



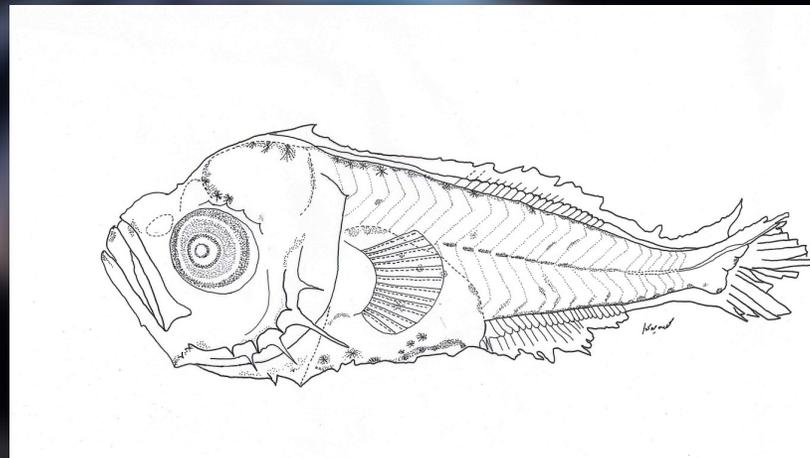
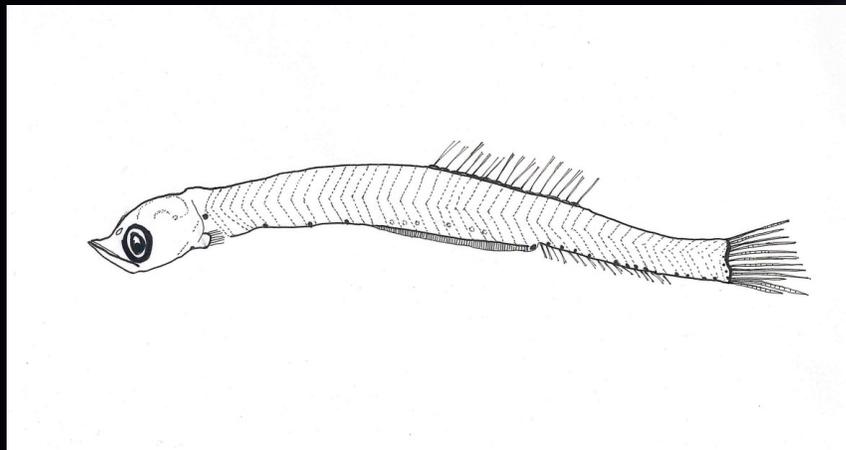
Regional Training Course on Fish Larvae

Phase I: Larval Fish Identification and Fish Early Life History Science

## Fish Larvae Identification:

# Scombridae Carangidae Engraulidae and Siganidae

Presented by Asst. Prof. Penchan Laongmanee and Nathacha Changphetphol





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# Family: Scombridae



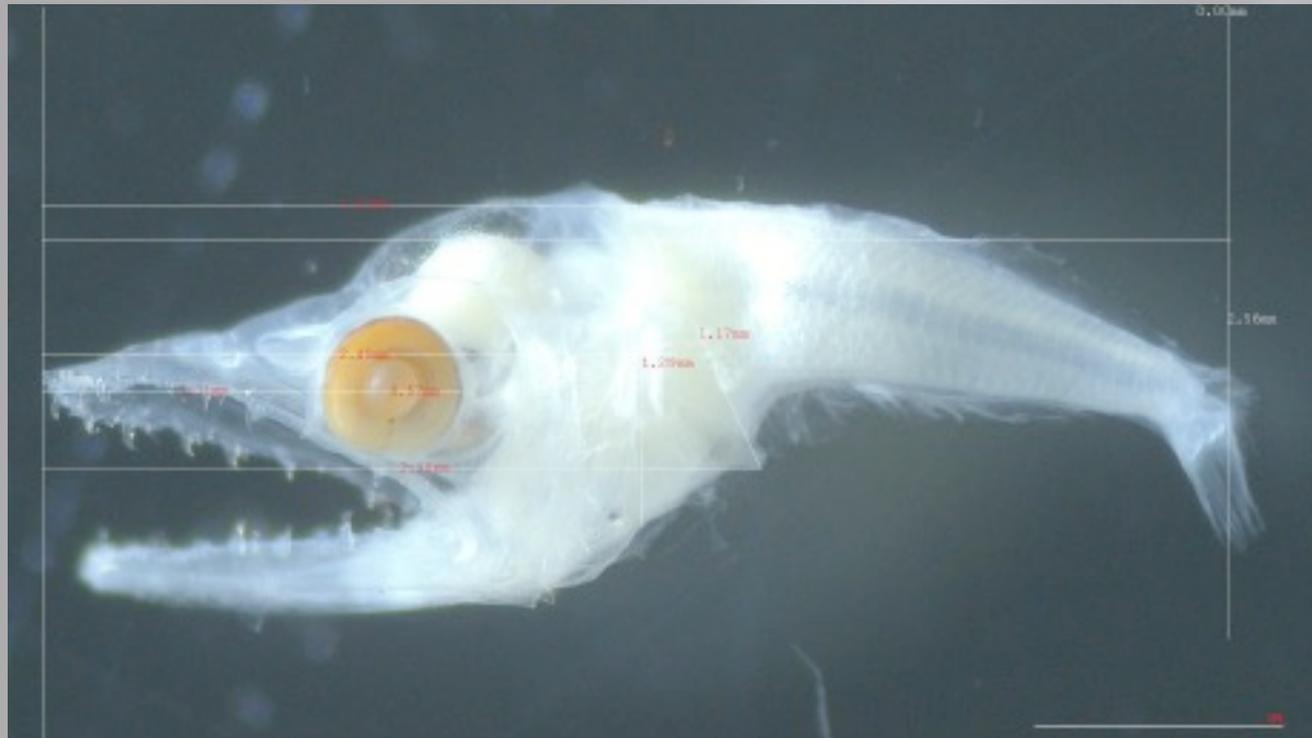
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### Phase I: Larval Fish Identification and Fish Early Life History Science

