

## Reading Practice Set 1

### Examining the Problem of Bycatch

1. A topic of increasing relevance to the conservation of marine life is bycatch—fish and other animals that are unintentionally caught in the process of fishing for a targeted population of fish. Bycatch is a common occurrence in longline fishing, which utilizes a long heavy fishing line with baited hooks placed at intervals, and in trawling, which utilizes a fishing net (trawl) that is dragged along the ocean floor or through the mid-ocean waters. Few fisheries employ gear that can catch one species to the exclusion of all others. Dolphins, whales, and turtles are frequently captured in nets set for tunas and billfishes, and seabirds and turtles are caught in longline sets. Because bycatch often goes unreported, it is difficult to accurately estimate its extent. Available data indicate that discarded biomass (organic matter from living things) amounts to 25–30 percent of official catch, or about 30 million metric tons.
2. The bycatch problem is particularly acute when trawl nets with small mesh sizes (smaller-than-average holes in the net material) are dragged along the bottom of the ocean in pursuit of groundfish or shrimp. Because of the small mesh size of the shrimp trawl nets, most of the fishes captured are either juveniles (young), smaller than legal size limits, or undesirable small species. Even larger mesh sizes do not prevent bycatch because once the net begins to fill with fish or shrimp, small individuals caught subsequently are trapped without ever encountering the mesh. In any case, these incidental captures are unmarketable and are usually shoveled back over the side of the vessel dead or dying.
3. The bycatch problem is complicated economically and ecologically. Bycatch is a liability to shrimp fishers, clogging the nets and increasing fuel costs because of increased drag (resistance) on the vessel. Sorting the catch requires time, leading to spoilage of harvested shrimp and reduced time for fishing. Ecologically, high mortality rates among juvenile fishes could contribute to population declines of recreational and commercial species. Evidence to this effect exists for Gulf of Mexico red snapper and Atlantic Coast weakfish. Because the near-shore areas where shrimp concentrate are also important nursery grounds for many fish species, shrimp trawling could have a profound impact on stock size.
4. Once the dead or dying bycatch is returned to the ecosystem, it is consumed by predators, detritivores (organisms that eat dead plant and animal matter), and decomposers (organisms that break down dead or decaying organic matter), which could have a positive effect on sport fish, seabird, crab, and even shrimp populations. Available evidence indicates that 40–60 percent of the 30 metric tons of catch discarded annually by commercial fishing vessels, and even more of the noncatch waste (organisms killed but never brought to the surface), does not lie unused on the bottom of the sea. It becomes available to midwater and ocean-bottom scavengers, transferring material into their food web and making energy available to foragers (organisms that search for food) that is normally tied up in ocean-bottom, deep-ocean, midwater, and open-ocean species.

5. Overfishing and overdiscarding may thus contribute to a syndrome known as “fishing down of food webs,” whereby we eliminate apex (top) predators and large species while transforming the ocean into a simplified system increasingly dominated by microbes, jellyfish, ocean-bottom invertebrates, plankton, and planktivores. The strongest evidence for the fishing down phenomenon exists in global catch statistics that show alarming shifts in species composition from high-value, near-bottom species to lower-value, open-ocean species. In the last three decades of the twentieth century, the global fishing fleet doubled in size and technology advanced immeasurably. Despite increased effort and technology, total catch stabilized, but landing rates (rates at which species are caught) of the most valuable species fell by 25 percent.
  
6. Conservation organizations have condemned the obvious and extreme waste associated with bycatch. Public concern over high mortality rates of endangered marine turtles captured in shrimp trawls led to the development of turtle exclusion devices (TEDs) in the 1980s. TEDs were incorporated into the shrimp net design with the purpose of directing turtles out of nets without unacceptably reducing shrimp catches. Marine engineers and fishers also developed shrimp net designs that incorporate bycatch reduction devices (BRDs), taking advantage of behavioral differences between shrimp and fish, or between different fishes, in order to separate fishes.

