

Welcome students. This course is offered to TyBsc students in the subject of geology. Semester 6.

The course code is GEC 110 and the Course title is Indian stratigraphy.

This module is of Unit 4.

The name of this module is

Pleistocene glaciation

Ice Age. Pleistocene Ice Age

in India and evidences of Ice Age .

I am Allison D'souza, assistant professor at Dhempe College of Arts and Science, Miramar, Panaji, Goa. In this module.

We will be learning about Pleistocene, glaciation, Ice Age, please.

Those in Ice Age in India evidences of ice age at the end of this module or student will be.

Able to know about the Ice Age in India during Pleistocene and its evidence.

the term Pleistocene was first used by Sir Charles Lyell.

He used this term to refer to all

deposits which were younger than Pliocene

in an older than Pliocene or recent.

Pleistocene is the time range from

2.5 million years to 0.01 million years.

Pleistocene and Holocene epochs

are under the Quaternary period.

There is no much difference between the

Pliocene and Pleistocene rocks.

With respect to the composition

except that the Pliocene are more

compact than the Pleistocene.

There is change in the mammalian fauna.

The presence of glacial conditions in the

Pleistocene are sufficient justification

to draw a line between the two epoch.

Ice Age for the first time in the

long geological history of India,

there is a reference to an Ice

Age as if this was the first time

when the part of the country was

caught in the grip of severe cold,

resulting in the formation

of masses of snow and ice.

But it is not so.

There are at least two glacial periods in the past which were witnessed in India.

These were Precambrian glacial period and Gondwana glaciation.

Precambrian glacial period.

The earliest recorded glaciation in

the form of tillite is found at

the top of Proterozoic, Bijawar Group.

It is typically exposed along the

banks of Ken River in Madhya Pradesh

and Mirzapur Siddhi area of Son Valley.

Gondwana glaciation.

The bottom formation of the Talchir

group is a glacial boulder bed

comprising of polished faceted

and striated boulders of Rhyolites

and other igneous rocks

embedded in greenish silty matrix.

The only region in Indian subcontinent

which actually experienced

the Ice Age or in other words,

thick masses of snow moved

from one part to another,

eroding, transporting,

and depositing load was the Himalayas.

The Himalayas had attained maximum height

during the Pleistocene times and along

with general lowering of temperatures.

Almost all over the globe was responsible

for the Ice Age in this part of India.

The Pleistocene in Ice Age is also

called the Great Ice Age and is most

recent Ice Age in the history of Earth.

It was during this period the

geography and topography of most

parts of the world acquired the

final or present configuration.

And flora and fauna.

Its present distribution.

The Pleistocene system

in India is fully developed.

Then all the preceding

system except the archaean.

Pleistocene glaciation is not a frigid spell,

but consisted of four to five

different glacial periods.

Each lasting thousands of years

and separated by equally long

or longer Haupt interglacial

periods during which ice

disappeared from most places.

Evidences of Ice Age in India.

Though Himalayan glaciers are

the largest in the world,

they are merely shrunken

remains of those glaciers which

flourished in place to sin.

Enormous heaps of terminal

moraine's now snow covered.

Or grass covered deserted cirques and

smooth and striated hummocky.

surfaces and other similar evidences exist.

Several 1000 feet below as low

as 5000 feet elevation.

The present snow line example is

the leader and thus in valleys.

And peer Panjal, the mountains have

glacial aspects and valleys are filled.

Maureen barriers scoping

out hollows in Kashmir.

Kailash kund, Sansar Basin,

Gulmarg Basin etc Ladakh and Kumaon,

directly or indirectly,

show the evidences of past glaciation.

The middle Himalayan ranges,

which show no evidence of glaciation

today also has moraines on them.

One further evidence of prevalence of

Ice Age in the Pleistocene Epoch in India

was extinction of Shivalik mammals.

The great carnivores,

the varied races of elephants.

The sivatherium and the

ungulates, large mammals with hooves,

which found suitable habitat in the

jungles of Siwaliks of Pleistocene

are all extinct in Pleistocene.

This disappearance of highly organized

mammals is attributed to the intense

cold of this glaciation or glacial epoch.

It is well known fact that the more

highly specialized an Organism is,

the less fit it is to

withstand any sudden changes,

while the less differentiated and

comparatively simple organisms are

Hardy and survive changes either

by adaptation or by migration.

Here are the references.

Thank you.