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Our brains can save us

Primatologist Jane Goodall points out even insects show surprising intelligence. The woman who discovered chimpanzees use tools tells **Erik Nilsson** humans' intellect may be our best mechanism to blunt ecological devastation.



Top left: Primatologist and environmentalist Jane Goodall speaks at the recent Beijing summit of the Roots & Shoots environmental-education program for youth run by her institute. **Above:** Goodall looks at rescued chimpanzees in July at the Sweetwaters sanctuary, Kenya's only great-ape sanctuary. PHOTOS PROVIDED TO CHINA DAILY

Bees can use tools. So can birds.

Octopuses can slither out of tanks, slink into others to gobble fish and squish back into their own, pulling the lid closed behind them — humans none the wiser, until they review surveillance footage.

Clever creatures. Indeed. Especially considering the mollusks don't have brains, per se.

This, says Jane Goodall, the household-name primatologist who discovered chimps use tools, makes it an amazing time for humanity's next generation to study animals.

And human intelligence can be the instrument by which we blunt ecological devastation, the Briton believes.

Goodall realized decades ago, upon observing the apes modifying natural objects to manipulate their environment — for instance, using sticks to extract yummy insects from the earth — that we needed to “redefine man, redefine tool or include chimpanzees with humans”.

So, science did. “It was very exciting for me because I was the first to learn about chimpanzees,” she says.

But revolutionary discoveries about animal intelligence are generating new paradigms.

“In 1960, if I talked to the professors about, ‘let's study the intelligence of the octopus,’ they would have laughed at me and locked me up as an insane person,” she says.

“Now, there's huge interest because octopuses are incredibly intelligent, and they can solve problems. Crows ... can make tools. They can do things even some primates can't.”

But experts for decades believed birds' brains' dissimilar structures meant they weren't capable of intelligence, she points out.

“So, it's a very exciting time for young people to go out there and learn about animals.”

Bumblebees were recently taught to pull strings to earn a reward. More strikingly, others replicated the procedure after observing it, she points out.

Goodall, who made the journey to Tanzania's forests as a young woman without formal training, is celebrated for revolutionizing our understanding of our species' closest kin. But her methods weren't without criticism, especially giving names rather than numbers.

“(Numbers) make them objects of study rather than living beings. So, to me it's very, very important, if it's possible, to know them as individuals, to name them and describe them,” she says.

“**(It's) not only learning about the primate but also learning from the primate.**”

Jane Goodall, primatologist and environmentalist

They may not be people, yet have individual personalities. They share emotions like joy and sadness, she discovered. They're capable of empathy.

Goodall first documented chimp warfare.

“(It's) not only learning about the primate but also learning from the primate. There's a difference,” she explains.

“It's more a humility. I have a lot to learn.”

Goodall left the chimpanzees she loved decades ago — to save them.

She saw, while flying over Tanzania's Gombe in the early 1990s, deforestation had shaved surrounding forests bald.

That changed everything. She realized: “You cannot do ani-

mal conservation unless you do people conservation.”

Protecting nature requires sustainable development that produces solutions for humans who share other species' habitats, she understood.

Goodall soon after led the successful movement to reforest the area and improve locals' living standards.

But her battle is global.

The 82-year-old environmentalist, anthropologist and United Nations Messenger of Peace spends over 300 days a year jetting around the world as an advocate.

What started as a mission to save the chimpanzees turned into a journey to improve life for all living things.

Roots & Shoots, an environmental-education program for youth run by the Jane Goodall Institute, has 150,000 members in 130 countries and regions, and 700 groups on the Chinese mainland.

“My hope for Roots & Shoots is to create a critical mass of young people who understand the importance of the natural world — for humans as well as wildlife — and a group of people who understand that — while we need money to live — it starts to go wrong when we live for money,” she tells China Daily in Beijing.

“But it's really young people who understand that economic development at the expense of the environment is a death knell if it goes on like this for the children of the future. That's worldwide.”

Goodall says she has seen vast changes in Chinese children's mentality since she started coming to the country three decades ago. Adults are following suit.

“China is already beginning to do a lot. In some cases, it's a world leader in things like solar technology,” Goodall says.

“The big problem in China is air pollution.”

