

TAXONOMY

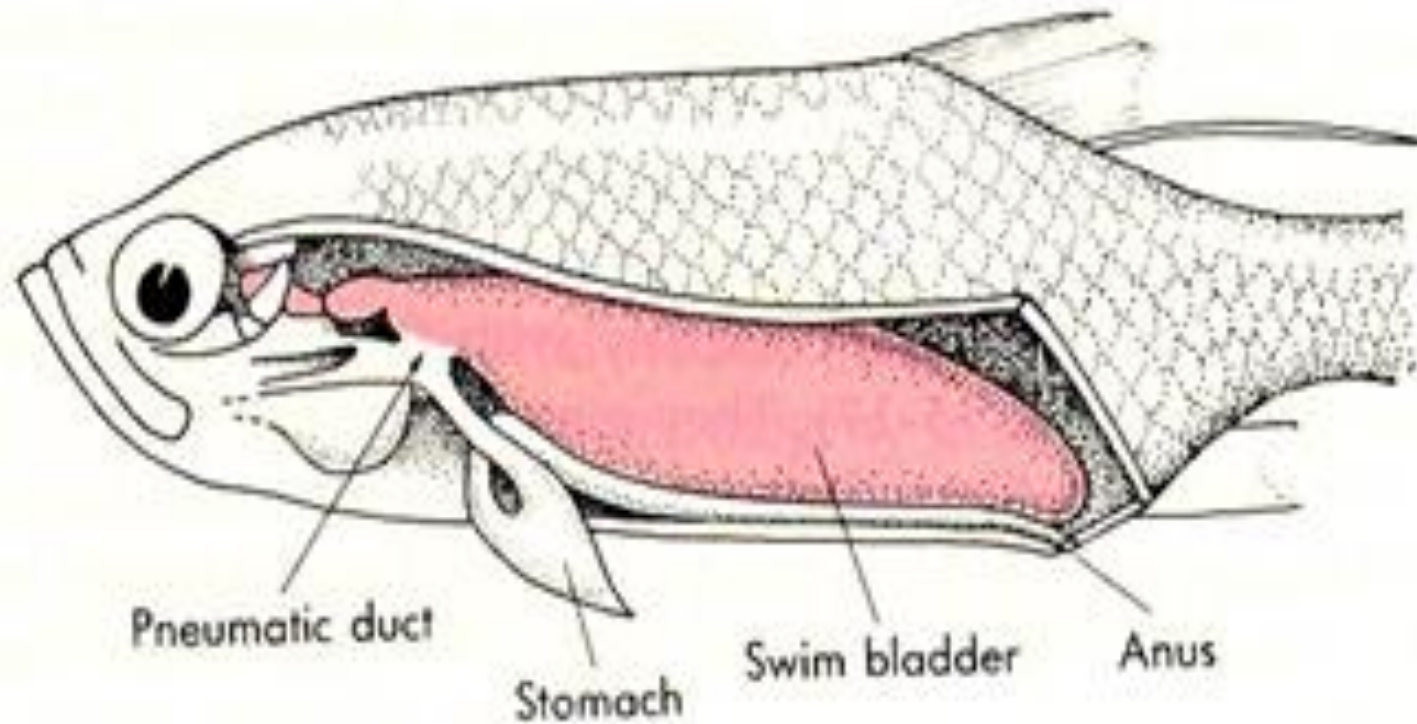
(ORDER: CLUPEIFORMES)

ORDER: CLUPEIFORMES

1. FAMILY: **Denticipidae**
2. FAMILY: **Engraulidae**
3. FAMILY: **Pristigasteridae**
4. FAMILY: **Spratelloididae**
5. FAMILY: **Chirocentridae**
6. FAMILY: **Dussumieriidae**
7. FAMILY: **Clupeidae**

