

IELTSFEVER ACADEMIC READING TEST 62

Health in the Wild

Many animals seem able to treat their illness themselves. Humans may have a thing or two to learn from them.

A . For the past decade Dr Engel, a lecturer in environment sciences at Britian's Open university, has been collating examples of self- medicating behaviour in wild animals. She recently published a book on the subject. In a talk the Edinburgh Science festival earlier this month, she explained that the idea that animals can treat themselves has been regarded with some skepticism by her colleagues in the past . But a growing number of animal behaviourists now think that wild animals can and do deal with their own medical needs.

B . One example of Self-medication was discovered in 1987. Michael Huffman and Mohamedi Seifu, working in the Mahale Mountains national Park in tanzania, noticed that local chimpanzees suffering from intestinal worms would dose themselves with the pith of a plant called Veronia. This plant produces poisonous chemicals called terpenes. Its pith contains a strong enough concentration to kill gut parasites, but not so strong as to kill chimps (nor people, for that matter; locals use the pith for the same purpose). Given that the plant is known locally as "goat-killer", however, it seems that not all animals are as smart as chimps and humans. Some consume it indiscriminately, and succumb.

C . Since the Veronia-eating chimps were discovered more evidence has emerged suggesting that animals often eat things for medical rather than nutritional reasons. Many species, for example, consume dirt a behaviour known as geophagy. Historically, the preffered explanation was that soil supplies minerals, and also in places where minerals can be more easily obtained from certain plants that are known to be rich in them. Clearly, the animals must be getting something else out of eating earth.

D . the current belief is that soil and particularly the clay in it helps to detoxify the defensive poisons that some plants produce in an attempt to prevent themselves from being eaten. Evidence for the detoxifying nature of clay came in 1999, from an experiment carried out on macaws by james Gilardi and his colleagues at the University of California, Davis. Macaws eat seeds containing alkaloids, a group of chemicals taht has some notoriously toxic members, such as strychnine. In the wild , the birds are frequently seen perched on eroding riverbanks eating clay. Dr. Gilardi fed one group of macaws a mixture of a harmless alkaloid in their bloodstreams than those that had not, suggesting that the hypothesis is correct.

E . Other observations also support the idea that clay is detoxifying. Towards the tropics the amount of toxic compound ds in plants increase-and so does the amount of earth eaten by herbivores. Elephants lick clay from mud holes all year round, except in September when they are bingeing on fruit which, because it has evolved to be eaten, is not toxic. And the addition of clay to the diets of domestic cattle increases the amount of nutrients that they can absorb from their food by 10-20%.

F . a third instance of animal self- medication is the use of mechanical scours to get rid of gut parasites. In 1972 Richard Wrangham, a researcher at the Gombe Stream Reserve in Tanzania, noticed that chimpanzees were eating the leaves of a tree called Aspilia. The chimps chose the leaves carefully by testing them in their mouths. Having chosen a leaf, a chimp would fold it into a fan and swallow it. Some of the chimps were noticed wrinkling their noses as they swallowed these leaves, suggesting the experience was unpleasant. Later, undigested leaves were found on the forest floor.

G . Dr. Wrangham rightly guessed that the leaves had a medicinal purpose- this was, indeed, one of the earliest interpretations of a behaviour pattern as self-medication. However, he guessed wrong about what the mechanism was. His (and everybody else's) assumption was that Aspilia contained a drug , and this sparked more than two decades of phtochemical research to try to find out what chemical the chimps were after. But by the 1990s, chimps across africa had been seen swallowing the leaves of 19 different species that seemed to have few suitable chemicals in common. The drug hypothesis was looking more and more dubious.

H . it was Dr Huffman who got to the bottom of the problem. he did so by watching what came out of the chimps, rather than concentratinfg on wht went in. He found that the egested leaves were full of intestinal worms. The factor common to all 19 species of leaves swallowed by the chimps was that they were covered with microscopic hooks. These caught the worms and dragged them from their lodgings.

I . Following that observation, dr engel is now particularly exc ited about how knowledge of the way that animals look after themselves could be used to improve the health of livestock. people might also to learn a thing or two- and may, indeed, already have done so. geophagy, for exam,ple, is a common behaviour in many parts of the world. The medical stalls in Arican markets frequently sell tablets made of different sorts of clays, appropriate to different medical conditions.

