

2  
Grade

●理工科英语分级读物

TORNADOES AND OTHER  
STORIES

# 龙卷风及其他

王启良 选注

高等教育出版社

理工科英语分级读物 第二级

Tornadoes and Other Stories

龙卷风及其他

高等教育出版社

(京)112号

理工科英语分级读物 第二级

TORNADOES AND OTHER STORIES

龙卷风及其他

王启良 选注

高等教育出版社出版

新华书店北京发行所发行

河北省香河县印刷厂印装

开本 787×960 1/32 印张 4.875 字数 81 000

1993 年 1 月第 1 版 1993 年 1 月第 1 次印刷

印数 0 001—1 882

ISBN 7-04-002002-5/H·147

定价 2.30 元

## CONTENTS

1. Tornadoes .....	1
2. Wind Power .....	4
3. High Up in the Tropics .....	7
4. Volcanoes .....	15
5. New Uses for Fly Ash .....	19
6. Glass .....	22
7. Diamonds .....	29
8. Rubber .....	34
9. Making Leather .....	41
10. The History of Books .....	45
11. Money .....	51
12. Telling the Time .....	56
13. Looking Nice .....	62
14. A Roof Over Our Heads .....	69
15. Canning Food .....	76
16. Dried Food .....	79
17. Vitamins.....	83
18. Smoking and Cancer .....	87
19. Modern Surgery .....	92
20. Pasteurization .....	96
21. Electromedicine .....	100
22. Engineers of the Woods.....	105
23. Beauty on the Wing .....	111
24. Electric Fish .....	117
25. Useful Companions .....	121
KEY TO EXERCISES .....	129
VOCABULARY .....	132

## 1. Tornadoes

The great power of tornadoes is almost unbelievable. The speed of this whirling funnel-shaped<sup>1</sup> wind may be more than 500 miles per hour. It can tear up<sup>2</sup> trees, carry buildings away, and can even lift large trucks off the highway. The tornado is like a giant vacuum sweeper<sup>3</sup> that sucks up<sup>4</sup> anything in its path. Experts believe that the most violent force of a tornado is found inside the funnel, where<sup>5</sup> a vacuum is created because of very low air pressure. When this vacuum moves over a building which is filled with air under normal pressure, the difference between the air pressure inside the building and that outside<sup>6</sup> causes the building to explode. The largest tornado on record had a funnel a mile wide.

There are many interesting stories about the strange things that tornadoes have done in the U.S. Common wheat straw has been driven several inches into posts and trees. Buildings have been turned completely around on their foundations and have re-

---

1. whirling funnel-shaped wind: 漏斗状的旋风。

2. tear up: 拔出。

3. vacuum sweeper: 真空吸尘器。

4. suck up: 吸尽。

5. where: in which.

6. that outside: the air pressure outside the building.

remained intact.<sup>1</sup> People and animals have been carried hundreds of feet, often suffering no physical harm.<sup>2</sup> Feathers have been removed from chickens. Cars, trucks, and even whole freight trains have been carried away.

A few years ago in the state of Indiana,<sup>3</sup> three people were walking into a church just as a tornado struck. Two walked up the steps into the church building and the third person went down into the basement. In that moment, the church building was carried away and the two persons upstairs were killed. The one in the basement was not hurt.

Fortunately, a tornado does not last long, about 20 to 30 minutes on the average.<sup>4</sup> Usually it destroys an area about 16 miles long and the great damage that it does in one place lasts only about 30 seconds. Tornadoes normally occur on hot, humid days but not necessarily in the summer. The biggest and most destructive tornado in the U.S. struck on March 18, 1925. Roaring along at a speed of 60 miles per hour, it swept clean a path a mile wide<sup>5</sup>

- 
1. Buildings have been turned completely around on their foundations and have remained intact: 建筑物在其地基上转了一圈而完好无损。
  2. suffering no physical harm: 不受伤。分词短语作状语, 表示伴随动作。
  3. Indiana: [indi'ænə] 印第安那(美国州名)。
  4. about 20 to 30 minutes on the average: (龙卷风持续) 大约平均为 20—30 分钟。
  5. it swept clean a path a mile wide: it swept a path clean a mile wide 扫出了一条一英里宽的道路。

across the states of Missouri,<sup>1</sup> Illinois,<sup>2</sup> and Indiana. In its 220-mile long journey across these three states, the tornado killed 689 people.

