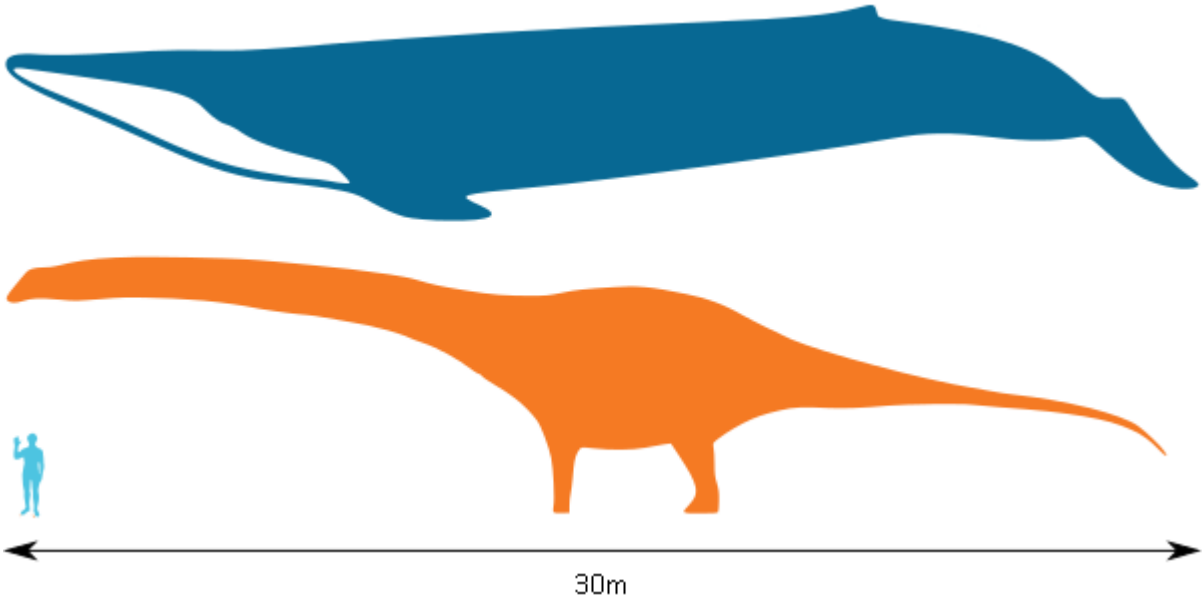
Dreadnoughtus schrani vs a blue whale

Sedgwick Museum of Earth Sciences

***Dreadnoughtus schrani* is a newly discovered species of dinosaur and the biggest titanosaurian sauropod dinosaur found so far. It is the largest land animal who's body mass can be accurately calculated. So how does that compare to the largest animal alive today, the blue whale?**



Sauropod:

A large plant-eating dinosaur with four pillar-like legs, barrel-like body, long neck and tail and tiny head (relative to the rest of its body) with a comparably small brain. Titanosauians are a group of sauropods that include the largest to have ever lived.

	Dreadnoughtus	Blue whale
Length	26m	30m
Weight	60 tonnes	181 tonnes
Found	Patagonia, South America	North Pacific, Antarctic, and Indian Ocean, North Atlantic, and at least two groups in the Southern Hemisphere
When	Upper Cretaceous (84–66 million years ago)	Roughly 28 million years ago - today
Conservation status	Extinct	Endangered

Why is *Dreadnoughtus* important?

Completeness

The skeleton is 70% complete, more than any other massive titanosaur, and because we have the limb bones we can make a reasonable estimate of its size and mass. *Argentinosaurus* was of a similar mass, maybe even greater, than *Dreadnoughtus*, but we only have a few of its bones: half dozen vertebrae in its mid-back, a shinbone and a few other fragmentary pieces, which make it difficult to accurately calculate the mass.

Preservation

The preservation is so good we can see scars where the muscles attached to the bones. This helps to tells us how big their muscles were and what they were used for. This is important because the muscles themselves do not fossilize.

Why is the preservation so good?

Dreadnoughtus was buried quickly when the ground it was standing on turned to quicksand after a river burst its banks. The flood water covered the dinosaur in fine grained silt and sand. Rapid burial kept most of the bones together and the fine sediment preserved the details.

Facts

Blue whales were abundant in nearly all the oceans until the beginning of the twentieth century when they were hunted almost to extinction. They were protected in 1966 and since then their numbers have risen to between 10,000 and 25,000 worldwide today.

An average blue whale can hold 90 tonnes of food and water in its mouth but can't swallow anything bigger than a beach ball.

The average blue whale heart weighs 180 kg and is the largest known in any animal.

Dreadnoughtus weighed more than seven *T. rex* but a blue whale weighs the same as 30 *T. rex*.

What's in a name? The name *Dreadnoughtus means 'fear nothing' and* refers to the 1906 battleship H.M.S. Dreadnought, which was huge, thickly armoured and virtually impervious to attack - just like a fully grown *Dreadnoughtus*. The *schrani* part of the name was given in recognition of the American entrepreneur Adam Schran who helped finance the team working on the fossil.

Evidence from the skeleton of the *Dreadnoughtus* suggests it was probably not fully grown when it died.

If you want to know more about Dreadnoughtus, this article in Nature is by Kenneth Lacovara and the team who found the fossil.
A Gigantic, Exceptionally Complete Titanosaurian Sauropod Dinosaur from Southern Patagonia, Argentina
https://www.nature.com/articles/srep06196