J . Aricans brought to the Americas as slaves continued this tradition, which gave their owners one more excuse to affect to despise them. Yet, as dr Engel points out, Rwandan mountain gorillas eat a type of clay rather similar to kaolinite-the main ingredient of many patent medicines sold over the counter in the West for digestive xcomplaints. Dirt can sometimes be good for you, and to be ";as sick as a parrot" may, after all, be a state to be desired.

Questions 1-4

Do the following statements agree with the information given in Reading passage 1? in boxes 1-4 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

- 1 . It is for 10 years that Dr Engel has been working on animal self-medication.
- 2 . In order to find plants for medication, animals usually need to walk a long distance.
- 3 . Birds such as Macaw, are seen eating clay because it is a part of their natural diet.
- 4 . According to Dr Engel, it is exciting that research into animal self-medication can be helpful in the invention of new painkillers.

Questions 5-9

Complete the notes below using **No More Than One Word** from the passage. Write your answers in boxes 5-9 on your answer sheet.

Date	Name	Animal	Food	Mechanism
1987	Michael Huffman and Mohamedi seifu	Chimpanzee	5..... of Veronia	Contained chemicals named 6..... which can kill parasites.
1999	James Gilardi and his colleagues	Macaw	Seeds (contain 7.....) and clay	Clay can 8..... the poisonous contents in food.
1972	Richard Wrangham	Chimpanzee	Leaves with tiny 9..... on surface	Such leaves can catch and expel worms from intestines.

Questions 10-13

Complete the summary below using words from the box.

write your answers, A-H, in boxes 10-13 on your answer sheet.

Animal self-medication has been supported by an increasing amount of evidences. One of them is called 10....., a soil-consuming behavior commonly found across animals species. Because earth, especially clay, can neutralize the 11..... content of their diet. Similar behavior can also be found among humans in Africa, where patients will buy 12 at medical stalls to heal them. Another one is related to chimps who eat leaves with 13..... taste probably , but with medicinal value duye to their special 14.....

- | | | | |
|------------------|-----------------|----------------|--------------|
| A . mineral | B . plants | C . unpleasant | D . toxic |
| E . Clay tablets | F . nutritional | G . geophagy | H . harmless |
| I . Structure | | | |

Coastal Archaeology of Britain

A . The recognition of the wealth and diversity of England's coastal archaeology has been one of the most important developments of recent years. Some elements of this enormous resource have long been known. The so-called submerged forests off the coasts off England, sometimes with clear evidence of human activity, had attracted the

interest of antiquarians since at least the eighteenth century but serious and systematic attention has been given to the archaeological potential of the coast only since the early 1980s.

B . it is possible to trace a variety of causes for this concentration of effort and interest. In the 1980s and 1990s scientific research into climate change and its environmental impact spilled over into a much broader public debate as awareness of these issues grew; the prospect of rising sea levels over the next century, and their impact on current coastal environments, has been a particular focus for concern. At the same time archaeologists were beginning to recognize that the destruction caused by natural processes of coastal erosion and by human activity was having an increasing impact on the archaeological resource of the coast.

C . The dominant process affecting the physical form of England in the post-glacial period has been the rise in the altitude of sea level relative to the land, as the glaciers melted and the landmass readjusted. The encroachment of the sea, the loss of huge areas of 1 and now under the North sea and the English Channel, and especially the loss of the land bridge between England and France, which finally made Britain an island, must have been immensely significant factors in the lives of our prehistoric ancestors. Yet the way in which prehistoric communities adjusted to these environmental changes has seldom been that, although the rise in relative sea level is comparatively well documented, we know little about the constant reconfiguration of the coastline. This was affected by many processes, mostly quite, which have not yet been adequately researched. The detailed reconstruction of coastline histories and the changing environments available for human use will be an important theme for future research.

D . So great has been the rise in sea level and the consequent regression of the coast that such of the archaeological evidence now exposed in the coastal zone, whether being eroded or exposed as a buried land surface, is derived from what was originally terrestrial occupation. Its current location in the context of other related evidence from dry land sites. Nevertheless, its physical environment means that preservation is often excellent, for example in the case of the Neolithic structure excavated at the stumble in Essex.

