

CURRICULUM VITAE

**PROFESSOR GEOFFREY MORIASO OLE MALOIY,
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CURRICULUM VITAE

Education:

B.Sc. 1964, University of British Columbia, Canada
Ph.D. 1968, Aberdeen University, Scotland
F.I. Biol. London, U.K. 1979
D.Sc. (Hon). 1982, Duke University, U.S.A.
D.Sc. 1985, Aberdeen University, Scotland
DL. (Hon) 2013, IBC Cambridge, UK
DSc 2013 University of Nairobi, Kenya
CCSc, Cambridge Certificate in Science, 2013, IBC Cambridge, UK
DSc (Hon) 2013 Jomo Kenyatta University of Agriculture and Technology

Present Positions:

Professor of Animal Physiology, University of Nairobi, Kenya. 1975
Director of Science, Institute of Animal Physiology and Biotechnology Research.
1992 – to date.
Chancellor, Jomo Kenyatta University of Agriculture and Technology 2013 – 2018.

Previous Positions

Director, Comparative Animal Physiology Research Unit, University of Nairobi.
1976-1990
Principal, College of Agriculture and Veterinary Sciences, University of Nairobi.
1983-1988.
Dean, Faculty of Veterinary Medicine, University of Nairobi, 1976-1980.
Chairman, Department of Animal Physiology, University of Nairobi. 1973-1976;
1980-1983.

Previous Appointments, Research and Professional Experiences:

1965-1968 Postgraduate research student in the Department of Physiology, the Rowett Research Institute and the Department of Physiology, University of Aberdeen, Scotland.

1966-1969 Research Officer, East African Veterinary Research Organization, Muguga, Kenya.

1969-1971 Senior Research Officer and Head, Animal Physiology Division, East African Veterinary Research Organization, Muguga, Kenya.

1970 Visiting Research Scientist, Environmental Physiology Department, the Negev Institute for Arid Zone Research, Beersheva, Israel.

1971 Visiting Research Scientist, A.R.C. Institute of Animal Physiology, Babraham, Cambridge, England.

- 1972-1975 Senior Lecturer, Department of Animal Physiology, University of Nairobi, Kenya.
- 1973-1976 Chairman, Department of Animal Physiology, University of Nairobi, Kenya.
- 1975 Senior Fulbright Scholar and Research Associate Biological Laboratories, Harvard University, Cambridge, M.A. U.S.A.
- 1976-1980 Dean, Faculty of Veterinary Medicine, University of Nairobi, Kenya.
- 1978 Visiting Professor, Department of Zoology, Tel Aviv University, Israel.
- 1978 Visiting Professor, Institute of Physiology, Max Planck Institute for Experimental Medicine, Gotingen, Germany.
- 1979 Visiting Alexander Agassiz Professor of Biology, Harvard University, Cambridge, MA., U.S.A.
- 1980-1983 Chairman, Department of Animal Physiology, University of Nairobi, Kenya.
- 1983-1988 Principal, College of Agriculture and Veterinary Sciences, University of Nairobi, Kenya.
- 1985 Storer Life Sciences Lecturer, University of California, Davis, U.S.A.
- 1990-1991 Research Associate, Museum of Comparative Zoology, Harvard University, Cambridge MA., U.S.A.
- 1990-1991 Visiting Professor, Department of Zoology, Duke University, Durham, North Carolina, U.S.A.
- 1999-2002 Chairman, Board of Governors, National Museums of Kenya.
- 2012-2013 Member, Muranga University College Council
- 2013 -2018 Chancellor, Jomo Kenyatta University of Agriculture and Technology

Membership of Scientific Societies and Academies:

- i) Fellow, Institute of Biology, London, U.K. 1979.
- ii) Scientific Fellow, Zoological Society of London, England, 1968.
- iii) Nutrition Society, U.K.
- iv) Physiological Society, U.K. 1973.
- v) Society for Experimental Biology, U.K.
- vi) Member, Norwegian Academy of Science and Letters 1989.
- vii) Member, American Association for the Advancement of Science (2003).
- viii) Fellow African Academy of Sciences 2004.
- ix) Member, American Chemical Society. 2011.

