

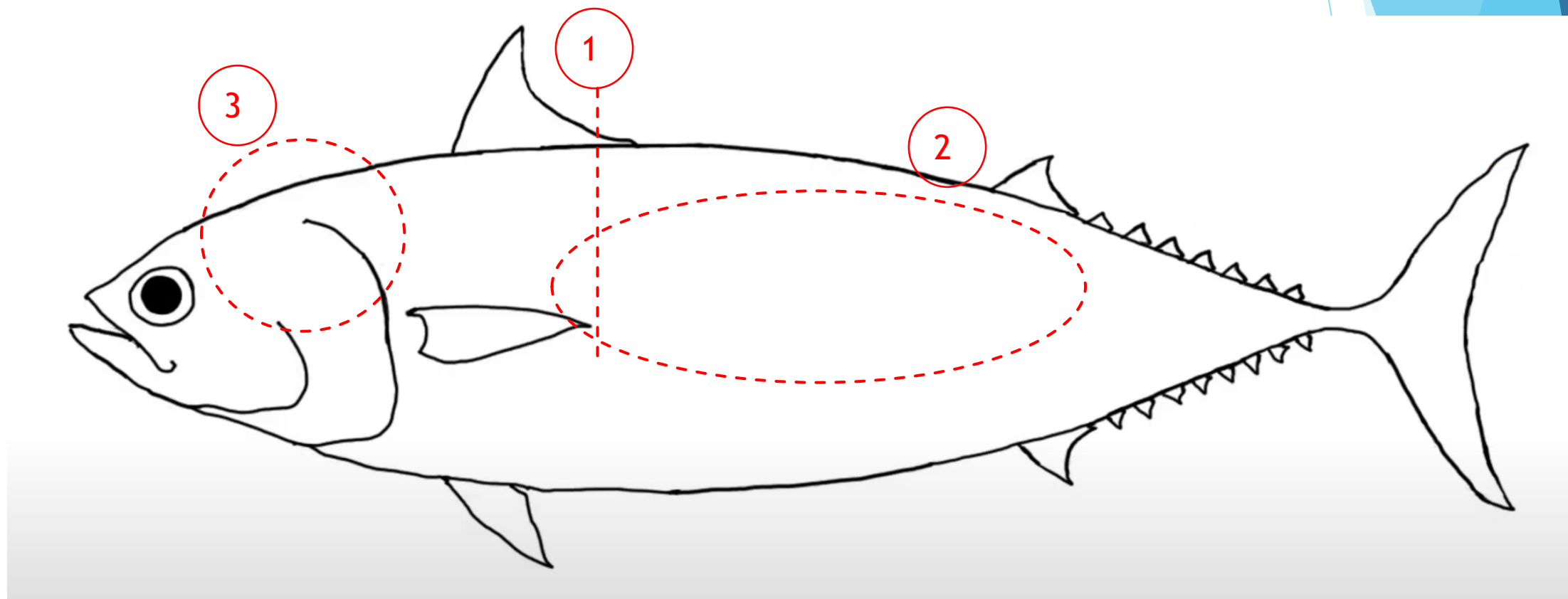
Differences between Bullet tuna (*Auxis rochei*) - BLT ▶ and Frigate tuna (*Auxis thazard*) - FRI

IOTC Species identification and
sampling workshop

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

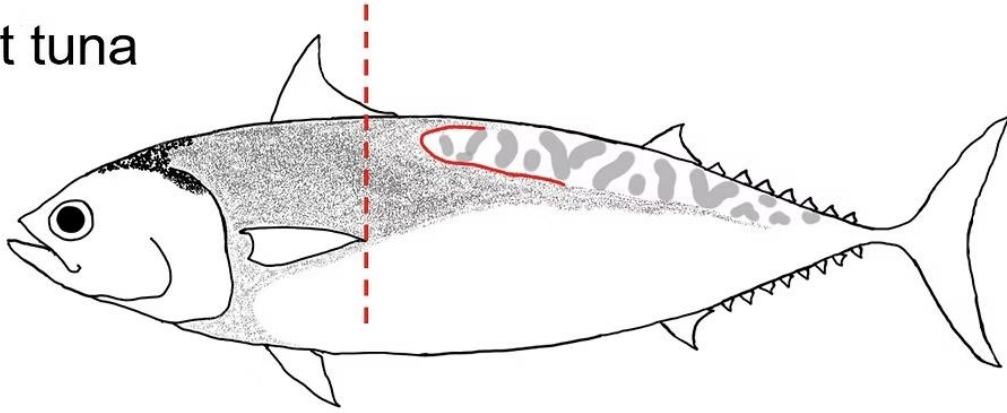


What and where to look?

