

## Dr Chris Brown – publications

Publications are divided into (1) full length refereed papers or chapters in books and (2) refereed short communications. These are indicated at the end of each paper. Asterisks next to an author's names indicate undergraduate or postgraduate student authors or co-authors.

### Publications in Peer-reviewed Journals

1. BRAND, Z., CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2017). Ostrich (*Struthio camelus*) embryonic development from 7 to 42 days of incubation. *Brit. Poultry Sci.* doi.org/10.1080/00071668.2016.1259529
2. BRAND, Z., CLOETE, Z.W.P., MALECKI, I.A. & **BROWN, C.R.** (2014). Embryonic development in the ostrich (*Struthio camelus*) during the first 7 days of artificial incubation. *Brit. Poultry Sci.* 55: 68-75. (1)
3. BRAND, Z., CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2013). Changes in the air cell volume of artificially incubated ostrich eggs. *S. Afr. J. Anim. Sci.* 43: 98-104. (1)
4. BRAND, Z AND CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2012) Genetic parameters for eggshell traits in ostriches. *Brit. Poultry Sci.* 53: 316-324. (1)
5. BRAND, Z., CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2012) Heritability of embryonic mortalities in ostrich eggs and factors affecting hatching failure of fertile eggs during artificial incubation. *Anim. Prod. Sci.* 52: 806-812. (1)
6. \*BRAND, Z., CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2011) Influence of Incubation management on pipping position, hatching ability and survival of ostrich chicks. *S. Afr. J. Anim. Sci.* 41: 265-274. (1)
7. \*BRAND, Z, CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2009) Genetic parameters for ostrich incubation traits in South Africa. *S. Afr. J. Anim. Sci.* 39: 253-259. (1)
8. \*BRAND, Z., CLOETE, S.W.P., MALECKI, I.A. & **BROWN, C.R.** (2008). Genetic relationships between water loss and shell deaths in ostrich eggs, assessed as traits of the female. *Austr. J. Exp. Agr.* 48:1326-1331. (1)

9. \*BRAND, Z., CLOETE, S.W.P., **BROWN, C.R.** & MALECKI, I.A. (2007). Systematic factors that affect ostrich egg incubation. *S. Afr. J. Anim. Sci.* 38: 315-324. (1)
10. \*BRAND, Z., CLOETE, S.W.P., **BROWN, C.R.** & MALECKI, I.A. (2007). Factors related to shell deaths during artificial incubation of ostrich eggs. *J. S. Afr. Vet. Assoc.* 78:195-200. (1)
11. **BROWN, C.R.** & \*PEINKE, D.M. (2007). Activity patterns of springhares, *Pedetes capensis*, in the Eastern Cape, South Africa. *J. Zoology, Lond.* 272: 148-155.
12. \*PEINKE, D.M. & **BROWN, C.R.** (2006). Habitat use of the springhare (*Pedetes capensis*) in the Eastern Cape Province, South Africa. *S. Afr. J. Wildl. Res.* 36: 103-111. (1)
13. PEINKE, D.M. & **BROWN, C.R.** (2005). Burrow utilization by springhares (*Pedetes capensis*) in the Eastern Cape, South Africa. *Afr. Zool.* 70: 37-44. (1)
14. \*BRAND, Z., BRAND, T.S. & **BROWN, C.R.** (2003). The effect of different combinations of dietary energy and protein on the composition of ostrich eggs. *S. Afr. J. Anim. Sci.* 33: 193-200. (1)
15. \*BRAND, Z., BRAND, T.S. & **BROWN, C.R.** (2003). The effect of dietary energy and protein levels on production in breeding female ostriches. *Brit. Poultry Sci.* 44: 598-606. (1)
16. TIELEMAN, B.I., WILLIAMS, J.B., BUSCHUR, M.E. & **BROWN, C.R.** (2003). Phenotypic plasticity of larks along an aridity gradient: are desert birds more flexible? *Ecology* 84:1800-1815. (1)
17. \*PEINKE, D.M. & **BROWN, C.R.** (2003). Metabolism and thermoregulation in the springhare (*Pedetes capensis*). *J. Comp. Physiol.* 173: 347-353.
18. \*MEYER, A., CLOETE, S.W.P. & **BROWN, C.R.** (2003). The influence of single-sex rearing on ostrich behaviour and skin damage. *S. Afr. J. Anim. Sci.* 33: 95-104. (1)