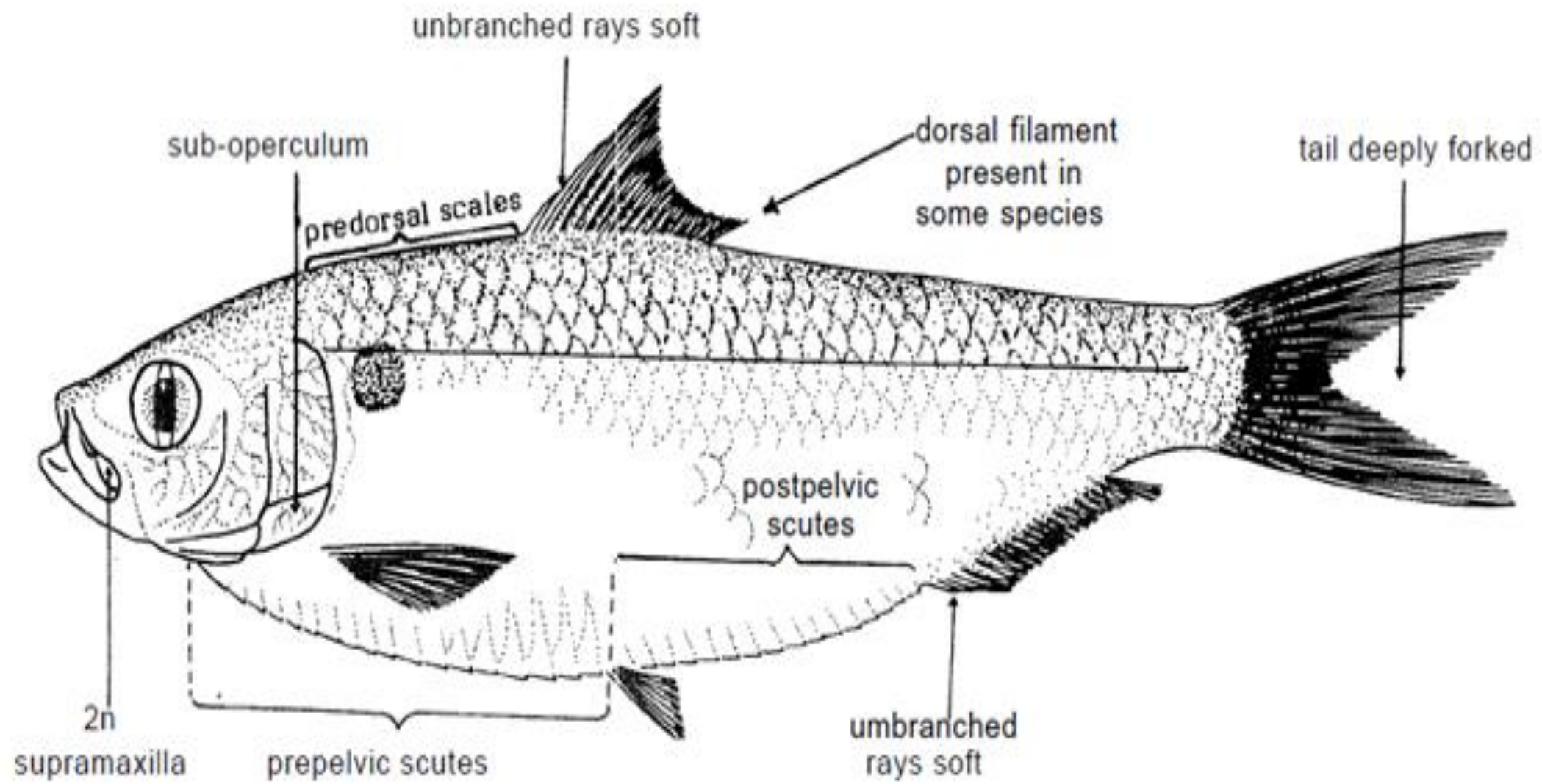
- The order clupeiformes mostly includes the herring family, **Clupeidae** and anchovy family, **Engraulidae**
- This group includes many of the most of the worlds most numerous and commercially important fishes
- These groups are seen in groups or schools
- This group has silvery body with streamlined and spindle-shaped and they generally lack lateral line
- Most of the species consumes planktons which they filter from water with their gill rakers

