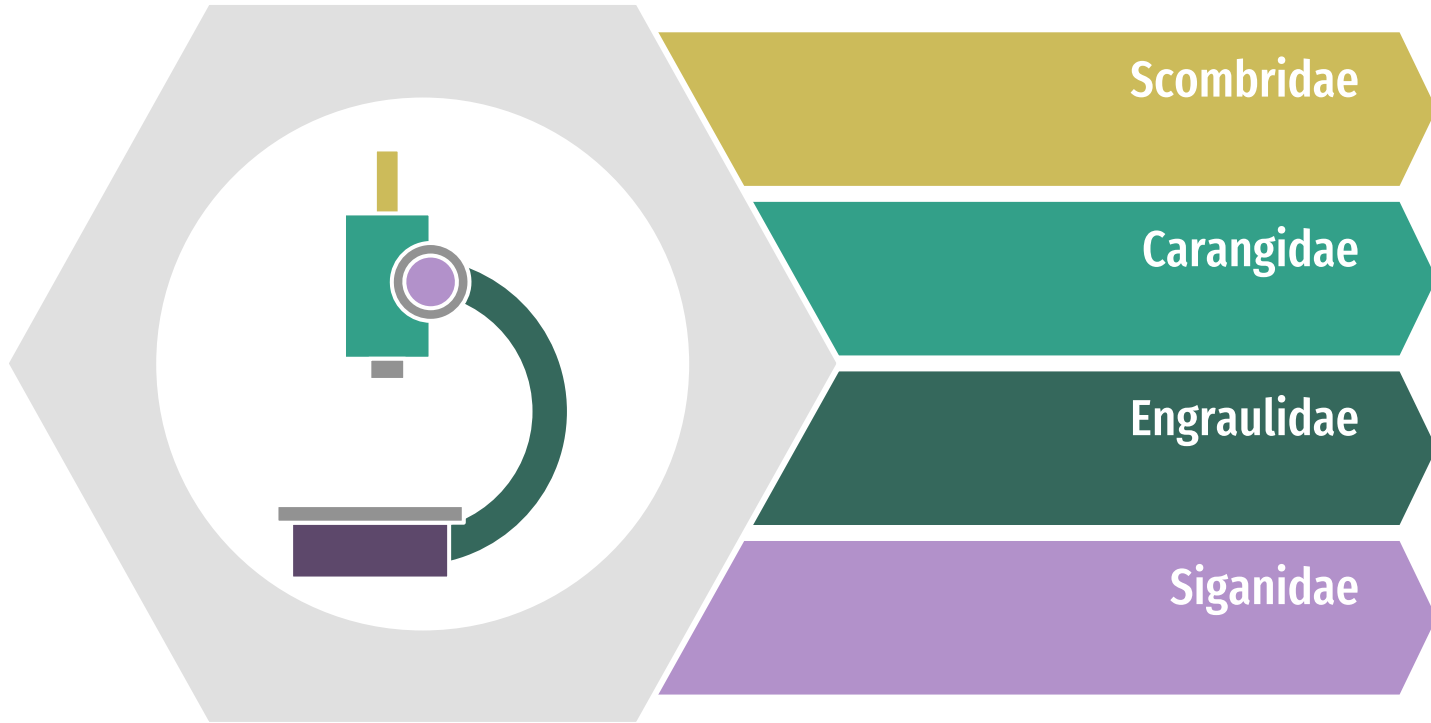


Fish Larvae Identification

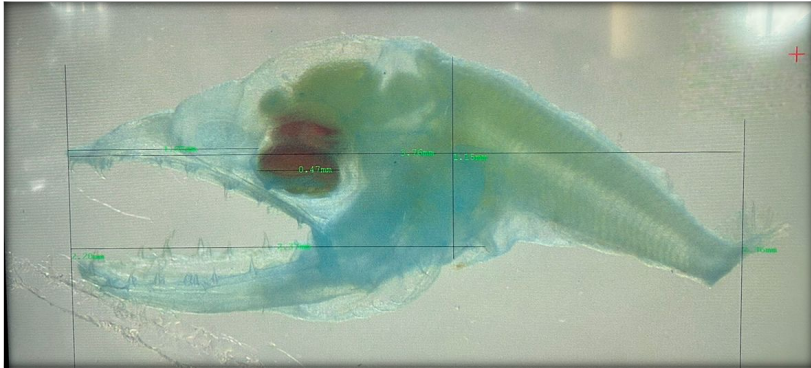
Muhammad Azizi Mahali
Muhammad Zulfadzli bin Haji Zulkifli





