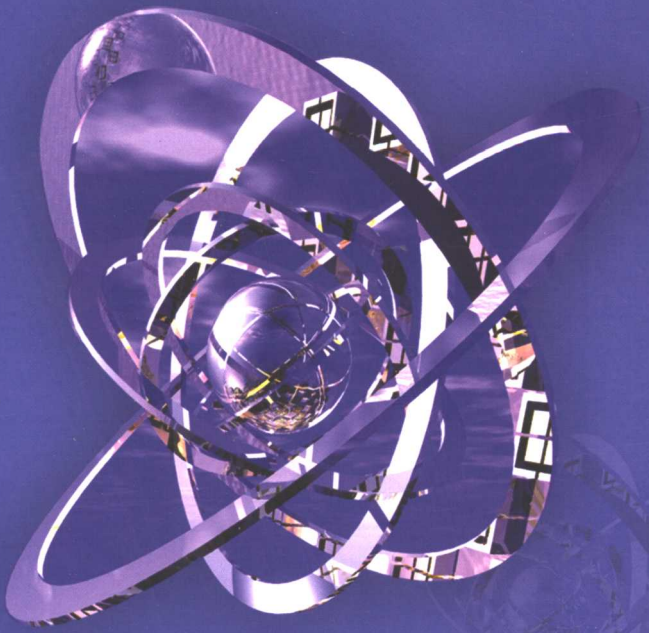
王士先 ◎编 张彦斌 ◎审校

SEEING IN TONGUES

——科普英语阅读文选



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前 言

随着国际互联网的迅速发展和世界科技文化的广泛交流，英语已被越来越多的人认同为当今必不可少的沟通交流工具。广大青少年学习英语的热潮一浪高过一浪。近年来，随着英语学习水平的明显提高，他们迫切需要适合自己水平的英语阅读材料，特别是科普方面的阅读材料。为适应大、中学生阅读英语科普文献的需要，在上海市青少年科技教育中心的组织下，我们选编了这本科普英语阅读文选。

本书中文章均选自近期的国外原版杂志。内容力求新颖有趣，学科覆盖面力求广泛，文字力求规范，深入浅出，以使广大青少年在阅读本书时，既能提高英语水平，同时又可获得一些新的科技信息，扩大视野，为未来的事业打好基础。

本书主要针对修读大学英语四级或四级以上的学生或相应水平的学生。全书分为两个部分：第一部分为精读(Intensive Readings)，共 50 篇，每篇篇幅在 160 至 450 英语词之间；第二部分为泛读(Extensive Readings)，共 10 篇，每篇篇幅在 650 到 850 英语词之间。第一部分每篇文章后附有阅读理解练习和英译中练习，帮助学生提高阅读技能和翻译技能；第二部分不提供练习，只提供注释和生词。

本书可用作中学课外提高班教材，也可供修读大学英语四级或四级以上的学生用作课外阅读。对于想要提高英语水平和愿意多接触一些英语科普文章的广大科技工作者，本书也不失为一本有价值的参考书。

本书不足之处，欢迎读者批评指正。

编 者

2005 年 12 月

几点说明

关于生词：

1. 全书提供超出《大学英语四级词汇表》（2000 年版）的生词，全部列入书后的总词汇表，并注明课数，希望读者在阅读时先尽量猜测词义，猜不出时才去查阅。前一课出现过的词汇和词组原则上不再重复注释。
2. 泛读材料部分因文章较长，为便于查找，凡列入书后总词汇表的生词，文中都用黑斜体表示；凡文章后面附有注释的语言点都列为斜体，并在语言点右上角注有上标序号如 [1、2、3]。
3. 意义比较明显的复合词和派生词原则上不提供，要求读者自行猜测。
4. 本书出现的地名除注明国名的以外均为美国地名，一般只出现城镇名和州名。许多地方州名用缩写，可参考书后《美国各州州名及其缩写表》。
5. 专有名词如人名和学校、机构名称等一般不列入总词汇表。
6. 单词有几种读法的，一般只取常用的一种。
7. 上下文中已有英文注释的用斜体表示的专门名词和词组一般不列入总词汇表。
8. 凡编入练习要求猜测词义的生词不列入总词汇表。

