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英文注释

EVERYDAY SCIENCE

生活中的科学

Science  
at the

Aquarium

奇趣水族馆

KATE BOEHM JEROME (美) 著

外语教学与研究出版社

FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS

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国家地理科学探索丛书(英文注释版)由美国北极星传媒有限公司策划并授权外语教学与研究出版社在中华人民共和国境内(不包括香港、澳门特别行政区及台湾省)独家出版、发行。

## 图书在版编目(CIP)数据

奇趣水族馆 = Science at the Aquarium / (美)杰罗姆(Jerome, K.B.)著. —北京: 外语教学与研究出版社, 2005. 6

(国家地理科学探索丛书: 注释版. 生活中的科学)

ISBN 7 - 5600 - 4756 - 4

I. 奇… II. 杰… III. 英语—语言读物 IV. H319.4

中国版本图书馆 CIP 数据核字(2005)第 029651 号

出版人: 李朋义

责任编辑: 余 军

美术编辑: 孙莉明

出版发行: 外语教学与研究出版社

社 址: 北京市西三环北路 19 号 (100089)

网 址: <http://www.fltrp.com>

印 刷: 北京画中画印刷有限公司

开 本: 740 × 975 1/16

印 张: 1.5

版 次: 2005 年 6 月第 1 版 2005 年 6 月第 1 次印刷

书 号: ISBN 7 - 5600 - 4756 - 4

定 价: 5.90 元

\* \* \*

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这套丛书秉承《国家地理》杂志图文并茂的特色，在书中配有大量精彩的图片，文字地道易懂、深入浅出，将科学性和趣味性完美结合，称得上是一套精致的小百科全书。特别值得一提的是本套丛书在提高青少年读者英语阅读能力的同时，还注重培养他们的科学探索精神、动手能力、逻辑思维能力和沟通能力。

本套丛书既适合学生自学，又可用于课堂教学。丛书各个系列均配有一本教师用书，内容包括背景知识介绍、技能训练提示、评估测试、多项选择题及答案等详尽的教学指导，是对课堂教学的极好补充。

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北京 BEIJING



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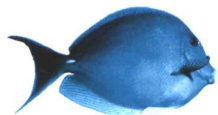
## 信息驿站





# Have you been to an aquarium?

## 你去过水族馆吗？

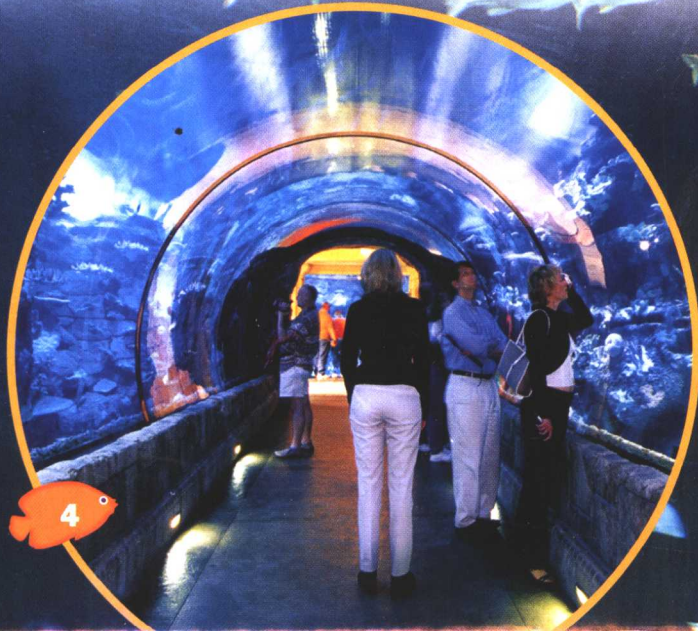


It's like an underwater zoo. Amazing<sup>1</sup> sea creatures<sup>2</sup> are on display—and you don't even have to get wet to see them!

Most people think only about homes, or habitats, on land. But many plants and animals live in the water. Did you know there are more than 20,000 different kinds of fish? Aquariums are wonderful places to learn about the underwater creatures we so rarely<sup>3</sup> see.