**Directions: Now answer the questions.**

1. Why does the author provide the information that “Available data indicate that discarded biomass (organic matter from living things) amounts to 25–30 percent of official catch, or about 30 million metric tons”?
  - (A) To disprove the claim that it is difficult to accurately estimate the extent of the bycatch problem
  - (B) To illustrate the extreme effectiveness of the longline and trawling methods
  - (C) To suggest that uncertainty about the true extent of bycatch does not leave in doubt that it is a problem
  - (D) To indicate that data about bycatch are available only from fisheries having the right kind of gear
  
2. According to paragraph 1, which of the following is true about the impact of various methods of fishing on the problem of bycatch?
  - (A) Almost all commercial fishing methods capture fish and animals that the fishers do not want.
  - (B) Switching from trawling to longline fishing would save seabirds and turtles from being unintentionally caught.
  - (C) Longline fishing is particularly dangerous for dolphins and whales.
  - (D) Trawling on the ocean floor produces less bycatch than does trawling through mid-ocean waters.
  
3. The word “acute” in the passage is closest in meaning to
  - (A) common
  - (B) severe
  - (C) complicated
  - (D) noticeable
  
4. According to paragraph 2, why have larger mesh sizes not provided a practical solution to bycatch in shrimp fishing?
  - (A) Larger openings increase the risk that nets will get tangled or damaged as they are being hauled over the sides of the vessel.
  - (B) Openings large enough to prevent the capture of juvenile and other undesirable fish would also release the shrimp.
  - (C) Large mesh sizes are more likely to result in fish getting stuck partway through, causing more deaths within the catch.
  - (D) When nets grow full, they still trap fish that cannot reach the mesh openings.

5. According to paragraph 3, which of the following is NOT a problem associated with bycatch in shrimp fishing?
- (A) Shrimp fishers have to buy more fuel because of the added weight of the extra fish in their nets.
  - (B) The population of recreational and commercial species declines because much of the bycatch is their prey, resulting in a food shortage for them.
  - (C) Shrimp fishers must spend time sorting the shrimp from the bycatch, and some shrimp spoil during this time.
  - (D) The populations of some species of fish are reduced because so many of their young are caught in shrimp nets.
6. According to paragraph 4, how does bycatch sometimes benefit sport fish, seabird, crab, and even shrimp populations?
- (A) The discarded fish provide these species with a significant amount of food that would otherwise be unavailable to them.
  - (B) Fishing eliminates up to 40 to 60 percent of the predators of these species, most of which are caught unintentionally.
  - (C) These fish and other animals may be caught unintentionally in overcrowded locations and then released into more favorable environments.
  - (D) Many of the competitors of these species are eliminated by fishing, leaving them with access to more food and other resources.
7. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 5? Incorrect choices change the meaning in important ways or leave out essential information.
- (A) Overfishing and overdiscarding of jellyfish, ocean-bottom invertebrates, plankton, and planktivores are transforming the ocean in a process known as fishing down of food webs.
  - (B) Overdiscarding bycatch simplifies the food web by favoring the kinds of predators that feed on such prey as jellyfish, ocean-bottom invertebrates, and planktivores.
  - (C) Fishing down of food webs may occur if overfishing and bycatch disposal result in the disappearance of species at the top of the food web and the dominance of species near the bottom.
  - (D) Overfishing and overdiscarding is a syndrome that affects not only top predators and large species but also microbes, jellyfish, ocean-bottom invertebrates, plankton, and planktivores.

8. What does paragraph 5 suggest is the reason why landing rates of the most valuable species fell 25 percent in the last three decades of the twentieth century?
- (A) Changes in technology led many fishers to shift from a focus on near-bottom species to lower-value open-ocean species.
  - (B) Around the world, the number of people and ships involved in the fishing trade declined because of changes in the demand for fish.
  - (C) The total amount of fish in the ocean decreased significantly, leading to a steady decrease in global total catch.
  - (D) The most valuable species make up a much smaller percentage of the total sea population than they used to.
9. In the paragraph below, there is a missing sentence. Look at the paragraph and indicate (A, B, C and D) where the following sentence could be added to the passage.

**Turtles were not the only marine species to benefit from new catch techniques.**

Where would the sentence best fit?

Conservation organizations have condemned the obvious and extreme waste associated with bycatch. **(A)** Public concern over high mortality rates of endangered marine turtles captured in shrimp trawls led to the development of turtle exclusion devices (TEDs) in the 1980s. **(B)** TEDs were incorporated into the shrimp net design with the purpose of directing turtles out of nets without unacceptably reducing shrimp catches. **(C)** Marine engineers and fishers also developed shrimp net designs that incorporate bycatch reduction devices (BRDs), taking advantage of behavioral differences between shrimp and fish, or between different fishes, in order to separate fishes. **(D)**

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Directions:** An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the 3 answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question is worth 2 points.**

Write your answer choices in the spaces where they belong. You can either write the letter of your answer choice or you can copy the sentence.

