology. Ecology of tropical intertidal gastropods (Mollusca; Gastropoda) in Pulau Bidong & Dungun, Terengganu. (Feb 2019 – present).

UNDERGRADUATES

September 2020/2021 (On-going)

- Hemadarshini Subramaniam (S52420). B. AppSc. (Conservation and Management of Biodiversity). Corallivorous snail, *Drupella* spp. in Pulau Kapas and Pulau Tenggol.
- Che Najiha Najwa Che Fauzi (S50757). B. AppSc. (Conservation and Management of Biodiversity). Corallivorous snail, *Drupella* spp. in Pulau Perhentian.
- Nur Izzati Akma Azman (S51542). B. AppSc. (Conservation and Management of Biodiversity). Corallivorous snail, *Drupella* spp. in Pulau Yu Besar and Pulau Yu Kecil.
- Nor Ashikin Mat Yaacob (S50952). B. AppSc. (Conservation and Management of Biodiversity). Diversity and species richness of freshwater snail in Tasik Kenyir.
- Norhani Rusli (S50683). B. AppSc. (Conservation and Management of Biodiversity). Freshwater snails and biomass study in Tasik Kenyir.

September 2019/2020 (All completed)

- Hafifah Azhar (S48219). B. AppSc. (Conservation and Management of Biodiversity). Marine gastropods of LIMA 2019 expedition: diversity and conservation status.
- Nur Afiah Affendi (S47710). B. AppSc. (Conservation and Management of Biodiversity). Bacterial diversity on shell and muscular foot of tropical periwinkle snails, *Planaxis sulcatus*.
- Nur Hafiza Rosli (S48128). B. AppSc. (Conservation and Management of Biodiversity). Bacterial diversity on shell and muscular foot of tropical periwinkle snails, *Echinolittorina malaccana*.
- Koh Ke Xin (S47549). B. AppSc. (Conservation and Management of Biodiversity). Effect of groundwater discharge on the role bivalve, *Macra* sp. in the cycling nutrients off Bidong Island, Malaysia.
- Najah Karimah Mustaffa (S46257). B.Sc. (Marine Biology). *Faunus ater* as a potential biomarker of contamination by heavy metals in UMT areas.

September 2018/2019 (All completed)

- Amirul Firdaus Che Khaidir (S41600). B. AppSc. (Conservation and Management of Biodiversity). Abundance and biomass of *Faunus ater* in waterways around Universiti Malaysia Terengganu.
- Maisarah Nor Jasni (S42119). B. AppSc. (Conservation and Management of Biodiversity). The diversity and conservation status of marine gastropods at benthic zone, Southern South China Sea.
- Netellie Abu Zaky (S42708). B. AppSc. (Conservation and Management of Biodiversity). Bacterial diversity on muscular foot and shell of *Faunus ater* in UMT waterways.
- Siti Nur Hakimah Zainuddin (S44072). B. AppSc. (Conservation and Management of Biodiversity). The diversity and conservation status of marine gastropods on intertidal zone of Pulau Pinang.

September 2017/2018 (All completed)

- Noor Hamizah Mohamad Basir (S38872). B. AppSc. (Conservation and Management of Biodiversity). Species diversity of mangrove snails and microhabitat in Setiu Wetlands, Terengganu.
- Nur Afiah Zakaria (S38887). B. AppSc. (Conservation and Management of Biodiversity). Biodiversity of marine gastropods in Pulau Bidong, Terengganu.
- Nur Anis Fatirah Mohd Yusoff (S38888). B. AppSc. (Conservation and Management of Biodiversity). Ecological footprint - food consumption and diet among Universiti Malaysia Terengganu and Universiti Sultan Zainal Abidin students.

- Nurul Fateha Ghazali (S38912). B. AppSc. (Conservation and Management of Biodiversity). Clothing consumption – ecological footprint among Universiti Malaysia Terengganu and Universiti Sultan Zainal Abidin students.

September 2016/2017 (All completed)

- Safiy Zakwan Zulkifli (UK35659). B.Sc. (Marine Biology). Population structure using shell morphometric of corallivorous gastropod *Drupella rugosa* (Born, 1778) in Pulau Redang, Terengganu.
- Nurul Balqis Basri (UK35389). B.AppSc. (Conservation and Management of Biodiversity). Distribution and abundance of rocky shore gastropods at Tanjung Jara, Terengganu.
- Nurul Hasnah Syawal (UK35417). B.AppSc. (Conservation and Management of Biodiversity). Distribution and abundance of rocky shore gastropods at Teluk Bidara, Terengganu.
- Nurul Nabila Azizan (UK35456). B.AppSc. (Conservation and Management of Biodiversity). Food consumption and diet: ecological footprint of Universiti Malaysia Terengganu students.
- Izzah Zakiah Mohamed Zahid (UK33868). B.AppSc. (Conservation and Management of Biodiversity). Clothing consumption: ecological footprint of Universiti Malaysia Terengganu communities.
- Fathinatul Aqmal Mamud (UK33703). B.AppSc. (Conservation and Management of Biodiversity). Transportation: ecological footprint of Universiti Malaysia Terengganu communities.

September 2015/2016 (All completed)

- Calvin Jiksing (UK31619). B.Sc. (Biological Sciences). Diversity, shell length and biomass of mudsnails in Setiu Wetlands Terengganu.
- Fetysella Olyndra Juli (UK32012). B.Sc. (Biological Sciences). Diversity, shell length and biomass of climbing gastropods in Setiu Wetlands, Terengganu.

COURSES TAUGHT

- Mangrove Field School (UMTROP401) (Postgraduate Erasmus Mundus M.Sc. Tropical Biodiversity & Ecosystems - TROPIMUNDO), Institute of Oceanography & Environment - INOS, UMT
- Biology of Invertebrates (BDV3001), (Undergraduate), UMT
- Invertebrates Diversity (BDV3005), (Undergraduate), UMT
- Evolution & Biodiversity (BIO3000), (Undergraduate), UMT
- Principles of Ecology (BIO3500), (Undergraduate), UMT

EDITORIAL BOARD

- Biodiversitas Journal of Biological Diversity
- Aquaculture, Aquarium, Conservation and Legislation (AACL) – International Journal of the Bioflux Society

JOURNAL REVIEWER

- Indian Journal of Geo-Marine Sciences
- Biodiversitas Journal of Biological Diversity
- Regional Studies in Marine Science
- AAAL – International Journal of the Bioflux Society
- Tropical Life Sciences Research
- Malaysian Fisheries Journal
- Marine Research in Indonesia
- Journal of Sustainability and Management
- Global Change Biology

LINKS

Scopus ID: 55662222000

Scopus author: Baharuddin, Nursalwa

ResearchGate: https://www.researchgate.net/profile/Nursalwa_Baharuddin

Google Scholar: <https://scholar.google.com/citations?user=vCfVc10AAAAJ&hl=en>