Species Description

Scombridae: Scomberomorus commerson



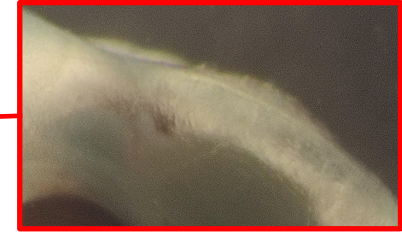
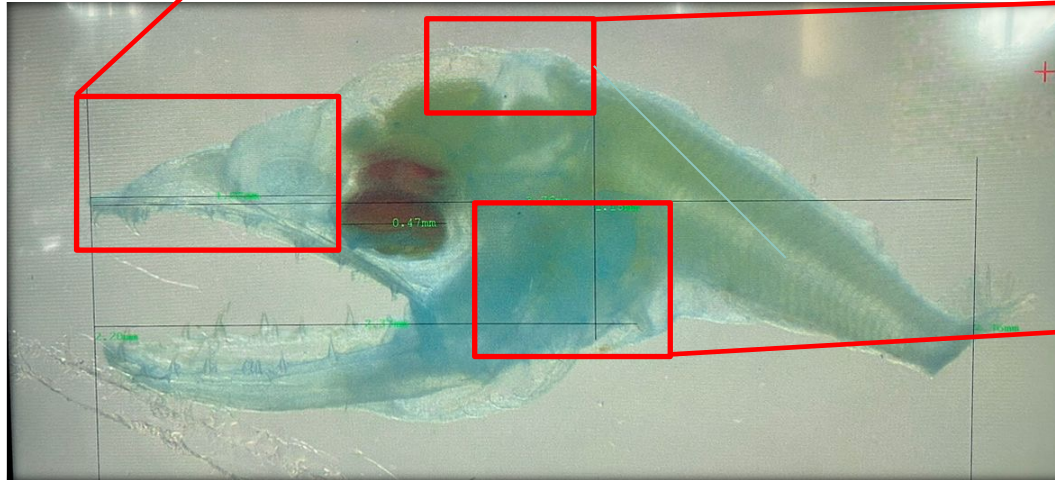
Adult stage

Body Shape	Moderate, BD is 31% of BL
Gut	Coiled early but not compact, PAL is 63% of BL
Snout	Pointed or elongate, SnL is twice (2.3x) of ED
Eye	Round and large
Mouth	Extremely large, upper jaw protrudes below lower jaw
Head Spination	Distinct supracoccipital spine, preopercular spine formed and at an angle
Fins	2 nd dorsal fin formed before 1 st dorsal fin
Pigment	No pigment on pelvic fin

