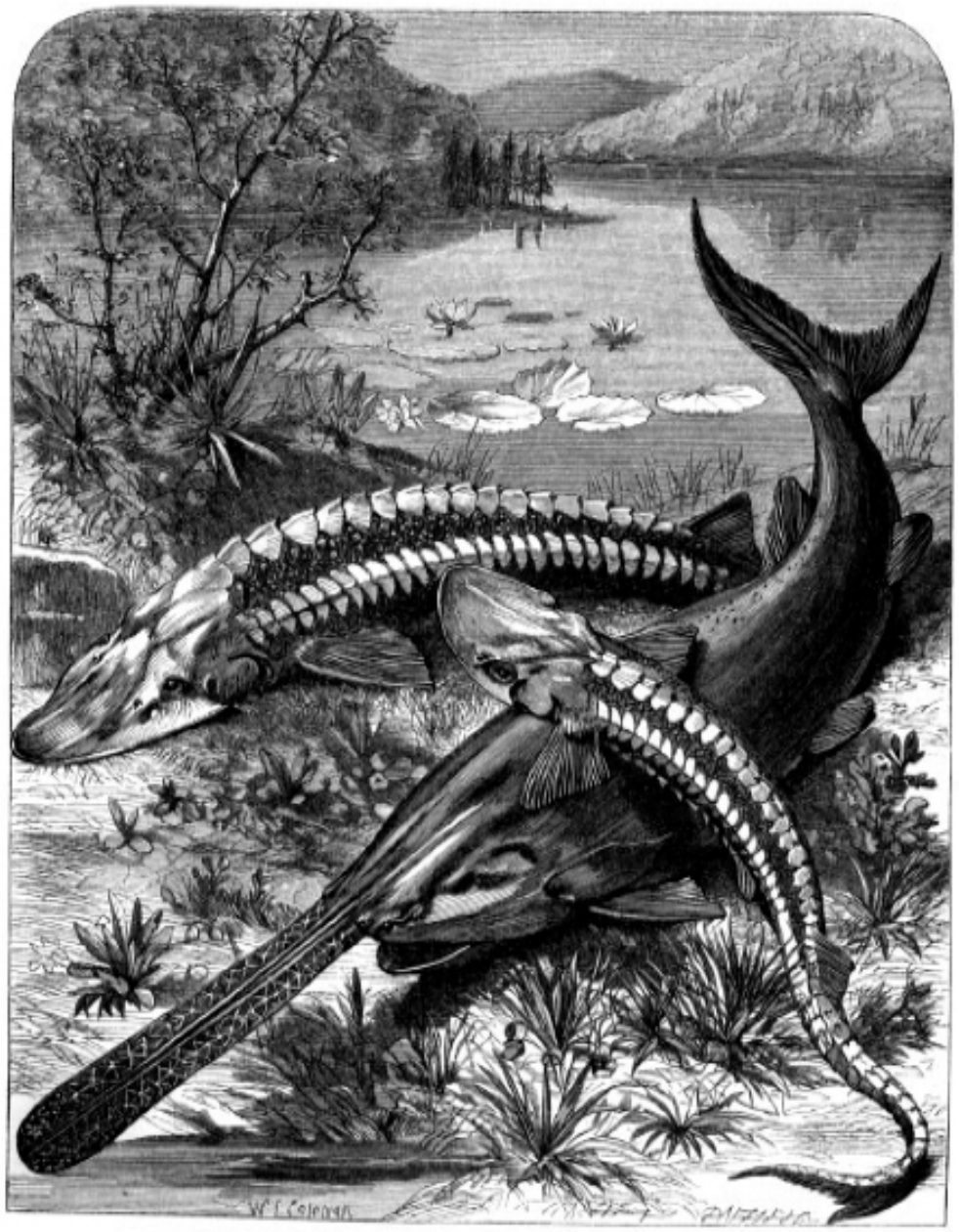


An early print of *Polyodon spathula* and *Scaphirhynchus platorynchus* from Wood (1863, p. 201).

ORDER ACIPENSERIFORMES

Chondrosteidae

Chondrosteus
Strongylosteus

Lower Jurassic of England and Germany

Peipiaosteidae

Stichopterus, Peipiaosteus
Spherosteus, Yanosteus

Permian, China (?), Upper Jurassic to Lower Cretaceous of central Asia and northeastern China

Polyodontidae

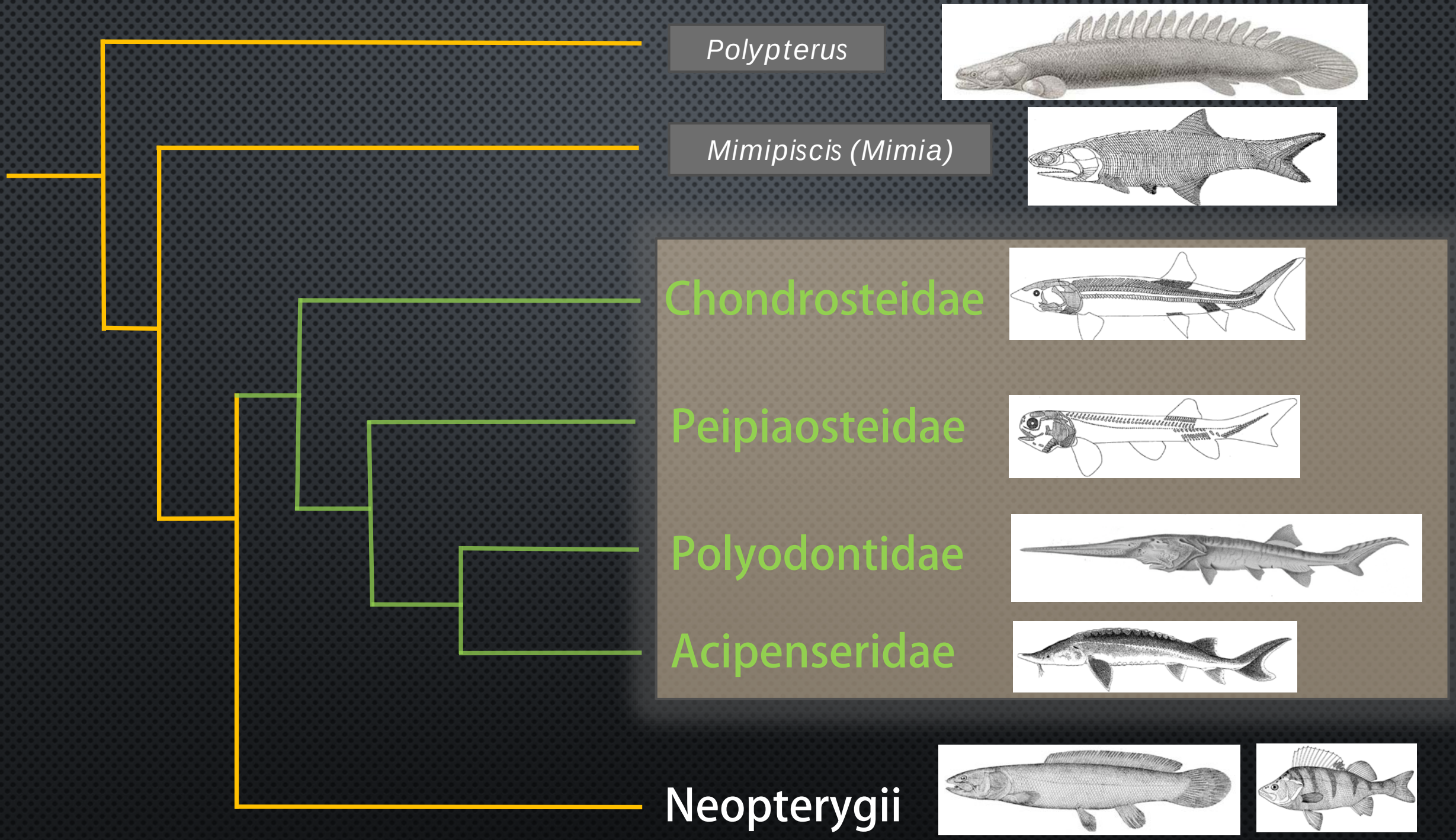
Priscosturion,
Protopsephurus,
Crossopholis,
Paleopsephurus,
Psephurus gladius,
Polyodon spathula

Upper Jurassic or Lower Cretaceous, China, to Recent, China and North America)

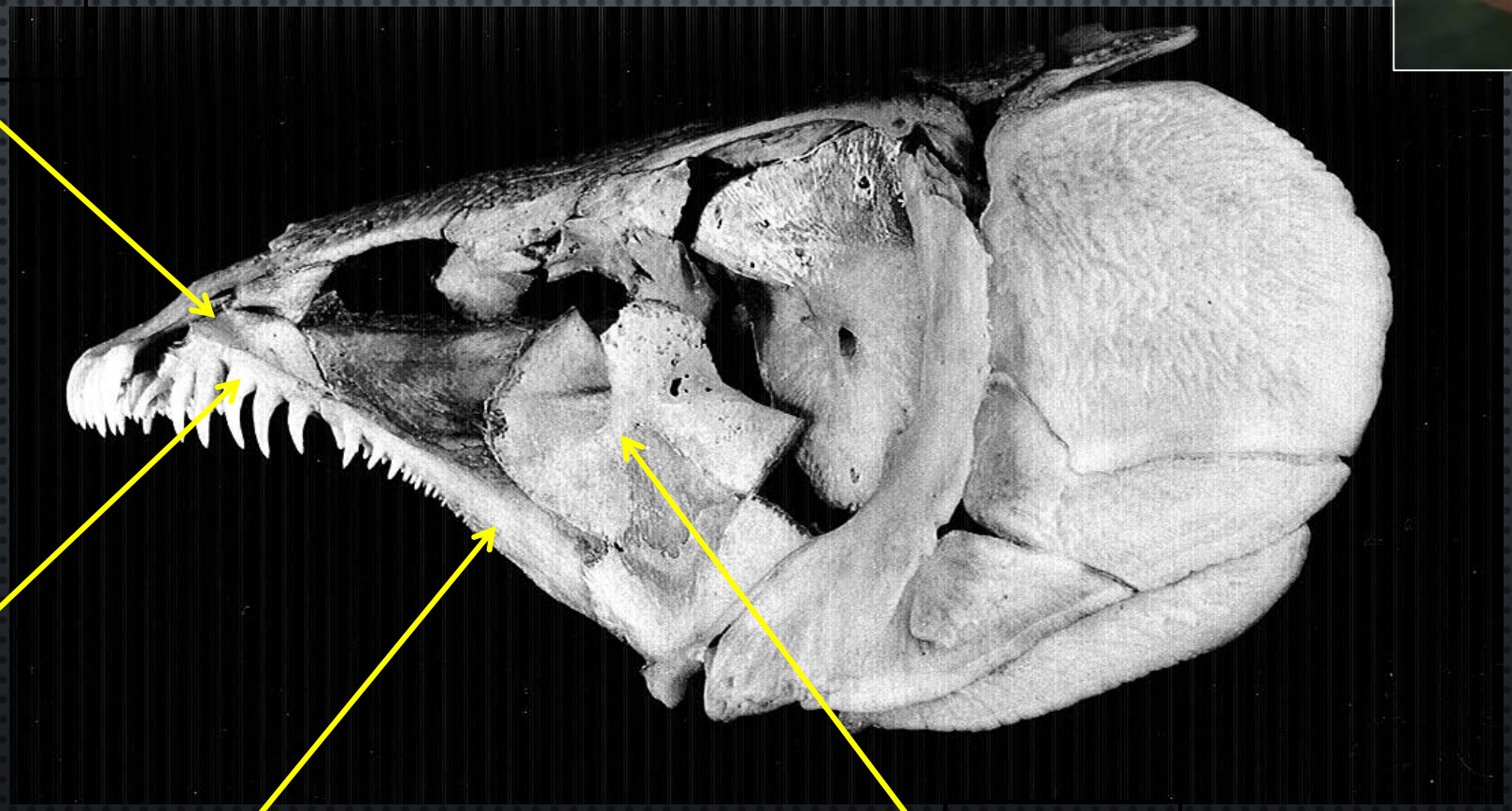
Acipenseridae

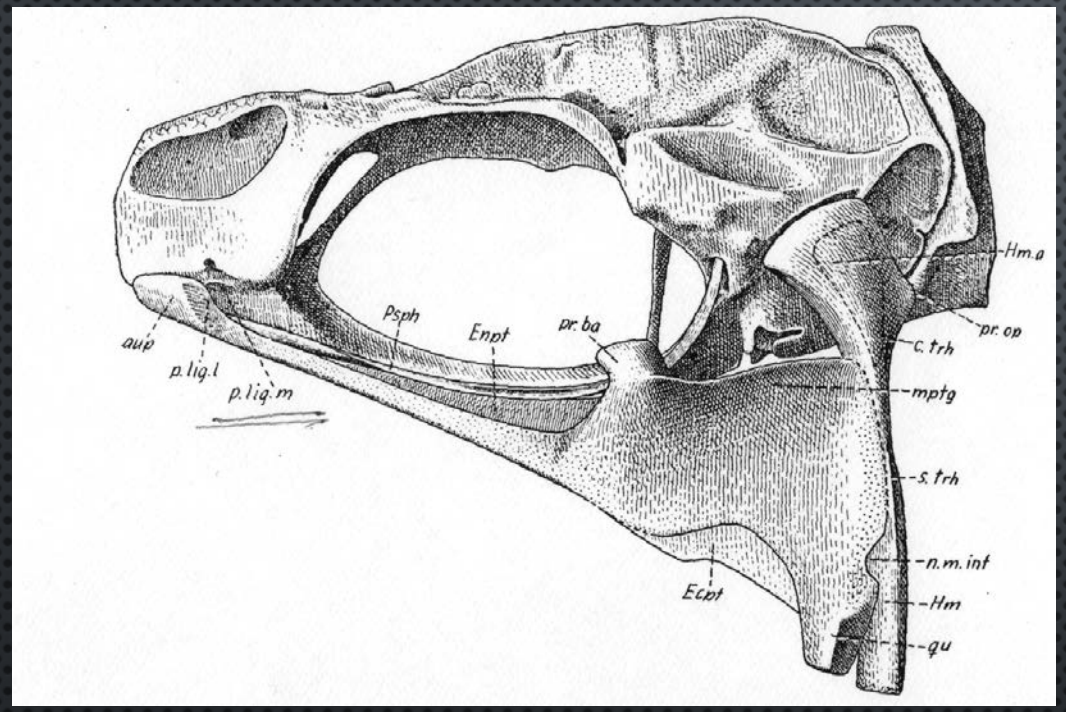
Protoscaphirhynchus
Acipenser, Huso,
Scaphirhynchus,
Pseudoscaphirhynchus,

Cretaceous to Recent of North America, Europe, and Asia


Polypterus
Mimipiscis (Mimia)
Chondrosteidae
Peipiaosteidae
Polyodontidae
Acipenseridae
Neopterygii

