

**For Teachers:** Please have the students read the sentences one at a time and correct their pronunciation of each sentence then have them repeat after you. Wait until after they read the sentence (use the number in place of the missing word) to have the students choose the correct answer to fill in the blank. When the students finish the article, move on to the further questions.

## 4[C] – Natural Solutions

11.2(4C)A2E

1. Malaria is a serious disease that affects millions of people every year.  
マラリア 重(おも)い 病気(びょうき) 影響(えいきょう)する  
 Malaria is spread by female mosquitoes, and one obvious way to fight it is to reduce the number of mosquitoes.  
広(ひろ)がる メスの 蚊(か) 明(あき)らか
2. This can be done very effectively by using chemicals that kill them.  
効果的(こうかてき)に 化学薬品(かがくやくひん)
3. In fact, since the 1950s, this method has resulted in a large reduction in the number of malaria cases.  
実際(じっさい)に ~以来(いらい) 方法(ほうほう) 成果(せいこ) 減少(げんしょう)
4. The chemicals used to kill mosquitoes, however, have various disadvantages.  
化学薬品(かがくやくひん) しかし 様々(さまざま)な 不利(ふり)なこと
5. Not only are they expensive, but they are often bad for the environment.  
~だけでなく 環境(かんきょう)
6. Moreover, over time, mosquitoes gradually stop being affected by them.  
その上(うえ) やがて 次第(しだい)に 不自然(ふしぜん)な

**Further Questions&A** \* Ask student to answer the question on their own at first. If the student can't answer correctly, have him look at the last page and read the "example answer" for the question. Have the student try to memorize the answer, if it's too long or difficult, you should divide the sentence into 2 or 3 parts to make it easier to remember. Once they have memorized the answer, the teacher should ask the question one last time so that the student can practice answering. Also if you find any mistakes, please mark the page and let me know ASAP.

7. 1) How is Malaria spread? マラリアはどのようにして広がりますか。  
ひろ  
 8. *It is spread by female mosquitoes.*
9. 2) What is an effective way to get rid of mosquitoes? 蚊を除くのに有効な方法はなんですか。  
か のぞ 有効(ゆうこう) ほうほう
10. *Using chemicals can be very effective in getting rid of mosquitoes.*
11. 3) What are some disadvantages of using chemicals? 化学薬品を使う上で不利なことはなんですか。  
かがくやくひん つか うえ ふり
12. *They are expensive and they are often bad for the environment.*

13. For these reasons, scientists have recently been looking at alternative methods of controlling mosquitoes.  
最近(さいきん) ~とみなしている 代(かわ)りの
14. One of these is using fish. Mosquitoes lay their eggs in water, and the eggs then turn into tiny worms that live in the water for one or two weeks.  
産(う)む ~に変(か)わる 小(ちい)さい むし
15. Some kinds of fish eat these worms, so introducing these fish into lakes and ponds can lead to fewer mosquitoes.  
種類(しゅるい) ~をもたらす 導(みちび)く 少数(しょうすう)の
16. Projects carried out in India have found that, depending on the kind of fish, this method can reduce the number of mosquitoes by over 90 percent.  
計画(けいかく) 遂行(すいこう)した 見つけた 次第(しだい)である 減(へ)らす

## Further Questions&A

17. 4) How can fish be a good alternative for controlling mosquitoes?  
 18. 魚は蚊を抑制するのにどうして良い代りになるのですか。  
さかな か 抑制(よくせい)するのによい かわ

19. *The fish eat the worms that turn into mosquitoes.*

20. 5) How well have fish worked when used in India?

21. インドで使しようした際さい、魚さかなはどのくらい効果こうかがありましたか。

22. *They reduced the number of mosquitoes by over 90 percent.*

23.

24. Using fish to control mosquitoes has many 長所(ちょうしょ) advantages.

25. One of these is that it does no 損害(そんがい) damage to the 環境(かんきょう) environment.

26. Another is that fish 生殖(せいしよく) reproduce by themselves, making this a very cheap method of fighting malaria.

27. In addition, some of these fish can be 捕(たら) caught and sold, meaning that その土地の local people can 実際(じっさい) actually 稼(かせ) earn an 収入(しゅうにゅう) income from them.

28. All of these 要因(よういん) factors are especially important in the 発展途上国(はってんとじょうこく) developing countries where malaria is still 一般的(いつぱんてき) common.

