# **DOUGLASS S. ROVINSKY**

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## RESEARCH INTERESTS

My research interest lies at the intersection of functional ecology and palaeobiology: understanding the ecologic niche of extinct animals using the interplay of morphology and function. I use **phylogenetic comparative methods**, **3D digital imaging**, and morphological data (**3D geometric morphometrics** and **linear morphometrics**) to investigate topics such as body size, feeding and locomotor ecology, and convergent evolution within an evolutionary framework.

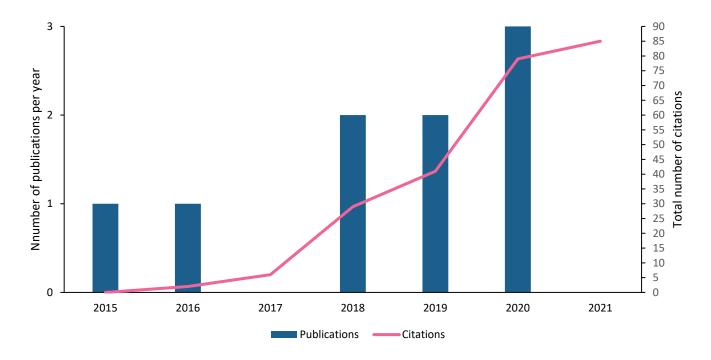
## **EDUCATION**

2016-2020. PhD

The evolutionary context and functional ecology of the thylacine (Thylacinus cynocephalus)
Department of Anatomy and Developmental Biology
Monash University, Australia

2005—2011. Bachelor of Science in Biology; Emphasis in Animal Biology (Zoology)
Department of Biology
Grand Valley State University, USA

## **PUBLICATIONS**



h-index = 5, i10-index = 4, 85 total citations (February 2021)

#### PEER REVIEWED PUBLICATIONS

#### 2020

- 1. Rule, J.P., Adams, J.W., **Rovinsky, D.S.**, Hocking, D.P., Evans, A.R, Fitzgerald, E.M.G. A new large-bodied Pliocene seal with unusual cutting teeth. *Royal Society Open Science* 287: 20201537. DOI: 10.1098/rsos.201591.
  - IF: 2.646; 28/71 (Q2) in Multidisciplinary Sciences; Altmetric: 47
- Rovinsky, D.S., Evans, A.R, Martin, D.G, Adams, J.W. Did the thylacine violate the costs of carnivory? Body mass and sexual dimorphism of an iconic Australian marsupial. *Proceedings of the Royal Society: B* 287: 20201537. DOI: 10.1098/rspb.2020.1537.
   IF: 4.637; 11/93 (Q1) in Biology; Altmetric: 405
- Herries, A.I.R., Martin, J.M., Leece, A.B., Adams, J.W., Boschian, G., Joannes-Boyau, R., Edwards, T.R., Mallett, T., Massey, J., Murszewski, A., Neubauer, S., Pickering, R., Strait, D.S., Armstrong, B.J., Baker, S., Caruana, M.V., Denham, T., Hellstrom, J., Moggi-Cecchi, J., Mokobane S., Penzo-Kajewski, P., Rovinsky, D.S., Schwartz, G.T., Stammers, R.C., Wilson, C., Woodhead, J., Menter, C. Contemporaneity of Australopithecus, Paranthropus, and early Homo erectus in South Africa. Science 368 (eaaw7293):1-19. DOI: 10.1126/science.aaw7293
  - IF: 41.845; 2/71 (Q1) in Multidisciplinary Sciences; Altmetric: 2506

#### 2019

- 4. **Rovinsky, D.S.**, Evans, A.R., Adams, J.W. The pre-Pleistocene fossil thylacinids (Dasyuromorphia: Thylacinidae) and the evolutionary context of the modern thylacine. *PeerJ* 7:e7457. DOI:10.7717/peerj.7457
  - IF: 2.379; 32/71 (Q2) in Multidisciplinary Sciences; Altmetric: 81
- 5. Herries, A.I.R., Adams, J.W., Joannes-Boyau, R., Armstrong, B., Baker, S., Blackwood, A.F., Boshian, G., Caruana, M.V., Penzo-Kajewski, P., Murszewski, A., **Rovinsky, D.S.** Integrating palaeocaves into palaeolandscapes: An analysis of cave levels and karstification history across the Gauteng Malmani dolomite, South Africa. *Quaternary Science Reviews* 220:310-334. DOI: 10.1016/j.quascirev.2017.02.007 IF: 3.803; 30/200 (Q1) in Geosciences, Multidisciplinary; Altmetric: 2