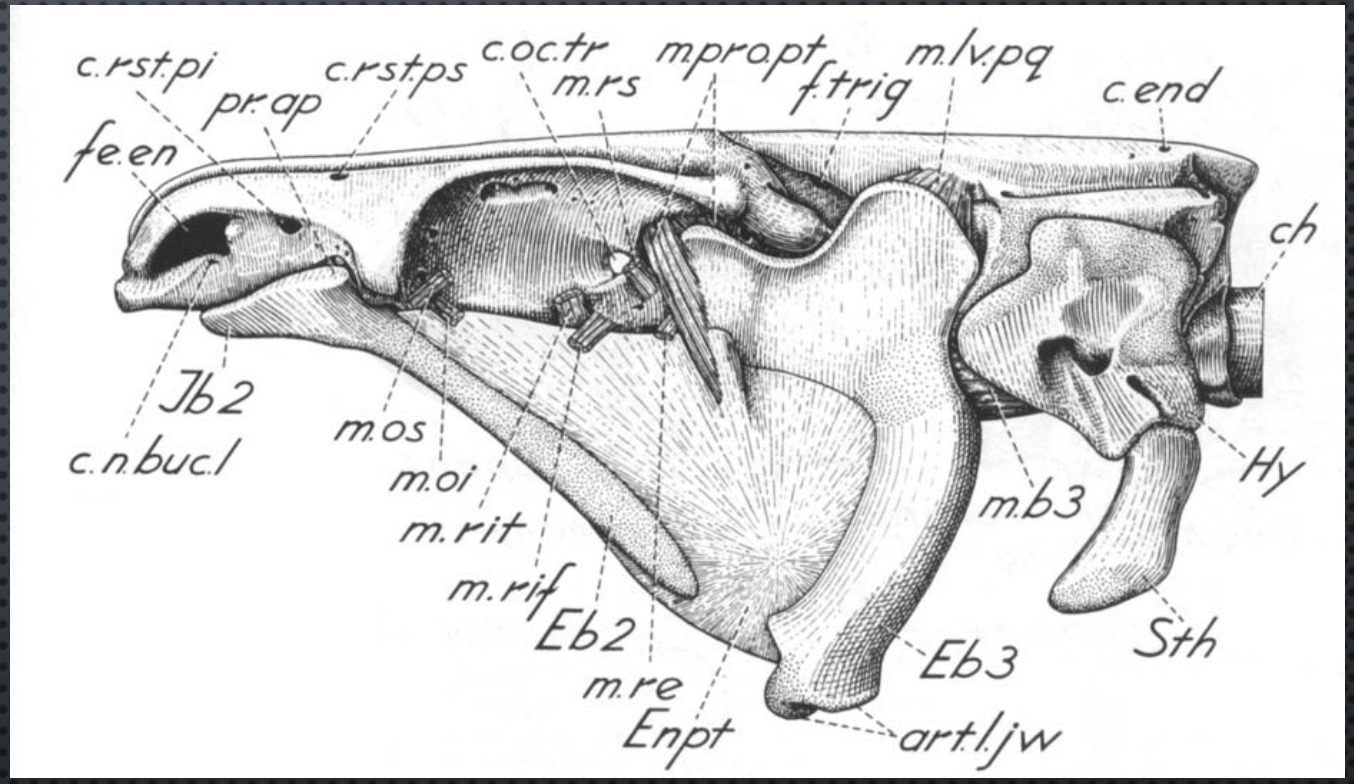
AMIA CALVA





AUSTRALOSOMUS,

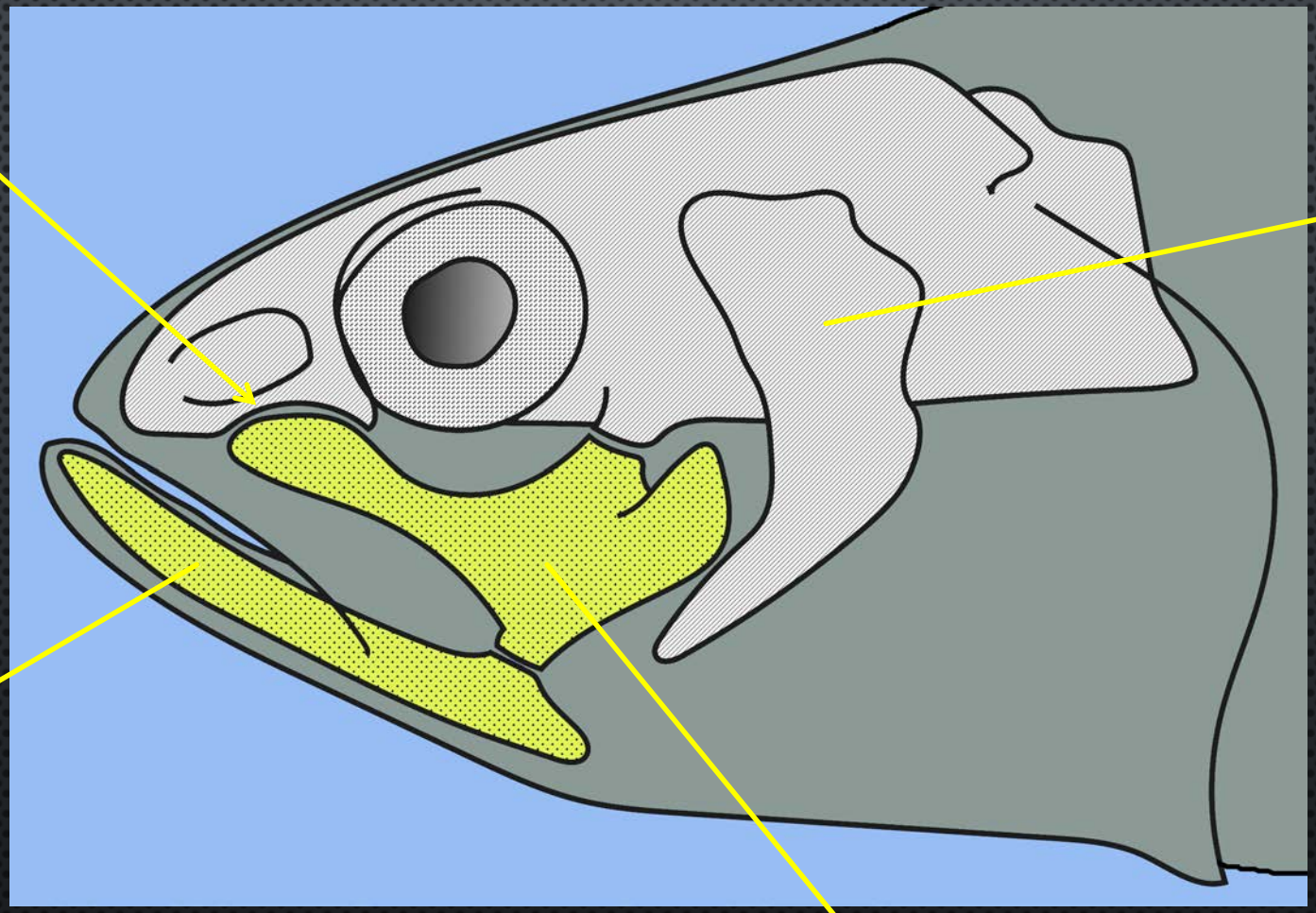
ACTINOPTERYGII

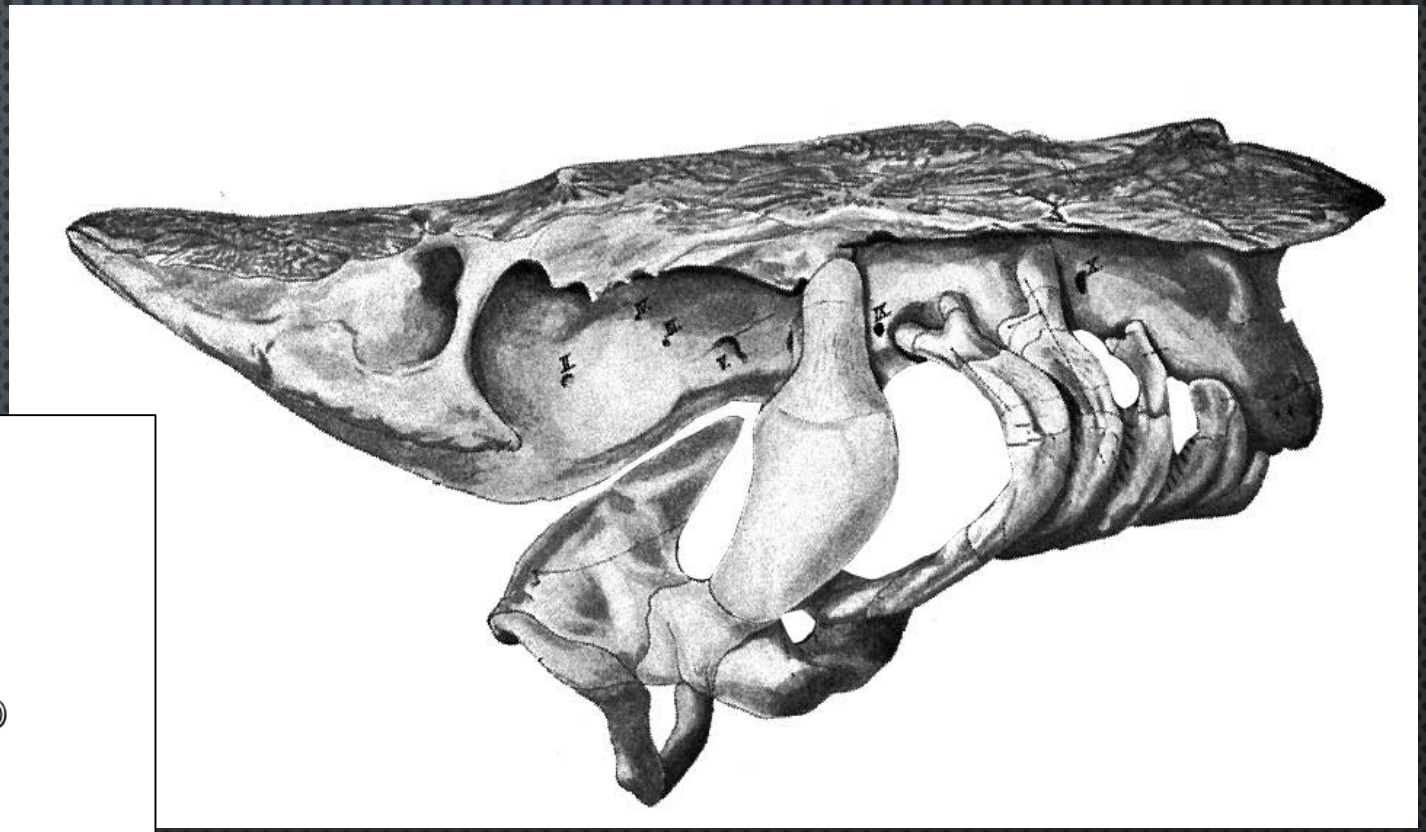


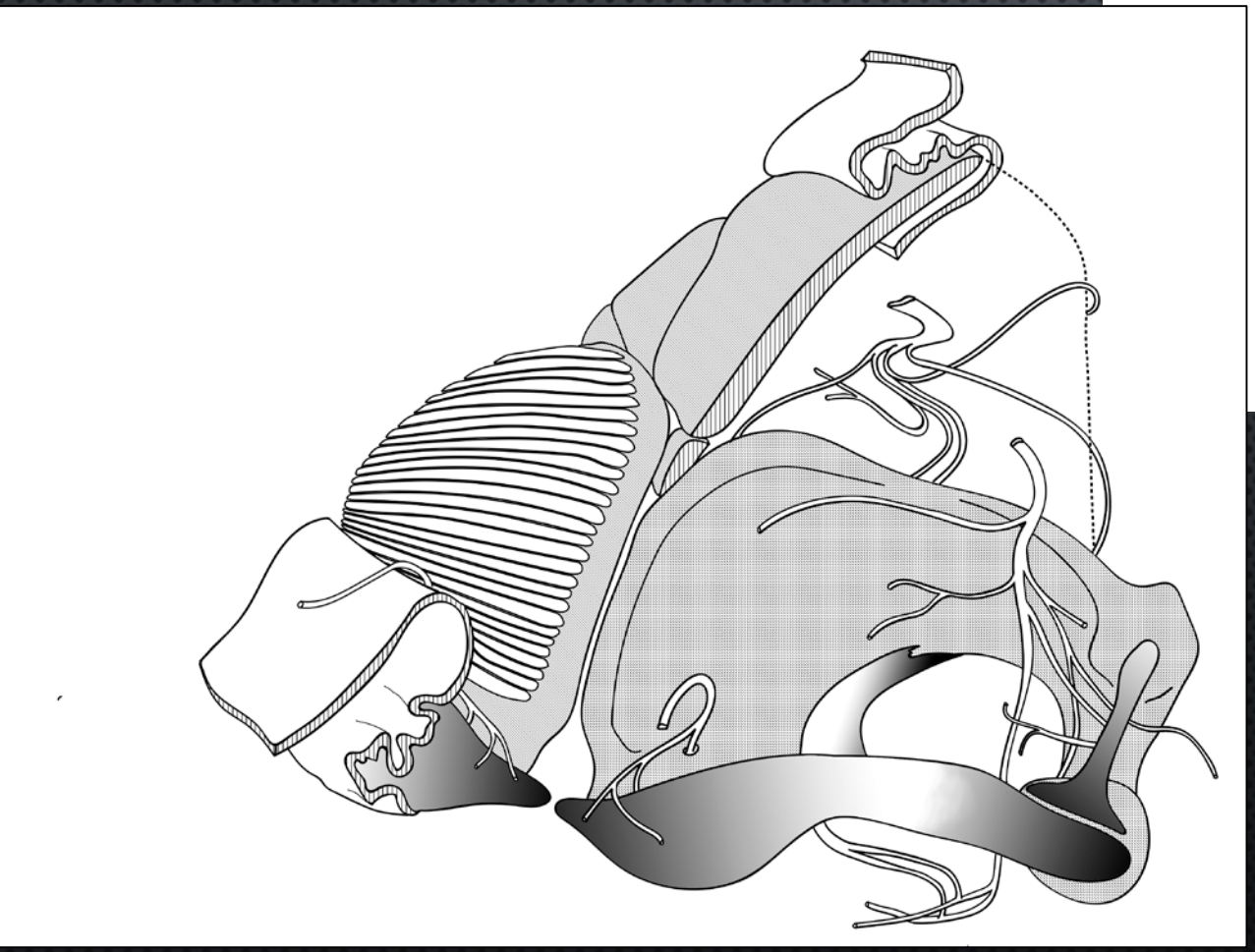
NESIDES,

COELACANTIFORMES

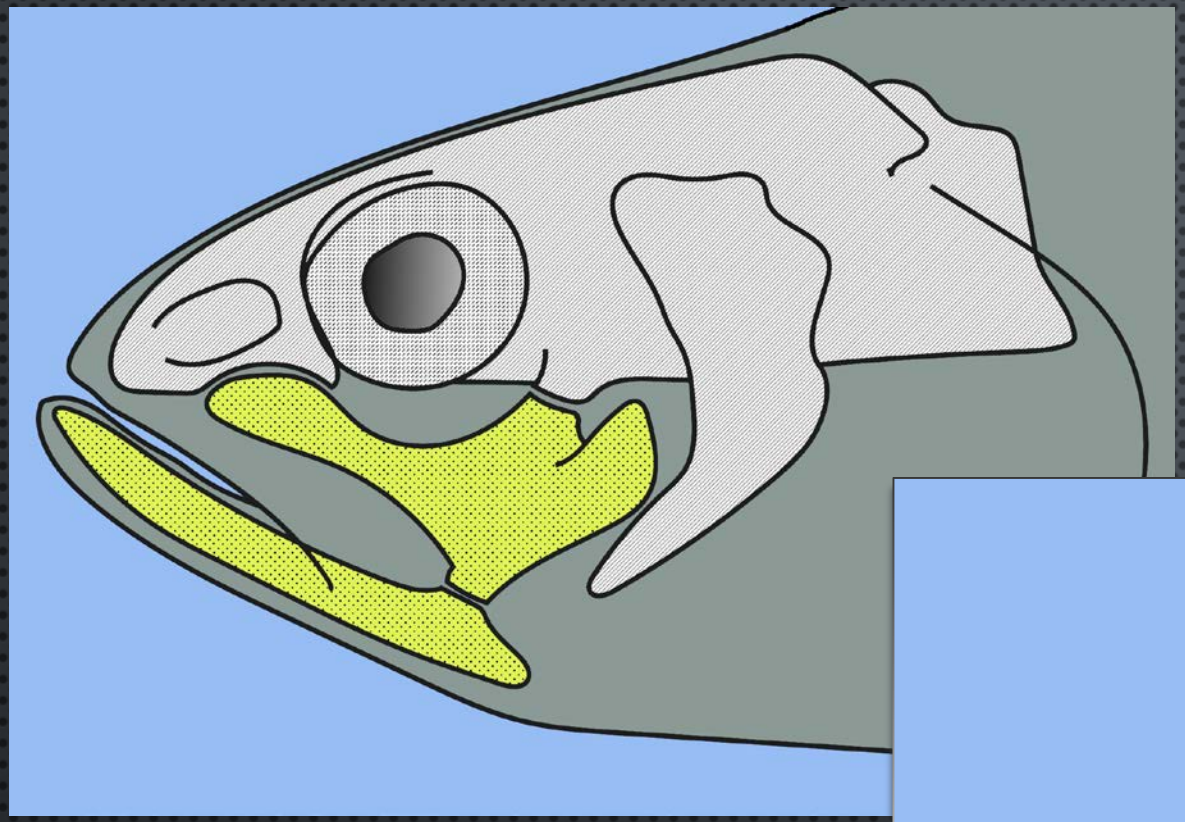
