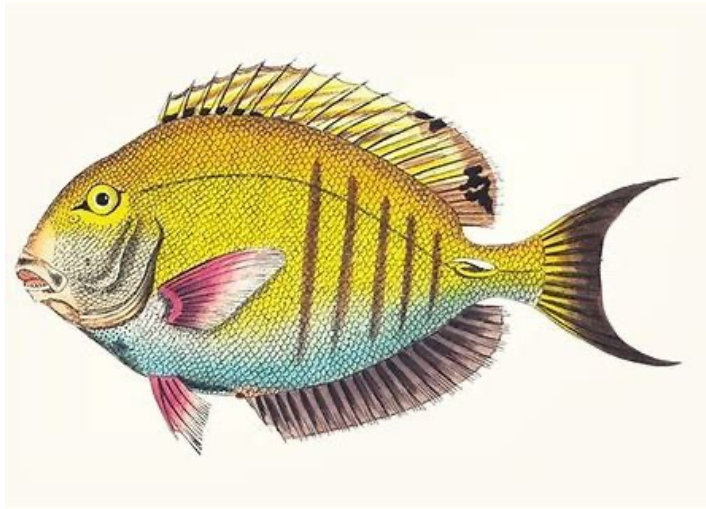


Fins and Scales

And more about water dwelling life!



Finny fin fins!

Fins have several different forms. Most fish have both single median fins on the middle of the body, and paired fins which are like two arms and legs.

Median fins are dorsal, caudal, and anal fins. Paired fins are pectoral and pelvic fins. Fins help fish to accelerate, balance and change direction.



Fins help in balance and motion generation.

Kinds of median fins:

Dorsal (top)

Anal (bottom)

Caudal (tail)



Fins help in maneuvering.

Kinds of paired fins:

Pectoral (sides)

Pelvic or ventral (under the body in place of legs)



Scaly scales

Scales are made of hydroxyapatite calcium carbonate and collagen. They are small rigid plates that grow out of the skin of a fish and cover most of the skin. Scales protect fish from predators and fungi, and smooth travel through the water. Scales have a crown, neck and base.



Kinds of scales

Sharks and rays have placoid (vascular core, dentine middle and vitrodentine exterior) scales developing from the dermis and epidermis.

There are four kinds of non-placoid scales developing from the dermis:

Lungfish and some fossil fish have cosmoid (three layer platelike) scales.

Bowfish, paddlefishes, gars, sturgeons, and bichirs, have ganoid (thick and rhomboid) scales.

Most bony fish have cycloid (round plates) and ctenoid (obliquely arranged) scales.



Modified scales

Some scales are modified to form other body parts; the stinger of a stingray, and shark teeth, are both modified placoid scales. In seahorses and pipefish, scales are fused into bony rings circling the body.



Cute scutes

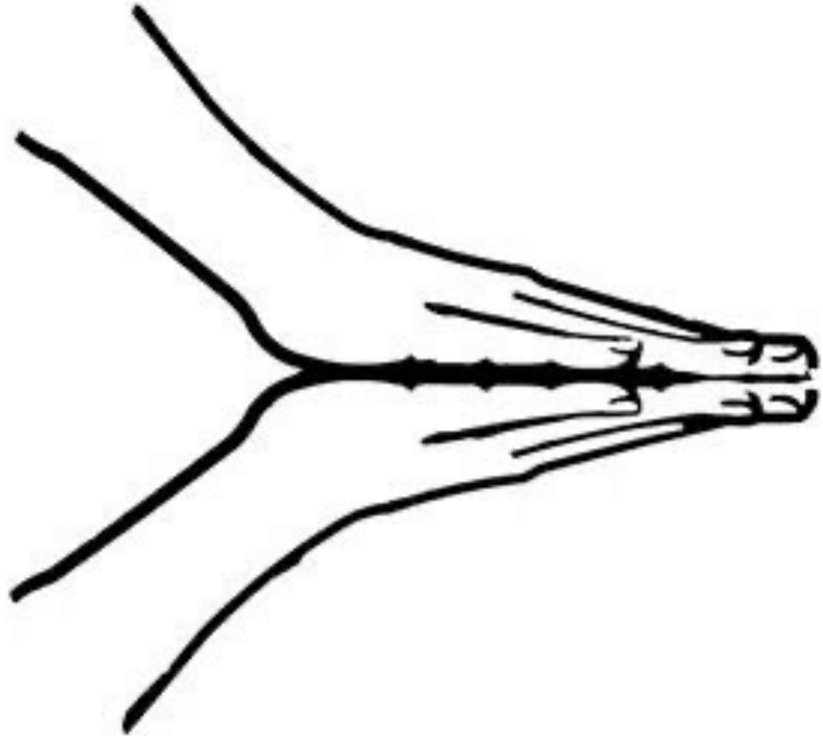
Scutes are modified ganoid scales, bony plates or shield-like scales found on some fish, reptiles, birds, and mammals. Although similar in appearance to scales, scute development differs from scale development. Scutes are flexible with a hard bony layer. Sturgeon have scutes.



Finger fins

I have fins to thrust and
steer, (both flat hands
together horizontally)

And balance my body
swim far or near! (hands
out then in)





*Fins and Scales
to You Are My
Sunshine*

I am a fish, (hands together)

With fins and scales, (r hand on top of l)

Swimming through the water now. (2 hand swimming motion)

With scales protecting, (arms hugging)

And fins maneuvering, (hands moving all about)

I can travel where safety will allow. (thumbs up)



Finding fish

Where can you find fish?

Be a fish imagineer!

What can you use for scales?





Can you be a fins
and scales chef—
what's on the
menu?

What can you use for fins and scales?



Fish Body Parts