Membership in Editorial Board of Scientific Journals:

I have served on the Editorial Board of the following journals: -

- i) *East African Medical Journal*
- ii) *East African Wildlife Journal* (now *African Journal of Ecology*)
- iii) *Journal of Arid Environment* and
- iv) *Journal of Agricultural Science*, Cambridge, England.

I have also refereed papers for the following journals:-

- i) *American Journal of Physiology*
- ii) *Physiological Zoology*
- iii) *Journal of Comparative Physiology*
- iv) *Journal of Applied Physiology*
- v) *Journal of Applied Ecology and*
- vi) *American Naturalist*

Occasionally I have been requested to review research grants applications for: -

- i) USA-NSF
- ii) Canadian NSERC and
- iii) National Geographic Society, USA.

Membership in National and International Advisory Boards:

- i) Member, Board of Trustees, Kenya National Parks, Department of Wildlife Conservation and Management, 1976-1980; Chairman of the Board, 1980-1983.
- ii) Member, East African Council for Veterinary Education, 1976-1977.
- iii) Member, National Council for Science and Technology, Kenya, 1977-1982.
- iv) Member, Executive Board, Louis Leakey Memorial Institute for African Prehistory, 1976-1979.
- v) Member, Board of Governors, National Museums of Kenya, 1979-1986.
- vi) Chairman, Board of Governors Olkejaudo High School, 1977-1986.
- vii) Member, Nairobi City Commission, 1983-1985
- viii) Vice-Chairman, Board of Governors, Egerton College, 1984-1987.
- ix) Member, Agricultural Research Council Advisory Panel, 1979-1986.
- x) Member, International Cell Research Organization, 1976-
- xi) Director, Magadi Soda Company PLC. 1984-1987.
- xii) Member, Subregional Executive Committee Eastern and Southern Africa - African Biosciences Network (ABN) 1981-1995.
- xiii) Member, Regional Executive Committee, African Biosciences Network (ABN) 1981-1995.
- xiv) Vice-Chairman, African Biosciences Network, 1985-1986.
- xv) Member of University Council, Sokoine University of Agriculture, Morogoro, Tanzania, 1984-1987.

- xvi) External Examiner in Veterinary Physiology, Faculty of Veterinary Science, University of Zimbabwe, 1986-1987.
- xvii) Member, ICSU Committee on Agriculture Forestry and Aquaculture, 1987-1990.
- xviii) Chairman and Member, Organizing Committee, 7th Pan African Ornithological Congress held in Nairobi, Kenya, September 1988.
- xix) Scientific Advisor, International Foundation for Science (IFS), Stockholm, Sweden, 1988-
- xx) Committee Member, Pan African Ornithological Congress, 1988-1990.
- xxi) Member, Board of Trustees, Namibian Desert Research Foundation, 1990-1998.

Membership University of Nairobi Committees:

- i) Member, University of Nairobi Senate, 1973-1990.
- ii) Member, University of Nairobi Council, 1983-1988.
- iii) Member, University of Nairobi Management Board, 1983-1988.

Honours and Awards:

- 1982 Hon D.Sc., Duke University, North Carolina, U.S.A.
- 1983 Decorated Order of Moran of the Burning Spear (MBS), Republic of Kenya.
- 1986 Decorated Elder of the Burning Spear (EBS), Republic of Kenya.
- 1989 Elected Foreign Member, Norwegian Academy of Science and Letters.
- 2004 Fellow African Academy of Sciences.
- 2009 Listed in Who is Who in the World.
- 2010 Listed in Who is Who in Science and Engineering
- 2010 Member American Chemical Society
- 2011 American Order of Merit (AOM)
- 2011 International Scientist of the Year 2011
- 2011 Listed Among 2000 Intellectuals of the 21st Century 2011
- 2011 The Albert Einstein Award of Excellence in Science
- 2013 International Order of Merit
- 2013 Hon. DL. IBC Cambridge, UK.
- 2013 Hon. DSc. Jomo Kenyatta University of Agriculture and Technology

Membership of Kenya Government Appointed Commissions and Committees:

- 1979 Member of the Kenya Government Committee to look at the reorganization of the Kenya National Museums, Historical Sites and Monuments.
- 1983 Member of Kenya Government Task Force to look into the management and affairs of the Nairobi City Council.
- 1983 Member of Egerton College Up-grading Committee.

