

Bees Are Dying

In March, 2017, cereal lovers in the United States were surprised to find that Buzz the Bee, the famous honeybee mascot of a cereal maker, was gone from the boxes of the maker's cereals.

1) 이것은 전 세계의 꿀벌 수가 급격히 감소하고 있다는 사실을 사람들에게 알리기 위해 시리얼 회사가 내린 결정이었다.

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2) 이 시리얼 회사의 결정이 뜬금없이 나온 것은 아니었다.

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3) 그해 초에 미국 어류 및 야생 동물국(Fish and Wildlife Service)은 미국의 호박벌이 멸종 위기에 처했다고 발표했다.

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The population of the bumblebee in the U.S. had shrunk by nearly 90 percent since the late 1990s, according to the Wildlife Service. Similar phenomena have occurred in other parts of the world. In Central Europe, honeybee colonies have declined by 25 percent since 1985.

4) 배나무와 사과나무가 가득한 중국의 한위안 현에서는 꿀벌이 심각하게 줄어 농부들이 손으로 직접 수분을 하고 있다.

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5) 대체로 벌들이 전 세계에서 사라지고 있으며 이 현상은 특히 과학자들과 농부들에게 걱정거리를 안겨주고 있다.

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Why are they worrying? What is special about bees?

6) 벌은 자연계에서 가장 효과적인 꽃가루 매개자이다.

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7) 만일 벌이 꽃가루를 이 꽃에서 저 꽃으로 옮기지 않으면 인간의 식량 중 삼분의 일이 심각한 타격을 입게 된다.

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They would have to be pollinated by other means, or they would produce significantly less food. Grains like wheat, rice, and corn are not much affected by the decline of bees because they are pollinated primarily by the wind. Fruits, vegetables, and some crops for farm animals, however, might disappear without bees. Apples, strawberries, watermelons... The list is almost endless.

Why, then, are bees disappearing?

8) 과학자들이 대체로 동의하는바에 따르면, 벌의 개체 수 감소에는 복합적인 요인이 있으며, 이 요인들은 단독으로 또는 복합적으로 작용한다.

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9) 대략적으로 말하면 벌의 감소는 세 가지 요인에서 발생한다.

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The first one is sickness.

10) 벌은 고유의 질병을 앓기도 하고 기생충의 공격으로 약해지거나 죽기도 한다.

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11) 대부분의 양봉업자들은 바로아 응애(Varroa destructor)라고 불리는 기생충인 진드기가 벌에게 가장 큰 위협이라는 데 동의한다.

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Varroa is a very small mite that feeds on the blood of the bee and spreads from hive to hive. In addition to weakening the bees, Varroa can also spread diseases.

12) 벌을 감소시키는 두 번째 요인은 영양 부족이다.

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13) 벌은 꽃을 먹고 살기에 안정적인 공급원이 필요하다.

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When there are not enough diverse blooming flowers during the bee season, bees are not able to sufficiently feed themselves. The lack of diverse flowers is in part the result of changes in agriculture. Over the past century, agriculture has become increasingly industrialized.

14) 산업화된 농업의 가장 두드러진 특징 중 하나는 단일 재배, 즉 한 가지 작물을 주어진 곳에서 매년 재배하는 농업 관행이다.

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Monoculture leads to poor nutrition for bees because a single plant cannot meet their nutrient requirements. "Bees need a varied diet of different pollens in order to grow into strong, healthy workers," explains Dr. Heather Mattila, a honeybee biologist at Wellesley College.

15) 또한 대규모 농업 시설, 놀이터, 골프장은 원래 다양한 꽃으로 가득했던 벌 서식지를 파괴함으로써 문제를 악화시키고 있다.

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16) "벌이 좋아하는 꽃이 없는 녹지 공간은 녹색 사막이 될 수 있습니다."

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Dr. Mattila adds.

17) 벌의 영양 부족을 초래하는 것으로 의심되는 또 한 가지 요인은 기후 변화이다.

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Increasing temperatures, changes in rainfall patterns, and more irregular and extreme weather have impacted bee populations. For example, scientists in Poland have documented how honeybees are responding to changes in the climate. Their first winter flight date, the wakening moment after winter, has advanced by more than one month during the last 25 years due to increasing temperatures.

18) 개화기 패턴이 벌의 첫 겨울비행과 늘 일치하지 않기 때문에 벌들은 식량 부족을 겪을 가능성이 높다.

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Widespread use of pesticides, common in industrial agriculture, is the third major factor that is leading to the decline of bees.

19) 농약이 벌을 죽이는 데는 여러 가지 방법이 있다. 직접 접촉이 그 중 하나이다.

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When bees are on the flowers at the time of the application of a pesticide, the bees die immediately. In this case, the queen and the other bees in the hive are not affected and the colony survives.

20) 벌이 농약과 직접 접촉하지 않더라도 벌은 여전히 꽃가루, 공기, 물 또는 흙을 통해 오염될 수 있다.

