



英 汉 对 照
最新美国科普短文选

胡 斌 编译



中国国际广播出版社

英 汉 对 照

最新美国科普短文选

胡 斌 编译

中国国际广播出版社

责任编辑：徐 梅 江 张 雷
封面设计：李 世 英

英 汉 对 照
最新美国科普短文选
胡 斌 编译

*

中国国际广播出版社出版
(北京复兴门外广播电影电视部内)
外文印刷厂印刷
新华书店总店北京发行所发行
开本 787×1092 1/32 131千字6.375印张
1988年3月第一版 1988年3月
北京第一次印刷
印数：1—12000册
I S B N 7-80035-067-3/G·19
定价：1.80元

前 言

超导超级对撞机在现代科技领域中占据什么地位？北极熊毛是什么颜色？艾滋病毒怎样传播？大气正面临缺少什么成分的严重威胁？继板块构造、大陆漂移、海底扩张理论之后，80年代地质理论又有哪些新的发展？……

对于当代人类面临的这样一些新课题，您不妨翻翻这本小书，或许会从中得到一些启迪，了解到一些80年代科技发展的最新动向和信息，同时又能使自己的英语水平得到进一步提高。如是，则编者之愿足矣。

本书绝大部分内容均是根据《美国之音》特别英语节目于1987年所播出的科技新闻和报道录制、整理的。全书共精选富有特色、趣味横生的短文40篇，涉及理、化、生、地、史、天、宇、海、农、医等10余个学科的内容。凡掌握1500左右单词的人都能读懂。每篇都附有注释，对稍难的词句或专业名词进行解释。其后附有参考译文。各篇题目和段落均由编者所定。

本书英文规范，科技信息丰富，可作为大学或中学英语教学的辅助读物。

书中各篇英文原文都经美国教师对照录音核准。其中由 Tom Bradley 博士校阅，3篇由 Steve Armstrong 先生校阅，其余各篇均由 Margaret Orleans 女士校阅。他们的工作对此书的形成起了重要的作用，在此向他们表示衷心的感谢。

谢。特别是Margaret Orleans女士一丝不苟的精神尤为令人钦佩。

本书在译文方面曾蒙辽宁大学的丁祖馨教授和范岳副教授的热情指教，谨此深表感谢。

限于编译者水平，亦兼时间仓促、专业纷繁，书中纰漏在所难免，恳望方家、读者指正。

胡 斌

1987年10月

CONTENTS

1. The Sex Change of Fish	1
2. Spider	6
3. The Asian Cockroach	11
4. The Ozone Problem	15
5. The Greenhouse Effect	20
6. The Treatment of Waste Water	24
7. Polar Bears and Solar Heating Systems	27
8. The Utilization of Ocean Energy	35
9. The Superconducting Supercollider	40
10. The Effects of the Chernobyl Accident	46
11. Space Exploration	52
12. An Unusual Planet	59
13. The Mars Observer	64
14. The Markarian 348 Galaxy	68
15. A Wonderland in the Atlantic Ocean	73
16. The Temperature of the Center of the Earth	77
17. The Cause of Earthquakes	80
18. The Great Changes of the Surface of the Earth ..	85
19. New Discoveries in Antarctica	98
20. The Earliest Tools with Handles	103
21. Promising Ways of Controlling Weeds	106

22. Groundnuts (1)	111
23. Groundnuts (2)	115
24. Small Farm Grain Storage	119
25. The Prediction of the World Population	123
26. The Fear of AIDS	126
27. The Only Effective Weapon in Fighting AIDS	132
28. An AIDS-Fighting Protein	137
29. An AIDS-Fighting Drug	141
30. The Early Discovery of Cancer	145
31. A Cancer-Fighting Protein	151
32. The Proper Use of Vitamins	155
33. Home Health Tests	159
34. Passive Smoking	164
35. Osteoporosis	170
36. The Examination of the Prostate	174
37. Depression	177
38. Parkinson's Disease	181
39. Down's Syndrome	186
40. Listeriosis	190

目 录

1. 鱼的性变
2. 蜘蛛
3. 亚洲蟑螂
4. 臭氧问题
5. 温室效应
6. 废水处理
7. 北极熊与太阳能供热方法
8. 海洋能的利用
9. 超导超级对撞机
10. 切尔诺贝利事故的后果
11. 星际探索
12. 一颗与众不同的行星
13. “火星观察者”号
14. 马卡良348号星系
15. 大西洋中的奇境
16. 地核温度
17. 地震的起因
18. 地表沧桑
19. 南极新发现
20. 最早的带柄工具
21. 有希望控制杂草的方法