Membership in Voluntary Organizations:

- i) Member of the Board, Maasai PCEA Rural Training Centre, Olooseos, 1974-1976.
- ii) Member, Appeal and Fund Raising Committee, Gertrude Garden Children's Hospital, Nairobi 1988-1990.
- iii) Member, Kajiado District Development Committee 1982
- iv) Member, Kajiado District Bursary Funds Committee 1986

Research Interests:

I am interested and actively involved in the following areas of research: -

- i) Comparative and Integrative Physiology
- ii) Renal Physiology
- iii) Energy Metabolism and Temperature Regulation
- iv) Environmental and Exercise Physiology
- v) Digestive Physiology of ruminants
- vi) Respiration Physiology.

Supervision of Graduate Students:

I have supervised several students at MSc and PhD level at the University of Nairobi.

Examiner for M.Sc. and Ph.D. Thesis:

I have been an examiner of M.Sc. and Ph.D. theses for the following Universities: -

- i) University of Nairobi, Kenya
- ii) University of New England, Australia
- iii) Makerere University, Uganda
- iv) University of Zimbabwe, Zimbabwe
- v) University of Zambia, Zambia
- vi) University of Dar es Salaam, Tanzania
- vii) University of Witwatersrand, South Africa

Examiner for D.Sc Theses

I have been an external examiner for D.Sc. theses for various universities.

Referee - Professorial Appointments:

Acted as a referee for professorial appointments in Kenya, Nigeria, Uganda, USA and Zimbabwe.

Symposia:

I have organized on behalf of the London Zoological Society the following Symposia:

- i) Comparative Physiology of Desert Animals, 1971
- ii) The Biology of Large African Mammals in their Environment (Jointly with Professor P.A. Jewell), 1988.

Lectures Given:

- (i) 1985 Presented the Storer Life Sciences Lectures, University of California, Davis, U.S.A.

Research Grants:

The Wellcome Trust, Nuffield Foundation, The Leverhulme Trust, National Geographic Society, Kenya National Council for Science and Technology, NORAD.

PUBLICATIONS

G.M.O. MALOIY

A. BOOKS

1972

1. MALOIY G.M.O. (ed.) (1972) *Comparative Physiology of Desert Animals*. Academic Press, London, xxvi + 413 pp.

1979

2. MALOIY G.M.O. (ed.) (1979) *Comparative Physiology of Osmoregulation in Animals vol. 1*. Academic Press, London, xii + 678 pp.
3. MALOIY G.M.O. (ed.) (1979) *Comparative Physiology of Osmoregulation in Animals vol. 2*. Academic Press, London vii + 246 pp.

1989

4. JEWELL, P.A. and MALOIY, G.M.O. (eds.) (1989) *The Biology of Large African Mammals in their Environment*. Oxford University Press, Oxford, XVII + 304 pp.

1992

5. MALOIY G.M.O. and ELEY, R.M. (1992) *The Hyrax*. Regal Press, Nairobi, XI + 122 pp.

2014

6. MALOIY, G.M.O. (2014) *Maasai Proverbs and Riddles*
7. MALOIY, G.M.O. (2014) *Glossary of Maasai Names and Places*

B. PAPERS

1963

- 8.. MALOIY G.M.O. (1963) Observations on free ranging of Thomson's and Grant's gazelles. *East African Agricultural and Forestry Journal* **28**, 151-160.

1965

9. MALOIY G.M.O. (1965) African game animals as a source of protein. *Nutrition Abstracts and Reviews* **35**, 903-908.
10. MALOIY G.M.O. (1965) International Symposium on Comparative Biology of Reproduction in Mammals. *East African Wildlife Journal* **3**, 134.
11. MALOIY G.M.O. and HEADY, H.F. (1965) Grazing conditions in Kenya Masailand. *Journal of Range Management* **18**, 269-272.

