

 NATIONAL
GEOGRAPHIC

READING EXPEDITIONS™

国 家 地 理
科学探索丛书

SCIENTISTS IN THE FIELD

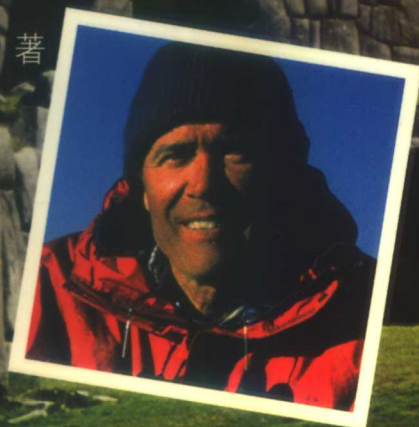
实地科学探索

JOHAN REINHARD

Discovering Ancient Civilizations

探索古代文明

REBECCA L. JOHNSON (美) 著



外语教学与研究出版社

FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS

(京)新登字 155 号

京权图字: 01-2004-4819

图书在版编目(CIP)数据

实地科学探索 探索古代文明/(美)约翰逊(Johnson, R. L.)著;邵红香注.—北京:外语教学与研究出版社,2004.8

(国家地理科学探索丛书·自然科学系列:英文注释版)

ISBN 7-5600-4259-7

I. 实… II. ①约… ②邵… III. 英语—语言读物, 考古 IV. H319.4: K

中国版本图书馆CIP数据核字(2004)第078639号

Copyright © (2002) National Geographic Society. All rights reserved.

Copyright © (2004) (in English-Chinese bilingual) National Geographic Society. All rights reserved.

国家地理科学探索丛书(英文注释版主题合订版)由美国北极星传媒有限公司策划并授权出版

仅限中国大陆地区销售 不得在香港、澳门、台湾地区销售,不得出口

实地科学探索

探索古代文明

REBECCA L. JOHNSON (美) 著

邵红香 注

* * *

责任编辑:余 军

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:2

版 次:2004年8月第1版 2004年8月第1次印刷

书 号:ISBN 7-5600-4259-7/G·2191

全套定价:29.50元

* * *

如有印刷、装订质量问题出版社负责调换

制售盗版必究 举报查实奖励

版权保护办公室举报电话:(010)88817519

NATIONAL
GEOGRAPHIC

家 地 理

科学探索丛书

SCIENTISTS IN THE FIELD

实地科学探索

JOHAN REINHARD

Discovering Ancient Civilizations

探索古代文明

REBECCA L. JOHNSON (美) 著

邵红香 注

外语教学与研究出版社

FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS

北京 BEIJING

CONTENTS

目 录

Introduction 4

引言

Frozen in Time

尘封的历史

Chapter 1 6

第一章

Johan Reinhard:

Becoming an Explorer

约翰·莱因哈德：成为探险家

Chapter 2 12

第二章

In the Field: Mummy Hunt

实地作业：寻找木乃伊

Tools of the Trade 20

探索工具

Johan Reinhard leads team members
on the top of Mount Ampato.





Chapter 3..... 22

第三章

In the Laboratory:

What Mummies Reveal

在实验室：木乃伊揭示了什么

Research Skill 28

研究技能

Asking Good Questions

善于提问

Science Notebook 30

科学备忘录

Index..... 31

索引

INTRODUCTION

引言

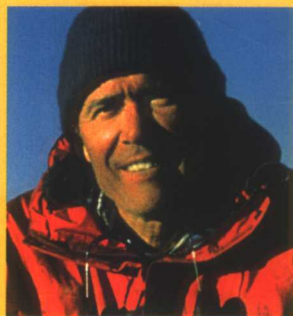
Frozen in Time

尘封的历史

Miguel Zárate looks at the Ice Maiden¹ for the first time.

(注释见第 5 页)

An icy wind whipped² across the mountaintop. Johan Reinhard and his climbing partner, Miguel Zárate, scrambled³ down the steep⁴ slope⁵. Hearts pounding⁶, they approached⁷ the strange cloth bundle⁸. With his ice axe⁹, Miguel gently freed it from the frozen ground. They turned the bundle over. Both men gasped¹⁰. They were looking into the face of a young girl.

