

# An island sanctuary at risk

An editorial in *Science*, 13 May, paints a grim picture of the future of the wildlife in the Galapagos islands.

This World Heritage Site has long been renowned among naturalists for its extraordinary wild inhabitants, from the finches celebrated by Charles Darwin to the giant tortoises that make their laborious way over the archipelago.

As the result of conflicts involving immigration and illegal fishing, the Ecuadorian government passed a special law in 1998 excluding any settler not born there or having family members there. This was designed to conserve the unique biodiversity and permit sustainable development of the islands, but has to a great extent failed. The population of humans has increased 10-fold over the past 30 years and now stands at more than 27,000. In the 1970s there were three vehicles plying there. Today, more than 350 taxis create congestion and pollution on Santa Cruz Island.

Reports this year have revealed that the Galapagos penguin faces a severe threat, with a 30 per cent chance of extinction during the coming century. There are problems with invasive plants, such as the blackberry, introduced in the 1980s, which shades and smothers native species. Goats, cats, rats and pigs have their impact on the island fauna. The sea cucumber industry and the trade in sharks for the sake of their fins have expanded. Tourism, with 120,000 visitors annually, generates funds, but these stay either on the mainland or in the areas where tours are organised.

The islands, it is maintained, need a non-extractive marine park round the westernmost islands of Ferdinandina and Isabela to



protect two indigenous birds, the Galapagos penguin and the flightless cormorant. Population growth and consumption by immigrants should be limited.

Measures are needed to prevent the import of such diseases as West Nile virus and avian malaria infections. Illegal fishing must be prevented and alternative roles found for fishermen.

The international scientific community must arouse strong global political support to arrest deterioration of the many natural features of the Galapagos Islands and permit their survival for another century.

## “Is this a dagger which I see before me?”

For some time I have experienced revulsion when I have come across a display of wicked looking kitchen knives or butchery utensils on the accessible shelves of a hardware store or supermarket. It would be so simple for anyone bent on mayhem to snatch a long, pointed knife from the rack to accomplish his purpose. Children, as well as supposedly responsible adults, face the same temptation.

I am thankful to see that the problem is at last receiving attention. An editorial in the *BMJ* for 28 May points out that violent crime in the UK has increased by 17.9 per cent between 2003 and 2004, with one easily accessible weapon being the kitchen knife with which modern kitchens are often lavishly provisioned. Moreover, statistics indicate that about a quarter of 16-year-old boys carry knives or other weapons.

Knives are more commonly carried on the person than wooden bats, screwdrivers and chains. The first two weeks of 2005 saw 15 murders and 16 non-fatal attacks attributed to stabbings. Consideration is being paid to disarming the adolescent age-group by raising the minimum age at which a person may purchase a knife from 16 to 18 years. In schools, head teachers may be allowed to search pupils for knives. Such moves do nothing to reduce the weapons already available in homes and other premises, however.

The two main designs for domestic kitchen knives are daggers with pointed tips for vegetables or meat joints and blunt-nosed bread and cake knives. When a domestic knife is used to harm someone the blunt-nosed variety is unlikely to cause serious damage, since clothing and skin are resistant to penetration, and a short-bladed craft knife also tends to inflict only superficial wounds. But a long, dagger-like knife may damage deep body structures.

Tradition plays a part in knife design, and copper and bronze weapons similar in design to modern ones date from about 3000BC. Personal table knives were first used in Britain in the 14th century and became universally common during the 19th century. They were used to spear meat and lift it from the plate, and so required pointed tips. It is interesting to note that as long ago as 1669 an association was noted between pointed domestic knives and violence in France, prompting a regulation that tips of domestic knives be smoothed.

According to the *BMJ*, a survey of UK chefs revealed the opinion that long dagger-like knives are not essential to food preparation, a short pointed implement less than 5cm long being adequate.

It is noteworthy that many knife assaults are impulsive, perhaps prompted by alcohol or drugs, and that the presence in a home of a long pointed kitchen knife serves no useful purpose and constitutes a real threat to life and limb.

## Violence prompts violence in its witnesses

An investigation by social scientists from the University of Michigan and Harvard Medical School and reported in the 27 May issue of *Science* indicates that individuals who witness acts of gun violence are more likely than others to engage in violent behaviour.

It has long been asserted that the showing of violent episodes in films and television programmes has an adverse effect on susceptible people and this study suggests that this problem goes even deeper. A study of adolescents in Chicago indicates that even a single exposure to a violent episode involving firearms doubles the chance that a young person will later engage in violent behaviour.

Three successive interviews over a period of five years were conducted with over 1,000 subjects initially aged 12 to 14 years. Variables such as family structure, temperament, intelligence quotient and previous exposure to violence were taken into consideration initially. Half way through the study subjects were asked whether in the previous 12 months

they had been shot at or had seen others shot at. In the final stage the 984 remaining subjects were asked if they had been involved in any violence or had carried a gun.

Compared with unexposed subjects, those who had experienced violence were more aggressive and reported having committed more violent offences. They were more emotional and impulsive and less inhibited than those who had not been exposed. They tended to be non-whites, male, from single-parent families and were more likely to have indulged in alcohol or other drug experiments. They were more likely to have families with criminal records and more likely to have been abused or to have witnessed home violence. They tended to live in more violent neighbourhoods.

The study does not suggest that persons who are initially non-violent by temperament are likely to become violent by social exposure to violence, but that any tendency towards violence will be encouraged.