



**NOAA**  
**FISHERIES**



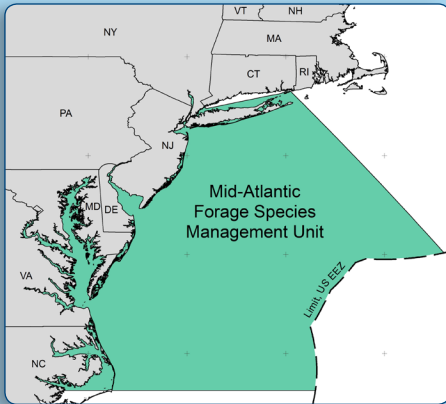
**MID-ATLANTIC**  
FISHERY MANAGEMENT COUNCIL

# Mid-Atlantic Forage Species Identification Guide

# Forage Species Identification Guide

This guide provides descriptions and codes for the forage species that vessels and dealers are required to report under the Mid-Atlantic Council's Unmanaged Forage Omnibus Amendment. Find out more about the amendment at: [www.mafmc.org/forage](http://www.mafmc.org/forage).

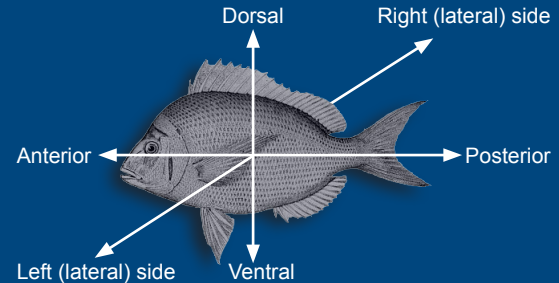
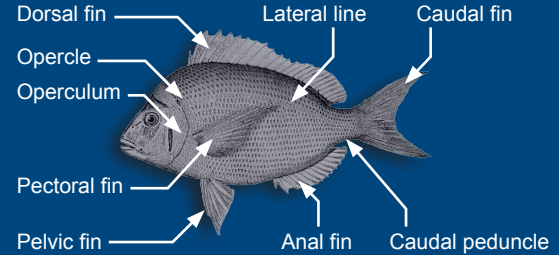
All federally permitted vessels fishing in the Mid-Atlantic Forage Species Management Unit and dealers are required to report catch and landings of the forage species listed to the right. All species listed in this guide are subject to the **1,700-pound trip limit** unless stated otherwise.



These species are subject to the combined 1,700-pound trip limit:

- Anchovies
- Argentines/Smelt Herring
- Greeneyes
- Halfbeaks
- Lanternfishes
- Round Herring
- Scaled Sardine
- Atlantic Thread Herring
- Spanish Sardine
- Pearlsides/Deepsea Hatchetfish
- Sand Lances
- Silversides
- Cusk-eels
- Atlantic Saury
- Unclassified Mollusks (Unmanaged Squids, Pteropods)
- Other Crustaceans/Shellfish (Copepods, Krill, Amphipods)

## Basic Morphology



## Using the Guide

- Use the images and descriptions to identify species.
- Report catch and sale of these species using the VTR code (red bubble) for logbooks, or the common name (dark blue bubble) for dealer reports.

# Silversides

(Atherinopsidae)

VTR CODE: SILNS

## Characteristics

- Silver stripe on each side
- Small and translucent
- Two separated dorsal fins

**Silversides** may be confused with **anchovies**. **Silversides** have two dorsal fins and a pointed jaw, while **anchovies** have one dorsal fin.

**Rough Silverside** (*Membras martinica*)  
Max Size: ~5"



**Inland Silverside** (*Menidia beryllina*)  
Max Size: ~4"



**Atlantic Silverside** (*Menidia menidia*)  
Other Common Name:  
Northern Silverside  
Max Size: ~5"



# Anchovies (Engraulidae)

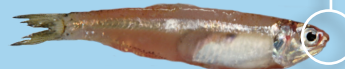
VTR CODE: ANCH

## Characteristics

- Translucent body
- Silver stripe on each side in the middle of the body
- **Rounded snout**
- Large eyes
- Easily shed scales



Rounded snout



**Bay Anchovy** (*Anchoa mitchilli*)  
Other Common Name: Common Anchovy  
Max Size: ~4"



**Dusky Anchovy** (*Anchoa lyolepis*)  
Max Size: ~5"

Single dorsal fin



**Striped Anchovy** (*Anchoa hepsetus*)  
Max Size: ~6"



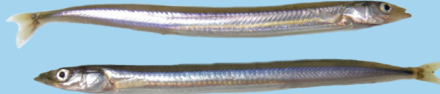
**Silver Anchovy** (*Engraulis eurystole*)  
Max Size: ~5"

