Understanding Our Environment

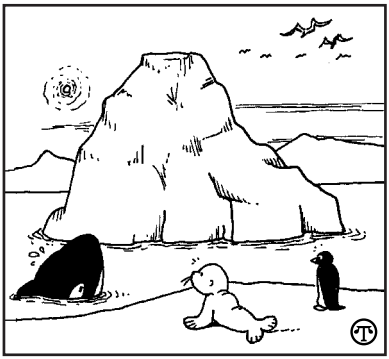
Food Chain Effects Just Tip Of The Iceberg

(NAPSA)—When many people in the United States hear the word "iceberg," the immediate image may be *Titanic*. While that massive ice formation may have loomed large for the passengers on that luxury liner, it's nothing compared to the effect that real icebergs are having on Antarctic sea life, with potential ramifications around the world.

NASA-funded research using satellite data has shown large icebergs that have broken off from Antarctica's Ross Ice Shelf are dramatically affecting the growth of minute plant life in the ocean around the region—plant life vital to the food chain.

Kevin Arrigo from Stanford says the icebergs appear to have caused a 40 percent reduction in the size of the plankton bloom in one of Antarctica's most biologically productive areas. The icebergs restrict the flow of pack ice, decreasing the amount of open water which the plants need for reproduction.

After the "calving," or breaking off, of the B-15 iceberg in March 2000, researchers used imagery from NASA's SeaWiFS (Sea-viewing Wide Field-of-view Sensor) satellite and data from the Defense Meteorological Satellite Program to see the effect that large icebergs have on phytoplankton blooms. How large? The B-15 is approximately the size of the state of Connecticut.



The flow of massive icebergs can have an effect on the world's ecosystems.

NASA's Thorsten Markus of the Goddard Space Flight Center, Greenbelt, Md., noted that satellite imagery lets researchers see that large icebergs such as the B-15 restricted the normal drift of pack ice. Normally, when the winds shift, ice is carried out into the Ross Sea, creating open ocean space and a breeding ground for phytoplankton. The icebergs, however, created a blockage that resulted in heavier pack-ice cover than previously recorded.

Phytoplankton are a critical part of the entire ecosystem in the Ross Sea, since they sustain marine mammals and birds in the region.

To learn more about icebergs and NASA's research, visit http://earthobservatory.nasa.gov.