Family: Scombridae

Scientific name : *Scomberomorus commerson*

## Morphology



Body shape: Moderate

Gut: compact

Snout: pointed

Mouth: Oblique

Teeth: Developed

Eye: Round and large

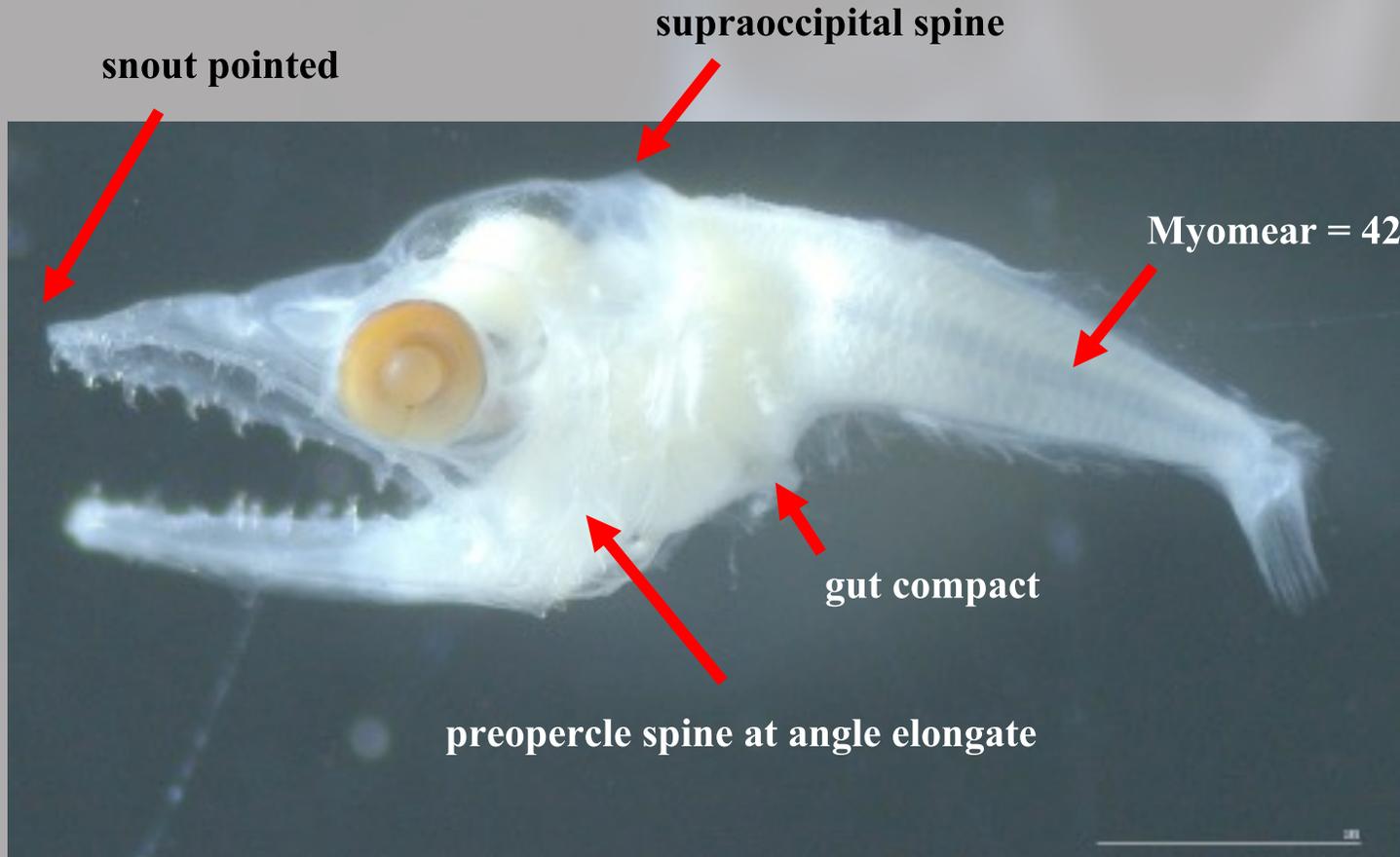
Head spination: supraoccipital spine present

Pigment: no pigment



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## Phase I: Larval Fish Identification and Fish Early Life History Science

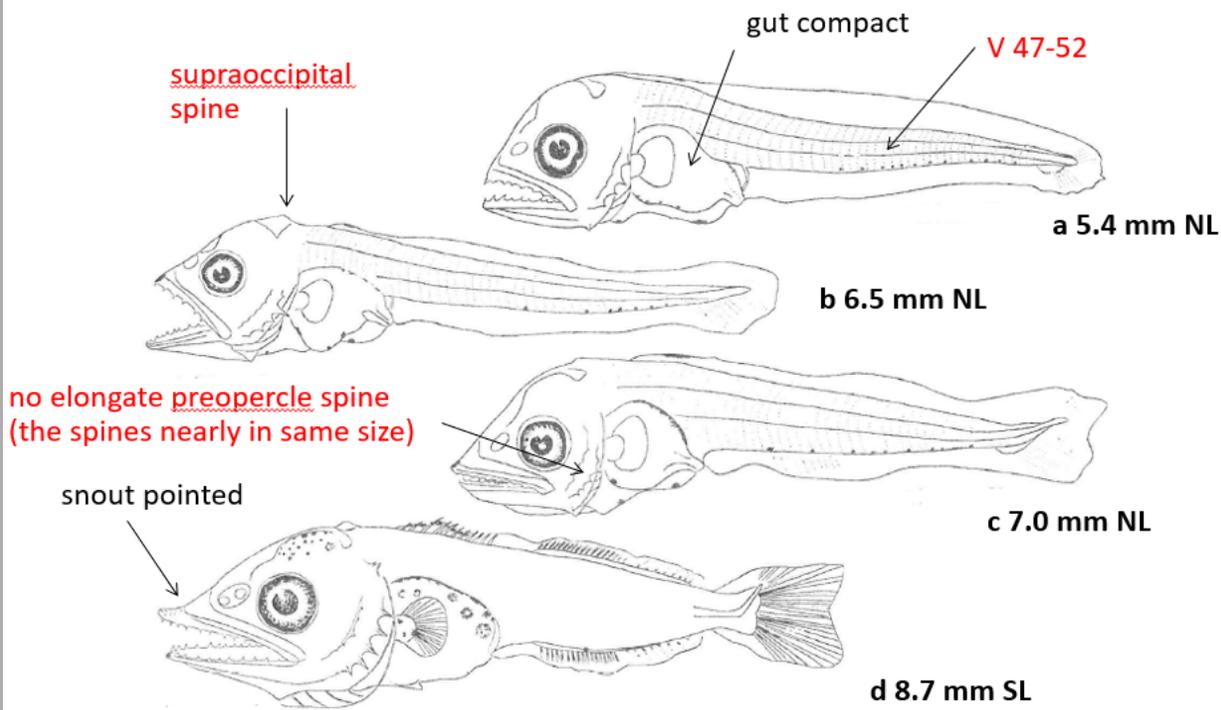


### Key to species (genus) of the Scombridae larvae (ca 10 mm BL >) in the Southeast Asian region (1 / 3)

- 1 a No preopercular spines. Round head and mouth relatively small. Ventral margin of tail pigmented. V (TM) 31. .... ***Scomber, Rastrelliger***
- 1 b Preopercular spines present. .... 2**
- 2 a Snout and head round. Preopercular spines small and supraorbital ridge not distinct. Five to 6 large pigment patches present on dorsolateral body in flexion to juvenile stages. V (TM) 31. ....  
..... ***Grammatorcynus bilineatus***
- 2 b Head, eyes and mouth relatively large. Spines on preopercle, post-temporal well-developed. V (TM) more than 32. .... 3**
- 3 a A supraoccipital spine present. .... 4**
- 3 b Supraoccipital spine absent. .... 5**
- 4 a Snout large and its length about 2 times of eye diameter. Mouth large. Supraoccipital spine distinct. V (TM) more than 46. ....  
..... ***Scomberomorus*****
- 4 b Snout moderately large and its length 1.5 times of eye diameter. Supraoccipital spine small. V (TM) 44-45. .... ***Sarda orientalis*****

