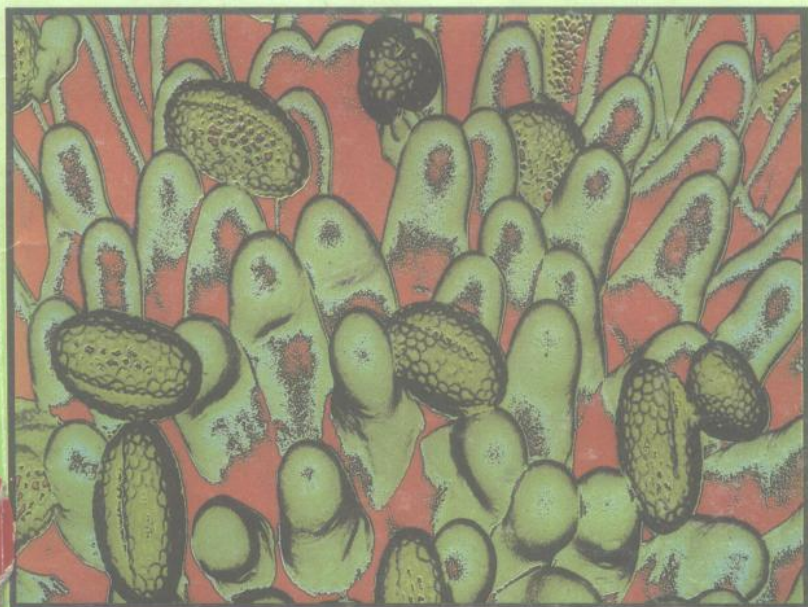


步步高英语系列丛书

Level Six ★★★

物种起源

DARWIN AND
EVOLUTION



翁燕珩

主编

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《步步高英语系列丛书》是一套快速提高英语阅读能力, 扩大词汇量, 增强英语语感, 从而全面提高英语水平的好书。认真地阅读这套书, 一定会在短期内取得学习英语和使用英语的成功, 长期享用成功的快乐。

这套丛书具有大众性、普及性, 适用于各个不同水平层次的英语学习者。既适用于学生, 又适用于自学者。既适用于中学生, 又适用于大学生。水平偏低的可以用作学习材料, 水平较高的可以用作复习精品。作课内读物很好, 作课外读物亦佳。可精读, 可泛读, 可玩味英语语言之美, 也可领略人类体能和智能的奥妙。

这套丛书专门为非英语国家的人学英语而编, 又有针对中国人阅读理解难点而进行的注释。按照难易程度分为六级, 一级比一级增多 350 个新词和适量的新句型。一级接一级循序而读, 自然而然地由浅入深, 由简到繁, 不知不觉地由低水平上升到高水平, 体现了学习英语的最佳途径和方法。可使读者费力不多, 而收效甚大。

这套丛书内容信息性强, 知识层面广, 读来有趣, 引人入胜, 欲罢不能, 确实是同类书中的上品。因此我诚挚地向广大英语爱好者及有志于掌握英语这一工具的人推荐这套书。

北京师范大学外语系 胡春洞

致 读 者

随着不断的对外开放,人们越来越重视外语学习,各级各类学校对外语教学的要求也越来越高。但是,您是不是也同许多人一样遇到这么一个问题:英语学习多年,单词记了不少,语法也算熟悉,但每当需要用英语进行口头或文字表达时便不知所措,说出来的别人听不懂,写出来的别人看不懂。这主要是对常用词汇和语法缺乏具体感受,对英美文化缺乏一定了解的缘故。由此看来,多读英美国家的作品以增强语感和文化摄入,就显得十分必要了。可是,目前国内出版的选材合理、编排科学,集知识性、趣味性于一体的普及型英语读物实在是太少了。为解广大英语学习者之急需,我们选编了这套《步步高英语系列丛书》。这套丛书有以下几个特点:

取材广泛,内容新颖。这些英美作者的文章,短小精悍,妙趣横生。您从中既可以熟悉常用的词汇和语法,增强语感;又可以撷取大量的文化信息,提高您的阅读理解与表达能力。

分级编排,级级衔接。本丛书分为六级,词汇量分别为350、700……至2100。各级之间紧密衔接,成为一体,在一定程度上填补了目前我国高中与大学英语教学中存在的语言知识“断带”问题。

