

1  **Skates and Rays**

Ashley and Jayce

2  **Rays**

- Members of two orders:
  - Myliobatiformes
  - Torpediniformes (electric ray)

3  **Skates vs. Rays**

- Rays are viviparous (bare live young) while skates are oviparous (lay eggs)
- Skates do not have barbs but may have thorns on their dorsal area or tails
- Both belong to the class Chondrichthyes
  - Cartilaginous fish
- Rays are generally bigger and can grow up to 22 ft (Manta Rays)

4  **Skates vs. Rays**

- Both are flat bodied
- Large pectoral fins
- Although in the same class as sharks, differ considerably more from them than each other
- Skates have small teeth while rays have plate-like teeth

5  **Thorns vs. Barbs**

6  **Rays**

- Tails are often almost twice the length of body
- Barbs are above the tail

7  **Skates**

- Skates, unlike rays, have thorns
- The amount and where they are found on the skates differ from skate to skate

8  **Ray Swimming Style**

9  **Skate Swimming Style**

10  **Clearnose Skate (*Raja eglanteria*)**

- Gets its name from the clear areas on either side of its snout

11  **Clearnose Skate (*Raja eglanteria*)**

- Found from Massachusetts to Southern Florida and the eastern Gulf of Mexico

- Caught inshore but move offshore when it gets cold
- Very adaptable
  - Caught in waters from 43 to 80 degrees F
  - Caught in salinities from 12 ppt to 35 ppt

12  **Clearnose Skate (*Raja eglanteria*)**

- Has between 46 and 54 upper teeth and around 48 lower teeth
- Males have sharper teeth than females
- Eat primarily mollusks, shrimps, crabs, and small fish

13  **Barndoor Skates (*Dipturus laevis*)**

- Found from Newfoundland to Northeastern Florida

- Can be found along the shoreline but prefers depths between 492 ft. and 2460 ft.
- Can be found in brackish water but prefers higher salinities
- One of the biggest skates in North America- largest reports of 59 inches and almost 40 lbs

14  **Winter Skates**

15  **Winter Skates**

- Found in the Western Atlantic Ocean
  - From Newfoundland Banks and the Southern gulf of St. Lawrence (Canada) to North Carolina
  - Commonly found in waters along the New England coast

- Reside in waters from the surface to 300 ft in depth
  - Prefers sand and gravel
  - Most of its activity is at night

16  **Winter Skates**

- Grows to about 41 in in length and 15 lbs
- Their lifespan is about 19 years
- Females produce about 40 egg cases a year

17  **Little Skate**

18  **Little Skate**

- Found in Western Atlantic Ocean
  - Canada to North Carolina

- Typically found on sandy or gravel bottoms from shallow waters to 295.28 ft
- Most active during daylight hours
- High tolerance of temperatures and salinity
  - 89.6°F (32°C) to 158°F (70°C).
  - 27 0/00 to 33.8 0/00 but their optimal range is 29 0/00 to 33 0/00.

19  **Little Skate**

- Usually reach 16 to 20 inches in length
- They can weigh anywhere from  $\frac{3}{4}$  of a pound to 2 pounds
- The winter skate is a common predator of the little skate

20  **Mermaid's Purses**

21  **Mermaid's Purses**

- Actually the eggs laid by the female skates
- Usually around 2 to 3.5 inches long and 1.5 to 2.25 inches wide
- Incubation can last from 3-12 depending on different types of species
- Clearnose skate eggs fail to hatch in water warmer than 75 F

22  **Sources**

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