JAWS TO SKULL RELATIONS

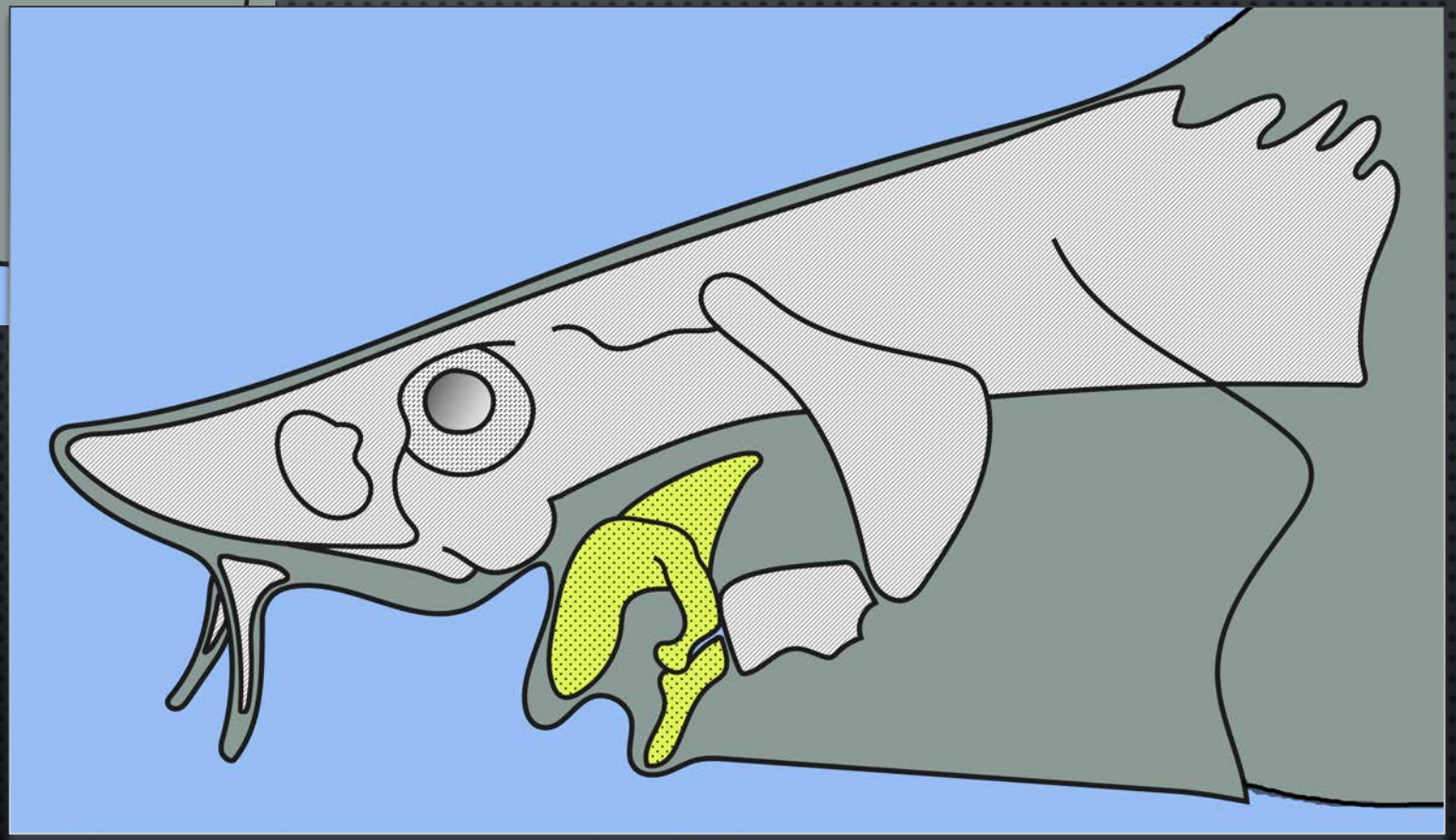


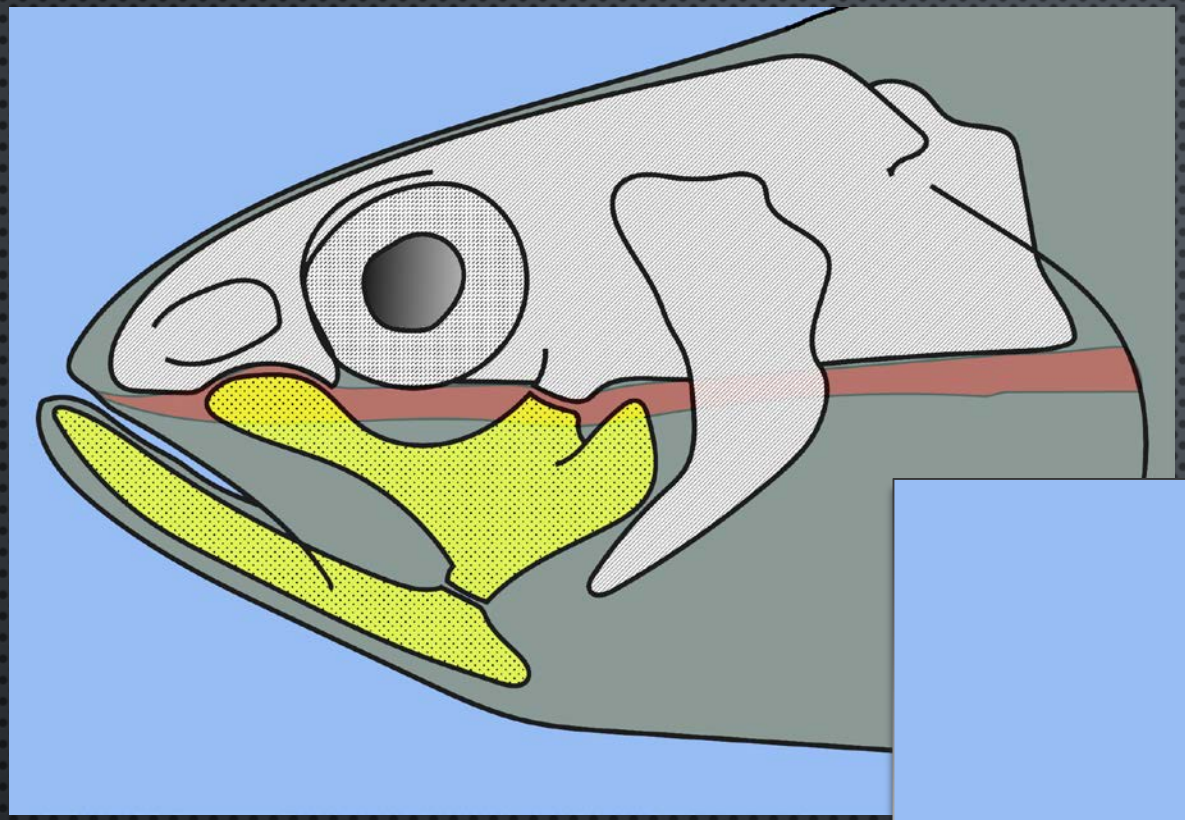


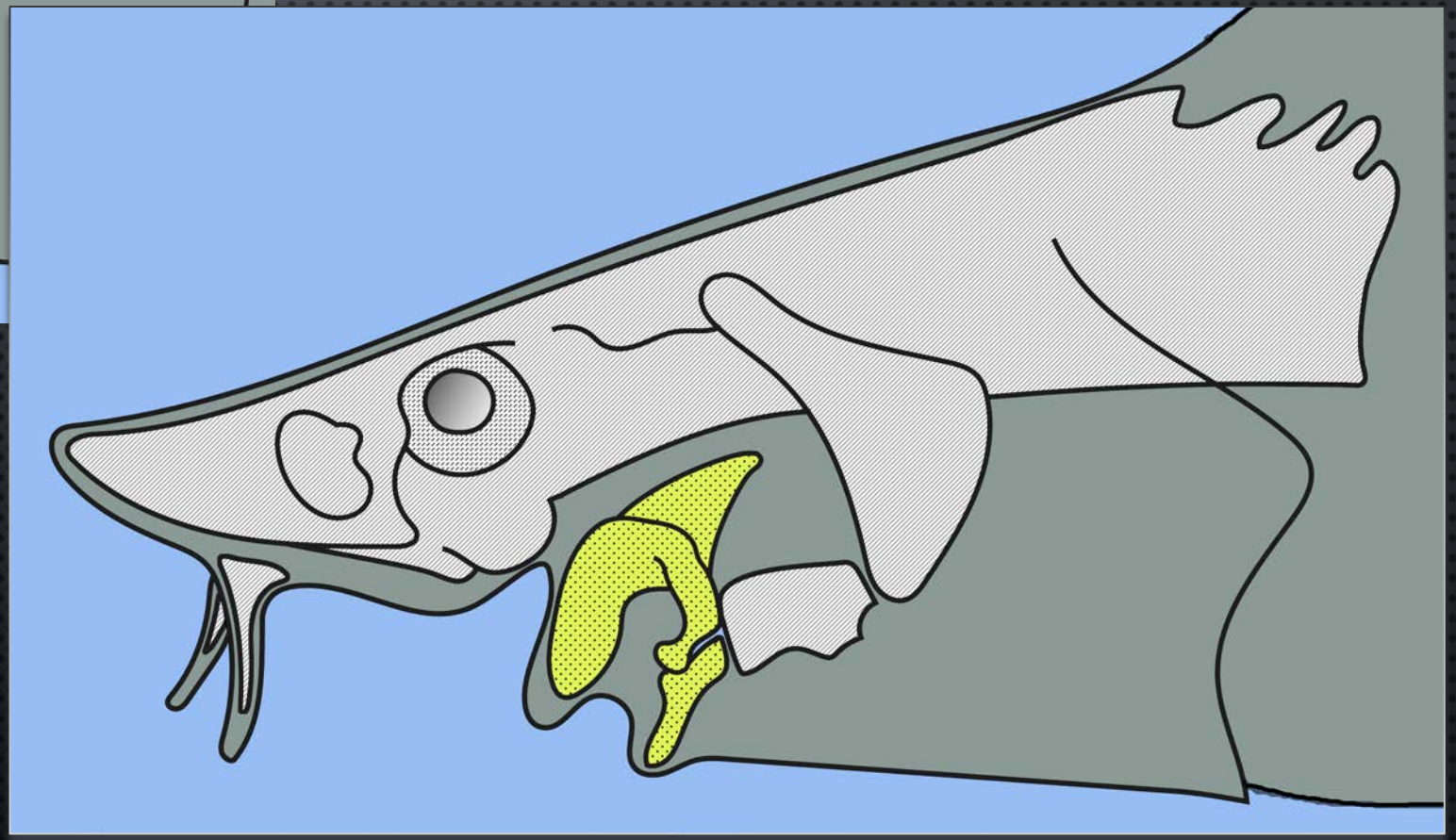


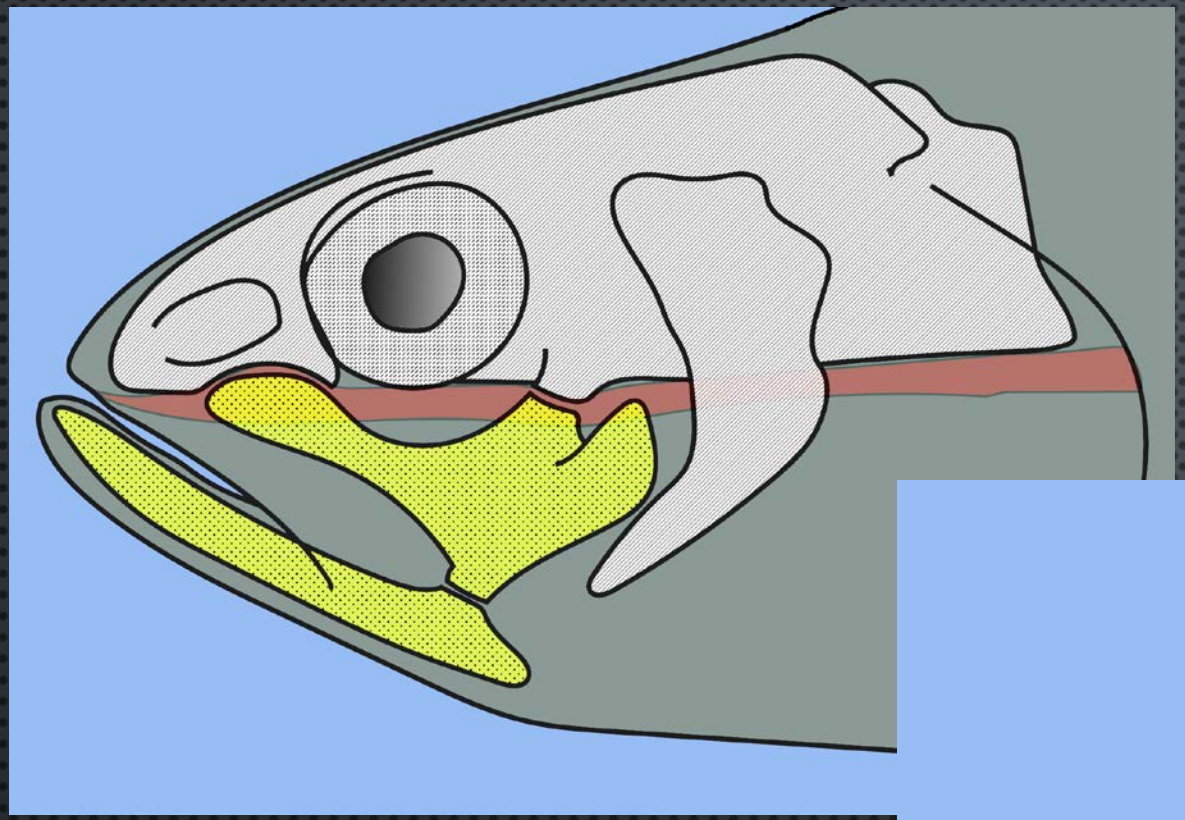
ACIPENSER

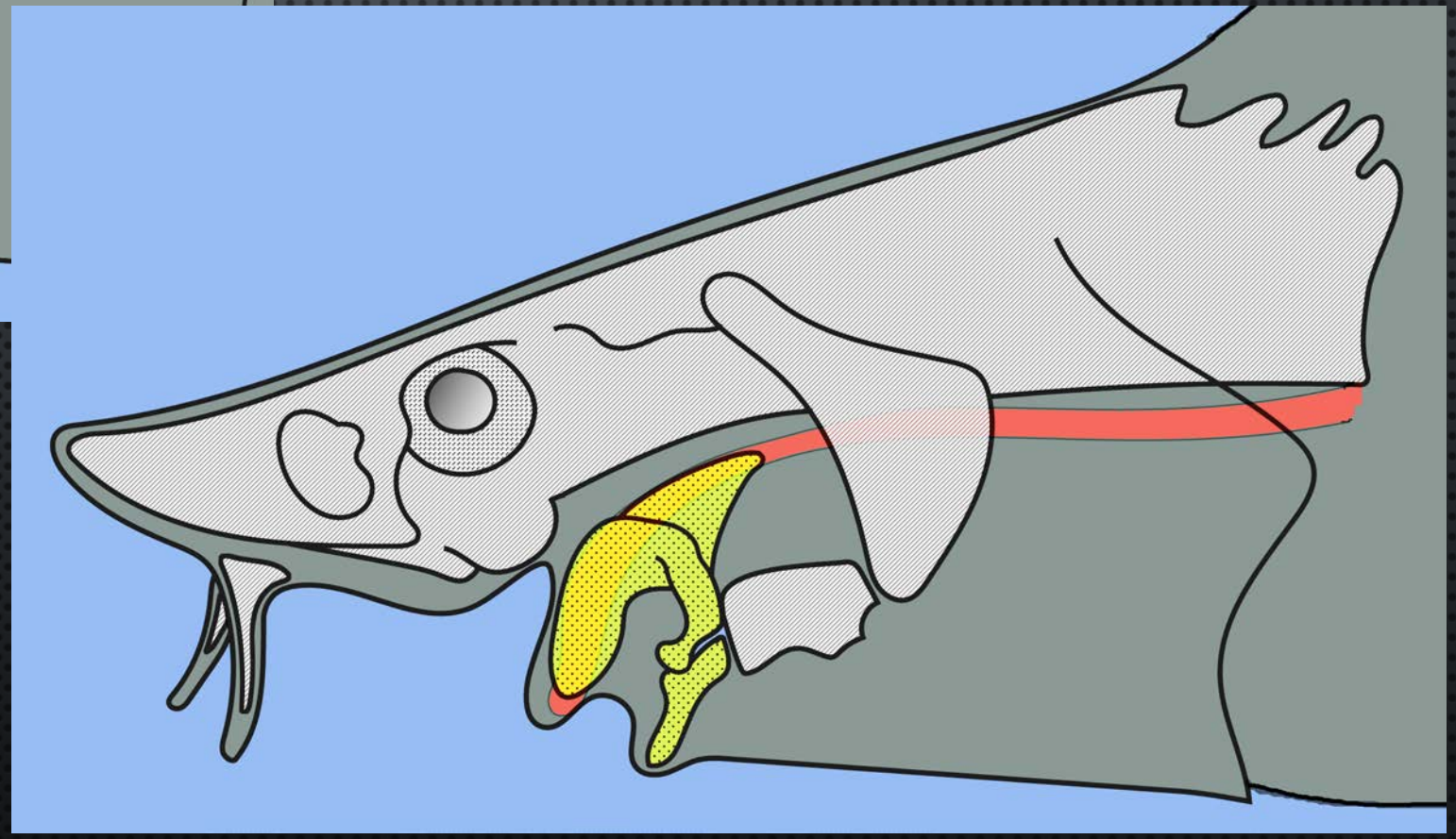


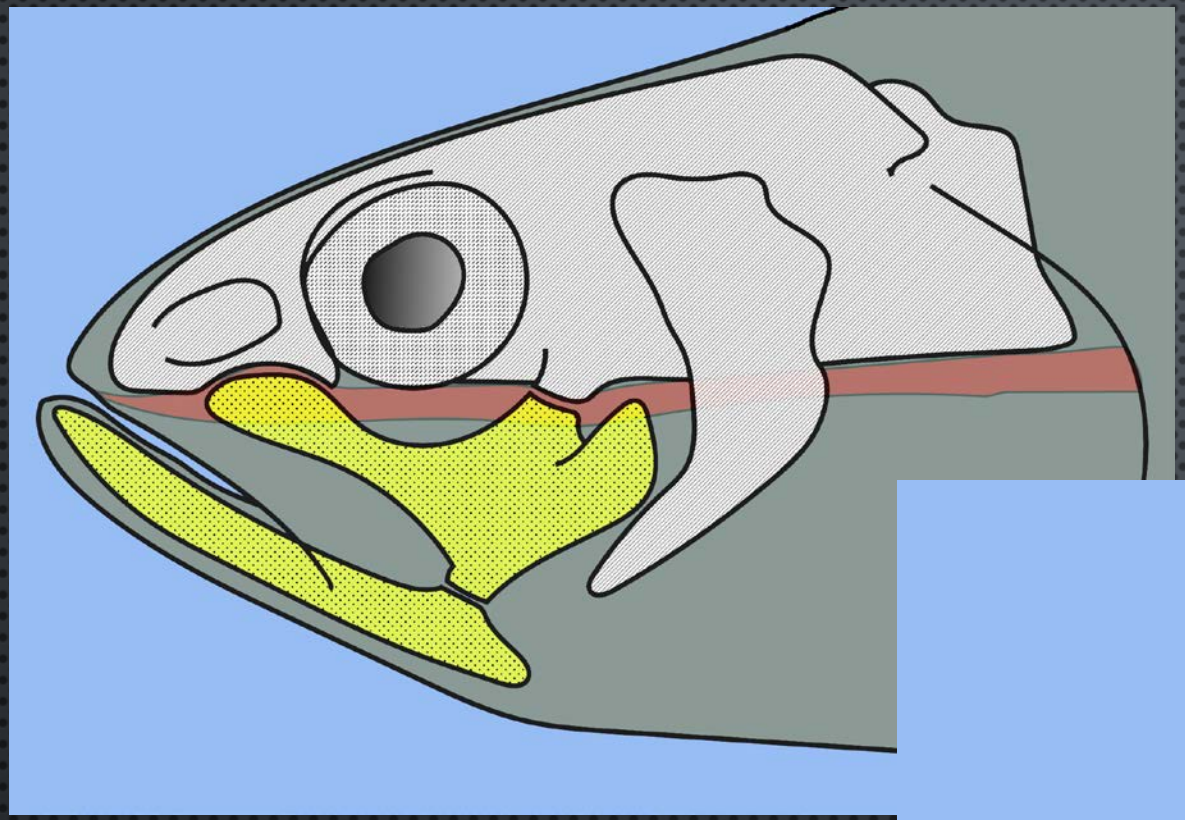