1967

12. MALOIY, G.M.O and KAY, R.N.B (1967) Digestion and metabolism in red deer. In Nature Conservancy Red Deer Section First Progress Report. Pp 73 – 75. Edinburgh: Nature Conservancy.

1968

13. MALOIY G.M.O. (1968) *The physiology of Digestion and Metabolism in the Red deer*. Ph.D. Thesis, University of Aberdeen, Scotland.
14. MALOIY G.M.O., KAY, R.N.B. and GOODALL, E.D. (1968) Studies on the physiology of digestion and metabolism of the red (*Cervus elaphus*). *Symposium London Zoological Society* **21**, 101-108.
15. MALOIY G.M.O., KAY, R.N.B., GOODALL, E.D. and TOPPS, J.H. (1968) Some effects of nitrogen and water intake in sheep and red deer. *Proceedings of Nutrition Society* **27**, 52A.
16. BROCKWAY, J.M. and MALOIY, G.M.O. (1968) Energy metabolism of the red deer. *Journal of Physiology London* **194**, 22-24P
17. GOODALL, E.D., KAY, R.N.B. and MALOIY, G.M.O. (1968) The red deer as an experimental animal. *Journal of Physiology London* **194**, 6-7P.

18. TOPPS, J.H., GOODALL, E.D., KAY, R.N.B. and MALOIY, G.M.O.
(1968) Urinary excretion of nitrogenous compounds by sheep and red deer. *Proceedings of Nutrition Society* **27**, 53A.

1969

19. MALOIY, G.M.O. and SCOTT, D. (1969) Renal excretion of urea and electrolytes in sheep and red deer. *Journal of Physiology London* **205**, 91-101.
20. JENKINSON, D.M. and MALOIY G.M.O. (1969) The distribution of nerves, monoamine oxidase and cholinesterase in the skin of the red deer (*Cervus elaphus*). *Research in Veterinary Science* **10**, 448-252.

1970

21. MALOIY, G.M.O. (1970) Water economy of the Somali donkey. *American Journal of Physiology* **219**, 1522-1527.
22. TAYLOR, C.R. and MALOIY, G.M.O. (1970) The effect of heat stress and dehydration on intake and digestion of food in some East African bovids. *Proceedings of International Congress of Game Biologists, Helsinki, Finland, August 1967*, p. 385.
23. MALOIY, G.M.O., KAY, R.N.B., GOODALL, E.D. and TOPPS, J.H.
(1970) Digestion and nitrogen metabolism in sheep and red deer given low amounts of water and proteins. *British Journal of Nutrition* **24**, 843-855.

1971

24. MALOIY, G.M.O. and HOPCRAFT, D. (1971) Thermoregulation and water relations in two East African antelopes: the hartebeest and impala. *Comparative Biochemistry and Physiology* **33A**, 403-412.
25. MALOIY, G.M.O. (1971) Temperature regulation in the Somali donkey (*Equus asinus*). *Comparative Biochemistry and Physiology* **39A**, 403-412.
26. MALOIY, G.M.O. and BOARER, C.D.H. (1971) The response of the Somali donkey to dehydration: hematological changes. *American Journal of Physiology* **221**, 37-41.
27. MALOIY, G.M.O. and TAYLOR, C.R. (1971) Water requirements of African goats and haired sheep. *Journal of Agricultural Science, Cambridge* **77**, 203-208.
28. MALOIY, G.M.O. and KAY, R.N.B. (1971) A comparison of digestion in red deer and sheep under controlled conditions. *Quarterly Journal of Experimental Physiology* **56**, 356-366.
29. MALOIY, G.M.O. (1971) Renal salt and water excretion in the one-humped camel. *Proceedings of International Congress of Physiological Sciences* **9**, 363.

