

## C

A new study reveals new clues about the subtle(微妙的) but previously poorly understood evolutionary dance happening between temperatures and changes in the size of animal body parts. The new research offers important insights about how birds may adapt to the rapid rise in temperatures driven by global climate change.

For the study in Nature Communications, the researchers looked at nearly 7, 000 species of terrestrial non migratory birds—which is nearly two-thirds of all bird species—and focused on how bird species has evolved in ambient temperature(温度的梯度) and other factors of selection.

Two widely accepted “rules” in biology indicate that as local temperatures change, animals are likely to adjust heat transfer capabilities by changing the size of their bodies and extremities(四肢).

Biologist Carl Bergmann’s rule states that colder climates spawn bigger bodies because they help keep heat while smaller bodies help shed it. As a result, a polar bear is more than 2 1/2 times as tall at the shoulder as a sun bear from equatorial regions.

Zoologist Joel Asaph Allen’s rule deals with extremities, such as limbs, ears, and beaks, stating that animals in colder climates tend to have smaller extremities because extremities tend to have more surface than volume and are uniquely suited to shed heat. For example, arctic hares have evolved short legs and ears, whereas desert jackrabbits have evolved very long legs and ears.

“The problem is that everything we know about ecology tells us that changing the size of bodies and extremities can be problematic,” says lead author Carlos Botero, an associate professor of integrative biology at the University of Texas at Austin.

For example, if body size decreases, birds may not be able to hunt the same food as their ancestors. Similarly, if the average size or shape of a bill changes, birds may become less efficient foragers(觅食者) or have trouble producing typical mating calls.

It is not surprising that many prior studies have failed to find evidence for these predictions and that these so-called biological rules are currently controversial. The new study could clarify that debate by showing that although the patterns that Bergmann and Allen predicted occur in the wild, the two separate mechanisms complement each other.

8. What is the new study about?

- A. The two rules proposed by previous researchers.
- B. The differences between animals in cold and warm areas.
- C. The effect global climate change has on animals’ foraging.
- D. The way birds evolve in response to the rising temperature.

9. What does the underlined word “spawn” in paragraph 4 probably mean?

- A. make for
- B. bring in
- C. arise from
- D. wipeout

10. According to the passage, the birds in the colder areas tend to have\_\_\_\_\_.

- A. bigger bodies and longer legs.
- B. bigger bodies and shorter legs.
- C. smaller bodies and longer legs.
- D. smaller bodies and shorter legs.

11. What can we learn from the passage?

- A. The two rules with separate mechanisms are contradictory.
- B. The new study combines the prior studies and the two rules.
- C. The new study provides supporting evidence for the two rules.
- D. The two rules show animals change the body size to keep heat

## D

U.S. forests could worsen global warming instead of easing it because they are being destroyed by natural disasters and are losing their ability to absorb planet-warming gases as they get older, a new Agriculture Department report says.

U.S. forests currently absorb 11 percent of U.S carbon emissions, or 150 million metric tons of carbon a year, equal to the combined emissions from 40 coal power plants, the report says. It predicts that the ability of forests to absorb carbon will start falling quickly after 2025 and that forests could emit up to 100 million metric tons of carbon a year as their emissions from rotting trees exceed their carbon absorption. Forests could become a “substantial carbon source” by 2070, the USDA report says.

The prediction suggests that the loss of forests as a natural carbon absorber will require the U.S. to cut emissions more rapidly to reach net zero, said Lynn Riley, a senior manager of climate science at the American Forest Foundation.

“Ten percent of our domestic emissions. That is a really significant portion,” Riley said. “As we work to decarbonize...forests are one of the greatest tools at our disposal. If we were to lose that, it means the U.S. will contribute that much more in emissions.”

The loss of carbon absorption is driven in part by natural disasters such as wildfires, tornadoes and hurricanes, which are increasing in frequency and strength as global temperatures rise. The disasters destroy forestland, disrupting their ecosystem and decreasing their ability to absorb carbon, Riley said.