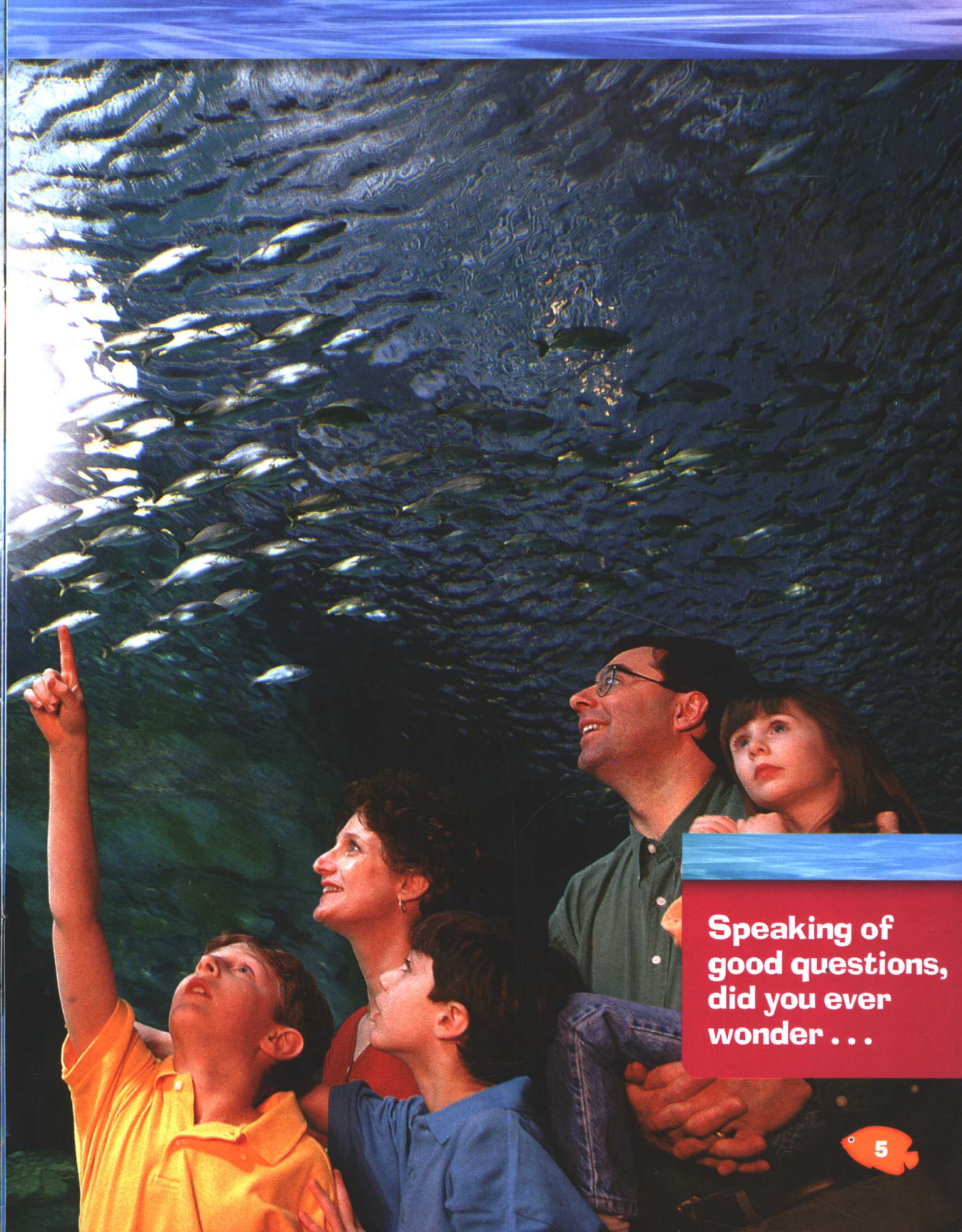
Why don't jellyfish look like fish? How often do whales come up for air? Why do some fish swim in schools? Think of all the interesting questions you can ask about the underwater world.

