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FIRST LANGUAGE ENGLISH **0500/13**

Paper 1 Reading **May/June 2024**

INSERT **2 hours**

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INFORMATION

- This insert contains the reading texts.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.

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Read **Text A**, and then answer **Questions 1(a)–(e)** on the question paper.

Text A: Jaguars (*Panthera onca*)

Jaguars are large wild cats, with lean muscles and powerful jaws, known for their distinctive spotty tan-coloured fur. The species roamed freely in the central mountain ranges of Arizona and New Mexico as recently as the 1960s but have now disappeared.

Some scientists and wildlife protection groups say now is the time to bring back jaguars. In a recent study, the scientists provided a prospective framework for the big cats' reintroduction to the mountainous southwestern stretches of the U.S. where they had lived for hundreds of years.

The scientists describe reintroduction as 'righting a wrong done to America's Great Cat over 50 years ago'. They believe that restoring jaguars to this area could provide a much-needed refuge for the troubled species in the future.

Comprising approximately 82 000 square kilometres, the proposed area could support up to 150 adult jaguars, a population that could be viable for at least 100 years. The study indicates that this area, not originally considered by the scientists, could be jaguar habitat due to the availability of water and prey such as fish and turtles. It is also relatively free from human disturbance. About 1.1 per cent has been developed for urban uses, crops or pasture, according to the study.

The primary justification for jaguar reintroduction rests on the idea that these cats used to live in the proposed recovery area before eradication by humans. Extensive research did discover a handful of independent jaguar observations locally between 1890 and 1964, and a female cat with cubs was trapped in mountains nearby in 1910. These observations, it was claimed, indicated that jaguars occupied the territory continually and had established a breeding population. The question, of course, is whether this proves the species was 'native' to the area and not just visiting as sceptics suggest. Historically, jaguars don't feature in local legends or stories. If a species must exist somewhere for a more extended period to be considered native, the jaguar might not qualify because evidence of sightings only goes back as far as 1890.

Danger to humans is low, scientists claim. Pointing to evidence provided to them by wildlife protection groups, the scientists concluded there were no historical reports of anyone being killed by a jaguar. Furthermore, they suggested, unprovoked attacks were extremely rare despite the media telling a more sensational story.

Read **Text B**, and then answer **Question 1(f)** on the question paper.

Text B: Rewilding

Aiming to restore what humans have destroyed over centuries, 'rewilding' is still a relatively new area of conservation biology. Rewilding is largely based on theories where the top predator in a food chain has a cascading effect on those organisms beneath it, thus effectively regulating the ecosystem.

There are different types of rewilding, perhaps the most controversial being the reintroduction of species from the Ice Age back into ecosystems. Since the Ice Age was thousands of years ago, and many of its larger animals are extinct, this form of rewilding involves introducing nearest modern equivalents into an area where they have never lived. Meanwhile, other forms of rewilding simply reduce human intervention in ecosystems, letting nature develop on its own, or reintroduce species more recently lost from ecosystems.

One great success story of a rewilding project is the reintroduction of beavers in Scotland. Beavers were excessively hunted to extinction in Great Britain. Conservationists wanted to reintroduce the beaver to help other wildlife prosper.

Another iconic rewilding project is the reintroduction of the grey wolf at Yellowstone National Park, USA. This project gained world-wide attention when environmental journalist George Monbiot gave a talk on the incredible effects of reintroducing the wolves. Beyond an exponential rise in biodiversity, there were beneficial geographical changes; for example, the reduction in grazing by elk allowed trees to grow, helping to stabilise river banks. Similar to the beavers, the wolves had a huge economic impact locally as increased awareness of these creatures attracted visitors from around the world.

No matter how much research has been done in other areas, however, the outcome's never certain for a new rewilding site, and, when introducing predatory animals like wolves, risks remain. Initially, landowners in Scotland also feared that beavers would devastate their wild salmon population (of huge commercial importance locally) but were relieved that this wasn't the case. Analysis of another rewilding project showed that despite all the work it involved the survival rate of reintroduced plants was extremely low.