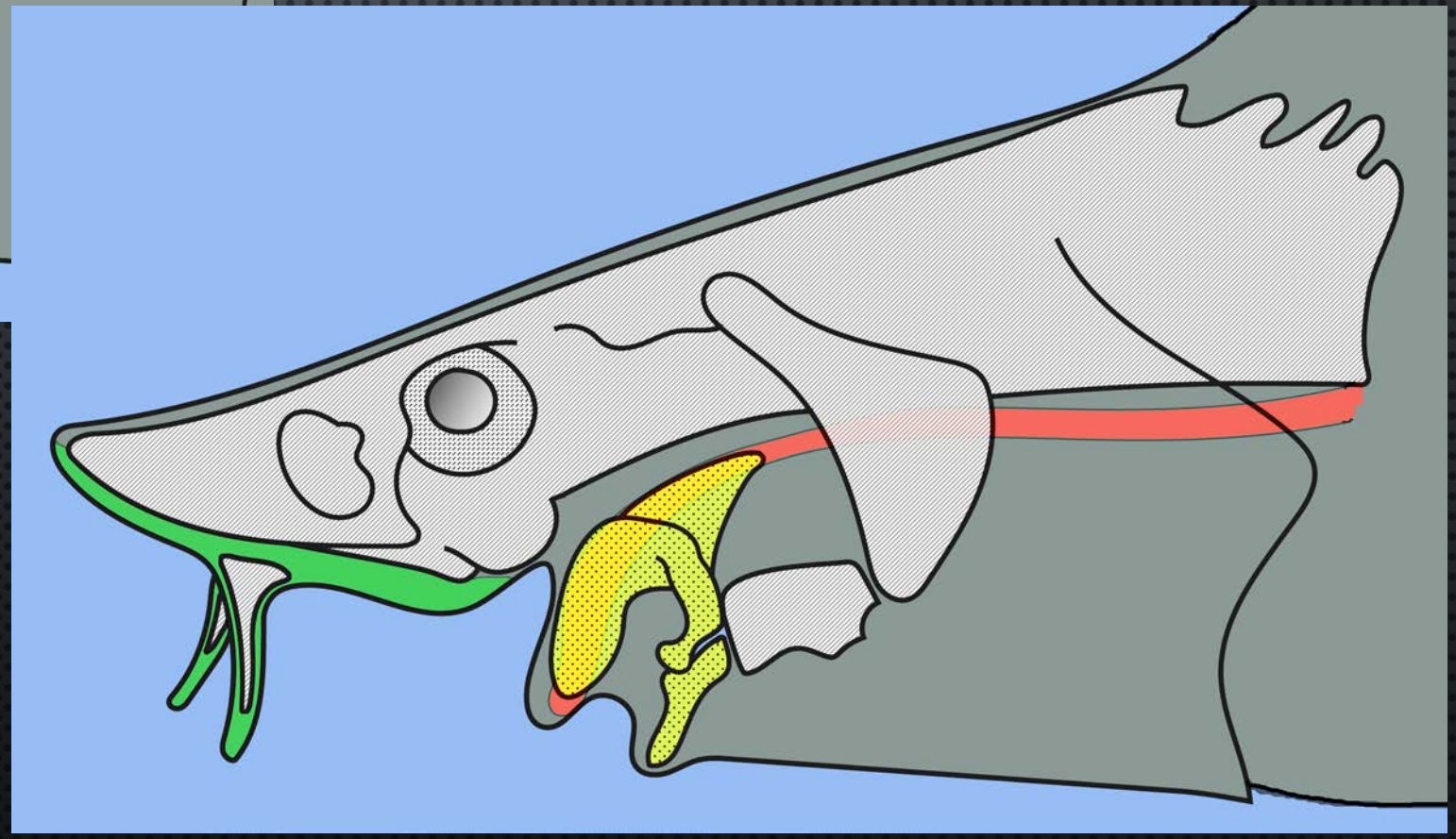


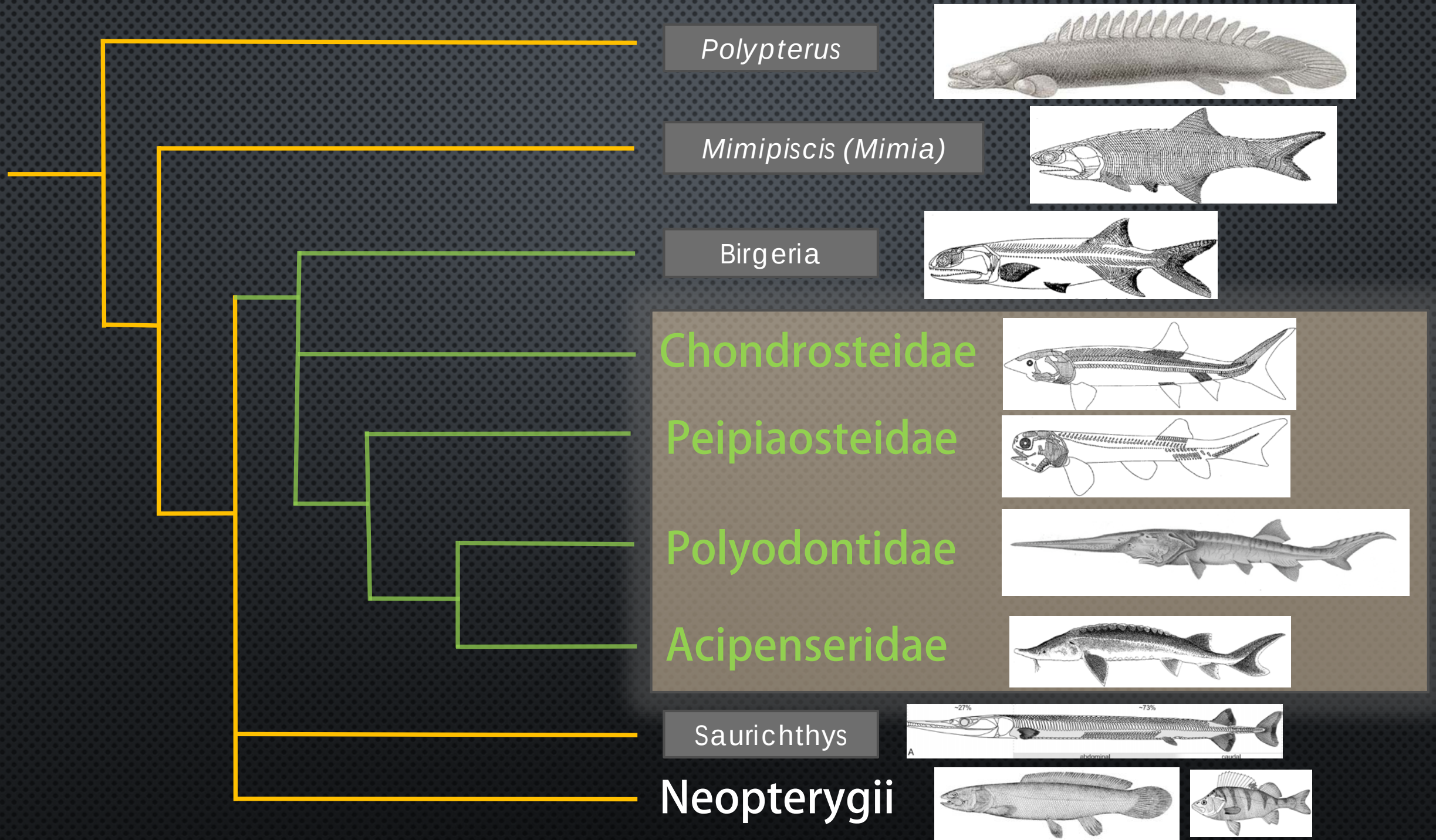


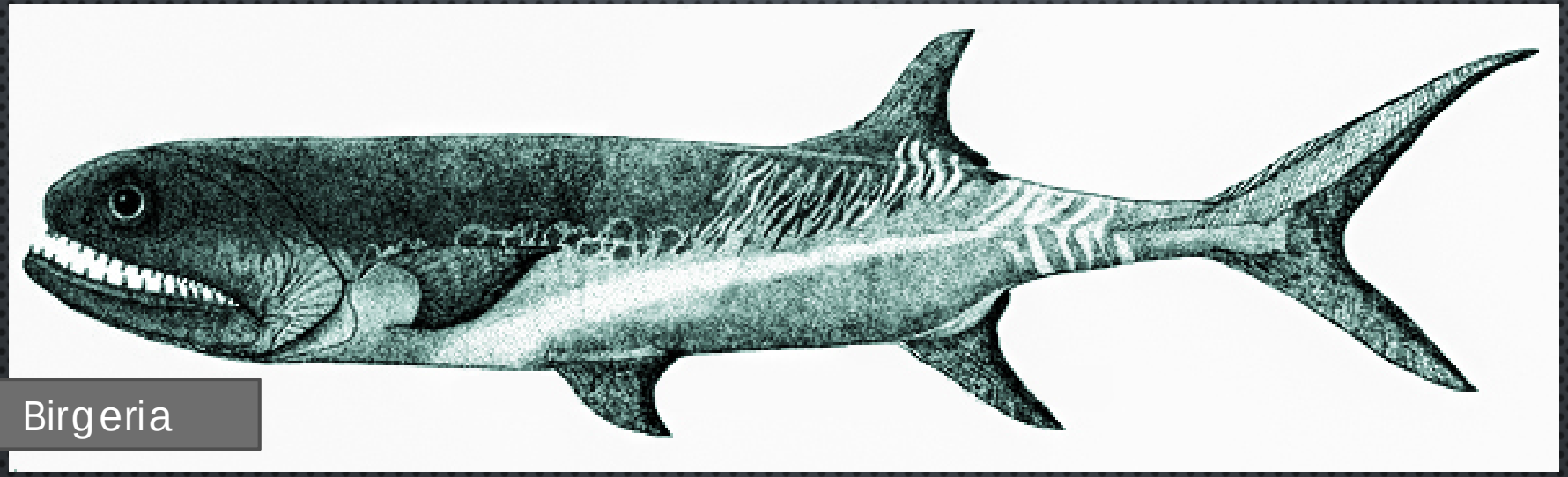









Polypterus
Mimipiscis (Mimia)
Birgeria
Chondrosteidae
Peipiaosteidae
Polyodontidae
Acipenseridae
Saurichthys
~27%
~73%
A
abdominal
caudal
Neopterygii