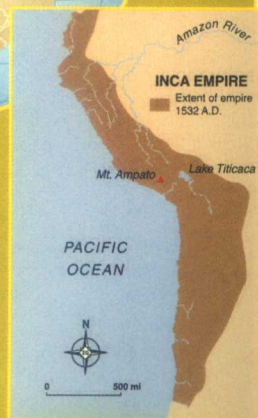
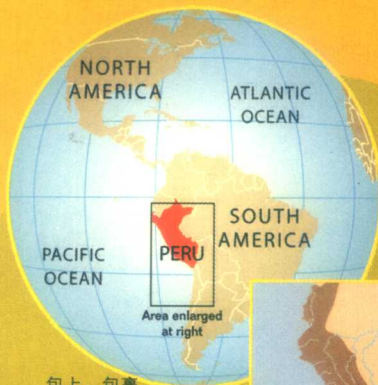


Johan Reinhard, explorer

In 1995 high in the Andes¹¹ in South America, Johan (YO-han) Reinhard discovered a frozen mummy—the body of an Inca¹² girl. The Ice Maiden, as she came to be called, was about 14 years old when she died. Her small body was wrapped¹³ in fine clothes. Nearby were tiny¹⁴ statues¹⁵ made of gold, silver, and rare¹⁶ seashells¹⁷. Who was this girl? Why was she here?

The Inca were an ancient people who lived in the Andes mountain range¹⁸. The Inca believed that the tallest peaks¹⁹ were home to powerful gods. Children were an important part of the rituals²⁰ used to honor these mountain gods, as were statues and other artifacts²¹. In return, the gods were to send good weather and keep the people safe.

About 500 years ago, the Ice Maiden died on top of Peru²²'s Mount Ampato²³. Frozen in time, she is a link²⁴ to the past. This is a book about Johan Reinhard, a scientist who looks in high places for clues²⁵ about ancient people and how they lived. Get set for more discoveries as you follow Johan to the top of the world.



1. maiden	<i>n.</i>	少女	13. wrap	<i>v.</i>	包上; 包裹
2. whip	<i>v.</i>	抽打	14. tiny	<i>adj.</i>	极小的
3. scramble	<i>v.</i>	爬	15. statue	<i>n.</i>	雕像
4. steep	<i>adj.</i>	陡峭的	16. rare	<i>adj.</i>	罕见的; 珍奇的
5. slope	<i>n.</i>	斜坡	17. seashell	<i>n.</i>	海贝壳
6. pound	<i>v.</i>	(心脏)剧跳	18. mountain range		山脉
7. approach	<i>v.</i>	靠近	19. peak	<i>n.</i>	山峰
8. bundle	<i>n.</i>	包裹; 包袱	20. ritual	<i>n.</i>	(宗教)仪式
9. axe	<i>n.</i>	斧	21. artifact	<i>n.</i>	人工制品
10. gasp	<i>v.</i>	倒抽气	22. Peru		秘鲁
11. Andes		安第斯山脉	23. Mount Ampato		安帕托山
12. Inca	<i>n.</i>	印加人(南美印第安人的一个部落)	24. link	<i>n.</i>	纽带
			25. clue	<i>n.</i>	线索

Johan Reinhard: Becoming an Explorer

约翰·莱因哈德：成为探险家

Do you wonder how people in other countries live today or how they lived long ago? Do you wish you could travel to faraway places? If so, then you and Johan Reinhard have a lot in common.

It's a long way from Peru to the tiny town of New Lenox, Illinois¹. That's where Johan grew up. As a boy, he loved sports and being outdoors. In the summer he went hunting² and camping. He caught fish in the creek³ that flowed through his town.

On rainy days Johan could be found at home in the basement. There he mixed liquids⁴ and powders⁵ in his chemistry set. He also built rockets⁶. None of them went very high. In fact, many never left the launch pad⁷.