# Sand Lances (Ammodytidae)

VTR CODE: SAND

## Characteristics

- Olive-green, bluish-green, or brown dorsally
- Silver sides with white below
- Long, slender body
- Small head with pointed snout, protruding lower jaw, and no teeth



**American/Inshore Sand Lance**  
(*Ammodytes americanus*)  
Max size: ~9"



**Northern/Offshore Sand Lance**  
(*Ammodytes dubius*)  
Max size: ~10"

Pointed snout, protruding lower jaw, and no teeth

# Argentines/Smelt Herring (Argentinidae)

VTR CODE: ARGT

## Characteristics

- Gray or white body
- Small mouth, large eyes
- Single dorsal fin
- Scales easily shed



**Striated Argentine**  
(*Argentina striata*)  
Max Size: ~9"



**Pygmy Argentine**  
(*Glossanodon pygmaeus*)  
Max Size: ~4"

Small mouth, large eyes

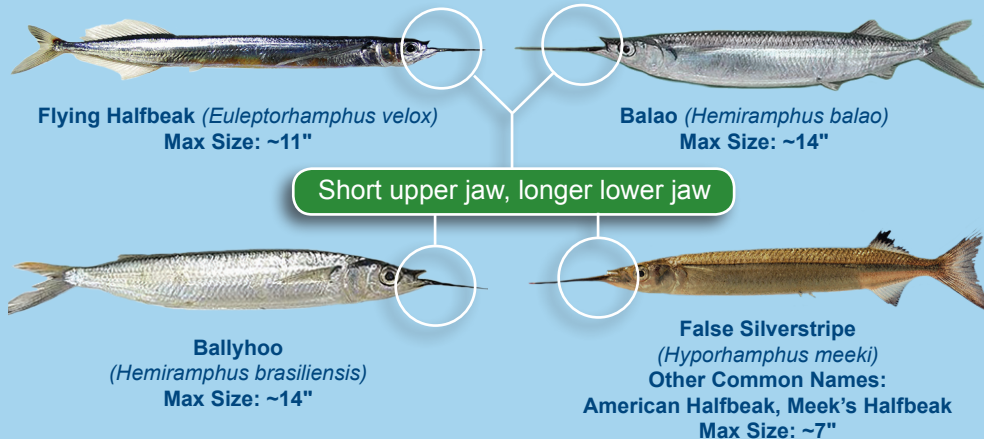
# Halfbeaks (Hemiramphidae)

VTR CODE: HALF

## Characteristics

- Short upper jaw, longer lower jaw
- Stripe down top half of body
- Long, slender body
- Scales easily shed

**Atlantic Saury** may be confused with halfbeaks. Atlantic Saury have two elongated jaws, while **Halfbeaks** have only one (lower) elongated jaw.



# Atlantic Saury (*Scomberesox saurus*)

VTR CODE: SAURY

## Characteristics

- Small dark spot above base of pectoral fin
- Dark bluish-green dorsally, with silver sides and abdomen
- Silver stripe on sides
- Elongated top and bottom jaws
- Long, slender body



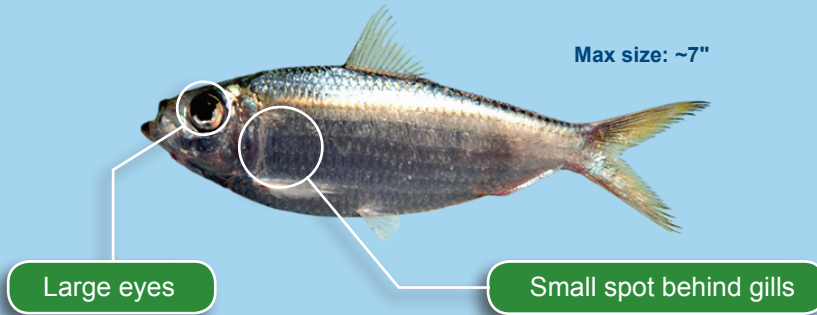
# Herrings and Sardines (Clupeidae)

## Scaled Sardine (*Harengula jaguana*)

VTR CODE: SARSC

### Characteristics

- Blue or brown dorsal area, silver below
- Moderately deep body
- Faint streaks along scales
- Small spot behind gills
- Large eyes



## Spanish Sardine (*Sardinella aurita*)

VTR CODE: SARSP

### Characteristics

- Iridescent blue dorsal area, silver below
- Dark spot near gills, followed by light gold spot and faint gold stripe
- Last two anal fin rays slightly extended



# Thread Herring (*Opisthonema oglinum*)

VTR CODE: HRAT

## Characteristics

- Long, thin ray extending from dorsal fin
- Black tips on dorsal and caudal fins
- Body moderately deep and compressed
- Blue dorsally and on upper sides, silver below
- Dark spot behind gill, may be followed by a row of smaller spots



