**Westward Migration**

The story of the westward movement of population in the United States is, in the main, the story of the expansion of American agriculture—of the development of new areas for the raising of livestock and the cultivation of wheat, corn, tobacco, and cotton. After 1815 improved transportation enabled more and more western farmers to escape a self-sufficient way of life and enter a national market economy. During periods when commodity prices were high, the rate of westward migration increased spectacularly. "Old America seemed to be breaking up and moving westward," observed an English visitor in 1817,during the first great wave of migration. Emigration to the West reached a peak in the 1830's. Whereas in 1810 only a seventh of the American people lived west of the Appalachian Mountains, by 1840 more than a third lived there.

Why were these hundreds of thousands of settlers—most of them farmers, some of them artisans—drawn away from the cleared fields and established cities and villages of the East? Certain characteristics of American society help to explain this remarkable migration. The European ancestors of some Americans had for centuries lived rooted to the same village or piece of land until some religious, political, or economic crisis uprooted them and drove them across the Atlantic. Many of those who experienced this sharp break thereafter lacked the ties that had bound them and their ancestors to a single place. Moreover, European society was relatively stratified; occupation and social status were inherited. In American society, however, the class structure was less rigid; some people changed occupations easily and believed it was their duty to improve their social and economic position. As a result, many Americans were an inveterately restless, rootless, and ambitious people. Therefore, these social traits helped to produce the nomadic and daring settlers who kept pushing westward beyond the fringes of settlement. In addition, there were other immigrants who migrated west in search of new homes, material success, and better lives.

The West had plenty of attractions: the alluvial river bottoms, the fecund soils of the rolling forest lands, the black loams of the prairies were tempting to New England farmers working their rocky, sterile land and to southeastern farmers plagued with soil depletion and erosion. In 1820 under a new land law, a farm could be bought for $100. The continued proliferation of banks made it easier for those without cash to negotiate loans in paper money. Western Farmers borrowed with the confident expectation that the expanding economy would keep farm prices high, thus making it easy to repay loans when they fell due.

Transportation was becoming less of a problem for those who wished to move west and for those who had farm surpluses to send to market. Prior to 1815, western farmers who did not live on navigable waterways were connected to them only by dirt roads and mountain trails. Livestock could be driven across the mountains, but the cost of transporting bulky grains in this fashion was several times greater than their value in eastern markets. The first step toward an improvement of western transportation was the construction of turnpikes. These roads made possible a reduction in transportation costs and thus stimulated the commercialization of agriculture along their routes.

Two other developments presaged the end of the era of turnpikes and started a transportation revolution that resulted in increased regional specialization and the growth of a national market economy. First came the steamboat; although flatboats and keelboats continued to be important until the 1850's steamboats eventually superseded all other craft in the carrying of passengers and freight. Steamboats were not only faster but also transported upriver freight for about one tenth of what it had previously cost on hand-propelled keelboats. Next came the Erie Canal, an enormous project in its day, spanning about 350 miles. After the canal went into operation, the cost per mile of transporting a ton of freight from Buffalo to New York City declined from nearly 20 cents to less than 1 cent. Eventually, the western states diverted much of their produce from the rivers to the Erie Canal, a shorter route to eastern markets.

What can be inferred from paragraph 1 about western farmers prior to 1815?

|  |  |
| --- | --- |
| A | They had limited their crop production to wheat, corn, tobacco, and cotton. |
| B | They were able to sell their produce at high prices. |
| C | They had not been successful in raising cattle. |
| D | They did not operate in a national market economy. |

What is the purpose of the statement, "Whereas in 1810 only a seventh of the American people lived west of the Appalachian Mountains, by 1840 more than a third lived there"?

|  |  |
| --- | --- |
| A | To illustrate that generally population shifts occur rapidly |
| B | To correct a mistaken impression of American agriculture from 1810 to 1840 |
| C | To emphasize the range and speed with which the westward migration occurred |
| D | To demonstrate how attractive the Appalachian Mountains were to Americans |

The word "fringes" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | borders |
| B | groups |
| C | types |
| D | directions |

According to paragraph 2, all of the following are reasons why Americans migrated westward EXCEPT

|  |  |
| --- | --- |
| A | the desire to move from one place to the next |
| B | the hope of improving their socioeconomic status |
| C | the opportunity to change jobs |
| D | the need to escape religious or political crises |

Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

|  |  |
| --- | --- |
| A | Because the West had more rivers and forests than the East, its soil was more productive. |
| B | The fertile soils of the West drew farmers from regions with barren soils. |
| C | Farmers living in western areas of the United States were more affected by soil erosion than farmers living in eastern areas. |
| D | The soil in western areas of the United States was richer than soil in eastern areas. |

According to paragraph 3, what was the significance of the land law passed in 1820?

|  |  |
| --- | --- |
| A | It granted government-supported loans to farmers. |
| B | It provided farmland at an affordable price. |
| C | It required banks to offer loans to farmers. |
| D | It enabled farmers to sell their land for a profit. |

The word "proliferation" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | growth |
| B | cooperation |
| C | importance |
| D | success |

Paragraph 4 suggests that turnpikes affected farmers by

|  |  |
| --- | --- |
| A | making the price of grain uniform for both eastern and western farmers |
| B | making western farm products more profitable than eastern farm products |
| C | allowing farmers to drive their livestock across mountain trails |
| D | allowing a greater number of farmers to sell their farm products in a commercial market |

The word "superseded" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | replaced |
| B | reformed |
| C | equaled |
| D | increased |

The word "diverted" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | collected |
| B | shifted |
| C | transported |
| D | sold |

Which of the following can be inferred from paragraph 5 about flatboats and keelboats?

|  |  |
| --- | --- |
| A | They ceased to be used as soon as the first turnpikes were built. |
| B | They were slower and more expensive to operate than steamboats. |
| C | They were used for long distance but not for regional transportation. |
| D | They were used primarily on the Erie Canal. |

Paragraph 5 mentions that the Erie Canal led to a reduction in all of the following EXCEPT

|  |  |
| --- | --- |
| A | the length of the route that goods from the West traveled across to reach eastern markets |
| B | the cost of transporting freight |
| C | the price of produce from western states |
| D | the amount of produce from western states that was shipped on rivers |

In fact, goods could be shipped more cheaply across the much greater distance of the Atlantic Ocean than they could from western New York to coastal cities.

|  |  |
| --- | --- |
| A | 1 |
| B | 2 |
| C | 3 |
| D | 4 |

**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 answer choices 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.**

The westward movement of population across the United States led to expanded agricultural production.

**1**The desire to improve their livelihood often inspired people to move west.

**2**Among the people who moved to the western United States were a number of artisans.

**3**The fertility of western farmland as well as favorable government policies supported agricultural gains.

**4**Steamboats were originally used to transport passengers rather than freight.

**5**Commercial farming in the West was greatly enhanced by improvements in land and water transportation.

**6**The transportation revolution resulted in regional economies that operated independently of a national market economy.

**Early Settlements in the Southwest Asia**

The universal global warming at the end of the Ice Age had dramatic effects on temperate regions of Asia, Europe, and North America. Ice sheets retreated and sea levels rose. The climatic changes in southwestern Asia were more subtle, in that they involved shifts in mountain snow lines, rainfall patterns, and vegetation cover. However, these same cycles of change had momentous impacts on the sparse human populations of the region. At the end of the Ice Age, no more than a few thousand foragers lived along the eastern Mediterranean coast, in the Jordan and Euphrates valleys. Within 2,000 years, the human population of the region numbered in the tens of thousands, all as a result of village life and farming. Thanks to new environmental and archaeological discoveries, we now know something about this remarkable change in local life.

Pollen samples from freshwater lakes in Syria and elsewhere tell us forest cover expanded rapidly at the end of the Ice Age, for the southwestern Asian climate was still cooler and considerably wetter than today. Many areas were richer in animal and plant species than they are now, making them highly favorable for human occupation. About 9000 B.C., most human settlements lay in the area along the Mediterranean coast and in the Zagros Mountains of Iran and their foothills. Some local areas, like the Jordan River valley, the middle Euphrates valley, and some Zagros valleys, were more densely populated than elsewhere. Here more sedentary and more complex societies flourished. These people exploited the landscape intensively, foraging on hill slopes for wild cereal grasses and nuts, while hunting gazelle and other game on grassy lowlands and in river valleys. Their settlements contain exotic objects such as seashells, stone bowls, and artifacts made of obsidian (volcanic glass), all traded from afar. This considerable volume of intercommunity exchange brought a degree of social complexity in its wake.

