# JOURNEY TO THE END OF THE EARTH By Tishani Doshi


SUMMARY

The author shares her experience when she aboard a Russian research vessel — the *Akademik Shokalskiy* — heading towards the coldest, driest, windiest continent in the world: Antarctica. She started her journey from the erstwhile Madras and had to cross several time-zones, water bodies and ecospheres. She was filled with relief after travelling for over 100 hours as well as a profound wonder at the immensity of the white continent.

The author describes how about fifty million years ago, there used to exist a supercontinent called Godwana around the present Antarctica. It was the time before the arrival of human beings on the planet. The continent used to be quite warmer and full of flora and fauna. For 500 million years Gondwana thrived, but around the time when the dinosaurs were wiped out and the age of the mammals got under way, the landmass was forced to separate into countries, shaping the globe much as we know it today.

A visit to Antarctica gives us an idea of how great changes have taken place on our planet. There have been major geological changes of the earth's crust, depletion of ozone and increase of carbon compounds along with evolution and extinction of several species of plants and animals. It is also evident that the Indian sub-continent drifted away from Godwana and jammed against Asia to buckle its crust and form the Himalayas; South America also drifted off to join North America, opening up the Drake Passage to create a cold circumpolar current, keeping Antarctica frigid, desolate, and at the bottom of the world.

Antarctica stores about 90 percent of the earth's ice making it look like a giant ping-pong ball without any evidence of human settlement. However, there exist a variety of things ranging from the microscopic to
the mighty: midges and mites to blue whales and icebergs as big as countries. Silence prevails everywhere except for occasional sound of avalanches and breaking ice sheet.

Although human civilizations have been about only 12000 years, man has created quite a ruckus by destructing nature and building towns, cities etc. Not only we have battled with other species for limited resources that nature can provide but we have burnt huge quantity of fuel leading to excessive production of carbon dioxide causing global warming.

Going to Antarctica makes us familiar with the melting of ice for real and the question if the Gulf Stream ocean current will be disrupted or not. If this happens, it may lead to the end of the world. These questions can be answered by observing the carbon records trapped in the layers of ice. Thus studying Antarctica can tell us about the earth's past, present and future.

The author was part of a programme called Students on Ice, which gives students opportunity to explore Antarctica and help them foster a new understanding and respect for our planet. It was headed by Canadian Geoff Green who diverted his attention from catering celebrities to taking young students to the poles. He felt that the celebrities are past their prime and have less time and energy to work for the betterment of the environment. On the other hand, students are the future of our planet who have the will and power to act for a better world. He offers the future generation of policy-makers a life-changing experience at an age when they're ready to absorb, learn, and most importantly, act.

The programme had been quite successful because it gave live examples of global warming and it impact on the ice capes. This cannot be experienced by people sitting comfortably in their rooms. Everyone who sees the reality really becomes worried about our planet.

Antarctica is the best classroom because it can teach us the cause and effect phenomenon quite easily due to its simple eco system. The example of the microscopic phytoplankton is taken by the author. This small green grass like organism consumes the carbon dioxide to prepare food through photosynthesis. These organisms not only provides food to the marine animals of the whole Sothern Ocean but also plays an important role in maintaining the carbon cycle of our planet. The ultra violet radiation due to depletion of the ozone layer is destroying these microorganisms. If this is not checked, the whole eco system will collapse.

The author recounts walking on one metre thick sheet of ice above 180 metres of ocean water as the ship wedged herself into a thick white stretch of ice between the peninsula and Tadpole Island which was preventing them from going any further. They could see the crabeater seals sunning themselves on the ice.

After returning home, the author still remains affected by the experience and keeps thinking about the threat of global warming and other environmental hazards which might ultimately lead to our extinction. However, she is confident that with programmes like Students on Ice, and with young students taking the initiative, the world may still be saved.

MULTIPLE CHOICE QUESTIONS

1. What is the purpose of the journey to the world's most preserved place, Antarctica?
   A) To tour the world.
   B) To see the beauty of the earth.
   C) To know the geography more closely.
   D) To sensitize the young minds towards climatic change.

