

Ryan P. O'Donnell

MYCOLOGIST & BOTANIST | PHD CANDIDATE

Research School of Biology, Australian National University

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🏛️ Education

Doctor of Philosophy (Ecology & Evolution)

AUSTRALIAN NATIONAL UNIVERSITY

2022–present

Master of Scientific Studies (Biodiversity Science)

UNIVERSITY OF NEW ENGLAND

2019–2021

Graduate Certificate in Science (Biodiversity Science)

UNIVERSITY OF NEW ENGLAND

2018–2019

Bachelor of Music (Performance: Classical Voice)

SYDNEY CONSERVATORIUM OF MUSIC

2014–2017

Bachelor of Arts in Communication (Media Arts and Production)

UNIVERSITY OF TECHNOLOGY SYDNEY

2011–2013

🧠 Skills

ANALYTICAL: PHYLOGENOMICS • DIVERGENCE TIME ESTIMATION • POPULATION GENETICS • BIOLOGICAL NOMENCLATURE & TAXONOMY • DATA VISUALISATION • MORPHOLOGICAL PHENETICS

COMMUNICATIONS: GRAPHIC DESIGN • PHOTOGRAPHY • VIDEO PRODUCTION • BOTANICAL ILLUSTRATION

FIELD + LAB: DNA EXTRACTION/SEQUENCING • PLANT IDENTIFICATION • FUNGAL ISOLATION AND CULTURING

PROGRAMMING: R • BASH/UNIX • L^AT_EX

🏆 Grants

National Taxonomy Research Grant Program (NTGRP)

AUSTRALIAN BIOLOGICAL RESOURCES STUDY (ABRS)

2023

\$16,818

- Systematics of Australian mycorrhizal *Ceratobasidium* (Ceratobasidiaceae)

RSB Seed Funding Grant

AUSTRALIAN NATIONAL UNIVERSITY, RESEARCH SCHOOL OF BIOLOGY

2022

\$15,000

- Evolutionary and population ecology of *Pterostylis* (Orchidaceae) and their fungal symbionts (*Ceratobasidium*, Ceratobasidiaceae)

AOF Research Grant 348/22

AUSTRALIAN ORCHID FOUNDATION

2022

\$10,000

- The evolution and diversification of the Australian Diurideae: Understanding the influence of genome size and chromosome number (project cancelled and funds returned due to poor field season)

Hansjörg Eichler Scientific Research Fund

AUSTRALASIAN SYSTEMATIC BOTANY SOCIETY

2022

\$5,000

- An integrative taxonomic study of the *Pterostylis macrosepala* (D.L.Jones) G.N.Backh. complex (Orchidaceae; Pterostylidinae)

N.C.W. Beadle Scholarship in Botany

UNIVERSITY OF NEW ENGLAND

2020

\$1,000

📖 Peer-Reviewed Publications

FIRST-AUTHOR

O'Donnell RP, Linde CC, May TW (in press) Rise up, *Rhizoctonia*: moving to one fungus, one name in the Ceratobasidiaceae (Agaricomycetes; Cantharellales). *Persoonia*.

O'Donnell RP, Wong DJ, Peakall R, Phillips RD, Linde CC (2024) *Discordance Down Under*: Combining phylogenomics & fungal symbioses to detangle difficult nodes in a diverse tribe of Australian terrestrial orchids. *Systematic Biology*, syae070. doi:10.1093/sysbio/syae070.

O'Donnell RP, Bruhl JJ, Telford IR, Wilson TC, Zimmer H, Taseski GM, Andrew RL (2023) Molecular and morphological analyses support recognition of *Prostanthera volucris* (Lamiaceae), a new species from the Central Tablelands of New South Wales. *Australian Systematic Botany* 36, 1:1–20. doi:10.1071/SB22017.

O'Donnell RP, Wilson TC, Andrew RL, Telford IR, Taseski GM, Zimmer H, Bruhl JJ (2021) Molecular phylogenetic analysis of the *Prostanthera phyllicifolia* (Lamiaceae) assemblage resolves relationships of the 'Critically Endangered' *P. gilesii* and other putative new species. *Telopea* 24, 359–375. doi:10.7751/telopea15561.

CO-AUTHOR

Hyde KD ... Zvyagina E (2024) The 2024 Outline of Fungi and fungus-like taxa. *Mycosphere* 15, 1:5146–6239. doi:10.5943/mycosphere/15/1/25.

Hyde KD ... Zucconi L (2023) Global consortium for the classification of fungi and fungus-like taxa. *Mycosphere* 14, 1:1960–2012. doi:10.5943/mycosphere/14/1/23.

Q Manuscripts In Review

FIRST-AUTHOR

John EG[†], **O'Donnell RP**[†], Perkins J, Rubial M, Peakall R, Wong DCJ (under review - Molecular Biology and Evolution) Once in a blue moon: phylotranscriptomics reveals the unusual genetic basis of blue floral colour in the terrestrial orchid subtribe Caladeniinae (Diurideae; Orchidaceae).

[†] Shared co-first authors.