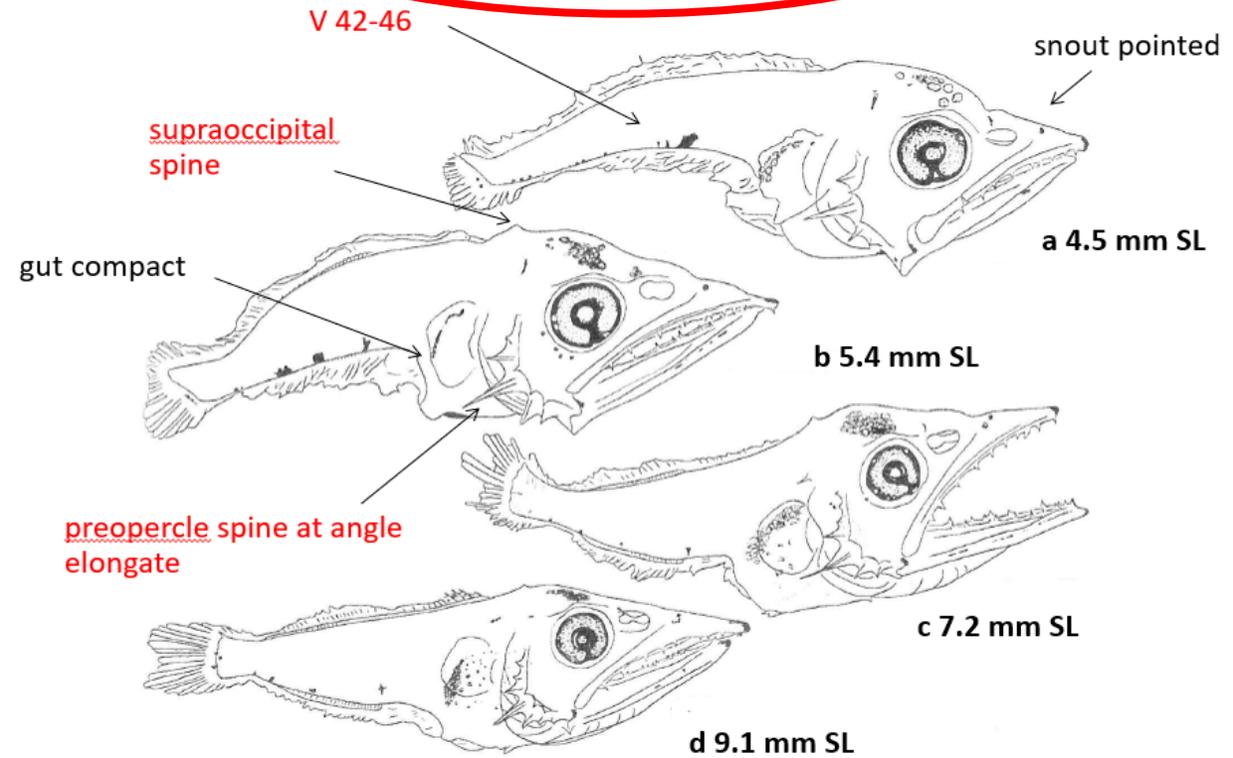


*Scomberomorus guttatus*



Zhang (1985)

*Scomberomorus commerson*

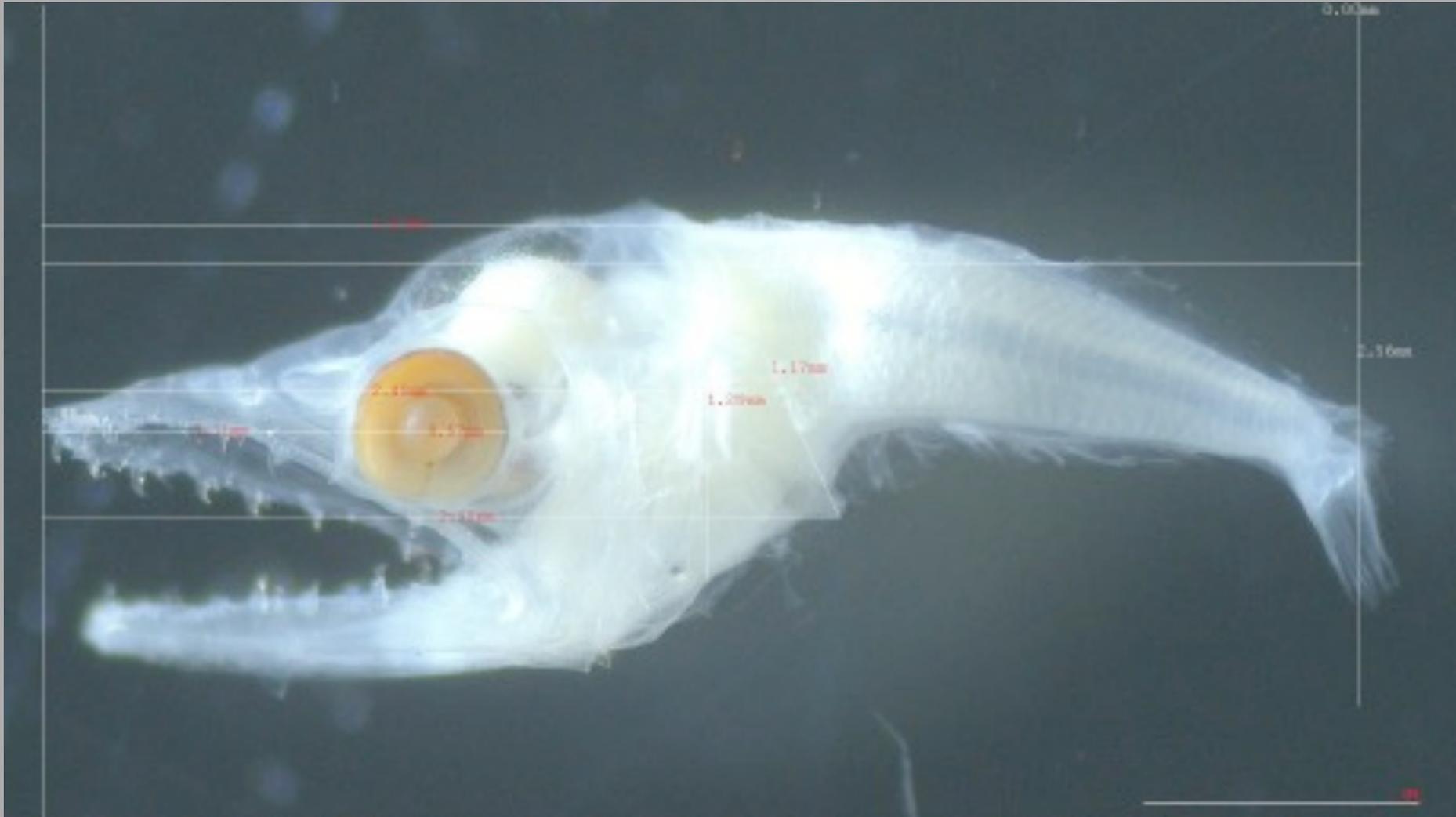


Jenkins (1984)



