READING PASSAGE 2

*You should spend about 20 minutes on **Questions 14–26**, which are based on Reading Passage 2 below.*

THE EL NIÑO EFFECT

Año Nuevo Island, off the coast of central California, is one of a string of eleven sites along the coastline of North America that scientists are studying to assess the impact of *El Niño** in the eastern Pacific. By studying seabirds in an area encompassing over 30 degrees of latitude, from Prince Island in southern California to a cliff in Norton Sound, off the central Alaskan coast, they are building a kind of window from which the health of the region's entire marine ecosystem can be observed.

'Birds are great biological sampling devices, because if they don't find prey then they don't survive,' says William Sydeman, director of the Marine Studies Program at Point Reyes Bird Observatory. 'And birds are inexpensive to study, in comparison to the cost of running an oceanographic research vessel.'

El Niño, which this year is the harshest ever recorded, may be on the wane, but in the eastern Pacific it continues to cause famine at sea. You might never guess it from the cacophony of nesting gulls and cormorants on Año Nuevo, but California's seabirds are suffering. And as far north as British Columbia, the researchers are finding a similar pattern of breeding failures. 'Most of the prey species that the birds feed on, like squid and rockfish and different species of zooplankton, are non-existent, which is unusual,' says Sydeman. 'The birds can't find food, and people who are surveying small fish and zooplankton by sampling from ships can't find anything either. The food web just didn't develop this year.'

Sydeman has spent much of his career studying wildlife in the Farallon Islands. On this small group of windswept rocks 35 kilometres offshore from San Francisco, throngs of breeding birds, sea lions and elephant seals gather every spring and summer. These creatures rely on the waters surrounding the islands, some of the most productive in the world, to feed themselves and their young.

This breeding season has seen a long list of casualties. Many species, including brown pelicans, are abandoning their nesting colonies in mainland southern California, long before any chicks have fledged. At Año Nuevo and the Farallon Islands the birds are nesting late, and far fewer than usual are attempting to nest. Where chicks are produced, the mortality rate is high.

**El Niño: a warming of the eastern tropical Pacific, occurring every few years, which disrupts the weather pattern of the region.*

This summer, biologists have spent long hours patiently watching from hides on islands up and down the Pacific coast to see what food adult birds bring back for their chicks. The idea is that this indicates the state of the marine food web more directly than human devices for sampling populations of sea creatures. Birds may not be unbiased in the way a researcher sampling from a ship would be. They may select certain sizes of fish, or prefer certain species of zooplankton. But they are, of necessity, experts at finding their prey – a process that can be very difficult for shipbound scientists who must search a vast area of water to find scattered schools of marine animals.

‘The birds can track the upper 100 metres of the water columns for us,’ explains Sydeman. ‘This is the most productive region of the ocean, because phytoplankton need light for photosynthesis, and light decreases rapidly at depth.’

As study subjects, the birds have other obvious advantages. They are far more visible and easier to track than their prey. Moreover, their ability to find food is directly tied to the timing and success of their breeding efforts. Decreased breeding effort and delays in egg-laying indicate that the adults are having a lean time in late winter and early spring. Reproductive success – how many chicks a nesting pair fledges – reflects the productivity of the marine food web over several months, from the time adults mate to the time the chicks head out on their own.

El Niño may have little effect on sea life as far north as Alaska. So far, the birds are nesting right on schedule and it seems to be a normal breeding year. ‘There is no overall, massive signal,’ says Vernon Byrd, a biologist with the US Fish and Wildlife Service. Any El Niño effect will be difficult to assess, however. ‘This far north, ocean current systems are more complex and over the years there’s been a lot of argument about what’s really going on,’ says Scott Hatch, a research wildlife biologist. Hundreds of emaciated seabirds washed up dead on Alaska’s beaches last winter, and some observers were quick to pin the blame on El Niño.

But Hatch points out that several such mass deaths have been documented during the past decade. ‘When strong winds are sustained over two or three-week periods, it just becomes too much for the birds to cope with, and they start to die off,’ he says. ‘Since this occurs in years when there is no El Niño, it would be premature to say El Niño is the cause.’

