

Sounding cocci-ed

Broadcasters have a duty to promote science but when they do, it helps to get the details right, cautions **Professor Brian J Ford**

The public don't get enough science. The secret story of scientific discovery is something they rarely encounter but it's among the most exciting sagas of all. So, I was intrigued by a series on BBC Radio 4 about antibiotics. It swept us back to Alexander Fleming and his momentous observation of penicillin almost a century ago. The drug (said the programme) could kill bacteria... and there the idyll was shattered. The bacteria were said to be 'staphylocock-sigh'. Pardon? Didn't they know it was 'staphylo-cock-eye'? Perhaps it was a slip of the tongue; but no, there it was again: cock-sigh. No mistaking it.

The narrator was James Macnaughton, and the programme was produced by Eilidh McCreadie. Did nobody in the team know how to pronounce these ubiquitous bacteria? The BBC even have a pronunciation unit in case someone encounters an unfamiliar name. It's hard to believe that people can grow up in British society without once having heard of staphylococci, the most abundant pathogen of them all.

It was no better when the sad death of Jane Goodall was discussed by the BBC. What a woman! Goodall was one of those rare candidates admitted to the University of Cambridge for a PhD without holding a first degree. Yet the BBC didn't emphasise that; instead, all the commentators claimed – at length – that she was the person who'd discovered that animals could use tools.

Not so. As far back as 1871 Charles Darwin wrote: 'It has often been said that no animal uses any tool; but the chimpanzee in a state of nature cracks a native fruit, somewhat like a walnut, with a stone.' Chimpanzees have also been known to use sticks to extract

termites from a crevice, much as some crows use twigs to retrieve food, and shrikes impale grubs on thorns. Orangutans use sticks for probing fruit, monkeys wield rocks to break nuts, while vultures and sea otters use stones to break open shells. The phenomenon is abundant and has been known for centuries.

Goodall's singular revelation was that chimps do not merely use tools but can *make* them. She observed chimpanzees snatching twigs from trees, then pulling off the side branches and leaves in order to create a suitable probe.

That was her revelation – animals could not only use objects as tools but could

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actually make them to suit the task in hand. That was back in 1960, and since then, New Caledonian crows have been seen to modify twigs with their beaks to make them easier to use, and gorillas have been known to break branches to size for use as a walking stick.

Goodall's later research showed us how the personalities of chimps can vary, much as they do in humans, and she observed the mothers painstakingly teaching their young to use tools, and adult chimps sharing food with those who needed it most. Her observations on warfare waged by chimps could yet teach us lessons that we might learn. ■



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