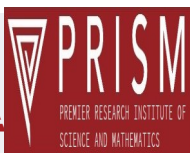


# FIELD GUIDE TO COMMON SEAHORSES AND PIPEFISHES IN MINDANAO, PHILIPPINES



*SHARON ROSE TABUÑO, PhD*

*1st Edition*



## "Saving the seahorses means saving the seas..."



*The Island of Mindanao is called the 'land of promise,' of the Philippines. Its coastal areas are endowed by rich coastal marine resources including seahorses and pipefishes. Seahorses are highly charismatic and considered as flagship species of the marine environment occupying various habitats while pipefishes also gained popularity by resembling seahorses. However, both are vulnerable to changing environment, habitat degradation and overfishing. Their popularity to Traditional Chinese Medicine (TCM) led to overharvesting for trading hence, resulted in the decrease of populations. Thus, this work takes precedence in describing seahorses and pipefishes including its habitats in Mindanao, Philippines. This photographic guide to seahorses and pipefishes was constructed as a collaborative effort with partners and stakeholders to account for species and microhabitats present in selected areas in Mindanao. This served as an inspirational and conservational tool for information dissemination and for local capacity building as we take the challenge to save the seas by saving the seahorses.*

*The logo called 'Seahorse Tidal Love' is drawn by hand and represents the seahorse as a symbol of love and hope amidst tossing waves of uncertainties under changing environment.*

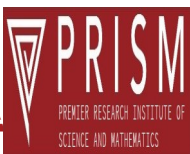
—SRMT—

## ACKNOWLEDGMENT

PROVINCIAL GOVERNMENT LANA O DEL NORTE  
LOCAL GOVERNMENT UNIT OF TUBOD, LANA O DEL NORTE  
LOCAL GOVERNMENT UNIT OF BACOLOD, LANA O DEL NORTE  
LOCAL GOVERNMENT UNIT OF KAUSWAGAN, LANA O DEL NORTE  
LOCAL GOVERNMENT UNIT OF ILIGAN CITY, LANA O DEL NORTE  
LOCAL GOVERNMENT UNIT OF SURIGAO CITY  
LOCAL GOVERNMENT UNIT OF SURIGAO DEL NORTE  
LOCAL GOVERNMENT UNIT OF SURIGAO DEL SUR  
LOCAL GOVERNMENT UNIT OF MISAMIS ORIENTAL & MISAMIS OCCIDENTAL  
LOCAL GOVERNMENT UNIT OF ZAMBOANGA DEL NORTE  
DENR LANA O DEL NORTE  
BFAR LANA O DEL NORTE  
BFAR CAGAYAN DE ORO  
BFAR CARAGA

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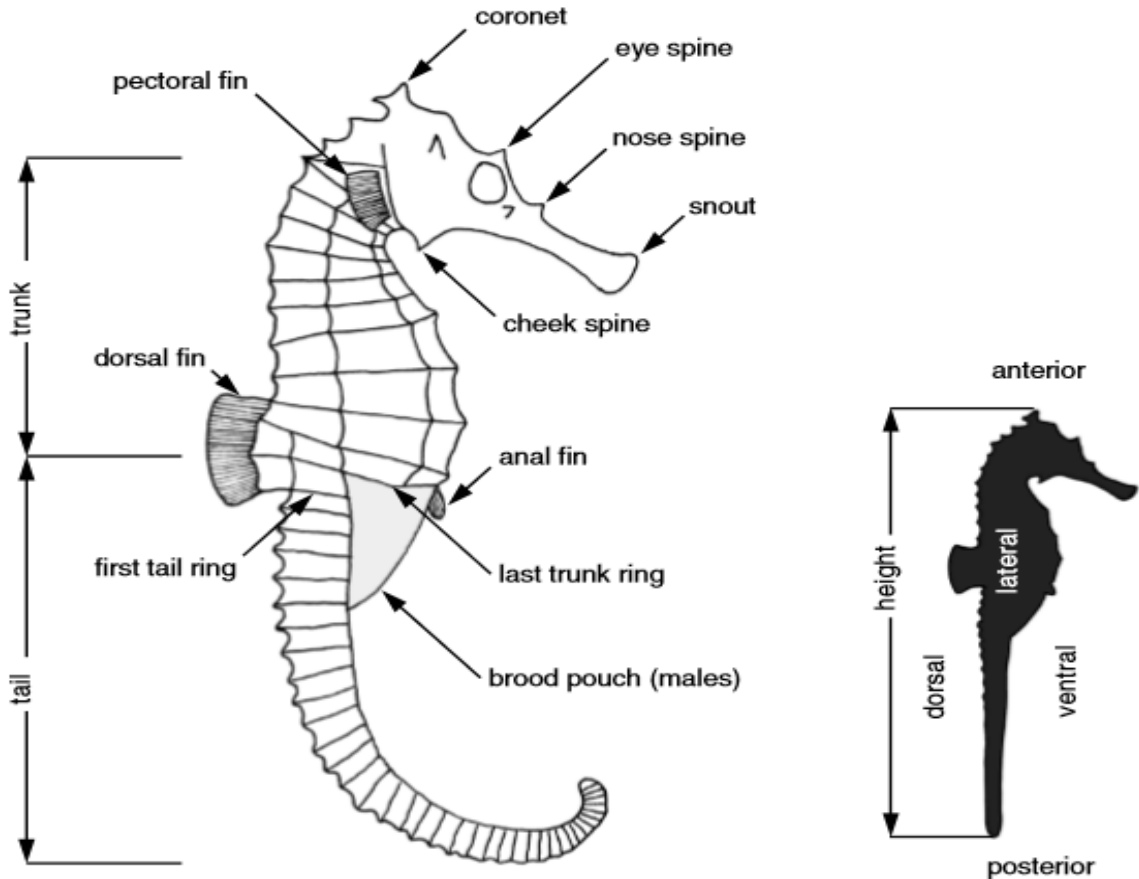




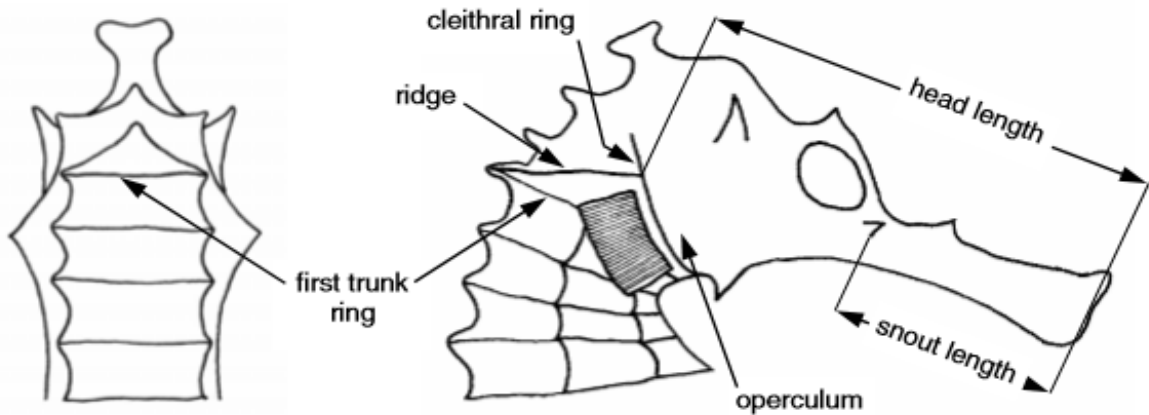


# COMMON SEAHORSES of Mindanao

## Parts of the Seahorse

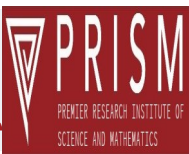


a. Whole Seahorse: Lateral



b. Head: Dorsal View

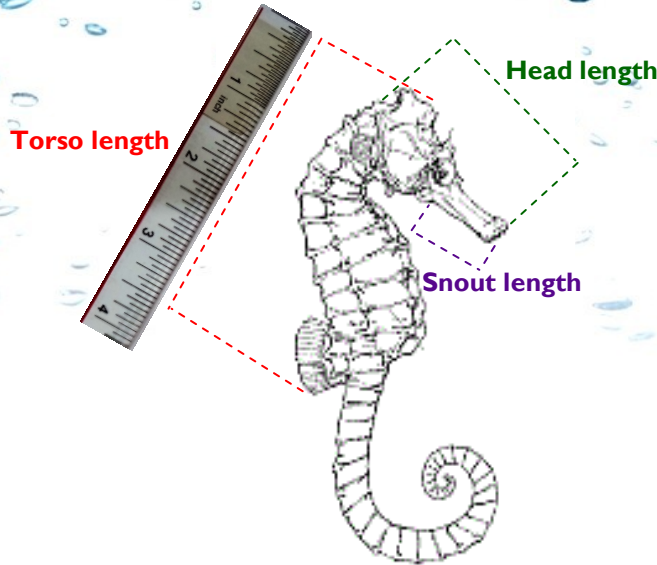
c. Head: Lateral View





# Don't Know Which Seahorse Species?

## How to Photograph for ID



For unknown species, record the following characteristics:

