



I 編集の都合上省略

II 次の英文を読み、下記の設問に答えなさい。(＊の付いた単語は注を参照すること)

It's time to rewrite the story of how Stone Age explorers from Asia crossed over into the Americas and colonized the continents. The Clovis people were leading candidates for the title of first Americans. But a *hoard of tools newly uncovered in Texas suggests the land was inhabited several thousand years before the reign of the Clovis culture. ⁽¹⁾When the people who built the Texan tools migrated, *ice sheets would have made travel by land difficult. This lends strength to the hypothesis that the Americas were colonized not by land but by sea.

Who the first Americans were, where they came from and when they arrived are controversial questions among researchers. One favored theory, known as ⁽²⁾"Clovis first," says that during the last Ice Age, people from Asia followed herd animals across a land bridge connecting Siberia to Alaska and established the first settlements in North America. The Clovis culture is characterized by pointed stone tools.

But recent discoveries of artifacts that pre-date the Clovis, including this new one in Texas, have challenged the Clovis-first hypothesis. The new hoard contains 15,528 items, the largest group of pre-Clovis stone objects ever found. It includes 56 well-preserved tools among many stone chips, flakes and fragments that probably broke off other tools. "What we have found is evidence of early human occupation dating back to 15,500 years ago, 2,500 years older than Clovis," says Michael Waters, lead author of the study. Waters and his team discovered the primitive toolkit in a well-preserved layer of soil at Buttermilk Creek in central Texas. Directly above it lay another, distinct layer dating from the Clovis era.

The objects are clearly shaped by human hands, but less sophisticated than Clovis tools — the team describes them as prototypes. The hallmark of Clovis technology is a carefully chiseled, oval-shaped stone with thin razor-sharp edges and a *notch in the bottom for attaching it to a spear or knife handle. In contrast, the newly discovered tools are not well-shaped, lack notches and are lighter than Clovis tools. Waters thinks that descendants of their makers may have later invented Clovis technology.

Others agree the discovery is significant. "This looks to me like a really solid example of archaeology that is older than dates people associate with Clovis," says Douglas Bamforth, an archeologist at a different school. "They have done a great job of documenting the age of the *sediment." He points out that the tools could have shifted through the ages. "Nobody will argue these artifacts aren't real, but the question is whether they were really found exactly where they belonged or whether they settled from above."

Burrowing *rodents, plant roots and geologic activity all create cracks and voids in soil. The artifacts could have slipped over time through such gaps from the higher Clovis layer to the older Buttermilk Creek layer. But Waters and his team argue ⁽³⁾this is not likely to have happened here. Firstly, the site is not especially geologically active and the team did not find any cracks large enough for objects to sift through. Secondly, if the earth had shifted, allowing the artifacts to move about, the changes would show in the magnetic signatures of different layers of soil; the team analyzed the magnetic record, but found no such signs of disturbance. Finally, the team showed that they could piece stone flakes together like pieces of a 3D jigsaw puzzle, and the pieces that fitted together always came from a single layer of earth. In other words, the fragments had not moved from their original burial site.

The new discoveries also suggest that the bridge between Asia and America was not the only route into the Americas. Fifteen thousand years ago, people in Siberia could not easily have crossed to Alaska and down into North America because the major ice sheets at the time were fused, prohibiting travel through North America after crossing the bridge. Instead, whoever made the stone tools at the Buttermilk Creek site may have journeyed to the New World by sea.

"I think we are on the edge of a paradigm shift now," says Waters. "We're past the Clovis-first model. We have robust evidence of people here before Clovis that is in a secure geological context and well-dated. Now we can seriously sit down and develop a new model for the peopling of the Americas." The Clovis-first case seems to be closed, but a new phase in North America aimed at pushing back the time of first human colonizing will undoubtedly begin now.





【出典：Ferris Jabr, “First Americans Arrived 2500 Years before We Thought,” *New Scientist* (March 2011); “Clovis First Hypothesis Refuted,” *earth-pages* (May 2011)より。出題の都合上，原文の一部に変更を加えている。】

注

- hoard：埋納遺跡
- ice sheet：氷床
- notch：V字型の刻み目，切り込み
- sediment：堆積物
- rodent：齧歯(げっし)動物(ネズミ・リス・ビーバーなど)

設問

- 1 下線部(1)を日本語に訳しなさい。
- 2 下線部(2)はどのような説か。句読点を含め65字以内の日本語で答えなさい。
- 3 下線部(3)の内容を句読点を含め40字以内の日本語で書きなさい。
- 4 本文の内容に関する以下の問いに英語で答えなさい。
 - (1) A layer of soil dating from the Clovis era is above the layer where the new tools were discovered. What did Professor Waters and his colleagues conclude from this fact? Answer in about 10 words.
 - (2) What three differences do the newly discovered tools have from the Clovis tools? Answer in about 15 words.
 - (3) What does the age of the new tools suggest about the route by which the first people arrived in the Americas? Answer in about 10 words.

Ⅲ 編集の都合上省略

Ⅳ 下線部(1)～(4)を英語に訳しなさい。

- 1 (1)ほかの子供たちと遊ぶよりも一人で読書をするの方が好きだった少女が，今ではサッカー日本代表チーム(Japan’s national football team)で活躍している。
- 2 (2)地中奥深くに形成されたマグマが地球の表面へと上昇するまでには，途方もない時間がかかると推定されている。
- 3 かつて山奥のある村でこんな話を聞いたことがある。(3)明治時代に入ると日本は西洋の近代技術を導入するために，多くの外国人技師を招いた。なかには土木系の技師としてその村に滞在する者もいたという。その当時の村人は，キツネやタヌキやムジナにだまされながら暮らしていた。それが村のありふれた日常だった。それなのに外国人技師たちは，けっして動物にだまされることはなかった。
(4)いまなら動物にだまされる方が不思議に思われるかもしれないが，当時のこの村の人たちにとっては，だまされない方が不思議だったのである。だから，「同じ場所にいる外国人には同じ現象は起こらなかった」という出来事が不思議な話として，その後も語りつがれた。

【出典：内山節『日本人はなぜキツネにだまされなくなったのか』より。出題の都合上，原文の一部に変更を加えている。】



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