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NATURE, SCIENCE & TECHNOLOGY

21 世纪英语快速阅读系列  
自然与科技

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出版发行/ 上海科技教育出版社

(上海冠生园路 393 号 邮政编码 200235)

网 址/ [www.sste.com](http://www.sste.com)

经 销/ 各地新华书店

印 刷/ 常熟文化印刷有限公司

开 本/ 850 × 1168 1/32

印 张/ 6.5

字 数/ 173 000

版 次/ 2003 年 12 月第 1 版

印 次/ 2003 年 12 月第 1 次印刷

印 数/ 1 - 5 000

书 号/ ISBN 7 - 5428 - 3201 - 8/H·47

定 价/ 12.00 元

# Foreword

## 前言

在全球化的进程中，中国人已愈来愈离不开英文了。幼儿园的小朋友、在校学生、上班族等组成了一支庞大的英语学习大军。姑且不说“英语可以变成你打开世界的钥匙”这类高深莫测的场面话，但它至少已是升学、就业等方面实现愿望的基本要件了。英语学习入门容易提高难。英语学习者在结束入门阶段的学习后，由于受汉语思维模式的影响，直接阅读英文报刊上的原作一般总是不得要领。为了让读者提高英语阅读水平，熟悉英语表达习惯，掌握英语语言规律，我们专门编译了“21世纪英语快速阅读系列”这套丛书。

“21世纪英语快速阅读系列”包括《自然与科技》、《饮食与保健》、《人生与情感》、《教育与就业》4分册。每分册由30篇左右相关主题的短文组成，它们大都选自新近出版的英美报纸和杂志，题材多样，内容广泛，语言规范而又生动。考虑文章的篇幅，有的短文是经过对原文删减而成的，但均未作任何旨在降低阅读要求的改写。在每篇短文后有4道针对该短文的阅读自测题，每题提供4个选项(A、B、C和D)，其中有一个最佳选项，其答案附在自测题后。为了帮助读者更好地理解原文的句子结构，获得准确的相关主题信息，又给出了其参考译文。对短文中一些在

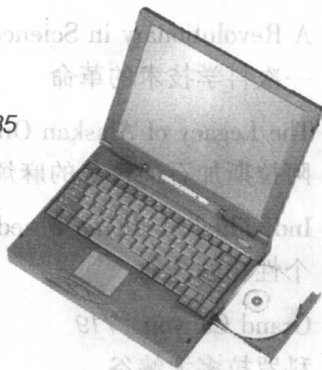


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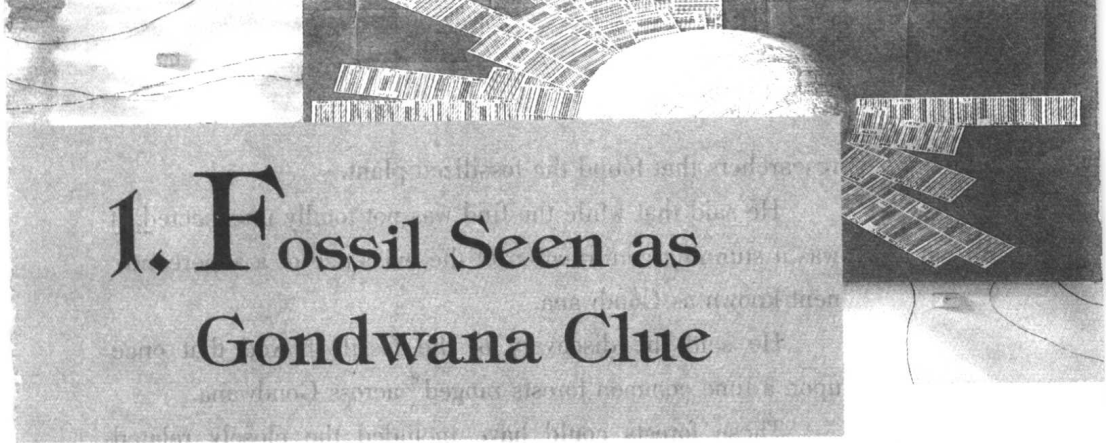
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# 1. Fossil Seen as Gondwana Clue



One

快速浏览

About 18 months ago, a 35-million-year-old fossil of a monster plant was discovered in North-West Tasmania, Australia. It is “stunning<sup>①</sup> new evidence” of the existence of a Gondwana supercontinent (Gondwanaland<sup>②</sup>), scientists have claimed. The information links Australia (and particularly Tasmania) to Gondwanaland, and this fossil is causing great excitement.

