



**Michael L. Berumen, Postdoctoral Scholar**

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**Education**

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James Cook University, Townsville, Queensland, Australia

– Ph.D. conferred Mar 2007, School of Marine and Tropical Biology

Dissertation: *Influence of resource availability on life history traits of chaetodontids*

Supervisors: Prof. J. Howard Choat, Prof. Geoffrey P. Jones, Dr. Morgan S. Pratchett

University of Arkansas, Fayetteville, Arkansas

–B.S., May 2001, *Summa Cum Laude* (highest honours)

Major: Zoology

GPA: 3.86 / 4.0

Honours thesis: *Effects of coral composition and diet on the condition of butterflyfish*

Supervisor: Dr. Raj Kilambi

James Cook University, Townsville, Australia

–Jul 1999 – Dec 1999: Butler University Study Abroad Program

–Jan 2000 – Jul 2000: Master's Qualifying Program (High Distinction)

Westark College, Fort Smith, Arkansas

–May 1997 – May 1998: Concurrent high school enrolment

Math and Biology classes, GPA: 4.0 / 4.0

## **Employment History**

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Fulbright College Honors Intern, University of Arkansas.	Aug 2000 – May 2001
Trip Director / Dive Instructor, Blue Heeler Dive, Townsville	Aug 1999 – Jul 2000
Internship with U.S. Senator Tim Hutchinson, Washington DC	Jun 2001 – Jul 2001
Assistant Director of the Chancellor's Scholarship, University of Arkansas	Aug 2001 – Mar 2002
Dive Instructor, Diving Dreams, Townsville	Jun 2002 – Jan 2004
Liaison to the Honors College, University of Arkansas Chancellor's Office	Apr 2002 – Jul 2007
Co-founder, Reef Insights Co., Townsville, Australia	Nov 2004 – present
Instructor, University of Arkansas Gifted and Talented Summer Institute	Jul 2005, 2006, 2007
Instructor, University of Arkansas Biology Department	Aug 2005 – Jul 2006
Adjunct Instructor, Hawaii Pacific University	Aug 2005 – Mar 2007
Visiting Assistant Professor, University of Arkansas Biology Department	Aug 2006 – May 2007
Visiting Scholar, University of Cambridge Department of Zoology	Jun 2007 – Jul 2007
Postdoctoral Scholar, Woods Hole Oceanographic Institution	Aug 2007 – present

## **Academic Awards and Honors**

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National Science Foundation Graduate Research Fellowship (2004 – 2006)  
UA Honors College Outstanding Mentor Award (2002, 2003)  
Samuel Dellinger Outstanding University of Arkansas Zoology Student Award (2001)  
*USA Today* All-USA Academic Team (2001)  
Inducted to Phi Beta Kappa Honor Society (2001)  
Arkansas Student Undergraduate Research Fellowship (2001)  
Fulbright Scholarship National Finalist (2001)  
Rhodes Scholarship Finalist (2000 & 2001)  
Barry M. Goldwater Scholarship (1999 – 2001)  
University of Arkansas Sturgis Fellowship (1998 – 2001)  
Arkansas Governor's Scholarship (1998 – 2001)  
Most Outstanding Biology Student Award, Westark College (1998)

## **Publications**

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- Pratchett, M, S Wilson, **M Berumen**, & M McCormick (2004) Sub-lethal effects of coral bleaching on an obligate coral feeding butterflyfish. *Coral Reefs* 23: 352-256
- Berumen, M** (2005) The importance of juveniles in modelling growth: butterflyfish at Lizard Island. *Environmental Biology of Fishes* 72: 409-413
- Berumen, M**, M Pratchett, & M McCormick (2005) Within-reef differences in diet and body condition of coral-feeding butterflyfishes (Chaetodontidae). *Marine Ecology Progress Series* 287: 217-227
- Berumen, M** & M Pratchett (2006) Effects of resource availability on the competitive behaviour of butterflyfishes (Chaetodontidae). *Proceedings of the 10<sup>th</sup> International Coral Reef Symposium*. 644-650
- Berumen, M** & M Pratchett (2006) Recovery without resilience: Persistent disturbance and long-term shifts in the structure of fish and coral communities at Tiahura Reef, Moorea. *Coral Reefs* 25: 647-653
- Almany, G, **M Berumen**, S Thorrold, S Planes, & G Jones (2007) Local replenishment of coral reef fish populations in a marine reserve. *Science* 316: 742-744
- Pratchett, M & **M Berumen** (in review) Within-reef variation in abundance of *Chaetodon* fishes (Chaetodontidae) at Lizard Island, northern Great Barrier Reef. Submitted Jan 2007 to *Journal of Fish Biology*.
- Gregson, M, M Pratchett, & **M Berumen** (in review) Inter-specific variation in the feeding behaviour of Great Barrier Reef butterflyfishes (Chaetodontidae). Submitted March 2007 to *Coral Reefs*
- Pratchett, M, M Marnane, **M Berumen**, J Eagle, & D Pratchett (in review) Utilisation of distinct nursery habitats by *Chaetodon* butterflyfishes (Chaetodontidae) relates to dietary specificity. Submitted Jul 2007 to *Coral Reefs*.
- Berumen, M**, M Pratchett (in press) Trade-offs associated with dietary specialisation for corallivorous butterflyfishes. *Behavioral Ecology and Sociobiology*.