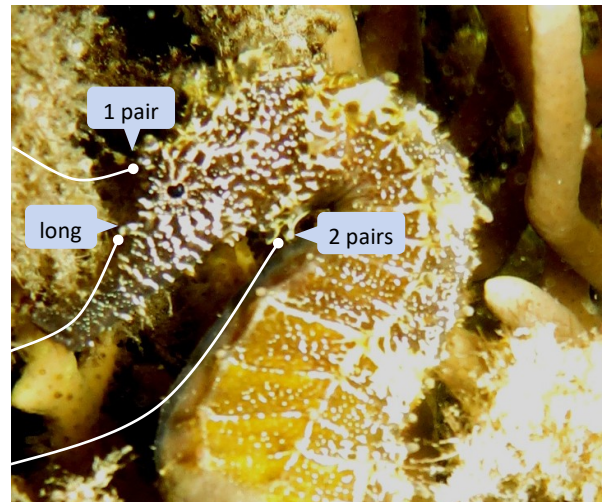
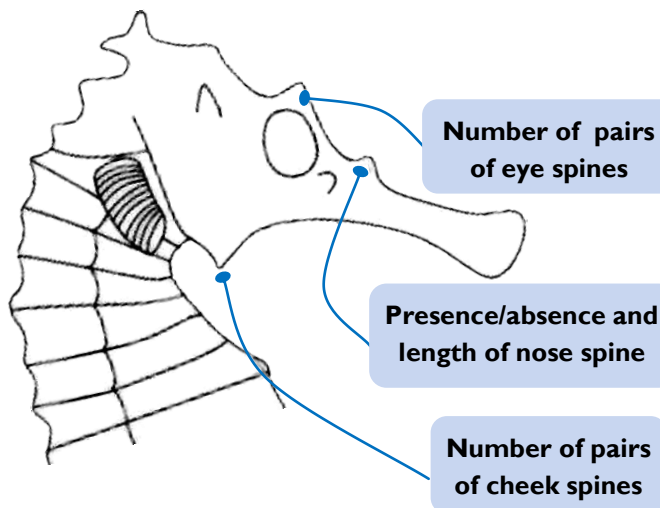
- **Torso length**  
(distance from top of coronet to base of dorsal fin)
- **Head length**  
(from immediately behind the operculum - the flap covering the gills - to tip of snout)
- **Snout length**  
(from bump immediately in front of the eye to tip of snout)

or

Take a photo of the side profile of the seahorse with a ruler and calculate these measurements from the photo.

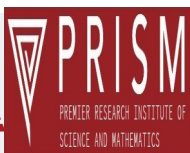
Also record and photograph a side view of the head showing

- All facial spines and coronet
- Number of pairs of eye spines
- Number of pairs of cheek spines
- Presence/absence of nose spine, and if present, whether it is long (prominent) or short (low)
- Any other distinguishing features, e.g., spines or bumps on body, stripes on snout/tail



*H. comes*

Photo: Sharon Rose Tabugo





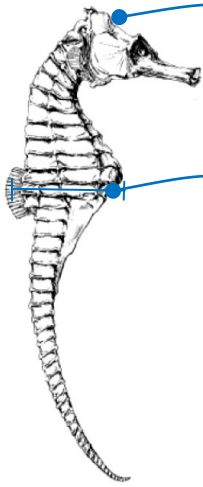


# COMMON SEAHORSE

## *Hippocampus kuda*

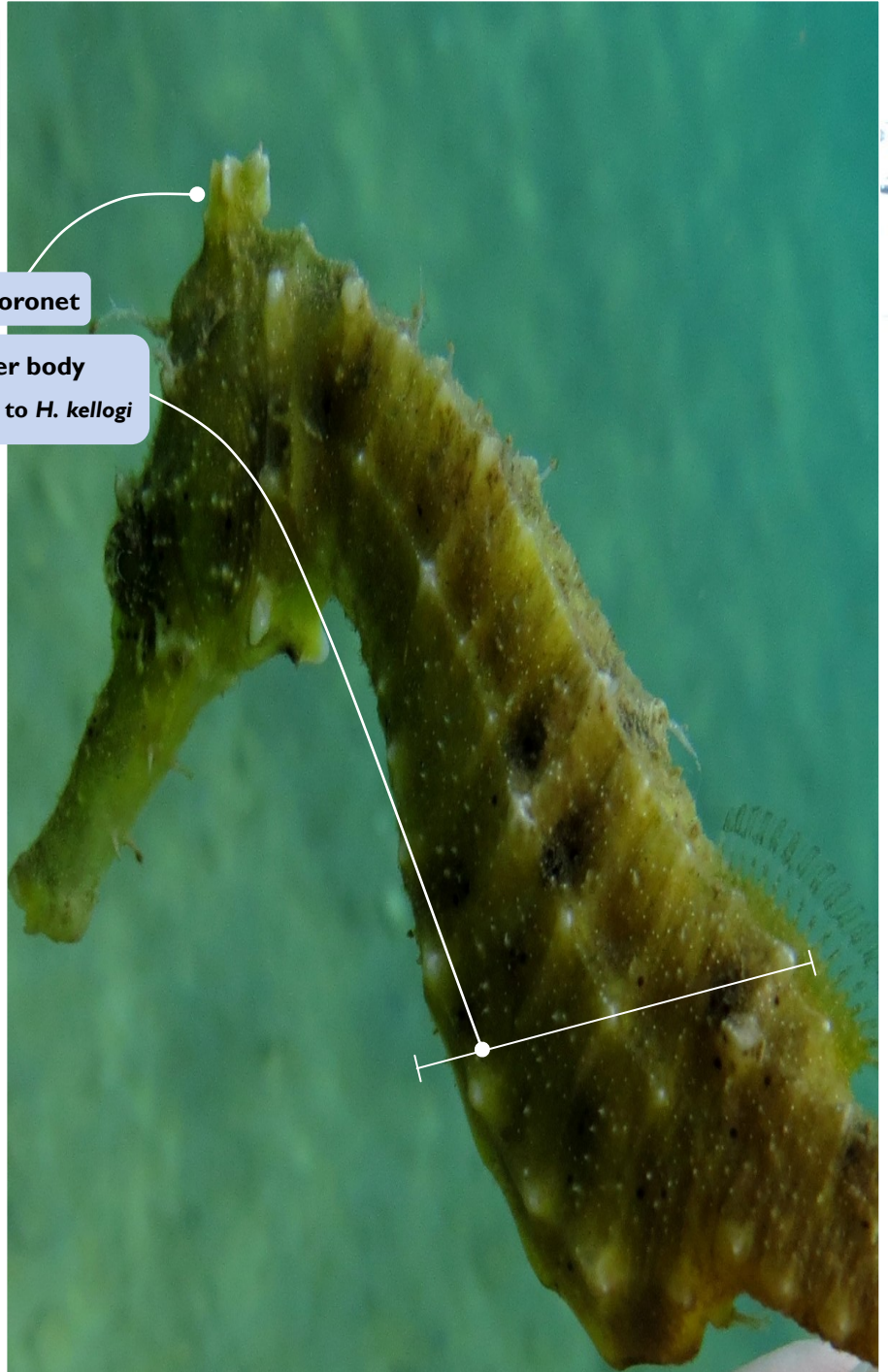
Smooth Seahorse

- Deep body (“fatter” compared to *H. kellogi*)
- Low/round coronet
- Spines are rounded bumps



Low coronet

Deeper body  
Compared to *H. kellogi*

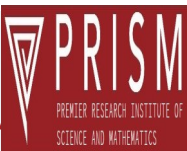


Color variation of *H. kuda*



Photo: Sharon Rose Tabugo

Photo: Sharon Rose Tabugo







# COMMON SEAHOSE

## *Hippocampus kuda*

Smooth Seahorse

**Common name:** Yellow seahorse; spotted seahorse

### Description

Maximum recorded adult height: 17 cm

Trunk rings: 11

Tail rings: 36 (34–38)

