

Curriculum vitae

Name: Dr Alexander Mustard **DOB:** 04-02-75
Nationality: British **Sex:** Male
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Professional profile:

Since finishing my PhD in 2001, I have completed several oceanographic research cruises, published many articles (see attached list) and have received the Norman Heaps Prize (2002) from the Challenger Society for Marine Science as one of the UK's most promising young marine scientists. At the same time I have established myself as a successful underwater photographer, have had many images published in books and magazines, have won a number of international awards and am only the second ever recipient of the Visions in the Sea (2003) "outstanding contribution to underwater photography" award.

Working in marine science I have been privileged to learn a great deal about the oceans, but equally have been frustrated by how much of this knowledge remains in academia. Now, I would like to bring together my scientific and artistic skills to communicate, to a wider audience, true science in an entertaining way with impact.

Education:

1996-2001. PhD. University of Southampton. PhD thesis "Relationship between zooplankton and their physico-chemical environment at the mesoscale"

1992-1996. BSc (Hons) 1992-1996. Oceanography with marine biology. University of Southampton. Thesis "The effect of organic nutrients on phytoplankton cultures".

1988-1993. A levels (ABB) Stowe School, Buckingham.

Employment:

2000-present. Biological oceanographer, Southampton Oceanography Centre.

My research interest is the interaction between the ocean and the life that it supports.

I have worked with a large number of biological and oceanographic sampling and analysis techniques and technologies. These include techniques of phytoplankton culture, zooplankton ecology, oceanographic sampling and statistical data analysis.

I would class myself as an advanced computer user, with a wide range of software experience (including mathematical, statistical and graphical programs) on PC, Mac and UNIX platforms. I have been responsible for my Department's website.

I have completed 5 oceanographic research cruises in the Atlantic and Indian Oceans (27 weeks).

I am accomplished in presenting my science both as written and verbal papers (see attached list).

Photography:

My photography has won many international awards, including 1st, 2nd and 3rd at 29th Festival Mondial De L'Image Sous-Marine (2002), Antibes, France. Gold and Silver Medals at the 10th International Festival of Underwater Photography and Film (2001), UK.

I speak regularly at the British Society of Underwater Photographers and am a 3 time speaker at the Visions in the Sea annual symposium.

My photographs have had extensive editorial usage in books and magazines, including DIVE, Diver, Asian Diver, Amateur Photographer, UWP Magazine and The Sunday Times.

I founded YUP, the Young Underwater Photographers group. with members from 25 countries.

Awards and responsibilities:

Visions in the Sea (2003) "Outstanding Contribution to Underwater Photography" Award.

The Challenger Society for Marine Science (2002) Norman Heaps Prize.

Committee of the Underwater Science Group of the Society of Underwater Technology (2001-)

Committee of the British Society of Underwater Photographers (2002-)

Additional information and achievements:

Sections

- 1) marine science articles
- 2) marine science presentations
- 3) underwater photography articles
- 4) underwater photography presentations
- 5) awards
- 6) underwater photograph awards
- 7) media interviews and articles about Alexander Mustard

Marine science articles:

Mustard, A.T., (2004) Grouper politics: two's an argument, three's nuclear hunting. Ocean Frontiers Newsletter. June 2004.

Mustard, A.T., (2004) Spawn. (Caribbean mass coral spawning). DIVE Magazine. April 2004, 41-43.

Mustard, A.T., (2004) Cheeky chappy: spawning of the red-lip blenny. Ocean Frontiers Newsletter. May 2004.

Allen, J.T., Brown, L., Moore, C.M., Lucas, M.I., and Mustard, A.T., (2004) A large diatom standing stock maintained in a silicon depleted unstable frontal jet. Proceedings of the GLOBEC Open Science Meeting, The Royal Society, London.

Mustard, A.T., (2004) Best behaviour: how to photograph the natural behaviour of coral reef life. Underwater Photography Magazine 17: 44-47.

Mustard, A.T., (2004) The next generation: broadcast spawning in coral reef fish. Ocean Frontiers Newsletter. April 2004.