关于练习：

1. 本书只提供阅读练习和翻译练习，以集中训练这两种技能。如作为教材，教师可先行介绍一些阅读技能和翻译技能，并结合阅读和翻译练习实践进行讲解。
2. 翻译练习中的黑体字在翻译时要注意其翻译技巧，可能是词义引伸，可能是词类转换，也可能是需要运用合译或分译技巧，等等。
3. 多项选择阅读练习只有一种答案。

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PART I

INTENSIVE READINGS

Passage 1

No Clowning Around

No joke: Learning to juggle can cause changes in human brain structure, say researchers at the University of Regensburg in Germany.

At the start of their study, the scientists performed brain scans on 24 volunteers with no juggling ability. Then they gave half the group three months to learn how to joggle three balls for at least 60 seconds.

After the practice period, brain scans of the 12 jugglers showed more gray matter – brain tissue related to processing information – than scans of the non-jugglers. The catch: When the jugglers stopped tossing the balls for another three months, the amount of gray matter returned to normal.

"Our results challenge our view of the human central nervous system (brain and spinal cord)," says lead researcher Arne May. Traditionally, scientists have believed that the adult brain does not change after new experiences.

May suspects that juggling could change how brain cells are made or connected. He hopes his studies will eventually help treat brain diseases.

Exercise 1 Choose the best answer from the choices given.

1. The passage mainly deals with _____.
   A) the mystery of juggling
   B) the use of juggling in medicine
   C) the function of sports on health
   D) the influence of juggling on brain
2. The aim of the research is _____.
   A) to test juggling as a medical treatment
   B) to raise the level of juggling
   C) to search for new ways of information processing
   D) to study the relationship between juggling and brain
3. The word "catch" (Line 3, Para.3) has the same meaning as _____.
   A) hidden problem
   B) result obtained
   C) achievement
   D) advantage
4. The results of the experiment show that juggling _____.
   A) can improve brain health
   B) can change brain structure
   C) can treat mental diseases
   D) helps to get more information
5. Which of the following statements is TRUE according to the passage?
   A) Both professional jugglers and non-jugglers joined in the experiment.
   B) It takes 3 months to make a professional juggler.
   C) The research was sponsored by the information industry.
   D) Gray matter in one's brain serves to process information.

Exercise 2 Translate the following sentences into Chinese, paying

attention to the translation of the words in bold type.

1. At the start of their study, the scientists **performed brain scans on** 24 volunteers with no juggling ability.
2. Then they gave **half the group** three months to learn how to joggle three balls for at least 60 seconds.
3. After the practice period, brain scans of the 12 jugglers showed **more gray matter** – brain tissue related to processing information – **than scans of the non-jugglers.**
4. **The catch**: When the jugglers stopped tossing the balls for another three months, the amount of gray matter returned to normal.
5. May **suspects** that juggling could change **how brain cells are made or connected.**

Passage 2

Leafless Wonder

The latest brainstorm in the struggle to slow global warming: a synthetic tree! The leafless wonder soaks up thousands of times more heat-trapping carbon dioxide gas (CO_2) from the air than any real tree. "It looks like a goal post with Venetian blinds," says designer and physicist Klaus Lackner of Columbia University in New York.

Trees play a key role in the circulation of carbon molecules between organisms and the environment – known as the carbon cycle. Leaves collect CO_2 from the air for photosynthesis, the process in which plants use light to make food and release oxygen gas as waste. Because, says Lackner, even if trees blanketed the entire planet they couldn't absorb all the CO_2 that humans pump into the air: Tailpipes and power plants spew 22 billion tons of CO_2 a year. An acre of real trees can snag only 10 tons, but the panels of a fake tree can soak up to 90,000 tons a year. "We're just accelerating a natural process," Lackner says.

Exercise 1 Choose the best answer from the choices given.

1. A "brainstorm" (Line 1, Para.1) most probably refers to _____.
   A) a kind of brain disease
   B) a new idea
   C) a strange device
   D) a kind of weather
2. It can be inferred from the passage that _____.

