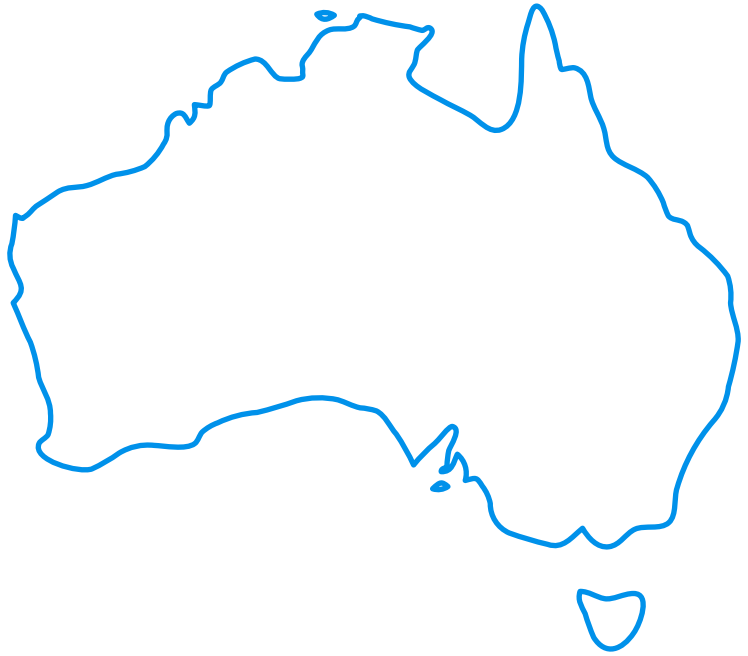


Ig Nobels

The Australian Showcase

- Jack Foster

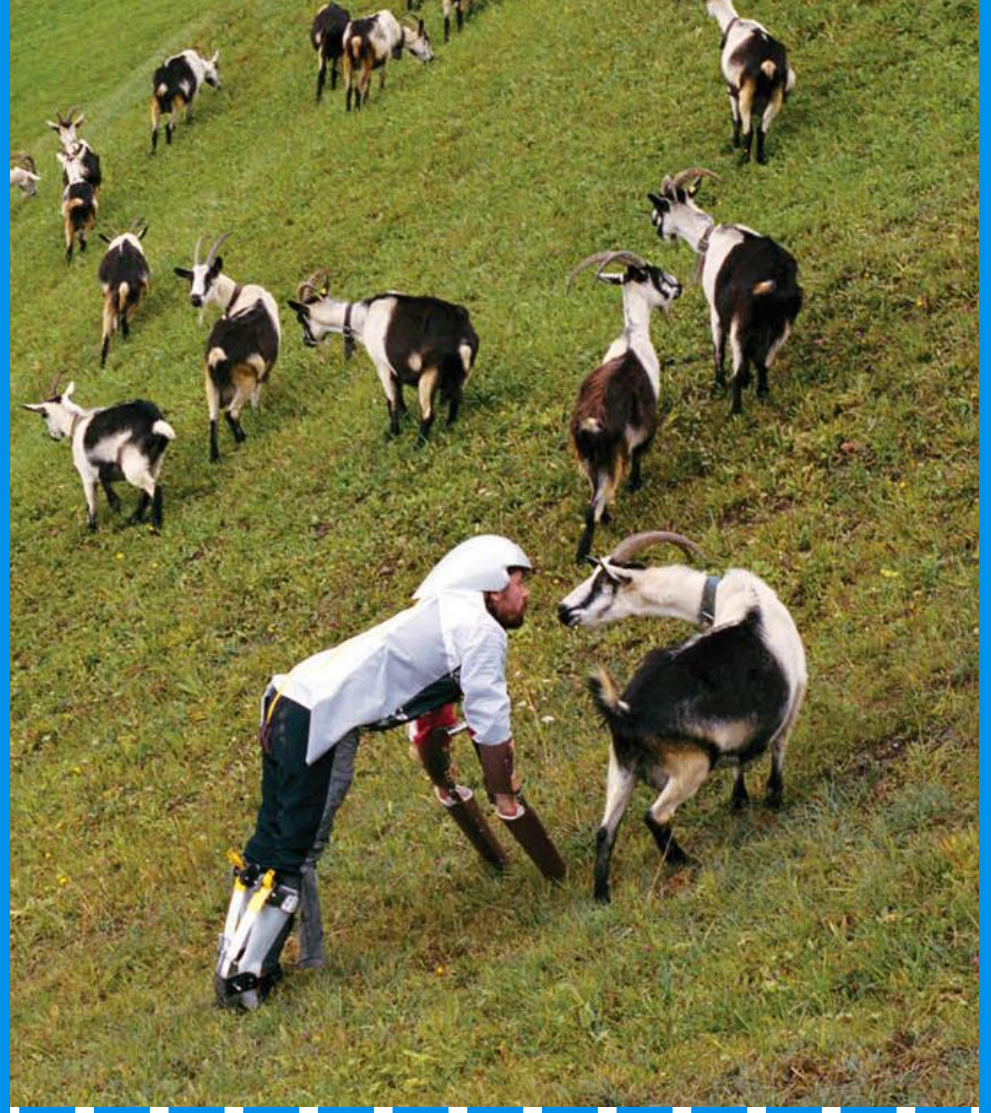
What is an Ig Nobel Prize?