19. \*MEYER, A., CLOETE, S.W.P., **BROWN, C.R.** & VAN SCHALKWYK, S.J. (2003). The persistence to slaughter age of scars resulting from damage inflicted to ostrich skins during the grow-out phase. *S. Afr. J. Anim. Sci.* 33: 32-37. (1)
20. \*BRAND, Z., BRAND, T.S., **BROWN, C.R.** & VAN SCHALKWYK, S.J. (2002). The effect of dietary energy and protein levels on body condition and production of breeding male ostriches (*Struthio camelus domesticus*). *S. Afr. J. Anim. Sci.* 32: 231-238. (1)
21. \*BRAND, Z., BRAND, T.S., **BROWN, C.R.** & VAN SCHALKWYK, S.J. (2002). The effect of dietary energy and protein levels during a breeding season of ostriches (*Struthio camelus domesticus*) on production the following season. *S. Afr. J. Anim. Sci.* 32: 226-230. (1)
22. \*MEYER, A., CLOETE, S.W.P., **BROWN, C.R.** & VAN SCHALKWYK, S.J. (2002). Declawing ostrich (*Struthio camelus domesticus*) chicks to minimize skin damage during rearing. *S. Afr. J. Anim. Sci.* 32: 192-200. (1)
23. \*VAN SCHALKWYK, S.J., **BROWN, C.R.** & CLOETE, S.W.P. (2002). Gas exchange of the ostrich embryo during peak metabolism in relation to incubator design. *S. Afr. J. Anim. Sci.* 32: 122-129. (1)
24. TANSLEY, S.A. & **BROWN, C.R.** (2000). RAPD variation in the rare and endangered *Leucadendron elimense* (Proteaceae): implications for their conservation. *Biol. Conserv.* 95: 39-48. (1)
25. \*VAN SCHALKWYK, S.J., CLOETE, S.W.P. **BROWN, C.R.** & \*BRAND, Z. (2000). Hatching success of ostrich eggs related to axis of setting, turning frequency, and angle of rotation. *Brit. Poultry Sci.* 41: 46-52. (1)
26. **BROWN, C.R.** (1999) Metabolism and thermoregulation of individual and clustered long-fingered bats, *Miniopterus schreibersii* and the implications for roosting. *S. Afr. J. Zool.* 34:166-172. (1)
27. \*VAN SCHALKWYK, S.J., BRAND, Z., CLOETE, S.W.P. & **BROWN, C.R.** (1999). Effects of time of collection and pre-incubation treatment on blastoderm development and embryonic mortality in ostrich embryos. *S. Afr. J. Anim. Sci.* 29: 154-163. (1)
28. \*VAN SCHALKWYK, S.J., CLOETE, S.W.P. & **BROWN, C.R.** (1999). The effect

of temperature on the hatching performance of ostrich eggs and its implications for artificial incubation in forced-draught wooden incubators. *S. Afr. J. Anim. Sci.* 29: 92-99. (1)

29. **BROWN, C.R.** & \*PRIOR, S.A. (1999) Development of body temperature regulation in ostrich chicks. *Br. Poultry Sci.* 40: 523-529. (1)
30. \*WHITTINGTON-JONES, C.A. & **BROWN, C.R.** (1999). Thermoregulatory capabilities of the woodland dormouse, *Graphiurus murinus*. *S. Afr. J. Zool.* 34: 34-38. (1)
31. \*PEINKE, D.M. & **BROWN, C.R.** (1999). Osmoregulation and water balance in the springhare (*Pedetes capensis*). *J. Comp. Physiol.* 169: 1-10 (1)
32. **BROWN, C.R.**, \*EVERITT, V. & BAXTER, R.M. (1999). Comparative metabolism, thermoregulation and morphology in two populations of vlei rats, *Otomys irroratus*. *J. Comp. Physiol.* 169: 19-24 (1)
33. **BROWN, C.R.**, \*HUNTER, E.M. & BAXTER, R.M. (1997). Metabolism and thermoregulation in the forest shrew, *Myosorex varius* (Soricidae: Crocidurinae). *Comp. Biochem. Physiol.* 118: 1285-1290. (1)
34. **BROWN, C.R.** & \*JONES, G.E. (1996). Some blood chemical, electrolyte and mineral values from young ostrich chicks. *J. S. Afr. Vet. Assoc.* 67:111-114. (1)
35. **BROWN, C.R.** & BRYANT, D.M. (1996). Energy expenditure during molt in dippers: no evidence of elevated costs. *Physiol. Zool.* 69:1036-1056. (1)
36. **BROWN, C.R.**, \*PEINKE, D. & \*LOVERIDGE, A. (1996). Mortality in near-term ostrich embryos during artificial incubation. *Br. Poult. Sci.* 37: 73-85. (1)
37. GRAY, D.A. & **BROWN, C.R.** (1995). Saline infusion-induced increases in plasma osmolality do not stimulate nasal gland secretion in the ostrich. *Physiol. Zool.* 68: 164-175. (1)
38. **BROWN, C.R.** (1994). Ageing of Red Bishops from endosteal layers in their bones. *Ostrich* 65: 134-137. (2)

