“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 decreased 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 collaborators 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 & hope amidst tossing waves of uncertainties under changing environment.

—SRT—

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LOCAL GOVERNMENT UNIT OF SURIGAO DEL NORTE
LOCAL GOVERNMENT UNIT OF SURIGAO DEL SUR
LOCAL GOVERNMENT UNIT OF MISAMIS OCCIDENTAL
LOCAL GOVERNMENT UNIT OF ZAMBOANGA DEL NORTE
DENR LANAO DEL NORTE
BFAR LANAO DEL NORTE
BFAR CAGAYAN DE ORO
BFAR CARAGA

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COMMON SEAHORSES
of Mindanao

Parts of the Seahorse

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 eye 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 SEAHPORSE
Hippocampus kuda

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

Photo: Sharon Rose Tabugo

Color variation of H. kuda

Photo: Sharon Rose Tabugo
COMMON SEAHORSE
Hippocampus kuda

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

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

Agpoopongan Pier, Island Garden City of Samal

Photo: Berns Maglana

Maguindanao Kauswagan, LDN Tubod, LDN

Photo: Sharon Rose Tabugo
KELLOGGI’S SEAHORSE
Hippocampus kelloggi

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

**MALE**
- Medium-high coronet with high plate in front
- Prominent eye spine
- Prominent, slightly backwards-pointing cheek spine
- 40 (39-41) tail rings

**FEMALE**
- Deep head
- Thick snout
- Narrow body with thick rings
- Spines low and rounded

**DORSAL**

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

**Distribution**
- Tungawan, Zamboanga del Norte
- Tawi-tawi
TIGER TAIL SEAHORSE
Hippocampus comes

- 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

Spiny Seahorse

Photo: Sharon Rose Tabugo
TIGER TAIL 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

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

Rizal, Zamboanga del Norte (male and female)

Photo: Sharon Rose Tabugo
SPINY SEAHORSE
Hippocampus histrix

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

**MALE**

**FEMALE**

DORSAL

Distribution
Zamboanga
Samal Island, Davao
HEDGEHOG SEAHORSE
Hippocampus spinosissimus

- 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

DORSAL

MALE

FEMALE
BARBOURI’S SEAHORSE
Hippocampus barbouri

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

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

H. barbouri in Samal Island, Davao

Photo: Citizen Scientist
DENISE’S PYGMY SEA HORSE
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
**BARGIBANTI’S SEAHORSE**

*Hippocampus bargibanti*

- 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*).
**SCRIBBLED PIPEFISH**

*Corythoichys intestinalis*

**Pipefishes in Mindanao**

ETYMOLOGY: *Corythoichys*: korythos = helmet + ichthys = 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](image)

**What to measure?**

**SCRIBBLED PIPEFISH**
*Corythoichthys intestinalis*

**Pipefishes in Mindanao**

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

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**Female**

*Photo: Sharon Rose Tabugo*

**Male (pregnant)**

*Photo: Sharon Rose Tabugo*

**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

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**Habitat:**

- Shallow sandy / Mixed sand
- Coral areas and Lagoons
- Seaward/ Rocky Reefs

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

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

**CITES (Ref. 115941)**

- Not Evaluated

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**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

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*Sargassum beds*

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

*Rocky and Sandy Bottoms*
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.

**Parts of the Pipefish**


**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
Surigao City
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
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
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

Depth

At least 110 m

Feeding and Growth

Feeds on small crustaceans

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.

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

IUCN Red List Status (Ref. 120744)

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

CITES (Ref. 115941)

Not Evaluated
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
Hippocampus comes Morphotypes

IUCN Red List Status (Ref. 120744)

Vulnerable (VU) (A2bd+i4bd); Date assessed: 15 September 2013

CITES (Ref. 115941)

Appendix II: International trade monitored
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