- Clupeiformes are *physostomes* which means that the gas bladder has a pneumatic duct connecting to gut

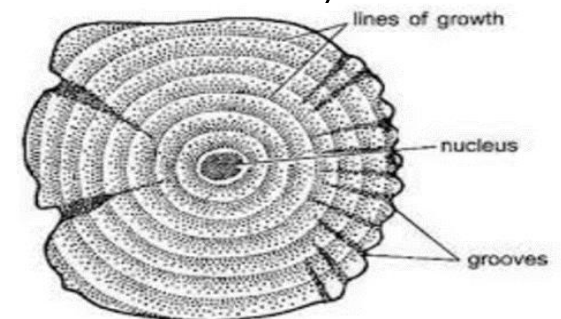


Family: Clupeidae

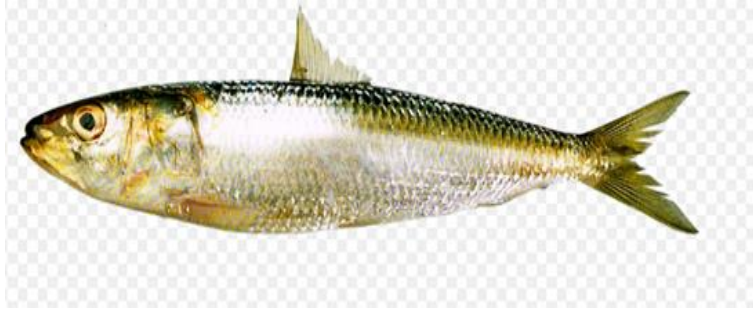
- It includes herrings, shads, sardinellas, sprats and sardines
- Small, mostly silvery fishes, usually between 7 and 20 cm length
- Generally with fusiform (tapering at both ends), sub-cylindrical bodies but sometimes quite strongly compressed
- Most species contains scutes at the belly side
- Lower jaw short but deep



- Fins lacking spiny rays
- A single **dorsal fin** is present usually short and near mid-point of the body
- **Pectoral fins** set low on the body
- **Pelvic fin** base about equidistant between pectoral fin base and anal fin
- **Caudal fin** deeply forked
- Scales always **cycloid** (smooth to touch), but often shed rather easily
- No lateral line



- Colour: back usually blue/green, sides silvery, sometimes with a distinct silver band
- Darker markings include a black spot behind gill openings, sometimes continued as a series of spots along sides, a dark spot at dorsal fin origin (*Sardinella*), dark dots or spots along back and dark pigmentation on parts of fins
- Most clupeids are marine, but some can tolerate low salinities and some shads (*Alosinae*) and gizzard shads (*Dorosomatinae*) live temporarily or permanently in freshwater



Sardinella longiceps



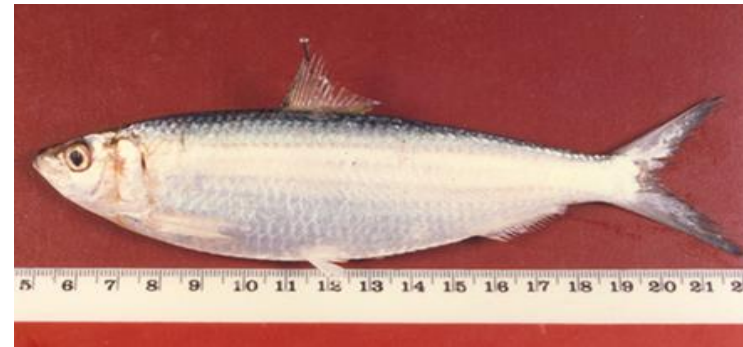
Escualosa thoracata



Amblygaster leiogaster



Sardinella gibbossa



Sardinella fimbriata

Indian oil sardine (*Sardinella longiceps*)