## **Edited Book**

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- Pratchett, M, **M Berumen**, & B. Kapoor (editors). *The Biology of Butterflyfishes*. Science Publishers, Inc. Publishing agreement signed in May 2007, guaranteeing monograph publication in late 2008. Solicited chapters will be peer-reviewed. Author agreements are secured from D Bellwood, P Munday, L van Herwerden, R Fisher, S Wilson, M Kulbicki, S Yabuta, and E Cox, with other agreements pending.

## **Reviewing**

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- UA Gifted & Talented Summer Institute Scholarship Committee member (2004 & 2006)
- Lindbergh Foundation Technical Review Panel Member (2007)
- UA "Honors College – Environmental Dynamics Research Mentoring Experiences for Students" proposal reviewer (2007)
- UA Honors College Research Grant proposal reviewer (2007)
- Editorial Board Member: *The Open Oceanography Journal* (Bentham Open Journals) (from 2007)

## Teaching History

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<i>Subject Taught</i>	<i>Term</i>	<i>Enrollment</i>
<u>University of Arkansas</u>		
Principles of Biology (BIOL 1543)	Fall 2005	~700
	Spring 2006	~650
	Summer 2006	~120
General Ecology (BIOL 3863)	Fall 2006	~85
Marine Biology (BIOL 4803)	Spring 2007	~70
<u>Hawaii Pacific University</u>		
Introduction to Biology (BIOL 1000 online)	Fall 2005	~20
	Spring 2006	~20
Introduction to Oceanography (MARS 1000 online)	Fall 2006	~20
	Military Term 2006	~15
	Military Term 2007	~15
<u>University of Arkansas Gifted and Talented Summer Institute</u>		
Biology “Down Under”: Marine Biology and Zoology of Australia	July 2005	~15
Marine Biology	July 2006	~15
“Life” in Movies: Biology in Popular Media	July 2007	~15

## Former and Current Advisees

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Phillip Cleves	B.S. (Hons)	University of Arkansas (with Prof. DD Rhoads)
Danielle deVere	M.Sc.	James Cook University (with Prof. JH Choat)
Marcus Gregson	Ph.D.	University of Technology, Sydney (with Dr. MS Pratchett)

9 additional undergraduate senior theses written under my direction

## **External Funding**

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P.A.D.I. Project A.W.A.R.E., 2003: "Demography of butterflyfish." AU\$1000  
P.A.D.I. Project A.W.A.R.E., 2003: "Settlement preferences of butterflyfish." AU\$700  
P.A.D.I. Project A.W.A.R.E., 2004: "Marine education for young Arkansans." US\$900  
JCU Doctoral Research Scheme, 2004: AU\$2500  
JCU Program Grant, 2004: "Phylogenetics of chaetodontids" AU\$35,000 (Awarded to JH Choat et al.)  
JCU Conference Travel Grant. 2004 – 2005: AU\$1500  
JCU Graduate Research Fund, 2005: AU\$1500  
JCU Doctoral Completion Scholarship, 2005: AU\$1000  
National Science Foundation, Graduate Research Fellowship, 2004-2006 (US\$40,500 per year)

## **Conference and Meeting Presentations**

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Paper presentation: "Diet and condition of butterflyfish in habitats with varying coral cover and composition," 9<sup>th</sup> International Coral Reef Symposium, Bali, Indonesia: Oct 2000.

Informative research presentation (for Geelong College students and station visitors): Lizard Island Research Station, Great Barrier Reef, Australia: Apr 2000.

Paper presentation: "Influence of competitive dominance on the social structure and population dynamics of butterflyfish," 6<sup>th</sup> Indo-Pacific Fish Conference, Durban, South Africa: May 2001.