- Satire on Nobel Prizes
- Celebrates ten unusual achievements in scientific research
- Ig Nobel ← Ignobel
- Annually awarded since 1991

The 2005 Ig Nobel Prize for Science Education was awarded to the Kansas State Department of Education for…

"mandating that children should not believe in Darwin's theory of evolution any more than they believe in Newton's theory of gravitation, Faraday's and Maxwell's theory of electromagnetism, or Pasteur's theory that germs cause disease"

Are Cats a Liquid?



GoatMan: How I Took a Holiday from Being Human

Of Flying Frogs and Levitrons

ROYAL SOCIETY OF CHEMISTRY

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Intestines of non-uniform stiffness mold the corners of wombat feces†

Patricia J. Yang,‡[a] Alexander B. Lee,‡[b] Miles Chan,[a] Michael Kowalski,[c] Kelly Qiu,[c] Christopher Waid,[c] Gabriel Cervantes,[a] Benjamin Magondu,[c] Morgan Biagioni,[a] Larry Vogelnest,[d] Alynn Martin,[e] Ashley Edwards,[e] Scott Carver*[e] and David L. Hu *[ab]

Wombat Poo is Cube-Shaped?

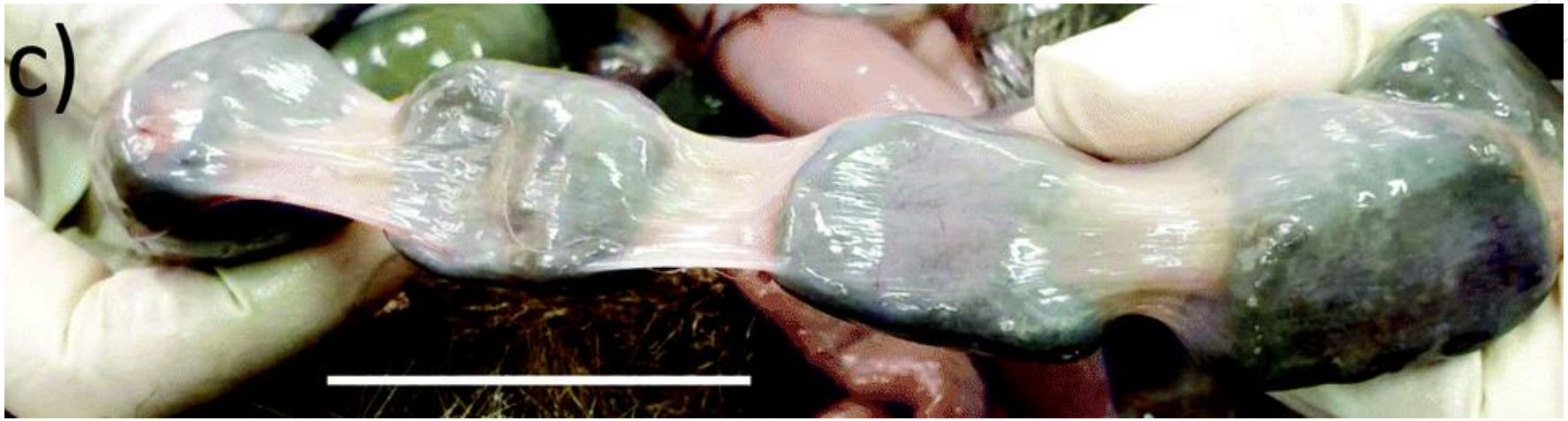
- “It is currently poorly understood how these animals produce geometric scats”
- How?
  - Pelvic bones compress poo?
  - Square exit hole?
- Why?
  - Square poo doesn’t roll off rocks