Mustard, A.T., (2004) Predator or prey? The endangered Caribbean reef shark *Carcharhinus perezii*. Ocean Frontiers Newsletter. March 2004.

Mustard, A.T., (2004) Lobster for lunch? Invertebrate predation on coral reefs. Ocean Frontiers Newsletter. February 2004.

Mustard, A.T., (2004) The night shift: the adaptations of nocturnal planktivores on coral reefs. Ocean Frontiers Newsletter. January 2004.

Mustard, A.T. and Broadbelt, S., (2003) A first record of mass coral spawning in Grand Cayman. 6th Reef Conservation UK Conference, Zoological Society London.

Rixen, M., J. T. Allen, S. Alderson, V. Cornell, N. Crisp, S. Fielding, A. T. Mustard, R. T. Pollard, E. E. Popova, D. A. Smeed, and M. A. Srokosz, (2003). Along or across front survey strategy? An operational example at an unstable front. *Geophysical Research Letters*, 30(1), 1017-1,1017-4.

Mustard, A.T., Lucas, M.I., Moore, C.M., Davidson, R.D., Allen, J.T., Fielding, S. and Mayor, D.J. (2003) Bottom-up forcing of mesozooplankton by mesoscale physical processes. 3rd International Zooplankton Production Symposium.

Fielding, S., Pollard, R.T., Anderson, C.I.H., Alderson, S.G., Allen, J.T. and Mustard, A.T., (2003) High frequency acoustic measurements of copepods to full ocean depth. 3rd International Zooplankton Production Symposium.

Castellani, C., Harris, R.P., Irigoien, X., Lampitt, R.S. and Mustard, A.T. (2003) Physical controls of the production in *Oithona* sp. in the North Atlantic. 3rd International Zooplankton Production Symposium.

Mustard, A.T., (2003) The wall of mouths. Adaptations for feeding on plankton. Ocean Frontiers Newsletter. December 2003.

Mustard, A.T., (2003) Fighting for food. Competition between herbivores on coral reefs. Ocean Frontiers Newsletter. November 2003.

Mustard, A.T., (2003) Coral spawning on Grand Cayman. Ocean Frontiers Newsletter. October 2003.

Broadbelt, S. and Mustard, A.T., (2003) Go east for eco-tourism. What's Hot magazine. Sept 2003: 6-8.

Mustard, A.T., (2003) Food for thought. Plants and herbivores on coral reefs. Ocean Frontiers Newsletter. September 2003.

Mustard, A.T., (2003) Tarpon, *Megalops atlanticus*, a blast from the past. Ocean Frontiers Newsletter. August 2003.

