

The Waterside Ape: An Alternative Account of Human Evolution

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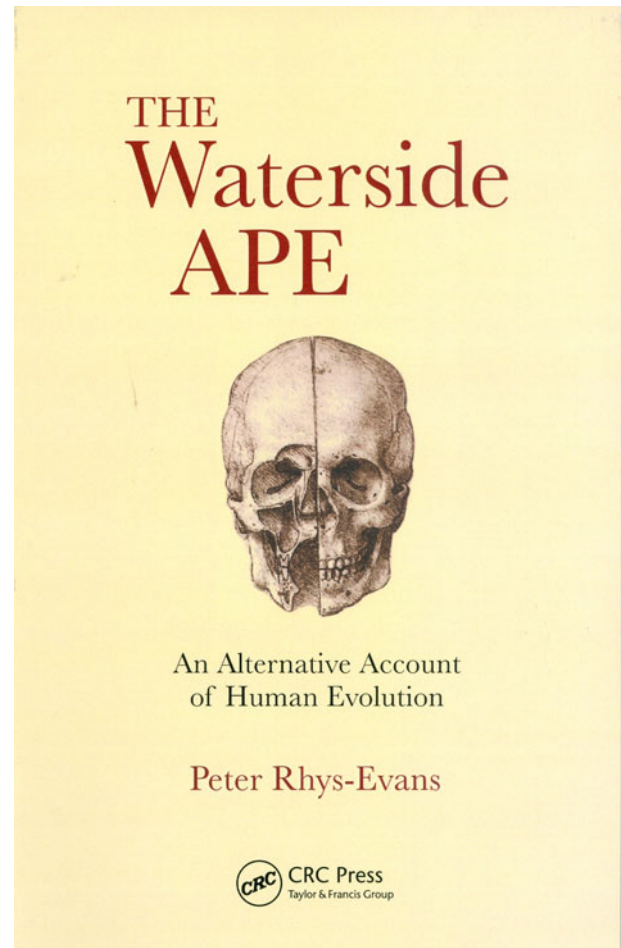
Now here is something different from the standard ENT textbook. Instead, we have a very thought-provoking, if surprisingly controversial, theory, to which an ENT expert has obviously been able to make a major contribution. The author is well known to a UK readership for his publications, his contribution to this journal, and his work in head and neck oncology, and here he is expanding on his paranasal sinuses paper published in *The Journal of Laryngology & Otology* way back in 1992.¹

Most of us will now accept that as humans we share a common ancestry with our simian cousins, but we do show remarkable differences from the pack that challenge explanation. The traditional story of human evolution is that we shifted from an arboreal existence, to walk the savannah grasslands and then found that walking upright gave us survival advantages. Finally, Lucy (I had not known her name was inspired by the Beatles song, this book is full of such gems) decided to walk out of Africa, long before evolving a big brain though.

Now I would have thought that suggesting an early waterside existence instead, as a driver of modern human development, was not at all sensational or unreasonable. No one is suggesting mermaids after all. I did, however, read up on the subject on the Internet, even before starting on the book, and was struck by the vehemence with which the establishment has rubbished this theory, likening it to pseudoscience, the influence of alien visitors or intelligent design.

At several times when reading this book, I was struck with 'I never thought of that before' reactions. For example, if bipedalism is such an evolutionary advantage, why is it so unique to humans? How amazing is the human (solely amongst primates) diving ability shown by some communities to this day, whether hunting pearls or food? So many land animals went back to the sea for good (e.g. whales, dolphins, manatee), why should not humans have benefitted from remaining on the margins of the water, or venturing in to cool off or feed?

The proposal is simple enough and probably started in 1942, with the idea that early humans avoided the savannah but instead became hunter-gatherers around inland waters and the seashore, where bipedalism, with an upright gait, carried an obvious advantage. The pioneer Elaine Morgan is frequently cited for her 1985 work, in which she wrote of the 'aquatic ape'. The professional scientific community, however,



rejected the concept as 'not worth the trouble of a rebuttal', which appears strange and does seem to have been a continuing response. The suggestion is that this was because she was not an academic scientist, but also had a history of feminist writing. The more open-minded Sir David Attenborough supported discussion through a conference in 2013 and a BBC Radio 4 programme, which introduced the term 'the waterside ape'. Again, the establishment responded with ridicule, as there was no supportive fossil evidence and (in a really curious logic) essentially the theory could not be falsified!

By now this reader was gripped. We learn that most of the fossils are submerged by rising sea levels and of course can only carry information as to the bony skeleton, not the soft tissues. A chapter on genetics taught me that it was not Darwin who introduced us to the terms 'evolution' or 'survival of the fittest', but the influence of epigenetics and climate change was thought-provoking. A chapter on our early ancestors showed how fossil records varied from the Hobbit of Indonesia to the giant 'basketball player' skeleton of Kenya (who died of dental sepsis; another gem). The more recent Neanderthals may well have disappeared when faced with

Cro-Magnon humans, but did leave their genetic traces as in Chapter 5.

Then we start to really tackle the waterside ape theory. A chapter entitled 'Why are we so different?' is more about the ways in which we are so, but sets the scene by listing bipedalism, loss of the fine coats of our cousins, deposition of subcutaneous fat, thermoregulation by sweating, or our large brain. Subsequent chapters cover each difference in turn and offer a very convincing association for each with exposure to an aquatic environment. Any more detail would require a spoiler alert at this point. The later chapters do really emphasise the ENT expert input here, with studies of comparative anatomy of the nasal airway, the larynx and external ear. 'Surfer's ear', those troublesome exostoses, have been found in fossil records, and might even have carried some advantage! Could the mysterious function of the sinuses be to aid buoyancy or to promote nitric oxide production, improving cerebral blood flow as part of the diving reflex? Could the nasal valve (however inefficient) and the downward pointing nostrils of the human be of an advantage in preventing water ingress when swimming? Laryngeal descent happened long before speech developed, but may well be of value in diving and breath holding.

If we add to that the vernix covering of the newborn, and the resemblance of the human kidney to that of a marine mammal (or the camel, yet another little gem), there is a compelling case that our ancestors may well have spent a long period as waterside dwellers. Indeed, their consequent diet, high in the omega 3 fatty acid docosahexaenoic acid (which I now have to get from red capsules), may well have promoted the cognitive revolution we have enjoyed.

I found this a fascinating book on a topic I first heard of in that 1992 article published in this journal. It shows how much can be learnt from comparative anatomy, and is of special interest to an ENT readership. I thought it presented very convincing evidence for a theory that the anthropologists should address with a better counterargument than presently offered.

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Reference

- 1 Rhys Evans PH. The paranasal sinuses and other enigmas: an aquatic evolutionary theory. *J Laryngol Otol* 1992;**106**:214–25