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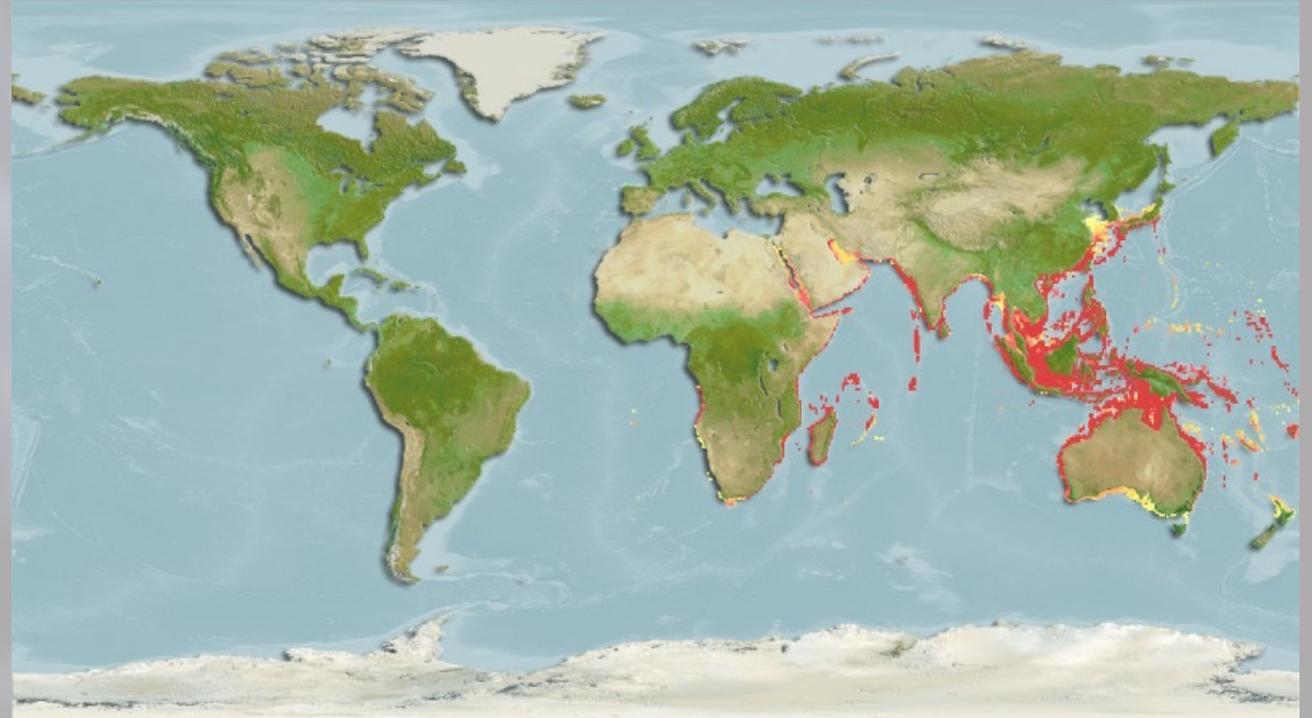
BL	4.8	mm
HL	2.40	mm
ED	0.57	mm
SnL	1.11	mm
BD	1.29	mm
PAL	2.90	mm
PDL	2.41	mm



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### Phase I: Larval Fish Identification and Fish Early Life History Science

# Distribution



- **Indo-West Pacific:** Red Sea and South Africa to Southeast Asia, north to China and Japan and south to southeast Australia, and to Fiji (Ref. [6390](#)).
- **Immigrant to the eastern Mediterranean Sea** by way of the Suez Canal. **Southeast Atlantic:** St. Helena.



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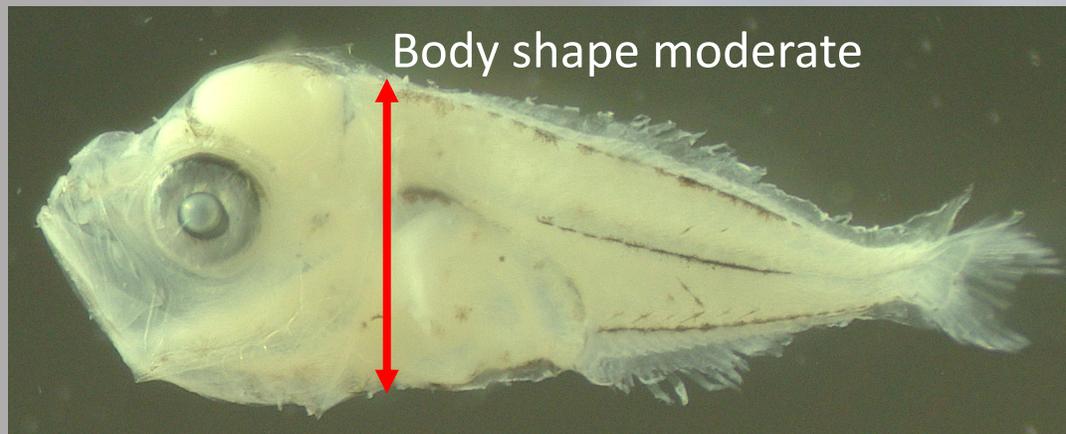
# Family: Carangidae



Family: Carangidae

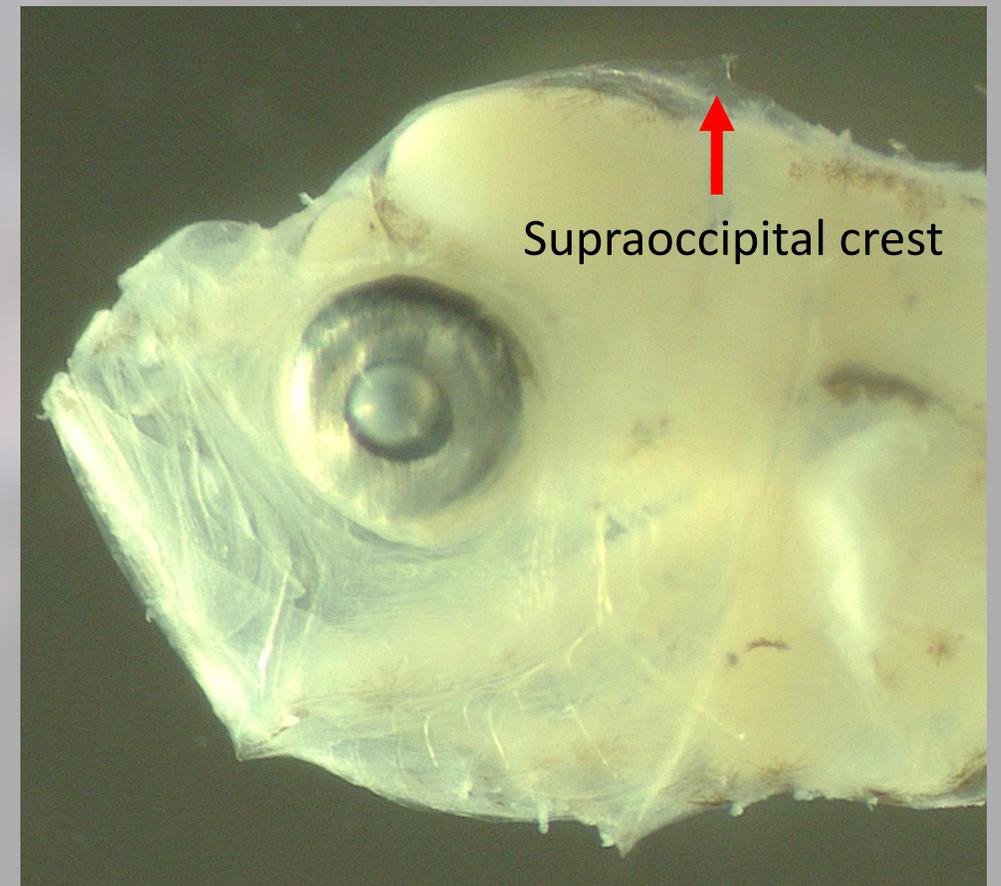
Scientific name : *Selaroides leptolepis*

## Morphology



## Group 2

From 4 groups of carangid larvae in the Southeast Asian Region





Genera and species with larval information available among carangid fishes in the Southeast Asian region – **Group 2**

Characters	Tribe	Genus	Species
<p><b>Group 2:</b></p> <p>Supraoccipital crest (SOC) present; body shape moderate</p>	Carangini	<i>Alepes</i>	<i>Alepes</i> sp.
		<i>Decapterus</i>	<i>D. macarellus</i>
			<i>D. macrosoma</i>
		<i>Selar</i>	<i>S. crumenophthalmus</i>
	<i>Selaroides</i>	<i>S. leptolepis</i>	
	Naucratiini	<i>Elagatis</i>	<i>E. bipinnulata</i>
	Scomberoidini	<i>Scomberoides</i>	<i>S. lysan</i>
			<i>S. tol</i>