- Mustard, A.T., Conquer, M.D. and Allen, J.T. (2003) Laboratory evaluation of a high specification digital CMOS camera for imaging zooplankton at high towing speeds. Southampton Oceanography Centre Internal Document No. 89. 17pp.
- Mustard, A.T., (2003) Parasitic cymothoid isopods – Stuck on you. Ocean Frontiers Newsletter. July 2003.
- Mustard, A.T. (2003) The thimble jellyfish (*Linuche unguiculata*) – A life less ordinary. Ocean Frontiers Newsletter. June 2003.
- Mustard, A.T., (2003) Egg trading in hamlets, (*Hypoplectrus spp.*) To be or not to be (a hermaphrodite). Ocean Frontiers Newsletter. May 2003.
- Allen J.T., Rixen M., Fielding, S., Mustard, A.T., Brown, L., and Sanders, R. (2003) Might eddies dominate carbon export ? 2003 EGS-AGU-EUG joint assembly, Nice, France, 6-11 April 2003.
- Allen, J.T., Rixen, M., Alderson, S.G., Mustard, A.T., Sanders, R., Fielding, S., de Cuevas, B. and Cornell, V. (2003) TOES – Techniques for optimising environmental sampling. Final Report. Southampton Oceanography Centre Research and Consultancy Report No. 66. 44pp.
- Mustard, A.T., (2003) Elkhorn coral, *Acropora palmata*. A giant stride back in time. Ocean Frontiers Newsletter. April 2003.
- Mustard, A.T., (2003) Seagrass, *Thalassia testudinum*. An invader from another world. Ocean Frontiers Newsletter. March 2003.
- Mustard, A.T., (2003) The arrow blenny *Lucayablennius zingaro*. Tiny but deadly. Ocean Frontiers Newsletter. February 2003.
- Mustard, A.T., Fielding, S., Irigoien, X., Moore, C.M., Crisp, N.A. and Allen, J.T. (2002). Controls on mesozooplankton herbivorous grazing pressure at the mesoscale. A case study at the Iceland-Faroes Front. Abstract published in proceedings of the GLOBEC Open Science Meeting, China. Poster presented.
- Mustard, A.T., (2002) Sex on the reef: they way they do it and how to find it. Divequest Newsletter May 2002: 5-7.
- Mustard, A.T., Irigoien, X., Moore, C.M., Fielding, S., Smeed, D.A., Allen, J.T., Crisp, N.A. and Cresswell, J., (2002) The interaction between mesoscale physical processes and zooplankton at the Iceland-Faroes Front. The Challenger Society for Marine Science Centenary Conference.
- Allen, J. T., C. M. Moore, A. T. Mustard, L. Brown and J. F. Read (2002) Export production, particulate sinking v. physical transport. The Challenger Society for Marine Science Centenary Conference.
- Moore, C. M., Lucas, M.I., Allen, J.T., Davidson, R.J., Smeed, D.A., Mustard, A.T., (2002) Mesoscale controls on phytoplankton community structure, physiology and production within an eutrophic open ocean frontal region. The Challenger Society for Marine Science Centenary Conference.
- Allen, J.T., Rixen, M., Crisp, N. A., Mustard, A. T., Sanders, R., and Alderson, S.G., (2002) TOES-Techniques for optimising environmental sampling. Stage 2 report. Commercial in confidence. 4pp.
- Mustard, A.T., (2001) The relationship between zooplankton and the physico-chemical environment at the mesoscale. PhD thesis. University of Southampton. 244 pp.
- Mustard, A.T., (2001) The multicoloured plankton of the Iceland-Faeroes Front. Challenger Wave, The newsletter of the Challenger Society of Marine Science May 2001.
- Bett, B.J., and Mustard, A.T., (2001) Deep water coral reefs. Oceans Illustrated 2: 74-75.
- Broadbelt, S., and Mustard, A.T., (2001) The mystery wreck of the 12 mile banks. What's Hot Magazine Feb 2001:4-8.
- Fielding, S., Crisp, N.A., and Mustard, A.T., (2000) Biophysical interactions at the Almeria Oran front. Proceedings of 140th Meeting of the Acoustical society of America 3-8th December 2000.
- Pollard, R.T., Allen, J.T., Fielding, S., Holliday, N.P., Mustard, A.T., and Read, J.F., (2000) Faroes-Iceland-Scotland Hydrographic and Environmental Survey, FISHES 2001. Cruise proposal.
- Roe, H., Griffiths, G., Crisp, N. Fielding, S. and Mustard, A.T. (1998) Developing systems for concurrent measurements of physical variability and quantitative biology. Paris 17-20 March 1998. First GLOBEC Open Science Meeting.
- Rabe, B., Mustard, A.T., Alderson, S.G., and Allen, J.T., (1998) Towed, undulating Optical Plankton Counter (OPC), attenuation and fluorimeter observations during RRS *Discovery* Cruise 224, 15 Nov 96 - 17 Jan 97. Southampton Oceanography Centre Internal Document 42. pp 166.

Crisp, N.A., Allen, J.T., Griffiths, G., Mustard, A.T., Roe, H.S.J., and Smeed, D.A., (1998) Scheherezade - an interdisciplinary study of the Gulf of Oman, Strait of Hormuz and the southern Arabian Gulf. Charles Darwin Cruise 104. No 12. Calibrated multifrequency backscatter and concurrent hydrography. Leg 1, 12 Feb - 19 March. Southampton Oceanography Centre. Research and Consultancy Report No. 31.