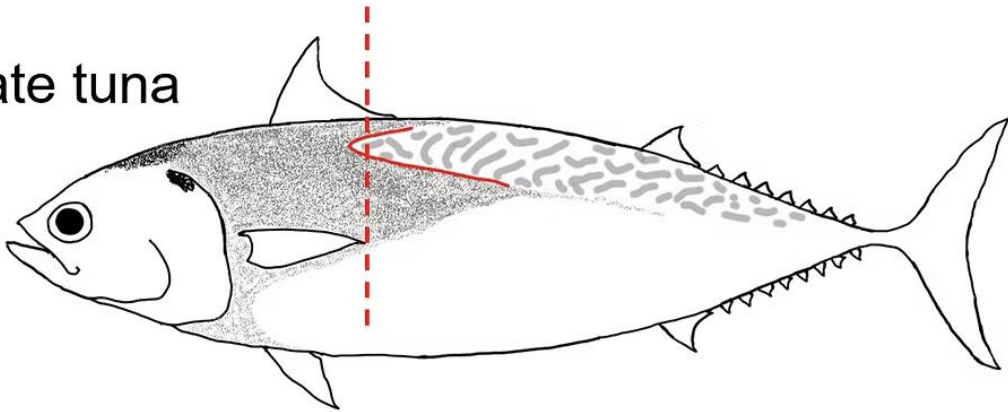


① Patten zone overlap with pectoral fin

Bullet tuna



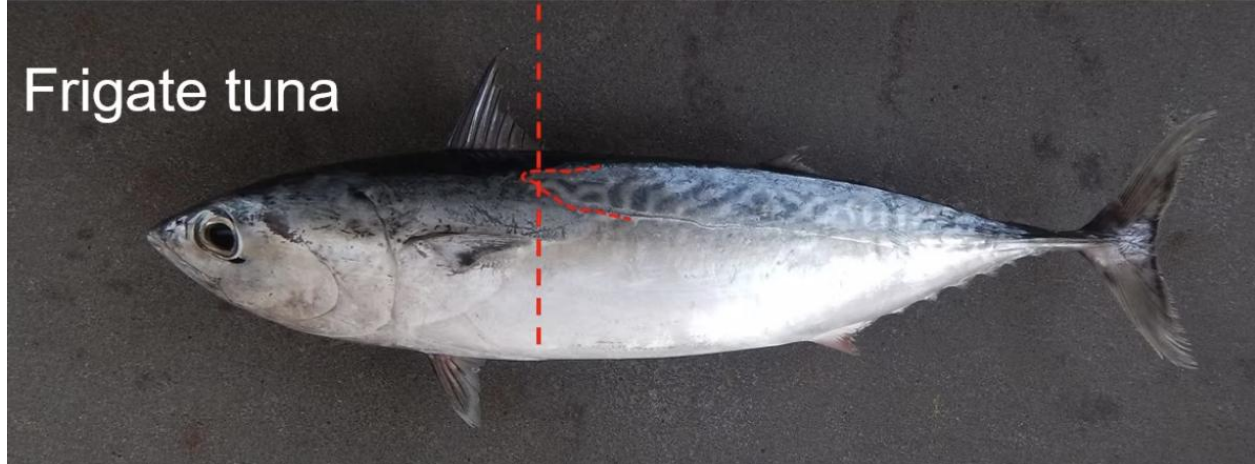
Frigate tuna



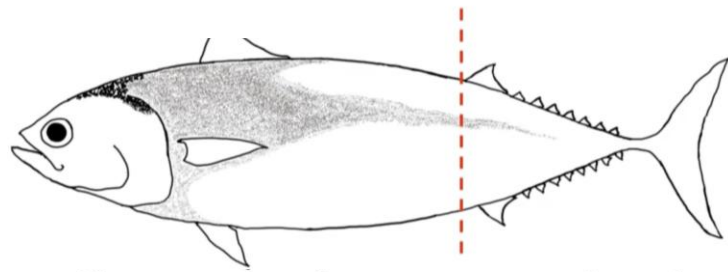
Bullet tuna



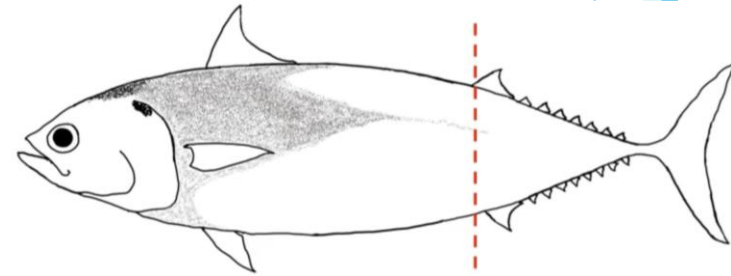
Frigate tuna



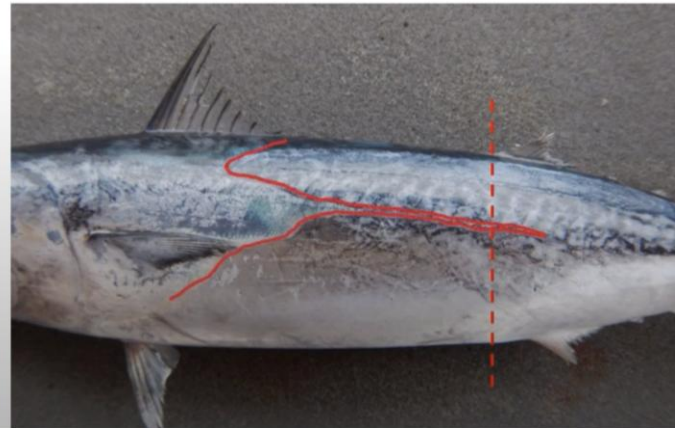
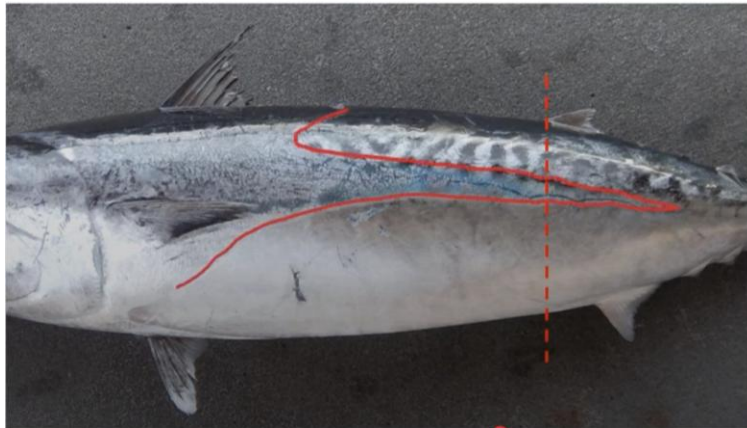
② – Shape of the corselet