HL/SnL: 2.3 (2.0–2.6)

Rings supporting dorsal fin: 2 trunk rings and 1 tail ring

Dorsal fin rays: 17 (17–18)

Pectoral fin rays: 16 (15–18)

Coronet: Low to medium-height, rounded, overhanging at the back, often with a cup-like depression in the top; sometimes with broad flanges; not spiny

Spines: Low, rounded bumps only

### Other distinctive characteristics:

Deep head; deep body; thick snout

Color/pattern: Often totally black with a grainy texture; alternatively pale yellow or cream with fairly large, dark spots (especially females); may be sandy colored, blending in with surroundings

### Distribution

Buruun, Iligan City  
Canaway, Iligan City  
Dalipuga, Iligan City  
Zamboanga City  
Lopez Jaena, Misamis Occidental  
Tukuran, Zamboanga del Sur  
General Santos City  
SND, Lanao del Norte  
Samal Island, Davao  
Sarangani, Southern Mindanao  
Linamon, Lanao del Norte  
Tubod, Lanao del Norte  
Surigao City  
Cagayan de Oro City  
Bacolod, LDN

Agpopongan Pier, Island Garden City of Samal



*H. kuda*

Photo: Berns Maglana



Maguindanao

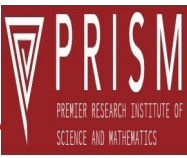
Kauswagan, LDN

Tubod, LDN

Lopez Jaena, Misamis Occidental



Photo: Sharon Rose Tabugo





# Hippocampus kuda Morphotypes



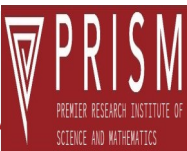
**IUCN Red List Status (Ref. 120744)**



**Vulnerable (VU)** (A2cd+3cd+4cd); Date assessed: 16 August 2012

**CITES (Ref. 115941)**

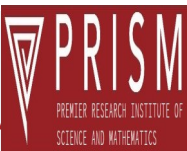
Appendix II: **International trade monitored**







# Hippocampus kuda Morphotypes





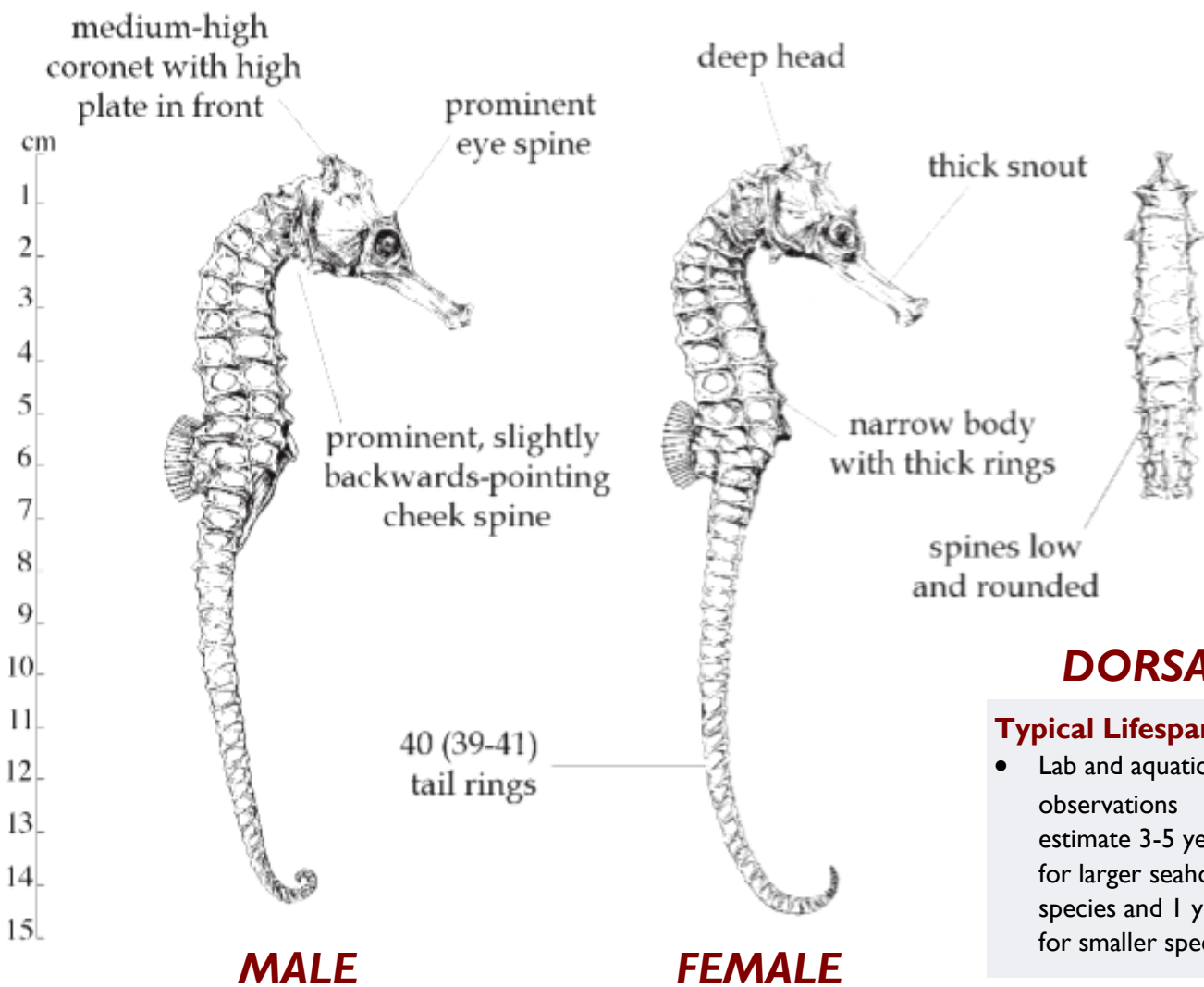


# KELLOGGI'S SEAHORSE

Smooth Seahorse

## *Hippocampus kelloggi*

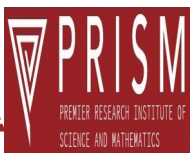
- Distinct coronet
- Narrow body (compared to *H. kuda*)
- Thick truck rings
- Long, back-pointing, rounded cheek spine



**Typical Lifespan**

- Lab and aquatic observations estimate 3-5 years for larger seahorse species and 1 year for smaller species.

**Distribution**  
Tungawan, Zamboanga Sibugay  
Tawi-tawi





# WINGED SEAHORSE

## *Hippocampus alatus*

Smooth Seahorse

### Characteristics

- laterally directed wing-like spines;
- Nape and lateral head spines with ribbon-like filaments;
- Snout length approximately 1/2 head length; and snout depth 4x in its length;
- Trunk ridges with enlarged broad-based blunt spines on rings 1,4,7 and below dorsal fin, others as low tubercles, ventral ridge smooth;
- Nose spine absent, spine above eye of moderate length reaching pupil diameter;
- Dorsal fin rays usually 17; trunk rings 11; tail rings 34-36; subdorsal spines 2-3/0-0.5, 1,0-0.5, usually enlarged on the 11th trunk ring;
- Lateral head spine large, usually larger than spine above eye; coronet well-developed, with 5-7 blunt spines, apex rough and rugose;

### Habitat

- Adults inhabit soft bottoms;
- Marine, demersal, non-migratory; depth range 10-80m;

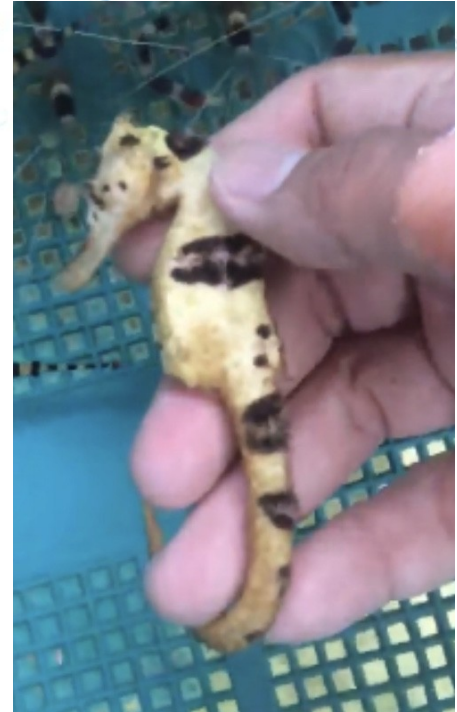


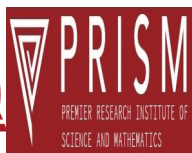
Photo : Citizen Scientist  
Macabalan Pier, Cagayan de Oro City,