- | | | |
|---------------|-----------|-------|
| 1. Illinois | | 伊利诺伊州 |
| 2. hunting | <i>n.</i> | 打猎 |
| 3. creek | <i>n.</i> | 小溪；小河 |
| 4. liquid | <i>n.</i> | 液体 |
| 5. powder | <i>n.</i> | 粉末 |
| 6. rocket | <i>n.</i> | 火箭 |
| 7. launch pad | | 发射台 |

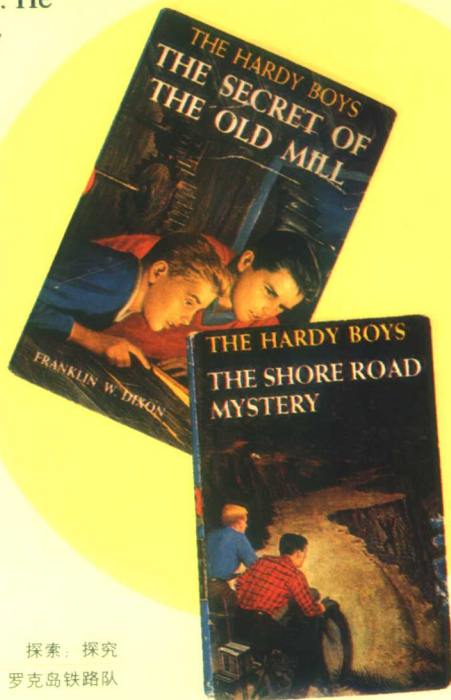
Johan Reinhard as a boy



Johan's father worked as a detective¹ for the post office. He caught mail robbers². Maybe that was one reason why Johan loved mysteries³ and detective stories. His favorite⁴ books were from *The Hardy Boys* series⁵, stories about two brothers who solved crimes⁶. Johan read all kinds of other books too. The more he read, the more he wanted to explore⁷ the world.

At age 16 Johan left home and became the youngest worker on the Rock Island Railroad's line gang⁸. They dug holes and put up telegraph poles⁹ along the tracks¹⁰. It was hard, dangerous work. Johan traveled with a group of men who were mostly from the South. He liked being around people who were different from those back home. He also discovered he could make his own way in the world.

1. detective	n.	侦探	7. explore	v.	探索; 探究
2. robber	n.	强盗; 盗贼	8. Rock Island Railroad's line gang		罗克岛铁路队
3. mystery	n.	神秘的事物	9. telegraph pole		电话线杆
4. favorite	adj.	特别喜爱的	10. track	n.	轨道
5. series	n.	丛书			
6. solve a crime		破案			



▲ Hardy Boys covers from the 1950s



Rock Island Railroad, 1937

From the Amazon¹ to Asia

As soon as he graduated² from high school, Johan headed for³ South America—alone. He used the money he'd made on the line gang to explore Brazil⁴ and parts of the Amazon rain forest. Traveling along the Amazon River, he was fascinated⁵ by the people he met and the places he saw.

During his first trip to South America, Johan knew he wanted to be an anthropologist⁶. That's a scientist who studies different groups of people—how they live and what they believe. Anthropologists study modern groups of people or those who lived long ago.

Johan returned to the United States with a plan. He would attend college⁷ and when he wasn't studying, he would learn how to scuba dive⁸, sky dive⁹, and explore caves¹⁰. He thought these skills would help him get to places where no anthropologist had gone before.

▼ Johan and team entering the Amazon rain forest

1. Amazon		亚马孙河	6. anthropologist	<i>n.</i>	人类学家
2. graduate	<i>v.</i>	毕业	7. attend college		上大学
3. head for		朝……行进	8. scuba dive		戴水肺潜水
4. Brazil		巴西	9. sky dive		延缓张伞跳伞
5. fascinate	<i>v.</i>	迷住; 使神魂颠倒	10. cave	<i>n.</i>	洞; 穴





◀ Johan in Italy on his first expedition as an anthropologist

Johan traveled to Europe and learned to speak German. He studied other languages as well. He took classes in anthropology. And he became an expert¹ mountain climber.