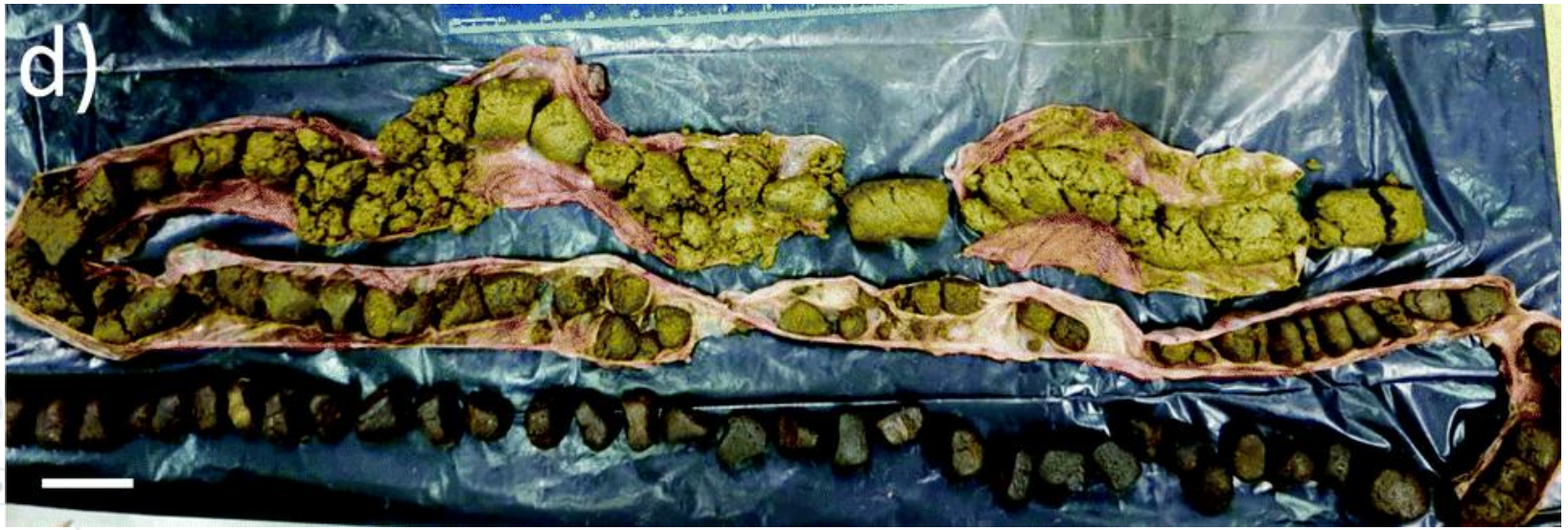
Disproving Existing Theories

Pelvic bones are nowhere near the large intestine

Round exit hole

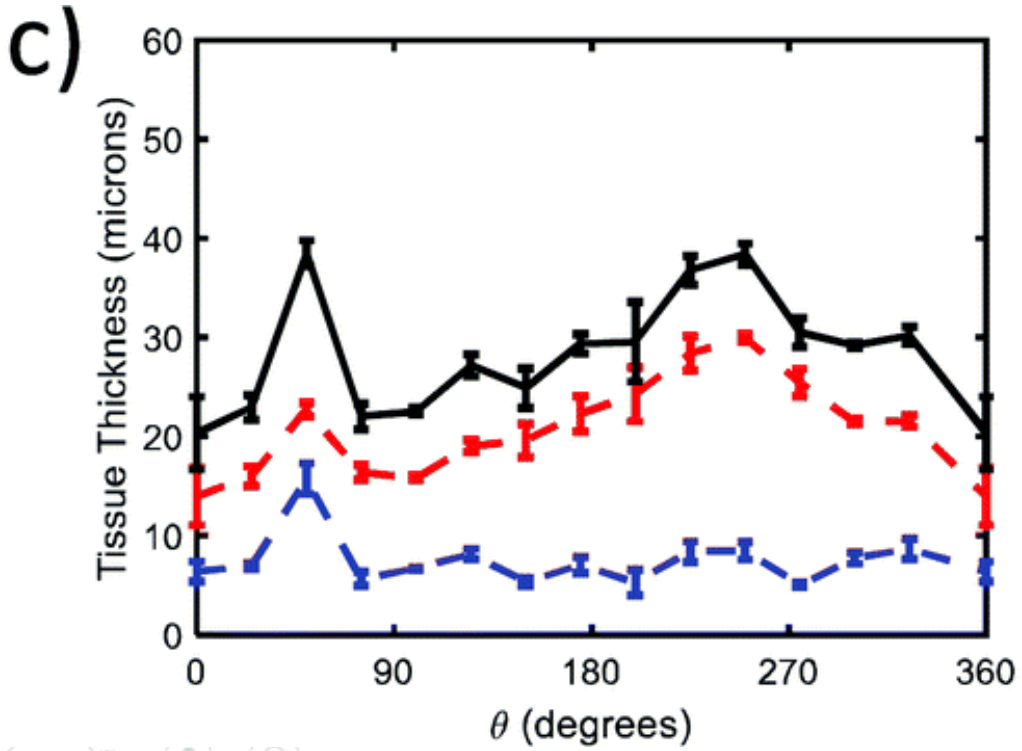
Wombat Intestines?!