Birgeria

Saurichthys

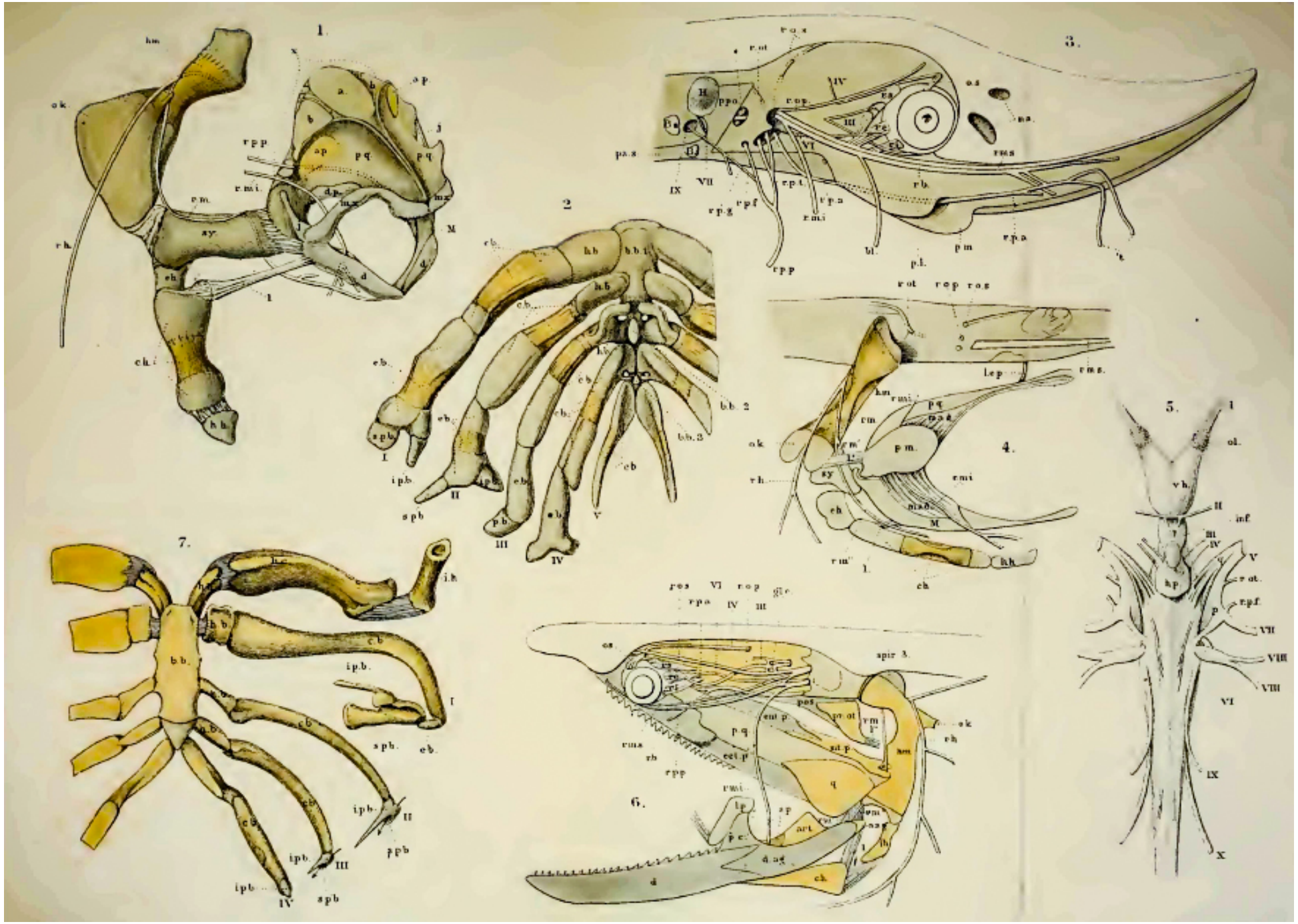
Moythomasia

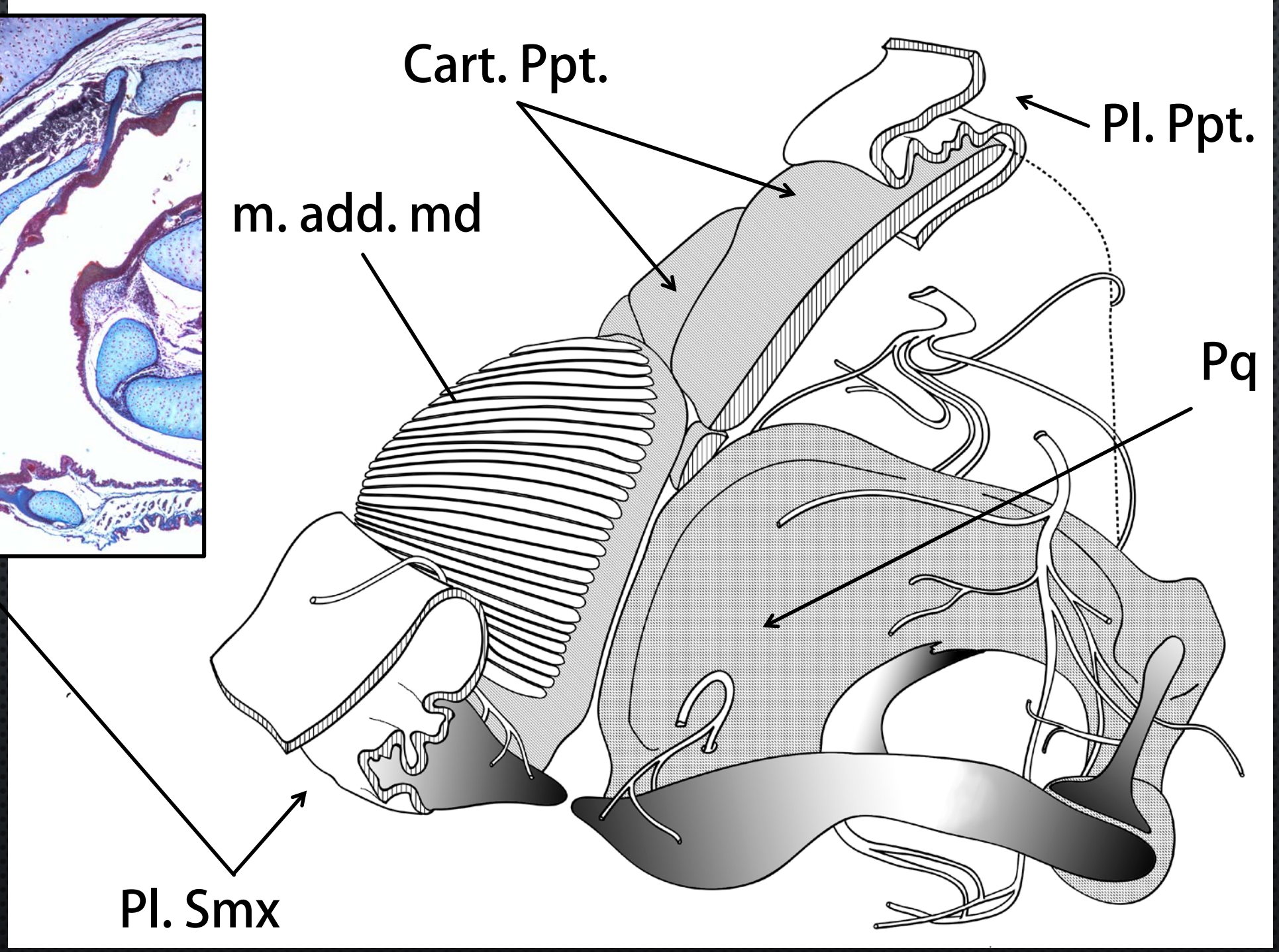
Cheirolepis

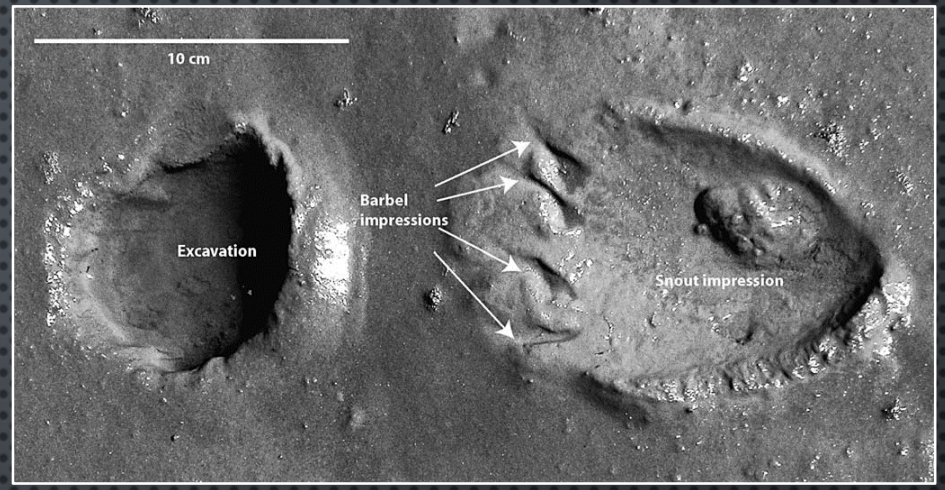
Mimipiscis

Over het Visceraalskelet en de Zenuven van den Cop der Ganoiden 1880

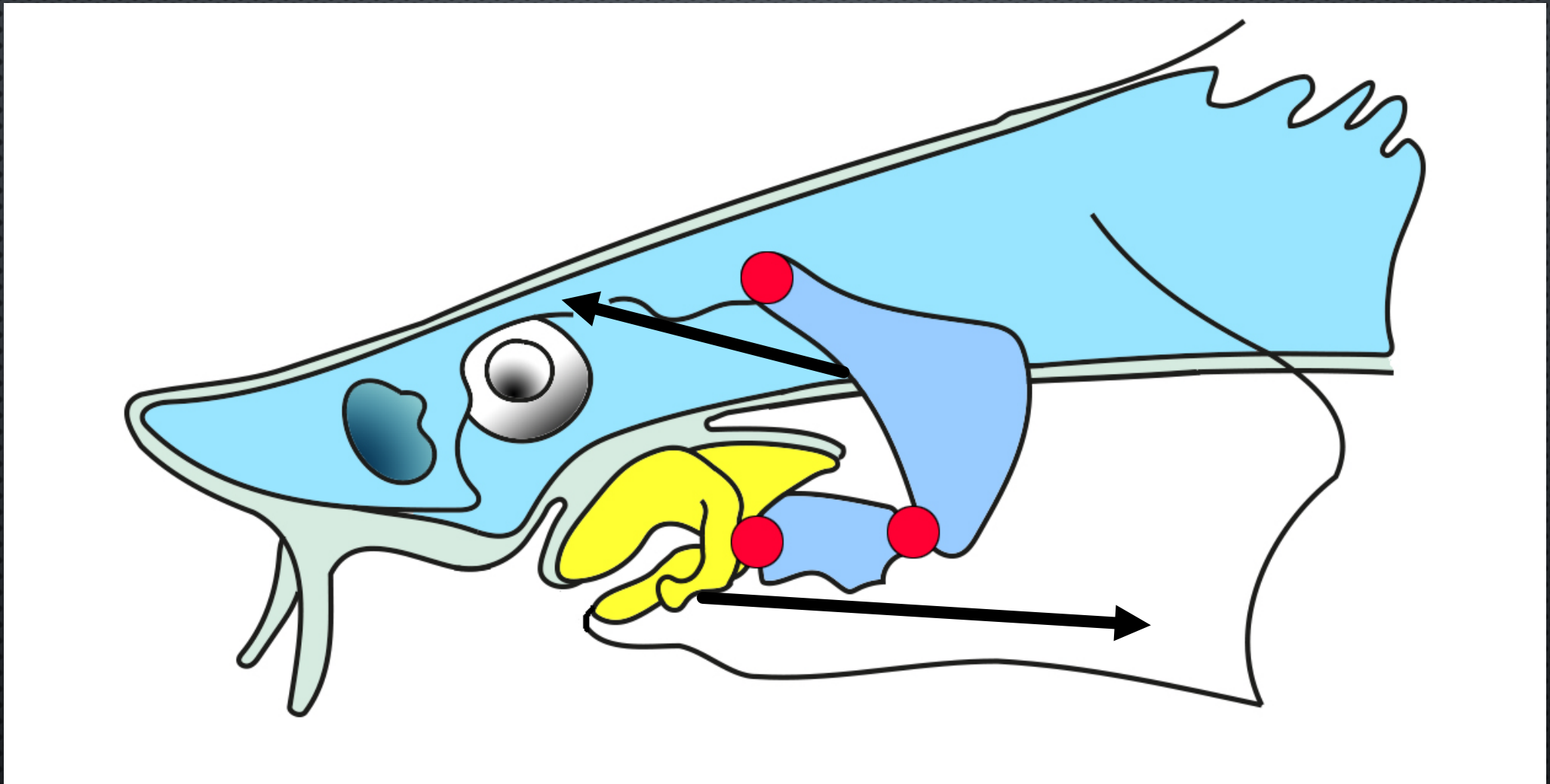
J. W. VAN WIJHE

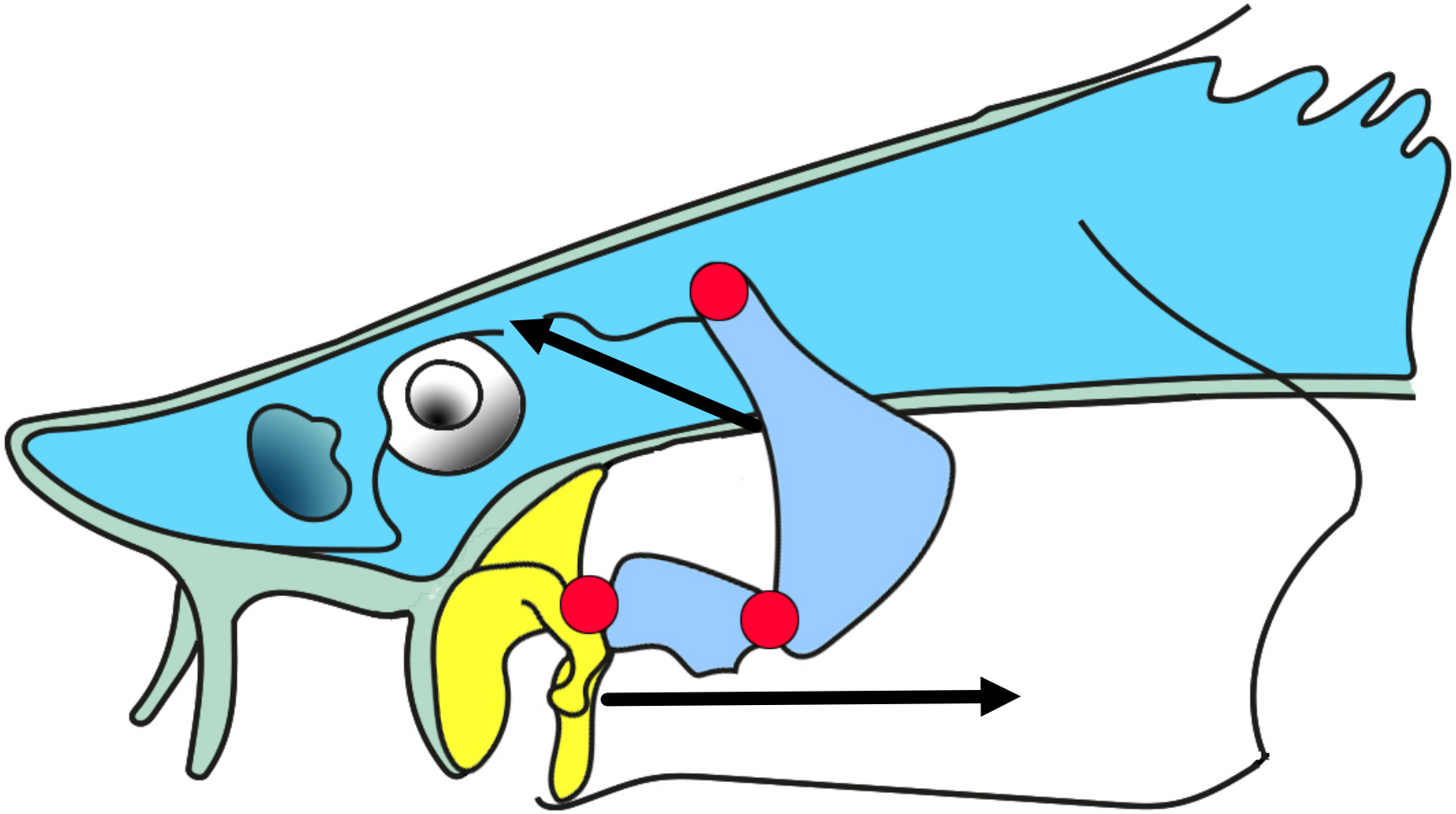



Cart. Ppt.
Pl. Ppt.
m. add. md
Pq
Pl. Smx


10 cm
Excavation
Barbel impressions
Snout impression

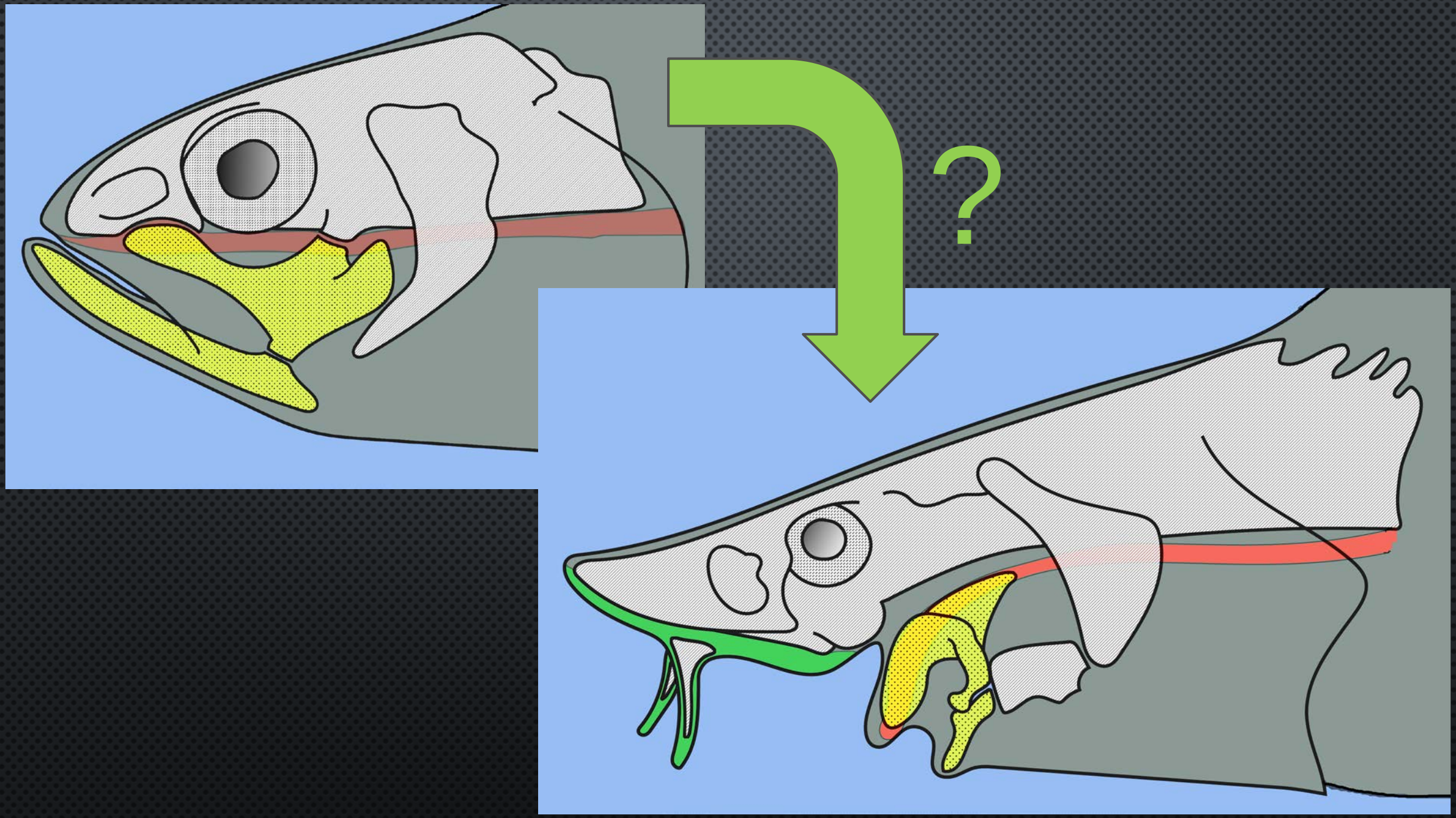
A



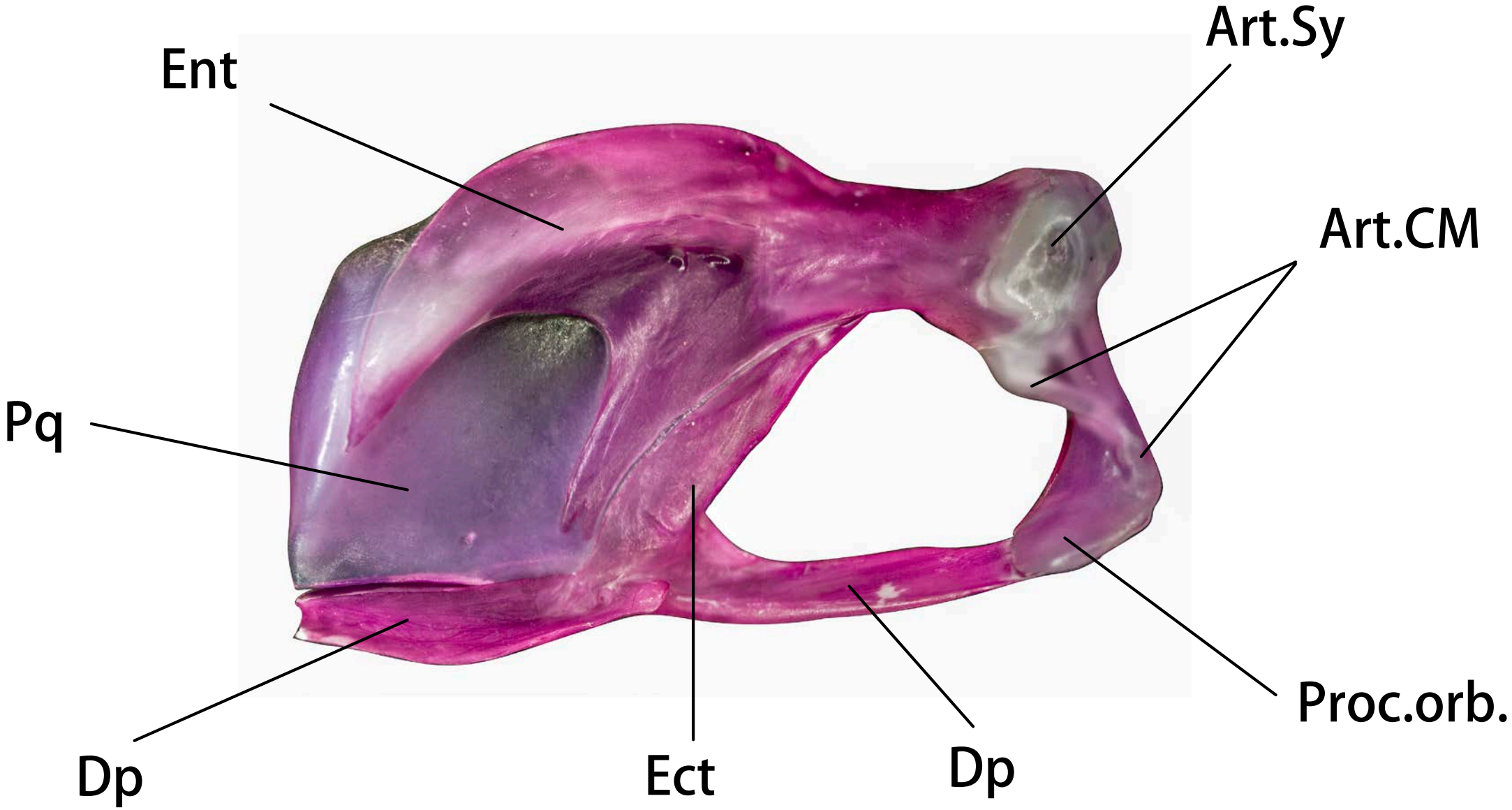


Polyodon spathula

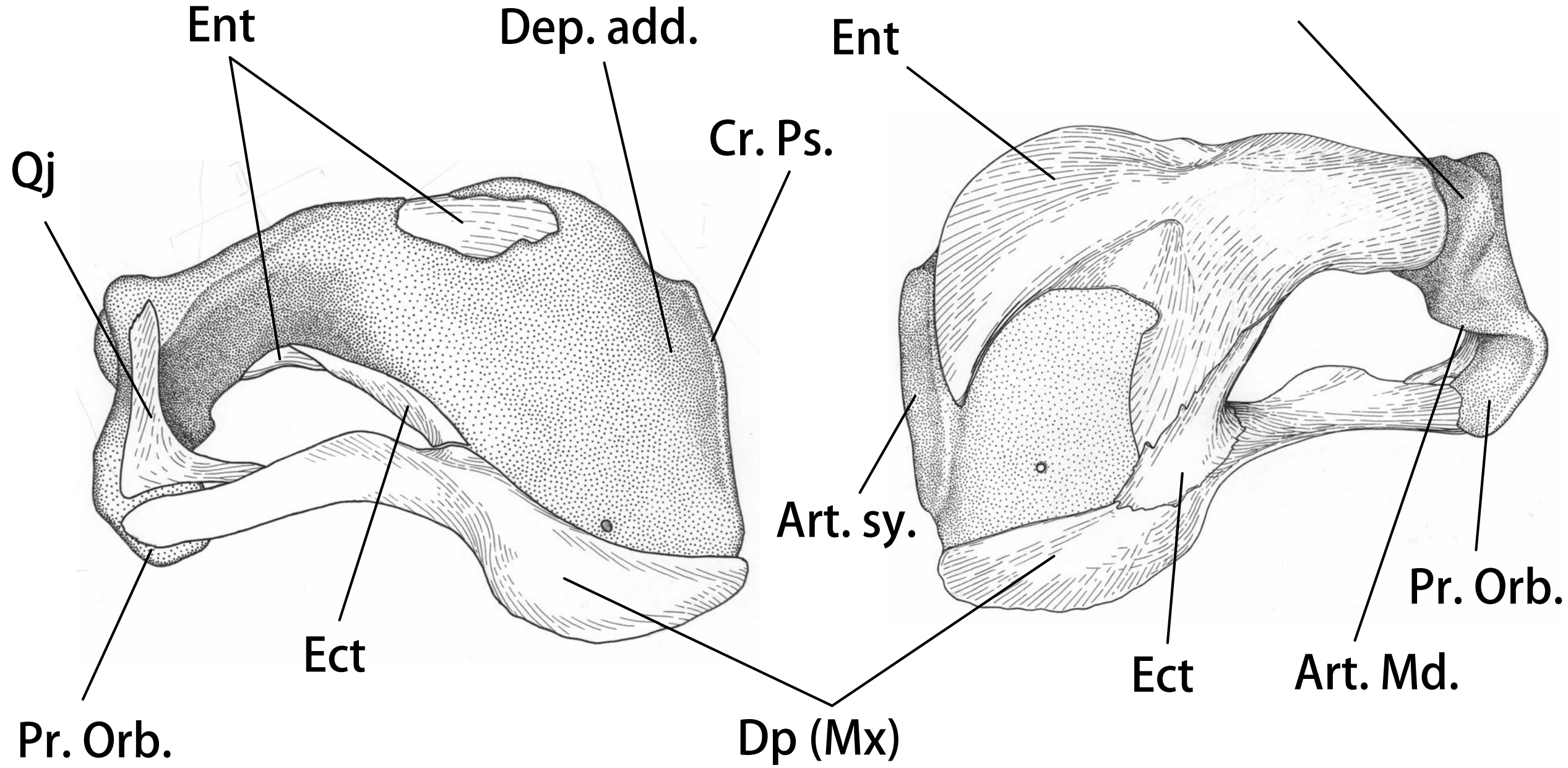