选词科学,难易适中。本书词汇均来源于《Longman Lexicon of Contemporary English》(《朗曼当代英语词汇》),是根据计算机统计的词频安排的。语法现象也是由易到难,精心设计。读者可以循序渐进,逐步提高。

略加注释,便于阅读。凡文中出现的个别难词、新词、俚

语、短语和比较复杂的语法现象,都略加注释,以免除读者查阅辞典之苦。每篇文章末尾配有练习题,可用以检测您的阅读与理解水平。

本书以国家教委颁布的《九年义务教育全日制初级中学英语教学大纲》初、高中学生应掌握的词汇量为依据,一、二级可供初中学生阅读;三、四级可供高中学生阅读;五、六级可供大专以上的学生阅读。全套书亦可用作英语教学的泛读辅助教材。

愿《步步高英语系列丛书》成为您的朋友!

编者

1993年3月

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1

Erasmus Darwin

Erasmus Darwin was the grandfather of Charles. They never met because Erasmus died seven years before his grandson, Charles, was born. Both Charles and Erasmus, in their different times, were fascinated^① by the facts of the natural world. Both of them wrote books about the evolution^② of living things. There were more similarities between their ideas than there were differences, but there was at least one important difference. It was this difference which made Charles famous and changed the thinking of the world.

In his way, Erasmus was also famous. He had written several books and there was one book written about him which was simply called *Erasmus Darwin*. The book was originally written in German and the English edition^③ appeared during his grandson's lifetime; it was Charles who wrote the Introduction. Erasmus was elected a member of the Royal Society^④. He earned his living as a doctor, and was even offered the job of Doctor^⑤ to King George III — but Erasmus refused.

The three books by Erasmus, for which he is now remembered, were called *Zoonomia*, *The Temple of Nature*,

and *The Botanic Garden*^⑥. The last two of these were written as long poems, which was not unusual in the eighteenth century. The books of Erasmus were translated into both French and German and his reputation as a writer was as great as his reputation as a scientist^⑦.

Before looking at the ideas of Erasmus in his books, it would be better to look at the ideas held by the mass^⑧ of people during the eighteenth and nineteenth centuries. For three or four hundred years, travellers had been coming back to Europe with stories of strange people, strange languages and strange animals. Europeans were aware of the different nature of non-European worlds^⑨. They were taught in their churches and elsewhere, that every word of the Bible was literally^⑩ true and that what they learned from the Bible applied to the whole world, whatever it was like. From this starting point, the usual group of beliefs, conscious or unconscious, was; one, that the world was only a few thousand years old; two, that man was very different from all other living creatures and had been especially created by God; three, that the creatures which came out of Noah's ark^⑪ were the same as the creatures of their own time; four, that there was no reason for any animal to change its form or for a species to become extinct^⑫.

Most people recognised a 'chain of being'^⑬ starting from the most primitive forms of life, rising up to man himself, and then progressing even further to the angels and up

to God himself. Few, however, considered the possibility of development from one form to another. An ape¹⁶ may look like a man and a sheep may resemble a goat but the changing of one into another, or a common ancestor for both was not usually open to discussion. For the chain of being to become a theory of evolution, not only did the idea of change and development need adding, but the whole world needed a much longer history.

There had been many intelligent people, of course, who had thought more deeply about the origin and development of living things. Not surprisingly, many of those who found the literal interpretation of Noah and the Flood¹⁵ difficult to accept were interested in plants, insects, birds and animals and other phenomena of the natural world¹⁶. And there were, of course, people such as farmers who were aware that careful breeding¹⁷ of certain animals could have interesting results—but no one really connected this information with the evolution of living things generally.

Erasmus Darwin certainly did not accept the Bible as literally true; and he was not alone in his ideas¹⁸. Many intelligent, educated Europeans of the 18th century fully accepted the idea of unlimited change from creature to creature.