1972

30. MALOIY, G.M.O. (1972) Knut Schmidt-Nielsen, Dedication. Symposium. *London Zoological Society* **31**, xxv.
31. MALOIY, G.M.O. (1972) Preface. *Symposium London Zoological Society* **31**, ix-x.
32. MALOIY, G.M.O. (1972) Renal salt and water excretion in the camel (*Camelus dromedarius*). *Symposium London Zoological Society* **31**, 243-259.
33. MALOIY, G.M.O. (1972) Desert survival. *Africana* **4(II)**, 14-15.
34. JOHNSON, K.G., MALOIY, G.M.O. and BLIGH, J. (1972) Sweat gland function in the red deer. *American Journal of Physiology* **223**, 604-607.
35. MALOIY, G.M.O. (1972) Comparative studies on digestion and fermentation rate in the fore-stomach of the one-humped camel and the zebu steer. *Research in Veterinary Science* **13**, 476-481.
36. MACFARLANE, W.V., HOWARD, B., MALOIY, G.M.O. and HOPCRAFT, D. (1972) Tritiated water in field studies of ruminant metabolism in Africa. *Proceeding Symposium on use of Isotopes in studies on the Physiology of Domestic animals with special reference to Hot Climates*, Athens, Greece, International Atomic Agency, pp. 83-94.

1973

37. MALOIY, G.M.O. (1973) The effect of dehydration and heat stress on intake and digestion of food in the Somali donkey. *Environmental Physiology and Biochemistry* **3 (1)**, 36-39.
38. MALOIY, G.M.O. (1973) The water metabolism of a small East African antelope: the dik dik. *Proceedings Royal Society of London B* **184**, 167-178.
39. MALOIY, G.M.O. (1973). Water metabolism in East African ruminants in arid and semi-arid regions. *Z. Tierzuchtg. Zuchtgsbiol* **90**, 219-228.

1974

40. REITE, O.B., MALOIY, G.M.O. and AASEHAUG, B. (1974) pH, Salinity and temperature tolerance of Lake Magadi *Tilapia grahami*. *Nature London* **247**, 315.
41. OHWAKI, H., HUNGATE, R.E., LOTTER, L., HOFFMAN, R.R. and MALOIY, G.M.O. (1974) The stomach fermentation in East African Colobus monkeys in their natural state. *Applied Microbiology* **27**, 713-723.
42. MALOIY, G.M.O. (1974) A behavioural approach to a dry life. *New Scientist* **61**, 119.
43. MALOIY, G.M.O. (1974) Digestion and renal function in East African goats and haired sheep. *East African Agricultural and Forestry Journal* **40**, 177-188.

1975

44. HOPPE, P., KAY, R.N.B and MALOIY, G.M.O. (1975) Salivary secretion in the camel. *Journal of Physiology London* **244**, 32P.
45. MALOIY, G.M.O. and EDHOLM. O.G. (1975) Thermoregulation, water and electrolyte metabolism of man in the desert. *East African Medical Journal* **52**, 97-112.
46. JOHANSEN, K., MALOIY, G.M.O. and LYKKEBOE, G. (1975) A fish in extreme alkalinity. *Respiration Physiology* **24**, 159-162.
47. WOOD, S.C., WEBER R.E., MALOIY, G.M.O., and JOHANSEN. K (1975) Oxygen uptake and blood respiratory properties of the caecilian (*Boulengerula taitanus*). *Respiration Physiology* **24**, 355-363.
48. LOMHOLT, J.P., JOHANSEN, K and MALOIY, G.M.O. (1975) Is aestivating lungfish the first vertebrate with suctional breathing? *Nature London* **257**, 787-788.
49. LYKKEBOE, G., JOHANSEN, K. and MALOIY, G.M.O. (1975). Functional properties of haemoglobin in the teleost, *Tilapia grahami*. *Journal of Comparative Physiology* **104**, 1-11.
50. KAYANJA, F.I.B. and MALOIY, G.M.O. (1975) The fine structure of the intestinal epithelium of *Tilapia grahami*. *Anatomic Anzeiger* **138**, 451-462.
51. HOPPE, P., JOHANSEN, K. MALOIY, G.M.O. and MUSEWE, V. (1975) Thermal panting reduces oxygen uptake in the dik-dik antelope (*Rhynchotragus kirkii*). *Acta Physiologica Scandinavica* **95**, 9C.