### IUCN Red List Status (Ref. 120744)

Not Evaluated

### CITES (Ref. 118484)

Appendix II: International trade monitored



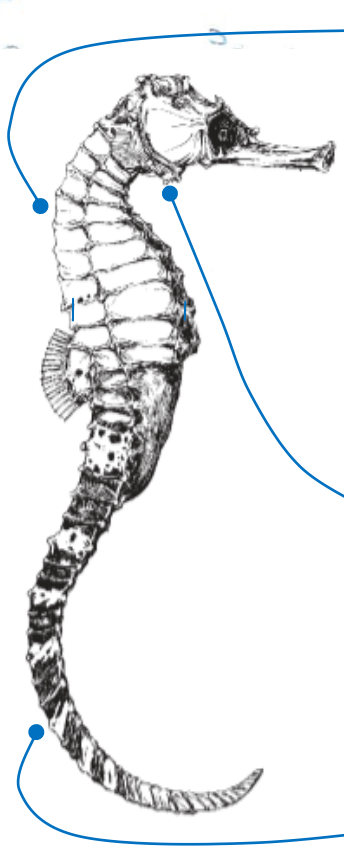




# TIGER TAIL SEAHOSE

*Hippocampus comes*

Spiny Seahorse



Blunt spines

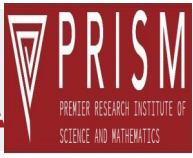
Double cheek spines

Striped tail



- Double cheek spines
- Prominent nose spine
- Rugged spines on body (spines not sharp)
- Low coronet
- Striped tail (can look blotchy)
- Small head relative to body

Photo: Sharon Rose Tabugo







# TIGER TAIL SEAHOSE

Spiny Seahorse

## *Hippocampus comes*

**Common name:** Tiger tail seahorse

### Description

Maximum recorded adult height: 18.7 cm

Trunk rings: 11

Tail rings: 35-36 (34-37)

HL/SnL: 2.2 (1.9-2.5)

Rings supporting dorsal fin: 2 trunk rings and 1 tail ring

Dorsal fin rays: 18 (17-19)

Pectoral fin rays: 17 (16-19)

Coronet: Small and low, with five distinct rounded knobs or spines

Spines: Range from knob-like and blunt to well-developed and sharp; often with dark band near tip

### Other distinctive characteristics:

Cheek spines are double; double spines below and sometimes also above eye; prominent, sharp nose spine; long, slender snout

**Color/pattern:** Commonly hues of yellow and black, sometimes alternating; striped tail (although this may not be visible in dark specimens); mottled or blotched pattern on body; may have fine white lines radiating from eye

Rizal, Zamboanga del Norte (male and female)

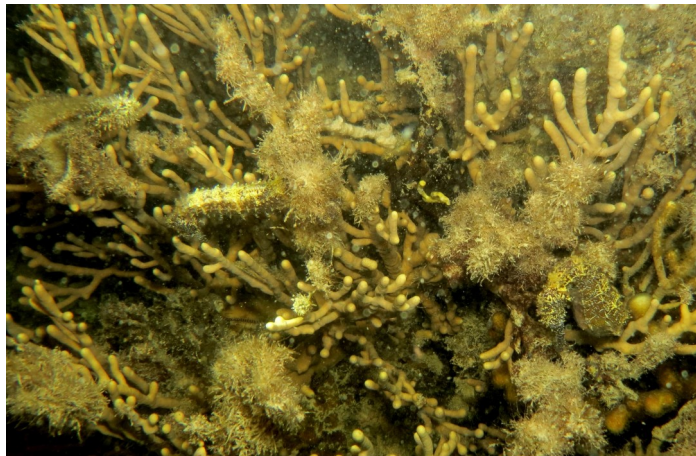


Photo: Sharon Rose Tabugo

Rizal, Zamboanga del Norte



Photo: Sharon Rose Tabugo



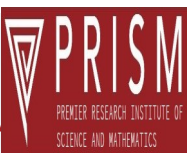
Rizal, ZDN (male)



Rizal, ZDN (female)

### Distribution

Rizal, Zamboanga del Norte  
Tungawan, Zamboanga Sibugay  
Zamboanga City  
Samal Island, Davao  
Surigao City








# Hippocampus comes Morphotypes

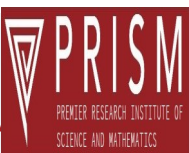


**IUCN Red List Status (Ref. 120744)**

 **Vulnerable (VU)** (A2bd+4bd); Date assessed: 15 September 2013

**CITES (Ref. 115941)**

Appendix II: **International trade monitored**



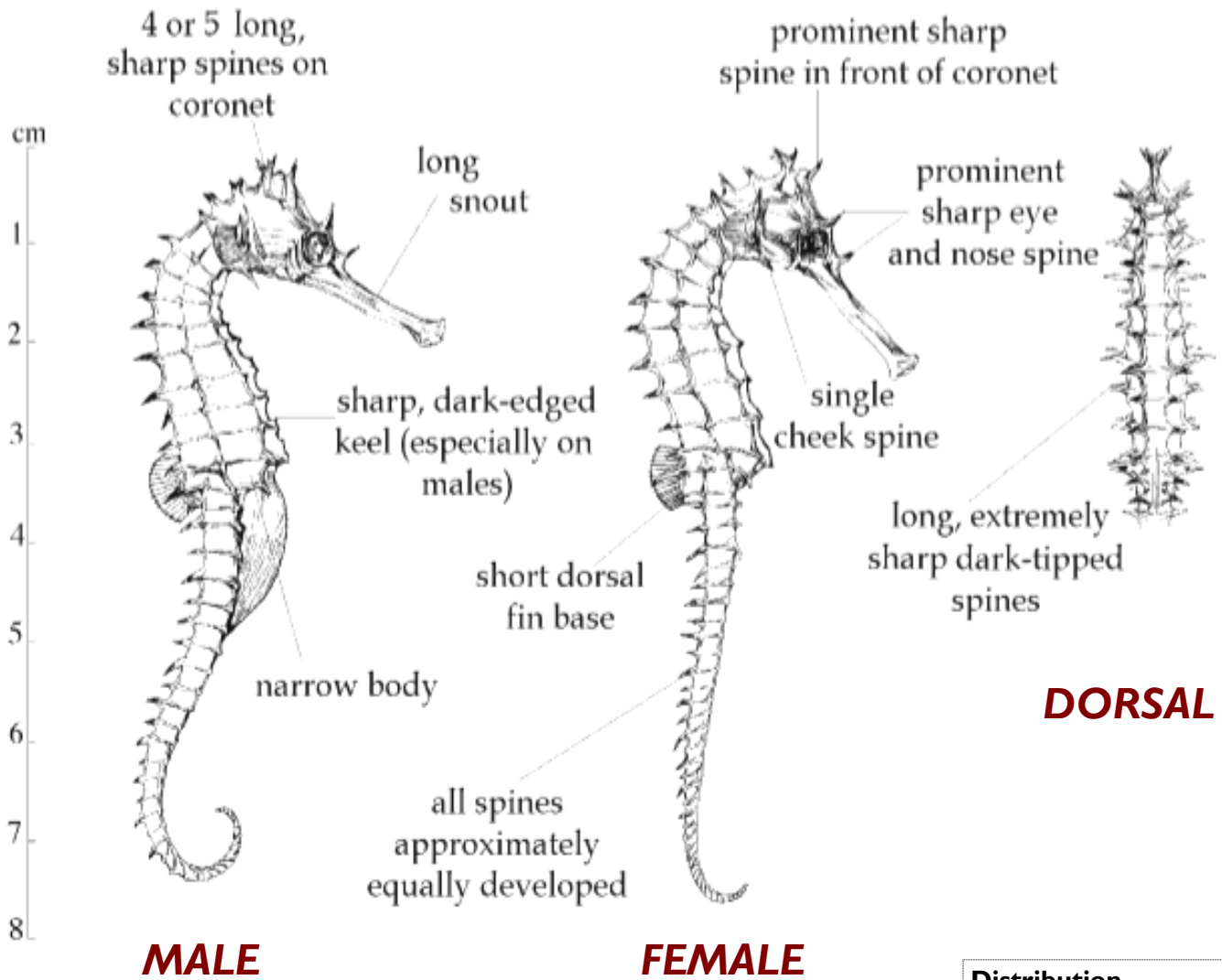


# SPINY SEAHORSE

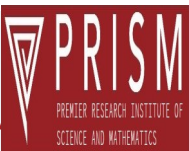
## *Hippocampus histrix*

Spiny Seahorse

- Long snout
- Single cheek spine
- Sharp spines on coronet
- Prominent nose spine
- Sharp, often dark-tipped body spines