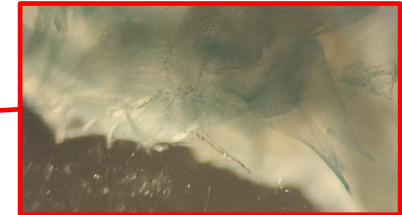
Morphological Characters

Scomberomorus commerson

Pointed snout and elongated
Snout length about 2x eye diameter



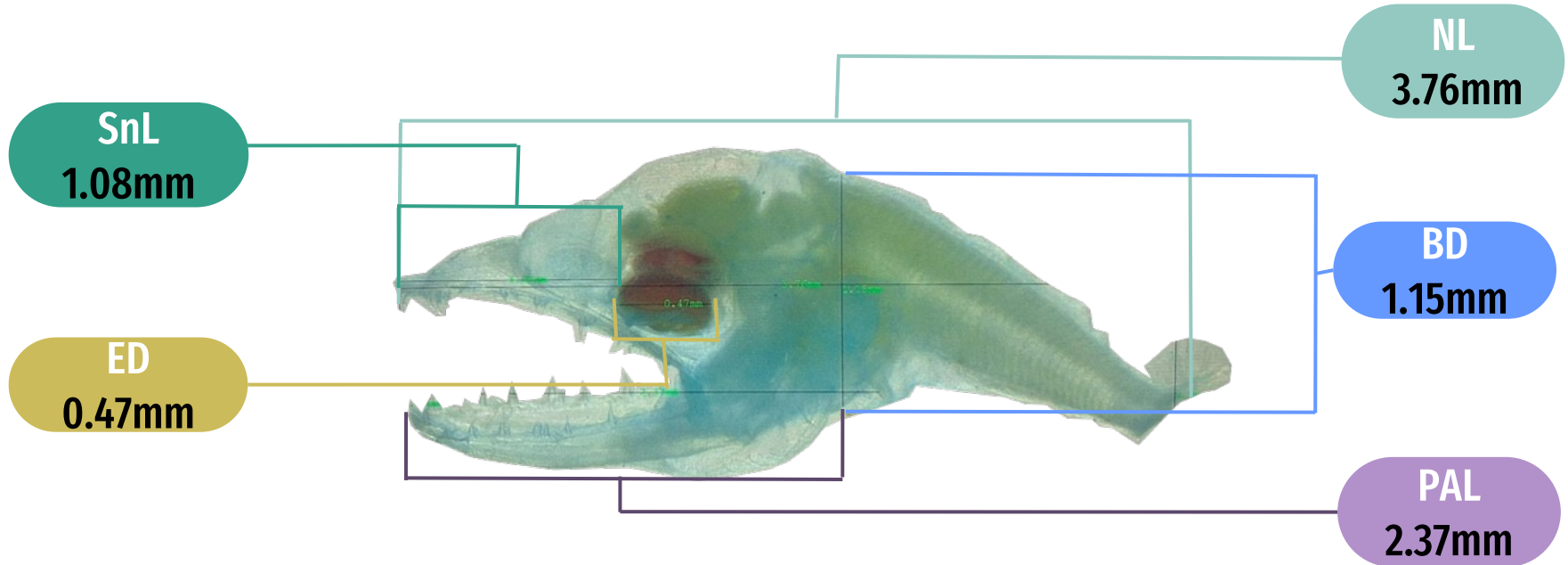
Supraoccipital spine



Preopercular spine

V : 42

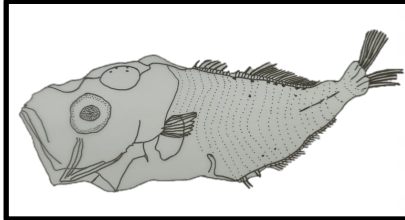
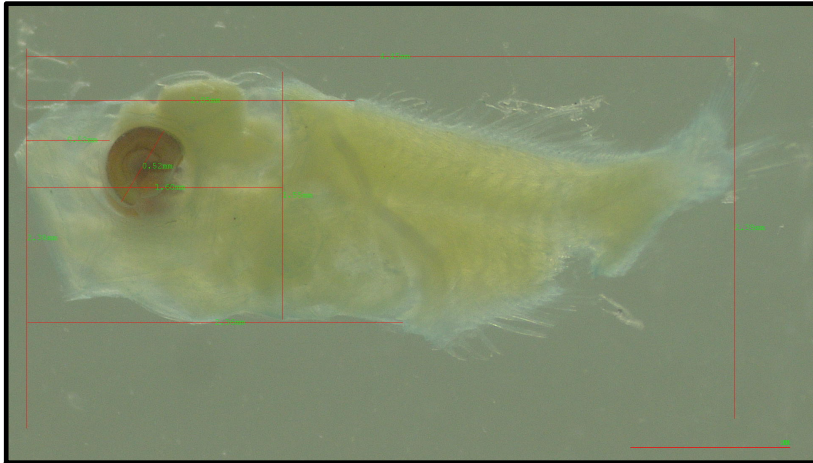
Morphological Measurement



Growth stage: Flexion

Species Description

Carangidae: Selar sp.