▲ South American villagers near one of Bolivia¹⁰'s highest peaks

When he was just 21 years old, Johan went to Italy on his first expedition² as an anthropologist. Not on land, but underwater! Making use of his scuba diving skills, he looked for ancient Roman artifacts. It was exciting work. But much was already known about the Romans. Johan wanted to study a group of people who were not known. He headed to the country of Nepal³ in Asia. There he discovered a tribe⁴ of mountain nomads⁵ who moved from place to place, hunting animals and gathering⁶ wild plants for their food. They lived as people did thousands of years ago.

Johan found the tribe fascinating. However, after a while the members of the tribe ordered him to stop following them around. Their hostile⁷ attitude⁸ made Johan decide to wrap up⁹ his research and leave.

- | | | |
|---------------|-------------|------------|
| 1. expert | <i>adj.</i> | 知识丰富的; 内行的 |
| 2. expedition | <i>n.</i> | 远征; 探险 |
| 3. Nepal | | 尼泊尔 |
| 4. tribe | <i>n.</i> | 部落 |
| 5. nomad | <i>n.</i> | 游牧部落的人 |

- | | | |
|-------------|-------------|--------|
| 6. gather | <i>v.</i> | 采集 |
| 7. hostile | <i>adj.</i> | 怀敌意的 |
| 8. attitude | <i>n.</i> | 态度 |
| 9. wrap up | | 结束; 完成 |
| 10. Bolivia | | 玻利维亚 |

Mountain Man

Johan didn't leave Nepal. There were other groups of people to study. And there were impressive¹ mountains to climb. Johan went on expeditions to many peaks in the Himalayas², including³ Qomolangma Feng⁴—the world's highest peak. He also discovered that in many places, the local people believed that gods lived on some of the mountaintops.

After more than five years in Nepal, Johan decided to come back to the United States—by way of South America. In the Andes he heard stories about Inca ruins⁵ on high mountain peaks. He began to wonder if the Inca had believed in mountain gods too.

For the next few years, Johan traveled through the Andes. He talked to the mountain people. He listened to legends⁶ and stories about their Inca ancestors⁷. He discovered that the ancient Inca did believe in mountain gods and honored⁸ them with various⁹ rituals. So Johan began to search for evidence¹⁰ of those rituals. He looked on the highest peaks. Eventually¹¹, on Mount Ampato, he found the Ice Maiden.

But that's not the end of the story. If you want to try *your* hand¹² at anthropology, then join Johan on one of his most recent expeditions.

▲ Inca male figurines¹³ that may have been an offering¹⁴ to the gods

- | | | |
|--------------------|------|---------|
| 1. impressive | adj. | 令人难忘的 |
| 2. Himalayas | | 喜马拉雅山脉 |
| 3. include | v. | 包括 |
| 4. Qomolangma Feng | | 珠穆朗玛峰 |
| 5. ruins | n. | 废墟; 遗迹 |
| 6. legend | n. | 传说 |
| 7. ancestor | n. | 祖先 |
| 8. honor | v. | 对……表示尊敬 |

- | | | |
|--------------------|------|---------------|
| 9. various | adj. | 各种各样的 |
| 10. evidence | n. | 证据; 根据 |
| 11. eventually | adv. | 最终 |
| 12. try one's hand | | 试做; 试身手 |
| 13. figurine | n. | (陶土、金属等的) 小雕像 |
| 14. offering | n. | 供物; 祭品 |
| 15. ceremony | n. | 典礼; 仪式 |



► Modern villagers act out the ceremonies¹⁵ of their Inca ancestors.



In the Field: Mummy Hunt

实地作业：寻找木乃伊

Ever wanted to explore a mountaintop? Well, imagine¹ this! You're part of Reinhard's expedition to dig out Inca ruins on Mount Llullaillaco² (Yu-yai-YA-ko) in Argentina³. But you're not just hanging around⁴, enjoying the view. You're very busy:

As a member of Reinhard's team, your job is to dig a hole in frozen, stony ground. You lean on⁵ your shovel⁶, gasping for breath. The air is very thin on a mountaintop. It's hard to breathe. Just a few minutes of shoveling leaves you really tired. The high altitude⁷ isn't just tiring. It also can be dangerous. Anyone who starts to show signs of altitude sickness⁸ must get down the mountain. Delaying⁹ can be deadly¹⁰.