**Distribution**  
 Zamboanga  
 Samal Island, Davao





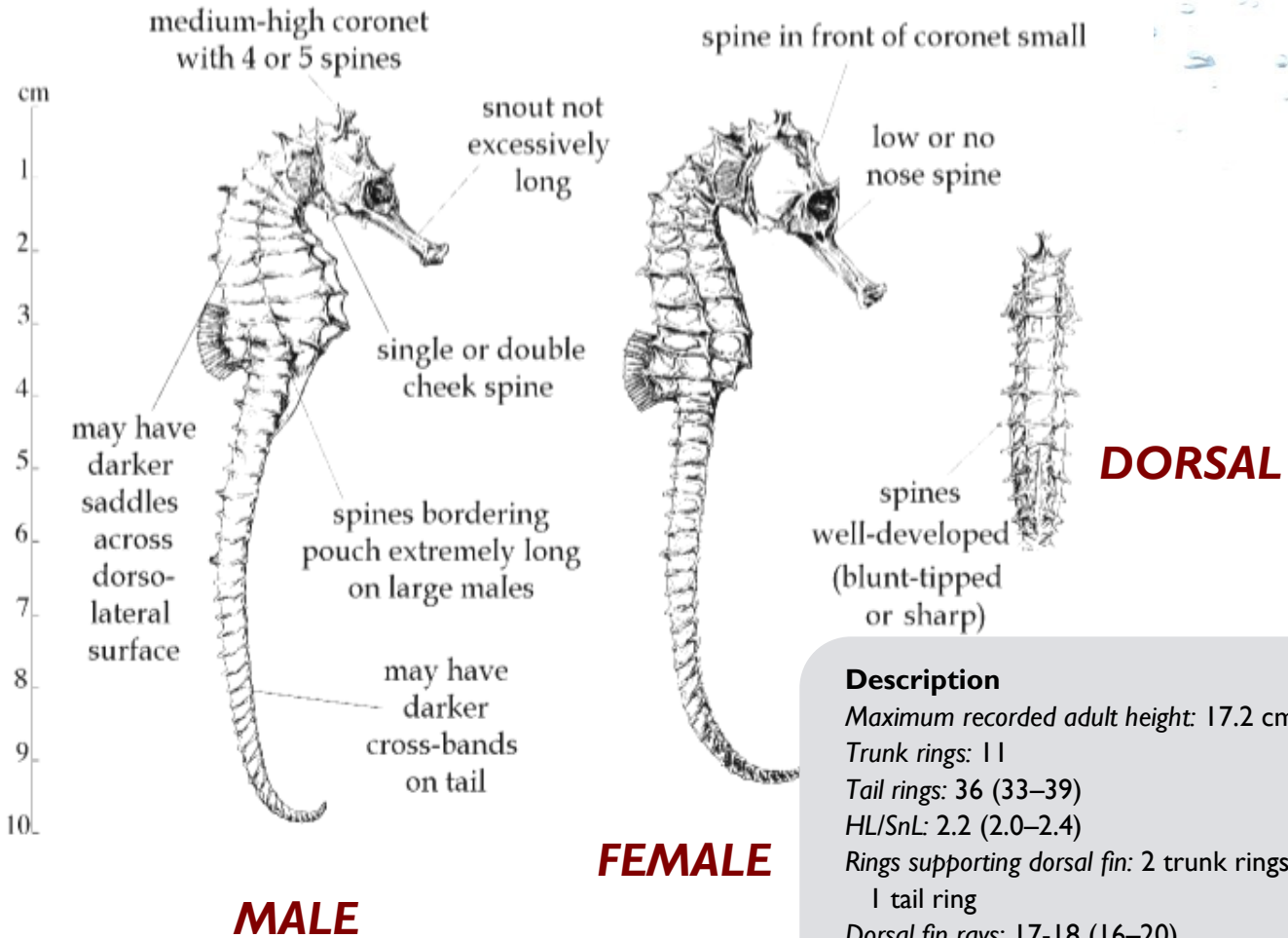


# HEDGEHOG SEAHORSE

## *Hippocampus spinosissimus*

Spiny Seahorse

- Low or no nose spine (compare to *H. histrix*)
- Single or double cheek spines
- Blunter and shorter body spines than *H. histrix*



### Description

Maximum recorded adult height: 17.2 cm

Trunk rings: 11

Tail rings: 36 (33–39)

HL/SnL: 2.2 (2.0–2.4)

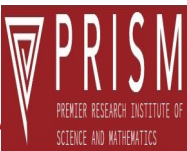
Rings supporting dorsal fin: 2 trunk rings and 1 tail ring

Dorsal fin rays: 17-18 (16–20)

Pectoral fin rays: 17 (16–19)

Coronet: Low to medium-height, with four or five sharp spines

Spines: Well-developed, either blunt or sharp, usually longer on first, fourth, seventh and eleventh trunk rings and with a regular series of longer spines on tail





# BARBOURI'S SEAHORSE

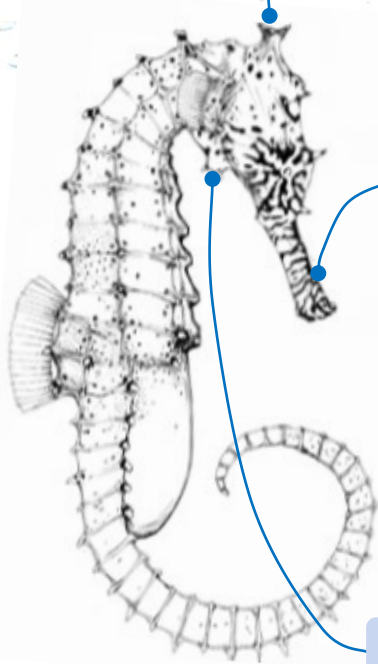
## *Hippocampus barbouri*

- Two pairs of cheek spines
- Prominent nose spines
- Stripes on snout

High coronet

Striped snout

Double cheek spines



*Other distinctive characteristics:* Double cheek spines, double spines below eye

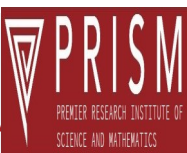
*Color/pattern:* White to pale yellow to pale brown; reddish-brown spots and lines on body; snout often striped; fine lines radiating from eye

### Distribution

Surigao del Norte  
Samal Island, Davao  
Surigao City  
Zamboanga

*H. barbouri* in Samal Island, Davao

Photo: Citizen Scientist








# *Hippocampus barbouri* Morphotypes

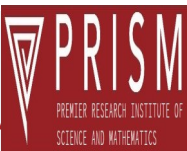


**IUCN Red List Status (Ref. 120744)**

 **Vulnerable (VU)** (A2cd); Date assessed: 19 January 2017

**CITES (Ref. 115941)**

Appendix II: [International trade monitored](#)