Mustard, A.T., (1997) Scheherezade - an interdisciplinary study of the Gulf of Oman, Strait of Hormuz and the southern Arabian Gulf. Charles Darwin Cruise 104. No 7. Optical plankton counter data. Leg 1, 12 Feb - 19 March. Southampton Oceanography Centre. Research & Consultancy Report No. 16.

Herring, P.J., Roe, H.S.J., Griffiths, G., Boorman, B. and Mustard, A.T., (1997) The effects of the oxygen minimum on the distribution of the mesopelagic fauna in the Gulf of Oman. The 8th Deep Sea Biology Symposium. Monterey, California, USA.

Marine science presentations:

Gallett, I., Mustard, A.T., and Wigham, B.D., (29.01.04) The SERPENT Project. Society for Underwater Technology, Underwater Science Group Committee Meeting.

Mustard, A.T., (30/09/03) Stories from nature's aquarium: the ecology of coral reefs. Buckingham Aquatics Centre.

Mustard, A.T., (20/05/2003) Bottom-up forcing of mesozooplankton by mesoscale physical processes. 3rd International Zooplankton Production Symposium, Gijon, Spain.

Mustard, A.T., (09/05/2003) Seeing beyond the bustle of life on a coral reef. Schools visit talk at SOC.

Mustard, A.T., (09/01/2003) The role of mesoscale physical processes in the lives of zooplankton. POETS Corner Southampton Oceanography Centre Seminar Series.

Mustard, A.T., (19/11/2002) Seeing beyond the bustle of life on coral reefs. Southampton University Sub Aqua Club.

Mustard, A.T., (07/10/2002) Biodiversity and coral reefs. Hythe District Rotary Club. Hythe, Hampshire.

Mustard, A.T., (10/09/2002) The interaction between mesoscale physical processes and mesozooplankton at the Iceland Faroes Front. The Centenary Conference of the Challenger Society for Marine Science, University of Plymouth. Awarded Norman Heaps prize for best oral presentation by a young scientist.

Mustard, A.T., (13/07/2002) The precious biodiversity of Sulawesi's coral reefs. BSoUP Splash-In at Mount Batten Centre, Plymouth.

Mustard, A.T., (04/07/2002) The precious biodiversity of Sulawesi's coral reefs. Marine Life Talks at Southampton Oceanography Centre.

Mustard, A.T., (14/03/2002) The bustling life on a coral reef. National Science Week Lecture. Southampton Oceanography Centre.

Mustard, A.T., (27/02/2002) Mesozooplankton and the mesoscale. George Deacon Division Away-day.

Mustard, A.T., (17/02/2002) Coral reefs on their best behaviour. Talk given for the Cayman Islands Tourism Association. Raised £>300 for local marine conservation.

Mustard, A.T., (23/11/2001) "Hibernating plankton" and "The life of coral reefs". Mount House School, Tavistock, Devon.

Mustard, A.T., et al. (18/07/2001) On the biology of the Red Sea. Given at the British Society of Underwater Photographers. Audience 100 persons.

Mustard, A.T., (16/02/2001) TOES: Optimisation of sampling plankton distributions. Techniques for Optimising Environmental Sampling meeting, Southampton Oceanography Centre.

Mustard, A.T., (29/01/2001) The Optical Plankton Counter: advantages and disadvantages of a new technology for describing zooplankton distributions. Southampton Oceanography Centre *In Situ* Measurements Seminar Series.

Mustard, A.T., (20/12/2000) The natural history of coral reefs. Southampton Oceanography Centre Christmas Lecture 2000.

Mustard, A.T., (07/12/2000) Coral reefs. Marine Life Talks Series at Southampton Oceanography Centre.