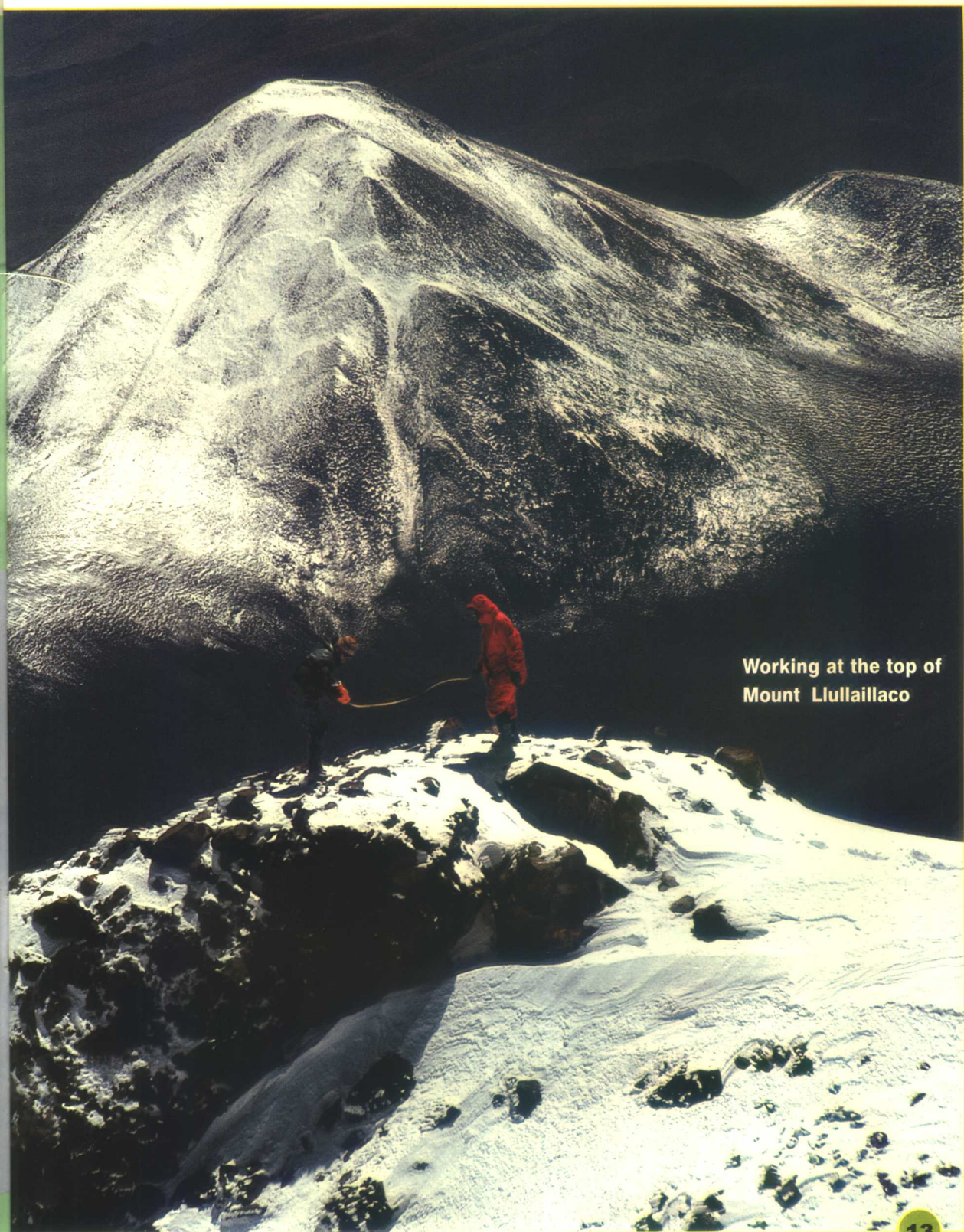
A cold wind tugs¹¹ at your hat and numbs¹² your face. The windchill¹³ is -37°C (-35°F). You glance¹⁴ around. Johan is looking closely at samples¹⁵ of soil. Some team members are shoveling. Others are using picks¹⁶ to break into the hard ground. They all look as weary¹⁷ as you feel.