Ram filter-feeding



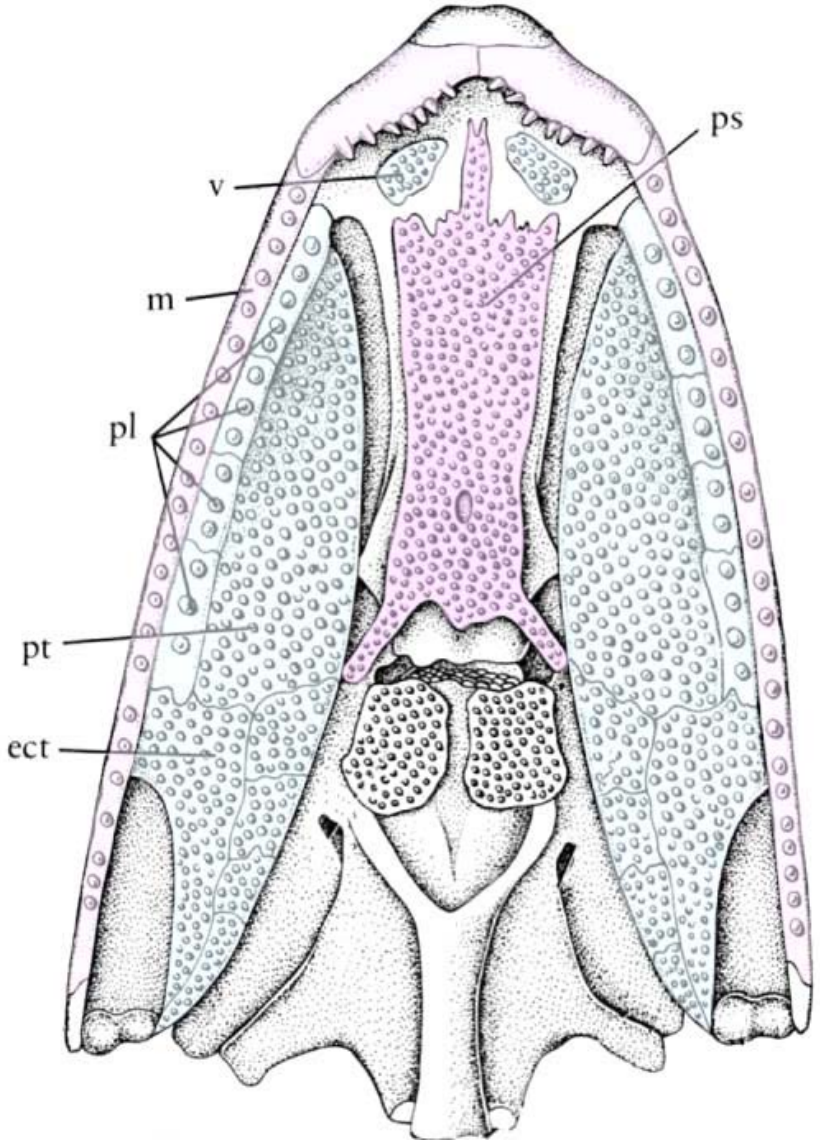
ACIPENSER, RIGHT UPPER JAW IN ORAL VIEW



ACIPENSER, UPPER JAW

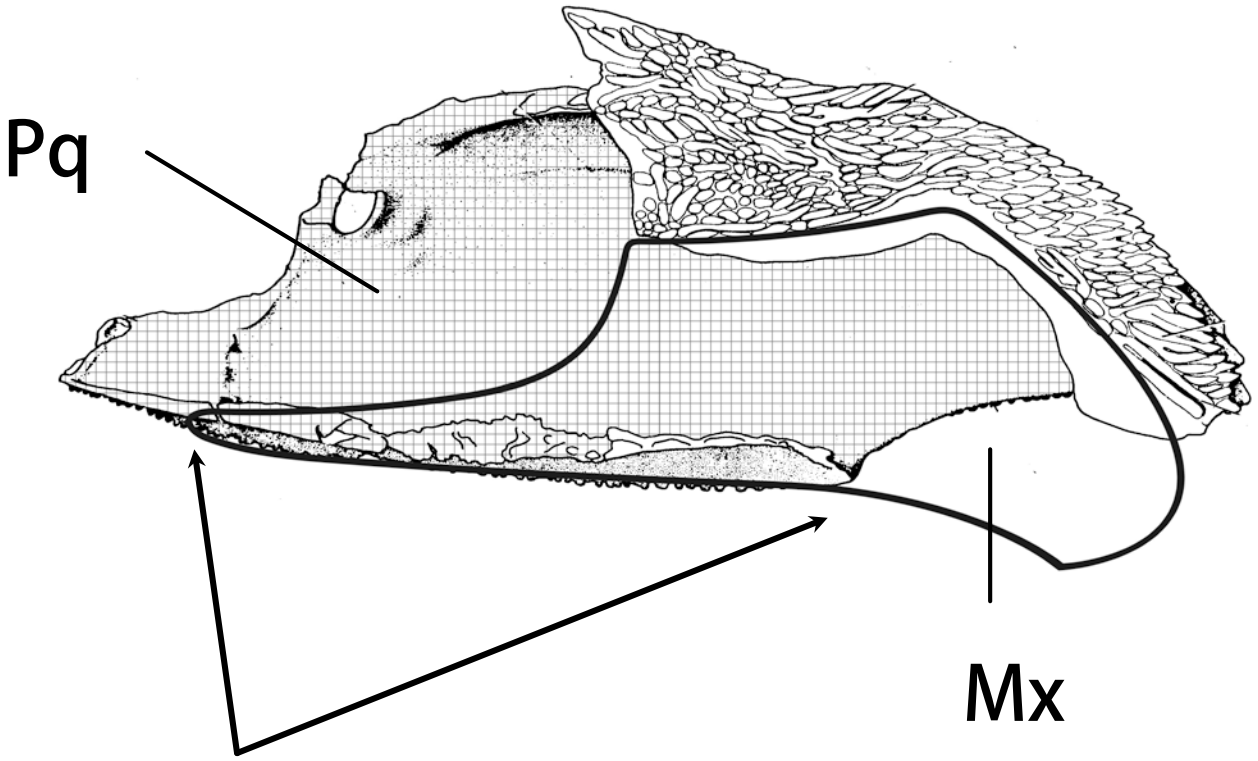


Mimipiscis, Upper Devonian



Skull in ventral view

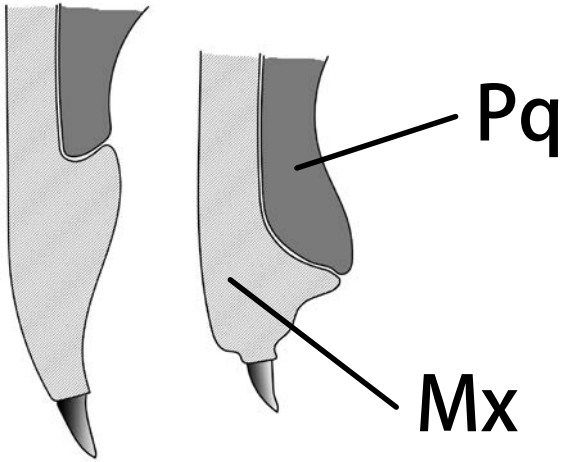
Left upper jaw in lateral view



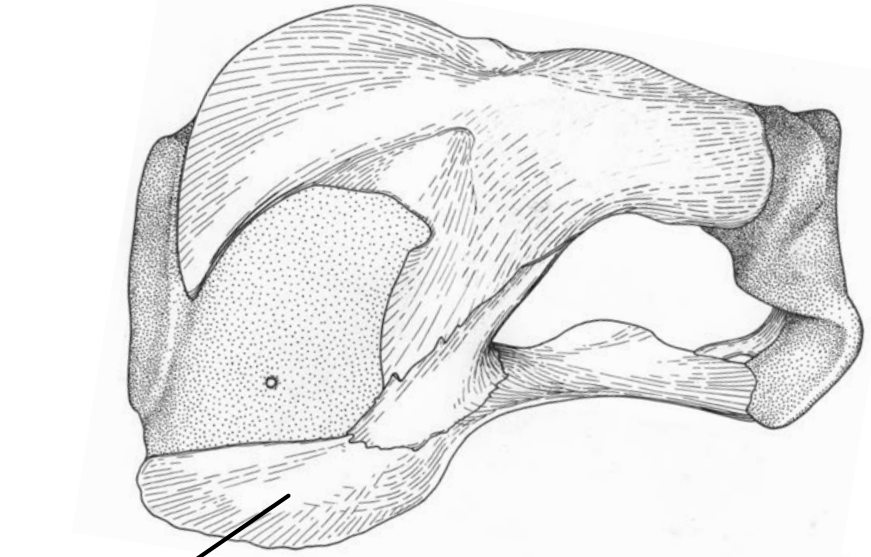
Limits of Mx
"fusion" to Pq

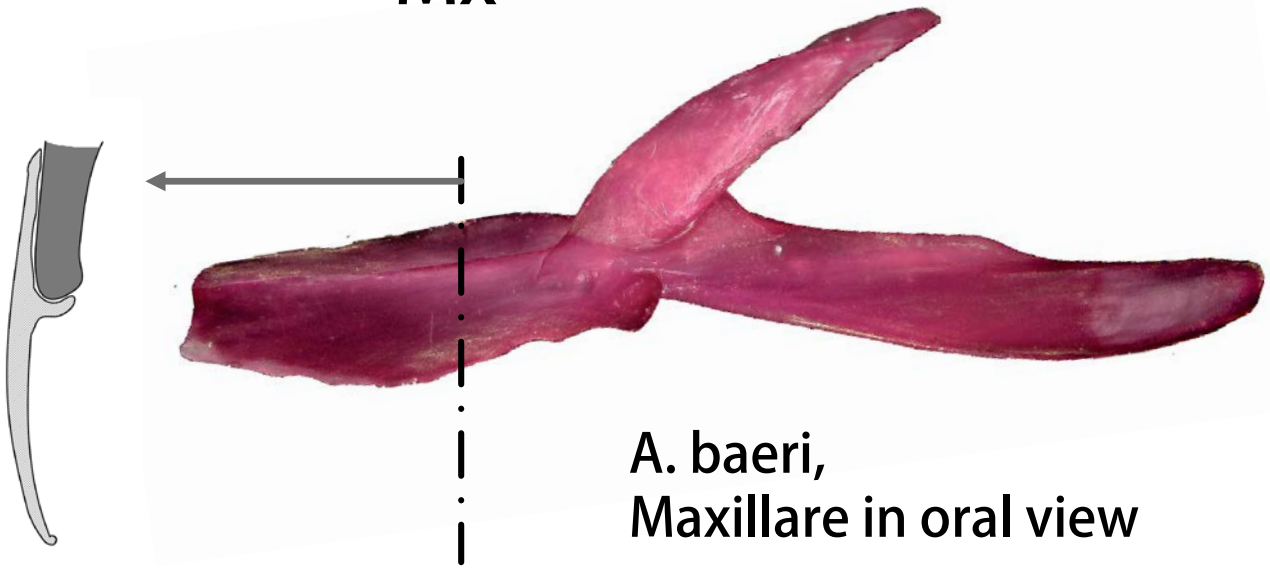
ACIPENSER, UPPER JAW

A. stellatus, 42 mm TL
Section through Pq

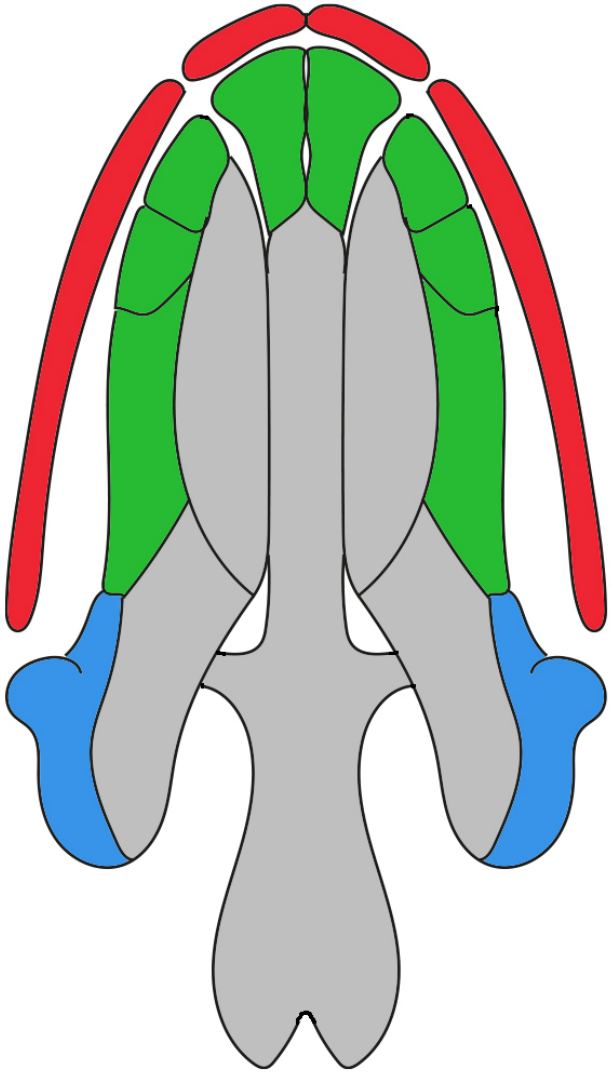


Palaeoniscoid maxillare
(from Poplin, 1974)