## Further Questions&A

29. 6) What is an advantage of using fish to control mosquitoes?

30. 魚さかなで蚊かを抑制よくせいすることの一つの利点りてんはなんですか。

31. *It does no damage to the environment.*

32. *Fish reproduce by themselves making it a very cheap method of fighting malaria.*

33. *Some of the fish can be caught and sold, meaning the local people can earn an income from them.*

34. Using 自然(しぜん)の力(ちから) nature to control nature in this way is known as " 生態制御(せいいたいせいぎょ) biocontrol ."

35. Biocontrol itself is not a new idea, but scientists are now doing more 調査(ちょうさ) research on it.

36. One problem with using fish has been that it must be limited to 永久(えいきゅう)の permanent ~のような bodies of water, such as lakes.

37. Mosquitoes, though, often lay their eggs in 水(みず)たまり pools of rainwater that later dry up.

38. Scientists have now found a kind of fish in the African country of Tanzania that can 生(い)き残(のこ)る survive even when these pools are dry.

39. When the rain comes, the fish eat the mosquitoes.

40. Many 専門家(せんもんか)たち experts believe that this kind of 研究(けんきゅう) research is giving 生態制御(せいいたいせいぎょ) biocontrol a 輝(かがや)く bright future as a way to fight 病気(びょうき) diseases.

## Further Questions&A

41. 7) What is "biocontrol"? せいぶつてきぼうじょ 生物的防除とはなんですか。

*It is using nature to control nature.*

42. 8) What is a problem with using fish to control mosquitoes?

43. 魚さかなを使つかって蚊かを抑制よくせいすることのもんだいてん問題点は何ですか。

44. *They must be used in permanent bodies of water, but mosquitoes often lay their eggs in pools of rainwater.*

**\*Choose the correct answer from these choices.**

45. (41) How has the number of malaria cases been reduced since the 1950s?

1950年代からマラリアの症例の数はどのように減ってきていますか。

46. 1 By treating people with new medicines.
47. 2 By destroying the places where mosquitoes live.
48. 3 By getting rid of mosquitoes with chemicals.
49. 4 By stopping mosquitoes from laying eggs.

50. (42) Why are scientists introducing certain fish into lakes and ponds?

科学者はなぜ特定の魚を湖や池に導入しているのですか。

51. 1 They eat the worms that turn into mosquitoes.
52. 2 They produce eggs that help to kill the mosquitoes.
53. 3 They reduce the number of worms that mosquitoes eat.
54. 4 They make it easier to see where mosquitoes are hiding.

56. (43) What is one advantage of using fish to fight malaria?

魚を使ってマラリアと戦うことの一つの利点は何ですか。

57. 1 They remove chemicals that pollute the water.
58. 2 They can be used by farmers to grow more crops.
59. 3 They are not affected by the disease themselves.
60. 4 They can help local people to make money.

62. (44) Why are the Tanzanian fish especially good for biocontrol?

生態制御のためにタンザニアの魚が特に有用なのはなぜですか。

63. 1 They can survive without a permanent body of water.
64. 2 They are already known to most people around the world.
65. 3 They cost less to transport than other kinds of fish.
66. 4 They live longer in lakes than most other kinds of fish.

68. (45) Why do many experts think that biocontrol has a bright future?

多くの専門家が生体制御は前途有望であるとなぜ考えていますか。

69. 1 Research is explaining more clearly the cause of diseases.
70. 2 The number of fish has increased in African lakes and ponds.
71. 3 Scientists are finding new ways to use nature to control diseases.
72. 4 Natural chemicals are often more effective than man-made ones.

**Answers for "Further Questions"**

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76. *It is spread by female mosquitoes.*

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78. *Using chemicals can be very effective in getting rid of mosquitoes.*

79. 3) What are some disadvantages of using chemicals?

80. *They are expensive and they are often bad for the environment.*

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87. *Fish reproduce by themselves making it a very cheap method of fighting malaria.*

88. *Some of the fish can be caught and sold, meaning the local people can earn an income from them.*

89. 7) What is "biocontrol"?

90. *It is using nature to control nature.*

91. 8) What is a problem with using fish to control mosquitoes?

92. *They must be used in permanent bodies of water, but mosquitoes often lay their eggs in pools of rainwater.*

解答:(41) 3 (42) 1 (43) 4 (44) 1 (45) 3