Thanks to extremely fine-grained excavation and extensive use of flotation methods (through which seeds are recovered from soil samples), we know a great deal about the foraging practices of the inhabitants of Abu Hureyra in Syria's Euphrates valley. Abu Hureyra was founded about 9500B.C, a small village settlement of cramped pit dwellings (houses dug partially in the soil) with reed roofs supported by wooden uprights. For the next 1,500 years, its inhabitants enjoyed a somewhat warmer and damper climate than today, living in a well-wooded steppe area where wild cereal grasses were abundant. They subsisted off spring migrations of Persian gazelles from the south. With such a favorable location, about 300 to 400 people lived in a sizable, permanent settlement. They were no longer a series of small bands but lived in a large community with more elaborate social organization, probably grouped into clans of people of common descent.

The flotation samples from the excavations allowed botanists to study shifts in plant-collecting habits as if they were looking through a telescope at a changing landscape. Hundreds of tiny plant remains show how the inhabitants exploited nut harvests in nearby pistachio and oak forests. However, as the climate dried up, the forests retreated from the vicinity of the settlement. The inhabitants turned to wild cereal grasses instead, collecting them by the thousands, while the percentage of nuts in the diet fell. By 8200B.C., drought conditions were so severe that the people abandoned their long-established settlement, perhaps dispersing into smaller camps.

Five centuries later, about 7700B.C., a new village rose on the mound. At first the inhabitants still hunted gazelle intensively. Then, about 7000 B.C., within the space of a few generations, they switched abruptly to herding domesticated goats and sheep and to growing einkorn, pulses, and other cereal grasses. Abu Hureyra grew rapidly until it covered nearly 30 acres. It was a close-knit community of rectangular, one-story mud-brick houses, joined by narrow lanes and courtyards, finally abandoned about 5000 B.C.. Many complex factors led to the adoption of the new economies, not only at Abu Hureyra, but at many other locations such as 'Ain Ghazal, also in Syria, where goat toe bones showing the telltale marks of abrasion caused by foot tethering (binding) testify to early herding of domestic stock.

The word "momentous" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | numerous |
| B | regular |
| C | very important |
| D | very positive |

Major climatic changes occurred by the end of the Ice Age in all of the following geographic areas EXCEPT

|  |  |
| --- | --- |
| A | temperate regions of Asia |
| B | southwestern Asia |
| C | North America |
| D | Europe |

The phrase "this remarkable change" in the passage refers to

|  |  |
| --- | --- |
| A | warming at the end of the Ice Age |
| B | shifts in mountain snow lines |
| C | the movement of people from farms to villages |
| D | a dramatic increase in the population |

The word "exploited" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | explored |
| B | utilized |
| C | inhabited |
| D | improved |

Why does the author mention "seashells, stone bowls, and artifacts made of obsidian"?

|  |  |
| --- | --- |
| A | To give examples of objects obtained through trade with other societies |
| B | To illustrate the kinds of objects that are preserved in a cool climate |
| C | To provide evidence that the organization of work was specialized |
| D | To give examples of the artistic ability of local populations |

The word "cramped" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | primitive |
| B | secure |
| C | extended |
| D | confined |

Paragraph 3 suggests which of the following about the settlement of Abu Hureyra?

|  |  |
| --- | --- |
| A | The settlement was inhabited by small groups of people from nearby areas. |
| B | Small bands of people migrated in and out of the settlement. |
| C | The location of the settlement made permanent development difficult. |
| D | The easy availability of food led to the growth of the settlement. |

The word "shifts" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | effects |
| B | similarities |
| C | changes |
| D | exceptions |

Paragraph 4 suggests that the people of Abu Hureyra abandoned their long-established settlement because

|  |  |
| --- | --- |
| A | the inhabitants had cleared all the trees from the forests |
| B | wild cereal grasses took over pistachio and oak forests |
| C | people wanted to explore new areas |
| D | lack of rain caused food shortages |

According to paragraph 5, after 7000 B.C. the settlement of Abu Hureyra differed from earlier settlements at that location in all of the following EXCEPT

|  |  |
| --- | --- |
| A | the domestication of animals |
| B | the intensive hunting of gazelle |
| C | the size of the settlement |
| D | the design of the dwellings |

The word "abruptly" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | informally |
| B | briefly |
| C | suddenly |
| D | surprisingly |

Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

|  |  |
| --- | --- |
| A | In many areas besides Abu Hureyra, complex factors led to new economies including the herding of domestic stock. |
| B | In 'Ain Ghazal and Syria, domestic stock was more important than it was at Abu Hureyra. |
| C | Once early methods of herding animals improved, new economies were adopted. |
| D | Many complex theories attempt to explain the early domestication of animals. |

One of the major effects was the rapid growth of the human population itself.

|  |  |
| --- | --- |
| A | 1 |
| B | 2 |
| C | 3 |
| D | 4 |

**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 answer choices 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.**

At the end of the Ice Age, patterns of human settlement changed in southwestern Asia.

**1**Wild cereals, grasses, and nuts were exchanged for exotic objects.

**2**Changes in climatic conditions made southwestern Asia highly beneficial to human occupants.

**3**Social organization in Abu Hureyra decreased as the population grew.

**4**The favorable location of Abu Hureyra kept the city from experiencing hardship during drought years.

**5**Within 2,000 years, populations in southwestern Asia greatly increased in number.

**6**In rich, fertile areas permanent societies evolved to a high level of complexity.

**Fossil Preservation**

When one considers the many ways by which organisms are completely destroyed after death, it is remarkable that fossils are as common as they are. Attack by scavengers and bacteria, chemical decay, and destruction by erosion and other geologic agencies make the odds against preservation very high. However, the chances of escaping complete destruction are vastly improved if the organism happens to have a mineralized skeleton and dies in a place where it can be quickly buried by sediment. Both of these conditions are often found on the ocean floors, where shelled invertebrates (organisms without spines) flourish and are covered by the continuous rain of sedimentary particles. Although most fossils are found in marine sedimentary rocks, they also are found in terrestrial deposits left by streams and lakes. On occasion, animals and plants have been preserved after becoming immersed in tar or quicksand, trapped in ice or lava flows, or engulfed by rapid falls of volcanic ash.

The term "fossil" often implies petrifaction, literally a transformation into stone. After the death of an organism, the soft tissue is ordinarily consumed by scavengers and bacteria. The empty shell of a snail or clam may be left behind, and if it is sufficiently durable and resistant to dissolution, it may remain basically unchanged for a long period of time. Indeed, unaltered shells of marine invertebrates are known from deposits over 100 million years old. In many marine creatures, however, the skeleton is composed of a mineral variety of calcium carbonate called aragonite. Although aragonite has the same composition as the more familiar mineral known as calcite, it has a different crystal form, is relatively unstable, and in time changes to the more stable calcite.

Many other processes may alter the shell of a clam or snail and enhance its chances for preservation. Water containing dissolved silica, calcium carbonate, or iron may circulate through the enclosing sediment and be deposited in cavities such as marrow cavities and canals in bone once occupied by blood vessels and nerves. In such cases, the original composition of the bone or shell remains, but the fossil is made harder and more durable. This addition of a chemically precipitated substance into pore spaces is termed "permineralization."

Petrifaction may also involve a simultaneous exchange of the original substance of a dead plant or animal with mineral matter of a different composition. This process is termed "replacement" because solutions have dissolved the original material and replaced it with an equal volume of the new substance. Replacement can be a marvelously precise process, so that details of shell ornamentation, tree rings in wood, and delicate structures in bone are accurately preserved.

Another type of fossilization, known as carbonization, occurs when soft tissues are preserved as thin films of carbon. Leaves and tissue of soft-bodied organisms such as jellyfish or worms may accumulate, become buried and compressed, and lose their volatile constituents. The carbon often remains behind as a blackened silhouette.

Although it is certainly true that the possession of hard parts enhances the prospect of preservation, organisms having soft tissues and organs are also occasionally preserved. Insects and even small invertebrates have been found preserved in the hardened resins of conifers and certain other trees. X-ray examination of thin slabs of rock sometimes reveals the ghostly outlines of tentacles, digestive tracts, and visual organs of a variety of marine creatures. Soft parts, including skin, hair, and viscera of ice age mammoths, have been preserved in frozen soil or in the oozing tar of oil seeps.