▲ Work gloves and ice axe



- | | | |
|-----------------------|------|---------|
| 1. imagine | v. | 想像；设想 |
| 2. Mount Llullaillaco | | 尤耶亚科山 |
| 3. Argentina | | 阿根廷 |
| 4. hang around | | 闲荡 |
| 5. lean on | | 靠在；倚在 |
| 6. shovel | n. | 铲；铁锹 |
| 7. altitude | n. | 高度；海拔 |
| 8. altitude sickness | | 高空病 |
| 9. delay | v. | 耽搁 |
| 10. deadly | adj. | 致命的 |
| 11. tug | v. | 用力拖(或拉) |

- | | | |
|---------------|------|-----------|
| 12. numb | v. | 使麻木；使失去知觉 |
| 13. windchill | n. | 风寒指数 |
| 14. glance | v. | 扫视 |
| 15. sample | n. | 样品 |
| 16. pick | n. | 镐 |
| 17. weary | adj. | 疲倦的 |



Working at the top of
Mount Llullaillaco

Path to the Peak

Did you ever
wonder ...

... what causes
altitude
sickness?

Climbers who don't take time to adjust¹⁸ to lower levels of oxygen¹⁹ in the air above about 2,300 meters (7,546 feet) can get altitude sickness. The symptoms²⁰ include a headache, dizziness²¹, and a queasy stomach²².

The last two weeks have been tough¹. Getting to the top of Llullaillaco was a challenge². First, it took five days by truck just to reach the base of the mountain. That's where Johan set up Base Camp. Then you spent five more days moving supplies³ and gear⁴ from Base Camp to Camp One, at about 5,791 meters (19,000 feet).

Traveling up the mountain, you focused on⁵ the task ahead. The team must make sure that any artifacts remaining on this mountain are located⁶ and preserved⁷ before they are stolen by others or destroyed⁸. Between Base Camp and Camp One, several team members found a place where a group of ancient Inca people must have stopped for a while on their way up the mountain. Broken walls from their stone huts⁹ and bits of pottery¹⁰ remain—signs¹¹ that the team is on the right trail¹².

Finally you made it to the summit¹³, the very top of the mountain. The team had reached its destination¹⁴ of 6,739 meters (22,110 feet). And then a storm hit! You were stranded¹⁵ in your tent. Hurricane-speed¹⁶ winds screamed¹⁷ through camp. A snowstorm turned everything white.

1. tough	<i>adj.</i>	艰苦的	18. adjust	<i>v.</i>	适应
2. challenge	<i>n.</i>	挑战	19. oxygen	<i>n.</i>	氧气
3. supply	<i>n.</i>	供给; 供应品	20. symptom	<i>n.</i>	症状
4. gear	<i>n.</i>	用具; 装备	21. dizziness	<i>n.</i>	头晕; 头昏
5. focus on		集中	22. queasy stomach		胃中不适欲呕
6. locate	<i>v.</i>	找到……的位置	23. burial site		埋葬地
7. preserve	<i>v.</i>	保护			
8. destroy	<i>v.</i>	破坏; 毁坏			
9. hut	<i>n.</i>	(简陋的)小屋			
10. pottery	<i>n.</i>	陶器			
11. sign	<i>n.</i>	迹象			
12. trail	<i>n.</i>	足迹; 路径			
13. summit	<i>n.</i>	顶点			
14. destination	<i>n.</i>	目的地			
15. strand	<i>v.</i>	使陷于困境			
16. hurricane-speed	<i>adj.</i>	速度如飓风的			
17. scream	<i>v.</i>	尖叫			

► A truck with a dead battery gets pushed on the way to Base Camp.



Burial Site²³

Camp One

Base Camp

The path to the top of Mount Llullaillaco

(注释见第 14 页)

