

No longer knowing

People in developed countries can't identify their local wildlife, and the trend is spreading across the world, writes Sarah Pilgrim.



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Can you name the tree in front of your house or the bird visiting your back garden each summer? Does it matter that so many of us cannot? Does this affect humanity as a whole?

To find out how familiar people are with British wildlife, I showed a selection of the most common plant and animal photos to people living in and around Bromley, south-east London, and locals from agricultural-based villages near Gainsborough, Lincolnshire.

This might seem a world away from concerns about loss of biodiversity, but I wanted to see if there was a link between habitat loss in developed countries and the decline in knowledge about species. However, using social science methods to collect natural science data is no stroll in the park, and I was quite shocked at some of the answers I received. A pheasant, for instance, was commonly mistaken for a turkey, an otter for a grey seal and a buttercup for a daisy. I even heard a shrew identified as an anteater and a hare as a kangaroo!

Fortunately, such answers were the exception rather than the rule, and by collecting some general information, I found that age, gender and area of residence to be key predictors of environmental knowledge: rural-dwelling elder women knowing the most, and urban-dwelling young men knowing the least.

Forging a bond with the environment at a young age and maintaining that throughout a lifetime is also important. Hence those who visit the countryside more frequently out of choice, for walking and hobbies rather than involuntarily for work or school trips, could identify more local species. In addition, people who spent their childhoods in rural areas rather than urban areas know more. People who grew up on the coast held the poorest environmental knowledge, possibly because they have a stronger bond with marine plants and animals than the land-based ones I used.

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Other factors I found that contribute to the making of local experts include having an environmentally friendly attitude, working in education and more years lived locally.

The best knowledge and understanding of the local environment is acquired by word-of-mouth from parents and relatives, friends and locals. Learning through outdoor interests, such as fishing, is also important. I found media sources, such as television, on the other hand and formal education to be particularly ineffective in teaching people about local species.

Of the plant and animal photos shown, people most easily identified the mammals, perhaps due to their publicity by wildlife organisations (eg The Wildlife Trusts' badger emblem)



A traditional healer from Tamil Nadu, extracts juice from the marulu plant to use in a medicine used to cure ear problems.

and their iconic status (eg as main characters in many children's stories such as *Wind in the Willows* by Kenneth Grahame). People had the most trouble recognising wild flowers, despite their historical importance as medicines and food.

It seems that a decline in local ecological knowledge is inevitable in today's society where supermarkets and doctors' surgeries replace wild plant foods and medicines. Today local knowledge is viewed as a personal interest rather than a survival tool. The trouble is, this loss of local knowledge is spreading to regions where wild plants play an important role in the food,

medicines and fuel of daily life.

I have also worked with a group of lower caste rural villages near Madurai, in Tamil Nadu, southern India, which are part of a programme run by a non-governmental organisation called SPEECH. The villagers have built up their knowledge of the land over generations, to use in day-to-day survival, such as to cure sickness and to provide food when drought spoils crop yields. Despite this, I found the younger villagers knew less about wild plant uses. This was probably due to recent changes such as easier access to modern medicine and migration to urban areas. Elder women, as the primary carers for their families, hold the majority of health-related plant knowledge. I saw no signs of this knowledge being passed on to their children, who now attend schools rather than being taught at home.

Overall, it seems that directly experiencing nature with friends and family is vital to acquiring local environmental knowledge. How can a magazine or TV image compare to a child pointing to a thrush, listening to its song and asking the name? We are almost in a time when more than half the world's population live in towns and cities, and with television and computer games coaxing children in from the outdoors, opportunities to experience local wildlife are declining.

Even more concerning is the equivalent loss of knowledge in poorer regions. Here environmental knowledge is much more in-depth and potentially valuable. In south India I was told of a plant that has remained a secret from all but local villagers, from which women eat a single leaf each day as a natural contraceptive. Another local plant by the name of *Adathoda* can treat diarrhoea, constipation, jaundice, TB, cough, asthma, diphtheria, bronchitis, gonorrhoea, kidney problems and conjunctivitis depending on what part is used and how it is prepared.

This knowledge, or ecological literacy, accumulated by observations and handed down through the generations, generally goes unrecorded. When it's lost, it's gone forever. This can greatly affect local communities, local plant and animal diversity, and perhaps even human health as a whole.

Sarah Pilgrim is a PhD student at the Centre of Environment and Society, Department of Biological Sciences, University of Essex, Colchester CO4 3SQ, tel: 01206 872219, email: sepilg@essex.ac.uk. This work is funded by NERC and supervised by Jules Pretty and Dave Smith of the University of Essex.

