



## HERE COMES THE SUN

Spring is on its way in Antarctica. Each day the length of daylight increases by 15 minutes, and the arrival of the sun has brought much appreciated warmth. In fact, windchill temperatures on the ice have risen almost 100 degrees in the past week: from a low of nearly -100 °F to 0 °F.

As the sun rises, Weddell seals begin to emerge like wintering bears from their hiding places below the sea ice. After weeks of surveying the area, our team discovers the first seals to haul out on top of the ice. Resembling vacationing humans lying on a beach, the seals take advantage of the warmer weather to sunbathe next to icebergs.



The seals arrive by using their specialized front teeth to “ream” the sea ice from below. Scraping their front teeth across the ice, the seals are able to create a hole big enough to wedge their large bodies through. These specialized teeth allow the Weddell seal to be the only “warm-blooded” marine animal (mammal or bird) to live in the areas of solid (fast) ice in Antarctica year round. There are no penguins, whales, or other seals in the winter where the Weddell seals live. This is because only Weddell seals can make their own breathing holes in the sea ice.

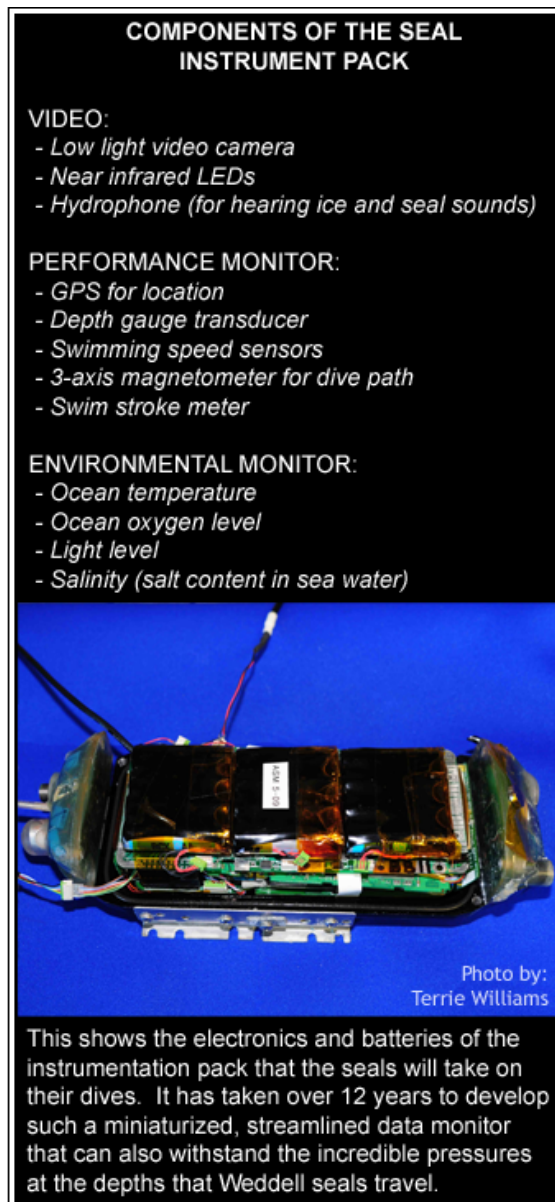


Compare the skulls of the two Antarctic seals above. The Weddell seal on the left has protruding front canines that act as ice picks for making holes in the sea ice. This gives the Weddell a buck tooth appearance. In comparison, the Leopard seal on the right has enormous canines that curve down. It is easy to see how the Leopard seal got its name - it is a fearsome predator in Antarctic waters. However, this leopard cannot follow the Weddell seal into the fast ice areas because it can not ream breathing holes. Thus, Weddells are safe from their attacks.

