

Street pigeons in Basel

SIR — Because of overpopulation, street pigeons (*Columba livia forma urbana*) have become a plague in most cities of the world. They cause a variety of health and environmental problems and themselves suffer from poor, 'slum-like' living conditions¹. Attempts to reduce the populations, whether by killing or by treatment with sterilizing agents, have not been successful. A prohibition on pigeon-feeding, issued in 1978 in Basel, failed because of public protest and simple ignorance. The government therefore asked the department in which I work to analyse the causes scientifically and find a practical solution.

The street pigeons in Basel depend upon human 'pigeon-feeders' who provide the large food base that is principally responsible for the overpopulation². Preliminary studies demonstrated that a population reduction is obtainable only by a reduction of the ecological capacity of the system². This means the large feeding base is the system's limiting factor. Killing pigeons only rejuvenates the flocks and has no long-term effect upon the population size^{3,4}.

In 1988 and 1990 we launched our information campaigns "Pigeon Action I and II" (see figure) in collaboration with the Society for the Protection of Animals of Basel. We tried to explain the complicated ecological relationships between the large food base and the resulting overcrowding. We asked the public by pamphlets, posters, radio and television to stop or at least to limit their feeding with the slogans: "Feeding pigeons is animal cruelty", and "Protection of animals is: not feeding pigeons!"

It seemed important not only to prohibit feeding but to offer an alternative

for pigeon friends. We therefore built nine controlled and well-kept pigeon lofts to house a small but healthy population. Nearby, we developed designated man-pigeon encounter areas where the feeding of the pigeons is allowed. We yearly remove about 1,200 eggs and so can keep these flocks small.

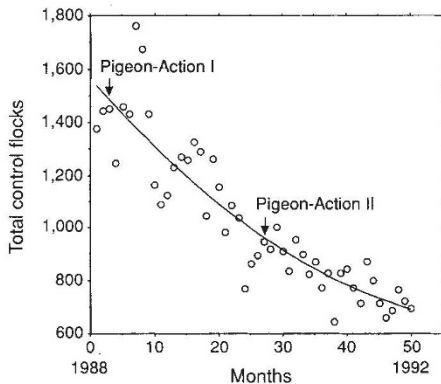
We weekly observed the size of 13 control flocks in different parts of Basel. Within 50 months, the total population of these flocks was reduced by 50 per cent (see figure). This corresponds to a reduction in the total Basel pigeon population to 10,000. Our aim is a small and healthy stock of about 5,000 street pigeons, a goal we hope to reach in the next few years.

Our Pigeon Action has been well-received nationally and internationally. We have found a satisfactory change in the mental attitude of the public. Feeding pigeons has become taboo and only a few incorrigible people continue.

If man's activity is the cause of an ecopathological effect, then the solution must be sought in a change of public attitude rather than in a change in the affected ecosystem. Our results demonstrate that by changing mental attitudes, the population of the street pigeons can be permanently reduced, to the benefit of both the animal and its environment.

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Monthly total street pigeon population (in 13 control flocks). The start dates of the two pigeon campaigns are indicated as Pigeon-Action I and II. The regression line shows the decrease in number of the pigeons within 50 months from 1,400 (summer average 1988) at the beginning to 708 (summer average in 1990) by the end of the investigation.

Body heat

SIR — While the DREADCO biochemists are searching for an alcohol substitute to warm the lost and snow-bound¹, I would suggest they investigate the body's own heat generating mechanism, which has been known since antiquity and which was reported in *Nature* ten years ago by Benson and others².

The production of 'magical heat' by breath control techniques has been known since prehistoric times³ and it is practised in the form of *g Tum-mo* yoga in Tibet³ and India² and in other religious practices of the indigenous peoples of Africa, Asia, Polynesia, Europe and North America⁴. It has been suggested that these practices increase the skin temperature due to an increase in car-

diac output concomitant with a decrease in hepatic and renal blood flow, resulting in an increase in flow in the cerebral and peripheral vessels⁵.

Finding the putative neuropeptide (perhaps a thyroxine analogue) that specifically increases the parasympathetic tone in these individuals, or developing a specific blocking agent to the adrenergic receptors of the sympathetic system, may be the safest and most practical way of bringing DREADCO's 'Body Heat' to the market place.

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Thatcher right?

SIR — You are, of course, entitled to your liberal bias and the Opinion section is the proper place for your editorial comments, but consider, if you will, how your "taboo" remarks might sound to a conservative reader.

In the first paragraph, you seem to take delight in spanking Margaret Thatcher for not using money wrung from British taxpayers to fund a survey of sexual habits that you think is so smashing. In the second column you explain that one of the reasons for her disapproval was scepticism about the veracity of the prospective survey data. Then you admit that "[t]he premise is correct" in the very next sentence!

Now, just what was it that Mrs Thatcher was mistaken about? One of her objections was, by your own admission, valid. Even if it hadn't been, she undoubtedly had other reasons for her frugality. For example, she may have wondered, as I do, just how much more data we need to identify the behaviours that risk transmission of AIDS. Or, how much more money we must extort from those not at risk to attenuate the affliction of those who, at their own discretion, are?

This conservative American reader, for one, would be delighted to have a government as concerned as Mrs Thatcher about how much tax money is being spent chasing a treatment for a disease whose overwhelming cause is volitional behaviour that is at best irresponsible and at worst degenerate.

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