More than 200 tornadoes strike in the United States every year. It is not possible to predict when a tornado will strike although the U.S. Weather Bureau<sup>3</sup> gives storm warnings when conditions are right to cause a tornado.<sup>4</sup> The safest place to be if a tornado seems likely is<sup>5</sup> in some underground area such as a cellar or a basement.

from *Short Readings in Science*

I. Multiple Choice: Circle the number of the item that best completes the sentence.

1. Low air pressure inside the funnel of a tornado creates (1) tension (2) vacuum (3) wind (4) speed.
2. Wheat straw has been driven into (1) posts. (2) freight trains (3) churches (4) people.
3. The average duration of a tornado is about (1) five to ten minutes (2) twenty to thirty minutes (3) one hour (4) one day.
4. A tornado may reach a speed of more than

1. Missouri: [mi'zuəri] n. 密苏里(美国州名)。

2. Illinois: [ili'noi] n. 伊利诺斯(美国州名)。

3. U.S. Weather Bureau: 美国气象局。

4. When conditions are right to cause a tornado: 当出现刚好要发生龙卷风的情况时。right (ad.) 用来加强语气, 如 He came right on time. 他恰好及时赶到。

5. The safest place to be if a tonado seems likely is...: If a tonado seems likely to happen, the safest place that can be found is ...

(1) 500 (2) 700 (3) 1000 (4) 50 miles per hour.

5. The best kind of weather for a tornado is  
(1) dry and dusty (2) hot and windy (3)  
cloudy and rainy (4) hot and humid.

II. True-False: Write + if the statement is true and  
O if false.

- 1. The U.S. Weather Bureau gives warnings  
when weather conditions are favorable for a  
tornado.
- 2. Tornadoes occur only during the summer  
months.
- 3. A cellar is a good place to be during a tor-  
nado.
- 4. Tornadoes have enough force to move mo-  
untains.
- 5. Usually, tornadoes destroy areas as large as  
50-100 square miles.

## 2. Wind Power

In its search for alternatives to fossil-fuel<sup>1</sup> energy sources, science is looking back<sup>2</sup> in history — at the windmill. Small windmills once were seen everywhere in rural America,<sup>3</sup> but most were abandoned with the coming of rural electrification programs in the 1930's.<sup>4</sup> Now energy shortages and rising petroleum prices

---

1. fossil-fuel: 矿物燃料。

2. look back: 回顾。

3. rural America: rural areas of America.

4. 1930's: 20 世纪 30 年代。

have brought renewed interest in putting the wind to work.<sup>1</sup>

Near Sandusky, Ohio,<sup>2</sup> the National Aeronautics and Space Administration (NASA)<sup>3</sup> is testing a 30-meter-tall experimental steel windmill with two slender 18.6-meter aluminum blades that look like enormous airplane propellers. NASA's windmill, designed to whirl at a steady 40 revolutions per minute even if the wind varies,<sup>4</sup> generates 100 kilowatts of power—enough to supply the needs of 30 homes. Perhaps the most significant fact about the NASA experiment is that it is the first large-scale test of windmill technology in more than 30 years. Some scientists estimate that with enough investment in research and development, windmills could supply<sup>5</sup> 20 per cent of U.S. electrical needs by the year 2000.

The Sandia Laboratories in New Mexico<sup>6</sup> are testing an altogether<sup>7</sup> different device that looks

- 
1. renewed interest in putting the wind to work: 再度对利用风力感兴趣。
  2. Sandusky ['sædəski], Ohio [əu'haɪəu]: 俄亥俄州的桑达斯基(美)。
  3. the National Aeronautics and Space Administration (NASA): 美国国家航空与宇宙航行局(简称为 NASA)。
  4. designed to whirl at a steady 40 revolutions per minute if the wind varies: 分词短语作定语, 修饰前面的 windmill. revolutions per minute: 转/分, 常为 r.p.m. 或 rpm。
  5. could supply: 虚拟语气, 表示作者的估计和推测。
  6. The Sandia ['sændjə] Laboratories in New Mexico ['meksikəu]: 新墨西哥州的桑地亚实验室(美)。
  7. altogether: completely.

more like a giant eggbeater than a conventional windmill. Its principal advantage is that its symmetrical shape<sup>1</sup> catches breezes from any direction.

All designers of new windmills face one very old problem, however: what to do when the wind dies. One solution would be to use windmills to<sup>2</sup> pump water uphill into storage reservoirs; when the wind stops, the water would be released to drive hydraulic turbines.

Meanwhile, U.S. ranchers and farmers in the Southwest are so eager to utilize wind power that New Mexico State University is offering a special course in the operation and maintenance of windmills built a generation ago.

*from Short Readings in Science*

I. Multiple Choice: Circle the number of the item that best completes the sentence:

1. By the year 2000, it is possible that with enough advancement in technology, windmills could provide all but (1) 80% (2) 20% (3) 40% (4) 70% of electrical needs in the U.S.

2. Science is interested in the windmill as another source of energy instead of (1) electricity (2) turbines (3) fossil-fuel (4) uranium.