**Other Common Names:**  
Hairy-Back, Spat, Bristle Herring  
Max size: ~12"

# Round Herring (*Etremeus teres*)

VTR CODE: HRRD

## Characteristics

- Olive green dorsal area with silver sides and ventral area
- Slender, cylindrical body
- Small head with large eyes



**Other Common Name:** Red-Eyed Round Herring  
Max size: ~10"

**NOTE:** The following species are managed separately and are **not** subject to the 1,700-pound limit:

- Atlantic Herring
- Atlantic Menhaden
- Alewife
- Blueback Herring
- American Shad
- Hickory Shad

Continue to report them as required.

# Cusk-eels (Ophidiiformes)

VTR CODE: CSKEEL

## Characteristics

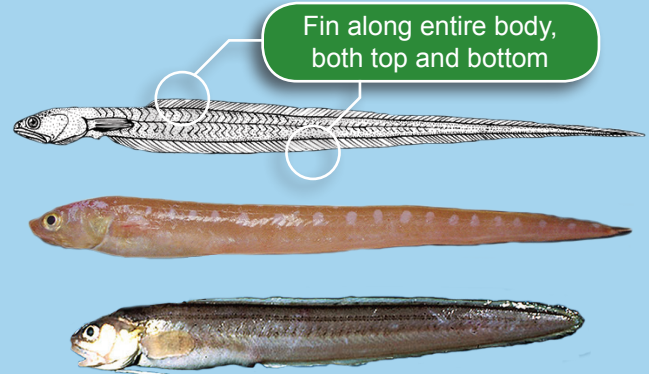
- Brownish-yellow, darker on top
- Elongated bodies
- Fin along entire body, both top and bottom
- Chain pearlfish lack scales, while cusk-eels have small scales

**NOTE:** Cusk-eels are not cusk (groundfish), which are much larger (average size 36").

**Chain Pearlfish**  
(*Echiodon dawsoni*)  
Max size: ~4"

**Fawn Cusk-eel**  
(*Lepophidium profundorum*)  
Max size: ~9"

**Striped Cusk-eel**  
(*Ophidion marginatum*)  
Max size: ~9"



# Lanternfishes (Myctophidae)

VTR CODE: LANT

## Characteristics

- Dark brown or gray with silver sheen
- Small body with large head, eyes, and mouth
- Most species have light-producing organs on abdomens and sides



**Horned Lanternfish**  
(*Ceratoscopelus maderensis*)  
Max size: ~3"



**Dumril's Headlightfish**  
(*Diaphus dumerilii*)  
Max size: ~3"



**Jewel (Crocodile) Lanternfish**  
(*Lampanyctus crocodilus*)  
Max size: ~12"



**Spotted Lanternfish**  
(*Myctophum punctatum*)  
Max size: ~4"



# Greeneyes (Chlorophthalmidae)

**VTR CODE: GREN**

## Characteristics

- Small, slender, tan body
- Reflective green eyes
- Large mouth and eyes



**Shortnose Greeneye**  
(*Chlorophthalmus agassizi*)  
Max size: ~9"



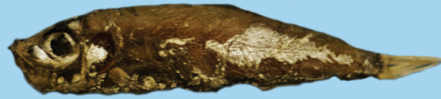
**Longnose Greeneye**  
(*Parasudis truculenta*)  
Max size: ~10"

# Pearlsides/Deepsea Hatchetfish (Sternoptychidae)

**VTR CODE: HATCH**

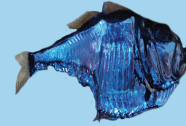
## Characteristics

- Some species have large mid-bodies with narrow tail, others have a more uniform profile
- Thin bodied
- Light-producing organs on lower sides of body



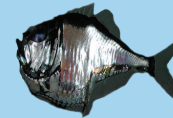
**Atlantic Pearlside**  
(*Maurolicus weitzmani*)  
Other Common Name: Weitzman's Pearlside  
Max size: ~2"

- Large, upward pointing mouth
- Laterally compressed body
- Large eyes



**Atlantic Silver Hatchetfish**  
(*Argyropelecus aculeatus*)  
Max size: ~3"

- Large mid-body with narrow tail
- Large, upward pointing mouth and large eyes



**Slope Hatchetfish**  
(*Polyipnus clarus*)  
Max size: ~2"

- Large mid-body with narrow tail
- Large eyes
- Small, upward pointing mouth



**Pearlside (Mueller's)**  
(*Maurolicus muelleri*)  
Max size: ~3"

- Mostly silver with a green or blue back

# Crustaceans (Copepods, Krill, Amphipods, etc.)

VTR CODE: CRUST



## Copepods (Copepoda)

- Long antennae
- Most species have a single eye
- Max size: ~less than 1/10"