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This has deadly effects on a bee colony because a contaminated bee transports the pesticide to the colony, in pollen or nectar, or on its body.

The results are often disastrous, and the affected colony eventually collapses. Some pesticides do not affect adult bees, but do cause damage to young, immature bees.

21) 어떤 종류의 농약은 벌의 뇌에 영향을 주어 학습 속도를 느리게 하거나 때로는 꿀을 찾는 능력을 상실하게 하기도 한다.

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22) 농약으로부터 벌을 보호하는 여러 가지 방법이 제시되고 있다.

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23) 그 중 하나는 농약을 밤에 살포하는 것이다.

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24) 이렇게 하면 농약이 벌에게 주는 피해를 최소화할 수 있다. 벌은 낮에 먹이 활동을 하기 때문이다.

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Certain crops such as melons and cucumbers have flowers that will be open for only a single day. For such crops, pesticides should be applied when the flowers are closed, as it will reduce the impact on bees. All in all, in order to protect bees from harmful pesticides, there should be national and international collaboration among beekeepers, growers, governments, and pesticide manufacturers.

As individuals, we can also help save bees.

25) 벌에게 도움이 되는 꽃을 정원에 심고 농약으로 이 꽃들을 오염시키지 않도록 주의하는 것이다.

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Also, we can buy and consume more organic produce that is grown without or with minimum use of pesticides.


26) 이렇게 하면 농업회사는 농약 사용을 줄이게 될 것이다.

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When we take these seemingly small actions to help bees, we help them make our world healthier.

27) 즉, 벌을 도움으로써 우리 자신을 돕는 셈이 된다.

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◇「콘텐츠산업 진흥법 시행령」제33조에 의한 표시

1) 제작연월일 : 2019년 09월 09일

2) 제작자 : 교육지대㈜

3) 이 콘텐츠는 「콘텐츠산업 진흥법」에 따라 최초 제작일부터 5년간 보호됩니다.

◇「콘텐츠산업 진흥법」외에도「저작권법」에 의하여 보호되는 콘텐츠의 경우, 그 콘텐츠의 전부 또는 일부를 무단으로 복제하거나 전송하는 것은 콘텐츠산업 진흥법 외에도 저작권법에 의한 법적 책임을 질 수 있습니다.

정답

- 1) [정답] It was the decision of the cereal maker to remind people that the world's population of bees is fast diminishing.
- 2) [정답] The cereal maker's decision did not come out of the blue.
- 3) [정답] Earlier in that year, the U.S. Fish and Wildlife Service declared that in the United States the bumblebee was endangered.
- 4) [정답] In Hanyuan County, China, where pear and apple trees fill the landscape, farmers are forced to pollinate their fruit by hand due to the severe decline in the population of honeybees.
- 5) [정답] All in all, bees are disappearing all over the world, and that worries scientists and farmers, among others.
- 6) [정답] Bees are one of the nature's most effective pollinators.
- 7) [정답] If they do not move pollen from one blossom to another, one third of the crops we consume would be severely affected.
- 8) [정답] There is general agreement among scientists that declines in bee populations are the product of multiple factors that can act alone or in combination.
- 9) [정답] Roughly speaking, bee declines arise from three factors.
- 10) [정답] Bees suffer from their own diseases and from parasites that weaken and often kill them.
- 11) [정답] Many beekeepers agree that the parasitic mite, Varroa destructor, is the most serious threat to bees.

- 12) [정답] A second factor that is causing bee declines is poor nutrition.
- 13) [정답] Bees feed on flowers, so they need a stable supply.
- 14) [정답] One of the outstanding features of industrial agriculture is monoculture, the agricultural practice of planting one crop in a given area year after year.
- 15) [정답] Also, large industrial facilities, playgrounds, and golf courses are making matters worse by destroying bee habitats that were once filled with diverse flowers.
- 16) [정답] "A green space can be a green desert unless it has flowering plants that are friendly to bees."
- 17) [정답] One more suspected factor that is contributing to the bees' poor nutrition is climate change.
- 18) [정답] Because patterns of flowering do not always match the bees' first winter flight, bees are likely to suffer from food shortages.
- 19) [정답] There are several ways bees can be killed by pesticides. One of them is direct contact.
- 20) [정답] If bees avoid direct contact with pesticides, they can still be contaminated through pollen, the air, water or soil.
- 21) [정답] Other types of pesticides could affect bees' brains, making the bees slow learners and sometimes causing them to lose their ability to find nectar.
- 22) [정답] Several ways to protect bees from pesticides are being proposed.
- 23) [정답] One of them is to apply pesticides in the evening.
- 24) [정답] This will minimize the impact of pesticides on bees, as bees take food during the day.
- 25) [정답] We can plant flowers in our gardens that are helpful for bees and try not to contaminate these flowers with pesticides.

- 26) [정답] This way we can expect commercial growers to reduce their use of pesticides.
- 27) [정답] In other words, we help ourselves by helping bees.