Illustration

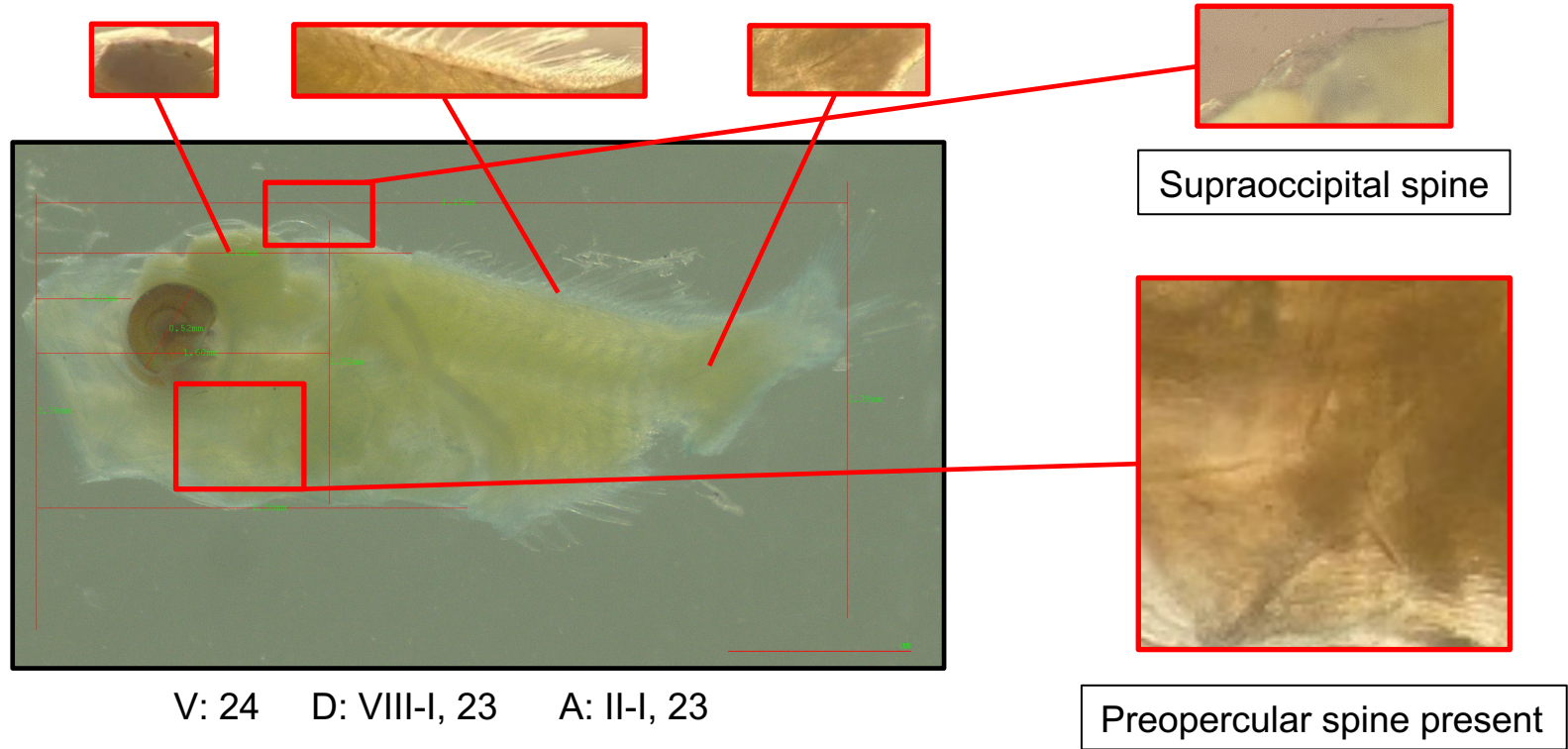


Adult stage

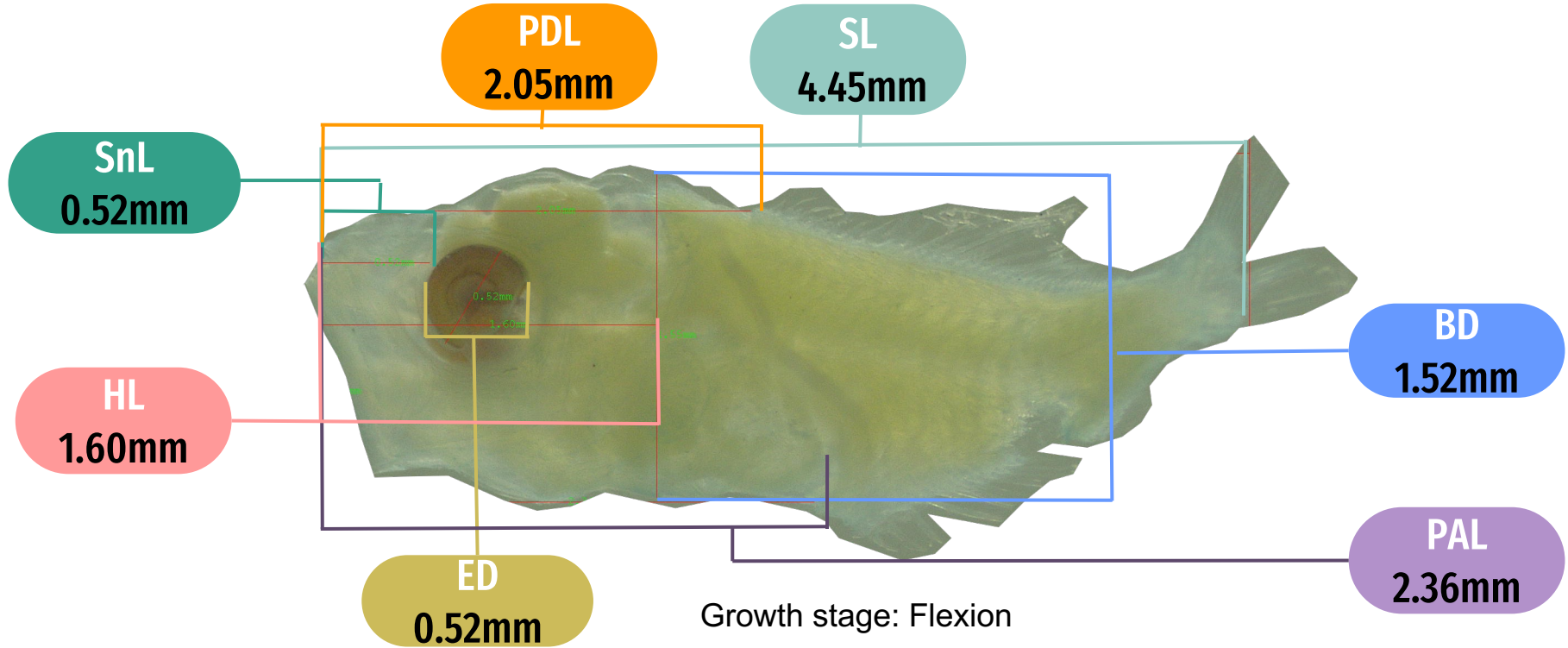
Body Shape	Moderate, BD is 34% of BL
Gut	Coiled early but not compact, PAL is more than ½ of BL (53% of BL)
Snout	Moderate and slightly concave. SnL is 33% of HL
Eye	Large and round, ED is 33% HL
Mouth	Large, oblique and terminal
Head Spination	SOC present, POC at an angle
Fins	-
Pigment	Head (sparse), along midline septum and dorsoventral.

Morphological Characters

Carangidae: Selar sp.