E . In some cases these buried land surfaces do contain evidence for human exploitation of what was a coastal environment, and elsewhere along the modern coast there is similar evidence. Where the evidence does relate to past human exploitation of the resources and the opportunities offered by the sea and the coast, it is both diverse and as yet little understood. We are not yet in a position to make even preliminary estimates of answers to such fundamental questions as the extent to which the sea and the coast affected human life in the past, what percentage of the population at any time lived within reach of the sea, or whether human settlements in coastal environments showed a distinct character from those inland.

F . The most striking evidence for use of the sea is in the form of boats, yet we still have much to learn about their production and use. Most of the known wrecks around our coast are not unexpectedly of post-medieval date, and offer an unparalleled opportunity for research which has as yet been little used. The prehistoric sewn-plank boats such as those

from the Humber estuary and Dover all seem to belong to the second millennium BC; after this there is a gap in the record of a millennium, which cannot yet be explained, before boats reappear, but built using a very different technology. Boatbuilding must have been an extremely important activity around much of our coast, yet we know almost nothing about it. Boats were some of the most complex artifacts produced by pre-modern societies, and further research on their production and use make an important contribution to our understanding of past attitudes to technology and technological change.

G . Boats needed landing places, yet here again our knowledge is very patchy. In many cases the natural shores and beaches would have sufficed, leaving little or no archaeological trace, but especially in later periods, many ports and harbors, as well as smaller facilities such as quays, wharves, and jetties, were built. Despite a growth of interest in the waterfront archaeology of some of our more important Roman and medieval towns, very little attention has been paid to the multitude of smaller landing places. Redevelopment of harbor sites and other development and natural pressures along the coast are subjecting these important locations to unprecedented threats, yet few surveys of such sites have been undertaken.

H . One of the most important revelations of recent research has been the extent of industrial activity along the coast. Fishing and salt production are among the better documented activities, but even here our knowledge is patchy. Many forms of fishing will leave little archaeological trace, and one of the surprises of recent survey has been the extent of past investment in facilities for procuring fish and shellfish. Elaborate wooden fish weirs, often of considerable extent and responsive to aerial photography in shallow water, have been identified in areas such as Essex and the Severn estuary. The production of salt, especially in the late Iron Age and early Roman periods, has been recognized for some time, especially in the Thames estuary and around the Solvent and Poole harbor, but the reasons for the decline of that industry and the nature of later coastal salt working are much less well understood. Other industries were also located along the coast, either because the raw materials outcropped there or for ease of working and transport: mineral resources such as sand, gravel, stone, coal, ironstone, and alum were all exploited. These industries are poorly documented, but their remains are sometimes extensive and striking.

I . Some appreciation of the variety and importance of the archaeological remains preserved in the coastal zone, albeit only in preliminary form, can thus be gained from recent work, but the complexity of the problem of managing that resource is also being realised. The problem arises not only from the scale and variety of the archaeological remains, but also from two other sources: the very varied natural and human threats to the resource, and the complex web of organizations with authority over, or interests in the coastal zone. Human threats include the redevelopment of historic towns and old dockland areas, and the increased importance of the coast for the leisure and tourism industries, resulting in pressure for the increased provision of facilities such as marinas. The larger size of ferries has also caused an increase in the damage caused by their wash to fragile deposits in the intertidal zone. The most significant natural threat is the

predicted rise in sea level over the next century especially in the south and east of England. Its impact on archaeology is not easy to predict, and though it is likely to be highly localized, it will be at a scale much larger than that of most archaeological sites. Thus protecting one site may simply result in transposing the threat to a point further along the coast. The management of the archaeological remains will have to be considered in a much longer time scale and a much wider geographical scale than is common in the case of dry land sites, and this will pose a serious challenge for archaeologists.

Questions 15-17

Choose the correct letter, A, B, C and D.

Write your answers in boxes 14-16 on your answer sheet.

15 . What has caused public interest in coastal archaeology in recent years ?

- A . Golds and jewelleries in the ships that have submerged
- B . The rising awareness of climate change
- C . Forests under the sea
- D . Technological advance in the field of sea research

16 . What does the passage say about the evidence of boats?