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BL 4.5 mm

HL 1.66 mm

ED 0.54 mm

SnL 0.49 mm

BD 1.51 mm

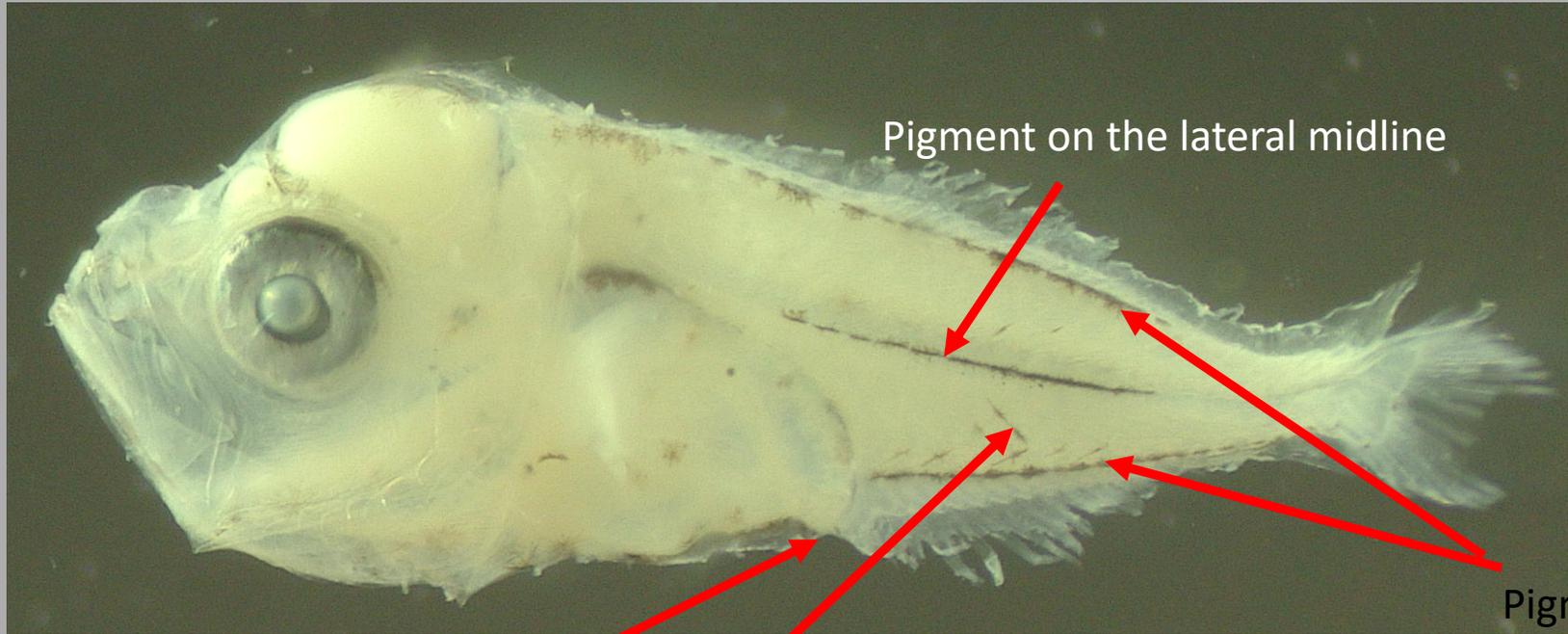
PAL 2.62 mm

PDL 1.70 mm

Myomear = 10+14



# Morphological



Pigment on the lateral midline

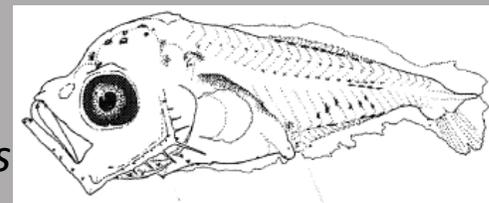
Melanophores along myosepta

Anus beyond mid-body



3 preopercle spine development

Pigment patterns on dorsal and ventral body



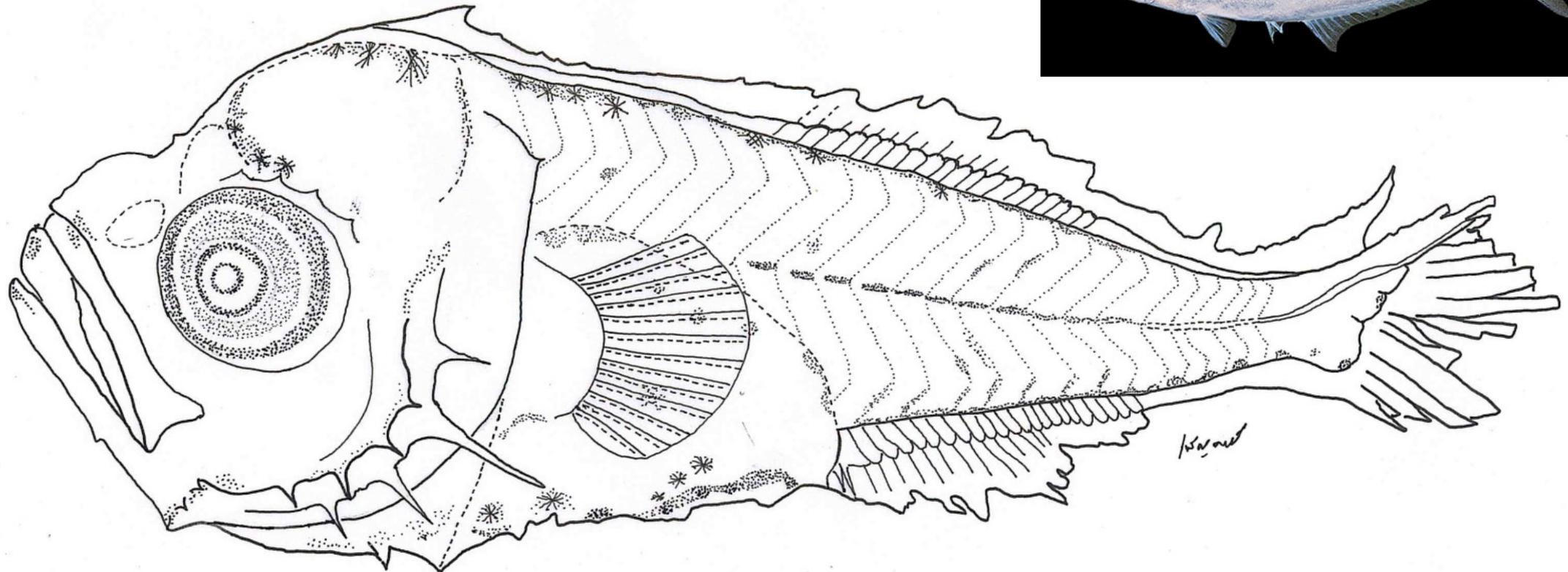
\* Similar to *Selar crumenoptamus*



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# *Selaroides leptolepis*





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From St. no. 5 of the regular fisheries resource survey in the Gulf of Thailand Of Department of Fisheries, Thailand