It is important, then, to briefly examine the ideas of Erasmus Darwin and two other men. These, and others, prepared the way for Charles Darwin in the 19th century.

Charles never felt that he owed much to previous¹⁹ thinkers, even to his famous grandfather. What Charles offered to the world was something new; it was nevertheless an addition to, and related to, many of the thoughts of those who came before him²⁰.

The first of the three men to consider is Georges Leclerc de Buffon. He was French and lived from 1707 to 1788. He was a scientist with a special interest in living things. He suspected that not all creatures were always perfectly adapted²¹ to their surroundings; he suspected occasional²² faults and problems. He noticed that the way animals and plants were distributed over the earth suggested possible change and development in their history. He spoke about the need, in theory, for the history of the world to be much longer. He saw certain similarities between animals which did not look related. He noticed differences in the form of animals belonging to the same species and he saw that life increased faster than its food supply. None of these ideas fitted very well with the literal interpretation of the Bible. Two important books of his were published in 1749 and 1778. It is fairly certain that the writings of Buffon influenced both Erasmus Darwin and a second Frenchman, Jean Baptiste Lamarck, who lived from 1744 to 1829. Lamarck was a deep and logical thinker. He saw all living creatures, not only as constantly²³ changing, but as constantly trying to change. He believed that life was sponta-

neously^② created at the lowest levels and that all beings, during their life, actually tried to develop into higher forms. He believed that whatever change a creature made to itself during its lifetime, that change was passed on to its children. For example, if a giraffe^③ managed to make its neck just a little longer by always trying to reach higher, then the children of that giraffe would have longer-than-average necks. This is not true, but to a firm believer in evolution like Lamarck, it was one of the few possible answers.

So, there were actually several scientists who did not accept the fact that all life forms were unchanging, that is to say, that no development ever took place, and that all creatures were the same as they were when God created the world. Erasmus Darwin was one of these 18th century scientists. He published his *Zoonomia* in 1794 but he had been working on it for many years. His two long poems were published in 1791 and 1803. One of his most interesting comments on living things is:

‘the whole is one family of one parent’

which is exactly what his grandson was going to argue years later. That sentence summarises^④ the evolution of all living things in their various forms from a single, probably primitive, living being. Erasmus noticed that living things had a special relationship with the places where they lived (today

this is known as the study of 'ecology'^①, and the whole set of relationships is 'ecosystem'). He was fascinated, for example, by protective colouring in animals, and by how a plant spread its seeds. He suggested that creatures just like those of long ago might still be found in deep seas (he would never have seen the coelacanth^②). He was aware, too, that most living things were constantly making changes to suit their environment.

Among certain scientists, then, the idea of evolution and constant change among living things was really quite well accepted. There were others beside Buffon, Lamarck and Erasmus Darwin; these three were among the leaders in such thinking. And one of them happened to be the grandfather of Charles Darwin. Charles supplied some of the answers to their questions. Other answers were supplied by the Austrian Gregor Mendel. More information has been supplied by 20th century scientists—but there will always be more questions.

Notes

- ① fascinate 迷住, 强烈地吸引住。如: He is fascinated by the beautiful butterfly. 他被这只漂亮的蝴蝶迷住了。
- ② evolution 进化。
- ③ English edition 英文版。
- ④ Royal Society 皇家协会(成立于1662年, 以提倡学术

研究为宗旨)。

- ⑤ Doctor 医生。
- ⑥ The Botanic Garden 《植物园》。
- ⑦ 在文学界和科学界,他有着同样显赫的名望。
- ⑧ the idea held by the mass 人们所持观点。
- ⑨ 欧洲人也意识到了欧洲以外的天地。
- ⑩ literally = really 确实地。
- ⑪ Noah's ark 诺亚方舟(《圣经》中诺亚为避洪水而造的方形大船)。
- ⑫ 任何动物都不会改变形状(态),每一物种都不会灭绝。
- ⑬ chain of being 生物链。
- ⑭ ape 猿。
- ⑮ The Flood 指《圣经》中说的洪水。
- ⑯ 许多人认为诺亚和大洪水这样的解释过于牵强,因而他们对自然界的植物、昆虫、鸟、动物和其它自然现象产生兴趣并不奇怪。
- ⑰ breeding 育种,繁殖。
- ⑱ 他的观点并不孤立。
- ⑲ previous 先前的。
- ⑳ 不过它也是对前人许多观点的补充和扩大。
- ㉑ adapted 适应。
- ㉒ occasional 偶尔的。
- ㉓ constantly 经常地,不断地。
- ㉔ spontaneously 自发地,本能地。
- ㉕ giraffe 长颈鹿。