Many fish and other animals are unintentionally caught during commercial fishing, a problem known as bycatch.
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Answer choices

- (A) Bycatch occurs in both longline fishing and trawling and affects a range of species, although marine engineers have developed net devices that have lessened the problem for some species.
- (B) Female fish are especially likely to become bycatch when they are near the ocean bottom spawning their eggs, which decreases the populations of commercially desirable fish such as salmon and tuna.
- (C) Trawling with small mesh nets for shrimp results in large amounts of bycatch, especially of small, young, or unwanted species of fish, causing a range of problems for shrimp fishers and the ecosystem.
- (D) Efforts are being made to come up with productive uses for bycatch, such as providing food for fish farms or being used in agricultural products such as animal feed and fertilizers.
- (E) When bycatch is disposed of in the ocean, the extra food is eaten by predators, detritivores, and decomposers but may ultimately cause the most valuable species to decline.
- (F) Much of the equipment designed to prevent bycatch has so far proven to be largely ineffective, with TEDs failing to significantly reduce the number of sea turtles captured in fishing nets.

## Reading Practice Set 2

### Ancient Rome and Greece

1. There is a quality of cohesiveness about the Roman world that applied neither to Greece nor perhaps to any other civilization, ancient or modern. Like the stones of a Roman wall, which were held together both by the regularity of the design and by that peculiarly powerful Roman cement, so the various parts of the Roman realm were bonded into a massive, monolithic entity by physical, organizational, and psychological controls. The physical bonds included the network of military garrisons, which were stationed in every province, and the network of stone-built roads that linked the provinces with Rome. The organizational bonds were based on the common principles of law and administration and on the universal army of officials who enforced common standards of conduct. The psychological controls were built on fear and punishment—on the absolute certainty that anyone or anything that threatened the authority of Rome would be utterly destroyed.
2. The source of the Roman obsession with unity and cohesion may well have lain in the pattern of Rome's early development. Whereas Greece had grown from scores of scattered cities, Rome grew from one single organism. While the Greek world had expanded along the Mediterranean Sea lanes, the Roman world was assembled by territorial conquest. Of course, the contrast is not quite so stark: in Alexander the Great the Greeks had found the greatest territorial conqueror of all time; and the Romans, once they moved outside Italy, did not fail to learn the lessons of sea power. Yet the essential difference is undeniable. The key to the Greek world lay in its high-powered ships; the key to Roman power lay in its marching legions. The Greeks were wedded to the sea; the Romans, to the land. The Greek was a sailor at heart; the Roman, a landsman.
3. Certainly, in trying to explain the Roman phenomenon, one would have to place great emphasis on this almost animal instinct for the territorial imperative. Roman priorities lay in the organization, exploitation, and defense of their territory. In all probability it was the fertile plain of Latium, where the Latins who founded Rome originated, that created the habits and skills of landed settlement, landed property, landed economy, landed administration, and a land-based society. From this arose the Roman genius for military organization and orderly government. In turn, a deep attachment to the land, and to the stability which rural life engenders, fostered the Roman virtues: gravitas, a sense of responsibility, peitas, a sense of devotion to family and country, and iustitia, a sense of the natural order.



4. Modern attitudes to Roman civilization range from the infinitely impressed to the thoroughly disgusted. As always, there are the power worshippers, especially among historians, who are predisposed to admire whatever is strong, who feel more attracted to the might of Rome than to the subtlety of Greece. At the same time, there is a solid body of opinion that dislikes Rome. For many, Rome is at best the imitator and the continuator of Greece on a larger scale. Greek civilization had quality; Rome, mere quantity. Greece was original; Rome, derivative. Greece had style; Rome had money. Greece was the inventor; Rome, the research and development division. Such indeed was the opinion of some of the more intellectual Romans. “Had the Greeks held novelty in such disdain as we,” asked Horace in his Epistles, “what work of ancient date would now exist?”
5. Rome’s debt to Greece was enormous. The Romans adopted Greek religion and moral philosophy. In literature, Greek writers were consciously used as models by their Latin successors. It was absolutely accepted that an educated Roman should be fluent in Greek. In speculative philosophy and the sciences, the Romans made virtually no advance on early achievements.
6. Yet it would be wrong to suggest that Rome was somehow a junior partner in Greco-Roman civilization. The Roman genius was projected into new spheres— especially into those of law, military organization, administration, and engineering. Moreover, the tensions that arose within the Roman state produced literary and artistic sensibilities of the highest order. It was no accident that many leading Roman soldiers and statesmen were writers of high caliber.



