

# HABITATS AND CHIPMUNK SPECIES

READING PRACTICE SETS

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## TOEFL iBT READING PRACTICE SET

**Directions:** Read the passage and answer the questions. Give yourself 18 minutes to complete this practice set.

### HABITATS AND CHIPMUNK SPECIES

1 There are eight chipmunk species in the Sierra Nevada mountain range, and most of them look pretty much alike. However, eight different species of chipmunks scurrying around a picnic area will not be found. Nowhere in the Sierra do all eight species occur together. Each species tends strongly to occupy a specific habitat type, within an elevational range, and the overlap among them is minimal.

2 The eight chipmunk species of the Sierra Nevada represent but a few of the 15 species found in western North America, yet the whole of eastern North America makes do with but one species: the Eastern chipmunk (*Tamias striatus*). Why are there so many very similar chipmunks in the West? The presence of tall mountains interspersed with vast areas of arid desert and grassland makes the West ecologically far different from the East. The West affords much more opportunity for chipmunk populations to become geographically isolated from one another, a condition of species formation. In addition, there are more extremes in western habitats. In the Sierra Nevada, high elevations are close to low elevations, at least in terms of mileage, but ecologically they are very different.

3 Most ecologists believe that ancient populations of chipmunks diverged genetically when isolated from one another by mountains and unfavorable ecological habitat. These scattered populations first evolved into races – adapted to the local ecological conditions – and then into species, reproductively isolated from one another. This period of evolution was relatively recent, as evidenced by the similar appearance of all the western chipmunk species.

4 Ecologists have studied the four chipmunk species that occur on the eastern slope of the Sierra and have learned just how these species interact while remaining separate, each occupying its own elevational zone. The least chipmunk (*Neotamias minimus*) is found at the lowest elevation, among the sagebrush. The yellow-pine chipmunk (*Neotamias amoenus*) is common in low- to mid-elevations and brushy coniferous forests with such indicator tree species as the pinyon, ponderosa, and Jeffrey pines. The lodgepole chipmunk (*Neotamias speciosus*) is found at higher elevations, among high-elevation pines and firs, including the lodgepole pine and the red fir. The alpine chipmunk (*Neotamias alpinus*) is higher still, venturing among the talus slopes, alpine meadows, and high-elevation pines and junipers. [A] Obviously, the ranges of each species overlap. [B] Why don't least chipmunks move into the pine zones? [C] Why don't alpine chipmunks move to lower elevations and share the conifer forests with lodgepole chipmunks? [D]

5 The answer to such questions, in one word, is aggression. Chipmunk species actively defend their ecological zones from encroachment by neighboring species. The yellow-pine chipmunk is more aggressive than the least chipmunk, possibly because it is a little bit larger. It successfully bullies its smaller evolutionary cousin, excluding it from the pine forests. Experiments have shown that the least chipmunk is physiologically able to live anywhere in the Sierra Nevada, from high alpine zones to the desert. The little creature is apparently restricted to the desert not because it is specialized to live only there but because that is the only habitat where none of the other chipmunk species can live. The fact that least chipmunks tolerate very warm temperatures makes them, and only them, able to live where they do. The least chipmunk essentially occupies its habitat by default. In one study, ecologists established that yellow-pine chipmunks actively exclude least chipmunks from pine forests; the ecologists simply trapped all the yellow-pine chipmunks in a section of forest and moved them out. Least chipmunks immediately moved in, but yellow-pine chipmunks did not enter sagebrush desert when least chipmunks were removed.

6 The most aggressive of the four eastern-slope species is the lodgepole chipmunk, a feisty rodent indeed. It actively prevents alpine chipmunks from moving downslope, and yellow-pine chipmunks from moving upslope. There is logic behind its aggressive demeanor. It lives in the cool, shaded conifer forests, and of the four species, it is the least able to tolerate heat stress. It is, in other words, the species of the strictest habitat needs: it simply must be in those shaded forests. However, if it shared its habitat with alpine and yellow-pine chipmunks, either or both of these species might outcompete it, taking most of the available food. Such a competition could effectively eliminate lodgepole chipmunks from the habitat. Lodgepoles survive only by virtue of their aggression.

1. Why does the author mention a **picnic area** in paragraph 1?
  - (A) To identify a site where a variety of different species of chipmunks can be seen
  - (B) To support the point that each species of chipmunk inhabits a distinct location
  - (C) To emphasize the idea that all species of chipmunks have a similar appearance
  - (D) To provide an example of a location to which chipmunks are likely to scurry for food
  
2. In paragraph 2, the author indicates that a large variety of chipmunk species exist in western North America because of
  - (A) a large migration of chipmunks from eastern North America in an earlier period
  - (B) the inability of chipmunks to adapt to the high mountainous regions of eastern North America
  - (C) the ecological variety and extremes of the West that caused chipmunks to become geographically isolated
  - (D) the absence of large human populations that discouraged species formation among chipmunks in the East
  
3. The word **diverged** in the passage is closest in meaning to
  - (A) declined
  - (B) competed
  - (C) progressed
  - (D) separated
  
4. The phrase **one another** in the passage refers to
  - (A) populations
  - (B) races
  - (C) ecological conditions
  - (D) species
  
5. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 4? Incorrect choices change the meaning in important ways or leave out essential information.
  - (A) Ecologists studied how the geographic characteristics of the eastern slope of the Sierra influenced the social development of chipmunks.
  - (B) Ecologists learned exactly how chipmunk species separated from each other on the eastern slope of the Sierra relate to one another.
  - (C) Ecologists discovered that chipmunks of the eastern slope of the Sierra invade and occupy higher elevational zones when threatened by another species.
  - (D) Ecologists studied how individual chipmunks of the eastern slope of the Sierra avoid interacting with others of their species.
  
6. Where does paragraph 4 indicate that the yellow-pine chipmunk can be found in relationship to the other species of the eastern slope of the Sierra?
  - (A) Below the least chipmunk
  - (B) Above the alpine chipmunk
  - (C) At the same elevation as the least chipmunk
  - (D) Below the lodgepole chipmunk

7. Paragraph 5 mentions all of the following as true of the relationship between least chipmunks and their habitats EXCEPT:
- (A) Least chipmunks are able to survive in any habitat of the Sierra Nevada.
  - (B) Least chipmunks occupy their habitat because of the absence of competition from other chipmunks.
  - (C) Least chipmunks are able to survive in hot temperatures better than other species of chipmunks.
  - (D) Least chipmunks spend the warm season at the higher elevations of the alpine zone.
8. According to paragraph 6, why is the lodgepole chipmunk so protective of its habitat from competing species of chipmunks?
- (A) It has specialized food requirements.
  - (B) It cannot tolerate cold temperatures well.
  - (C) It requires the shade provided by forest trees.
  - (D) It prefers to be able to move between areas that are downslope and upslope.
9. Look at the four squares [A-D] that indicate where the following sentence could be added to the passage.

**Yet each species remains within a fairly well-defined elevational zone.**

Where would the sentence best fit?

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.**

**A variety of chipmunk species inhabit western North America.**

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#### Answer Choices

- (A) Ecological variation of the Sierra Nevada resulted in the differentiation of chipmunk species.
- (B) Only one species of chipmunk inhabits eastern North America.
- (C) Although chipmunk species of the Sierra Nevada have the ability to live at various elevations, each species inhabits a specifically restricted one.
- (D) Chipmunks aggressively defend their habitats from invasion by other species of chipmunks.
- (E) Experimental studies indicate that least chipmunks inhabit desert habitats because of their physiological requirements.
- (F) The most aggressive of the chipmunk species is the lodgepole chipmunk.