- A . We have a good knowledge of how boats were made and what boats were for prehistorically
- B . Most of the boats discovered were found in harbors
- C . The use of boats had not been recorded for a thousand years
- D . The way to build boats has remained unchanged throughout human history

17 . What can be discovered from the air?

- A . Salt mines
- B . Shellfish
- C . Ironstones
- D . Fisheries

Questions 18-24

do the following statements agree with the information given in Reading Passage-1?

In boxes 18-24 on your answer sheet, write

TRUE	if the statement is true
FALSE	if the statement is false
NOT GIVEN	if the information is not given in the passage

18 . England lost much of its land after the ice-age due to the rising sea level.

- 19 . The coastline of England has changed periodically .
- 20 .Coastal archaeological evidence may be well- protected by sea water.
- 21 . The design of boats used by pre-modern people was very simple.
- 22 . Similiar boats were also discovered in many other European countries.
- 23 . There are few documents relating to mineral exploitation.
- 24 . Large passenger boats are causing increasing damage to the seashore.

Question 25-27 Choose THREE letters A-G

Write your answer in boxes 25-27 on your answer sheet

Which three of the following statements are mentioned in the passage?

- A . Our prehistoric ancestors adjusted to the environmental change caused by the rising sea level by moving to higher lands
- B . It is difficult to understand how many people lived close to the sea.
- C . Human settlements in coastal environment were different from those in land
- D . Our knowledge of boats were built mainly for collecting sand from the river.
- E . The prehistoric boats were built mainly for collecting sand from the river.
- F . Human development threatens the archaeological remains.
- G . The reason for the decline of salt industry was the shortage of laborers.

Scent of success

A . Innovation and entrepreneurship, in the right mix, can bring spectacular results and propel a business ahead of the pack. Across a diverse range of commercial successes, from the Hills Hoist clothes line to the Cochlear ear implant, it is hard to generalize beyond saying the creators tapped into something consumers could not wait to get their hands on. However, most ideas never make it to the market. Some ideas that innovators are spruiking to potential investors include new water-saving shower heads, a keyless locking system, ping-pong balls that keep pollution out of rainwater tanks, making teeth grow from stem cells inserted in the gum, and technology to stop LPG tanks from exploding. Grant Kearney, chief executive of the Innovation Xchange, which connects businesses to innovation networks, says he hears of great business ideas that he knows will never get on the market. " Ideas by themselves are absolutely useless,"he says. "An idea only becomes innovation when it is connected tyo the right resources and capabilities."

B . One of Australia's latest innovation successes stems from a lemon-scented bath-room cleaner called shower power, the formula for which was concocted in a factory in Yatala, Queensland. In 1995, Tom Quinn and John Heron bought a stuggling cleaning products business, OzKleen, for bulk. The business was in bad shape, the cleaning formulas were ineffective and environmentally harsh, and there were few regular clients. Now shower Power is claimed to be the top-selling bathroom cleaning product in the country. In the past 12 months, almost four million bottles of OzKleen's Power products have been sold and the companny forecasts 2004 sales of 10 million bottles. The company's. sales in 2003 reached \$ 11 million, with 700K of business being exports. In particular shower power is making big inroads on the british market.

C . OzKleen's turnaround began when Quinn and Heron hired an industrial chemist to revitalize the product line. Market research showed that people were looking for a better cleaner for the bathroom, universally regarded as the hardest room in the home to clean. The company also wanted to make the product formulas more environmentally friendly. One of Tom Quinn's sons, Peter, aged 24 at the time, began working with the chemist on the formulas, looking at the potential for citrus-based cleaning products that dominated the market. "We didn't want to use chlorine, simple as that," he says. "It offers bad working conditions and there's no money in it." Peter looked at citrus ingredients, such as orange peel, to replace the petroleum by-products in cleaners. He is credited with finding the Shower Power formula. "The head," he says. The company's recipe is in a vault somewhere and in my sole owner of the intellectual property.