1976

52. MALOIY G.M.O. (1976) Water and salt metabolism in the camel. In: *Progress in Animal Biometeorology, Volume 1, Part 1*. (Edit. H.D. Johnson), pp. 58-66. Swets and Zietlinger, Amsterdam.
53. MUSEWE, V.O., MALOIY, G.M.O. and KANJA, J.K. (1976) Evaporative water loss in two small African antelopes: dik-dik and suni. *Comparative Biochemistry and Physiology* **53C**, 17-18.
54. MALOIY G.M.O. and SALE, J.B. (1976) Renal function and electrolyte balance during dehydration in the hyrax. *Israeli Journal of Medical Sciences* **12**, 852-853.
55. HOPPE, P., KAY, R.N.B. and MALOIY, G.M.O. (1976) The rumen as a reservoir during dehydration and rehydration in the camel. *Journal of Physiology London* **254**, 76-77P.
56. KAY, R.N.B., HOPPE, P. and MALOIY, G.M.O. (1976) Fermentative digestion of food in the Colobus monkey (*Colobus polykomos*) *Experientia* **32**, 484-487.
57. SEEHERMAN, H.J., TAYLOR, C.R. and MALOIY, G.M.O. (1976) Maximum aerobic power and anaerobic glycolysis during running in lions, horses and dogs.

58. JOHANSEN, K., LOMHOLT, J.P. and MALOIY, G.M.O. (1976) Importance of air and water breathing in relation to size of the African lungfish (*Protopterus amphibius*). *Journal of Experimental Biology* **65**, 395-399.
59. JOHANSEN, K., LYKKEBOE, G., WEBER, R.E. and MALOIY, G.M.O. (1976) Respiratory properties of blood in awake and aestivating lungfish (*Protopterus amphibius*). *Respiration Physiology* **27**, 335-345.
60. JOHANSEN, K., LYKKEBOE, G., WEBER, R.E. and MALOIY, G.M.O. (1976) Blood respiratory properties in a mammal of low body temperature, the naked mole rat (*Heterocephalus glabber*). *Respiration Physiology* **28**, 303-314.

1977

61. WEBER, R.E., JOHANSEN, K., LYKKEBOE, G., and MALOIY, G.M.O. (1977) Oxygen binding properties of haemoglobin from aestivating and active African lungfish. *Journal of Experimental Zoology* **199**, 85-96.
62. GESSER, H., JOHANSEN, K. and MALOIY, G.M.O. (1977) Tissue metabolism and enzyme activity in the rodent (*Heterocephalus glaber*), a poor temperature regulator. *Comparative Biochemistry and Physiology* **57A**, 293-296.
63. MALOIY, G.M.O. (1977) Mechanism of urine dilution and concentrations in some East African desert herbivores. *Proceedings International Congress of Physiological Sciences* **12**, 75A.

1978

64. WOOD, S.C., LYKKEBOE, G., JOHANSEN, K. and MALOIY, G.M.O. (1978) Temperature acclimation in the pancake tortoise (*Malacochersus tornieri*): metabolic rate, blood pH, oxygen affinity and red blood cell organic phosphates. *Comparative Biochemistry and Physiology* **59A**, 155-160.
65. CLEMENS, E.T. and MALOIY, G.M.O. (1978) Cyclic changes in the osmolarity and electrolyte composition in the gastrointestinal tract of the rock hyrax. *Journal of Nutrition* **108**, 988-993.
66. MALOIY, G.M.O., TAYLOR C.R. and CLEMENS, E.T. (1978) A comparison of gastrointestinal water content and osmolarity in East African herbivores during hydration and dehydration. *Journal of Agricultural Sciences, Cambridge* **91**, 249-254.
67. MALOIY, G.M.O., LYKKEBOE, G., JOHANSEN, K. and BAMFORD, O.S. (1978) Osmoregulation in *Tilapia grahami*: a fish in extreme alkalinity. In: *Comparative Physiology of Water, Ions and Fluid Mechanics*. (Eds.) K. Schmidt-Nielsen, L. Bolis and S.H.P. Madrell, Cambridge University Press, pp. 229-238.
68. TAYLOR, C.R., SEEHERMAN, H.J., MALOIY, G.M.O., HEGLUND, N.C. and KAMAU, J.M.Z. (1978) Scaling maximum aerobic capacity (VO₂max) to body size in mammals. *Federation Proceedings* **37**, 473.