Paper presentation: "Recovery without resilience: disturbance and phase-shifts on Tiahura Reef, Moorea, French Polynesia," 10<sup>th</sup> International Coral Reef Symposium, Okinawa, Japan: Jul 2004.

Paper presentation: "Variation in growth of butterflyfishes (Chaetodontidae) in response to resource availability," 7<sup>th</sup> Indo-Pacific Fish Conference, Taipei, Taiwan: May 2005.

Paper presentation: "The influence of resources on life history traits in butterflyfishes," 81<sup>st</sup> Australian Coral Reef Society Conference, Heron Island, Australia: Aug 2005.

Poster presentation: "Growth of specialist versus generalist coral-feeders on different coral resources," 6<sup>th</sup> European Meeting of the International Society for Reef Studies, Bremen, Germany: Sep 2006.

Poster presentation: "Growth of specialist versus generalist coral-feeders on different coral resources," Coral Reef Ecosystem Biodiversity Forum, Noumea, New Caledonia: Oct/Nov 2006.

Paper presentation: "Self-recruitment of coral reef fish populations in a marine reserve," 83<sup>rd</sup> Australian Coral Reef Society Conference, Fremantle, Australia: Oct 2007.

Science session: "What can butterflyfishes teach us about community ecology?" Sigma Xi Annual Meeting, Florida, USA: Nov 2007.

## **Keynote and Invited Lectures**

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Westark College: Nov 2000

University of Arkansas: Mar 2001, Oct 2003, Oct 2004, Feb & Nov 2005, Apr 2006, Jul & Sep 2007

UA Highlights Weekends (Admissions Programs) 2002-2005

UA Honors College Prestigious Undergraduate Fellowship Interview Weekends 2002-2006

UA Gifted and Talented Scholars and Upward Bound Summer Institutes, Jul 2005 & 2006

Australian Coral Reef Society Fish Taxonomy Workshop, Aug 2005

UA Biology Club, Nov 2005, Mar 2006

Keynote Speaker, Trinity Junior High School National Honor Society Induction, Nov 2005

Keynote Speaker, UA Gifted and Talented Scholars Convocation, Apr 2006

School of Biological Sciences, University of Auckland: Oct 2006

School of Marine Biology and Aquaculture, James Cook University: Nov 2006, Oct 2007

Woods Hole Oceanographic Institution: Dec 2006 & Sep 2007

University of Central Arkansas: Mar 2007

University of Arkansas Fort Smith: Apr 2007

68 other elementary and secondary schools from 2001-2007

## **Professional Organizations**

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American Association for the Advancement of Science

Ecological Society of America

Sigma Xi (*research organization*)

Phi Beta Kappa (*academic honor society*)

International Society for Reef Studies

Australian Coral Reef Society

Animal Behavior Society

Society for Integrative and Comparative Biology

American Society of Ichthyologists and Herpetologists

Professional Association of Diving Instructors

National Postdoctoral Association

## University of Arkansas Administration and Service

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Co-Chair, Recruitment Task Force	Aug 2001 – Jun 2003
Faculty-in-Residence	Jul 2004 – Jul 2007
University Housing Master Steering Committee	Jul 2005 – Jul 2007
Holcombe Hall International Living/Learning Community Steering Committee	Aug 2005 – Jul 2007
Chair, Enhanced Learning Center Director Search Committee	Dec 2005 – May 2006
University Living/Learning Community Task Force	May 2006 – Jul 2007
Faculty Sponsor, Climate Change Awareness Group (Student Organization)	Sep 2006 – May 2007
Residential Education Strategic Planning Committee	Oct 2006 – May 2007

## Field Experience

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### As primary researcher:

Lizard, Orpheus, and One Tree Islands  
Moorea, Tahiti  
Kimbe Bay, Papua New Guinea  
Coconut Island, Hawaii  
Frank's Caye, Belize

### As an assistant:

Beaver Lake, Arkansas  
Ozark National Forest, Arkansas  
Palo Verde and La Selva, Costa Rica  
Shoals Marine Lab, Maine

## Other Skills & Certificates

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Selected for *TheClimateProject.org* (Al Gore's global warming awareness training program)  
P.A.D.I. Instructor Development Course Staff Instructor (licensed to teach 11 specialties)  
Oxygen and First Aid Provider  
Queensland Transport Marine Driver Licence

## **Primary References**

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Associate Scientist  
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Prof. Geoffrey Jones  
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Prof. J. Howard Choat  
Adjunct Professor  
Marine Biology & Aquaculture  
James Cook University  
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## **Additional References**

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Dr. Suzanne McCray  
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