so
hello students I'm Peyusha Fernandes,
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of Arts and Science. today we are going
to learn about
Fins and their modifications, from unit
number two that is Morphology
Physiology and Behavior.
The outline of this module are the
paired and the unpaired fins,
the pelvic fins, the pectoral fins, the
dorsal fins,
Anal fins, caudal fins and the
adipose fins. At the end of this module
will be able to describe the different
types of
fins and their modifications present in
fish
cite examples of paired and unpaired
fins and differentiate between different
types of
fins.So let us talk about the different
types of fins
fins are basically of two types paired
fins
and the unpaired fins.Now, paired fins
are the fins which are in pair whereas
unpaired pins
are not in pair so these paired fins
are further divided into
two types that is pelvic fins and
pectoral fits whereas these unpaired
films are also called as
median fins and they are further
divided into
four main types.They are the dorsal
fins
Anal fins, caudal fin and adipose fin
so let us look at the position of these
fins. Now, this is the picture of a
rainbow trout
Now, these are the paired fins they are
the pectoral fins
and the pelvic fins. we have
the anal fins, the caudal fin which is
also called as the tail fin
the adipose fin on the dorsal side of
the fish
and the dorsal fin let us first learn
about
the paired fins. Now, the paired fins are
of two main types
the pelvic fins and the pectoral fins
so let us look one by one in detail
first is the pelvic fins. Now, these fins
are present on the ventral side of the
fish
now the position of these fins on the
ventral side may
vary depending on the type of species
either they can be present at the
abdominal region

or they can be present at the thoracic region that is the
region which is just below the pectoral fin
or they can be present in front of the pectoral fin
which is also called as the jugular position the
position of these pelvic fin it varies from species to species
now in case of Eel and eel-like fishes these pelvic fins are either absent
or they are greatly reduced now this is the picture of the eel
in bottom dwelling fish the pelvics are frequently modified into organs
for holding on to the substrate
next is pectoral fin where are they located
they're located high up on the sides of the deep bordered fish
in case of the deep bodied fish their body is deep but and they are
laterally compressed whereas they can be also present towards
or below the midline of the fish for example in case of rover predators
now rover predators are the fishes which are continuously in search of their prey. Now , the shape and the size of this pectoral fins
it varies, they can be either long and pointed
they can be rounded they can be broad and rounded,
they can be also enlarged and even rigid
now in case of long and pointed the example is tuna fish
whereas these pectoral fins are rounded in case
of rover predators and they are
Broad and rounded in case of
suckers and sculpins they are enlarged
in case of flying fish that is
Exocoetus and they are rigid in case of the
Sharks. Let us look at the pictures this is the picture of
tuna wherein they are long and pointed
here in case of rover predators they are rounded
whereas in case of sculpins they are broad and rounded
in case of exocoetus they are enlarged and in case of the
sharks they are rigid.
Now, let us learn about the unpaired fins that is dorsal fins
and the anal fins the they can have
long dorsal fins for example in case of

rover predators and deep bodied fishes
or they can also have long
dorsal
and anal fins for example in case of
eels
the picture we have seen previously
bears the dorsal fin the caudal fin
and the anal fin are continuous
so the number of these dorsal fins and
the anal fins
may vary to one two or even three.
Next, is caudal fin. Now, this caudal fin
this is the caudal fin in case of fish it
is also called as the
tail fin and it is very well developed
in case of the
fishes now, there are some exceptions for
example
in case of seahorse, the hippocampus
wherein the caudal film is modified into
a prehensile tail
okay with the help of these tail it is
holding on to the
objects in the sea so that is an
exception
plus in case of rays they can be reduced
or in case of the sting rays
the caudal fin is absent
now this caudal fin is further divided
into
three types diphycercal caudal fin,
Heterocercal caudal fin and homocercal
Caudal fins
let us learn these in details now
Diphycercal
caudal fin now this is also
called as
Protocercal caudal fin because it is
formed in most of the
Primitive r fishes wherein the vertebral
column
divides the the tail into
two halves and these type of fins
are not found in many of the living
fishes
here the vertebral column is divided
into two halves the dorsal half
and the ventral half the dorsal half is
called as the epichordal lobe
whereas the ventral half is called as
the hypochordal
Lobe . now these are the examples
Of diphycercal caudal fins that is
present
in primitive sharks, chimeras, lung fishes
and latimeria. Here i have the pictures
of lungfish and chimera wherein the
vertebral column extends up till the tip
of the
tail and similar is the case i of
Chimeras. Next, is heterocercal caudal fin. Now, this is an
intermediate type of caudal fin

hetero means different or unequal so it has
an asymmetric type of caudal fin wherein the vertebral column it bends upwards results into a larger dorsal lobe and a smaller
Ventral lobe and this is a characteristic in case of
bottom dwellers this is the picture of hammer headed
Shark whereas in case of hypocercal caudal fin
it is just the opposite now in case
Of you can see here this is the hammer headed shark .this is the heterocercal fin and this is Acipenser with similar condition
this is the diagrammatic view wherein you can see the vertebral column has bend
upwards
hypocercal caudal fin as i have said before it's just the opposite of the heterocercal wherein the vertebral column terminates into a larger ventral lobe so the ventral lobe
is larger than the dorsal lobe
and it is present in flying fishes and some primitive
Fishes. This is the diagrammatic view next we have is homocercal caudal fin homocercal again the lobes are equal
but they are symmetric externally
and internally they are asymmetric and it is a common type of
caudal fin. Now, this is the diagrammatic view this is the vertebral column
Now, homocercal caudal fin is further divided into
gephyrocercal caudal fin and abbreviated
homocercal caudal fin.Abbreviated homocercal caudal fin
in this type of caudal fin the vertebral column is a
bit elongated and upturned and also with or without lobe. This is the diagrammatic picture
and this is in case of gephyrocerrcal caudal fin
wherein the caudal fin completely disappears
now this is the case in case of ortagoriscus Mola and this is the diagrammatic view where it completely
disappears and the last one we have is adipose fin it is a fleshy dorsal appendage so when it is a dorsal appendage so that means it is present on the
dorsal side and this adipose fin is not

present in all the fishes
except in some trouts, smelts,
lenten fishes, catfishes and characin
these are my references
thank you.