

Check your understanding



1 Why is the caterpillar fungus such an important resource?

Answer

The fungus is sold for up to \$140,000 per kilogram (smaller pieces are cheaper). Fungus trade is an important part of the economy in countries where it is produced. Although harvesters get only a small portion of that money, it is the primary source of income for their families. These people often don't have much education or any other opportunities to make money. They depend on fungus financially to survive.

2 Local harvesters are aware that overharvesting causes fungus population decline. How does overharvesting cause a decline in fungus production?

Answer

Harvesters extract the fungus before it has a chance to spread its spores into the soil. That practice prevents the next generation of caterpillars from being infected. This interrupts the life cycle of the fungus and causes a decline in the fungus populations.

3 What are the effects of climate change in the region where caterpillar fungus grows?

Answer

The winters have been much warmer in the Himalayan region since 1979. The increase was the highest in Bhutan with about 4°C of winter warming in the past three decades. This increase causes permafrost thaw and vegetation change. Caterpillar fungus live where winters are cold (up to -5°C, on average) and dry, near the margins of permafrost. The warmer temperatures are likely causing a decline in fungus production.

4 Why can't the caterpillar fungus respond to climate change by just relocating to colder and higher areas?

Answer

The caterpillar fungus relies on its host: the caterpillar. It is a parasite, which means it cannot survive without a host. The caterpillars rely on the vegetation, feeding on certain plant roots. All of these organisms would need to shift together to higher elevations, where it is cold and dry, so that they could maintain their close relationships.