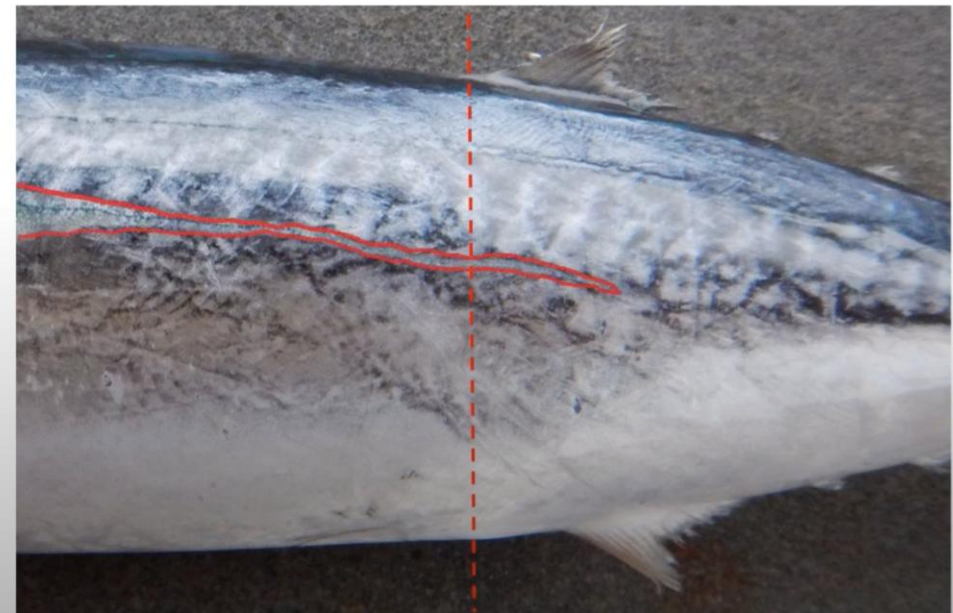
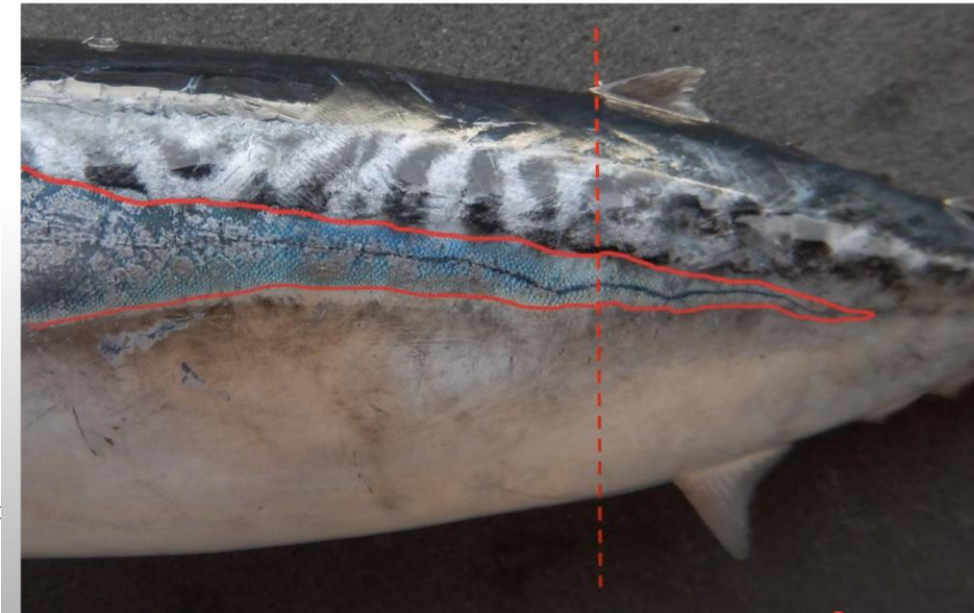
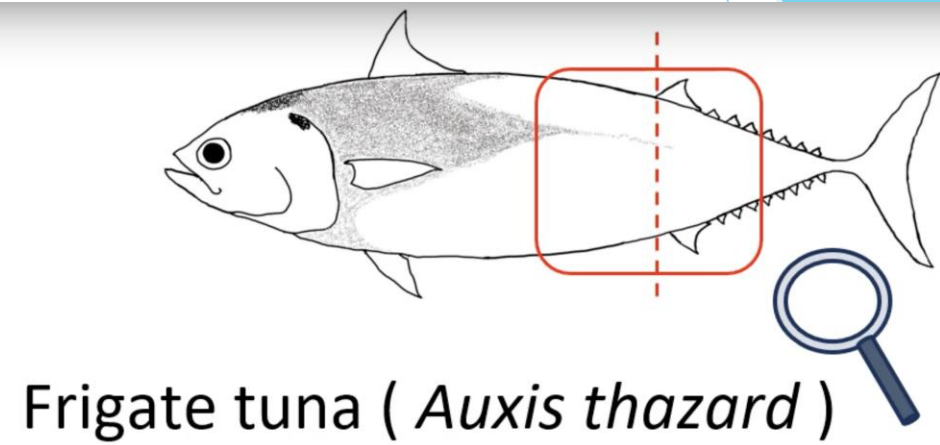
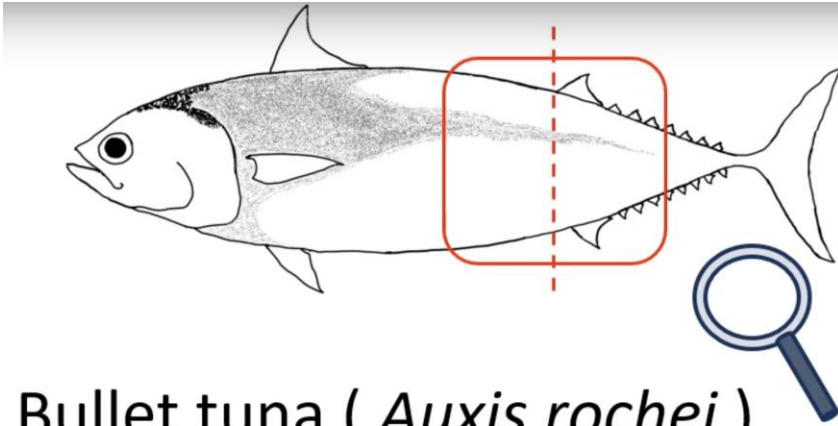
Bullet tuna (*Auxis rochei*)



Frigate tuna (*Auxis thazard*)