Conversely, introduction of an organism may be too successful if it's an invasive species (one that out-competes the resident species, causing biodiversity to reduce). This can cost billions to control, far outweighing any other benefits.

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Read **Text C**, and then answer **Questions 2(a)–(d)** and **Question 3** on the question paper.

Text C: The beavers of Lily Pond

The writer, Hanna, and her husband, John, are both interested in wildlife. Hanna is a research scientist studying beavers in the wild.

For months I'd been looking for a pond. Not just any one would do. Planning to spend several hundred nights there without human companionship, weathering all seasons, I wasn't going to settle for the first pond (or ten) that looked promising.

Then I saw Lily Pond, an artist's vision of what a pond ought to look like. Fragrant aquatic flowers of pristine perfection blanketed this fresh water in such matted profusion that the slight breeze caused their overlapping pads to tip on edge, seizing my attention again and again. On their round green leaves sat bug-eyed frogs, and fat bumblebees buried their heads in the plants' floating blossoms. It was morning and the place was busy – a complex tangle of life. I climbed onto the mud-and-stick dam sheering up this enchanting pool, hoping that the beavers who'd created it were still in residence, maintaining their engineering feat.

'There's not enough food here for beavers,' John warned gently.

I'd hoped that the big stick-lodge nearby might house sleeping beavers.

'Drive back to the park office. Get that permit to stay,' I answered. 'This definitely is the one. I can't explain why.'

John stared at me with an expression of incredulity, started to speak, then changed his mind.

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'It's no good,' John sighed, delivering supplies days later. 'Those lilies are too thick to see anything – even if there are beavers.' But there were tempting breaks in the floral mats, cheeky narrow bands of open water arranged in satisfyingly geometric patterns. Secretly, this kept my hope alight.

To have built this impressive lodge, trees had to be felled, cut into manageable sections and towed to position. Towing twiggy limbs across shallow water, through a solid cover of lilies, isn't easy, so remarkably, beavers dredge deep swimming-channels on the pond bottom and float their materials over them. I focused on the gaps.

Just then a furry face peered out of one. Next, slowly surfaced one long, brown body. The creature seemed unaware of us frozen in position. Twice the animal paddled the length of the dam, inspecting it, allowing close-ups of him. The third time, he dived and covered the course again, underwater, trailing bubbles.

'Have you got a name yet?' John whispered.

'Beaver Number One,' I insisted.

We watched Beaver One surface then dive again at the far end of the dam – presumably entering an underwater door to his living quarters. That meant the lodge was occupied!

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Judging by his size, this fine-looking specimen groomed to perfection was of breeding age: were there beaver kits in the lodge? Was this a colony?

That month I remained at the pond, eventually identifying beavers Two to Four (by keeping them all in sight simultaneously since I couldn't tell them apart). John needn't have worried – clearly these beavers ate lilies. Munching sounds betrayed them. The species was even more adaptable than we'd realised.

Under cover of darkness, our beavers were a silent, invisible squad, capable of transforming their surroundings overnight. Their quietness was especially amazing given my suspicion that beavers were not naturally nocturnal, so ill-equipped for night vision. There's a mysterious, magical quality about these mammals. Their odd, lumpy shape resembles some mythical beast created from a grab bag of parts belonging to other creatures: five-fingered front paws, webbed hind feet, a flat tail beautifully etched as if by skilled craftsmen. If Beaver One picked up a whiff of my odour or I carelessly made noise, he'd draw up his tail and bring it down on the pond's surface in that trademark beaver tail-slap with such force that his hind legs recoiled right out of the water.

One night my camera's flashlight cover fell off, bathing the beavers in its white beam. To my surprise they didn't seem disturbed. John speculated they'd probably become habituated to passing headlights, making me thankful for modern laws protecting them.

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