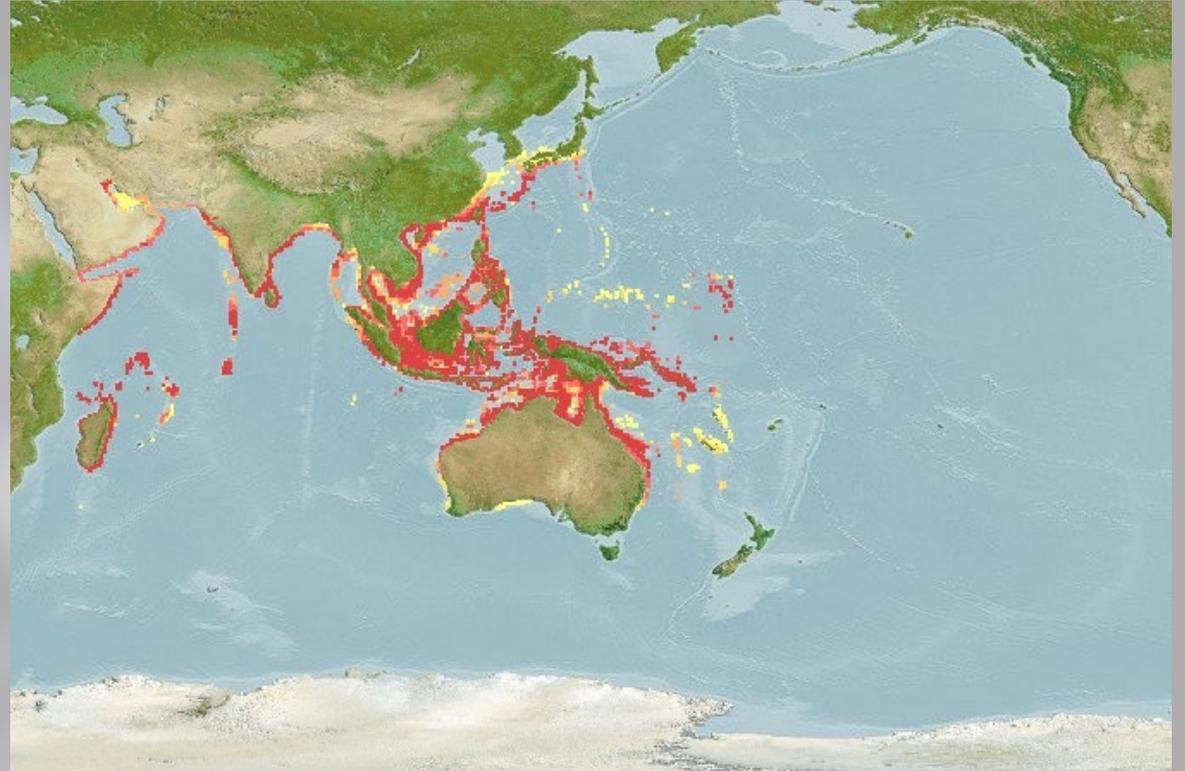
Thank to  
Mr. Wiwattanan Boonyoung &  
Mrs. Piyawan Hussadee



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# Distribution



- Indo-West Pacific: Persian Gulf to the Philippines, north to Japan, south to the Arafura Sea (Ref. 9819) and Australia (Ref. 3287).



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Phase I: Larval Fish Identification and Fish Early Life History Science

# Family: Engraulidae



Family: Engraulidae

Scientific name : *Stolephorus indicus*

## Morphology



Body shape: Very elongate

Gut: Elongate, 75 % of SL

Snout: Short, 31 % of HL

Mouth: Small and terminal

Eye: Round and large to moderate

Head spination: None

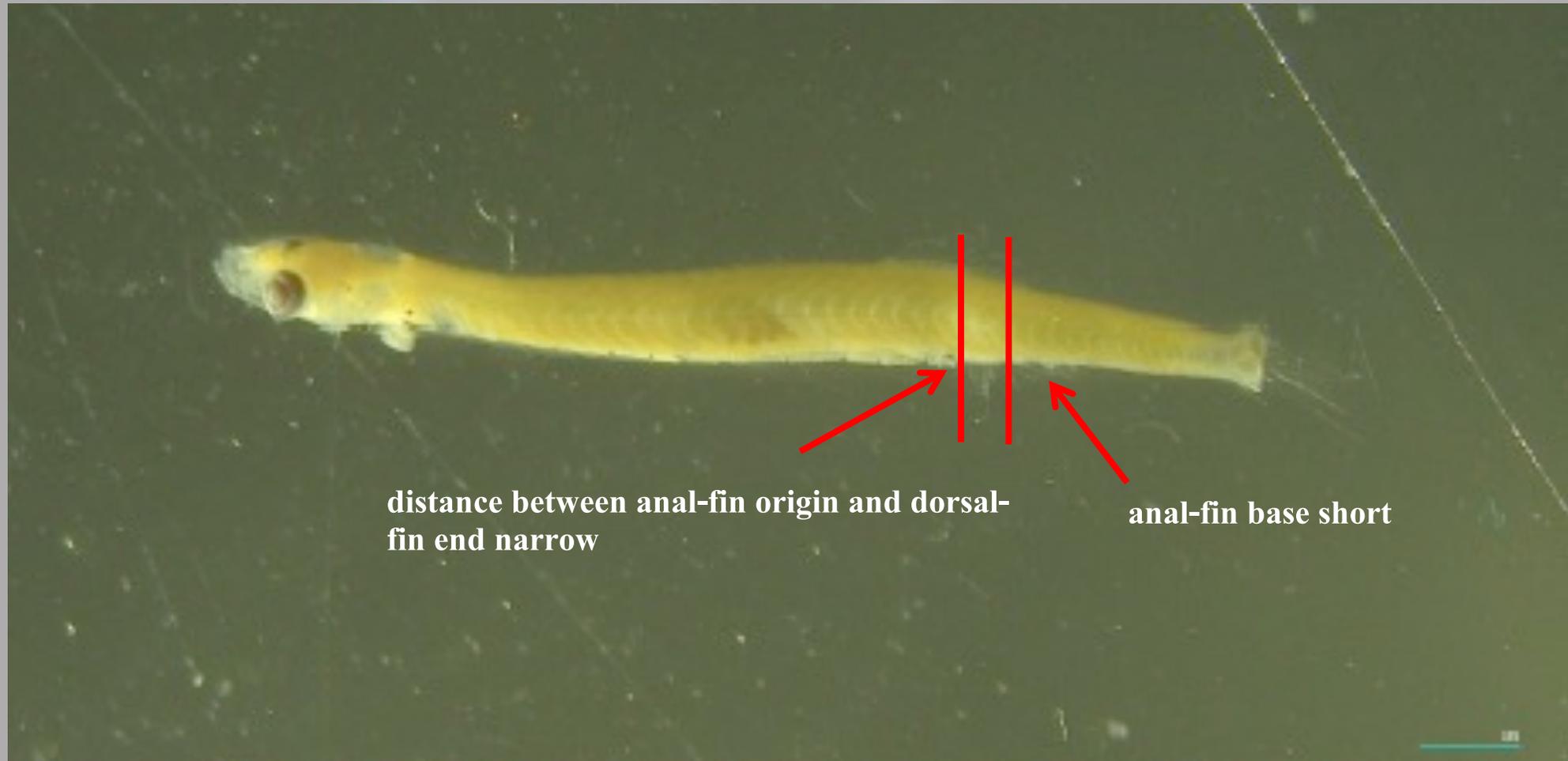
Fins: anal-fin base short, dorsal fin ray overlap with the anus fin

