

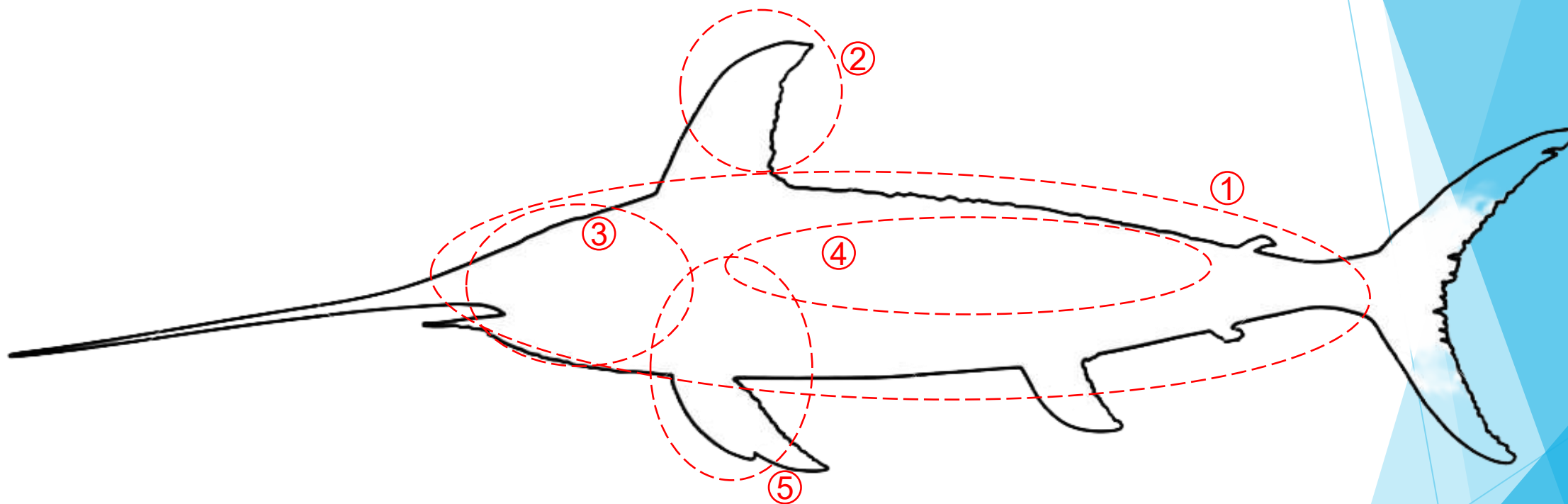
Differences between blue marlin (*Makaira nigricans*) - BUM ▶ and striped marlin (*Kajikia audax*) - MLS

IOTC Species identification and sampling
workshop

Kochi, India, September 29th to October 3rd, 2025



What and where to look?



①- Body shape



More massive, very robust



Blue marlin

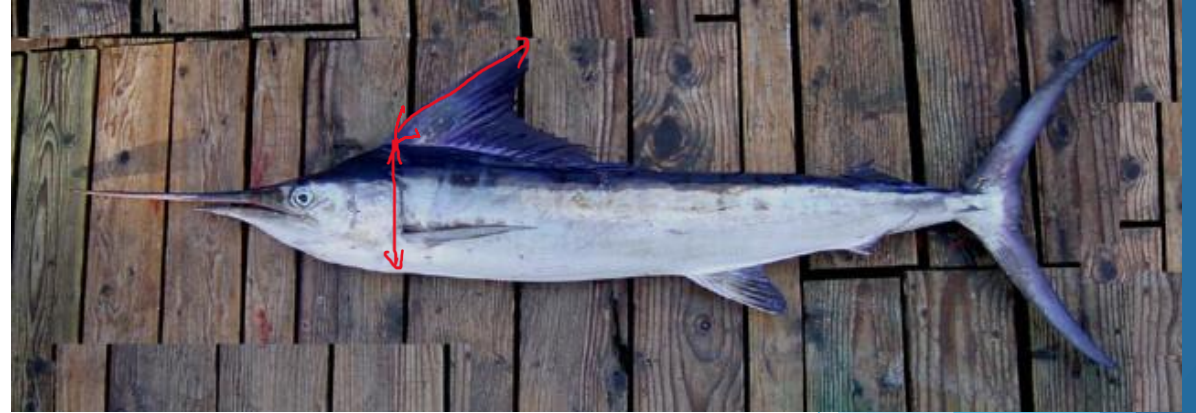


Elongated

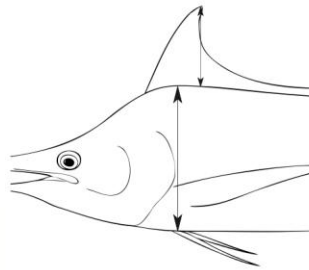


Striped marlin

②- Dorsal fin

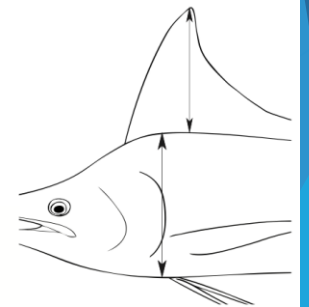


First dorsal height = $1/2$ to $3/4$ of body depth



Blue marlin

**FIRST DORSAL HEIGHT
>=
BODY DEPTH**



Striped marlin

③ – Head profil



Rounder forehead



Blue marlin



More sloping and streamlined



Striped marlin

④- Stripes and colours



faint and not
always visible
once dead



Blue marlin



prominent,
vertical blue-
violet stripes,
visible after
dead



Striped marlin

⑤ - Pectoral fins and pelvic fins

- Blue marlin : Pectoral fins long and narrow, pelvic fins shorter than pectoral fins
- Striped marlin: Long pelvic fins almost as long as pectoral fins