Underwater photography articles:

- Mustard, A.T. and Shaxted, G., (2004) Back to basics. Underwater Photography Magazine. **19**: 39-43.
- Mustard, A.T. and Jones, D., (2004) Remotely operated photography. Underwater Photography Magazine. **19**: 31-34.
- Mustard, A.T., (2004) Deep Blue on the Red Carpet. DIVE Magazine. April 2004. 20-21.
- Mustard, A.T., (2004) Open up your macro photography. Underwater Photography Magazine. **18**: 41-44.
- Mustard, A.T., (2004) Best behaviour: how to photograph the natural behaviour of coral reef life. Underwater Photography Magazine. **17**: 44-47.
- Mustard, A.T., (2004) Happy holidays: the reality of digital underwater photography. Underwater Photography Magazine. **16**: 26-29.
- Mustard, A.T., (2003) Filter fulfilment 2: available light photography with digital cameras underwater. Underwater Photography Magazine. **14**: 42-46.
- Mustard, A.T., (2003) Shedding light on the D100. Underwater Photography Magazine. **13**:27-30.
- Mustard, A.T., (2003) Has the future arrived? First impressions of the Nikon D100 underwater in a Subal D10 housing. Underwater Photography Magazine. **11**: 16-21.
- Mustard, A.T. and Westaway, K., (2002) Model Behaviour. Underwater Photography Magazine. **10**: 42-45.
- Nurminen, J., Mustard, A.T., (2002) Size Matters: photographing the wreck of the Vrouw Maria. Underwater Photography Magazine. **9**: 54-57.
- Mustard, A.T., (2002) How well do you know your flashgun? Underwater Photography Magazine. **8**: 45-47.
- Nurminen, J., Mustard, A.T., (2002) YUP yhdistää nuoria kuvaajia. Sukeltaja (in Finnish). 3/2002: 24-25.
- Mustard, A.T., (2002) Photographing the spawning of white belly damselfish. Underwater Photography Magazine. **7**: 32-34.
- Mustard, A.T., (2002) Environmentally friendly underwater photography. Underwater Photography Magazine. **6**: 18-20.
- Mustard, A.T., (2002) How to take blurred pictures (with a zoom). In Focus. The Journal of the British Society of Underwater Photographers. **73**: 24-25.
- Mustard, A.T., (2002) YUP - the Young Underwater Photographers' Group. In Focus. The Journal of the British Society of Underwater Photographers. **73**: 31.
- Mustard, A.T., and Scoones, P.J., (2002) Wide angle zoom lenses. Underwater Photography Magazine. **5**: 26-29.
- Mustard, A.T., (2002) Talking 'bout my generation – the Young Underwater Photographer's group. Underwater Photography Magazine. **5**: 44-45.
- Mustard, A.T., (2001) The snorkel. Underwater Photography Magazine. **3**: 40-41.
- Mustard, A.T., (2001) Is it worth the hassle? Underwater Photography Magazine. **2**: 36-37.
- Mustard, A.T., (2001) Zoom blur underwater. Underwater Photography Magazine. **1**: 20-21.
- Mustard, A.T., (2001) A holiday romance with medium format. In Focus. The Journal of the British Society of Underwater Photographers. **71**: 11-14.
- Mustard, A.T., (1998) Lights, camera ... action. In Depth, Southampton Oceanography Centre, **3**: 3.

Underwater photography presentations:

- Mustard, A.T., (19/05/2004) Exploiting natural light underwater. British Society of Underwater Photographers, Imperial College, London.
- Mustard, A.T., (21/01/2004) An introduction to digital underwater photography. British Society of Underwater Photographers, Imperial College, London.
- Mustard, A.T., (25/10/2003) Adventures in digital underwater photography. Visions in the Sea, 7th Annual Underwater Photography Conference. Kings College, London.
- Mustard, A.T., (22/10/03) Zen diving photography. Bedouin Moon Hotel, Dahab.

Mustard, A.T., (20/08/2003) Underwater photography with medium format. British Society of Underwater Photographers, Imperial College, London.

Mustard, A.T., (19/03/2003) Underwater photography with available light and colour correction with filters. British Society of Underwater Photographers, Imperial College, London.

Mustard, A.T., (17/11/2002) Experiments in shallow water wide angle. Visions in the Sea, 6th Annual Underwater Photography Conference. Imperial College, London.

Mustard, A.T., (16/11/2002) Equipment briefing: the Nikon F100 underwater. Visions in the Sea, 6th Annual Underwater Photography Conference. Imperial College, London.

Pugsley, A.J., and Mustard, A.T., (16/11/2002) The Young Underwater Photographers' Group. Visions in the Sea, 6th Annual Underwater Photography Conference. Imperial College, London.