A) carbon dioxide is the main cause of global warming

B) trees without leaves can also produce oxygen

C) a tree can be synthesized from carbon dioxide gas

D) carbon dioxide gas can help get rid of global heat

3. "A goal post with Venetian blinds" is mentioned in the passage to imply that _____.

A) the artificial tree can screen out carbon dioxide

B) the artificial tree has the shape of a window

C) the synthetic tree can provide shade from the sun

D) the synthetic tree are usually made in twins

4. The fake tree is _____ more efficient than the real tree in absorbing carbon dioxide.

A) nineteen times

B) ninety times

C) nine hundred times

D) nine thousand times

5. It can be concluded from the passage that _____.

A) natural trees will no more be needed on Earth in the future

B) global warming could be controlled in the future

C) forests will give way to artificial trees in soaking CO_2

D) there'll be more space for man to live on in the future

Exercise 2 Translate the following sentences into Chinese, paying attention to the translation of the words in bold type.

1. The latest **brainstorm** in the struggle to slow global warming: a synthetic tree!

2. The leafless **wonder** soaks up **thousands of times more** heat-trapping carbon dioxide gas (CO_2) from the air than any real tree.

3. Trees play a key role in the circulation of carbon molecules between organisms and the environment – **known as the carbon cycle**.

4. Leaves collect CO_2 from the air for photosynthesis, the process in which plants use light to make food and **release oxygen gas as waste**.
5. **Even if** trees blanketed the entire planet they couldn't absorb all the CO_2 that humans **pump into** the air.

Passage 3

Tuned Out

Can you hear me now? It turns out the communication between members of one bat species is breaking up.

Large-eared horseshoe bats, Rhinolophus philippinensis, come in three sizes. "Each size bat calls out using different notes," says Tigga Kingston, a biologist at Boston University. Bigger bats produce lower-pitch whistlers.

The bats may have developed their distinct notes to avoid food competition, says Kingston. That's because bats use echolocation to pinpoint food. The sound waves created by their calls bounce off prey and echo back to the bat. The large bats' whistles have long wavelengths that only bounce off jumbo insects. On the other hand, the smaller bats' short-wavelength calls hone in on smaller snacks.

The problem? Bats also whistle to communicate. Scientists suspect the animals tune out calls with a pitch unlike their own. That means two different-size bats don't connect and won't mate with each other. Result: The genes carried by bats of different sizes won't mix in future generations. Eventually, the three sizes of bats may become so distinct that they'll be classified as separate species. Now that's a bad connection.

Exercise 1 Choose the best answer from the choices given.

1. The three kinds of large-eared horseshoe bats are different from each other _____.

A) in the size of their ears
B) in the size of their feet
C) in the size of their body
D) in the languages they use

2. According to the passage, bats hunt their food by _____.
A) sound
B) instinct
C) sight
D) touching

3. The phrase "hone in on" (Line 6, Para.3) most probably means _____.
A) focus attention on
B) bounce off
C) take advantage of
D) get hold of

4. Which of the following statements is TRUE according to the passage?
A) All the large-eared horseshoe bats use the same language.
B) Different kinds of bats mate to produce new species.
C) The foods different kinds of bats eat are much the same.
D) The three kinds of bats don't need to fight for food.

5. It can be inferred from the passage that the large-eared horseshoe bats _____.
A) will evolve into three different species
B) will combine into one kind
C) will communicate with each other closely
D) will be connected to each other more closely

Exercise 2 Translate the following sentences into Chinese, paying attention to the translation of the words in bold type.

1. Can you hear me now? **Turns out** the communication between members of one bat species is breaking up.

2. Large-eared horseshoe bats, Rhinolophus philippinensis, **come in three sizes**. Each size bat calls out using different notes.

3. That's because bats use echolocation to **pinpoint food**. The sound waves created by their calls bounce off prey and echo back to the bat.

4. The large bats' whistles have long wavelengths that only bounce off jumbo insects. On the other hand, the smaller bats' short-wavelength calls hone in on smaller **snacks**.

5. That means two different-size bats don't connect and won't mate with each other. Result: The **genes carried by bats of different sizes** won't mix in future generations.