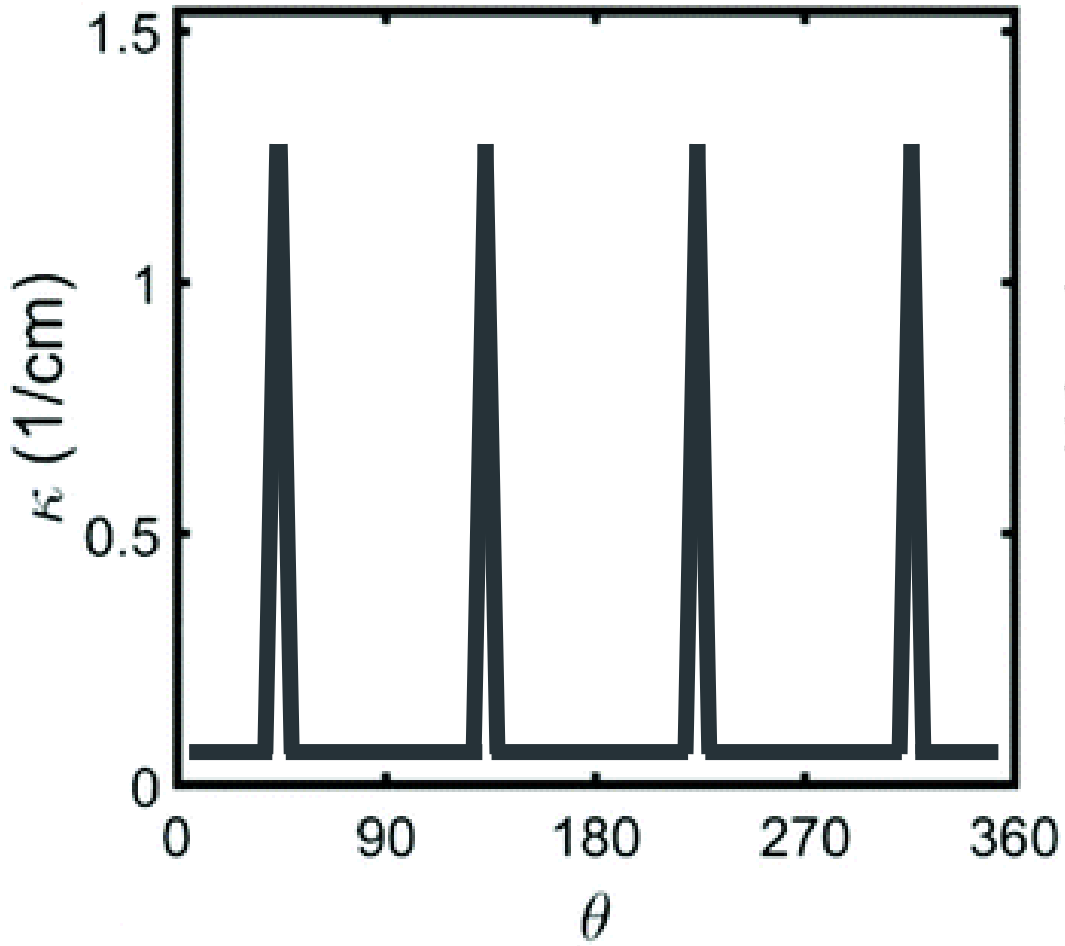
Measuring Wombat Intestines

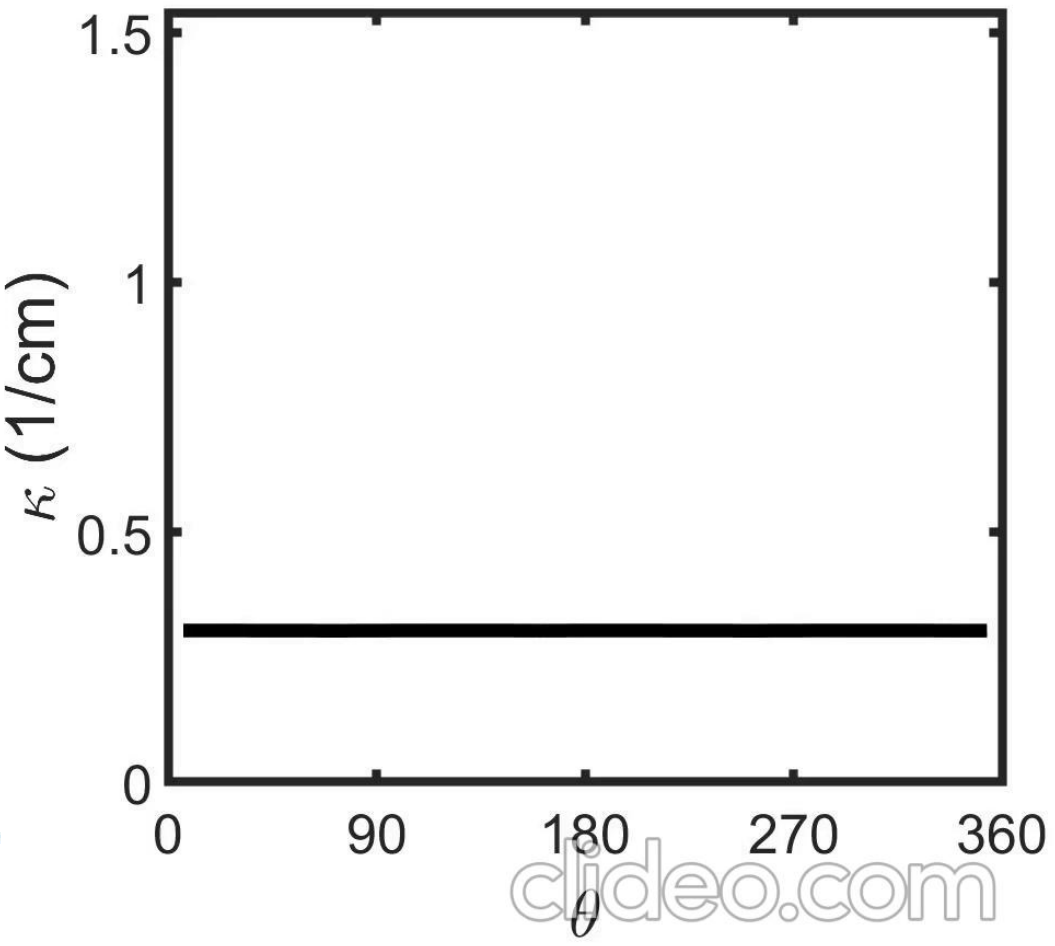
Thickness



Stiffness

Modelling Wombat Intestines





clideo.com

Why Should We Strive To Know This?