Exploitation of forested areas, which the report projects will continue to increase, is having the same effect as people increasingly move to the so-called wild and urban interface.

The trees’ ability to absorb carbon weakens overtime. Older, mature trees absorb less carbon than younger trees of the same species, and the U.S. forests are rapidly aging, the report found.

More aggressive forest management can help by cutting down a small portion of aging forests to make ways for younger trees that absorb more carbon, Riley said. A thorough study of each forest should be done before removing older trees, Riley said, comparing forest management to prescribing the proper drugs to a patient.

12. Which of the following statements is true according to the passage?

- A. Coal power plants emit 150 million metric tons of carbon every year
- B. Cutting down all older trees is an effective way to solve the problem.
- C. A new study of forest should be conducted after removing older trees.
- D. Forests are likely to shift from a carbon absorber to an emission source.

13. What can we infer from what Riley said in paragraph 3 and 4?

- A. Forests play a crucial role in holding carbon.
- B. Forests are no longer a natural carbon absorber.
- C. The U.S makes contributions to decarbonization.
- D. Achieving net zero emissions is within easy reach.

14. The following factors can cause the loss of carbon absorption EXCEPT\_\_\_\_\_.

- A. aging forests
- B. natural disasters
- C. global warming
- D. development of forests

15. What is the best title of the passage?

- A. Cutting Carbon Helps Slow Global Warming.
- B. Global Warming Is Becoming Worse Gradually.
- C. Forests Are Losing Their Ability to Hold Carbon.
- D. Planting More Trees Is at The Top of The Agenda.

第二节(共 5 小题：每小题 2.5 分，满分 12.5 分)

阅读下面短文，从短文后的选项中选出可以填入空白处的最佳选项。选项中有两项为多余选项。

The World Book Day, also called World Book and Copyright Day, falls on April 23<sup>rd</sup>.\_\_\_\_\_16\_\_\_\_\_ Reading extensively exposes you to new ideas and knowledge, improves your concentration and memory, and enhances your creativity and critical thinking skills.

Despite the importance of reading, many students today don’t have a good habit of reading. There are a few reasons for this: lack of time and motivation, abundance of digital distractions and failure to stick to reading. However, these challenges can be overcome with your conscious efforts.

First, you need to make time for reading by limiting time spent on social media or other leisure activities. Start with just 15—30 minutes a day of reading and you can work your way up to longer sessions.\_\_\_\_\_17\_\_\_\_\_ Many libraries also have digital book options if you prefer e-readers or audiobooks.

Second, build the habit by scheduling reading time each day and sticking to it.\_\_\_\_\_18\_\_\_\_\_ Even just having a regular routine on certain days of the week, such as reading Monday to Friday after dinner for example, can help you cement(巩固, 加强) it as a habit.

Finally, track your progress to stay on track. Set monthly reading goals to achieve and record the books you read, how long the sessions were and any key insights gained. It is a traditional way to write on a notebook.\_\_\_\_\_19\_\_\_\_\_.

By making reading a priority, limiting distractions, setting a regular schedule, and tracking your progress, you can successfully develop the habit of reading. 20 So take the first step to cultivate this important habit today. Your future self will surely thank you for it.

- A. Today using an app may make it easier to achieve.
- B. The goal of the day is to engage people in reading.
- C. Habits are formed through consistency and repetition.
- D. Developing a habit of reading is particularly unnecessary.
- E. Protecting the copyright is likely to be the focus of the day.
- F. A lifelong love of reading will enrich your life in so many ways.
- G. Find books you are genuinely interested in to help build motivation.

第三部分：语言运用(共两节，满分 30 分)

The first cable car originated from San Francisco. They were invented before the automobile in the days when horse-drawn streetcars were the popular public transportation.