   Ans: D

2. Why is a visit to Antartica important to understand the effect of global warming?
   A) Because here one can see quickly melting glaciers and collapsing ice-shelves
   B) Because it is filled with snow and ice
   C) Because it is away from urban rush
   D) None

   Ans: A

3. Which programme aimed to take high school students to the end of the world?
   A) The author's delight
   B) Teachers delight
   C) School program
   D) Geoff Green's 'Students on Ice' programme

   Ans: D

4. Why did Geoff decide to take high school students on the journey?
   A) To make them tour the world
   B) To make them enjoy
   C) To make them feel relaxed
   D) To make them understand their planet and respect it.

   Ans: D

5. Why is the Antarctica the right place to understand the past, present and future?
   A) Because half million-year-old carbon records are trapped in its layers of ice.
   B) Because of layers of ice
   C) Because of cold
   D) None

   Ans: A

6. Why has the author called her journey as Journey to the End of the Earth'?
   A) Because it was too far
   B) Because no human race or plants exist
   C) Because it crosses nine time zones, six checkpoints, three water bodies and many ecospheres to reach there.
   D) All these

   Ans: C

7. What was the name of the Russian research vessel?
   A) Shokalskiy
   B) Akademik Shokalskiy
   C) Academic research
   D) Akademik Scholar

   Ans: B

8. What was Gondwana?
   A) An ancient tourist place
   B) An ancient city in Antarctica
   C) An ancient super continent
   D) None

   Ans: C

9. What was the objective of the Students on the Ice program?
   A) To make them travel
   B) To make them see snow
   C) To make them see white expanse in the form of ice
   D) To enable them to think differently to save the planet

   Ans: D

10. What disturbed the silence of the continent?
   A) The birds
   B) The animals
   C) The humans
   D) Avalanches

   Ans: D

11. Why was the programme 'Students on Ice' a great success?
   A) Because of its arrangements
   B) Because of good travel facilities
   C) Because of good food arrangements
   D) Because of the life changing exposure to the youngsters

   Ans: D

12. What kind of atmosphere does Antarctica have?
   A) Coldest
   B) Driest
   C) Windiest
   D) All these

   Ans: D

13. Where does 90% of earth's total ice exist?
   A) Pacific region
   B) Southern oceans
   C) Northern pole
   D) Antarctica Continent

   Ans: D

14. Why is Antarctica completely pure?
   A) Because of ice
   B) because of avalanches
   C) because of melting glaciers
   D) because of non-existence of humans

   Ans: D

15. If we want to know our earth, the human race and its past, present, and future where should we go?
    A) Northern Pole
    B) Southern Pole
    C) Gondwana
    D) Antarctica Continent

    Ans: D

EXTRACT BASED QUESTIONS

A. To visit Antarctica now is to be a part of that history; to get a grasp of where we've come from and where we could possibly be heading. It's to understand the significance of Cordilleran folds and pre-Cambrian granite shields; ozone and carbon; evolution and extinction. When you think about all that can happen in a million years, it can get pretty mind-boggling. Imagine: India pushing northwards, jamming against Asia to buckle its crust and form the Himalayas; South America drifting off to join North America, opening up the Drake Passage to create a cold circumpolar current, keeping Antarctica frigid, desolate, and at the bottom of the world.

1. The statement, "where we've come from" refers to
    i. Antarctica as the place where all species originated.
    ii. The pure and pristine environment that existed millions of years ago.
    iii. The giant amalgamated landmass called Godwana.
    iv. The age of dianosaurs.

2. Why should thinking about all that can happen in a million years, be pretty mind-boggling?
3. Which significant geographical changes have taken place due to the continental drifts?
4. What evidence do we have from the passage that supports the statement that the power and intellect of human beings is futile against the will of nature?

Ans: 1. ii. The pure and pristine environment that existed millions of years ago.

2. Since significant changes in landforms and climate have taken in the past, it is possible that many such changes may take place in the future that we have not assumed.

3. India and South America had been separated from its parent landmass creating the Himalayas and the Drake Passage leaving Antarctica frizid.