- The sardine, *Sardinella longiceps*, is a highly migratory, schooling species.
- This pelagic species is found in the photic zone at depths of 20–200 m, along the continental shelf
- This species feeds on phytoplankton and small crustaceans
- It breeds once a year off the western coast of India, when temperatures and salinity are low during the southwest monsoon months.
- Spawning peaks in August to September

Indian oil sardine

Kingdom : Animalia

Phylum: Chordata

Class: Actinopterygii

Order: Clupeiformes

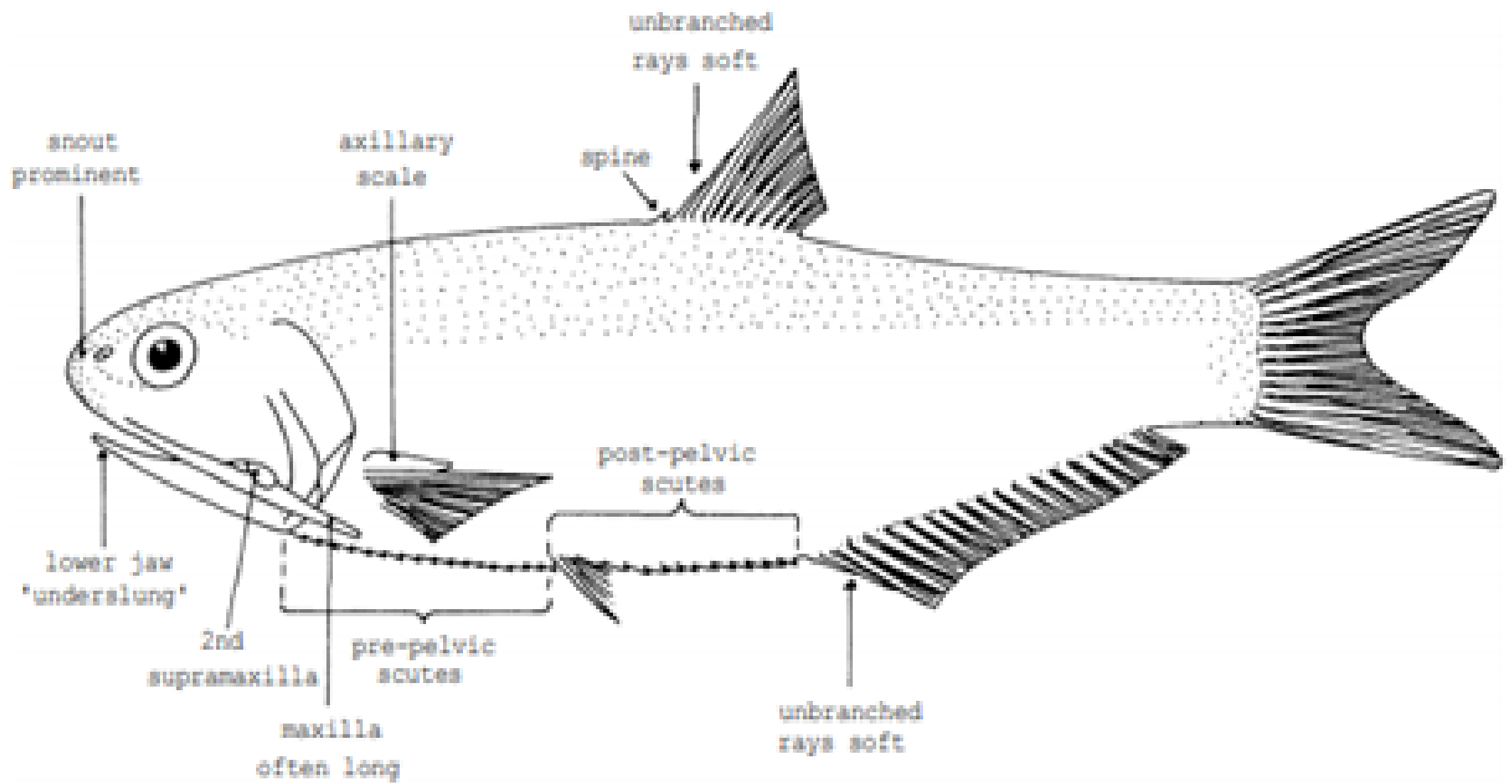
Family: Clupeidae

Genus: Sardinella

Species: longiceps

Family : Engraulidae

- This family comprises of **anchovies**
- Small silvery fishes, mostly 10 to 15 cm, usually with fusiform, sub-cylindrical bodies but sometimes quite strongly compressed; body tapers to very slender tail in the rat-tailed anchovies(*Coilia*)
- Scutes are present along belly, either needle-like or strongly keeled.
- Snout usually pig-Like, strongly projecting, Lower jaw characteristically "underslung"

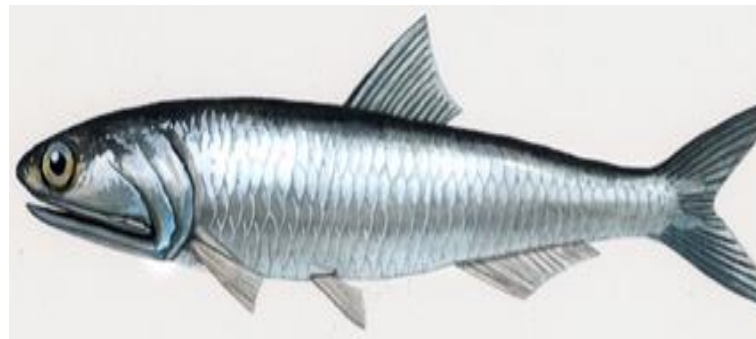


- No spiny rays in fins
- A single **dorsal fin**, usually short and at midpoint of body
- **Pectoral fins** set low on body, sometimes with 1 (Setipinna) or 4 to 19 (Coilia) filamentous rays
- **Pelvic fins** usually about midway between pectoral fin base and anal fin origin
- **Anal fin** short, moderate or very long; caudal fin forked except in Coilia
- Scales always **cycloid** (smooth to touch) but often shed rather easily