One day, Andrew Hallidie, whose father was the inventor of the wire rope, witnessed a terrible 21 involving a streetcar for which it was that 22 the idea of the cable railway. He was wandering around the street when he noticed a horse struggling to 23 the streetcar up Jackson Street. It's 24 and was dragged back down a hill, passengers and goods 25 out of the carriage. This scene triggered Hallidie to find a 26 way to transport people and things.

Back home, Hallidie 27 strands of wire ropes to make wire cables, believing the cables would be 28 enough to pull the cable cars. Then he found someone to help him 29 the cars, with difficulty but successfully. He also managed to get the help of William E. Eppelsheimer, a German engineer, who 30 the first cable car line. Finally, Hallidie obtained a formal 31 from a lawyer named Benjamin Brooks to build a valid system.

August 2, 1873 saw the first trial of the cable car. Originally, Hallidie hired a grip man to operate the car. But after looking down the 32 hill, the man refused firmly. Hallidie decided to 33 it by himself from Jones Street to Kearney Street by way of Clay Street, known as the Clay Street Hill line today. About one month after the test run, the Line opened for 34 use. From then on, other lines opened in San Francisco as well as in other U.S cities and cities overseas. Till now, San Francisco is the only city where the cable car still 35.

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|---------------------|---------------|---------------|----------------|
| 21. A. accident     | B. horse      | C. quarrel    | D. game        |
| 22. A. reminded     | B. conceived  | C. recalled   | D. convinced   |
| 23. A. catch        | B. push       | C. kick       | D. pull        |
| 24. A. slipped      | B. slid       | C. ran        | D. jumped      |
| 25. A. collapsing   | B. falling    | C. erupting   | D. unfolding   |
| 26. A. wiser        | B. rougher    | C. safer      | D. broader     |
| 27. A. twisted      | B. revised    | C. fixed      | D. divided     |
| 28. A. long         | B. thick      | C. rough      | D. strong      |
| 29. A. manufacture  | B. sell       | C. design     | D. advertise   |
| 30. A. took on      | B. pulled up  | C. built up   | D. laid out    |
| 31. A. announcement | B. permission | C. commitment | D. appointment |
| 32. A. wide         | B. steep      | C. primitive  | D. remote      |
| 33. A. fetch        | B. drag       | C. drive      | D. direct      |
| 34. A. public       | B. personal   | C. outside    | D. external    |
| 35. A. hatches      | B. refreshes  | C. operates   | D. casts       |

第二节(共 10 小题：每小题 1.5 分，满分 15 分)

Torch festival of the Ethnic minority

The Torch Festival, the grandest festival of the Yi people, is held around the 24th day of the sixth month of the lunar calendar. The Yi people think fire possesses a superhuman power 36 can drive away evil and frighten off ghosts. They have 37 a special relationship with fire that they call themselves the “fire nationality”.

During the festival, torches, 20-30cm 38 diameter, a replaced upright in front of houses. At the entrance to

the villages, a grand “torch tower”, standing more than 20 metres high and \_\_\_\_\_39\_\_\_\_\_ (make) of pine branches and dry firewood, \_\_\_\_\_40\_\_\_\_\_ (decorate) with fresh flowers and fruits.

At last, with expectation and wishes \_\_\_\_\_41\_\_\_\_\_ (come) the long-awaited moment. After dinner, as darkness casts its shadow, young and old, \_\_\_\_\_42\_\_\_\_\_ (dress) in their most ceremonial and splendid costumes decorated with sparkling ornaments, rush \_\_\_\_\_43\_\_\_\_\_ (excite) to the “torch tower” square. Cheers and screams of delight burst from the crowd, while the soaring flames brighten the darkness of the night and warm everyone present at the scene.

On such a brilliant and marvelous night, the \_\_\_\_\_44\_\_\_\_\_ (participate) are overjoyed by the grand spectacle and the atmosphere of celebration. Young men and women sing and dance hand in hand around the bonfire \_\_\_\_\_45\_\_\_\_\_ (express) their gratitude for a life of plenty and good wishes for the coming year.