Preprints

O'Donnell RP, Bruhl JJ, Telford IR, Wilson TC, Zimmer H, Taseski GM, Andrew RL (accepted 2023) Molecular and morphological analyses support recognition of *Prostanthera volucris* (Lamiaceae), a new species from the Central Tablelands of New South Wales. doi:doi.org/10.1101/2021.12.21.473648.

Other Publications

O'Donnell RP (2024) An integrative taxonomic study of the *Pterostylis macrosepala* (D.L.Jones) G.N.Backh. complex (Orchidaceae; Pterostylidinae) Hansjörg Eichler Scientific Research Fund Report. Australasian Systematic Botany Society Newsletter. 199: 5–11.

O'Donnell RP (2022) Book Review: Presenting Science Concisely - Bruce Kirchoff. Australasian Systematic Botany Society Newsletter. 190: 27–28.

O'Donnell RP (2022) *Love Thy Neighbour* Science Write Now #6: Natural History and Historians

O'Donnell RP (2021) *Love Thy Neighbour* Boundless Writers Festival 2021

O'Donnell RP (2021) Selling systematics with storytelling: solving taxonomy's marketing problem. Australasian Systematic Botany Society Newsletter. 188: 29–30.

Conference Presentations

O'Donnell RP, Wong DJ, Peakall R, Phillips RD, Linde CC (2024) “Fungal symbiont shifts inform subtribal relationships in terrestrial orchids”. International Mycological Congress 2024, 11–15 August 2024.

O'Donnell RP, Linde CC, May TW (2024) “Rise up, *Rhizoctonia*: moving to one fungus, one name in the Ceratobasidiaceae (Agaricomycetes; Cantharellales)” (Poster). International Mycological Congress 2024, 11–15 August 2024.

O'Donnell RP, Linde CC, May TW (2023) “Rise up, *Rhizoctonia*: moving to one fungus, one name in the Ceratobasidiaceae (Agaricomycetes; Cantharellales)”. Biosystematics 2023, 26–30 November 2023.

O'Donnell RP, Wong DJ, Peakall R, Phillips RD, Linde CC (2022) “Detangling the Diurideae: Phylogenomics and fungal symbionts provide an updated evolutionary framework”. Australasian Evolution Society 2022, 14–16 December 2022.

O'Donnell RP, Wong DJ, Peakall R, Phillips RD, Linde CC (2022) “Detangling the Diurideae: Phylogenomics and fungal symbionts provide an updated evolutionary framework”. Australasian Systematic Botany Society EMCR Conference 2022, 15–16 November 2022.

O'Donnell RP, Andrew RL, Telford IR, Wilson TC, Zimmer H, Taseski GM, Bruhl JJ (2021) “Morphological and molecular evidence aid resolution of *Prostanthera phyllicifolia* s. l. (Lamiaceae)”. Australasian Systematic Botany Society Annual Conference 2021, 12–16 July 2021. Runner up: Pauline Ladiges Prize for best student presentation.

Other Presentations & Panels

Panelist: *Magic Mycelium* Bundanon Art Museum 09/03/2025

Invited Speaker: ‘Discordance Down Under: Combining phylogenomics & fungal symbioses to detangle difficult nodes in a diverse tribe of Australian terrestrial orchids’ Australasian Mycological Society (AMS) Virtual Seminar Series 31/10/2024

Invited Speaker & Panelist: ‘An Evening With 500 Queer Scientists’ World Pride 2023

Presenter: ‘Walks & Talks: Orchids From Australia & Abroad’ 13/08/2022

Presenter: 'Rare Plants - Large and Small' with Costa Georgiadis 12/05/2021

Panelist: Reel Science: Plants - Sydney Science Trail/National Science Week 21/08/2021

Teaching

AUSTRALIAN NATIONAL UNIVERSITY

- 2023 S1 **BIOL1003:** Biology 1: Evolution, Ecology and Genetics
- 2023 S1 **BIOL8291:** Research Presentation Skills
- 2022 S2 **BIOL3207/BIOL6207:** Data Science for Biologists
- 2022 S2 **BIOL2114/BIOL6114:** Evolution

Awards & Scholarships

- 2023 ANU University-Wide 3-Minute Thesis (3MT) Competition Grand Finalist
- 2023 ANU College of Science 3-Minute Thesis (3MT) Competition: First Place
- 2022 ANU Research School of Biology 3-Minute Thesis (3MT) Competition: People's Choice Award
- 2022 ANU Research School of Biology 3-Minute Thesis (3MT) Competition: Runner Up Prize
- 2022 Australian Government Research Training Program Scholarship (2022–2025)
- 2021 University of New England Vice-Chancellor's Scholar

Media

Radio Interview: Fuzzy Logic 2XXfm, Live at Floriade 2024 15/09/2024

Radio Interview: ABC Radio, Science Friction with Natasha Mitchell 'World Pride 2023 - Love Your Nature' 17/02/2023

Radio Interview: ABC Radio Evenings with Christine Anu 21/8/2021

Podcast Interview: Royal Botanic Garden Sydney 'Branch Out' Podcast - Starting in Science

Interview: The Music, With Sylvie

Interview: University of New England, #StudyLifeUNE

Exhibitions

2021 **The Margaret Flockton Award**

Professional Memberships

2023–present **Australasian Mycological Society**

2020–present **Australasian Systematic Botany Society**