**Directions: Now answer the questions.**

1. According to paragraph 1, all of the following are controls that held together the Roman world EXCEPT
  - A. administrative and legal systems
  - B. the presence of the military
  - C. a common language
  - D. transportation networks
  
2. According to paragraph 2, which of the following was NOT characteristic of Rome's early development?
  - A. Expansion by sea invasion
  - B. Territorial expansion
  - C. Expansion from one original settlement
  - D. Expansion through invading armies
  
3. Why does the author mention "Alexander the Great" in the passage?
  - A. To acknowledge that Greek civilization also expanded by land conquest
  - B. To compare Greek leaders to Roman leaders
  - C. To give an example of a Greek leader whom Romans studied
  - D. To indicate the superior organization of the Greek military
  
4. The word "fostered" in the passage is closest in meaning to
  - A. accepted
  - B. combined
  - C. introduced
  - D. encouraged
  
5. Paragraph 3 suggests which of the following about the people of Latium?
  - A. Their economy was based on trade relations with other settlements.
  - B. They held different values than the people of Rome.
  - C. Agriculture played a significant role in their society.
  - D. They possessed unusual knowledge of animal instincts.

6. Paragraph 4 indicates that some historians admire Roman civilization because of
- A. the diversity of cultures within Roman society
  - B. its strength
  - C. its innovative nature
  - D. the large body of literature that it developed
7. According to paragraph 4, intellectual Romans such as Horace held which of the following opinions about their civilization?
- A. Ancient works of Greece held little value in the Roman world.
  - B. The Greek civilization had been surpassed by the Romans.
  - C. Roman civilization produced little that was original or memorable.
  - D. Romans valued certain types of innovations that had been ignored by ancient Greeks.
8. Which of the following statements about leading Roman soldiers and statesmen is supported by paragraphs 5 and 6?
- A. They could read and write the Greek language.
  - B. They frequently wrote poetry and plays.
  - C. They focused their writing on military matters.
  - D. They wrote according to the philosophical laws of the Greeks.

9. In the paragraph below, there is a missing sentence. Look at the paragraph and indicate (A, B, C and D) where the following sentence could be added to the passage.

**They esteem symbols of Roman power, such as the massive Colosseum.**

Where would the sentence best fit?

Modern attitudes to Roman civilization range from the infinitely impressed to the thoroughly disgusted. **(A)** As always, there are the power worshippers, especially among historians, who are predisposed to admire whatever is strong, who feel more attracted to the might of Rome than to the subtlety of Greece. **(B)** At the same time, there is a solid body of opinion that dislikes Rome. **(C)** For many, Rome is at best the imitator and the continuator of Greece on a larger scale. **(D)** Greek civilization had quality; Rome, mere quantity. Greece was original; Rome, derivative. Greece had style; Rome had money. Greece was the inventor; Rome, the research and development division. Such indeed was the opinion of some of the more intellectual Romans. “Had the Greeks held novelty in such disdain as we,” asked Horace in his Epistles, “what work of ancient date would now exist?”

- A. Option A
- B. Option B
- C. Option C
- D. Option D

10. **Directions:** An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. **This question is worth 2 points.**

Write your answer choices in the spaces where they belong. You can either write the letter of your answer choice or you can copy the sentence.

The Roman world drew its strength from several important sources.
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Answer Choices

- A. Numerous controls imposed by Roman rulers held its territory together.
- B. The Roman military was organized differently from older military organizations.
- C. Romans valued sea power as did the Latins, the original inhabitants of Rome.
- D. Roman values were rooted in a strong attachment to the land and the stability of rural life.
- E. Rome combined aspects of ancient Greek civilization with its own contributions in new areas.
- F. Educated Romans modeled their own literature and philosophy on the ancient Greeks.

## Reading Answer Key

<b>Examining the Problem of Bycatch</b>	
1	C
2	A
3	B
4	D
5	B
6	A
7	C
8	D
9	C
10	A,C,E
<b>Ancient Rome and Greece</b>	
1	C
2	A
3	A
4	D
5	C
6	B
7	C
8	A
9	B
10	A,D,E