

Elephant Seal Swimming Speed

by Linn Johnson, Año Nuevo docent

I was at Año Nuevo and ran into three researchers from UCSC. They were gluing three instruments on a female seal at Mid-Bight beach. One instrument, on her head, was a satellite position tracker, another on her back was a time-depth recorder (I was impressed about how small they are these days: about 2 inches long by 1 inch wide), and the other was a speedometer. The speedometer was also quite small and glued to the seal's back in front of the time-depth recorder. The speedometer had a vertical axle (90 degrees from her back) with about a 1 inch impeller, which spins to record the seal's speed as water flows through the device.

One of the researchers had done a thesis for his master's degree on elephant seal swimming, so I asked the obvious question; how fast do elephant seals swim? His answer was 2 meters per second, average. I asked what is the fastest speed? His answer was about 5 meters per second.

So for average swimming, 2 meters per second works out to be 120 meters per minute

- or 7.2 kilometers per hour
- or about 4.5 miles per hour
- or 172.8 kilometers per day
- or 107.4 miles per day.

Remember that 107.4 miles per day would not be the point-to-point distance on Earth because you must account for the V-shaped diving to depth and swimming to the surface.

Top speed of 5 meters per second works out to be 18 kph or 11.2 mph.

Now we know the answer to one of the frequently asked questions.