- 22. 花生（一）
- 23. 花生（二）
- 24. 小型农场的粮食贮存
- 25. 世界人口预测
- 26. 对艾滋病的恐惧
- 27. 抵抗艾滋病的唯一有效武器
- 28. 一种抗艾滋病蛋白质
- 29. 一种抗艾滋病药物
- 30. 癌症的早期发现
- 31. 一种抗癌蛋白质
- 32. 正确使用维生素
- 33. 家庭健康检查
- 34. 被动吸烟
- 35. 骨质疏松症
- 36. 前列腺检查
- 37. 抑郁症
- 38. 震颤麻痹症
- 39. 唐氏综合征
- 40. 李斯特菌病

I. The Sex Change of Fish

Scientists say some fish have the ability to change their sex. Researchers have found 14 kinds of fish that can change from female to male and 8 kinds of fish that can change from male to female.²

Scientists studying one kind of fish discovered that when the only male in a group dies or disappears, the largest female changes into a male within 10 days. Dr. Douglas Shapiro of the University of Puerto Rico has found one kind of fish in the Philippines — a bass — changes sex to keep the same number of males to females.¹ Studies of 48 groups of this kind of fish showed that when males were removed from the group, an equal number of females changed to males.

Dr. Robert R. Warner of University of California at Santa Barbara studied a fish called the blue-head wrasse.³ He found the number of sex changes depended on the size of the living area and the number of fish in the group. In small areas with fewer than 200 fish, large males control the mating.³ The other fish in such a small area are females or become females because they have no other way to re-

produce. The big male fish in a large living area are not able to stop the great number of smaller males from invading the area to mate with females.

Scientists have found that when male fish are able to mate freely, they do not change sex. For example, small parrot fish⁴ live among seagrass. Because of the seagrass, large males can not see the other males invading the area. The other males are able to mate with⁵ the females and no sex change takes place. 5-152

Dr. Anne Robin Laidley of University of British Columbia says fish and reptiles generally are more likely to change sex than are mammals or birds.⁶ She says that the sex of a reptile may depend on the temperature⁷ of the air or water. She said that a group of trout fish⁸ can be made all male simply by adding a chemical to the water.

All fish that can change sex seem to have developed from fish whose sex was the same for life. Researchers believe that the reason they developed this ability is to increase reproduction. The scientists say they do not understand yet how fish change their sex to produce male sperm or female eggs.⁹ 精液 卵

Notes

1. female 雌(的)
male 雄(的)

bass 鲈鱼

the Philippines 菲律宾

the University of Puerto Rico 波多黎各大学 (波多黎各是加勒比海中的自由联邦, 首都圣胡安。)

Douglas Shapiro 道格拉斯·夏皮罗

2. blue-head wrasse [ræs] 蓝首隆头鱼 (隆头鱼属于鲈形目的一科, 共有300多种, 广布于热带和温带海域。)

University of California at Santa Barbara 圣巴巴拉加利福尼亚大学 (圣巴巴拉是美国加利福尼亚州的一座城市。在加利福尼亚州的其它许多城市亦设有加利福尼亚大学校园。该校校园主体在伯克利市。)

Robert Warner 罗伯特·沃纳

3. mating 交配, 交尾

4. parrot fish 鹦鹉鱼 (或称鹦嘴鱼, 体长而深, 头圆钝, 体色鲜艳。)

5. mate with... 与……交配

6. mammal 哺乳动物

reptile 爬行动物

University of British Columbia 不列颠哥伦比亚大学

Anne Robin Laidley 安妮·罗宾·莱德利

7. temperature 温度

8. trout 鳟 (属于鲑形目鲑科, 是许多国家重要的食用鱼。背部淡青稍带褐色, 侧线下部银白色, 全身有黑点。)

9. egg 卵 (子)

sperm 精液

鱼的性变

科学家们说，有些鱼能改变自己的性别。研究人员已发现有14种鱼能由雌变雄，8种鱼能由雄变雌。

科学家们研究了一种鱼，发现当一群鱼中仅有的一条雄鱼死去或失踪后，最大的雌鱼在10天内便变成雄鱼。波多黎各大学的道格拉斯·夏皮罗博士在菲律宾发现一种鱼——一种鲈鱼——能改变性别以维持雌雄数量的比例。对48群这种鱼的研究证明，当雄鱼从鱼群中分离出去后，相同数量的雌鱼便变成了雄鱼。