4. In the past, evolution and extinction as well as continental shifts had taken place which are beyond man's control.

B. *Students on Ice*, the programme I was working with on the *Shokalskiy*, aims to do exactly this by taking high school students to the ends of the world and providing them with inspiring educational opportunities which will help them foster a new understanding and respect for our planet. It's been in operation for six years now, headed by Canadian Geoff Green, who got tired of carting celebrities and retired, rich, curiosity-seekers who could only 'give' back in a limited way. With *Students on Ice*, he offers the future generation of policy-makers a life-changing experience at an age when they're ready to absorb, learn, and most importantly, act.

Fostering a new understanding and respect for our planet includes

A. Knowing the past of our planet.
B. Learning to conserve the environment.
C. Developing new cities and towns.
D. Going to the far end of our planet.

i. A&B ii. B&C iii. C&D iv. A&D

1. Geoff Green's reason for discarding the celebrities and including the students is_____
2. Why are the celebrities and retired, rich, curiosity-seekers described as people who could only 'give' back in a limited way?
3. What attribute does the author give the students?

Ans: 1. i. A&B

2. Less return from the celebrities and great prospect from the students.

3. They are past their prime and have less time and energy to work for the betterment of the environment.

4. Students are the future of our planet who have the will and power to act for a better world.

C. Nine time zones, six checkpoints, three bodies of water and many ecospheres later, I was still wondering about the beauty of balance in play on our planet. How would it be if Antarctica were to become the warm place that it once used to be? Will we be around to see it, or would we have gone the way of the dinosaurs, mammoths and woolly rhinos? Who's to say? But after spending two weeks with a bunch of teenagers who still have the idealism to save the world, all I can say is that a lot can happen in a million years, but what a difference a day makes!

1. Who does 'we' refer to?
   i. The author and her crew.
   ii. The living creatures of the planet.
   iii. The human race.
   iv. The author and the students.

2. What makes the author end with a positive note?
3. Why does the author give reference to the dinosaurs, mammoths and woolly rhinos?
4. Antarctica regaining its warmth and life comes with a warning for the human race. How can this be inferred?

Ans: 1. iii. The human race.

2. The author is confident that if students are well motivated by such programmes, the future of our planet is safe.

3. These are species which have suffered extinction due to the change in climate of our planet. The same fate may await humans too.

4. Warming up of Antarctica will be a consequence of global warming. Life may start thriving in Antarctica but the present species of plants and animals may perish.

## SHORT ANSWER TYPE QESTIONS

1. **What advantages does a visit to the Antarctica give?**
   A visit to the Antarctica will give a grasp of where we have come from and where we could possibly be heading. It will suggest the future possibilities through a study about the future climate change easily and more effectively, make us witness and realise repercussions of environmental changes. So, if one wants to study and examine the earth's past in order to reason out the present problems and to extend the scope of living for the future, one has to go to the Antarctica.

2. **How long was the journey of Tishani Doshi to Antarctica?**
   The journey to Antarctica involves crossing nine time zones, six checkpoints, three bodies of water and as many ecospheres. It is a journey of over a hundred hours in combination of a car an aeroplane and a ship.

3. **What were the emotions of Tishani Doshi on reaching Antarctica?**
   The open wide white landscape with an uninterrupted blue horizon gave her relief immediately because it ended a long journey. Then she was filled with wonder at its immensity and isolation making her wonder at how India and Antarctica were part of the same landmass. It wass a chilling and mind boggling experience.

4. **What is Gondwana? What kind of lives existed there?**
   Six hundred and fifty million years ago there was a southern supercontinent. This region, named Gondwana, was around the present day Antarctica. Human beings were not there. There was a huge variety of flora and fauna. Then Dinosaurs became extinct and mammals came to live. Continental Shift forced the landmass to separate and gave it the present shape.

5. **How did Antarctica become an isolated landmass?**
   Due to continental shift that lasted over a million years, India pushed northwards, jamming against Asia to buckle its crust and form the Himalayas. Then South America drifted off to join North America and while doing so created the Drake Passage and a cold circumpolar current. All this made Antarctica a frigid, desolate spot at the bottom of the world.

6. **How does one lose the sense of perspective and time at the Antarctica?**
   One loses his sense of perspective and time sensing the Austral Summer. The visual scale is large. You can see from the microscopic to the mighty, i.e., the smallest to the biggest. One can find midges and mites (the small ones) to the blue whales and huge icebergs (the mighty ones). The omnipresent silence is often interrupted by an occasional avalanche.