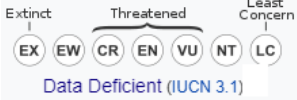


# BARGIBANTI'S SEAHORSE

Pygmy Seahorse

## *Hippocampus bargibanti*

### Conservation status

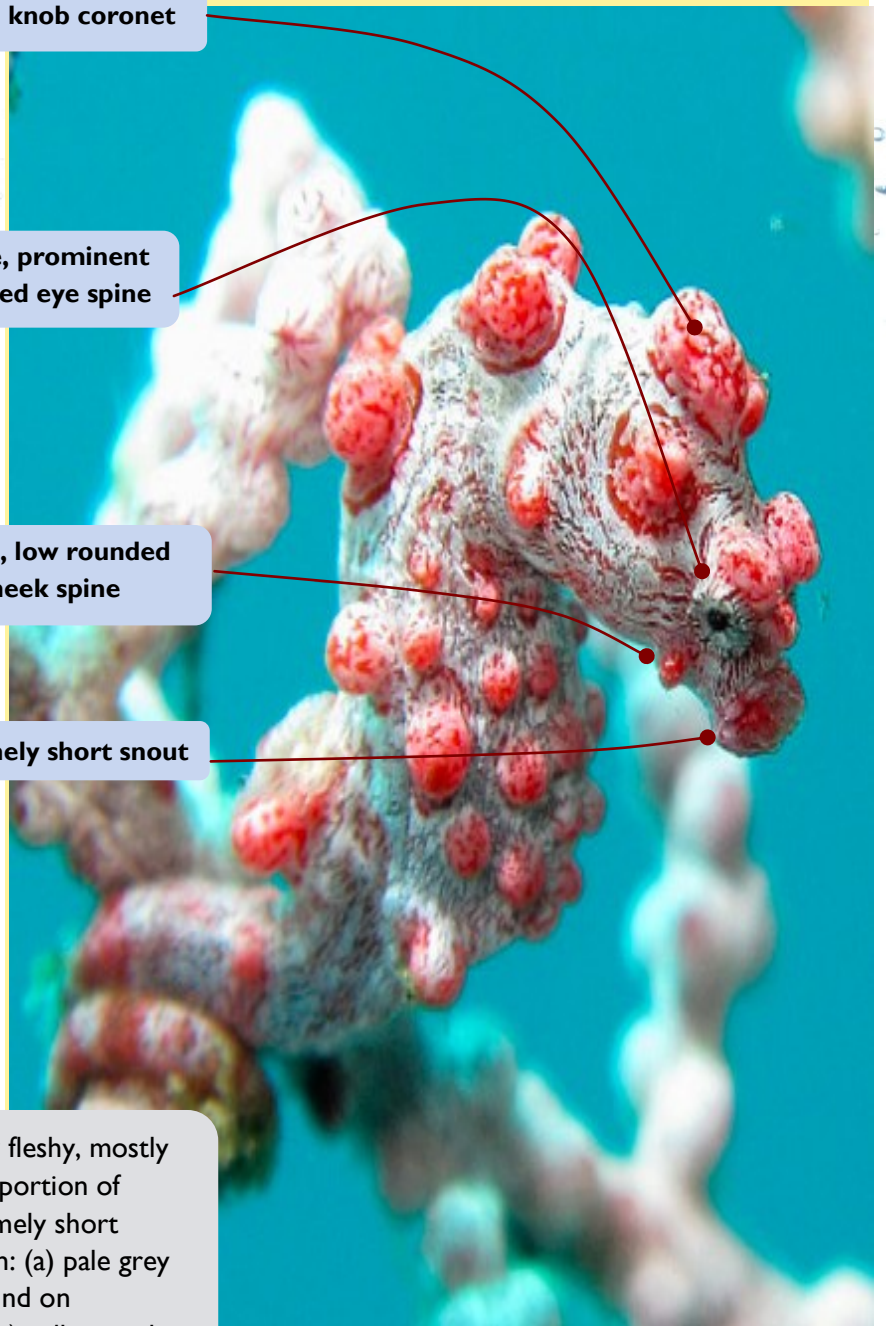
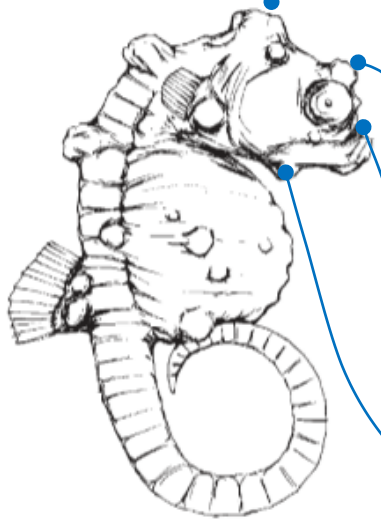


Rounded knob coronet

Single, prominent rounded eye spine

Single, low rounded cheek spine

Extremely short snout



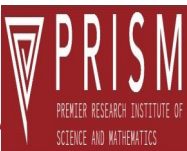
- Coronet: Rounded knob
- Spines: Irregular bulbous tubercles scattered over body and tail; single, prominent rounded eye spine; single, low rounded cheek spine
- Snout: extremely short

**Other distinctive characteristics:** Head and body fleshy, mostly without recognizable body rings; ventral portion of trunk segments incomplete; snout extremely short

**Color/pattern:** Two colour morphs are known: (a) pale grey or purple with pink or red tubercles (found on gorgonian coral *Muricella plectana*); and (b) yellow with orange tubercles (found on gorgonian coral *Muricella paraplectana*)

**Distribution**  
 Davao del Norte

**Photo:** Citizen Scientist  
 Samal Island, Davao







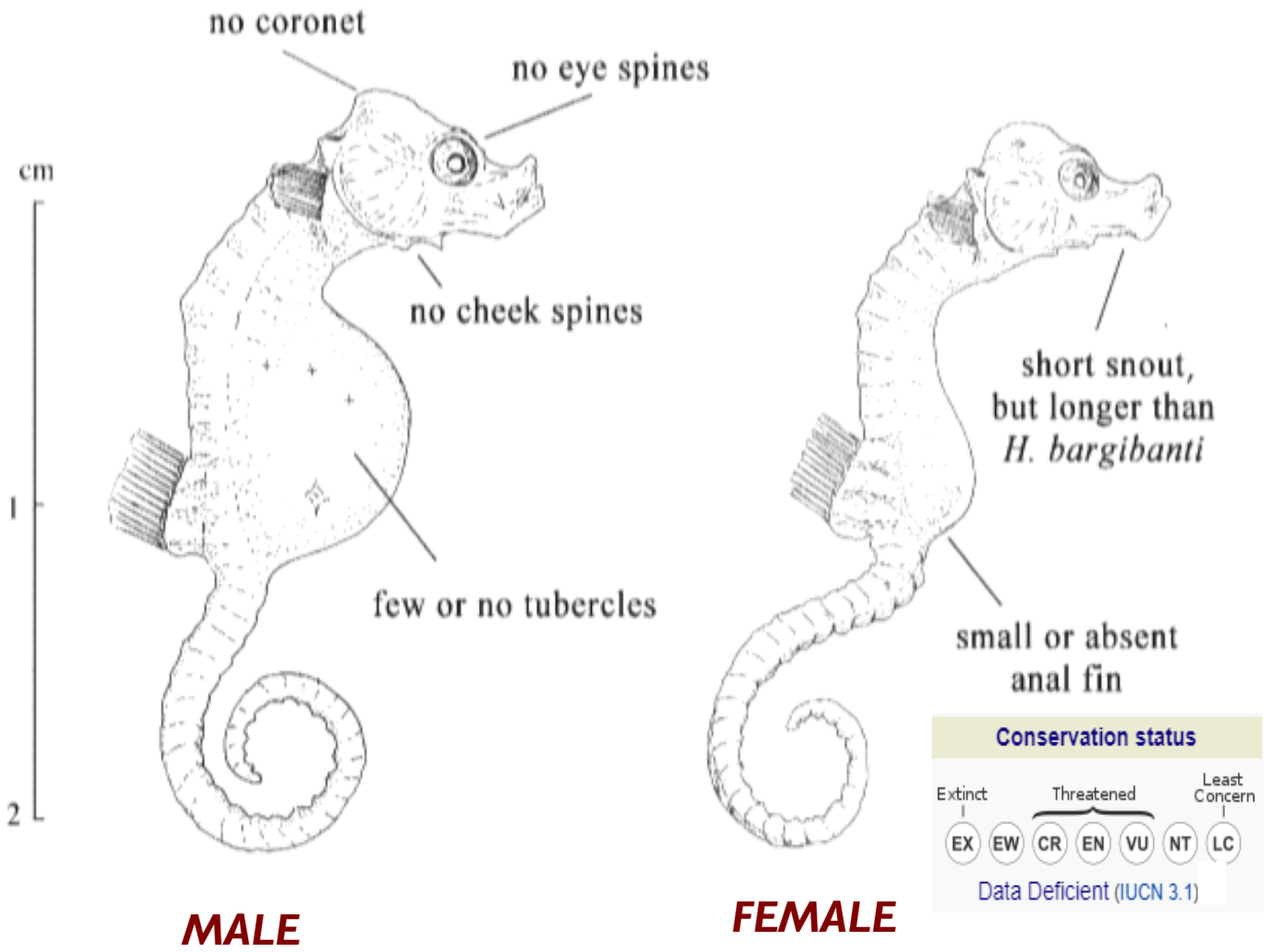
# DENISE'S PYGMY SEAHOSE

Pygmy Seahorse

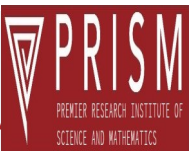
## *Hippocampus denise*

- Limited number of tubercles on the body
- Coronet: No raised coronet
- Spines: none

Other distinctive characteristics: Limited number of tubercles on the body  
 Color/pattern: Plain orange with slightly darker rings around tail



**Distribution**  
 Samal Island, Davao





# SCRIBBLED PIPEFISH

## *Corythoichthys intestinalis*

### Pipefishes in Mindanao

ETYMOLOGY: *Corythoichthys*: korythos = helmet + ichtys = fish

-Allies of 'seahorses'; also known as scribbled pipefish.

