

# Vultures now near the edge

Ever since Rachel Carson published her classic 'Silent spring' in 1962 there has been consternation among nature conservationists concerning the widespread threat posed by pesticides used in farming practice.

In Carson's day the great bugbear was DDT. This readily available pest control agent, which had been used without discrimination all over the world, earned the condemnation of experts, but even to this day it has not been proscribed as a hazard to wildlife and humans.

The outcry from pesticide manufacturers and government agricultural agencies alike when Carson's book appeared was astonishingly condemnatory. Her main argument was that when you introduce a persistent and highly toxic chemical into the food chain it may produce disastrous effects on many animal and plant species, including domestic animals and humans, and there is no certain method of foreseeing where the damage may stop.

In modern farm management there is still too little concern about remote unintended effects of antibiotics and other pesticides. And now the case of diclofenac has come into prominence. Three Asiatic species of vulture are reported to be threatened with imminent extinction unless swift action is taken to restrict the treatment of livestock with diclofenac.

Several leading conservation organisations, including the Royal Society for the Protection of Birds, Birdlife International, the Zoological Society of London and the Bombay Natural History Society, have drawn attention to the problem.

A report of research in the US recently published in *Nature* has shown that diclofenac is a major cause of the decline of vulture populations in Southern Asia, particularly in India, Pakistan and Nepal. Cattle



are used for work rather than raised as food and are often left to die naturally, their carcasses being left in the open, where vultures consume them and suffer kidney failure from the residual diclofenac. As a result, the white-rumped vulture has declined by more than 99 per cent and the slender-billed and Indian vultures have also been severely affected.

If diclofenac were to be used for livestock treatment in Africa, the Middle East or Europe, closely related species such as the griffon vulture might be similarly affected. One sequel might be increased threats to health posed by an increase in the number of feral dogs no longer kept within limits by vulture attack.

The effect of diclofenac on the food chain is disastrous and it should prompt urgent action from the authorities concerned.

# The primrose path to dodgy drug supplies

As Ophelia remarks to Laertes, the "puffed and reckless libertine" treads "the primrose path of dalliance" and "recks not his own rede" (ie, ignores his own counsel). In our own day, the same gay libertine takes his dalliance among the many medications offered him through the internet. As a commentary published in *Science* for 23 July expresses it, "Internet pharmacies have become major access points for illegitimate sales and distribution of prescription drugs internationally."

According to the US Food and Drug Administration, some 1,000 internet pharmacies are active, handling medicines that do not always conform to the best accepted formulation standards, source of ingredients, processing methods, quality assurance and labelling. Accordingly, drug manufacturers and licensing authorities have warned consumers about the health risks of purchasing drugs online. However, it is not clear how far such warnings are designed to protect drug company profits rather than consumers' health.

In the US the import of limited quantities of unapproved drugs for personal use is permitted, but this situation is exploited by internet pharmacies. The most alarming risk is from receiving counterfeit preparations, which are believed to account for as much as 10 per cent of the world's drug trade. Indeed, counterfeit products are claimed to account for 40–50 per cent of the total drug trade in Nigeria and Pakistan.

Stronger regulation of the drug business so that consumers can choose their access to pharmacies meeting acceptable safety and reliability criteria has to be accompanied by better education of the consumer in respect of online pharmacies. Only those carrying an approved seal of policy can be permitted to accept their custom. A task force is being organised in the US to ensure safe drug import, and is due to give its report by the end of 2004.

# How the truth may be reached through intuition rather than evidence

The mind is a strange thing, almost impossible to define with accuracy, and it worries not only psychiatrists but also philosophers. One particularly shady corner of it is what goes by the name of intuition, a quality not universally accepted by experts on psychology.

I was reminded of the strangeness of this phenomenon by reading an account by Ralph Edwards, in *The Lancet* for 24 July, of two clinical cases in which his intuition correctly convinced him that a medical error had been made although hard evidence of it was lacking at the time.

Intuition is defined by the lexicographers as the power of the mind by which it immediately perceives the truth of things without using reasoning or analysis. In modern phi-

losophy, intuition is the immediate apprehension of an object or idea by the mind without the intervention of any reasoning process or immediate apprehension by the intellect alone, and has been confused with instinct. However, humans are able to have recourse to both instincts and intuitions, whereas other animals are supposed to be unable to reason and can only make use of instinct.

According to John Locke, our knowledge of our own existence is intuitive. According to Immanuel Kant, space and time can be regarded as forms of intuition, and not as theoretical concepts. Henri Bergson wrote: "By intuition I mean instinct that has become disinterested, self-conscious, capable of reflecting upon its object and enlarging it indefinitely".

And finally, Carl Jung asserted that that the fundamental functions of the psyche include sensation, thinking, feeling and intuition. Sensation he defined as perception by organs of sense, thinking as intellectual cognition leading to logical conclusions, feeling as subjective evaluation, and intuition as perception through an unconscious method or perception or perception of an unconscious content.

Intuition, Jung maintained, should permit us to guess possibilities and backgrounds. So perhaps, while not claiming some kind of spiritual superiority, it might be excellent advice to encourage our faculty of intuition. Apparently it can spur us to action without the sometimes fatal delay involved in plain thinking.