A team of researchers from the University of Tasmania found the fossilized foliage of the giant conifer<sup>③</sup>, *fitzroya tasmanensis*, on the Lea River in the Cradle Mountain area.

Currently the tree, which has a base diameter of up to five metres, grows only in Chile in South America.

Head of the Department of Plant Science in Hobart, Professor Bob Hill, said that until the discovery in Tasmania there had been no reason to predict that the *fitzroya* had grown anywhere else in the world except South America.

Prof. Hill, who is recognized as a world authority in the area of macrofossils<sup>④</sup>, led the team of University of Tasmania

2006/1/4

researchers that found the fossilized plant.

He said that while the find was not totally unexpected, it was a stunning confirmation of the existence of a supercontinent known as Gondwana.

He said the discovery of the fossil showed that once upon a time common forests ranged<sup>⑤</sup> across Gondwana.

These forests could have included the closely related Tasmanian king billy<sup>⑥</sup> pine, fossilised remains of which were found near those of the fitzroya.

Prof. Hill said that the discovery would help researchers establish<sup>⑦</sup> why one species died out and the other survived when the both had similar climatic requirements.

He will go to Chile in January to present his findings at the Second Southern Connection Conference.



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### 阅读自测

1. That a 35-million-year-old fossil of a monster plant was discovered is \_\_\_\_\_.  
A. unexpected                      B. incidental  
C. stirring                              D. meaningless
2. Where does fitzroya tasmanensis usually grow?  
A. America  
B. South America  
C. North-West Tasmania  
D. the Cradle Mountain area
3. The discovery of the fossil of fitzroya tasmanensis showed that \_\_\_\_\_.  
A. common forests ranged across South America 35-million years ago



- B. the existence of Gondwanaland is a hypothesis  
 C. why one species died out and the other survived when the both had similar climatic requirements  
 D. the fitzroya grows anywhere else in the world except Chile

4. The word "billy" in the passage means \_\_\_\_\_.

- A. pot  
 B. kettle  
 C. club used by policeman  
 D. short club



### 答案

1. C 2. B 3. C 4. C



### 参考译文

#### 巨型植物的化石:冈瓦纳超大陆存在的见证

大约18个月前,在澳大利亚塔斯马尼亚州西北部发现了已存在3 500万年之久的一种巨型植物化石。科学家宣称,这一发现是冈瓦纳超大陆存在的极好的新证据,它也证明了澳大利亚(特别是塔斯马尼亚)与冈瓦纳大陆曾经是连在一块的。这一化石使科学家们激动不已。

塔斯马尼亚大学的一研究小组在利河源头的山区找到了巨型针叶树——*fitzroya tasmanensis*的植物化石。

这种大树底部的直径为5米,通常只生长在南美洲的智利。

霍巴特市植物学部的主任鲍勃·希尔教授说,在塔斯马尼亚发现这个之前,没有什么理由可以预言*fitzroya*树能生长在除南美洲之外世界上其他的地方。

在巨体化石领域,希尔教授是世界上公认的权威,是

他带领塔斯马尼亚大学研究小组发现了这种植物的化石。

他说,虽然这个发现并不是完全意外的,但它强有力地证实了著名的冈瓦纳超大陆的存在。

他还说,这种化石的发现说明,从前有一大片森林覆盖着整个冈瓦纳大陆。

这些林木也许包括被塔斯马尼亚国王用于制作警棍的松树,其化石也可能在 fitzroya 树化石的附近找到。

希尔教授认为,这个发现将有助于研究者解释:当两种物种有类似的气候要求时,为什么一物种灭绝而另一种幸存下来了。

一月份希尔教授将要去智利参加在那儿举行的第二届南半球交流会,期间他会介绍他的这个发现。



## 词语注释

- ① **stunning**: *adj.* causing or capable of causing emotional shock or loss of consciousness 足以使人晕倒的
- ② **Gondwanaland**: *n.* 冈瓦纳大陆(假设的史前时期的大陆板块名称,包括现今印度、澳大利亚、非洲、南美洲和南极洲,约在新生代时分离开来)
- ③ **conifer**: *n.* 松类, 针叶树
- ④ **macrofossil**: *n.* 巨体化石, 大化石
- ⑤ **range**: *vi.* to extend in a particular direction 平行, 延伸, 漫游
- ⑥ **billy**: *n.* (短粗)棍棒, 尤指警棍
- ⑦ **establish**: *vt.* to cause to be recognized and accepted 使人们接受, 确定

## 2. A Revolutionary in Science and Technology



One

快速浏览

Science and technology on the scale of a nanometer<sup>①</sup> is revolutionary. Nanotechnology<sup>②</sup> refers to the ability to manipulate individual atoms and molecules, making it possible to build machines using molecular building blocks or create materials and structures from the bottom up, designing properties by controlling structure. In the nanoworld, objects are measured in nanometers—1 billionth of a meter. That's about four times wider than an atom and more than 1,000 times narrower than a human hair. Nanotechnology could change the way almost everything—from medicines to computers to automobiles to objects not yet imagined—is designed and made.