#### 2018

- 6. Adams, J.W., **Rovinsky, D.S.** Taphonomic interpretations of the Haasgat HGD assemblage: A case study in the impact of sampling and preparation methods on reconstructing South African karstic assemblage formation. *Quaternary International* 496:4-18. DOI: 10.1016/j.quaint.2018.01.036

  IF: 2.003; 114/200 (Q3) in Geosciences, Multidisciplinary; Altmetric: 6
- 7. Herries, A.I.R., Murszewski, A., Pickering, R., Mallett, T., Joannes-Boyau, R., Armstrong, B., Adams, J.W., Baker, S., Blackwood, A.F., Penzo-Kajewski, P., Kappen, P., Leece, A.B., Martin, J., **Rovinsky, D.S.**, Boschian, G. Geoarchaeological and 3D visualisation approaches for contextualising *in-situ* fossil bearing palaeokarst in South Africa: A case study from the ~2.61 Ma Drimolen Makondo. *Quaternary International* 483:90-110. DOI: 10.1016/j.quaint.2018.01.001

  IF: 2.003; 114/200 (Q3) in Geosciences, Multidisciplinary; Altmetric: 7

#### 2016

8. Adams, J.W.\*, **Rovinsky, D.S.\***, Herries, A.I.R, and Menter, C.G. Macromammalian faunas, biochronology, and palaeochronology of the early Pleistocene Main Quarry hominin-bearing deposits of the Drimolen Palaeocave System, South Africa. *PeerJ* 4:e1941. DOI: 10.7717/peerj.1941 IF: 2.379; 32/71 (Q2) in Multidisciplinary Sciences; Altmetric: 23 \*co-1st author

#### 2015

 Rovinsky, D.S., Herries, A.I.R., Menter, C.G., and Adams, J.W. 2015. First description of in situ primate and faunal remains from the Plio-Pleistocene Drimolen Makondo palaeocave infill, Gauteng, South Africa. *Palaeontologia Electronica* 18.2.34A: 1-21. DOI: 10.26879/533
 IF: 1.616; 25/55 (Q2) in Paleontology; Altmetric: n/a

## PAPERS IN REVIEW/REVISION

 Rovinsky, D.S., Evans, A.R., Adams, J.W. Convergence between the thylacine and small prey-focused canids. BMC Evolutionary Biology. In revision

## **TEACHING EXPERIENCE**

#### **ACADEMIC**

#### 2020

BMS2011 Structure of the human body: An evolutionary and functional perspective

Demonstrator, Semester 1

Department of Anatomy and Developmental Biology

Monash University, Clayton Australia

#### 2018

BMS2011 Structure of the human body: An evolutionary and functional perspective

Demonstrator, Semester 1

Department of Anatomy and Developmental Biology

Monash University, Clayton Australia

#### 2015

Substitute Teacher (Primary—Secondary education)

Science and mathematics focus in secondary education positions

Lansing, USA

#### 2012-2015

General College Biology I

Laboratory Instructor

Department of Biology

Grand Valley State University, Allendale USA

## **STUDENT SUPERVISION AND MENTORING**

#### 2016

Honours: Alexander D. McDonald (mentor)

Digitally reconstructing the forelimb of the extinct Pig-footed bandicoot, Chaeropus ecaudatus,

using CT and MRI imaging

Monash University, Clayton Australia

Honours: James P. Rule (mentor)

Sensory adaptations of extant carnivorous marsupials to nocturnality: Establishing patterns and

anatomical convergence with Orders Primates and Carnivora

Monash University, Clayton Australia

### **COMPUTER SKILLS**

Coding and Statistics: R, PAST

Phylogenetics: MrBayes, TNT, Mesquite, R{ape}, R{phytools}, R{TreeSearch}, R{strap}, R{paleotree}