**Visitors at  
Mandalay Bay  
Shark Reef<sup>4</sup> in  
Las Vegas<sup>5</sup>,  
Nevada<sup>6</sup>**



- |                            |             |               |
|----------------------------|-------------|---------------|
| 1. amazing                 | <i>adj.</i> | 令人惊奇的         |
| 2. creature                | <i>n.</i>   | 生物；动物         |
| 3. rarely                  | <i>adv.</i> | 难得；很少         |
| 4. Mandalay Bay Shark Reef |             | 曼德勒湾 鲨鱼滩（水族馆） |
| 5. Las Vegas               |             | 拉斯韦加斯         |
| 6. Nevada                  |             | 内华达州          |





**Speaking of  
good questions,  
did you ever  
wonder . . .**



# Why are some fish kept in separate exhibits?

## 为什么有些鱼要分开展出?



Brightly colored fish swim together in one exhibit. Across the hall the exhibit is for seahorses only. Why are they separate?

There are many reasons different fish need different habitats. Some fish need special food. Others need a certain water temperature. Living things in an aquarium survive<sup>1</sup> best in habitats built to meet their needs.

**Leafy sea dragon<sup>2</sup>  
at Monterey Bay  
Aquarium<sup>3</sup> in  
Monterey, California<sup>4</sup>**

1. survive v.

生存。活下来

2. leafy sea dragon

枝叶海马

3. Monterey Bay Aquarium

蒙特雷湾水族馆

4. California

加利福尼亚州



Seahorses, for example, are not strong swimmers. They like sea grasses or weeds in their tank<sup>1</sup>. They use these plants as anchors<sup>2</sup>. They hang on to them with their tails.

Seahorses also like to eat live<sup>3</sup> food. They feed on small shrimp<sup>4</sup> and fish. But they can be slow eaters. In a small aquarium tank, fast-feeding fish can take all the food before the seahorses have a chance to eat. So it's better to keep these beautiful, strange-looking creatures in a special habitat of their own.

- |           |             |          |
|-----------|-------------|----------|
| 1. tank   | <i>n.</i>   | 水箱       |
| 2. anchor | <i>n.</i>   | 固定桩, 系缚物 |
| 3. live   | <i>adj.</i> | 活的       |
| 4. shrimp | <i>n.</i>   | 虾        |

**Seahorse  
holding on  
to a plant**



**Speaking of  
looks, did you  
ever wonder . . .**



# Why don't jellyfish look like fish?

## 为什么水母看起来不像鱼?



**Purple stripe jellyfish<sup>17</sup>**

**They look like blobs<sup>1</sup> of see-through<sup>2</sup> jelly<sup>3</sup>. Are these creatures really fish?**

As a matter of fact, jellyfish aren't fish. They don't have a backbone<sup>4</sup>. In fact, they have no bones at all. "Jellies" belong to a group of underwater animals called invertebrates.

Believe it or not, there are about 200 kinds of jellyfish. Many are tiny, but some are quite large. Since jellyfish have no bones, they are very light. Ocean currents<sup>5</sup> easily carry these creatures in the open seas.

Many jellyfish have tentacles<sup>6</sup>. These are long, arm-like structures<sup>7</sup> that dangle<sup>8</sup> from the jelly's main body. Jellies use tentacles as fishing lines<sup>9</sup>. For example, the sea nettle<sup>10</sup>, a type of jellyfish, has stinging cells<sup>11</sup> on its tentacles. When its tentacles touch a tiny fish, the stinging cells paralyze<sup>12</sup> it. The sea nettle then eats the fish.

Jellyfish don't have lungs<sup>13</sup>. They take in<sup>14</sup> oxygen<sup>15</sup> from the water through the outer layers<sup>16</sup> of their bodies. What an interesting way to breathe!

- |                  |             |          |                             |                 |
|------------------|-------------|----------|-----------------------------|-----------------|
| 1. blob          | <i>n.</i>   | (黏稠的) 一团 | 10. sea nettle              | 海刺              |
| 2. see-through   | <i>adj.</i> | 透明的      | 11. stinging cell           | 刺细胞             |
| 3. jelly         | <i>n.</i>   | 胶状物      | 12. paralyze                | <i>v.</i> 使麻痹   |
| 4. backbone      | <i>n.</i>   | 脊骨; 脊柱   | 13. lung                    | <i>n.</i> 肺     |
| 5. ocean current |             | 洋流       | 14. take in                 | 吸收              |
| 6. tentacle      | <i>n.</i>   | 触须       | 15. oxygen                  | <i>n.</i> 氧; 氧气 |
| 7. structure     | <i>n.</i>   | 结构       | 16. layer                   | <i>n.</i> 层     |
| 8. dangle        | <i>v.</i>   | 摇摆       | 17. purple stripe jellyfish | 一种有紫色条纹的水母      |
| 9. fishing line  |             | 钓线; 钓丝   |                             |                 |





**A fleet<sup>1</sup> of golden,  
long-tentacled jellyfish**

1. fleet

II.