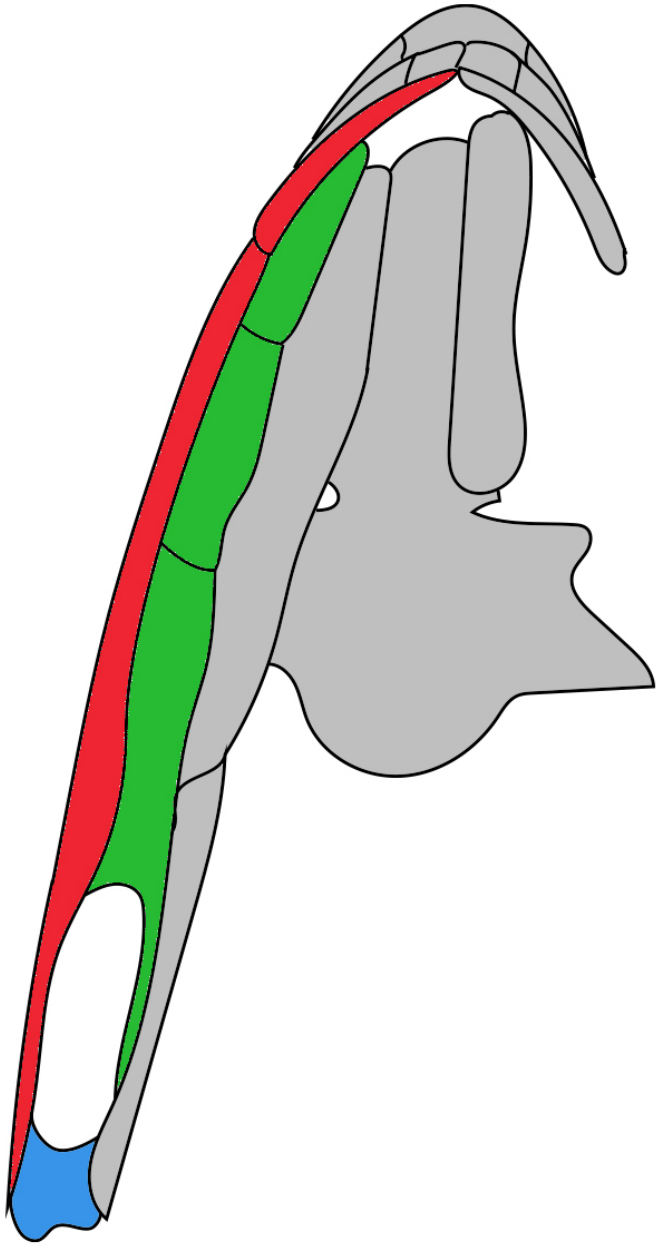




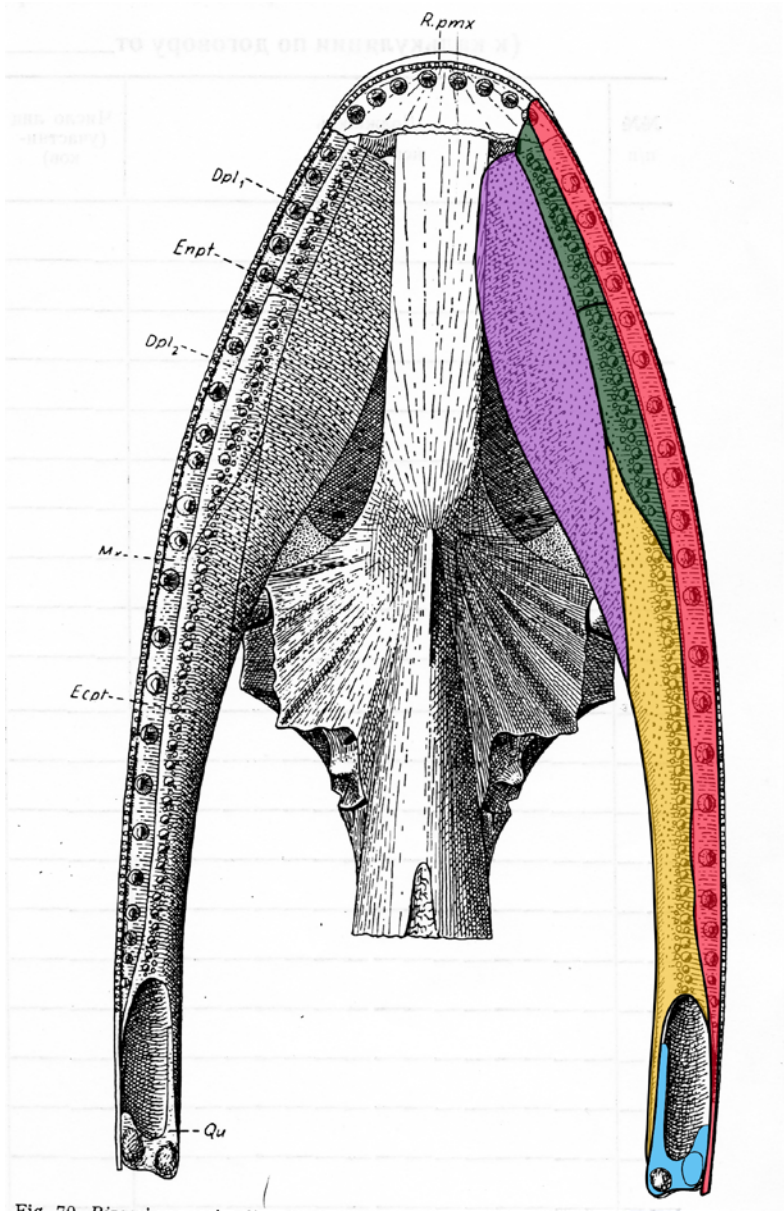
A. baeri,
Maxillare in oral view



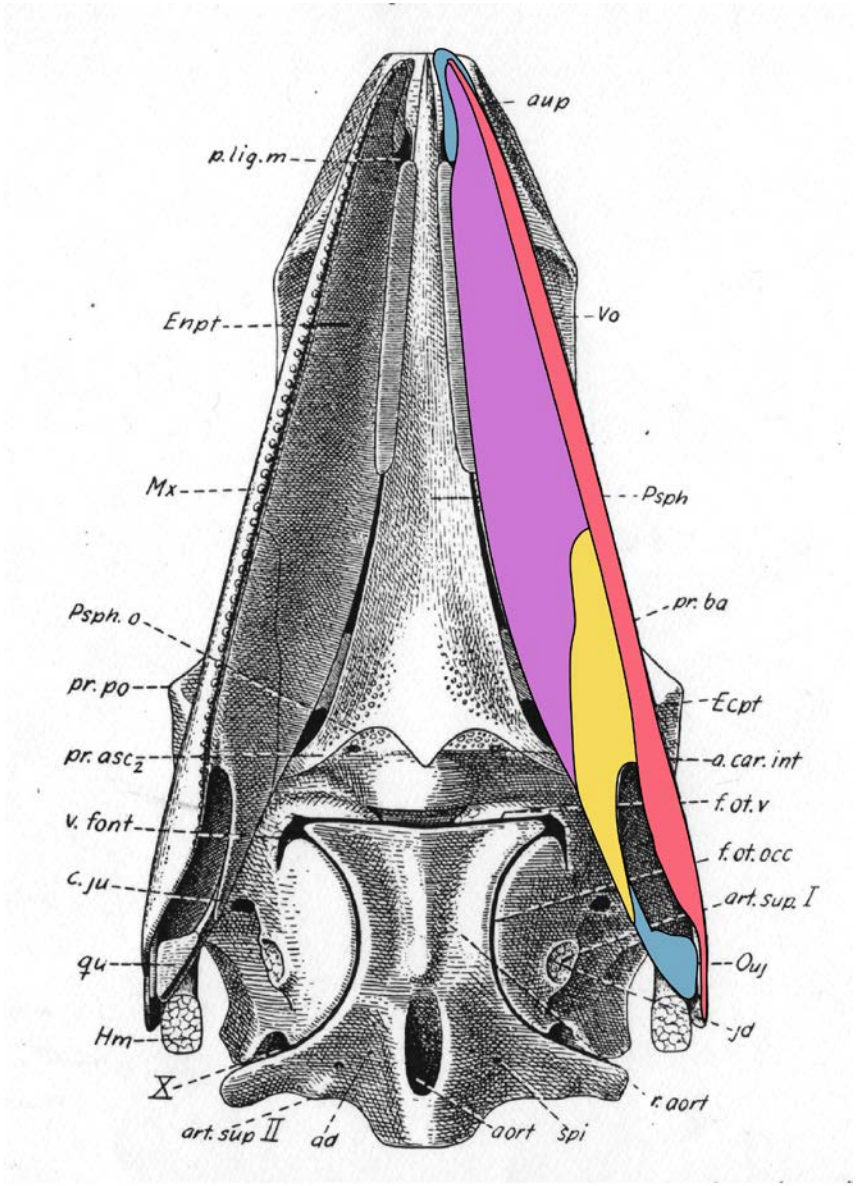
Amia



Pteronisculus

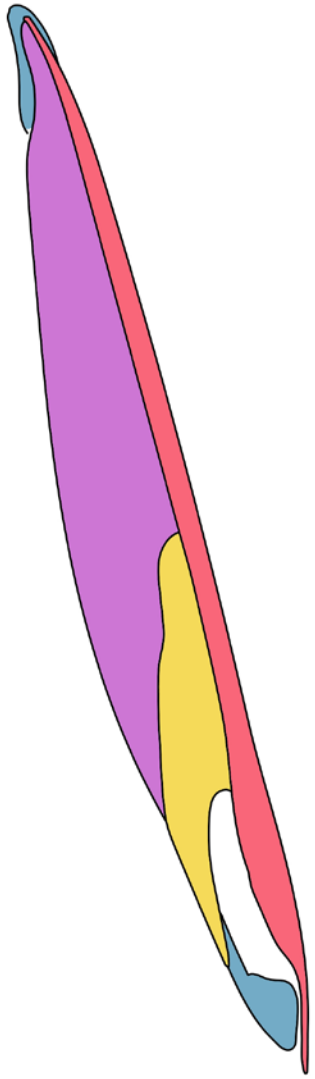


Birgeria

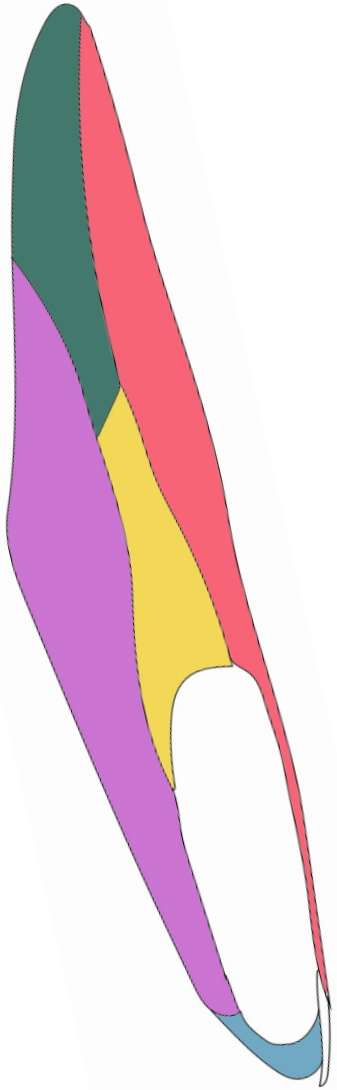


Australosomus