Morphometrics: R{geomorph}, MorphoJ, Morphologika, Landmark Editor, Stratovan Checkpoint, dHAL Viewbox4

3D Data Suites: Artec Studio, Avizo, Geomagic, MeshLab

Graphics: Adobe Photoshop, Adobe Illustrator

Productivity Suites: Microsoft Word, Microsoft Excel, Microsoft Powerpoint

## **AWARDS & GRANTS**

#### 2020

PhD Excellence in Publication Award \$500

Department of Anatomy and Developmental Biology,

Monash University

Best Poster Award \$100

Australasian Evolution Society Conference 2020,

2019

PhD Excellence in Publication Award \$500

Department of Anatomy and Developmental Biology, Monash University

2016

Monash University - Museums Victoria PhD Research Scholarship \$17,500

Robert Blackwood Partnership

## **OUTREACH & SCIENCE COMMUNICATION**

## **NON-PEER REVIEWED PUBLICATIONS**

Rovinsky, D.S., Evans, A.R., and Adams, J.W. 2020. "The Tasmanian tiger was hunted to extinction as a 'large predator' – but it was only half as heavy as we thought" The Conversation >47,000 reads; 54 comments; 5th-most read Monash University article of August 2020

https://theconversation.com/the-tasmanian-tiger-was-hunted-to-extinction-as-a-large-predator-butit-was-only-half-as-heavy-as-we-thought-144599

## PUBLIC OUTREACH: FACE TO FACE

Melbourne Museum National Science Week "Science on Show" 19 August 2018

## **PUBLIC OUTREACH: ONLINE MEDIA**

#### Interview

CNN Space + Science "Tasmanian tigers were small but not fierce predators. Then they went extinct." https://edition.cnn.com/2020/08/18/world/tasmanian-tiger-thylacine-study-scn/index.html

ABC News "Tasmanian tigers 'much smaller' than previously thought, US PhD student says" https://www.abc.net.au/news/2020-08-19/new-thinking-on-thylacine-size-from-us-phdstudent/12575016

Channel 7 Tasmania "Tiny tiger"

https://www.youtube.com/watch?v=mWhinC\_6cgw

Hobart Mercury "The not so scary truth about Tasmanian tigers"

https://www.themercury.com.au/news/tasmania/hyperlocal/tasmanian-tiger-was-not-so-big-andscary/news-story/931e011a9d97254b4869e3e456d1d1ad

Artec3D.com "Using Artec 3D scanners to discover the true size of the now-extinct thylacine" https://www.artec3d.com/news/thylacine-body-mass-quest?fbclid=IwAR38WjLCrFk0Yw7Fd77-3FZz3Vn-Gq2J2hvUR3LTqq1cIY1Yz\_Tlspmp7Pq

## **Invited commentary**

ABC Science News "Huge dinosaurs evolved different cooling strategies to prevent their brains overheating"

17 October 2019

https://www.abc.net.au/news/science/2019-10-17/huge-dinosaurs-cooling-strategies/11604992

#### **PUBLIC OUTREACH: RADIO**

Interview: "Tasmanian tiger has shrunk overnight!" 882 AM 6PR

19 August 2020

https://www.6pr.com.au/tasmanian-tiger-has-shrunk-overnight/

Interview: Your Afternoon with Helen Shields

https://www.abc.net.au/radio/hobart/programs/your-afternoon/your-afternoon/12557052

Interview: Einstein A Go Go "How to survive extinction" 102.7 FM 3RRR

22 September 2019

https://www.rrr.org.au/explore/podcasts/einstein-a-go-go/episodes/3763-einstein-a-go-go-22september-2019