Sydeman is philosophical about the disastrous year the birds are experiencing in California. In the years he has spent living closely with breeding seabirds on the Farallon Islands, he has seen good times as well as bad. ‘Because El Niño causes violent storms and flooding, people have tended to focus on this negative event that happens once every five to seven years,’ he says. ‘But from an ecosystem perspective, El Niño is part of a cycle that includes some very positive things.’

Questions 14–17

Choose the correct letter, ***A, B, C*** *or* ***D****.*

Write the correct letter in boxes 14–17 on your answer sheet.

14 Scientists are studying Año Nuevo in order to find out

A the function of seabirds in the ecosystem.
B the present condition of the marine life.
C the likely location of the next El Niño event.
D why El Niño has had little effect there.

15 One advantage of using birds is that they help scientists to

A locate marine life.
B collect samples of their prey.
C conduct better experiments.
D relieve famine areas.

16 This year El Niño seems to be

A a particular problem for gulls and cormorants.
B weaker in California than elsewhere.
C more destructive of marine life than previously.
D longer lasting than most.

17 In the current breeding season on the Farallon Islands, some species are

A moving their colonies.
B delaying their nesting.
C nesting on different islands.
D neglecting to feed their young.

Questions 18–26

Do the following statements agree with the information given in Reading Passage 2?

In boxes 18–26 on your answer sheet, write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

18 The food which is found by the birds reflects the health of the sea life.

19 Birds look for specific characteristics when choosing their prey.

20 Marine animals can be hard for scientists to find.

21 More biologists are involved in monitoring the effect of El Niño than ever before.

22 Adult seabirds locate prey below 100 metres.

23 It is difficult to interpret the data on the breeding success of birds.

24 Birds in Alaska are behaving in a similar way to birds further south.

25 El Niño has been held responsible for the loss of bird life in Alaska.

26 Hatch argues that the constant strong winds that are damaging to wildlife are typically caused by El Niño.

Questions 14–17（单项选择）

题号	答案	题干翻译	详细定位句（原文）	定位句翻译	详细解释
14	**B**	科学家研究阿尼奥努埃沃岛是为了弄清：	**第 1 段**："…they are building a kind of window from which the **health of the region's entire marine ecosystem** can be observed."	……他们正在搭建一个"窗口"，从中可以观察到该地区整个海洋生态系统的健康状况。	题干问 *in order to find out*（为了查明什么）。原文核心是用海鸟作为"窗口"去观察**海洋生态系统的健康/现状** ⇒ 对应 **B the present condition of the marine life**。A（海鸟在生态系统中的功能）文中没讨论；C（下次厄尔尼诺位置）无；D（为何那里影响小）也无。
15	**A**	使用鸟类的一个优势是：它们帮助科学家去……	**第 6 段**："…experts at finding their prey — a process that can be very difficult for shipbound scientists…"	……它们天生就是寻找猎物的专家——而对乘船采样的科学家来说，这个过程可能非常困难。	选项 A "定位海洋生物"与原文 **experts at finding their prey**（擅长找到猎物/海洋动物）完全同义。B "收集它们猎物的样本"不是优势点：研究者是**观察**鸟带回什么食物，而非"鸟帮助收集样本"。C、D 文中没有。
16	**C**	今年的厄尔尼诺似乎是……	**第 3 段**："El Niño, which this year is the **harshest ever recorded**, … continues to cause **famine at sea**."	今年的厄尔尼诺是有记录以来最严酷的一次……并持续导致海洋中的"饥荒"。	"harshest ever recorded"= **史上最严酷/破坏性最大**，并造成 "famine at sea"（海洋食物链崩、海里闹饥荒）⇒ **C more destructive… than previously**。D "持续更久"没提；B "加州更弱"相反（加州海鸟很惨）；A 只点名鹈和鸬鹚，不符合（更广泛的海鸟与食物网问题）。
17	**B**	在当前繁殖季，法拉隆群岛上一些物种正在……	**第 5 段**："At Año Nuevo and the Farallon Islands the birds are **nesting late**…"	在阿尼奥努埃沃与法拉隆群岛，鸟类正在**晚筑巢/推迟繁殖**……	题干关键词 current breeding season；原文直接给出 **nesting late** ⇒ **B delaying their nesting**。A "搬迁群落"只在第 5 段说某些物种在南加州大陆 "abandoning colonies"，但法拉隆这里强调的是"晚筑巢"；C、D 未提。

