



# WORD DISCOVERY

## THE ALASKA EXPEDITION

A S P Y T U N D R A P B T I Q  
P C G D M X P Q F B P V L H X  
C A L U H A U F L F A S I P T  
H R H E W D W H U U I P T I H  
C R Y O C O R Y T V P U A N E  
G E L I S O L S A P K A L G R  
E X S B F V S L I F I F I O M  
H B O Z O B L W G K H F K E O  
C R Y O T U R B A T I O N P K  
F S U B S I D E N C E E T A A  
C M U S K E G K L A N K G L R  
T H A W I N G I C E L E N S S  
F G R R C T H J D J C P C A T  
B T D K P E R M A F R O S T U  
Y D K H T B A P I P K R A K E

Can you help  
Cryo Cory on  
his quest to find  
these terms about  
permafrost soils?

1. Cryo Cory
2. Cryoturbation
3. Gelisols
4. Ice Lens
5. Muskeg
6. Palsa
7. Permafrost
8. Pingo
9. Piprake
10. Subsidence
11. Talik
12. Thawing
13. Thermokarst
14. Taiga
15. Tundra



# DEFINITIONS



Discover the meaning of these soil terms.

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## Cryo Cory

NRCS soil microbe character with ice hair.

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## Cryoturbation

The mixing of materials from various layers of soil, potentially down to bedrock, due to actions of freezing and thawing.

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## Gelisols

USDA soil taxonomic term for the soil order of soils found in very cold climates containing permafrost within 6.5 feet of the soil surface.

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## Ice Lens

A dominantly horizontal, lens-shaped body of ice of any dimension.

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## Muskeg

A peat bog consisting of a mixture of water and partly dead vegetation, typically covered by a layer of mosses.

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## Palsa

Peat mounds with a permanently frozen peat and mineral soil core.

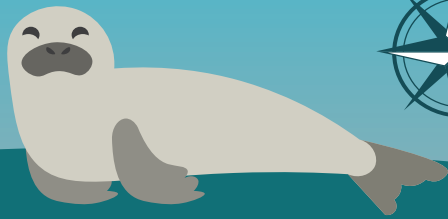
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## Permafrost

Ground (soil or rock) that remains at or below 0°C for at least 2 years.

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## Pingo

A dome-shaped frost mound formed in a permafrost area when the pressure of freezing groundwater pushes up a layer of frozen ground.

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## Pipkrake

Long, thin, needle-like ice crystals that form perpendicular to the ground surface.

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## Subsidence

The gradual caving or sinking of an area of land caused by melting permafrost ice layers.

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## Talik

A layer of unfrozen ground that lies in permafrost areas.

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## Thawing

Melting of ice in frozen ground, usually as a result of a rise in temperature.

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## Thermokarst

Irregular terrain caused by the melting of ground ice.

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## Taiga

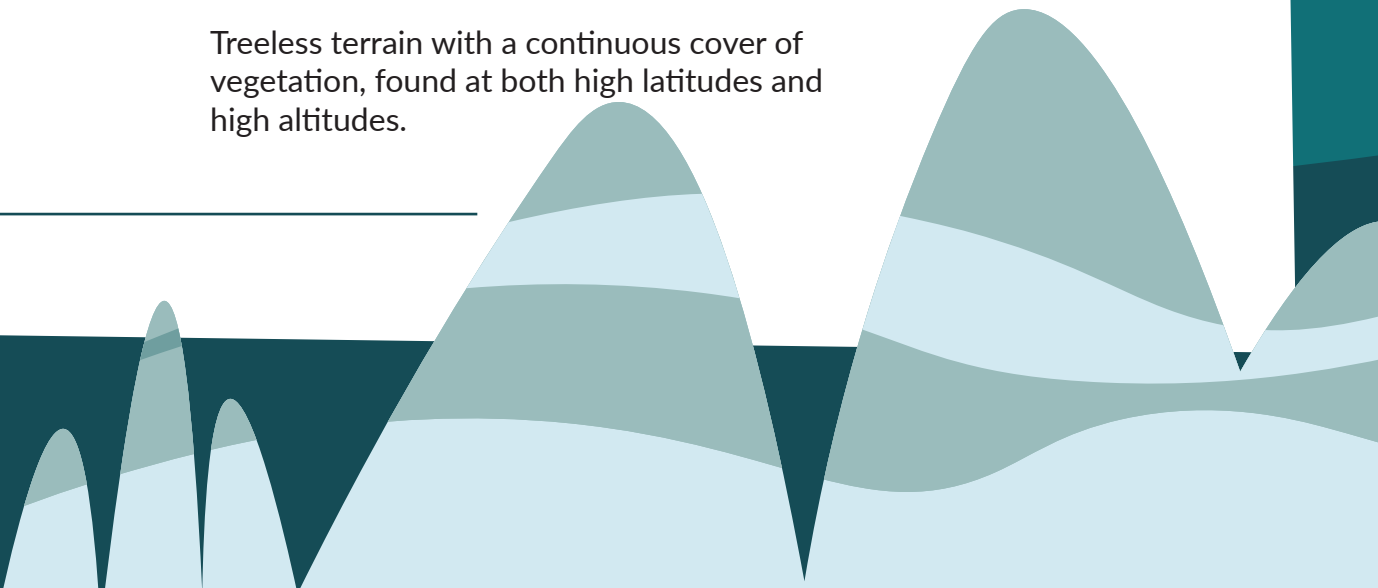
Coniferous forest of the cold, subarctic region.

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## Tundra

Treeless terrain with a continuous cover of vegetation, found at both high latitudes and high altitudes.

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# DID YOU KNOW?

1. Alaska's State Soil is called Tanana and it is a permafrost soil.
2. The Tanana soil series was established in 1914.
3. It's named after the Tanana River, derived from the Athabaskan word for "Mountain River."
4. Tanana is a permafrost soil, meaning it stays permanently frozen for 2 or more consecutive years.
5. The Tanana soil series is found only in Alaska and is unique because of its permafrost nature.
6. Tanana soils range widely through the Interior of Alaska on flood plains and low terraces of rivers.
7. When undisturbed, Tanana soils support a wetland forest of black spruce and shrubs that support an abundance of wildlife and recreation. Wildfire or human disturbance, such as plowing, will cause the soil to warm and dry, significantly altering its characteristics. After thawing, Tanana soils can grow hay, grains, potatoes and cool season vegetables.
8. Tanana soil may cover an estimated 3 to 5 million acres, though only a small portion of its range has been mapped.

## key

A S P Y T U N D R A P B T I Q  
 P C G D M X P Q F B P V L H X  
 C A L U H A U F L F A S I P T  
 H R H E W D W H U U I P T I H  
 C R Y O C O R Y T V P U A N E  
 G F I S O I S A P K A L G R  
 E X S B F V S L I F I F I O M  
 H B O Z O B L W G K H F K E O  
 C R Y O T U R B A T I O N P K  
 F S U B S I D E N C E F E T A A  
 C M U S K E G K L A N K G L R  
 T H A W I N G I C F I E N S S  
 F G R R C T H I D J C P C A T  
 B T D K P F R M A F R O S T U  
 Y D K H T B A P I P K R A K F



Tanana: Alaska's State Soil

Learn more at  
[www.ak.nrcs.usda.gov](http://www.ak.nrcs.usda.gov)

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