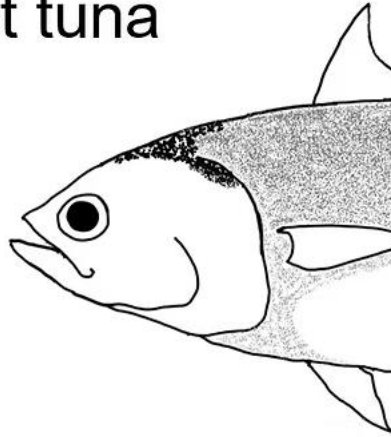


② – Shape of the corselet

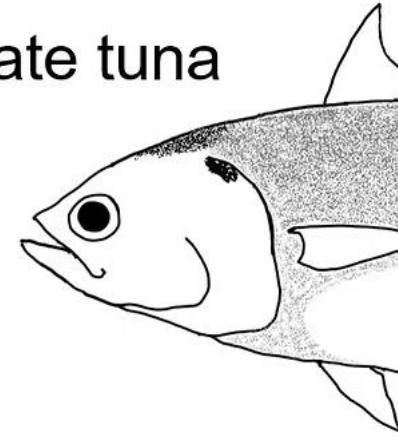


③ – Operculum : shape and colour

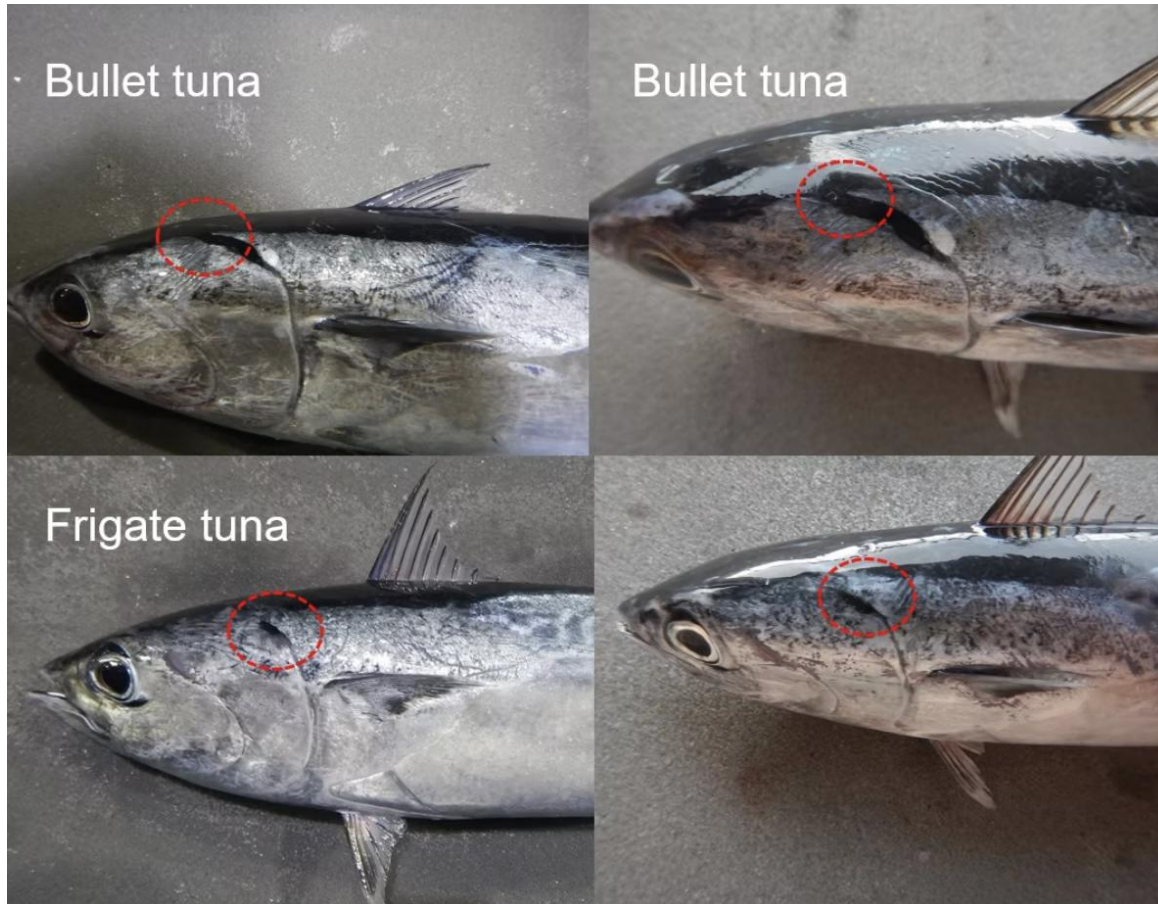
Bullet tuna



Frigate tuna



③ – Operculum : shape and colour

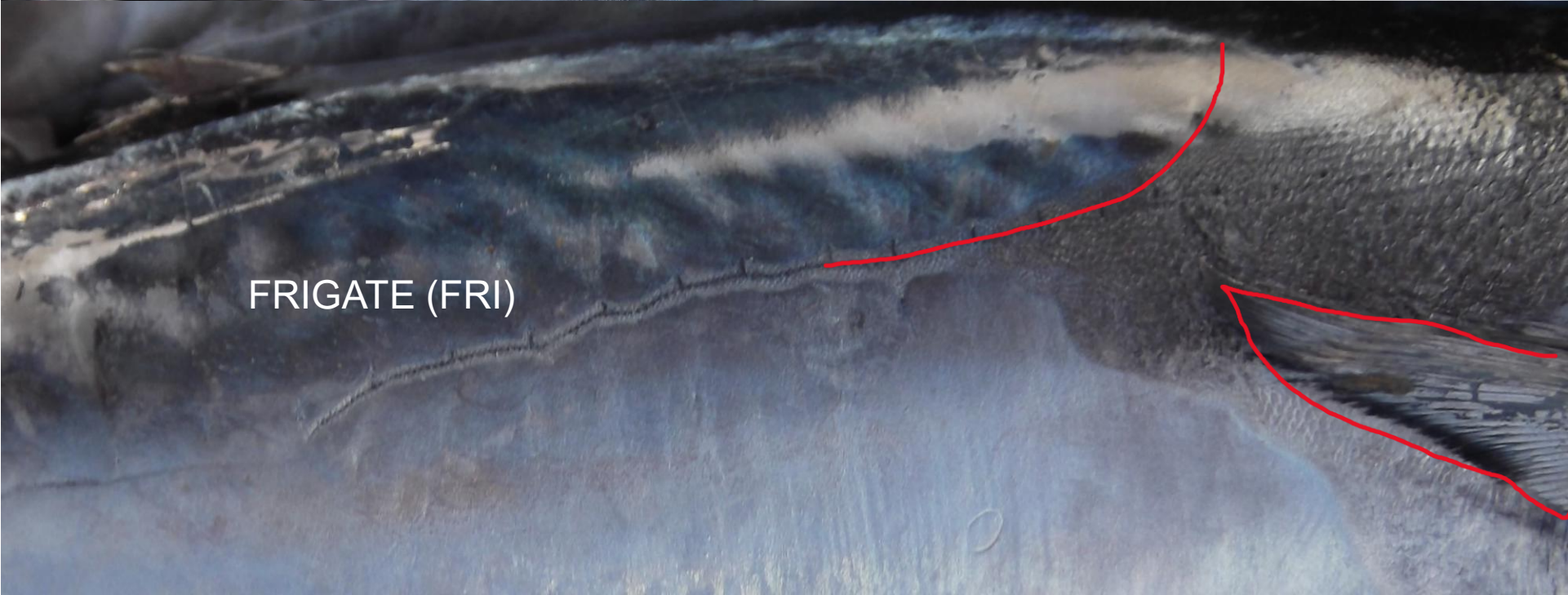
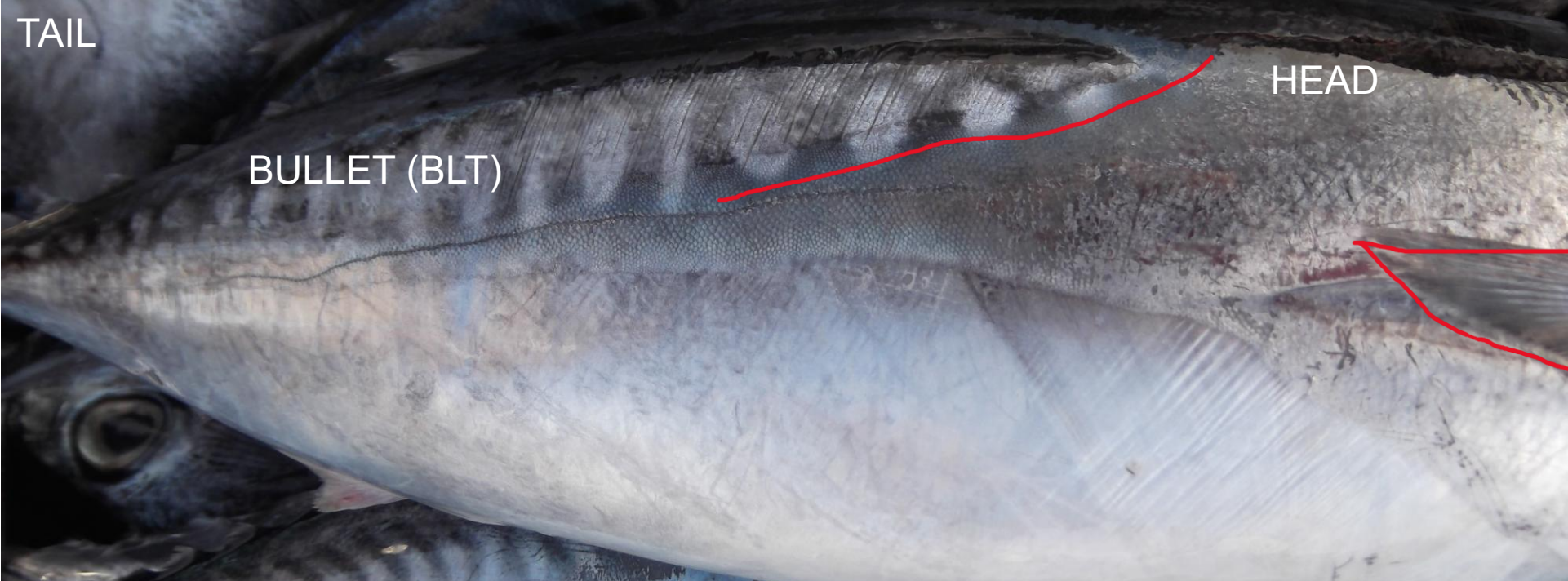