Pigment: Isthmus, notochord, ventral midline gut



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distance between anal-fin origin and dorsal-fin end narrow

anal-fin base short



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BL 10.58 mm

HL 1.66 mm

ED 0.43 mm

SnL 0.48 mm

BD 0.79 mm

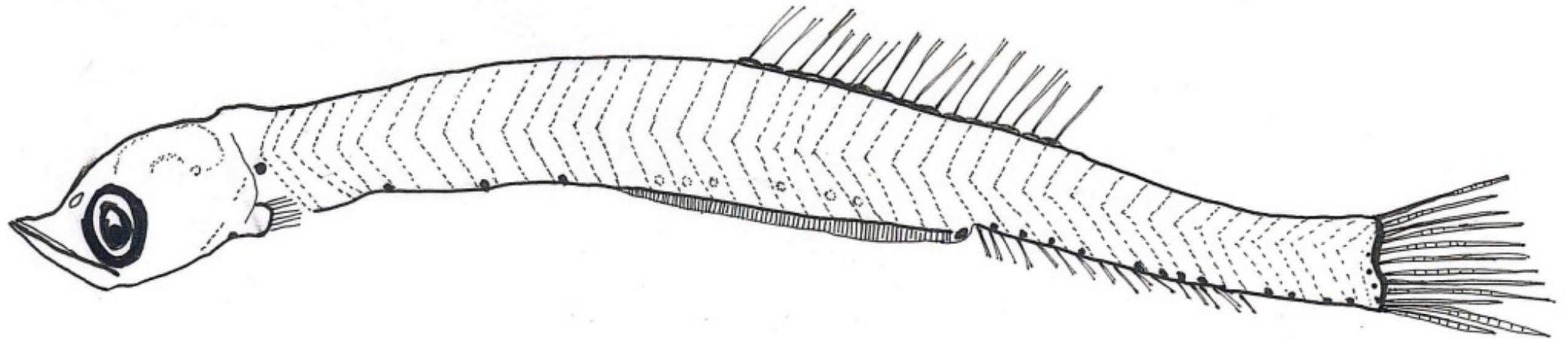
PAL 7.46 mm

PDL 6.87 mm



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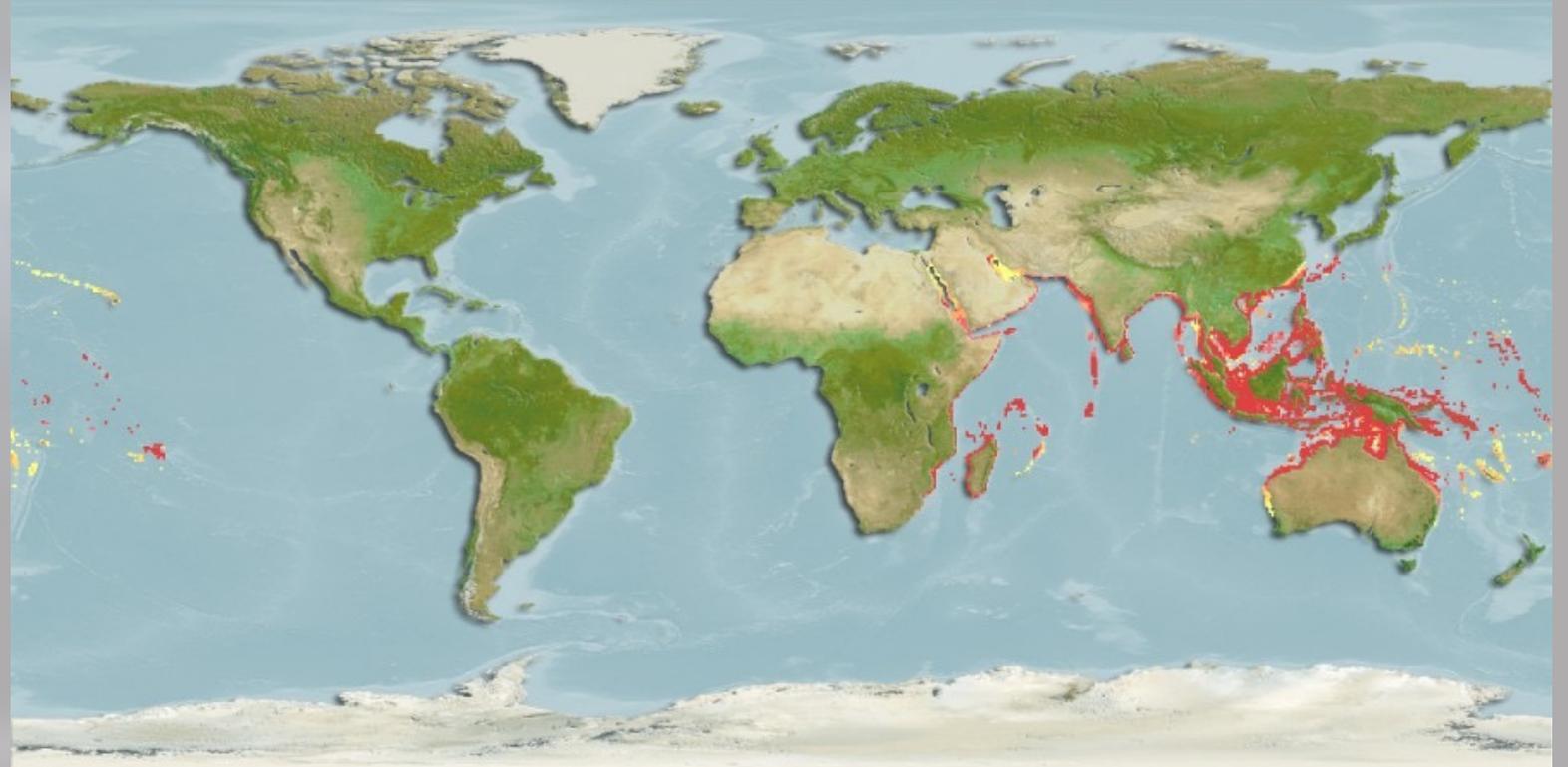




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### Phase I: Larval Fish Identification and Fish Early Life History Science

# Distribution



- **Indo-Pacific: Red Sea and South Africa, including the Persian Gulf, Madagascar and Mauritius eastward to Hong Kong, the Arafura Sea (Ref. 9819), northern and eastern coasts of Australia and further east to Samoa and Tahiti.**



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Phase I: Larval Fish Identification and Fish Early Life History Science