- Non-invasive procedure for diagnosing wombat health
- Cube formation in manufacturing
- Insight into how illnesses affect human intestine stiffness

Fun Fact!
A group of wombats is called a “wisdom”

J Gambl Stud (2010) 26:571–581
DOI 10.1007/s10899-009-9174-4

ORIGINAL PAPER

Never Smile at a Crocodile: Betting on Electronic Gaming Machines is Intensified by Reptile-Induced Arousal

Matthew J. Rockloff · Nancy Greer

Misattribution of Arousal

We incorrectly attribute the source of an emotional state a.k.a “arousal”

e.g. *Roller coasters and scary movies are good date ideas because when reflecting on them, we interpret our excitement as feelings for our companion*

1974

- **How will bridge height affect perceived attraction towards a individual?**
- More male participants on the high bridge, called the female post-interaction
- Misattributed bridge height arousal to attraction towards female

2007

- **How will white noise affect gambling intensity?**
- Participants exposed to white noise had a higher average bet size
- Misattributed white noise arousal to “lucky feeling”

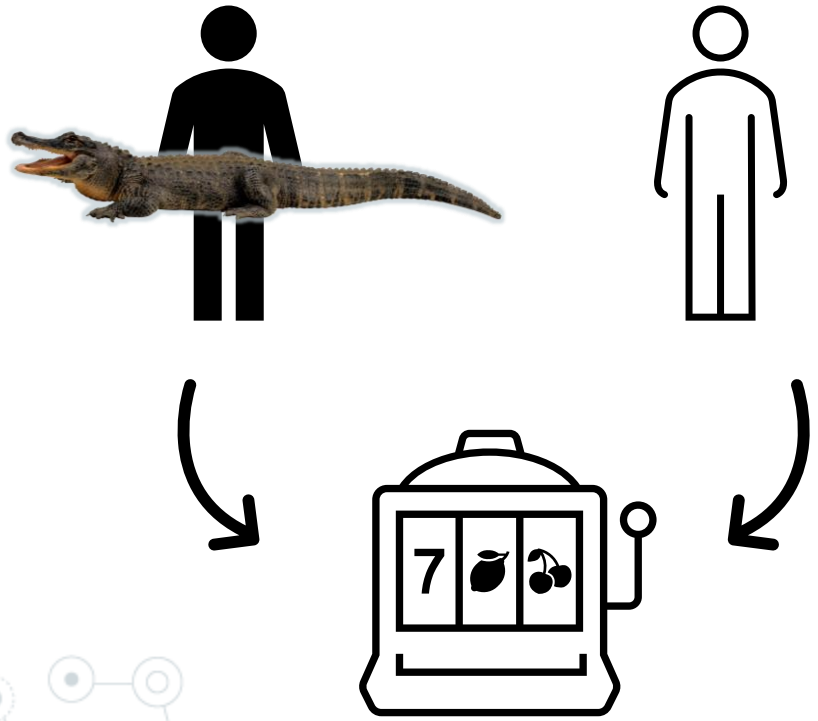
2010

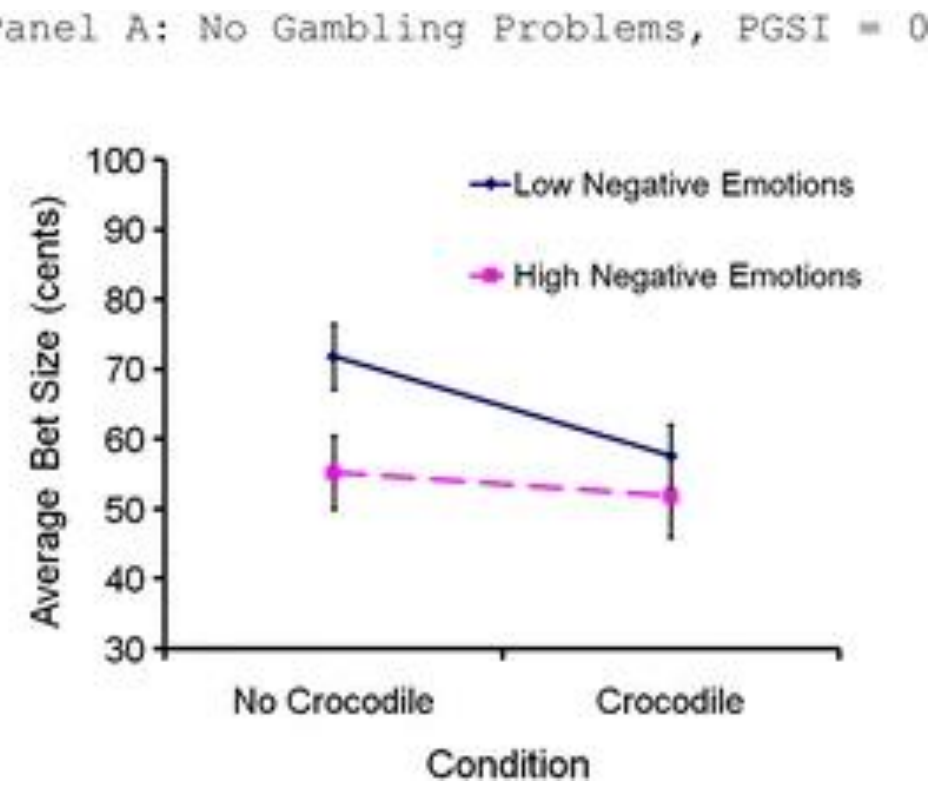
- **How will a 1-metre saltwater crocodile affect gambling intensity?**

