Professor Robert McNeill Alexander, CBE, FRS.

Publications

Books:

1967  **Functional Design in Fishes**  Hutchinson, London.
     second and third editions 1970, 1974

     Russian translation 1970
     Identified as a "Citation Classic" in Current Contents
     20 (16), 1989 (various editions)

1971  **Size and Shape**  Edward Arnold, London.

1975  **The Chordates**  Cambridge University Press, London.

1975  **Biomechanics**  Chapman & Hall, London.
     Japanese translation 1976
     Spanish translation 1982

1977  (R. McN. Alexander & G. Goldspink, editors)
     **Mechanics and Energetics of Animal Locomotion**

1979  **The Invertebrates**  Cambridge University Press,
     Cambridge.
     Italian translation 1983

1982  **Locomotion of Animals**  Blackie, Glasgow.

1982  **Optima for Animals**  Arnold, London.

1986  (editor)  **The Collins Encyclopaedia of Animal Biology**
     Collins, London.
     Swedish translation 1987
     Japanese translation 1987

1986  P. Slater & R. McN. Alexander (editors)
     **The Encyclopaedia of Animal Biology and Behaviour**
     Grolier International.
     Italian translation 1989

1988  **Elastic Mechanisms in Animal Movement**

1989  
Dynamics of Dinosaurs and other Extinct Giants
Japanese translation 1992

1990  
Animals  Cambridge University Press

1992  
The Human Machine  Natural History Museum Publications and
Columbia University Press.

1992  
(editor) The Mechanics of Animal Locomotion
Springer-Verlag.

1992  
Exploring Biomechanics: Animals in Motion  Scientific American

1994  
Bones: The Unity of Form and Function  Macmillan, New York and

1999  

2003  
Principles of Animal Locomotion  Princeton University Press

2005  

Multimedia CD-ROM

1995  
How Animals Move  Discovery Channel. This CD-ROM received Emma
awards for “best natural history” and “best general reference” at the

Papers:

1  1951  Behaviour of the robin during laying.
British Birds 44: 389-90.

2  1959  The physical properties of the swimbladder in intact Cypriniformes.  J. exp.


4  1959  The physical properties of the isolated swimbladder in Cyprinidae.  J. exp.

5  1959  The physical properties of the swimbladders of fish other than Cypriniformes.


24 1967  The functions and mechanisms of the protrusible upper jaws of some acanthopterygian fish. J. Zool., Lond. 151: 43-64.


1985 The maximum forces exerted by animals. *J. exp. Biol.* 115: 231-238.


119 1986 Do legs have surplus degrees of freedom? (Commentary on a paper by Berkenblit, Feldman & Fukson). Behav. Brain Sci. 9: 600 only.


130 1987 The spring in your step. New Scientist 114(1558): 42-44.


135 1988 A dissection guide to the roast lamb. In N. Kurti (ed.) But the Crackling was Superb 77-81. Hilger, Bristol.


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<th>Year</th>
<th>Title</th>
<th>Journal/Book Details</th>
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<td>1991</td>
<td>It may be better to be a wimp.</td>
<td><em>Nature</em>. 353, 696 only.</td>
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1996 Tendon elasticity and positional control. *Behavioural and Brain Sciences* **18**: 745 only.


237 1998 When is migration worthwhile, for animals that run, swim or fly? Journal of Avian Biology 29: 387-394.


242 1999 One price to run, swim or fly? Nature 397: 651-653.


251 2000 Storage and release of elastic energy in the locomotor system and the stretch-shortening cycle, in B. M. Nigg, B. R. MacIntosh and J. Mester (eds) *Biomechanics and Biology of Movement* pp.19-29, Human Kinetics, Champaign, IL.


2002 The merits and implications of travel by swimming, flight and running by animals of different sizes. *Integrative and Comparative Biology* **42**, 1060-1064.


2003 A rodent as big as a buffalo (a Perspective). *Science** 301, 1678-1679.


2004 Hitching a lift hydrodynamically in swimming, flying and cycling. *Journal of Biology** 3, article 7.


2007 Biomechanics: stable running (a Dispatch). *Current Biology** 17, R253-R255.