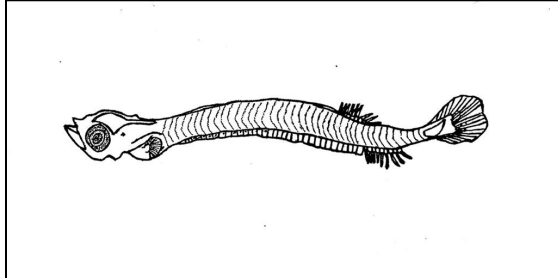


Morphological Measurement



Species Description

Family: Engraulidae
Encrasicholina punctifer



Illustration



Adult Stage

Body Shape	Very elongate, BD is 10% of SL
Gut	Very long, PAL is 76% of SL
Snout	Short and slightly concave, SnL is 18% of HL
Eye	Round and large
Mouth	Small and terminal
Head Spination	None
Fins	Origin of anal fin just under end of dorsal fin
Pigment	Gut, hindbrain, ventral surface of tail

Morphological Characters

Encrasicolina punctifer

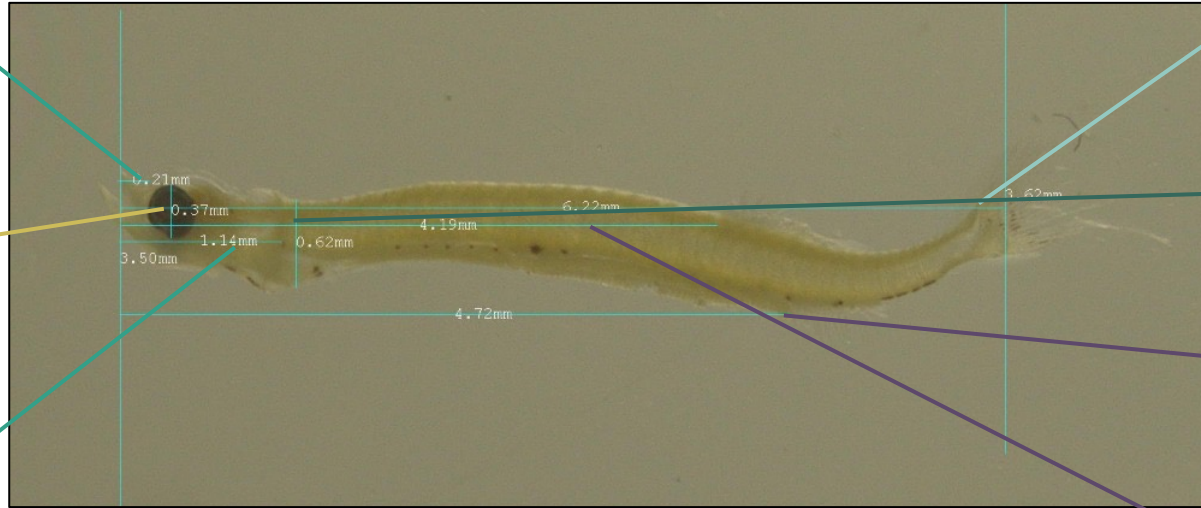


Origin of anal fin just under end of dorsal fin

Anal-fin base is short

Morphological Measurement (mm)

V: 42 D: 12 A: 12



SnL
0.21

ED
0.37

HL
1.14

SL
6.22

BD
0.62

PAL
4.72

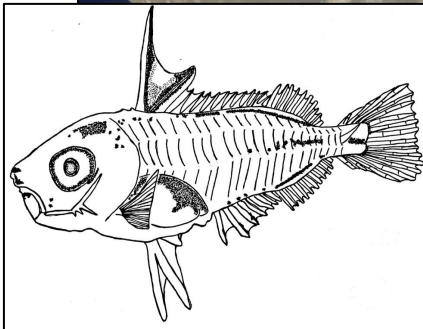
PDL
4.19

Flexion stage

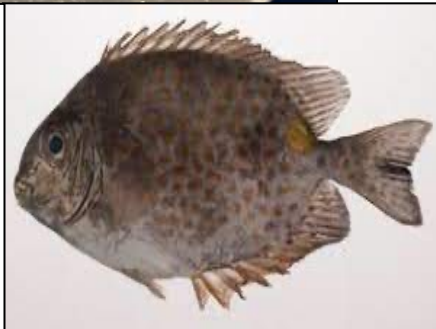
Species Description



Family: *Siganidae*
Siganus guttatus



Illustration



Adult Stage

Body Shape	Moderate, BD is 34% of SL
Gut	Gut folds and compact, PAL is 53% of SL
Snout	Blunt, SnL is 35% of HL
Mouth	Small
Eye	Round and large
Head Spination	Serrate ridges form on preopercular
Fins	Second dorsal spine and first pelvic spine are subequal length
Pigment	Upper & lower jaw, Head, Hindgut, Notochord, dorsal fin & anal fin base, dorsal & anal fin membrane