## HIGH TECH SEALS

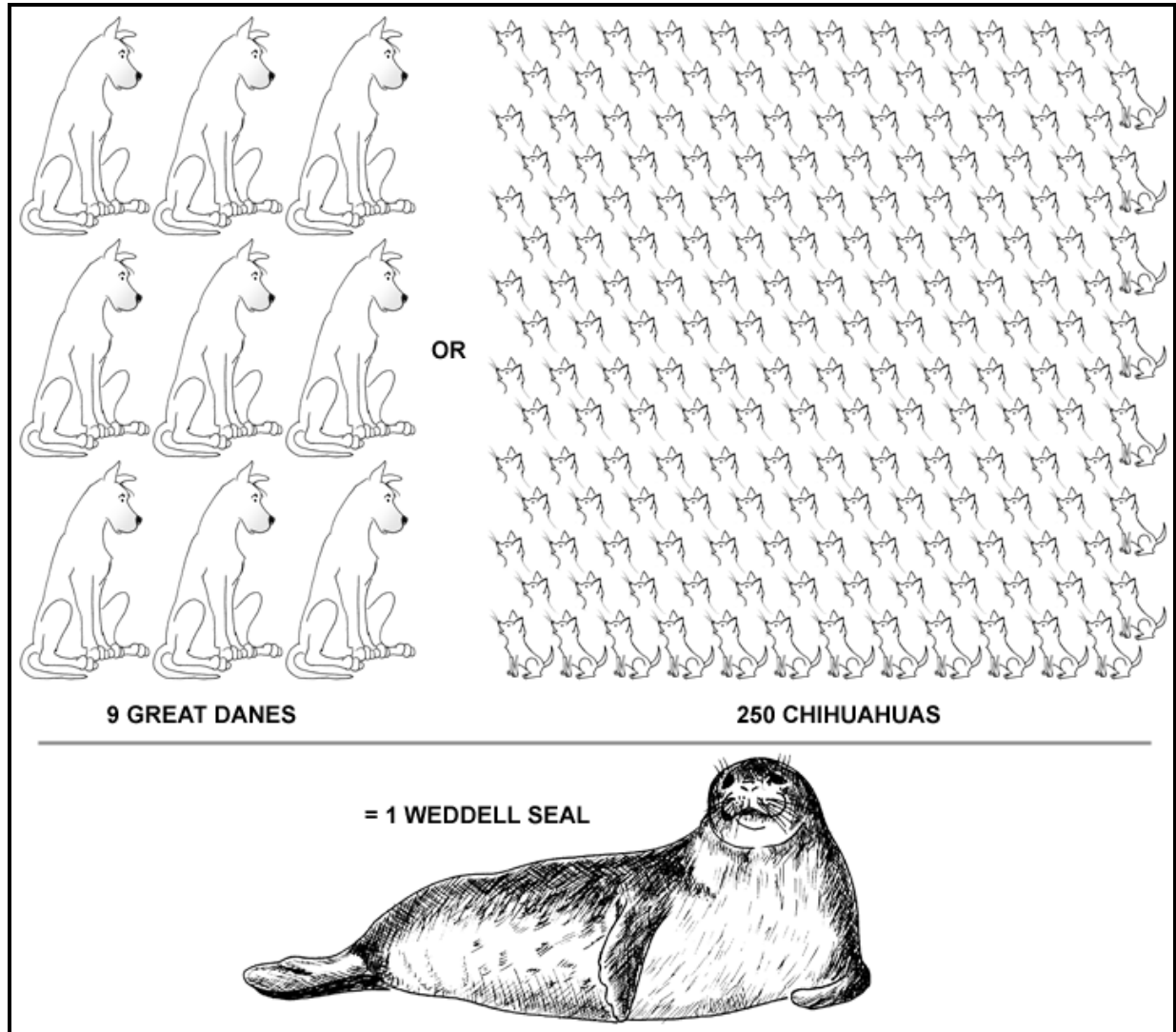
With Weddell seals finally appearing, it is time to begin our research. Our goal is to understand how Weddell seals hunt in the dark ocean below the ice. We also want to know how the seals survive the rapid changes in ice conditions that are occurring with environmental changes in the Antarctic. But how do you follow a seal when it is diving? Because SCUBA divers can not dive as deep or swim as fast as a seal, we have the seals help us record their underwater behavior and their environment.

This year five Weddell seals will be provided with miniaturized video camera/ instrument packs. The small package is placed on the head and upper back of the seal. This gives us a seal's eye view under the ice. The instruments record what the seals see and hear underwater, monitor where it goes, and even record the ocean temperatures and fish that the seal encounters. It is as if each seal is carrying its own iPhone or Blackberry!



## OUR FIRST WINTER SEALS

During a week of sunny days we locate five Weddell seals for our study. All are adults that weigh between 770 to 1100 pounds (350 to 500 kilograms).



Each seal is equivalent in weight to nine Great Dane dogs or 250 Chihuahuas! That is a lot of seal. Fortunately, Weddell seals have a very calm temperament - which is unusual for such a big, wild animal.

## MEET THE 2009 WINTER EXPEDITION SEALS

Every Weddell seal has a unique temperament and will tell us something different about their underwater lives and homes. Some are superior divers, some are underwater fighters, and others are speedy swimmers. Instead of calling the seals "Seal 1", "Seal 2", or "Seal 3", an expedition member who was reading the Hairy Potter books suggested names based on each seal's attitude. This will help us identify the seals when we retrieve their instrument packs. For the next four weeks we will be working with:



### Hairy Potter the Seal

A young male Weddell seal. He is identified by scars from fights with older Weddell seals.

JOIN HARRY POTTERSEAL ON FACEBOOK.



<http://www.facebook.com/search/?q=neville+longbottomdive&init=quick#/profile.php?id=100000329766172>

Photo by: Terrie Williams

### Ron WeSealey

Another young, male seal that is identified by the ginger color of his muzzle. His behavior ranges from quiet to rambunctious.

JOIN RON WESEALEY ON FACEBOOK.



<http://www.facebook.com/search/?q=neville+longbottomdive&init=quick#/profile.php?id=100000329736196>



Photo by: Terrie Williams



### Neville Longbottom Dive

The mildest of the seals we are studying. Neville is a young, medium sized male seal with a puppy dog character.

JOIN NEVILLE ON FACEBOOK.



<http://www.facebook.com/search/?q=neville+longbottomdive&init=quick#/profile.php?id=100000372452201>

Photo by: David Williams

**Prof. Minerva McGonaSeal**

The only female seal in our study. She is a large, very long, older seal that does not take any nonsense.

JOIN MINERVA'S ON FACEBOOK.

 <http://www.facebook.com/search?q=neville+longbottomdive&init=quick#/profile.php?id=100000313146098>



Photo by:  
Beau Richter



Photo by:  
Terrie Williams

**Hagrid the Seal**

The biggest male seal of the group. Despite Hagrid's apparent laziness, he clearly is a good underwater hunter and feeder - he has the thickest blubber layer of all of the seals measured.

Finally, after all of the expedition planning, travel, cold and surveying of ice, Neville, our first Weddell seal of the 2009 expedition, takes the plunge wearing his camera. Neville is quickly followed by Hairy Potter, Prof. McGonaSeal, Ron WeSealey and Hagrid.

After dipping their heads into the slushy blue water, each seal with its camera slips with a splash into a large hole in the ice. They are free to swim and dive across McMurdo Sound - this time recording their underwater world for us. It may be weeks before we see them again. The question is, what will each of the seals encounter along their travels?

Join Hairy Potter the Seal as he takes his first plunge with his camera into Antarctic waters :

YouTube Video: "Night Chills: Seal Sun Lover"  
<http://www.youtube.com/watch?v=rKJCiZ5YPxg>

Next Week: Race Across The Ice