## **CONFERENCE PRESENTATIONS**

- Rovinsky, D.S., Evans, A.R., Martin, D.G., and Adams, J.W. 2020. Trusting tall tiger tales: How big was the thylacine? Australian Archaeological Association Conference (held online). (talk) https://youtu.be/JGoZYKV9pLc
- 2. **Rovinsky, D.S.**, Evans, A.R., and Adams, J.W. 2020. Convergent evolution between the thylacine and mesopredator canids. Australasian Evolution Society Conference, Sydney, Australia (held online). (poster)
- 3. **Rovinsky, D.S.**, Evans, A.R., Martin, D.G., and Adams, J.W. 2020. Did the thylacine violate the costs of carnivory? Australia Mammal Society Conference, Lismore, Australia (held online). (*talk*) https://youtu.be/7Xq9PWCDAi0
- 4. **Rovinsky, D.S.**, Adams, J.W., Evans, A.R., Pollock, T.I. 2019. Specialisation of canine shape and sharpness in potentially sympatric species of *Dinofelis* (Carnivora, Machairodontinae). Society of Vertebrate Paleontology Conference, Brisbane, Australia. 79, p.182. (poster)
- 5. **Rovinsky, D.S.**, Evans, A.R., and Adams, J.W. 2017. Placing the thylacine (*Thylacinus cynocephalus*) in carnivorous morphospace using 3D geometric morphometrics. Conference of Australasian Vertebrate Evolution, Palaeontology and Systematics, Queenstown, New Zealand. (*talk*)

## **INVITED TALKS**

 Morphology Working Group: "So you've decided to study shape & size", University of Michigan, MI USA

## **PROFESSIONAL ACTIVITIES**

#### **EXTERNAL REVIEWER**

Reviewer for Palaeontologia Electronica

#### **ACADEMIC MEMBERSHIPS**

2020—present Member of the Australian Mammal Society

2019—present Member of the Society of Vertebrate Palaeontology

## **FIELDWORK**

## 2021

- Heritage Consultant, Taungurung Land and Waters Council, VIC Proj.Mgmt: R.C. Stammers (NGH Pty Ltd, Australia)
  - · transect surveys, artefact recovery and identification

#### 2016

- Excavations and macromammalian faunal analyst on the early Pleistocene Haasgat palaeocave deposit, Gauteng, South Africa
  - P.I.: J.W. Adams (Monash University, Australia)
    - · excavation, fossil fauna identification and analysis

#### 2015

- Excavations and macromammalian faunal analyst on the early Pleistocene Drimolen Main Quarry, Gauteng, South Africa
  - P.I.: J.W. Adams (Monash University, Australia), A.I.R. Herries (LaTrobe University, Australia), and C.G. Menter (University of Johannesburg, South Africa)
    - · excavation, fossil fauna identification and analysis

## 2014

- Excavations and macromammalian faunal analyst on the latest Pliocene Drimolen Makondo, Gauteng, South Africa
  - P.I.: J.W. Adams (Monash University, Australia), A.I.R. Herries (LaTrobe University, Australia), and C.G. Menter (University of Johannesburg, South Africa)
    - · excavation, fossil fauna identification and analysis

#### 2012

- Reproductive monitoring of fledgling tree swallows (*Tachycineta bicolor*) relating adult condition and reproductive performance with their nestlings, Allendale, USA P.I.: M.P. Lombardo (Grand Valley State University, USA)
  - · banding and tagging, blood and tissue sample collection, in vivo linear and mass metrics

#### 2006

- Excavations of the McNeal Mound (Hopewellian Middle Woodland Culture) of the Muskegon River Flats, Muskegon State Game Area, USA
  - P.I.: J.G. Brashler (Grand Valley State University, USA)
    - · site location, excavation, transect surveys, test pits, artefact recovery and identification

## MUSEUM COLLECTIONS ACCESS

American Museum of Natural History New York, USA

Australian Museum

Sydney, Australia

Ditsong Museum of Natural History

Pretoria, South Africa

Leeds Museum

Leeds, United Kingdom

Macleay Museum

Sydney, Australia

Michigan State University Museum

Lansing, USA

Museum of Natural History

Berlin, Germany

Museum of Natural Sciences of

Belgium

Brussels, Belgium

Museums Victoria

Melbourne, Australia

National Museum Wales

Cardiff, United Kingdom

Natural History Museum, London London, United Kingdom

Queen Victoria Museum and Art

Gallery

Launceston, Australia

Smithsonian Museum of Natural

History

Washington D.C, USA

South Australian Museum

Adelaide, Australia

State Museum of Natural History

Stuttgart, Germany

Tasmanian Museum and Art Gallery

Hobart, Australia

University Museum of Zoology

Cambridge, United Kingdom

Western Australia Museum

Perth, Australia

York Museum

York, United Kingdom