# Family: *Siganidae*



Family: Siganidae

Scientific name : *Siganus guttatus*

## Morphology



Body shape: compressed

Gut: compact

Snout: Short

Mouth: very small

Eye: Round and large

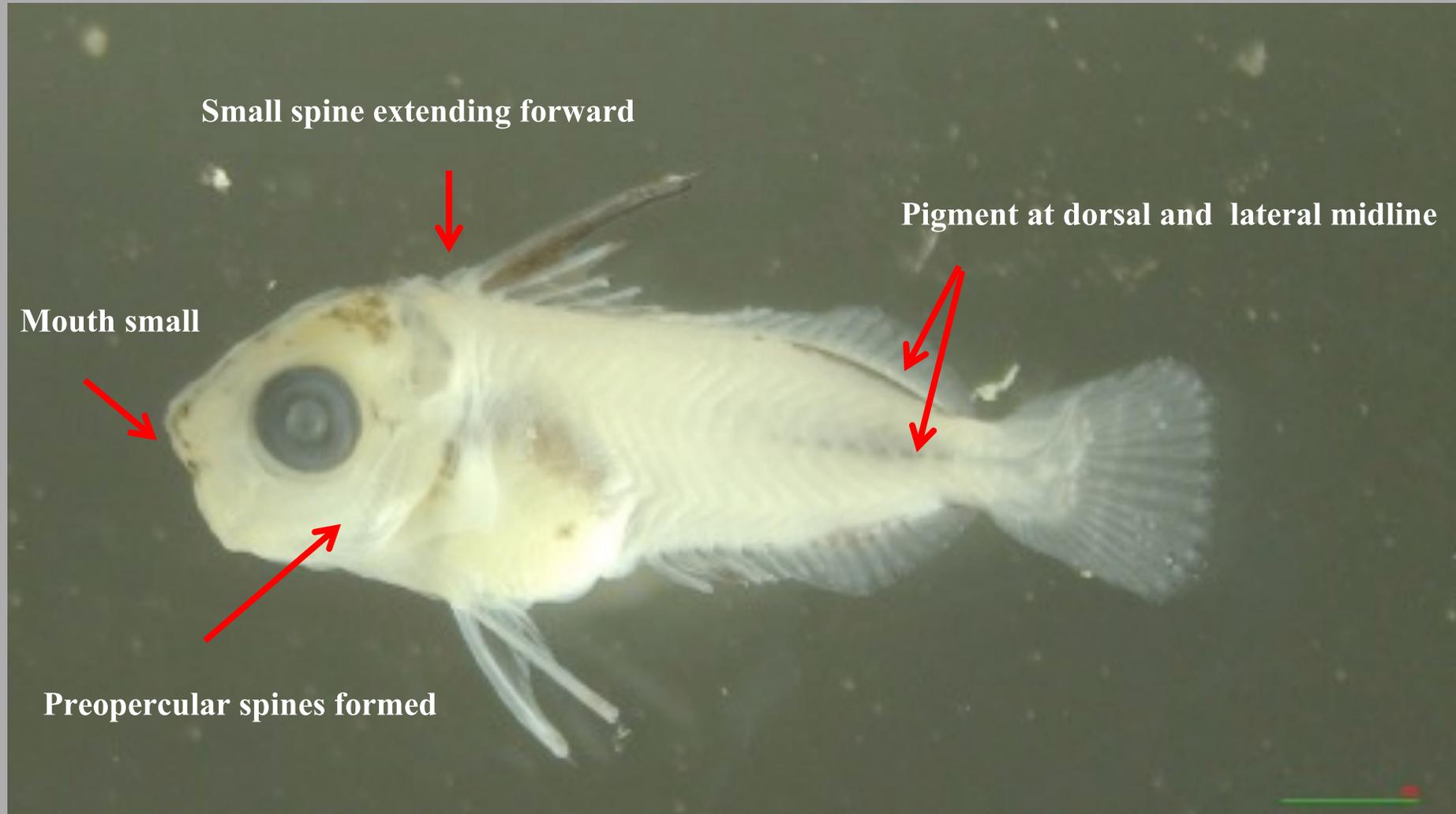
Head spination: Preopercular spines formed

Pigment: snout, head, dorsal spines membrane, dorsal and lateral midline



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Phase I: Larval Fish Identification and Fish Early Life History Science





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### Phase I: Larval Fish Identification and Fish Early Life History Science



BL	6.81	mm
HL	2.21	mm
ED	0.79	mm
SnL	0.64	mm
BD	2.2	mm
PAL	3.21	mm
PDL	2.01	mm



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Phase I: Larval Fish Identification and Fish Early Life History Science



## From Philippines

Thank to

Mr. Marvin Tobias &

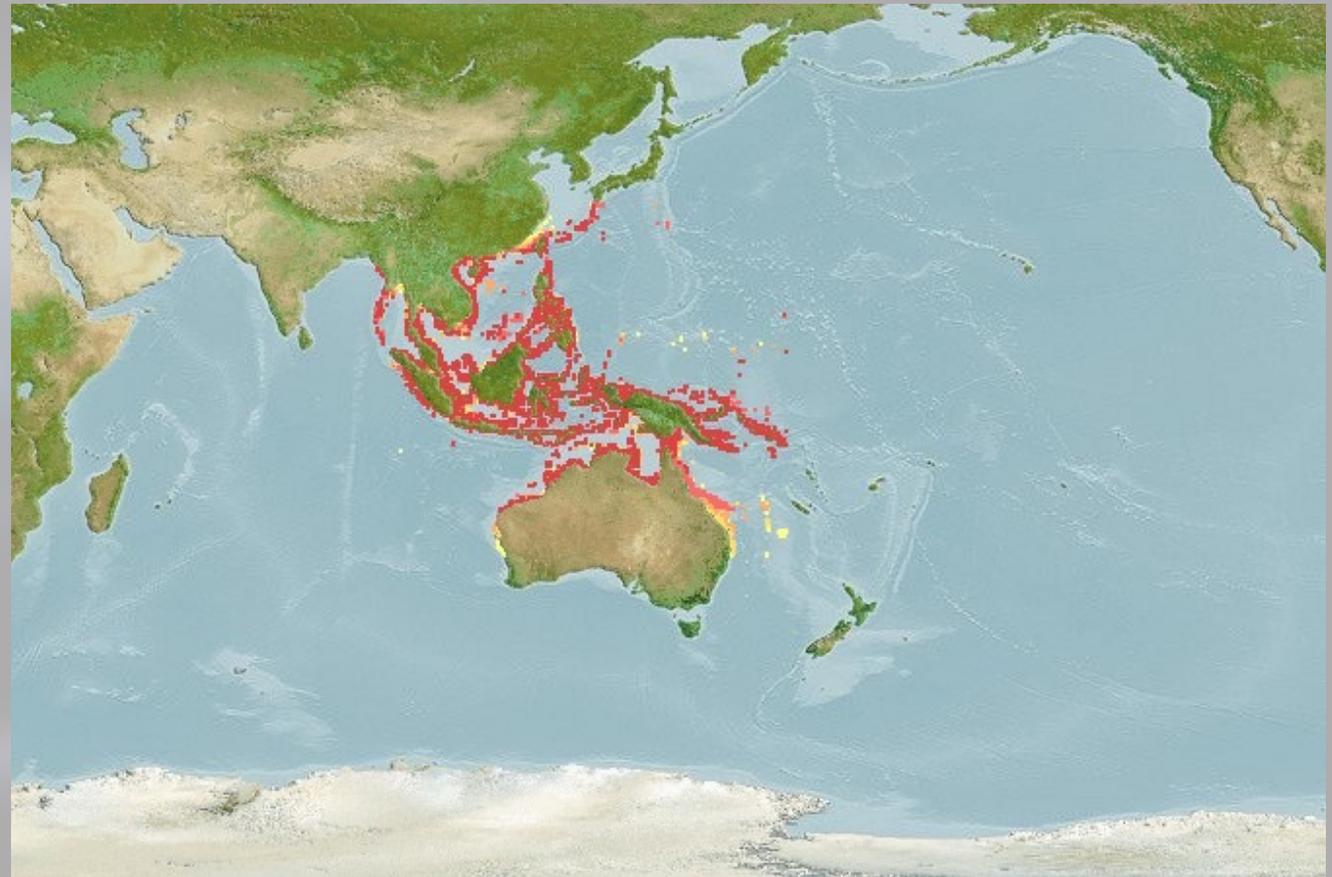
Dr. Dennis D. Tanay



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### Phase I: Larval Fish Identification and Fish Early Life History Science

# Distribution

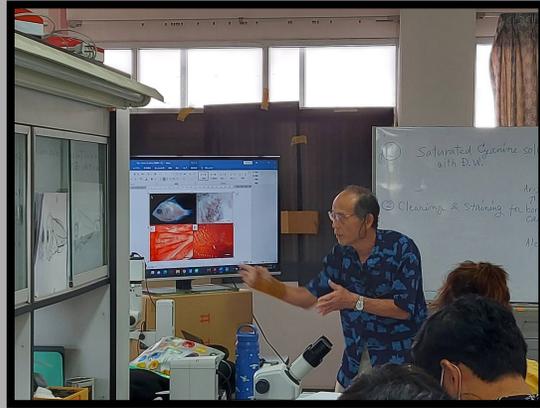


- **Eastern Indian Ocean and Western Pacific: Andaman Islands, Thailand, Malaysia, Singapore, Indonesia (including Irian Jaya), Viet Nam, Ryukyus, southern and eastern China, Taiwan, South China Sea, Philippines, and Palau.**



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# THANK YOU



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### Phase I: Larval Fish Identification and Fish Early Life History Science

