

# Ryan P. O'Donnell

MYCOLOGIST & BOTANIST | PHD CANDIDATE

Research School of Biology, Australian National University

✉ ryan.odonnell@anu.edu.au | 📧 rpodonnell | 🌐 rpodonnell | 🐦 rpodonnell.bsky.social

## 🏛️ 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:** BIOINFORMATICS • 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<sup>A</sup>T<sub>E</sub>X

## 🏆 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 (2025) Rise up, *Rhizoctonia*: moving to one fungus, one name in the *Ceratobasidiaceae* (*Agaricomycetes*; *Cantharellales*). *Persoonia* 54, 285–325. doi:10.3114/persoonia.2025.54.09.

**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* 74, 3:434–452. 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<sup>†</sup>, **O'Donnell RP**<sup>†</sup>, 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).

<sup>†</sup> 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**