Morphological Characters

Siganus guttatus



Length of the second ridge of the dorsal fin and the outer spine of the pelvic fin to the total length are subequal length

Morphological Measurement (mm)

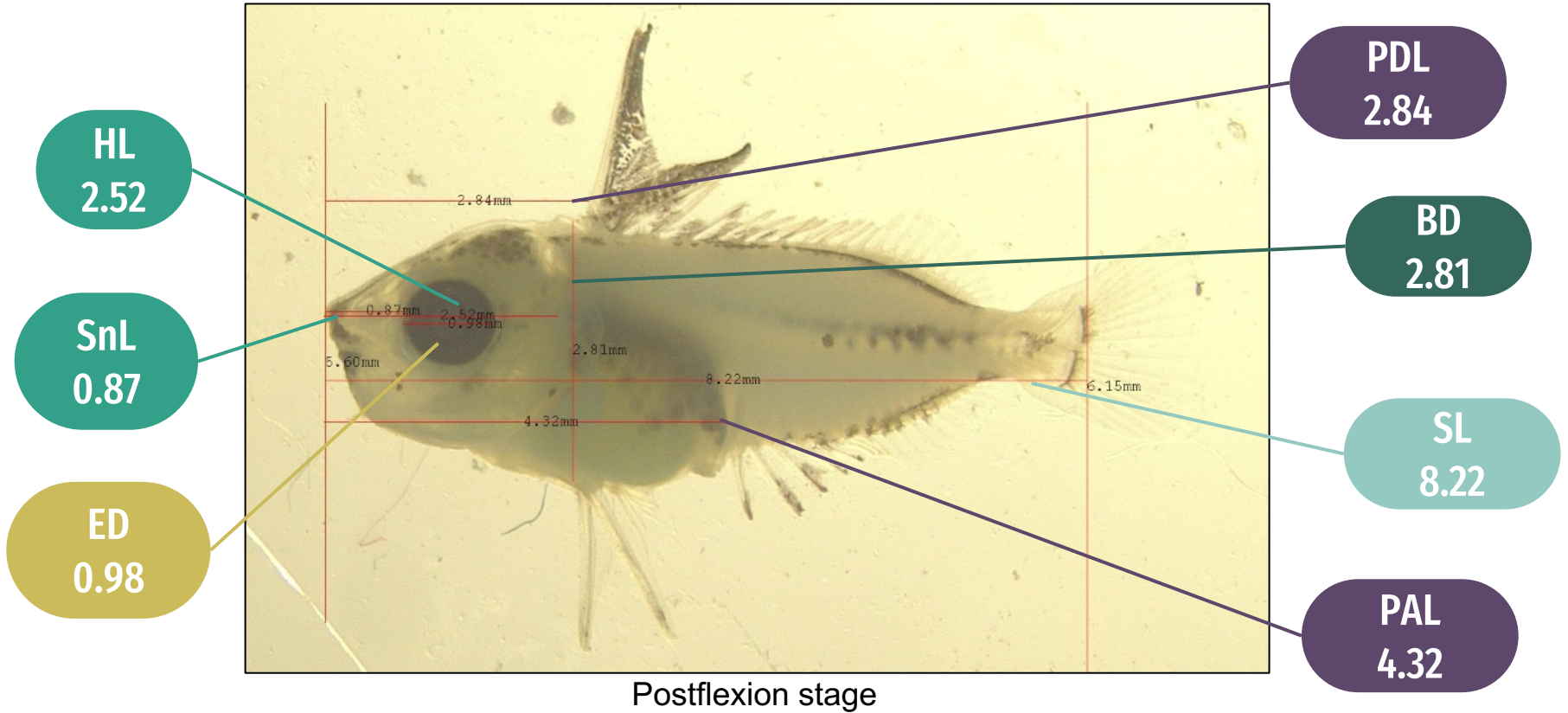


V: 24

D: XII, 10

A: VII, 9

P2: I, 3, I



THANK YOU