Interrelated areas of nanoscale science and engineering research focus goals:

Biosystems at the nanoscale—learning how nature operates on a nanoscale.

Nanoscale structures, novel phenomena and quantum control—how to overcome existing limits to miniaturization<sup>③</sup>.

Device and system architecture—integrating nanoscale devices into measurement and control assemblies.

Nanoscale processes in medicine—new approaches to visualizing, trapping and releasing nutrients and drugs.

Molecules—understanding single molecule mechanics, different length scales, and correlating material properties of molecular assembly.

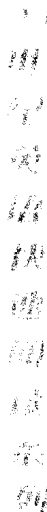
Modeling and simulation at the nanoscale—needed to understand, control and accelerate the development of new nanoscale processes and regimes.

What are some of the applications might be achieved through the evolution of nanoscale science and engineering?

Materials—new materials many times stronger or far lighter than anything known today, chemical sensing, optical switching.

Information technology—quantum computing and computer chips that store trillions of bits<sup>④</sup> of information on a pinhead device.

Medical—improved drug and gene delivery, biocompatible<sup>⑤</sup> materials for implants and nanoscale sensors for detection of disease.



### 阅读自测

1. Nanotechnology isn't able to \_\_\_\_\_.
  - A. control individual atoms and molecules
  - B. control structure
  - C. make machines using molecular building blocks
  - D. create materials and structures
2. According to the author, which research isn't related to



nanotechnology?

- A. biosystems at the nanoscale
- B. nanoscale processes in medicine
- C. modeling and simulation at the nanoscale
- D. material properties of molecular assembly

3. In the first paragraph, the phrase “from the bottom up” means \_\_\_\_\_.

- A. completely
- B. quite
- C. every inch
- D. totally

4. The author wrote this passage to \_\_\_\_\_.

- A. introduce nanotechnology
- B. explain revolutionary in science and technology
- C. argue for science and technology on the scale of a nanometer
- D. describe a controversy over the science on the scale of a nanometer



### 答案

1. B 2. D 3. C 4. A



### 参考译文

#### 一次科学技术的革命

纳米尺度上的科学技术是一次革命。纳米技术是指操纵单独的原子和分子,彻底使用分子级的构筑原料制造机器或创造材料和结构,通过控制结构来设计性能的能力。在纳米世界里,物体的度量衡为纳米——十亿分之一米。一纳米大约为一个原子宽度的4倍,比人的一根头发宽度

的千分之一还要细。纳米技术几乎可以改变所有的东西——从药品、计算机、汽车，到现在还想象不到的物体——的设计和制造方式。

与纳米量级有关的科学和工程研究主要集中于以下领域：

纳米尺度的生物系统——了解掌握自然界在纳米量级上的工作机制。

纳米结构、异常现象和量子控制——怎样突破目前存在的小型化限制。

装置和体系机构——将纳米级的装置集成到测量和控制配件之中。

医药的纳米级处理——设想、捕捉、释放营养和药物的新方法。

分子——理解单个分子的结构，不同长度级别分子集合以及相互关联的由分子集合体构成的物体的性能。

纳米尺度的建模和仿真——这需要了解、控制和加速发展新的纳米方法和规程。

纳米科学和工程的进展可能带来哪些方面的应用呢？

材料——一种比迄今所知的任何材料强度大许多倍而又轻得多的新材料，以用于化学探测、视觉转换。

信息技术——量子计算和能在针头大的元件上存贮数万亿比特信息的计算机芯片。

医疗——改进药品和基因的传输，提供移植和探测疾病的纳米级传感器上使用的生物兼容的材料。



## 词语注释

- ① nanometer: *n.* one billionth ( $10^{-9}$ ) of a meter 纳米, 毫微米, 十亿分之一米
- ② Nanotechnology: *n.* 纳米技术







- ③ **miniaturization**: *n.* the reduction in size of components and circuits for increasing package density and reducing power dissipation and signal propagation delays 小型化 (减少元件和电路的几何尺寸, 以达到增加电路的封装密度、减少功耗和减小信号传播延迟的目的)
- ④ **bit**: *n.* (计) 比特, (二进制) 位
- ⑤ **biocompatible**: *adj.* 生物适合的, 不会引起排斥的