群

**Speaking of  
breathing,  
did you ever  
wonder . . .**



# How often do whales come up for air?

## 鲸每隔多久浮出水面换气?



Orca<sup>8</sup>

**They swim underwater . . . but they can't stay down too long. Whales need air to breathe.**

All whales are mammals. This means that they must come to the surface of the water to breathe air. A whale breathes through the blowhole<sup>1</sup> on top of its head.

One type of whale you might see at an aquarium is the beluga<sup>2</sup> whale. A beluga can hold its breath<sup>3</sup> for up to 20 minutes on a dive<sup>4</sup>. Usually, however, a beluga comes up to breathe several times a minute.

- |                      |           |                       |
|----------------------|-----------|-----------------------|
| 1. blowhole          | <i>n.</i> | (鲸等的) 鼻孔              |
| 2. beluga            | <i>n.</i> | 白鲸                    |
| 3. hold one's breath |           | 屏息                    |
| 4. dive              | <i>n.</i> | 潜水                    |
| 5. Shedd Aquarium    |           | 谢德水族馆 (世界上最大的室内水族馆之一) |
| 6. Chicago           |           | 芝加哥                   |
| 7. Illinois          |           | 伊利诺伊州                 |
| 8. orca              | <i>n.</i> | 虎鲸                    |

### The Shedd Aquarium<sup>5</sup>

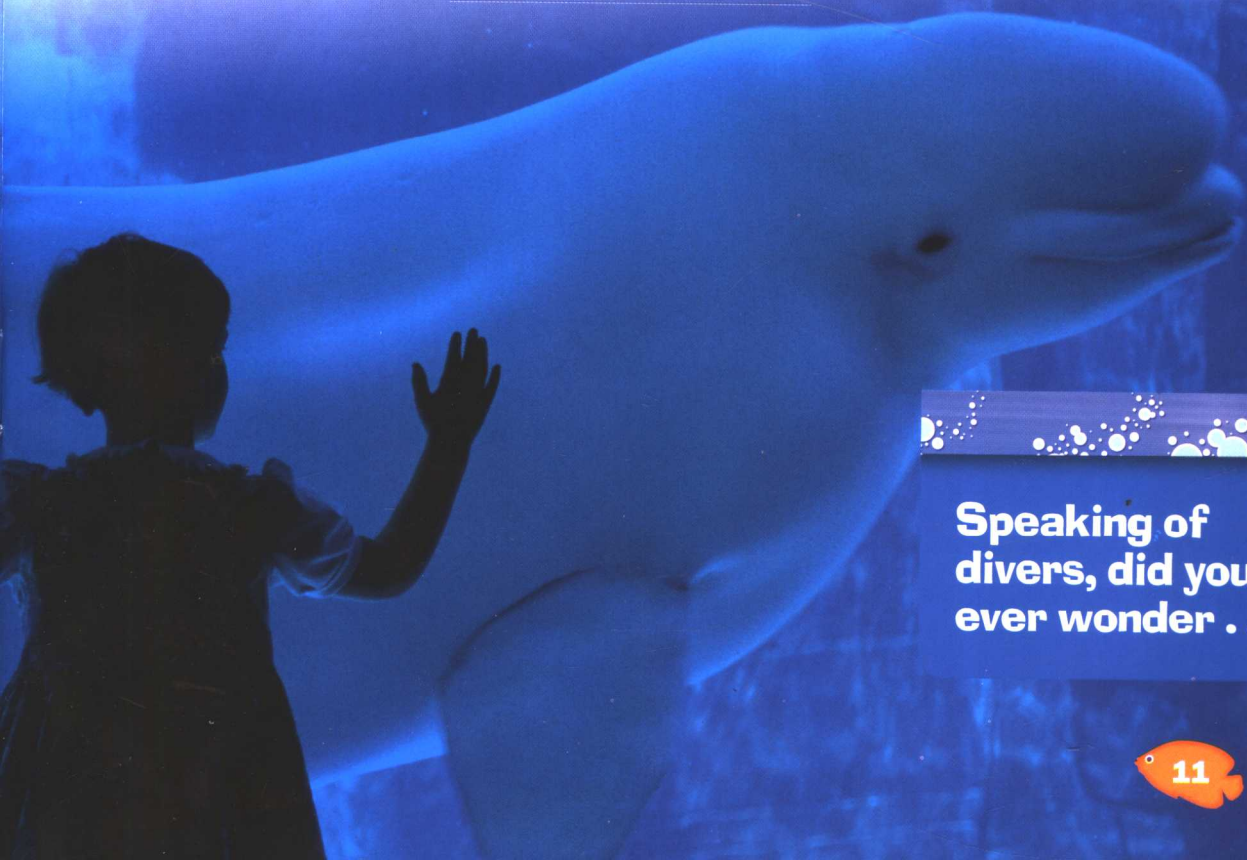
The Shedd Aquarium in Chicago<sup>6</sup>, Illinois<sup>7</sup>, has a huge tank for beluga whales. The tank holds more than 11 million liters (about 3 million gallons) of salt water. Good thing, too. Although small for whales, the belugas in Chicago are still pretty big. The largest one is about 4 meters (about 13 feet) long and weighs more than 900 kilograms (about 1,982 pounds).