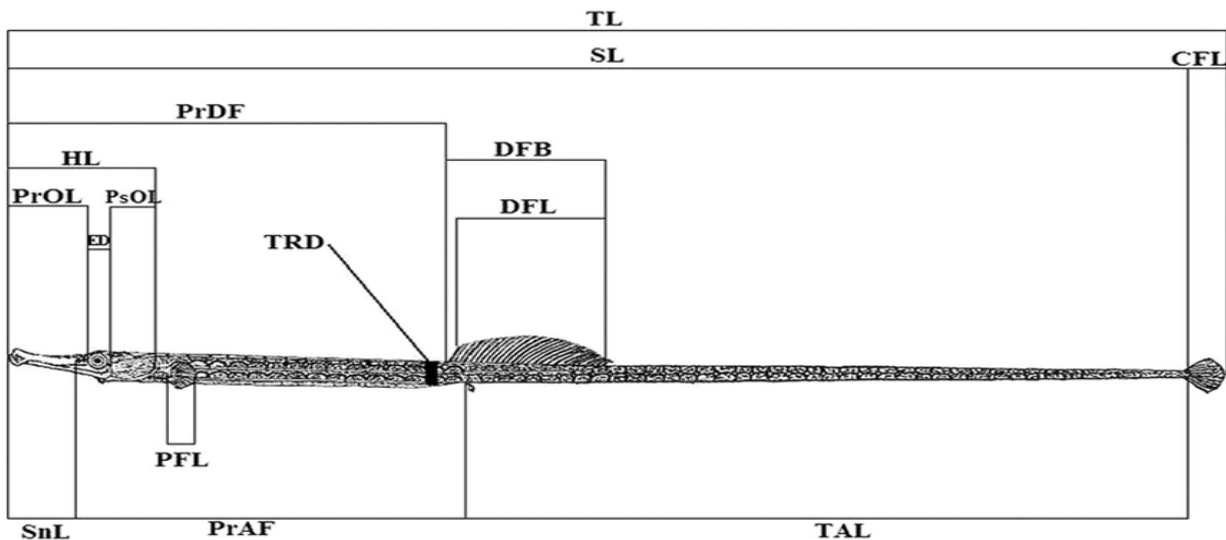
-The male carries the eggs in a brood pouch which is found under the tail

### Parts of the Pipefish

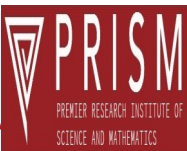


Photo: Rohanisah Balt Guro

### What to measure?



*Corythoichthys intestinalis* pipefish. Bottom, Measurements carried out on *Syngnathus rostellatus* following Dawson (1982) for syngnathids. Specimen redrawn from Nijssen & Buizer (1983). CFL – caudal fin length. DFB – dorsal fin base. DFL – dorsal fin length. ED – eye diameter. HL – head length. PFL – pectoral fin length. PrAF – pre-anal fin distance. PrDF – predorsal fin distance. PrOL – pre-orbitary length. PsOL – post-orbitary length. Standard length (SL). SnL – snout length. TAL – tail length. TL – total length. TRD – trunk depth.







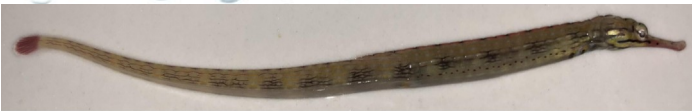
# SCRIBBLED PIPEFISH

## *Corythoichthys intestinalis*

### Pipefishes in Mindanao

### Rocky and Sandy Bottoms

*Corythoichthys intestinalis* is a marine coastal pipefish that inhabits lagoons and coral, rocky, and sponge reefs in the western and central Pacific. It is also widely distributed in Mindanao.



**Female**

Photo: Sharon Rose Tabugo



**Male (pregnant)**

Photo: Sharon Rose Tabugo



*C. intestinalis* in Dalipuga, Iligan City Photo: Local Fishermen

### Sargassum beds



*C. intestinalis* in Dalipuga, Iligan City Photo: Local Fishermen

#### Description

Maximum recorded adult height: 16.0cm SL male/unsexed

Dorsal Soft Rays (total): 26-32

Anal Soft Rays: 4

Males Brooding: 6.5-7.0 cm SL

Rings supporting dorsal fin: 2 trunk rings and 1 tail ring

Caudal rays rings: 10 (31-37)

Pectoral fin rays: 16 (15-18)

length of snout 1.8-2.4 in head length;

depth of snout 3.9-8.9

Head length: 6.6-9.8 in SL

Characteristics: discontinuous superior trunk and tail ridges straight lateral trunk ridge, ends near anal ring; continuous inferior trunk and tail ridges

#### Habitat:

Shallow sandy / Mixed sand

Coral areas and Lagoons

Seaward/ Rocky Reefs,

Sponge garden, Sargassum beds

IUCN Red List Status (Ref. 120744)

Least Concern (LC); Date assessed: 17 December 2015

CITES (Ref. 115941)

Not Evaluated

#### Distribution

Canaway, Buruun, and Dalipuga, Iligan City

Zamboanga City

Lopez Jaena, Misamis Occidental

Rizal, Zamboanga del Norte

General Santos City

SND, Lanao del Norte

Kauswagan, Bacolod, Linamon and Tubod,

Lanao del Norte

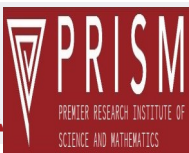
Samal Island, Davao

Sarangani, Southern Mindanao

Tawi-Tawi

Jolo, Sulu

Surigao City





# BANDED PIPEFISH

## *Doryrhamphus dactyliophorus*

**ETYMOLOGY:** *Dunckerocampus*: From Duncker, an ichthyologist and taxonomist that recognized four Gobiidae families (1928) + Gr, kampe = bent.

- Allies of 'seahorses'; also known as ringed pipefish.
- The male carries the eggs in a brood pouch which is found under the tail.
- Accepted name: *Dunckerocampus dactyliophorus*

Dorsal spines:0; dorsal soft rays:20-26;Anal spines:0;Anal soft rays:4,usually with one dark band crossing the operculum

**IUCN Red List Status (Ref. 120744)**

■ Data deficient (DD) : Date assessed: 28 June 2016

**CITES (Ref. 115941)**

Not Evaluated

### Distribution

Lugait, Misamis Oriental  
Surigao City  
Buruun, Iligan City  
Dalipuga, Iligan City  
Zamboanga City  
Lopez Jaena, Misamis Occidental  
Rizal, Zamboanga del Norte  
General Santos City  
SND, Lanao del Norte  
Samal Island, Davao  
Sarangani, Southern Mindanao  
Linamon, Lanao del Norte  
Tawi-Tawi  
Jolo, Sulu  
Cagayan de Oro City



Photo: Sharon Rose Tabugo

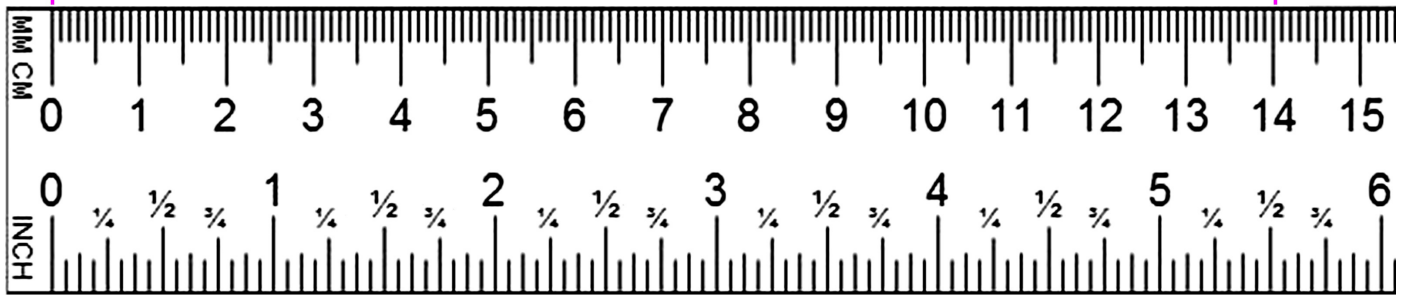
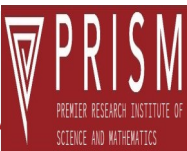