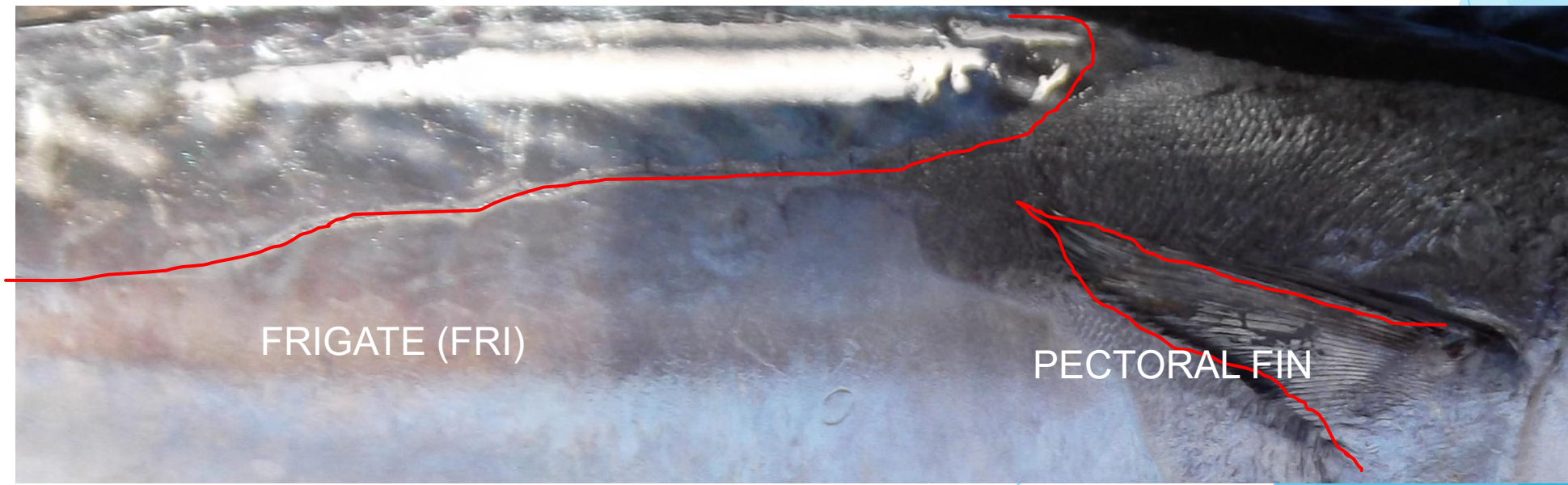
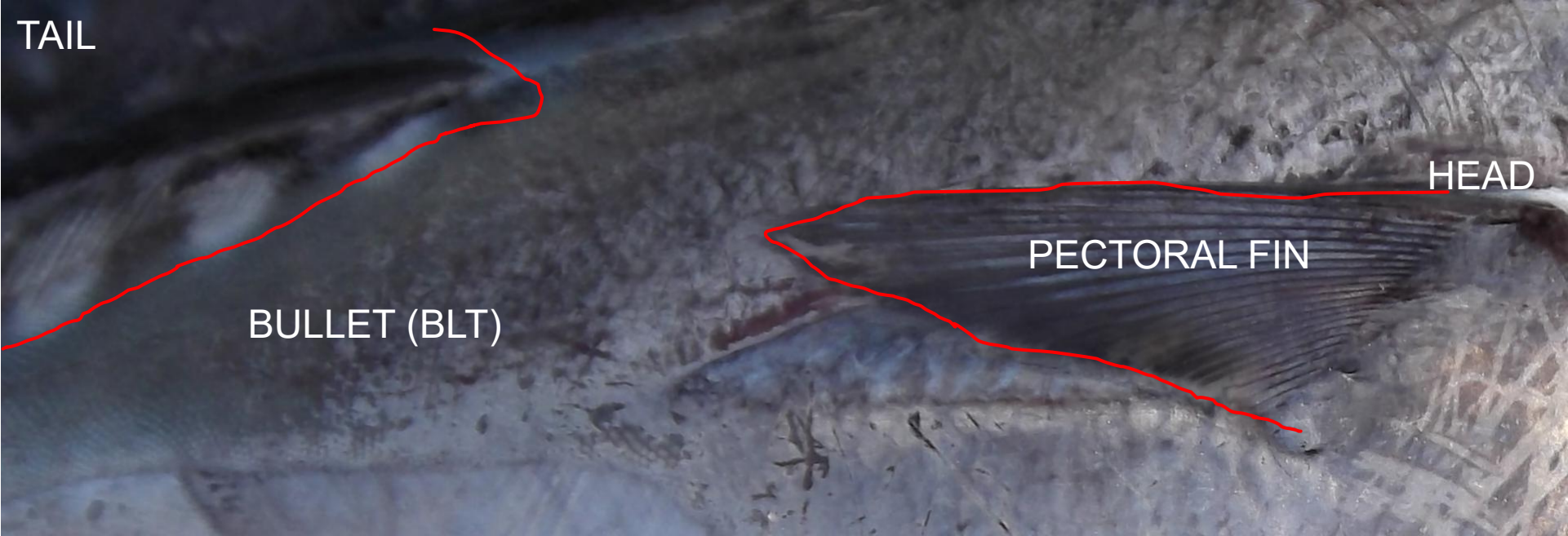
General characteristics (relative)