39. **BROWN, C.R.** (1994). Nest microclimate, egg temperature, egg water loss and eggshell conductance in Cape Weavers, *Ploceus capensis*. *Ostrich* 65: 26-31 (1)
40. **BROWN, C.R.** & BERNARD, R.T.F. (1994). Thermal preference of Schreibers' long-fingered (*Miniopterus schreibersii*) and Cape horseshoe (*Rhinolophus capensis*) bats. *Comp. Biochem. Physiol.* 107A: 439-449 (1)
41. **BROWN, C.R.** & \*FOSTER G.G. (1992). Thermal and energetic significance of clustering in the speckled mousebird, *Colius striatus*. *J. Comp. Physiol.* 162:658-664. (1)
42. **BROWN, C.R.** & \*LEWIS, B.D. (1991). The efficacy of ultrasonic pest controllers for fleas and ticks. *J. S. Afr. Vet. Assoc.* 62:110-113. (1)
43. **BROWN, C.R.** & BERNARD, R.T.F. (1991). Validation of subcutaneous body temperature as a measure of deep body temperature in small bats. *J. Zool., Lond.* 224: 315-318. (2)
44. COOPER, J. & **BROWN C.R.** (1990). Ornithological research at the Prince Edward Islands: a review of achievements. *S. Afr. J. Antarct. Res.* 20:40-57. (1)
45. **BROWN, C.R.**, KLAGES, N.T. & ADAMS, N.J. (1990). Short and medium-term variation in the diets of penguins at Marion Island. *S. Afr. J. Antarct. Res.* 20:13-20. (1)
46. COOPER, J., **BROWN, C.R.**, GALES, R.P., HINDELL, M.A., KLAGES, N.T., MOORS, P.J., PEMBERTON, D, RIDOUX, V., THOMSON, K. & VAN HEERZIK, Y. (1990). The diets and dietary segregation of crested penguins, *Eudyptes*. In *Biology of penguins*. L.S. Davis & J.T. Darby (eds). pp. 131-156. Academic Press, Orlando, Florida. (1)
47. ADAMS, N.J. & **BROWN, C.R.** (1990). Energetics of moult in penguins. In: *Biology of penguins*. L.S. Davis & J.T. Darby (eds). pp 297-315. Academic Press, Orlando. (1)
48. ADAMS, N.J. & **BROWN, C.R.** (1989). Dietary differentiation and trophic relationships in a sub-Antarctic penguin community at Marion Island. *Mar. Ecol. Prog. Ser.* 57: 249-258. (1)