7. **How has man made mayhem after his arrival on the planet?**
   Man came on the scene of Earth only a brief while ago, if we consider the age of the Earth in hours. In this short period he has made a rumpus, creating villages to mega cities. The resources available are limited but the growing human population has been anarchic. The complete burning of the fossil fuels has created a blanket of carbon dioxide around the world. This has increased the average global temperature.

8. **What two conditions make Antarctica important for the future of mankind?**
   Antarctica is a crucial element when we talk about the future or the end of the Earth. There are two reasons for it. Firstly, it has not sustained any human population. So the witnesses of the past history have not been tampered with. The region has remained relatively pristine. Secondly the half-million-year-old carbon records are safe under the layers of ice.

9. **What is "*students on ice*"? What are its objectives?**
   *"Students on Ice"* is a programme headed by a Canadian Geoff Green. Initially, Geoff Green was escorting celebrities to the ends of the word. Since the celebrities were going there for the fun of it, there were no gains for mankind. They could give back only in terms of money. So, Green decided to take high school students, who are the future policy makers at an age when they are ready to absorb learn and act. The trip hopes to provide them with inspiring educational opportunities. These opportunities will help them develop a new understanding and respect for our planet.

10. **Why has the programme "*Students on Ice*" been successful?**
    The programme *"Students on Ice"* has been taking high school students to the ends of the world at an age when they are ready to absorb learn and act. Moreover, it is easy to sit and talk about environmental changes sitting comfortably in the classrooms. But when a student goes and sees the poles he is definitely affected by the glaciers retreating and ice shelves collapsing.

11. **Why does the narrator say "Take care of small things, the big things will fall into place"?**
    Phytoplankton is the grass of the sea. It is a single celled plant. It nourishes and sustains the entire Southern Ocean's food chain. They assimilate carbon and synthsise organic compounds through photosynthesis. If there is a further depletion of the ozone layer, the process of photosynthesis will be affected and phytoplankton will become extinct and put an end to the food cycle of the Southern Ocean. It will also affect the global carbon cycle and lead to catastrophe.

**12. Why did Geoff Green decide not to take celebrities to the poles?**

Geoff Green decided not to take celebrities to the poles because they could give back "very little" in the form of monetary benefits only. They are past their prime and have less time and energy to work for the betterment of the environment which is a major concern. On the other hand, it will make way for students as they can give much more. Students are the future of our planet who have the will and power to act for a better world.

## LONG ANSWER TYPE QUESTIONS

1. **How could one say that the Antarctica is the best class room**?

Antarctica is a crucial element in the environmental debate, because it is the only place where human population has not sustained and the ice-cores contain half million year old carbon records. If one wants to examine the past and its relative effect on the present and to extend the scope of the future Antarctica is the only place. A journey to the poles provided a meaningful activity for school children. The occasional avalanches, or calving ice sheets will make a person place himself in the context of earth's geological history. Antarctica expedition provides the students with inspiring educational opportunities. It makes them develop a new understanding and respect for our planet. The future generation of policy makers gets the life changing experience at an age when they are ready to absorb, learn and act. A journey to the poles affects a person. It is easy to talk about the melting of polar ice-caps sitting with in the four walls of a class room, but when a person sees the glaciers retreating and ice-shelves collapsing, they realise that the threat of global warming is very real.

2. "Take care of the small things and the big things will take care of themselves". Explain with reference to the lesson **'Journey to the end of the earth'**

Each element in the environment plays an important role in the eco systems which altogether contribute to the welfare of the planet. Phytoplankton is the grass of the sea. It is a single celled plant. Although they look very insignificant, they nourish and sustain the entire Southern Ocean's food chain. They assimilate carbon and synthsise organic compounds through photosynthesis. If there is a further depletion of the ozone layer, the process of photosynthesis will be affected and phytoplankton will become extinct and put an end to the food cycle of the Southern Ocean. They also maintain equilibrium in the carbon-oxygen level both on land and in water. The level of carbon dioxide needs to be checked to stop a further increase in global temperature. If unchecked, it will lead to catastrophe. Similarly, we need to take care of the small components of the environment which are playing significant roles in keeping our planet alive. Each small step we take can contribute in our mission to save the planet not only for ourselves but for future generations.