The probability that actual remains of soft tissue will be preserved is improved if the organism dies in an environment of rapid deposition and oxygen deprivation. Under such conditions, the destructive effects of bacteria are diminished. The Middle Eocene Messel Shale (from about 48 million years ago) of Germany accumulated in such an environment. The shale was deposited in an oxygen-deficient lake where lethal gases sometimes bubbled up and killed animals. Their remains accumulated on the floor of the lake and were then covered by clay and silt. Among the superbly preserved Messel fossils are insects with iridescent exoskeletons (hard outer coverings), frogs with skin and blood vessels intact, and even entire small mammals with preserved fur and soft tissue.

The word "agencies" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | combinations |
| B | problems |
| C | forces |
| D | changes |

In paragraph 1, what is the author's purpose in providing examples of how organisms are destroyed?

|  |  |
| --- | --- |
| A | To emphasize how surprising it is that so many fossils exist |
| B | To introduce a new geologic theory of fossil preservation |
| C | To explain why the fossil record until now has remained incomplete |
| D | To compare how fossils form on land and in water |

The word "terrestrial" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | land |
| B | protected |
| C | alternative |
| D | similar |

Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

|  |  |
| --- | --- |
| A | When snail or clam shells are left behind, they must be empty in order to remain durable and resist dissolution. |
| B | Although snail and clam shells are durable and resist dissolving, over time they slowly begin to change. |
| C | Although the soft parts of snails or clams dissolve quickly, their hard shells resist dissolution for a long time. |
| D | Empty snail or clam shells that are strong enough not to dissolve may stay in their original state for a long time. |

Why does the author mention "aragonite" in the passage?

|  |  |
| --- | --- |
| A | To emphasize that some fossils remain unaltered for millions of years |
| B | To contrast fossil formation in organisms with soft tissue and in organisms with hard shells |
| C | To explain that some marine organisms must undergo chemical changes in order to fossilize |
| D | To explain why fossil shells are more likely to survive than are fossil skeletons |

The word "enhance" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | control |
| B | limit |
| C | combine |
| D | increase |

Which of the following best explains the process of permineralization mentioned in paragraph 3?

|  |  |
| --- | --- |
| A | Water containing calcium carbonate circulates through a shell and deposits sediment. |
| B | Liquid containing chemicals hardens an already existing fossil structure. |
| C | Water passes through sediment surrounding a fossil and removes its chemical content. |
| D | A chemical substance enters a fossil and changes its shape. |

The word "precise" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | complex |
| B | quick |
| C | exact |
| D | reliable |

Paragraph 5 suggests which of the following about the carbonization process?

|  |  |
| --- | --- |
| A | It is completed soon after an organism dies. |
| B | It does not occur in hard-shell organisms. |
| C | It sometimes allows soft-tissued organisms to be preserved with all their parts. |
| D | It is a more precise process of preservation than is replacement. |

The word "prospect" in the passage is closest in meaning to

|  |  |
| --- | --- |
| A | completion |
| B | variety |
| C | possibility |
| D | speed |

According to paragraph 7, how do environments containing oxygen affect fossil preservation?

|  |  |
| --- | --- |
| A | They increase the probability that soft-tissued organisms will become fossils. |
| B | They lead to more bacteria production. |
| C | They slow the rate at which clay and silt are deposited. |
| D | They reduce the chance that animal remains will be preserved. |

According to the passage, all of the following assist in fossil preservation EXCEPT

|  |  |
| --- | --- |
| A | the presence of calcite in an organism's skeleton |
| B | the presence of large open areas along an ocean floor |
| C | the deposition of a fossil in sticky substances such as sap or tar |
| D | the rapid burial of an organism under layers of silt |

But the evidence of past organic life is not limited to petrifaction.

|  |  |
| --- | --- |
| A | 1 |
| B | 2 |
| C | 3 |
| D | 4 |

**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 answer choices 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.**

The remains of ancient life are amazingly well preserved in the form of fossils.

**1**Environmental characteristics like those present on ocean floors increase the likelihood that plant and animal fossils will occur.

**2**Fossils are more likely to be preserved in shale deposits than in deposits of clay and silt.

**3**The shells of organisms can be preserved by processes of chemical precipitation or mineral exchange.

**4**Freezing enables the soft parts of organisms to survive longer than the hard parts.

**5**Comparatively few fossils are found in the terrestrial deposits of streams and lakes.

**6**Thin films of carbon may remain as an indication of soft tissue or actual tissue may be preserved if exposure to bacteria is limited.