

Pick your own title – write an essay on convergent evolution in mammals, including extinct and extant examples.

Rather than listing examples, try to probe some interesting mechanism (e.g. subtle differences in convergent forms, effect of molecular systematics on mammalian phylogeny, ecomorphs & specialisations, limitations of mammalian body plan, role of biogeography etc.) Take the examples from what you've read and probe the questions in depth, using examples to support your arguments. The conclusion should tie all this together. **Put in figures or tables.**

Reading list

Pough, F. H., Janis, C. M., Heiser, J. B. 2009, *Vertebrate Life* (8th Ed). Pearson Benjamin Cummings.

Chapters 20 and 21, p 522 for phylogeny.

Kemp, T. S. 2005, *The origin and evolution of mammals*. OUP, Oxford.

Chapters 5, 6 and 7 relevant – will have to browse through, great for extinct examples.

McDonald, D. W. 2006, *The encyclopedia of mammals*, 2nd edition. OUP, Oxford.

Introduction useful and pictures of relevant groups throughout. DON'T use this for phylogeny – please use Pough (p522).

Dawkins, R. *The Ancestors Tale* (eds).

The Marsupial Mole's Tale.

Springer, M. S. *et al.* 2004. Molecules consolidate the placental mammal tree. *Trends in Ecology and Evolution* 19 (8), pp. 430-438.

Good review.

Martin, L. D. and Meehan, T. J. 2005. Extinction may not be forever. *Naturwissenschaften* 92, pp.1-19.

Long, but some interesting ideas presented in this review.

Murphy, W. J. *et al.* 2001. Resolution of early placental mammal radiation using bayesian phylogenetics. *Science* 294, pp. 2348-2351.

Don't worry too much about the methods.

Madsen, O. *et al.* 2001. Parallel adaptive radiations in two major clades of placental mammals. *Nature* 409, pp. 610-614.

Don't worry too much about the methods.