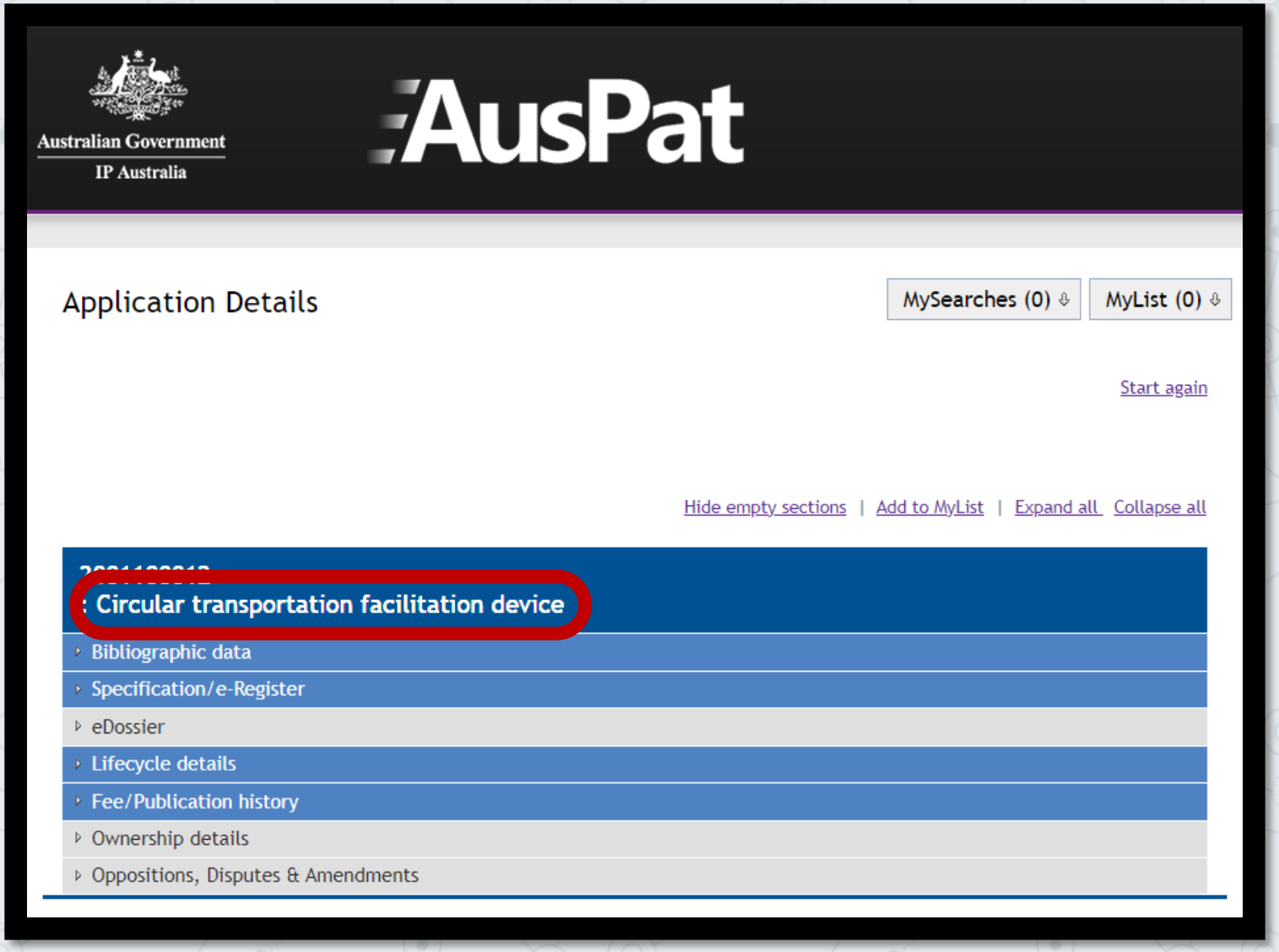
The Experiment

Koorana Saltwater Crocodile Farm

103 tourists






Australian Government
IP Australia
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Application Details
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Circular transportation facilitation device
Bibliographic data
Specification/e-Register
eDossier
Lifecycle details
Fee/Publication history
Ownership details
Oppositions, Disputes & Amendments

Australian Patent Office introduced the “Innovation Patent”

John Keogh tests the new patent by attempting to patent the wheel

John Keogh is successful in his application

Cite this article as: BMJ, doi:10.1136/bmj.38705.470590.55 (published 23 December 2005)

Research

Didgeridoo playing as alternative treatment for obstructive sleep apnoea syndrome: randomised controlled trial