Mustard, A.T., (19/06/2002) Capturing coral reef life on its best behaviour. British Society of Underwater Photographers, Imperial College, London. Audience 60 persons.

Mustard, A.T., (27/10/2001) Capturing fish on their best behaviour. Visions in the Sea, 5th Annual Underwater Photography Conference. Imperial College, London. 120 persons.

Awards (excluding photography competitions) and External Responsibilities:

Moderating committee of Wetpixel.com – digital underwater photography forum. (2004-present)

Visions in the Sea (2003) “Outstanding Contribution to Underwater Photography” Award. Only second ever recipient.

The Challenger Society for Marine Science (2002) Norman Heaps “Best presentation by a young scientist”.

Club Prima (2002) Festival Mondial De L’Image Sous Marine. Antibes, France.

Committee of the Underwater Science Group of the Society of Underwater Technology (2001 – present).

Committee of the British Society of Underwater Photographers (2002 – present).

Organising Committee of the 5th Underwater Science Symposium. (2001).

Selected Recent Photographic Awards:

BsoUP Focus On Digital Images (2004). Winner.

Underwater Photography dot com Competition (2002). Gold medallist in split-level category. Gold medallist in static subject macro category.

Sport Diver Photographer of the Year 2002. Runner Up.

29th Festival Mondial De L’Image Sous Marine (2002). 1st Prix Photos Noir et Blanc. 2nd Prix et Prix Jean et Maryse Chapeyroux.. Photos Noir et Blanc. 3rd Prix. Photos Couleurs. Mention du Jury d’originalité.

BSoUP Focus On Final (2002). Winner.

BSoUP Focus On Wrecks Competition (2002). Winner.

Presidents photographic prize at the Challenger Society for Marine Science (2002). Winner.

BSoUP Focus On Moving Subjects Competition (2002). Winner.

BSoUP Focus On Macro Competition (2002). Winner.

Wrecks On Line Photo Competition (2002). Winner.

BSoUP Best slide of 2001 Competition (2002). Winner.

The Tenth International Festival of Underwater Photography and Film (2001). Gold medal: Macro. Silver medal: Marine Life. Highly commended: Macro.

Interviews/articles about Alexander Mustard:

Doeg, C., (05/04) Big shot: Heart to heart. DIVE Magazine. May 2004: 84-85.

Anon. (05/04). Eine Frage der Perspektive: Alex und sein Kunstschuss. Tachen.Mai 2004. 5: 1-3.

McIntyre, J., (16/02/04) Weird marine creatures. TV Interview.

Wood, M., (30/09/03) Clownfish. Solent News Agency. Interview.

Thomas, M., (18/08/03) Digital underwater photography. Digital Camera Shopper magazine interview.

Rogerson, S., (08/07/03) Sulawesi Seas – marine biodiversity and conservation. DIVE Magazine Interview.

Pilgrim, D., (2002/3) Celebrating a century of Challenge. Marine Scientist 2. Winter 2002/03: 36-37.

Anon (2003) Challenger Centenary Conference. Ocean Challenge 12(2): 12-13.

Anon (2003) Congratulations. Planet Earth, Spring Issue. P27.

Anon (2003) The Dolphin. “Marine Masterpieces”.

Rowlands, P., (2003) Antibes Festival Report. Underwater Photography Magazine. (Interview 01/03).

Van Weeghel, C., (2003) Interview with Dr Alex Mustard. Dive Global Website. <http://www.diveglobal.com>. (Interview 01/03).

McIntyre, J., (2003) Alex cuts the mustard at Antibes. Sport Diver Magazine. Jan 2003. (Interview 11/02).

Rogerson, S., (2003) The British are coming. DIVE Magazine. Jan 2003. (Interview 12/02).

Fenner, P., (2003) Mustard Hot at Antibes. (2003).Diver Magazine. (Interview 12/02).

Cheesman, C., (2002) Dedicated AP reader celebrates French victory. Amateur Photographer Magazine. (Interview 11/02).

Mustard, A.T., (17/02/2002) Coral reefs. Interview for Cayman Islands’ Television.