CURRICULUM VITAE (11 July 2024)

IAN Z.W. CHAN

Ph.D. B.Sc.

CONTACT INFORMATION

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ACADEMIC POSITIONS

Since 2021: Lecturer. Department of Biological Sciences, National University of Singapore (NUS).
- Teaching (i) Tropical Conservation Biology and (ii) Statistics in R at the undergraduate and postgraduate levels.
- Previously taught (i) Evolutionary Biology and (ii) Environmental Studies amongst others.

2019–2021: Research Fellow cum Grant Manager. Evolutionary Development Lab, NUS.
- Phylogenetic analysis: ancestral character reconstruction of butterfly colours.
- Microstructure analysis: butterfly scale analysis using SEM and Raman spectroscopy.
- Gene function analysis: gene knockouts using CRISPR-Cas9.
- Grant management: coordinating 4 labs from NUS and SUTD on a multi-million-dollar NRF grant.

2018–2019: Research Fellow. Experimental Marine Ecology Lab, NUS.
- Animal behavioural studies: crab colour patterns and signalling.

EDUCATION

Ph.D. 2018. Sensory & Behavioural Ecology. NUS.
- Thesis: "*Defining and quantifying animal colour patterns*". Formulated a definition for colour patterns; wrote and implemented software for measuring animal colour patterns (see: ianzwchan.com/my-research/pat-geom/).
- Marine Ecology: experienced in SCUBA-based and rocky shore experiments on fish behaviour, coral-macroalgal interactions and seawall biodiversity.

B.Sc. 2014. Double Major in Life Sciences (Environmental Biology) & Business Management (Hons 1st class). NUS.
- Honours Thesis: "*Morphological Patterns in Animals: Definition, Measurement and a Novel Application of the Mantel Test*".
- F&N Book Prize, Dean's List (multiple years).

Dip. 2006. Biotechnology (Biomolecular Sciences). Temasek Polytechnic, Singapore.
- Final Project in Microbiology (protein extraction, purification and binding assays for a bacterial diagnostic kit) and Cell biology (characterised bacterial growth properties to improve the activated sludge process).
- Merit Award, Bronze Medal, CASE Prize, Honours List (all years).

PUBLICATIONS

[1]Co-first authors; †Corresponding author

(10) Lim, H., **Chan, I.Z.W.**†, & Monteiro, A.† (2024). Pattern Matters in the Aposematic Colouration of *Papilio polytes* Butterflies. Insects, 15(7), 465.

(9) Teo H.C., Fung T.K., Song X.P., Belcher R.N., Siman K., **Chan I.Z.W.** & Koh L.P. (2023). Increasing contribution of urban greenery to residential real estate valuation over time. **Sustainable Cities and Society**, 96: 104689.

(8) **Chan I.Z.W.**[1]†, Ngan Z.C.[1], Naing L., Lee Y., V Gowri & Monteiro A.† (2021). Predation favours *Bicyclus anynana* butterflies with fewer forewing eyespots. **Proceedings of the Royal Society: B**, 288(1951): 20202840.

(7) Bauman A.G., Hoey, A.S., Dunshea G., Fong J., **Chan I.Z.W.** & Todd P.A. (2021). Fear effects and group size interact to shape herbivory on coral reefs. **Functional Ecology**, 35(9): 1985–1997.

(6) **Chan I.Z.W.**†, Wang W.Y. & Todd P.A. (2021). Facial band colour in the mangrove crab *Parasesarma peninsulare* Shahdadi, Ng & Schubart, 2018 plays a role in mate recognition. **Estuarine, Coastal and Shelf Science**, 248: 106721.

(5) **Chan I.Z.W.**[1]†, Rafi F.[1] & Monteiro A. (2019). Interacting effects of eyespot number and ultraviolet reflectivity on predation risk in *Bicyclus anynana* (Lepidoptera: Nymphalidae). **Journal of Insect Science**, 19(6): 19.

(4) Lim A.Y.H.[1], **Chan I.Z.W.**[1]†, Carrasco L.R. & Todd P.A.† (2019). Aposematism in pink warty sea cucumbers: independent effects of chromatic and achromatic cues. **Marine Ecology Progress Series**, 631: 157–164.

(3) **Chan I.Z.W.**, Stevens M. & Todd P.A.† (2019). PAT-GEOM: a software package for the analysis of animal colour pattern. **Methods in Ecology and Evolution**, 10(4): 591–600.

(2) **Chan I.Z.W.**†, Chang J.J.M, Huang D. & Todd P.A. (2019). Colour pattern measurements successfully differentiate two Onchidiidae Rafinesque, 1815 species. **Marine Biodiversity**, 49(4): 1743–1750.

(1) **Chan I.Z.W.**, Stevens M. & Todd P.A.† (2016). Quantifying shell pattern and colour polymorphism in the button snail *Umbonium vestiarium* (Mollusca: Gastropoda: Trochacea) and comparing morph frequencies between two populations using the Mantel test. **Raffles Bulletin of Zoology**, Supplement No. 32: 22–32.

FUNDING

Total funding awarded to date: $$314,100

2024: Teaching Enhancement Grant, NUS Centre for Teaching, Learning and Tech. Co-PI. Awarded $6000.

2021–2024: Research Project Funding, Department of Biological Sciences, NUS. PI of project. Total of $10,300.

2020: Science Research Programme, Singapore Ministry of Education. PI of project. Awarded S$1,000.

2015–2018: Academic Research Fund Tier 1 Grant, Singapore Ministry of Education. Co-writer of grant proposal (PI: Prof Peter A. Todd). Awarded S$128,800.

2014–2018: President's Graduate Fellow, NUS. Awarded S$168,000.

SELECTED AWARDS & COMMUNITY INVOLVEMENT

Since 2023: Academic Advisor, DBS Graduate Students' Society, NUS.

Since 2021: Academic Advisor, Life Sciences Society, NUS.

2024: Faculty Teaching Excellence Award, Faculty of Science, NUS.

2024: Faculty Award for Mentorship Excellence, Faculty of Science, NUS.

2023: Ceremonies and Banquet Chair, Asia-Pacific Coral Reef Symposium 2023, NUS. 800+ pax.

2023: geNiUSchannel Competition VBlog Award, NUS.

2023: Faculty Teaching Excellence Award, Faculty of Science, NUS.

2018: Best Oral Presentation, 23rd Biological Sciences Graduate Congress, Thailand.

2017: Chairman of Organising Committee, 22nd Biological Sciences Graduate Congress, NUS. 200+ pax.

2016–2017: President, DBS Graduate Students' Society, NUS.

2014: Best Oral Presentation, 19th Biological Sciences Graduate Congress, Singapore.

OTHER SKILLS

Languages: English (native), Mandarin & French (good), Malay & Cantonese (conversational).

Emergency First Response: Wilderness First Aid certified.

SCUBA Diving: PADI Rescue Diver with over 130 dives and 160 underwater hours.

Swimming: Bronze, Survival and Long Distance certifications.

Kayaking: One-star certification with experience in overnight sea-kayaking expeditions.

Music: Singing (baritone), piano (LCM Grade 8), guitar and drums (self-taught).