②⑥ summarise 综合, 简要说明。

②⑦ ecology 生态学。

②⑧ coelacanth 空(腔)棘鱼。

Exercises

Compare the different ideas between the people in the 18th century and the scientists.

	old ideas	new ideas
history of human being	a few thousand years	1
origin of human	2	ape by evolution
change of creatures	never change forms	3
reasons of change	4	making changes to suit their environment

2

The early life of Charles Darwin

Charles's father, Robert, was a doctor and he planned for his own two sons, Charles and young Erasmus, to become doctors, too. There were six children in the family. Charles was the second son and the fifth child.

The family lived in Shrewsbury^① in a house called The Mount. Robert was a strict but good father. He was feared just a little by his children but loved very much by them. The family situation was not made easier^② by the fact that Mrs Darwin, the doctor's wife, died fairly early. Charles was only nine years old at the time of her death.

Charles's mother had been Susannah Wedgwood before she married Robert. Wedgwood is a famous name in the world of *ceramics*^③ and Susannah was a member of the family which started that famous product. Even after Susannah's death the Darwins and the Wedgwoods remained close friends; and Charles's uncle, Josiah Wedgwood, played an important part in Charles's future. The Darwins were not a religious family, in fact, one could describe them as a family of unbelievers; unbelievers with open minds^④. The writings of grandfather Erasmus are a nice example of this approach to life^⑤.

Robert, like Erasmus his father, was a member of the Royal Society, which means that he was a man quite highly respected by other educated men of the time. He was also respected in Shrewsbury as a doctor. He had many patients and became very rich. Much later, when he died, he left Charles five thousand pounds a year. This was, in those days, a very large amount of money. When Charles got married he received thirteen thousand pounds from his father in order to set up his home. In addition to this, Charles received money regularly from his father. In fact, from a financial point of view[®], it was never necessary for Charles to work or get a job at all. Nevertheless, Robert, like all good fathers, often complained about the way Charles spent his money and his spare time. Robert was a big man; he was six feet two inches tall and weighed three hundred and twenty eight pounds, about 150kg. He kept a close eye on all his children and cared for their education^⑦. Charles later described him as 'the kindest man I ever knew'. He was a lively personality[®] and very interested in the smallest details of the lives of his family and his patients. As it was Robert's plan that his sons should become doctors like their father and grandfather, Charles and young Erasmus often went with their father when he visited his patients. They watched Robert at work and helped to mix the medicines.

At the age of eight Charles was sent to school in Shrewsbury. It was a day school, (i. e. Charles came home

every day), which was run by a Mr Case. One report which we have of this school says that Charles was slower at learning than his younger sister. This tells us something about Charles; it also tells us something about Robert, whose thinking was broad enough to send his daughters to school. Not all families sent their daughters to school in those days.

After a year at Mr Case's school, Robert sent Charles to continue his education at a traditional boarding school known simply as Shrewsbury School. A 'boarding' school meant that the pupils lived and slept there, apart from the holidays. A large part of their learning was the grammar of Latin and Greek, Every day the pupils would have forty or fifty lines of Latin poetry to learn by heart or translate. As an occasional change from grammar, the pupils might learn a little of the history of the ancient Greeks and Romans or even a little geography. The school would not be very different from the school attended by William Shakespeare in Stratford more than two hundred years before[®]. This was the normal education for the sons of successful, middle-class parents. The school was organised by Dr Samuel Butler whose own grandson later became a writer. Although the school was a boarding school, Charles visited his home most evenings, partly perhaps because it was so close to the school and partly because the home itself was a happy one. Charles started at Shrewsbury School in 1818 and remained a pupil there for seven years.