**A humpback whale<sup>2</sup> in Antarctica<sup>3</sup> spouts<sup>4</sup> air from its blowhole.**



Beluga whales make many sounds. They send these sounds out through their blowholes. The beluga whales at the Shedd Aquarium are good at copying what they hear. They can make noises that sound just like the breathing sounds that scuba divers<sup>1</sup> make!

1. scuba diver	戴水肺的潜水员
2. humpback whale	座头鲸
3. Antarctica	南极洲
4. spout	喷出



**Speaking of  
divers, did you  
ever wonder . . .**



# Who takes care of the aquarium?

## 谁来管理水族馆?



**Fish must be fed and tanks must be cleaned. Some jobs even have to be done on the other side of the glass!**

It takes many people to keep an aquarium going. The people who work directly with the animals are called aquarists<sup>1</sup>. They are usually responsible<sup>2</sup> for feeding the animals. Most aquarists know how to scuba dive. They often put on wet suits<sup>3</sup> and dive into a tank to feed fish by hand.

- |                |             |        |
|----------------|-------------|--------|
| 1. aquarist    | <i>n.</i>   | 水族馆管理人 |
| 2. responsible | <i>adj.</i> | 承担责任的  |
| 3. wet suit    |             | 湿式潜水服  |
| 4. Kelp Forest |             | 海藻森林   |

Feeding fish in the Kelp Forest<sup>4</sup> at California's Monterey Bay Aquarium

Many people volunteer<sup>1</sup> at aquariums. This means that they work for free. Volunteers can prepare food for the animals. They also might help visitors find their way around.

One of the most important jobs at the aquarium is done by the veterinarian<sup>2</sup>, or animal doctor. It's not an easy job. Patients at the aquarium can't tell the doctor where they hurt or how they feel. The veterinarian has to observe<sup>3</sup> the animal. If it's not eating or is behaving strangely, it may need help.

- |                        |    |       |
|------------------------|----|-------|
| 1. volunteer           | v. | 自愿服务  |
| 2. veterinarian        | n. | 兽医    |
| 3. observe             | v. | 观察    |
| 4. Moses smoothhound   |    | 阿拉伯星鲨 |
| 5. University of Haifa |    | 海法大学  |
| 6. Israel              |    | 以色列   |



**A scientist holds a Moses smoothhound<sup>4</sup> shark at the Marine Lab at the University of Haifa<sup>5</sup>, Israel<sup>6</sup>.**

**Speaking of strange behavior, did you ever wonder . . .**



# Why do some fish swim in schools?

## 为什么有些鱼成群游动?



**It looks like there are a million of them! The fish swim very close to one another. Then they all seem to turn on cue<sup>1</sup>.**

Fish swim in schools, or groups, for several reasons. The main reason is for protection. A school of fish can confuse<sup>2</sup> an enemy. It's hard to pick out<sup>3</sup> just one fish when so many swim together. When they are attacked<sup>4</sup>, most of the fish in the school can get away<sup>5</sup>.

Schooling also makes it easier for the fish to find food. Many eyes looking for a meal are better than just a few. When one fish finds food, the rest can follow.

(注释见第15页)