3. During the 1930's, electrification programs

1. symmetrical shape: 对称的造型。

2. would be to use windmills to...: would be 是虚拟语气, 用法同注9。to use windmills to: 不定式短语作表语。

for rural areas caused the use of (1) steam engines (2) kerosene (3) water (4) windmills as a source of energy to diminish greatly.

4. A basic problem for designers of windmills is what to do when (1) it rains (2) there is no wind (3) the sun doesn't shine (4) there is too much wind.

5. Interest in wind power has been stimulated by (1) space scientists (2) increasing petroleum prices (3) water shortage (4) new inventions.

II. True-False: Write + if the statement is true and O if false.

— 1. A NASA experimental windmill is made of steel and is 30 meters tall.

— 2. Windmill technology has not been tested for over 30 years.

— 3. One hundred kilowatts of power can supply the energy needs of 50 homes.

— 4. One kind of experimental windmill looks like a large eggbeater.

— 5. The advantage of wind power is that it is always available.

### 3. High Up in the Tropics

The South American country of Bolivia<sup>1</sup> has a highly varied climate which ranges from<sup>2</sup> hot and moist in the east to high and cool in the west. In

1. Bolivia: [bə'livɪə] n. 玻利维亚(拉丁美洲)。

2. range from ... to ...: (变化)范围从...到...。

fact, the one missing element is a sea breeze, since Bolivia has no coastline.

The population of Bolivia is about three and a half million. Three-fourths of the people live in the mountainous regions, where the altitude varies from 8,000 to over 13,000 feet. The highest mountains are over 21,000 feet high.

About one-tenth of the total Bolivian population is white. Some of these white citizens are descendants of the Spanish conquerors who came to South America with Pizarro<sup>1</sup> in the sixteenth century. Other white citizens migrated to Bolivia from Europe and the United States because of their interest in trade. The white people in Bolivia control the government and the industries.

About one-fourth of the Bolivians are mixed Indian and white.<sup>2</sup> They usually work as shopkeepers or government employees. More than half of the Bolivians are full-blooded Indians.<sup>3</sup> They are the descendants of the peoples<sup>4</sup> who made up<sup>5</sup> the Inca Empire.<sup>6</sup> The Inca rulers professed<sup>7</sup> to have come

---

1. Pizarro: pizarro Francisco (1471—1541) leader of the Spanish conquest of Peru.

2. mixed Indian and white: 印第安人和白人的混血儿。

3. full-blooded Indians: 纯血统的印第安人。

4. peoples: 指各民族的人。

5. made up: 组成。

6. Inca: ['ɪŋkə] n. 印加(卡)人, 南美印第安人的一部落。the Inca Empire: 印加帝国。

7. professed: claimed.

from a race of gods<sup>1</sup> living on an island of the sun in Lake Titicaca<sup>2</sup>. This lake is the largest in South America and one of the highest lakes in the world.

When the Spanish soldiers conquered the Incas, they imposed<sup>3</sup> their own government on the country. They also tried to force the people to practice Roman Catholicism<sup>4</sup> and to speak Spanish. However, even today, most of the Indians still speak their own languages.

Today, the indians of Bolivia live in much the same way as<sup>5</sup> their ancestors lived before the coming of the Spaniards.<sup>6</sup> Most of them are farmers. They plough their land with metal-tipped sticks,<sup>7</sup> just as their ancestors did. The women walk behind the men as they plough, breaking up the clods of earth. Using these archaic methods, the Indians grow their two chief foods—a grain called Quinoa<sup>8</sup> and potatoes. Potatoes were first exported to Europe from this part of South America.

---

1. a race of gods: 印加统治者自称是提提喀喀太阳岛上的神的种族。

2. Lake Titicaca: [titi'kə:kə] 提提喀喀湖。

3. impose on/upon: 把……强加于。

4. Roman Catholicism: [kə'θɒlɪsɪzəm] 罗马天主教, 天主教的教义。

5. live in much the same way as...: 过着和……一样的生活。

6. Spaniards: ['spænjədz] n. 西班牙人。

7. metal-tipped sticks: 顶端装有金属的棒。

8. Quinoa: [kwi'nəuə] n. 昆诺河藜, (产于安第斯山脉地区, 印第安人种植, 以食其粟)。

Almost as important as food to the Indians is an intoxicating drink called chicha,<sup>1</sup> which is made from corn and coca leaves. The Indians also chew the coca leaves to give themselves energy. Chewing these leaves keeps the people from feeling<sup>2</sup> too hungry, thirsty, or cold.

Most of the Indians' household goods and clothes are made by hand at home. The women weave the brightly-colored cloth on handlooms. The Indians also are skillful at making pottery. Their baked clay pots are well-made, but they are not as beautiful as the pots their ancestors made centuries ago.