## Krill (Euphausiacea)

- Resemble shrimp
- Feathery gills on thoracic appendages
- Max size: ~2"



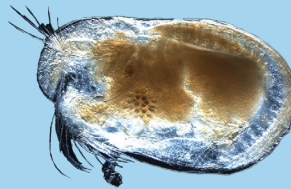
## Amphipods (Amphipoda)

- Laterally compressed
- Segmented body
- Max size: ~less than 2"



## Isopods (Isopoda)

- Ventrally compressed
- Segmented body
- Max size: ~1"



## Ostracods (Ostracoda)

- Rounded carapace that contains head and body
- Max size: ~0.15"



## Mysid Shrimp (Mysidacea)

- Small, translucent
- Max size: ~1"

# Unclassified Mollusks (Unmanaged Squids and Pteropods)

VTR CODE: MOLL

**NOTE:** *Illex* squid (*Illex illecebrosus*) and longfin squid (*Doryteuthis pealeii*) are not subject to the 1,700-pound possession limit, as they are managed separately. Sharptail shortfin squid (*Illex oxygonius*) are not subject to the possession limit, because they are difficult to distinguish from *Illex* squid.



**Atlantic Brief Squid** (*Lolliguncula brevis*)  
**Other Common Name:**  
**Thumbstall Squid**

- Stout mantle with rounded tip
- Max size: ~5"



**Oceanic Squid** (*Todarodes sagittatus*)  
**Other Common Name:**  
**European Flying Squid**

- No light-producing organs, unlike neon flying squid
- Max size: ~24"



**Neon Flying Squid**  
(*Ommastrephes bartramii*)

- Long golden or silver stripe along mantle
- Several small light-producing organs on mantle and head
- Max size: ~24"



**Bobtail Squids** (Sepiolidae)

- Broad mantle
- Pink or maroon in color
- Max size: ~24"



**Pteropods**  
(Gymnosomata and Thecosomata)  
**Other Common Names:**  
**Sea Angels, Sea Butterflies**

- Max size: ~1"

# References and Contact Information

## References:

1. Collette, B. B and G. Klein-MacPhee, editors. 2002. *Bigelow and Schroeder's Fishes of the Gulf of Maine*, third edition. Smithsonian Institution Press. Washington, D.C.
2. Froese, R. and D. Pauly (editors). 2017. FishBase. <http://www.fishbase.org/search.php>.
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4. Kells, V. and K. Carpenter. 2011. *A Field Guide to Coastal Fishes from Maine to Texas*. The Johns Hopkins University Press.
5. Pechenik, J. A. 2005. *Biology of the Invertebrates*. Fifth edition. McGraw-Hill.
6. Roper, C. F. E., M. J. Sweeney, and C. E. Nauen. 1984. *Cephalopods of the World: An Annotated and Illustrated Catalogue of Species of Interest to Fisheries*. FAO Species Catalogue Vol. 3. FAO Fisheries Synopsis No. 125, Volume 3.
7. Yatsu, A.; Tanaka, H.; Mori, J. (1998). Population structure of the neon flying squid, *Ommastrephes bartramii*, in the North Pacific Ocean, in: Okutani, T. *Contributed papers to International Symposium on Large Pelagic Squids, July 18-19, 1996, for JAMARC's 25th anniversary of its foundation*. pp. 31-48

**Page 3:** Characteristics: Ref 4; Rough silverside: DL Schultz; Inland silverside: B Stagnaro; Silver anchovy: T Vaske Jr. **Page 4:** Characteristics: Ref 4; American sand lance: CaRMS Photogallery; Pygmy argentine: D Ross Robertson. **Page 5:** Characteristics: Ref 4; Flying halfbeak: L Fischer; Balao: R Frietas; Ballyhoo: T Vaske Jr. **Pages 6-7:** Characteristics: Ref 4. **Page 8:** Characteristics: Ref 1, 4; Chain pearlfish: SL Bourque; Dumrill's headlightfish: K Matsuura; Spotted lanternfish: E Kissling. **Page 9:** Characteristics: Ref 1, 4. **Page 10:** Ref 3.5; Krill: Ø Paulsen; Amphipods: U Kils; Ostracods: Anna33; Isopods: H Hillewaert. **Page 11:** Characteristics: Ref 6,5,7; Pteropods: S Johnsen; All other photos credited to NOAA/DOC and USFWS/DOI

If you have any questions regarding species identification or how to report your catch and landings, please contact your local NOAA Fisheries port agent, or call the Sustainable Fisheries Division.

**Contact information:**  
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