京大過去問　２０１２年　第１問

次の文章の下線をほどこした部分(1)~(4)を和訳しなさい。

During his failed attempt to reach the North Pole on foot in the spring of 1895, Norwegian explorer Fridtjof Nansen encountered several sets of fox footprints on the ice north of the 85th parallel, several hundred kilometers from the nearest dry land. “What in the world was that fox doing up here?” he wrote in his journal. “It is incomprehensible what these animals live on up here, but presumably they are able to snap up some small crabs in the open waterways. But why do they leave the coast? That is what puzzles me most. Can they have gone astray?”

Early attempts to solve some of these riddles only added to the mystery. During the 1970s a research team spent several years trying to track the winter movements of Arctic foxes in northern Alaska. (1)The animals were fitted with numbered ear tags, released, and their whereabouts were then recorded. Although next to nothing was revealed about how they got to various places, due to limitations of the techniques being employed, deep into the high Arctic, more than 2000 kilometers away, is where some were recovered. In a valiant effort to learn more, the team decided to try out radio telemetry, the technology that had revolutionized wildlife tracking in the early 1960s. (2)The target may be followed to wherever it goes via a radio collar that is fitted to the animal being investigated, which transmits a signal that researchers on foot or in a plane can detect with precision. “We learned absolutely nothing,” says one of the researchers. “The place is simply too big and the foxes are too mobile. We would catch one and put a collar on it and then we would never hear the signal again. They just disappeared — gone outside the ability of the plane to keep track of them.”

The thought of an Arctic fox wandering around for months on end, under such harsh conditions, continues to raise many questions. (3)Is there some preordained pattern that the animals follow or are the journeys random? If not the latter, how do they navigate in an icescape that offers no permanent landmarks, that drifts and spins at the mercy of the currents, melts and freezes according to the weather, and seemingly has not much to offer in the way of a scent trail to follow for satisfying their appetites?

Even the advent of satellite-based tracking in the early 1990s did not provide an immediate answer. The first collars, which required large batteries, were far too heavy for Arctic foxes. (4)But now, at last, the technology has caught up, in the form of light, battery-powered devices tailored for the Arctic fox, including one equipped with an antenna laced with red pepper to discourage animals from gnawing it off. Last year, a Canadian team published results of a satellite-tracking

study of the Bylot Island foxes. The findings provide more evidence that Arctic foxes regularly travel enormous distances. Although it is too early to say for sure, it is possible that foxes decide to go onto the ice based partly on how much food is available on land in the autumn.

From Forget hibernating, migrating or holing up — Arctic foxes take winter on the chin, New Scientist