Photo: Sharon Rose Tabugo

### Habitat

Mangrove areas, seagrass beds, coral reef areas; soft bottoms;







# GREATER PIPEFISH

## *Syngnathus acus*

### Pipefishes in Mindanao

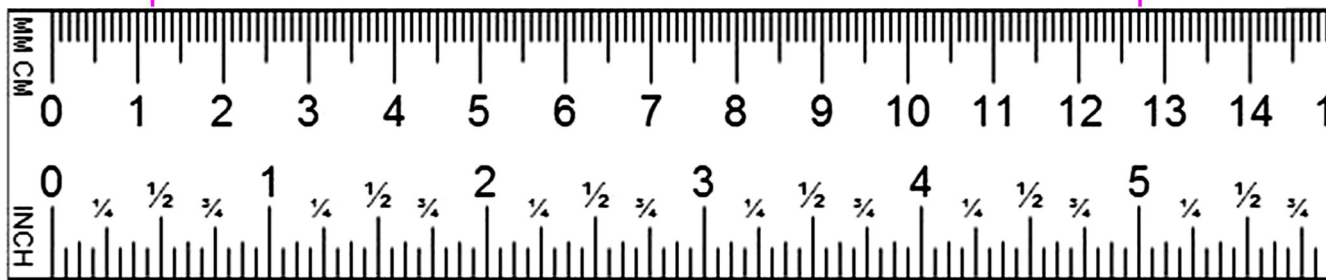
ETYMOLOGY: *Syngnathus*: Greek, syn, symphysis = grown together + Greek, gnathos = jaw

-Allies of 'seahorses'; also known as greater pipefish.

-Several females depositing partial clutches to a male's brood pouch under the tail

-long segmented armoured body; appeared as brown to green in with broad alternating light and dark hue; with slight hump at the top of the body behind the eyes; long snout and mouth on end; distinct body rings; sandy brown to dark bars covering the body

Photo: Roxanne Eupena

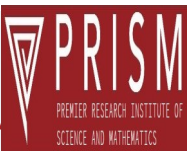


**Habitat:**

Sand  
Mud  
Rough bottoms

**Distribution:**

Surigao del Norte  
Surigao del Sur





# PACIFIC SEAWEED PIPEFISH

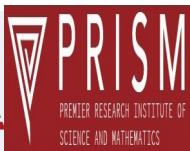
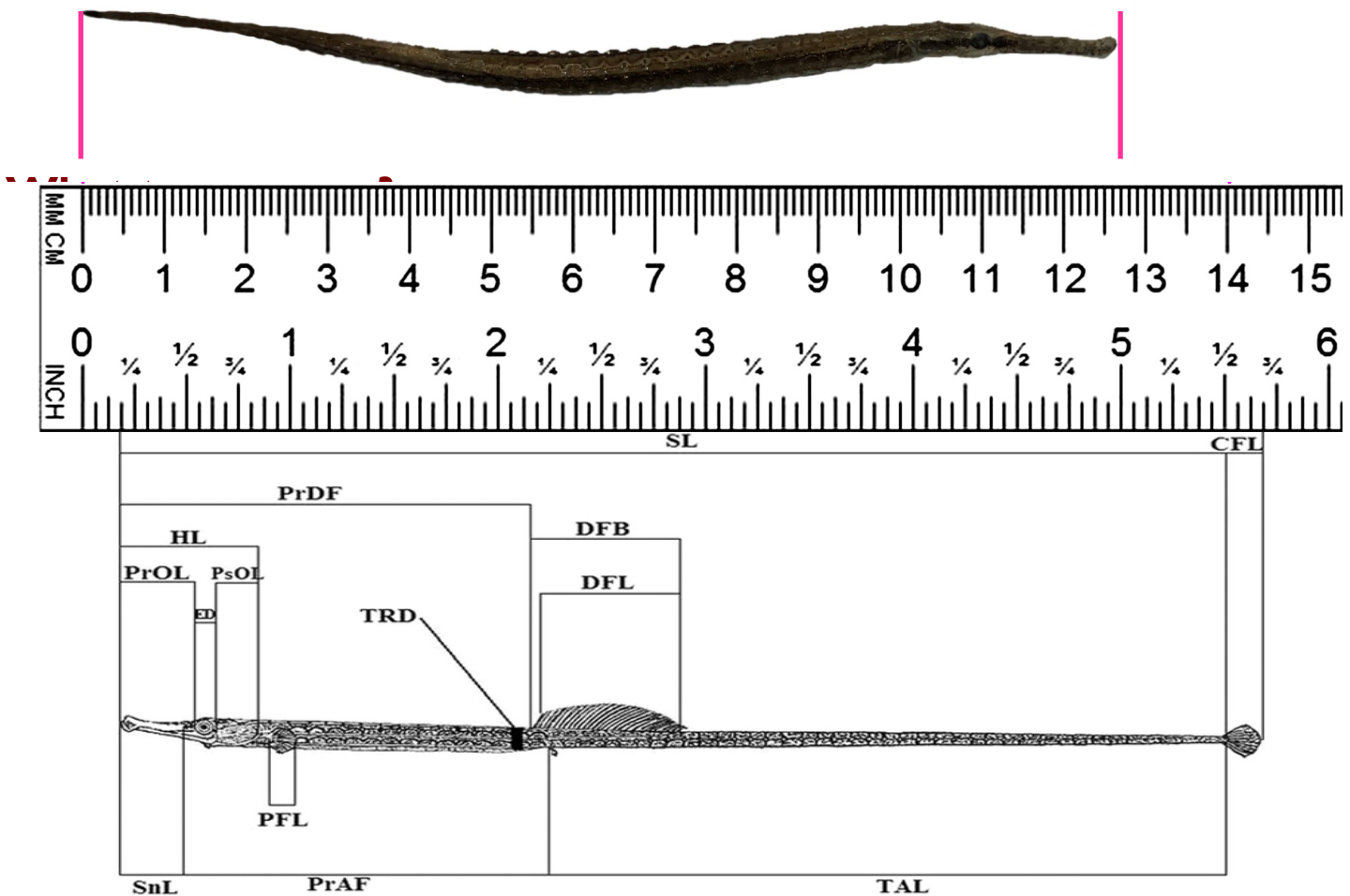
## *Syngnathus schlegeli*

### Pipefishes in Mindanao

ETYMOLOGY: *Syngnathus*: Greek, syn, symphysis = grown together + Greek, gnathos = jaw

- Allies of 'seahorses'; also known as seaweed pipefish.
- The male carries the eggs in a brood pouch which is found under the tail.
- Accepted name: *Syngnathus schlegeli*

Photo: Sharon Rose Tabugo







# PACIFIC SEAWEED PIPEFISH

## *Syngnathus schlegeli*

### Description

Maximum recorded adult height: 50.0 cm TL male/unsexed

Dorsal spines: 0

Dorsal soft rays: 33-42

Anal spines: 0

Anal soft rays: 3 (light greenish to dark brown in color with variable markings)

Length of snout: equal to or less than eye diameter, approximately 1.6 cm

Depth of snout:

Head length: 2.5 cm

### Feeding and Growth

Feeds on small crustaceans; planktons


### Biology/ Mating behavior

- Ovoviviparous
- Reproduce on average 3 times each year
- Brooding males occur mainly between May and July
- Gestation period lasts about 5 weeks

### Habitat:

Coastal and estuarine waters, on sand, mud and rough bottoms.

### IUCN Red List Status (Ref. 120744)

 Least Concern (LC) ; Date assessed: 01 December 2014

### CITES (Ref. 115941)

Not Evaluated

### Distribution

Buruun, Iligan City  
Canaway, Iligan City  
Dalipuga, Iligan City  
Zamboanga City  
Lopez Jaena, Misamis Occidental  
Rizal, Zamboanga del Norte  
General Santos City  
SND, Lanao del Norte  
Samal Island, Davao  
Sarangani, Southern Mindanao  
Linamon, Lanao del Norte  
Tawi-Tawi  
Jolo, Sulu  
Surigao City