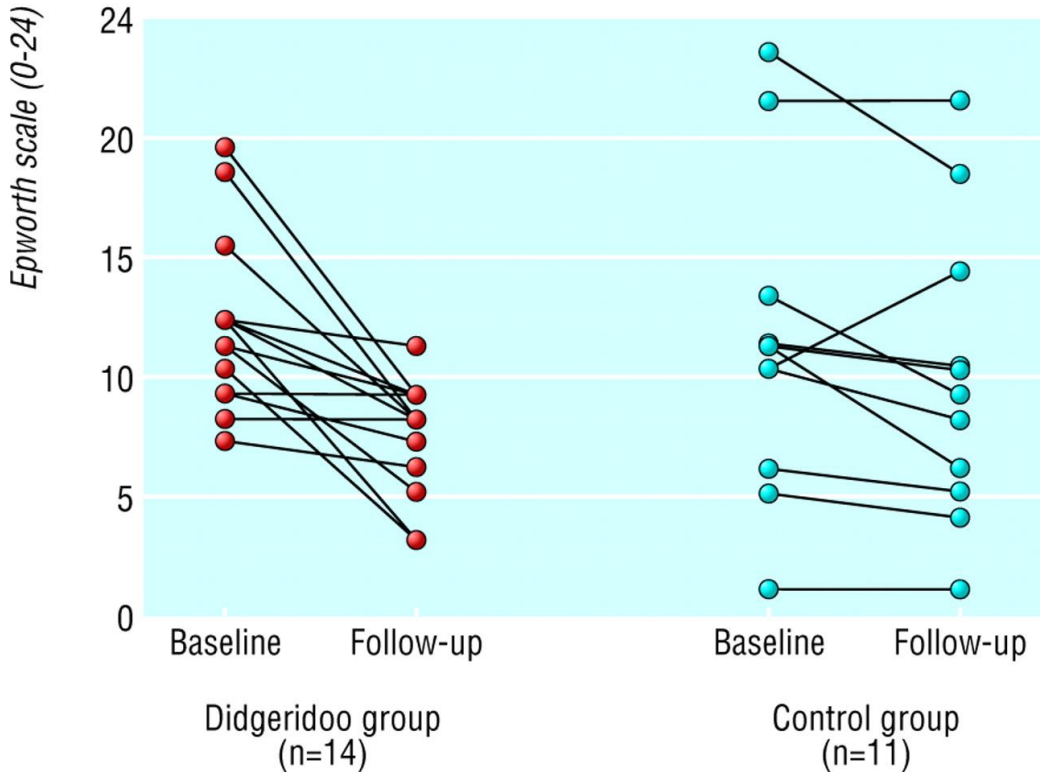
Milo A Puhan, Alex Suarez, Christian Lo Cascio, Alfred Zahn, Markus Heitz, Otto Braendli

What is Sleep Apnoea?

- Sleeping disorder that disrupts breathing and reduces sleep quality as a result
- Intervention by “continuous positive airway pressure therapy”

The Experiment

- Baseline assessment
- Lessons for a month
  1. Lip technique
  2: Circular breathing
  3/4: Review + Advanced Techniques
- Practice for three months after
- Follow-up assessment



ELSEVIER

Applied Ergonomics 33 (2002) 523–531

APPLIED ERGONOMICS

www.elsevier.com/locate/apergo

An analysis of the forces required to drag sheep over various surfaces

J.T. Harvey[a,*], J. Culvenor[b,1], W. Payne[c], S. Cowley[b], M. Lawrance[c], D. Stuart[d], R. Williams[e]

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[d] *School of Physical Education, Exercise and Sport Studies, University of South Australia, Holbrooks Road, Underdale, South Australia 5032, Australia*
[e] *Wimmera Health Care Group, Physiotherapy Department, Baillie Street, Horsham, Victoria, Australia, 3400*

Received 26 September 2001; accepted 8 July 2002

Sheep Shearing

- Very high injury rate
  - 15% pa vs average 2.6% pa

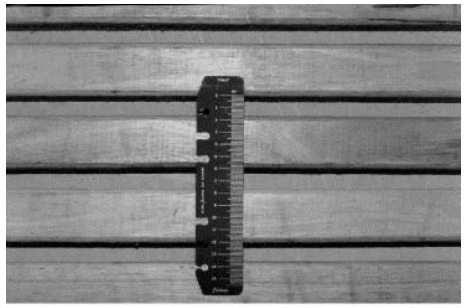
- Every 2.5 min for 8 hours
  - Catch
  - Tip
  - Drag
  - Sheer
  - Guide it away

The Experiment

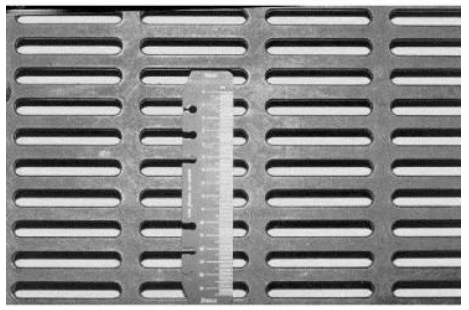
- Participants

  8 x 5 x

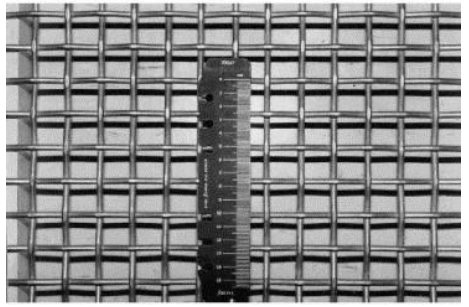
- Floor materials
  - Wood battens ‖ drag
  - Wood battens ⊥ drag
  - Plastic battens ‖ drag
  - Plastic battens ⊥ drag
  - Steel mesh
- Slopes
  - 0° (horizontal)
  - 5.6° (1:10)