49. **BROWN, C.R.** (1989). Energy requirements and food consumption of *Eudyptes* penguins at the Prince Edward Islands. *Antarct. Sci.* 1: 15-21. (1)
50. **BRANCH, G.M., BOUCHERS, P., BROWN, C.R. & DONNELEY, D.** (1988). Temperature and food as factors influencing oxygen consumption of intertidal organisms, particularly limpets. *Amer. Zool.* 28: 137-146. (1)
51. **BROWN, C.R. & PRYS-JONES, R.P.** (1988). Development of homeothermy in chicks of sub-Antarctic burrowing petrels. *S. Afr. J. Zool.* 23: 288-294. (1)
52. **BROWN, C.R. & ADAMS, N.J.** (1988). Egg temperature, embryonic metabolism and water loss from the eggs of sub-Antarctic Procellariiformes. *Physiol. Zool.* 61: 126-136. (1)
53. **BROWN, C.R.** (1988). Egg temperature and embryonic metabolism of A- and B-eggs of Macaroni and Rockhopper Penguins. *S. Afr. J. Zool.* 23: 166-172. (1)
54. **BROWN, C.R.** (1988). Energy expenditure during incubation in four species of sub-Antarctic burrowing petrels. *Ostrich* 59: 67-70. (1)
55. **BROWN, C.R.** (1988). Energy requirements for growth in Salvin's Prions, Blue Petrels and Greatwinged Petrels. *Ibis* 130: 527-534. (1)
56. **BROWN, C.R. & KLAGES, N.T.** (1987). Seasonal and annual variation in diets of Macaroni and southern Rockhopper Penguins at sub-Antarctic Marion Island. *J. Zool., Lond.* 212: 7-28. (1)
57. **BROWN, C.R.** (1987). Energetic requirements for growth and maintenance in Macaroni and Rockhopper Penguin chicks. *Polar Biol.* 8: 95-102. (1)
58. **BROWN, C.R.** (1987). Traveling speed and foraging range of Macaroni and Rockhopper Penguins at Marion Island. *J. Field Orn.* 58: 118-125. (1)
59. **ADAMS, N.J., BROWN, C.R. & NAGY, K.A.** (1986). Energy expenditure of free-ranging Wandering Albatrosses *Diomedea exulans*. *Physiol. Zool.* 59: 583-591. (1)
60. **BROWN, C.R.** (1986). Feather growth, mass loss and duration of moult in

Macaroni and Rockhopper Penguins. *Ostrich* 57: 180-184. (1)

61. BERRUTI, A., ADAMS, N.J. & **BROWN, C.R.** (1985). Chick energy balance in the white-chinned petrel *Procellaria aequinoctialis*. In: *Antarctic nutrient cycles and food webs*. W.R. Siegfried, P.R. Condy & R.M. Laws (eds). pp. 460-465. Springer-Verlag, Berlin. (1)
62. **BROWN, C.R.** (1985). Energetic cost of moult in Macaroni Penguins (*Eudyptes chrysolophus*) and Rockhopper Penguins (*E. chrysocome*). *J. Comp. Physiol.* 155: 515-520. (1)
63. **BROWN, C.R.** & ADAMS, N.J. (1984). Female Wandering Albatross *Diomedea exulans* raising a chick on its own at Marion Island. *Cormorant* 12: 103-104. (2)
64. ADAMS, N.J. & **BROWN, C.R.** (1984). Metabolic rates of sub-Antarctic Procellariiformes: a comparative study. *Comp. Biochem. Physiol.* 77A: 169-173. (1)
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66. **BROWN, C.R.** & ADAMS, N.J. (1984) Basal metabolic rate and energy expenditure during incubation in the Wandering Albatross (*Diomedea exulans*). *Condor* 86: 182-186. (1)
67. NEWTON, I.P., ADAMS, N.J., **BROWN, C.R.**, ENTICOTT, J.W. & FUGLER, S.R. (1983). Non-marine vagrant birds at the Prince Edward Islands, June 1981-May 1983. *Cormorant* 11: 35-38. (2)
68. **BROWN, C.R.** & ADAMS, N.J. (1983). The effect of underwater explosions on Rockhopper Penguins *Eudyptes chrysocome*. *Cormorant* 11: 68. (2)
69. ADAMS, N.J. & **BROWN, C.R.** (1983). Diving depths of the Gentoo Penguin *Pygoscelis papua*. *Condor* 85: 503-504. (2)
70. **BROWN, C.R.** & OATLEY, T.B. (1982). Bird ringing at Marion and Prince Edward Islands, 1977-1982. *S. Afr. J. Antarct. Res.* 12: 45-48. (1)

71. **BROWN, C.R. & LOVERIDGE, J.P.** (1981). The effect of temperature on oxygen consumption and evaporative water loss in *Crocodylus niloticus*. *Comp. Biochem. Physiol.* 69A: 51-57. (1)