D . To begin with, Shower Power was sold only in commercial but Tom Quinn decided to sell it in 750ml bottles after the constant "raves" from customers at their retail store at Beenleigh, near Brisbane. Customers were traveling long distances to buy supplies. Others began writing to OzKleen to say how good Shower Power was. "We did a dummy label and went to see Woolworths," Tom Quinn says. The Woolworths buyer took a bottle home and was able to remove a stain from her basin that had been impossible to shift. From that point on, she championed the product and OzKleen had its first super market order, for a palette of Shower Power worth \$3000. "We were over the moon" says OzKleen's financial controller, Belinda McDonnell.

E . Shower Power was released in Australian supermarkets in 1997 and became the top-selling product in its category within six months. It was all hands on deck at the factory, labeling and bottling Shower power to keep up with demand. OzKleen ditched all other products and rebuilt the business around Shower Power. This stage, recalls McDonnell was very tough. "It was hand-to-mouth, cashflow was very difficult," she says. OzKleen had to pay new-line fees to supermarket chains, which also squeezed margin.

F . OzKleen's next big break came when the daughter of a Coles Myer executive used the product while on holidays in Queensland and convinced her father that Shower Power should be in Coles supermarket. Despite the product success, Peter Quinn says the company was wary of how long the sales would last and hesitate to spend money on upgrading the manufacturing process. As a result, he remembers long periods of working around the clock to keep up with orders. Small tanks were still being used so batches were small and bottles were labeled and filled manually. The privately owned OzKleen relied on cash-flow to expand. "The equipment could not keep up with demand," Peter Quinn says. Eventually a new bottling machine was bought for \$50,000 in the hope of streamlining production, but he says: "We got ripped off." Since then he has been developing a new automated bottling machine that can control the amount of foam produced in the liquid, so that bottles can be filled more effectively. "I love coming up with new ideas." The machine is being patented.

G . Peter Quinn says "OzKleen's approach to research and development is open slather." "If I need it, I get it. It is about doing something simple that no one else is doing.

Most of these things are just sitting in front of people. It's just seeing the opportunities." With a tried and tested product, OzKleen is expanding overseas and developing more Power-brand household products. Tom Quinn, who previously ran a real estate agency, says: "We are competing with the same market all over the world, the (cleaning) products are sold everywhere." Shower Power, known as Bath Power in Britain, was launched four years ago with the help of an export development grant from the Federal Government. "We wanted to do it straight away because we realized we had the same opportunities worldwide." OzKleen is already number three in the British market, and the next stop is France. The power range includes cleaning products for carpets, kitchens and pre-wash stain removal. The Quinn and Heron families are still involved. OzKleen has been approached with offers to buy the company, but Tom Quinn says he is happy with things as they are. "We're having too much fun."

Questions 28-34

Reading Passage 1 has six paragraphs A-G which paragraph contains the following information?

Write the correct letter A-G, in boxes 28-34 on your answer sheet.

NB You may use any letter more than once.

- 28 . Description of one family member persuading another of selling cleaning products
- 29 . An account of the cooperation of all factory staff to cope with sales increase.
- 30 . An account of the creation of the formula of Shower Power
- 31 . An account of buying the original OzKleen company
- 32 . Description of Shower Power's international expansion
- 33 . The reason of changing the packaging size of Shower Power
- 34 . An example of some innovative ideas.

Questions 35-38

Look at the following people and list of statements below.

Match each person with the correct letter A-E in boxes 32-38 on your answer sheet.

- 35 . Grant Keamey
- 36 . Tom Quinn
- 37 . Peter Quinn
- 38 . Belinda McDonnell

List of Statement

- A . Described his story of selling his product to a chain store
- B . Explained there was a shortage of money when sales suddenly increased
- C . Believe innovations need support to succeed
- D . Believes new products like Shower Power may incur risks
- E . Says business won't succeed with innovations

Questions 39-40

Choose the correct letter A, B, C or D.

Write your answers in boxes 39-40 on your answer sheet.

39 . Tom Quinn changed the bottle size to 750ml to make Shower Power

- A . Easier to package.
- B . Appealing to individual customers.
- C . Popular in foreign markets.
- D . Attractive to supermarkets.

40 . Why did Tom Quinn decide not to sell OzKleen?

- A . No one wanted to buy OzKleen.
- B . New products were being developed in OzKleen.
- C . He couldn't make an agreement on the price with the buyer.
- D . He wanted to keep things unchanged.

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