(a)



(b)



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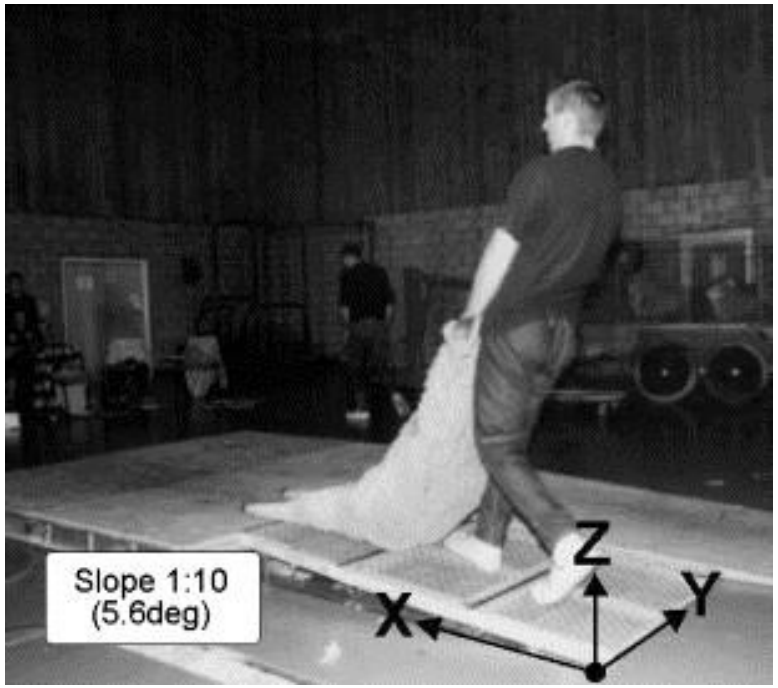


Results

Dragging Force on Sheep (N)

	Slope = 0°	Slope = 5.6°
Wood ∥	388.2	359.2
Wood ⊥	400.4	376.4
Plastic ∥	395.6	370.1
Plastic ⊥	405.4	378.9
Steel Mesh	422.8	394.1

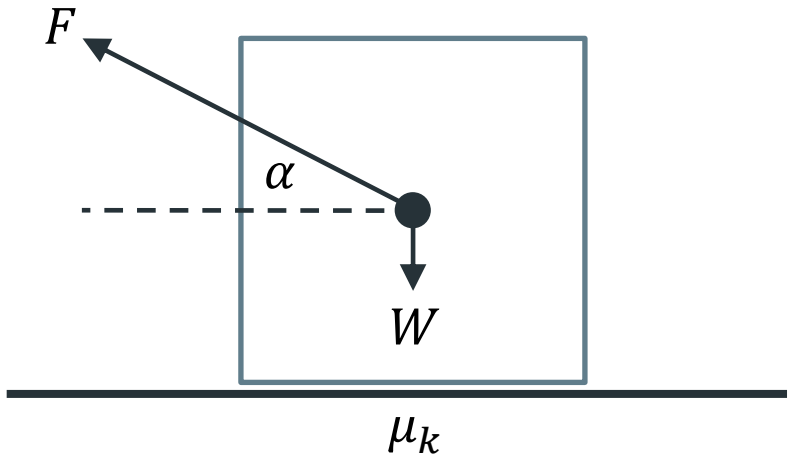
10% increase

Coefficient of Friction

	Slope = 0°	Slope = 5.6°
Wood ∥	0.507	0.484
Wood ⊥	0.606	0.585
Plastic ∥	0.620	0.596
Plastic ⊥	0.688	0.645
Steel Mesh	0.928	0.858

80% increase

Maths



F = Force to pull sheep

W = Weight of sheep

α = Angle of pull

μ_k = Coefficient of friction

$$F = \frac{\mu_k W}{\cos\alpha + \mu_k \sin\alpha}$$

Pulling Sheep Horizontally

$$\alpha = 0^o \Rightarrow \mathrm{F} = \mu_k W$$

Lifting Sheep Vertically

$$\alpha = 90^o \Rightarrow \mathrm{F} = W$$

J. Aust. ent. Soc., 1983, **22:** 79-80

NOTE

BEETLES ON THE BOTTLE: MALE BUPRESTIDS MISTAKE STUBBIES FOR FEMALES (COLEOPTERA)

D. T. GWYNNE and D. C. F. RENTZ

Department of Zoology, University of Western Australia, Nedlands, 6009, W.A.
CSIRO Division of Entomology, P.O. Box 1700, Canberra City, 2601, A.C.T.

The Experiment

“Improperly disposed beer bottles not only present a physical and “visual” hazard in the environment, but also could potentially cause great interference with the mating of a beetle species”

Ig Nobel Prizes “first make people laugh, and then make them think”. Perhaps one of the best ways to engage people in science.

Thank you for listening!