General characteristics (relative)

Feature	Blue Marlin (<i>Makaira nigricans</i>)	Striped Marlin (<i>Kajikia audax</i>)
Size	Very large (> 4 m, > 500 kg)	Smaller (max ~3.5 m, ~200 kg)
Body	Very robust, heavy-bodied	Slender, elongated
Bill	Shorter, thick	Longer, thin
Dorsal fin	Longer, thin	Very tall, pointed
Stripes	Usually faint or absent after death	Prominent vertical blue-violet stripes
Head profile	Prominent vertical blue-violet stripes	Sloping, streamlined

Blue Marlin (*Makaira nigricans*) BUM

- Body shape: very robust, heavy-bodied, thicker than striped marlin.
- Bill (rostrum): relatively shorter and thicker.
- Dorsal fin: lower, never taller than body depth; rounded in shape.
- Stripes: faint and not always visible once dead; if present, pale and irregular.
- Coloration: cobalt-blue on the back, silvery belly.
- Size: the largest marlin, females can exceed 4 m and 500+ kg.
- Head profile: more rounded forehead.

Striped Marlin (*Kajikia audax* - *Tetrapturus audax*) MLS

- Body shape: slender, elongated, less bulky.
- Bill (rostrum): longer and thinner.
- Dorsal fin: very tall, often higher than body depth, especially at the front; pointed shape.
- Stripes: prominent, vertical blue-violet stripes, usually visible even after death.
- Coloration: dark blue on the back with vivid stripes, silvery belly.
- Size: generally smaller than blue marlin (up to ~3.5 m, 200–220 kg).
- Head profile: more sloping and streamlined.

Field ID summary

- If it's big, thick-bodied, with a shorter bill and low dorsal → Blue Marlin.
- If it's slim, with a tall dorsal fin and strong vertical stripes → Striped Marlin.

Juvenile Blue Marlin (*Makaira nigricans*)

- Body shape: slimmer and less massive than adults → can superficially resemble striped marlin.
- Stripes: juveniles often show faint vertical stripes (especially when fresh), which may mislead observers into thinking it's a striped marlin.
- Bill: proportionally longer in juveniles than in adults, which again makes them look closer to striped marlin.
- Dorsal fin: not as tall as in striped marlin, but can look relatively larger in juveniles because the body is thinner.

Juvenile Striped Marlin (*Kajikia audax*)

- Body shape: already slender and elongated (consistent with adults).
- Stripes: very clear and usually remain visible even after death — one of the most reliable characters.
- Dorsal fin: very tall relative to body depth, even in juveniles.

Key to reduce confusion

- Stripes: if they are very prominent and persist after death → Striped Marlin. If they are faint/irregular or fade quickly → likely juvenile Blue Marlin.
- Dorsal fin height: remains a good discriminator — very tall (higher than body depth) = Striped Marlin.
- Overall robustness: even juveniles of Blue Marlin tend to look more “deep-bodied” compared to the slimmer striped marlin.
-
- The dorsal fin height and persistence of stripes after death are the safest distinguishing features in juveniles.

Quizz



BUM

Quizz



MLS

Quizz



BUM

Quizz






MLS

Sources

- FAO Species Identification Guides (par zones de pêche, ex. FAO Species Catalogue for Fishery Purposes), qui donnent des clés morphologiques détaillées.
- FishBase (www.fishbase.se), une base de données mondiale sur les espèces de poissons avec descriptions, photos et cartes de distribution.
- FAO Fisheries and Aquaculture Fact Sheets pour les espèces d'importance commerciale.
- Scientific field guides & ichthyology references, par ex. Collette & Nauen (1983) — FAO species catalogue, vol. 2. Scombrids of the world.
- <https://iotcofcm.wixsite.com/speciesid/properties-2>

Sources

Marlins (Istiophoridae)

- Nakamura, I. (1985). FAO Species Catalogue. Vol. 5. Billfishes of the World. An annotated and illustrated catalogue of marlins, sailfishes, spearfishes and swordfishes known to date. FAO Fisheries Synopsis No. 125, Vol. 5. Rome: FAO. 65 p.
-  FAO PDF en ligne
- FishBase – Blue Marlin (*Makaira nigricans*)
-  FishBase species summary
- FishBase – Striped Marlin (*Tetrapturus audax* / *Kajikia audax*)
-  FishBase species summary

Field guide

- Fischer, W. & Bianchi, G. (eds) (1984–1996). FAO Species Identification Sheets for Fishery Purposes – Western Indian Ocean & other regions. FAO, Rome.
- FAO (2001). Field Identification Guide to the Living Marine Resources of the Western Indian Ocean. Rome: FAO.



Thank you for your attention

Any question?