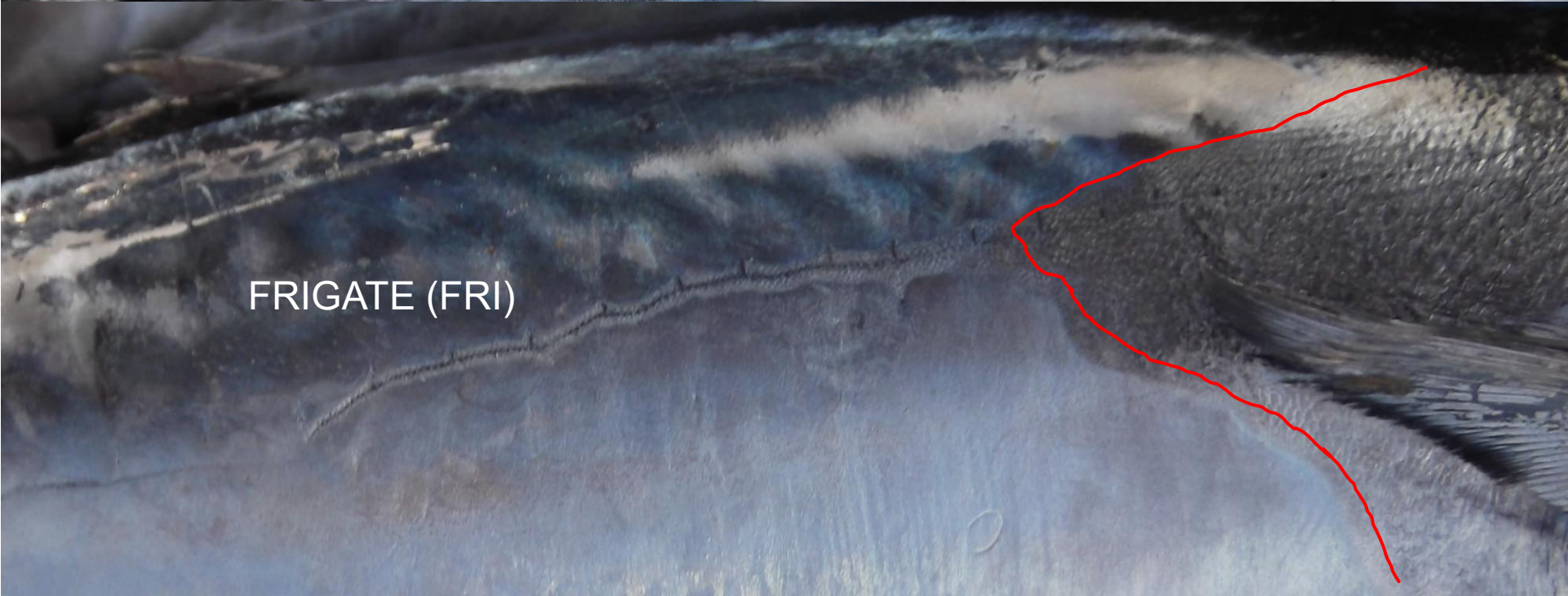
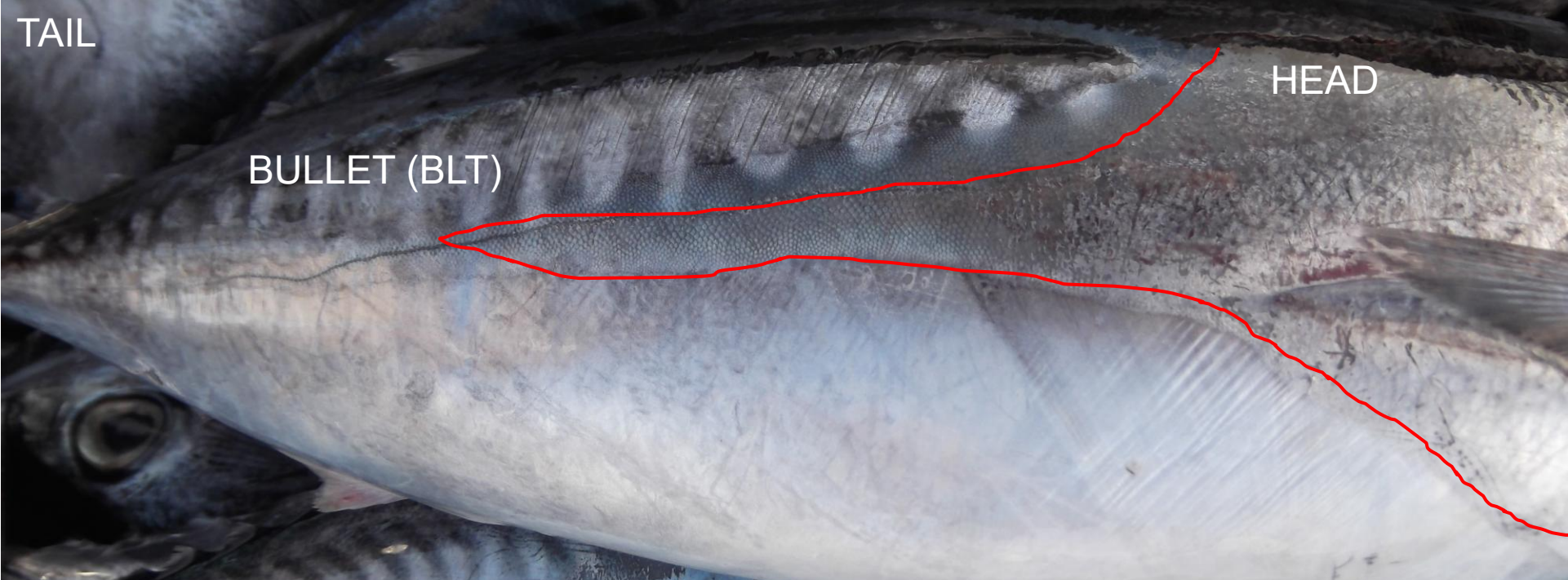
Feature	<i>Auxis rochei</i> (Bullet tuna)	<i>Auxis thazard</i> (Frigate tuna)
Operculum	Au top is black, continuing on body	Distinct black spot at the top
Body depth	More robust, deeper body for the same length	More elongated, slightly less deep-bodied
Corselet of scales (around pectoral fins)	Narrower corselet, limited around pectoral region	Well developed, broad corselet , extends further behind pectoral fins
Stripes/spots on belly	Belly usually plain or with few spots/marks , no strong oblique stripes	15-30 wavy oblique stripes on lower sides and belly
Dorsal fins	First and second dorsal fins closer together	First and second dorsal fins widely separated
Caudal peduncle	Slightly thicker	Slender
Typical size at landing	Often 25-40 cm	Often 35–55 cm

Field memo

- ▶ If you see strong oblique belly stripes + larger size → *Auxis thazard* (frigate tuna).
- ▶ If belly is plain/spotty + smaller/deeper body → *Auxis rochei* (bullet tuna)
- ▶ Usually: *A. thazard* > *A. rochei*