Many of the Bolivian Indians work in the mines, because mining is the most important industry in Bolivia. Some gold and silver are mined there, but the most important mining product is tin. Bolivia is the world's third largest producer of tin, and this metal makes up three-fourths of all Bolivia's exports. Other minerals, such as tungsten, are also mined there. Most of these mines are located on the high plateaus.

The eastern slopes of the Andes<sup>3</sup> are quite different from the high plateaus. They are a fertile region, with thick forests. Many fine woods, such

- 
1. Almost as ... to the Indians is... called chicha.: 本句是倒装语序,句中主语为 an intoxicating drink. chicha 一种能使人醉倒和兴奋的饮料。
  2. keep ... from (+...-ing): 使...免于...
  3. Andes: ['ændi:z] n. 安第斯山脉(南美洲)。

as ebony and mahogany, grow there. However, since there are very few roads in this region, it is not very highly developed. The two primary means of transportation are river boats and porters. Heavy loads are carried by mules or llamas. Llamas are fairly large animals which are very sure-footed on the mountain slopes.<sup>1</sup> They can travel long distances with very little food or water. The Indians weave the wool of the llamas into a coarse, heavy cloth. Finer cloth is woven from the skin of two similar animals—the vicuna and the alpaca. All three of these animals are so useful to the Indians that some historians believe the Indians came to live in the high country because these animals lived there.

East of the hill region are the great plains that stretch toward Brazil<sup>2</sup>. These plains are warm and have a good rainfall. Tropical plants, such as coffee, sugar, tobacco and cotton, can be grown there. Close to the Brazilian border, the plains are fertile, but very sparsely populated. It is difficult to keep in touch with<sup>3</sup> other places from these plains, because there are few rivers and almost no railroads. Some Indian tribes in this area live by hunting, fishing, cattleraising, or gardening.

A serious problem for Bolivia is the transport of food from the warm regions, where it is

---

1. are very sure-footed on mountain slopes: 爬坡很平稳。

2. Brazil: [brə'zɪl] n. 巴西(南美洲)。

3. keep in touch with: 与...保持联系。

grown, to the mountains, where most of the people live. Airlines are the most convenient solution to this problem, but they are expensive.

La Paz<sup>1</sup>, the capital of Bolivia, is the country's largest city. Nearly all the foreigners in Bolivia live there but most of its inhabitants are Indians. La Paz lies in<sup>2</sup> a valley under one of the highest peaks of the Andes. The surrounding region is barren and food is scarce there.

Lake Titicaca is sixty miles northwest of La Paz. Boats carry people and goods across the water. The steamers used on the lake have to be brought across the mountains in pieces, then reassembled on the shores of the lake.<sup>3</sup> The Indians who live near the lake use roundish boats made of the reeds that grow along the lake shores. The sails are made of reeds too. People and animals can be carried in these boats, which are quite strong.

Bolivia has one of the oldest universities in the western hemisphere. It is 400 years old. However, many Bolivians still cannot read and write. Some schooling is given by the mine owners in the mining camps.

Under the Incas, Bolivia was rich and well-governed. The Spanish invasion upset this society.

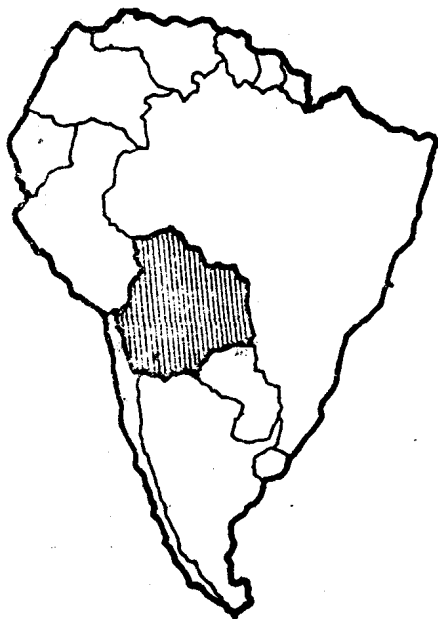
---

1. La Paz: [la: 'pæz] n. 拉巴斯(玻利维亚首都)。

2. lie in: 位于。

3. ... have to be brought across the mountains in pieces, then reassembled: 必需拆成部件运过山去, 然后再重新组装。

Since Bolivia gained its independence, about a hundred years ago, there have been several wars over boundaries. (Bolivia has been slow in developing, but its rich resources promise a more brilliant future in it.)



from *Reading Drills*

**I. Multiple Choice:** Circle the number of the item that best completes the sentence.

1. The most important industry in Bolivia is (1) making clothes (2) growing potatoes (3) mining (4) pottery.
2. The greatest hope for Bolivia's future lies in (1) her mineral resources (2) her undeveloped