69. WOOD, S.C., JOHANSEN, K. GLASS, M.L. and MALOIY, G.M.O.
(1978) Aerobic metabolism of varanid lizards: effect of temperature, size and activity. *Journal of Comparative Physiology* **127**, 331-336.
70. LANGMAN, V.A., MALOIY, G.M.O., SCHMIDT-NIELSEN, K. and SCHROTER, R.C. (1978) Respiratory water and heat loss in camels subjected to dehydration. *Journal of Physiology, London* **278**, 33P.
71. SKADHAUGE, E. and MALOIY, G.M.O. (1978) The intestine and osmoregulation. In: *Osmotic and Volume Regulation*. Alfred Benzon Symposium XI. (Eds.) C. Baker Jorgensen and E. Skadhauge, Munksgaard, pp. 325-343.

1979

72. MALOIY, G.M.O., ALEXANDER R. McN., NJAU R. and JAYES, A.S. (1979) Allometry of the legs of running birds. *Journal of Zoology London* **187**, 161-167.
73. ALEXANDER R. McN., MALOIY, G.M.O., NJAU R. and JAYES, A.S. (1979) Mechanics of running of the ostrich (*Struthio camelus*). *Journal of Zoology London* **187**, 169-178.
74. BECH, C., JOHANSEN, K. and MALOIY, G.M.O. (1979) Ventilation and expired gas composition in the flamingo (*Phoenicopterus ruber*) during normal respiration and panting. *Physiological Zoology* **52**, 313-328.
75. LANGMAN, V.A., MALOIY, G.M.O., SCHMIDT-NIELSEN, K. and SCHROTER, R.C. (1979) Nasal heat exchange in the giraffe and other large animals. *Respiration Physiology* **37**, 325-334.
76. MALOIY, G.M.O., MACFARLENE, W.V. and SHKOLNIK, A. (1979) Osmoregulation in mammalian herbivores. In: *Comparative Physiology of Osmoregulation in Animals, Vol.2*, Academic Press, (ed. G.M.O. MALOIY), pp. 185-209.
77. ALEXANDER R. McN., JAYES, A.S., MALOIY, G.M.O., and WATHUTA, E.M. (1979) Allometry of the limb bones of mammals from shrews (*Sorex*) to elephant (*Loxodonta*). *Journal of Zoology London* **189**, 305-314.
78. KAMAU, J.M.Z., JOHANSEN, K. and MALOIY, G.M.O. (1979) Thermoregulation and standard metabolism in the slender mongoose. *Physiological Zoology* **52**, 594-602.
79. ALEXANDER R. McN., MALOIY, G.M.O., HUNTER, B., JAYES, A.S., and NTURIBI, J. (1979) Mechanical stress during fast locomotion in buffalo and elephant. *Journal of Zoology London* **189**, 135-144.
80. MULLER, E., KAMAU, J.M.Z. and MALOIY, G.M.O. (1979) O₂-uptake, thermoregulation and heart rate in the spring hare (*Pedetes capensis*). *Journal of*

81. JOHANSEN, K., LYKKEBOE, G., KORNERUP, S. and MALOIY, G.M.O. (1980) Temperature insensitive O₂ binding in blood of the tree frog (*Chiromantis petersi*). *Journal of Comparative Physiology* **136**, 71-76.
82. EDDY, E.B., BAMFORD, O.S. and MALOIY, G.M.O. (1980) Ionic regulation in the African catfish (*Clarius mossambicus*) in water and air. *Comparative Biochemistry and Physiology* **66A**, 637-641.
83. BAMFORD, O.S. and MALOIY, G.M.O. (1980) Energy metabolism and heart rate during treadmill exercise in the marabou stork. *Journal of Applied Physiology* **49**, 491-496.
84. SKADHAUGE, E., CLEMENS, E.T. and MALOIY, G.M.O. (1980) The effects of dehydration on electrolyte concentrations and water content along the large intestine of a small ruminant: the dik-dik antelope. *Journal of Comparative Physiology* **135**, 165-175.
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