BULLET

(BLT)



=
KAWAKAWA

(KAW)



FRIGATE

(FRI)



BULLET
KAWAKAWA



FRIGATE



Quizz

FRI



Quizz



BLT

Quizz



FRI

Quizz



BLT

Quizz



BLT

Quizz



KAW

IOTC Species Identification and sampling workshop, 2025

Quizz



KAW



1

YFT

2

YFT

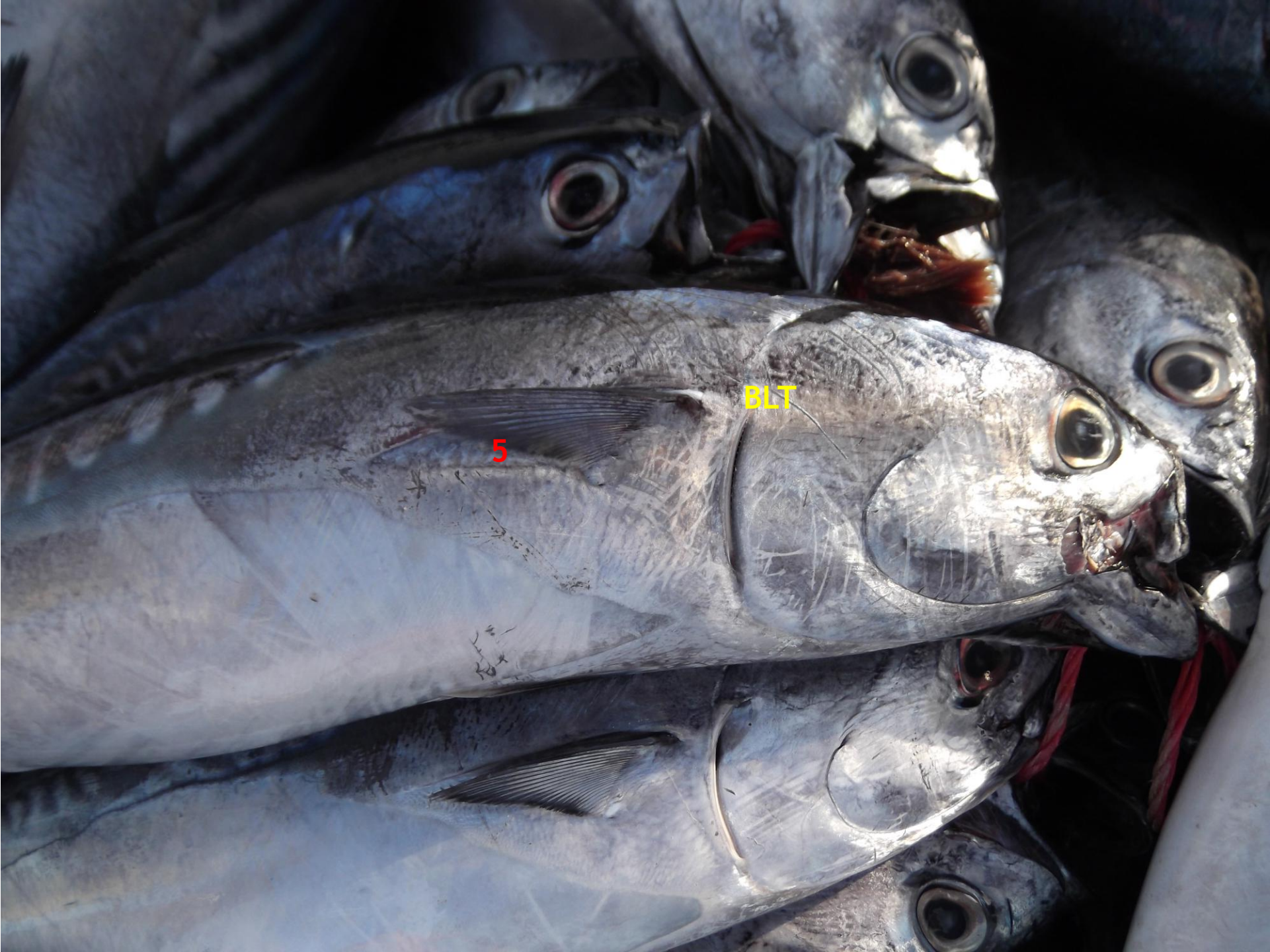
3

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YFT/BE

T







KAW

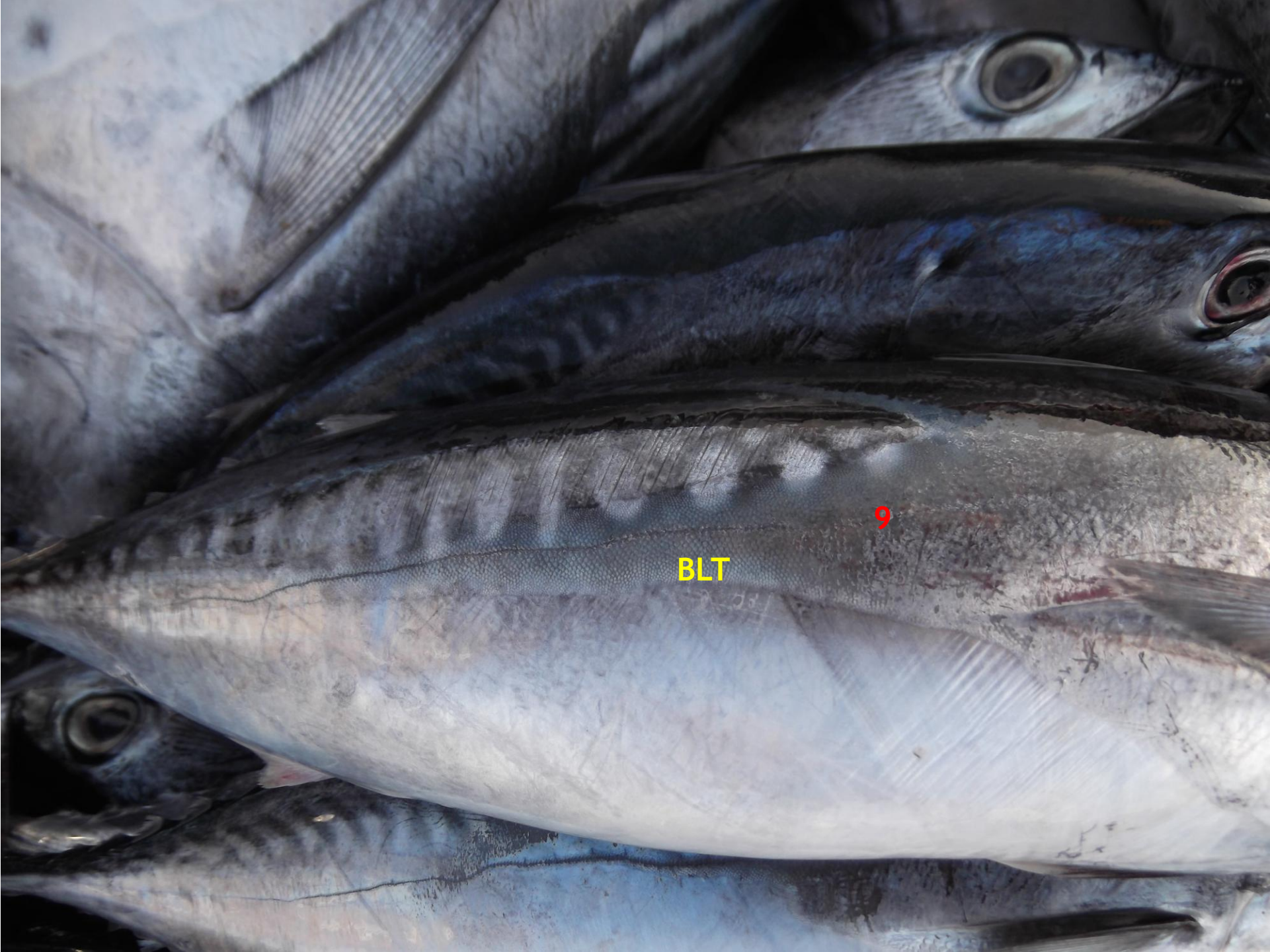
6

YFT

7

SKJ

8



BLT

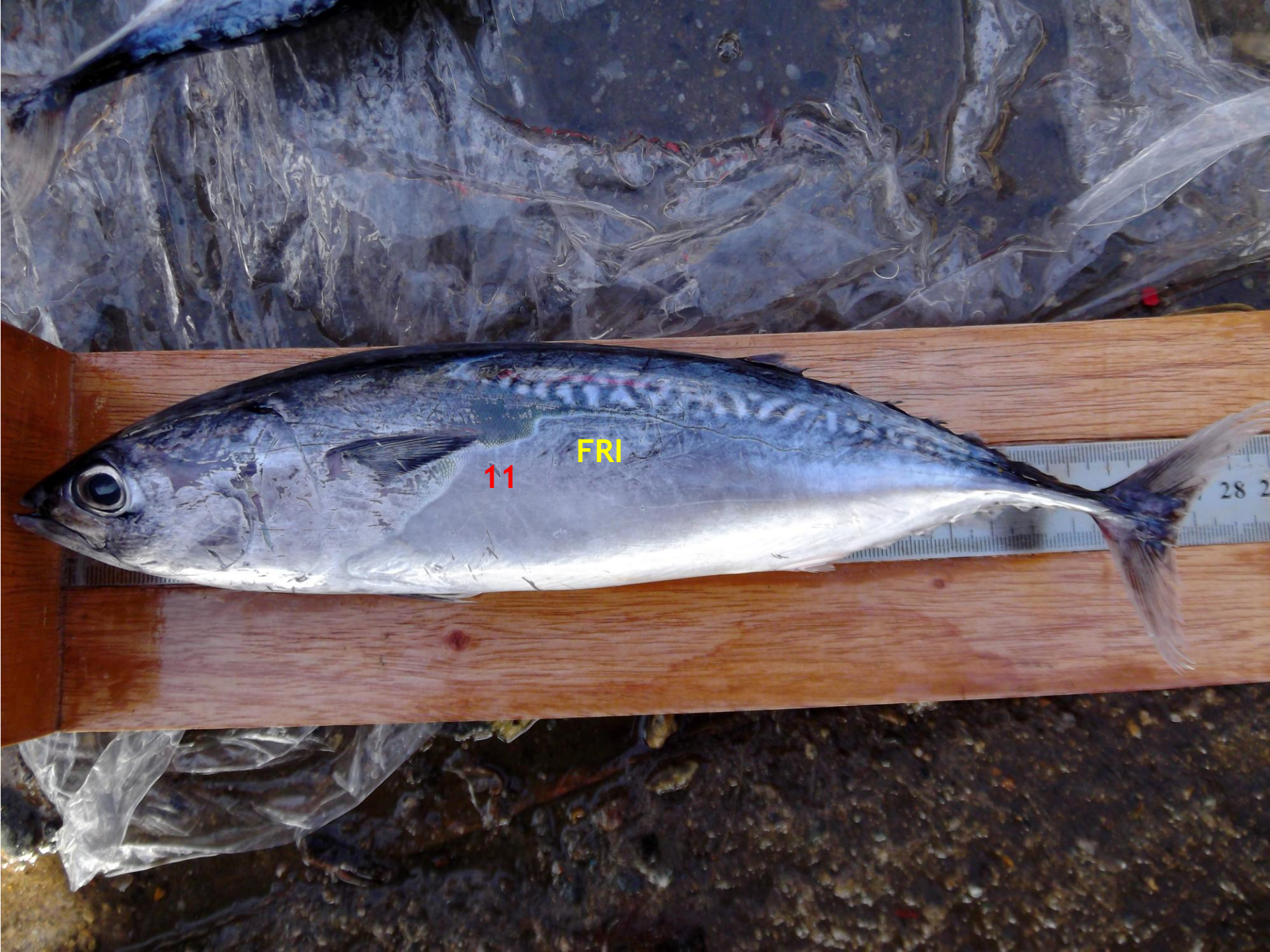
9



LOT

10

2015. 1. 20 8:40







BLT

14



KAW

16

BLT

15









LOT

GYMNOSARDA UNICOLOR DOGTOOTH TUNA




***GYMNOSARDA UNICOLOR* DOGTOOTH TUNA**



***GYMNOSARDA UNICOLOR* DOGTOOTH TUNA**



Source

- OFCF: <https://www.youtube.com/watch?v=DyMoOoQVEHs>
- OFCF: <https://iotcofcf.wixsite.com/speciesid/general-6-1>
- Fishbase
- Collette, B.B. & C.E. Nauen (1983). FAO Species Catalogue. Vol. 2. Scombrids of the World. An annotated and illustrated catalogue of tunas, mackerels, bonitos and related species known to date. FAO Fisheries Synopsis No. 125, Vol. 2. Rome: FAO. 137 p.
 Texte intégral FAO
- Fischer, W. & Bianchi, G. (1984–1996). FAO Species Identification Sheets for Fishery Purposes – par zones (Océan Indien, Atlantique, Méditerranée). Ces fiches contiennent les planches d'Auxis avec les différences clefs.
- FAO (2002). Field Identification Guide to the Living Marine Resources of the Mediterranean and Black Sea. Rome: FAO.
- FAO (2001). Field Identification Guide to the Living Marine Resources of the Western Indian Ocean. Rome: FAO.



Thank you for your attention

Any question?