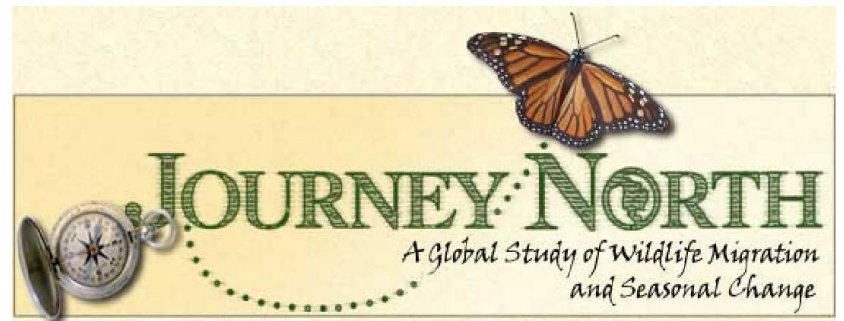




© 2011 Journey North  
<http://www.learner.org/jnorth/>



## Navigating the Way

By Journey North and Mike Hawe, ACS/LA



Photo © Journey North

## How Do Gray Whales Find Their Way?

Even scientists wonder how gray whales find their way to and from the frigid arctic seas and the warm Mexican lagoons.

No one knows for sure, but scientists have some ideas. Before you hear them, what ideas do YOU have?



Photo © Sheila Daniels

## Low-frequency Sounds

One hypothesis is that the whales use low-frequency sounds, like a primitive sonar. The whales also may use these sounds to communicate with each other, like a chain: "Hey, follow me. Go this way."



Photo © Michael H. Smith



Photo © Caroline Armon

## Known Sounds

Whales have acute hearing, and they migrate close to the coast. They may be able to hear the waves hitting the shore. They may hear the sounds of small creatures living in the kelp beds. These sounds tell the whales they are close to the coast.

## Landmarks

The whales might even use visual aids. Maybe they recognize certain landmarks. Some believe the behavior of **spy hopping** gives whales a better look around for landmarks along the way.

As this whale spy hops, it might notice important landmarks!



Photo © Michael H. Smith

## **Scent Memory**

Some scientists believe the whales have an inborn "geographic memory." The whales may detect the scents of different waters from certain areas to guide them on their way.



Photo © Caroline Armon

## **Earth's Magnetic Field**

The latest hypothesis is that the whales respond to the earth's magnetic field. Small particles of magnetite (iron oxide) in the whale's brain makes this possible.



Photo © BreeWitteveen

## **Finding Their Way**

However they find their way, it is an epic journey. For some whales, it's their very first. For others, it is just another of many such journeys made during a long, long life. Each year, we thrill at the news of the gray whales' return and the mysterious wonder of finding their way.



© 2011 Journey North  
<http://www.learner.org/jnorth/>