She says China has done better than many countries on climate change, especially regarding the Paris Agreement that China signed.

But the world needs more, she believes.

“Some countries are really doing well. And other countries have signed it and are carrying on as usual or even worse — that's not China.”

She's impressed by a water-purification system in Sichuan province's capital, Chengdu, that uses gravity to pull water through marshland plants that filter out contaminants. It doubles as a fish habitat.

Wetlands as sieves proved a prominent theme among students'

displays at the Beijing Roots & Shoots summit. Six primary schools in Jiangsu province's Zhangjiagang distributed hand-drawn postcards of wetlands with handwritten descriptions of what they learned during field research.

Dalian Minzu University student Wang Shuaiyu called the event and meeting Goodall “very moving”.

“It's a moment to celebrate all our environmental-protection projects,” she says.

Goodall told the crowd one of her sources of hope is “our extraordinary brains”.

“It's the explosive development of the human intellect that is the single greatest difference between us and chimpanzees, our closest animal relatives — and all other animals,” she says.

Beijing's air pollution reminds her of London when she was growing up.

“It was same in New York and LA. It was when people began to use brains that we gradually made the difference.”

That, she believes, is still happening worldwide.

“You,” she told the Beijing crowd, “are my reason for hope.”

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Ranger devotes a lifetime to protecting his trees

By **LIU XIANGRUI** and **DONG XIANWU**

While walking is a popular exercise for many people nowadays, it can be a real challenge for forest ranger Zhang Youguang, who has consistently walked 6 kilometers on mountainous roads daily for 43 years.

As a young man, Zhang took over the job from his father, who was once a hunter and later accepted the job of protecting the forest, as many people attempted to cut down trees illegally in the 1970s.

The forest in his charge is a virgin forest covering 2,700 mu (180 hectares), located in Pingshang town, in Puding county of Guizhou province in Southwest China.

Zhang has made his home in the forest, which is 28 km away from the town. Under his protection, the one-time saplings have since grown into towering trees.

Zhang wakes up early every day,

and he sets out on patrol after breakfast along the rugged and narrow mountain paths.

Taking along with him a bottle of water and some dry food, and tools including a sickle and a wooden stick, he spends hours in the forest. During fire-risk seasons, the patrolling time is longer than usual.

Dangers can be lurking, as the road turns slippery on snowy or rainy days, according to Zhang.

Once he was bitten by a poisonous snake, and he had to stay in bed after his foot swelled up.

During that time, his wife took over his responsibility and patrolled the mountains for two months.

“I was uneasy fidgets when I couldn't go patrolling. I was worried that something might happen to the forest,” he recalls, noting that he also urged his wife to take care of herself.

Zhang has stopped illegal lum-



Zhang Youguang, 65, has taken care of an area of mountain forests in Puding county in Guizhou province for 43 years. **DONG XIANWU** / CHINA DAILY

bering and poaching of wild animals in the region many times.

For example, he ran upon a group of illegal tree-cutters several years ago and managed to take

away their tools. However, the group later went to his home and threatened to hurt him.

They only decided to give up out of fear after Zhang told them that

he already had submitted the tools to the local forest station.

“I was of course scared too,” Zhang explains. “But I will not compromise if anyone dares to damage the forest.”

In recent years, such illegal conduct in the forest has diminished as people's livelihoods have improved a lot, Zhang says.

During his tenure, not a single emergency case of fire has taken place in the forest.

As ecological damage has been reduced significantly, more and more wildlife — monkeys, pheasants and hares — are seen in the area, Zhang says with delight.

The passing years have transformed Zhang from a young lad into a 65-year-old. It takes Zhang, who needs to take rests regularly, about 10 hours to finish his daily patrol now, compared with only four hours when he was young.

However, Zhang says he'll carry

on with his responsibility until the day he cannot walk anymore.

Zhang is happy that his younger brother Zhang Youquan was hired by the Fenglin village committee as a forest ranger too in 2014. That has relieved some of his work pressure, though he still follows his brother through every patrol and shares the knowledge he's accumulated over more than 40 years.

It is estimated that there are about 37,000 forest rangers like Zhang in Guizhou province. With the efforts of these green guardians, illegal lumbering and forest fires have been effectively reduced in the province in recent years.

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