- No lateral line.

- Colour: usually blue/green or brown on back, flanks wholly silver or with bright silver lateral stripe; darker markings include dark venulose area on shoulder (Thryssa) and dark pigmentation on all or part of dorsal, pectoral, pelvic, anal and caudal fins



Thryssa dussumieri



Engraulis ringens



Stolephorus commersonii



Coilia dussumeiri



Setipinna tenuifilis

Peruvian anchovy (*Engraulis ringens*)

- It has largest fishery in South America
- It has yielded greater catches from any other single wild species in the world, with annual harvest varying between 4.2-8.3 million tonnes in 2008-2012
- Almost all production is used for fish meal industry
- It is one of the most abundant fish species in the world
- It is caught in Peru
- It grow upto 20cm and has a life span of 3 years

- Peruvian anchoveta are filter feeders that rely, in some seasons, on microscopic algae (called diatoms) as their primary food source
- This species matures quickly (at about one year) and produces high numbers of eggs
- It reproduces via broadcast spawning, where several females release their eggs and several males release their sperm into the water column at the same time
- The anchoveta has been characterised as "the most heavily exploited fish in world history"
- The top yield was 13.1 million tonnes in 1971

Peruvian anchovy

Kingdom: Animalia

Phylum: Chordata

Class: Actinopterygii

Order: Clupeiformes

Family: Engraulidae

Genus: Engraulis

Species: ringens