Questions 18–26（TRUE / FALSE / NOT GIVEN）

题号	答案	题干翻译	详细定位句（原文）	定位句翻译	详细解释
18	**TRUE**	鸟找到的食物能反映海洋生物的健康状况。	**第 6 段**："The idea is that this indicates the state of the **marine food web** more directly…"	其理念是：这能更直接地表明海洋食物网的状态……	"food birds bring back" 被用来指示 **marine food web 的状态**；而食物网状态本质上就是海洋生态/海洋生物健康的反映 ⇒ 与陈述一致，TRUE。
19	**TRUE**	鸟在选择猎物时会寻找特定特征。	**第 6 段**："They may **select certain sizes of fish**, or prefer certain species of zooplankton."	它们可能会选择特定大小的鱼，或偏好某些浮游动物种类。	"certain sizes / certain species"= **按特定特征（大小/种类）筛选**，直接支持题干，TRUE。
20	**TRUE**	科学家有时很难找到海洋动物。	**第 6 段**："…very difficult for shipbound scientists who must search a vast area… to find **scattered schools** of marine animals."	对船上的科学家而言，这可能很难：他们必须搜寻很大水域，去找分散的海洋动物群。	原文明确说 shipbound scientists 很难在广阔海域找到"分散的鱼群/海洋动物群" ⇒ TRUE。
21	**NOT GIVEN**	参与监测厄尔尼诺影响的生物学家人数比以往任何时候都多。	**第 6 段**："This summer, biologists have spent long hours…"	今年夏天，生物学家花了很长时间……	只说"今年夏天生物学家花了很久"，**没有与"以往"做人数对比**（more than ever before），缺少比较信息 ⇒ NOT GIVEN。
22	**FALSE**	成鸟会在 100 米以下找到猎物。	**第 7 段**："The birds can track the **upper 100 metres** of the water columns for us."	鸟可以为我们追踪水柱**上层 100 米**。	原文是 **upper 100 metres（上层 100 米）**，而题干说 **below 100 metres（100 米以下）**，方向相反，构成矛盾 ⇒ FALSE。
23	**NOT GIVEN**	解读鸟类繁殖成功的数据很困难。	**第 8 段**："Reproductive success… **reflects** the productivity of the marine food web over several months…"	繁殖成功（雏鸟存活/离巢数量）反映了数月内海洋食物网的生产力……	原文强调 "繁殖成功**反映**生产力"，并未说 "数据难以解读/interpret difficult"。（"difficult to assess" 只出现在第 9 段谈阿拉斯加的厄尔尼诺影响，并非"繁殖成功数据本身难解读"）⇒ NOT GIVEN。
24	**FALSE**	阿拉斯加的鸟与更南方的鸟表现相似。	**第 9 段**："So far, the birds are nesting **right on schedule** and it seems to be a normal breeding year." **对比第 5 段**："…the birds are **nesting late**…"	到目前为止，鸟类按时筑巢，看起来是正常繁殖年。/（南方）鸟类晚筑巢……	阿拉斯加：按时、正常；加州/法拉隆：晚筑巢、繁殖失败多 ⇒ **不相似**，与题干相反 ⇒ FALSE。
25	**TRUE**	在阿拉斯加，厄尔尼诺曾被认为是鸟类死亡的原因。	**第 9 段**："…some observers were quick to **pin the blame on El Niño**."	一些观察者很快把责任归咎于厄尔尼诺。	"pin the blame on"= **把原因/责任归于**，对应 "has been held responsible" ⇒ TRUE。（注意：后文只是说这种归因可能过早，但不影响"曾被归咎"这一事实。）
26	**FALSE**	Hatch 认为持续强风导致的野生动物受损通常是厄尔尼诺造成的。	**第 10 段**："Since this occurs in years when there is **no El Niño**, it would be premature to say El Niño is the cause."	既然这种情况也发生在没有厄尔尼诺的年份，说厄尔尼诺是原因就为时过早。	Hatch 的观点是：强风造成的大量死亡**也会发生在没有厄尔尼诺的年份**，因此不能说"通常由厄尔尼诺引起"。题干把他的观点反过来了 ⇒ FALSE。