圣巴巴拉加利福尼亚大学的罗伯特·沃纳博士研究了一种叫做蓝首隆头鱼的鱼。他发现其变性的数量取决于其生活水域范围和鱼群尾数。在一个有鱼不足200尾的狭小水域中，体大的雄鱼独霸交配权。这个小区域内其他成员因无其他方法进行繁殖便均是或均变成了雌鱼。在广阔生活水域的大雄鱼则无法阻止较小的雄鱼侵入其领域与雌鱼交配。

科学家们发现如果雄鱼得以自由交配，便不会改变性别。例如，小鸚鵡鱼生活在海草中。由于海草的遮蔽，大雄鱼看不见其他雄鱼侵入其领域。其他雄鱼便能够与雌鱼交配，因而也就不会发生性的改变。

不列颠哥伦比亚大学的安妮·罗宾·莱德利博士说，鱼和爬行动物一般要比哺乳动物或飞禽更容易改变性别。她

说，爬行动物的性别可以取决于气温或水温。她说，只要在水中加入一种化学品，就可把一群鳉鱼全都变成雄鱼。

所有能够变性的鱼似乎都是由性别终生不变的鱼类演化而来的。研究人员认为它们形成这种能力的原因是为了加强繁殖。科学家们说，他们尚不清楚鱼是如何改变性别来产生雄性精液或雌性卵子的。

2. Spider¹

Spiders are among the most common of the world's animals. Scientists say there are more than 29,000 different kinds of spiders, maybe as many as 50,000 kinds. And they live anywhere they can find food — inside buildings or outside, in deserts, grasslands, underwater, or near the summit of the world's highest mountain, Mount Everest.²

Some spiders are extremely small, some only about one half millimeter³ long. Others are the size of a human hand. One South American tarantula⁴ measured 25 centimeters. All spiders have fangs^{4a} and most have poison glands⁵. But very few kinds are dangerous to humans. And they will bite only when they are hurt or afraid.

All spiders produce long, thin lines or threads of silk-like material. About one half of them, 15,000 different kinds of spiders, use this silk line to make webs.⁶ They use the sticky silk webs for protection, to catch food, and to find a mate.⁷

One American scientist, Peter Witt of the University of North Carolina, studied spiders and their webs for almost 40 years. He noted that most web spiders are al-

most blind. They cannot even see a nearby insect. But they immediately recognize what kind of insect is trapped⁸ in the web. They stay away from the area of the web that is being shaken wildly by a dangerous bee. But the spider moves toward the gentle movement of a small insect.

Dr. Witt has used the orb web spider⁹ for much of his research. These spiders make large webs with many details.¹⁰ Some of the webs are one meter or more across.¹¹ The orb web looks much like a city road plan. The crowded center is surrounded by circles of roads. Other roads extend from the center to the edges. Some experts say there is evidence that¹² orb webs were used by the planners to design some ancient European cities.

Dr. Witt said the orb web spider cannot live without its web. And he discovered that the creature¹³ will continue to produce webs even when it is starving. A Canadian scientist, David Pecal,¹⁴ found how the orb web spider can do this. Dr. Pecal discovered that the starving spider just eats its own webs in the evening. The spider then reuses the old web to produce the new silk the next day.

Notes

1. spider 蜘蛛
2. Mount Everest 埃佛勒斯峰，即珠穆朗玛峰。

3. one half millimeter 半毫米；一毫米半或一个半毫米
(即1.5毫米)是 one and a half millimeters 或 one millimeter and a half.

4. tarantula 狼蛛，或称塔兰图拉毒蛛，亦有舞蛛之称。
过去人们曾认为被这种蜘蛛咬伤后，会得毒蜘蛛舞蹈病。症状是又哭又蹦，继而疯狂地跳舞。然而现已证明狼蛛对人无害，亦不会引起任何疾病。只是人若被其咬伤后会引引起局部炎症和疼痛，一般并不严重。

American tarantula 美洲狼蛛

大多数美洲狼蛛都不织网，而是在土中挖沟，四处爬行捕食。这种蜘蛛行走缓慢，腿和身上有毛。有的种类还捕食青蛙、蟾蜍和老鼠。还有一种美洲狼蛛能在树上织网捕食鸟类。

5. gland 腺

fang 尖牙

6. web 网

7. mate 配偶

8. trap 设网捕捉，诱捕

9. orb web spider 圆形织网蛛

10. details 细小的部分，细目

11. across 从一边到另一边。因这种蛛网呈圆形，故可借助于“直径”这一概念。

12. there is evidence that 有迹象表明……

13. creature 生物，动物

14. David Pecal 戴维·皮考尔

Canadian 加拿大的；加拿大人