This dashed line represents the whale size before it was consumed.

Scientists have identified four stages of a whale fall. The stages – which often overlap or blend together – are shown above, starting with the head (Stage 1) and ending at the tail (Stage 4). The duration of these stages is estimated, and varies depending on the size and species of the whale.

**Stage 1:** Mobile-scavenger stage, months - 5 years

- Free-moving scavengers, like octopuses, rattails, hagfishes, sharks, and other free-swimming animals consume the whale's soft tissues.

**Stage 2:** Enrichment-opportunistic stage, months - 2 years

- A great number of polychaete worms, crustaceans, and other scavengers colonize the bones and remaining carcass. The whale fall begins to turn visible, and its diversity increases.

**Stage 3:** Sulphophilic stage, up to 50 years

- Once the soft tissue is removed from the bones, bacteria, Osedax worms, clams, and other organisms break down lipids within the fatty bones and produce sulphides, which other organisms can then consume.

**Stage 4:** Reef stage, unknown

- Whale falls have only been studied for a few decades, but scientists believe the hard, mineral skeleton left behind after nutrients have been consumed eventually provides structure for deep-sea suspension feeders.

**Timeline**

- Identification: The presence of baleen, a filter-feeding system inside the mouths of some whales, helps scientists identify which whale species they found.

**Common Organisms Found on a Whale Fall**

- Hagfish (Hagfishes)
- Sixgill Shark
- Rattail Fish
- Pom-Pom Anemone
- Sea Pig
- Eelpout Fish
- Bone eating Osedax Worms (red)
- Bacteria (yellow)
- Squat Lobster
- Giant Isopod
- Grooved Tanner Crab
- Muusoctopus
- Giant Snails
- Osedax Worms
- Rubyspira Worms
- Hesionid Worms
- Hooded Shrimp
- Amphipods
- Mussels
- Ampharetid Worms
- Brittle Star
- Squat Lobster

For a full list of references, visit sanctuaries.noaa.gov/magazine/5/whale-fall