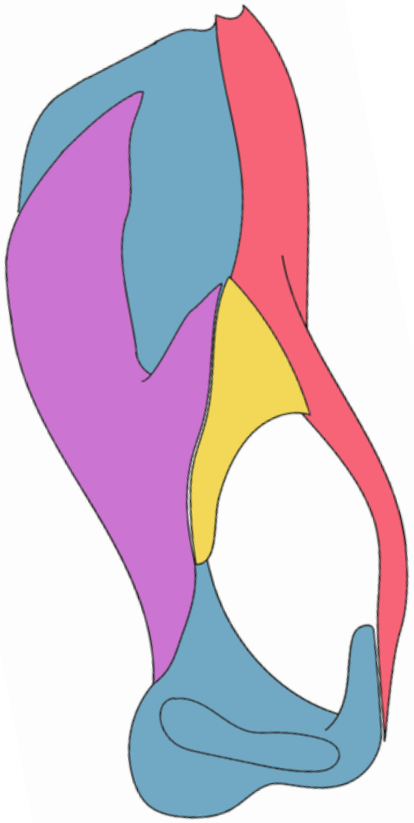
Birgeria



Australosomus

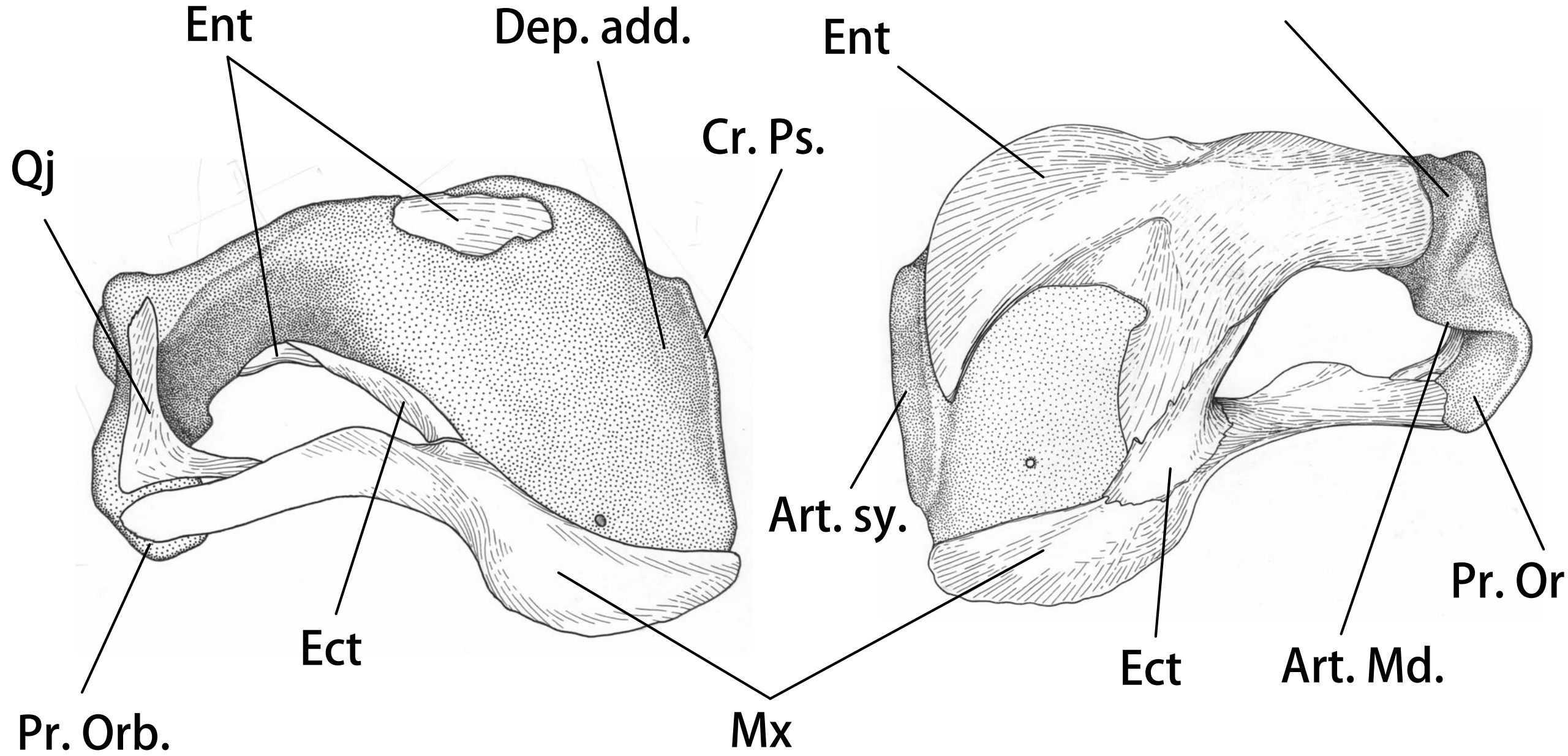


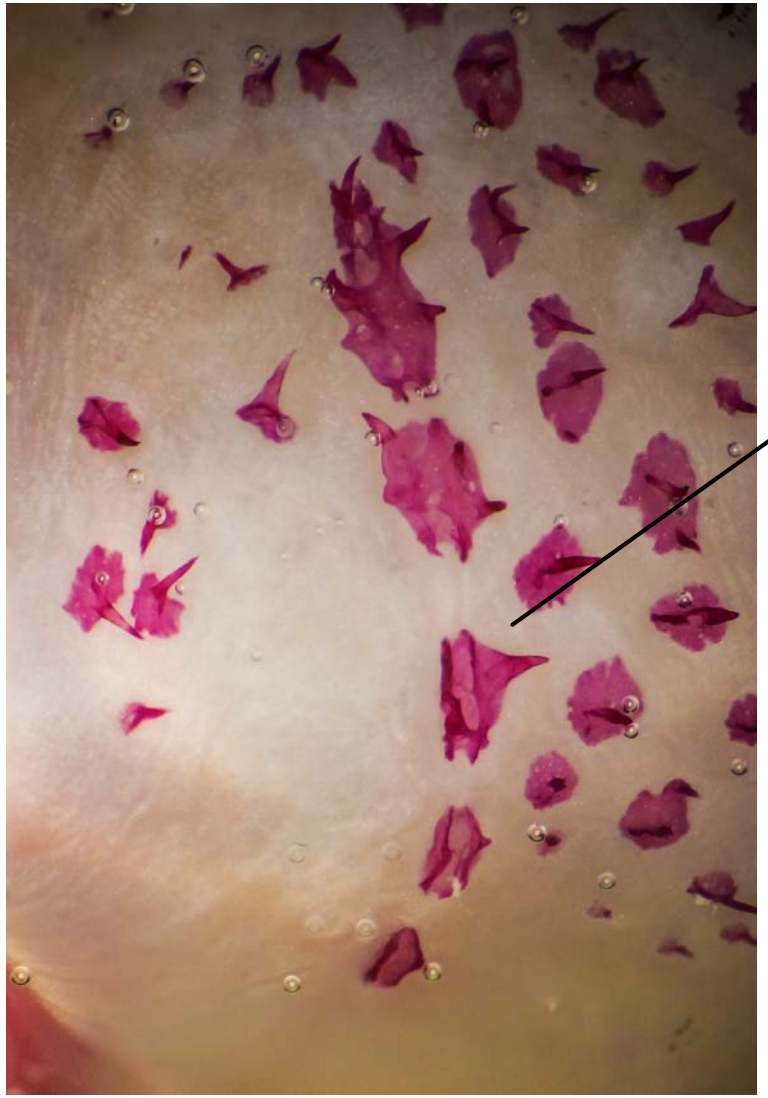
Saurichthys



Acipenser

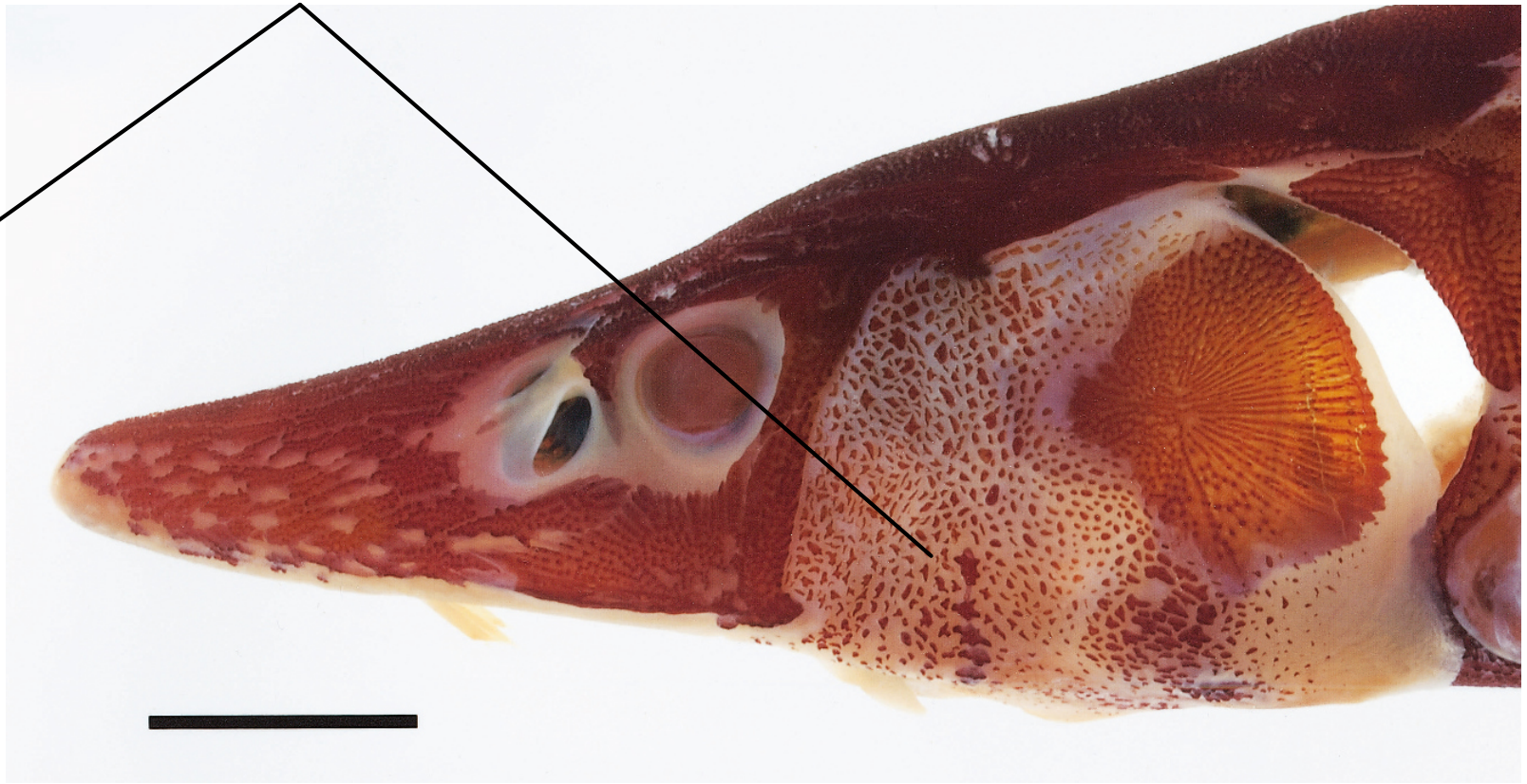
ACIPENSER, UPPER JAW



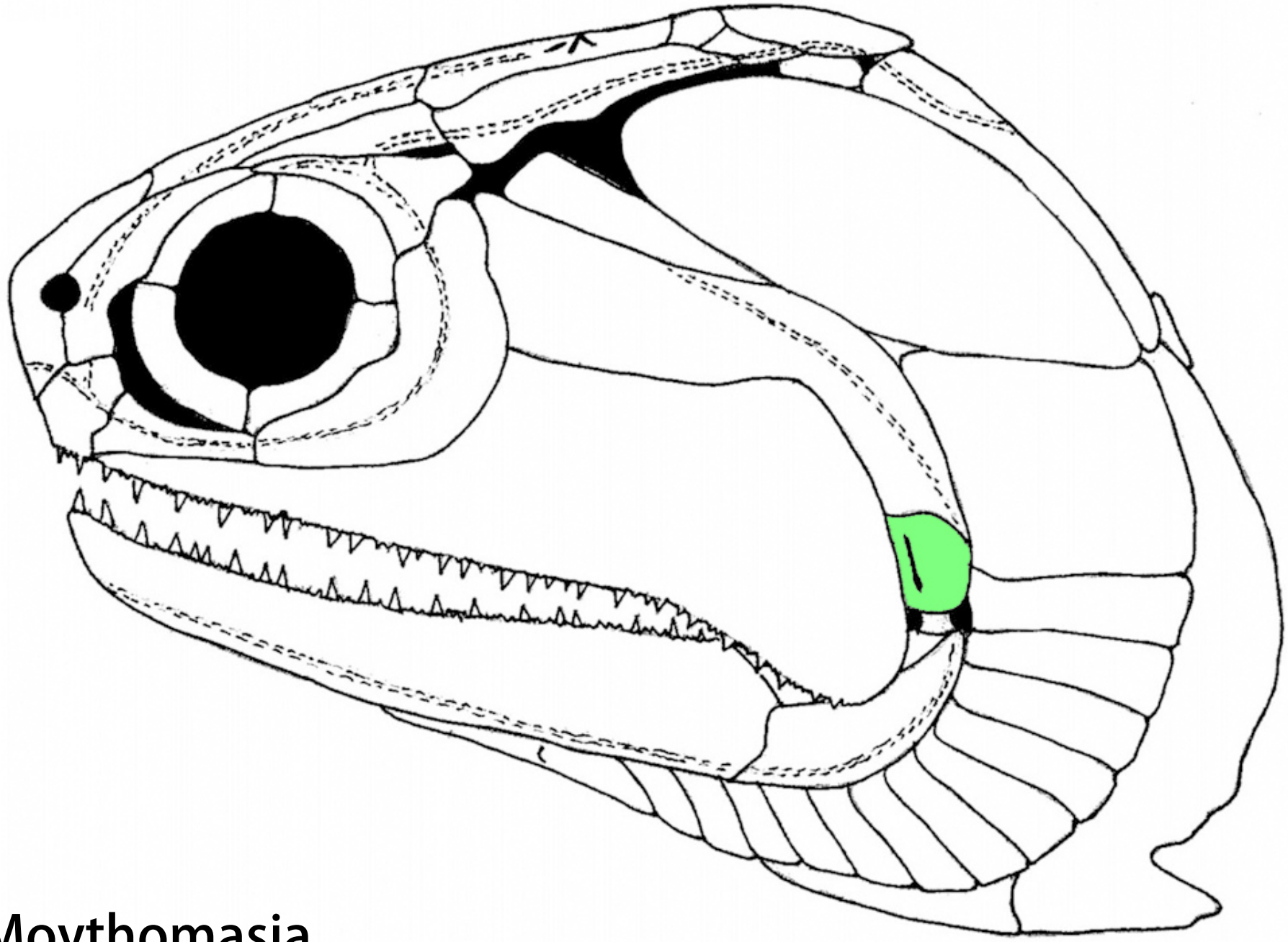


Acipenser baeri

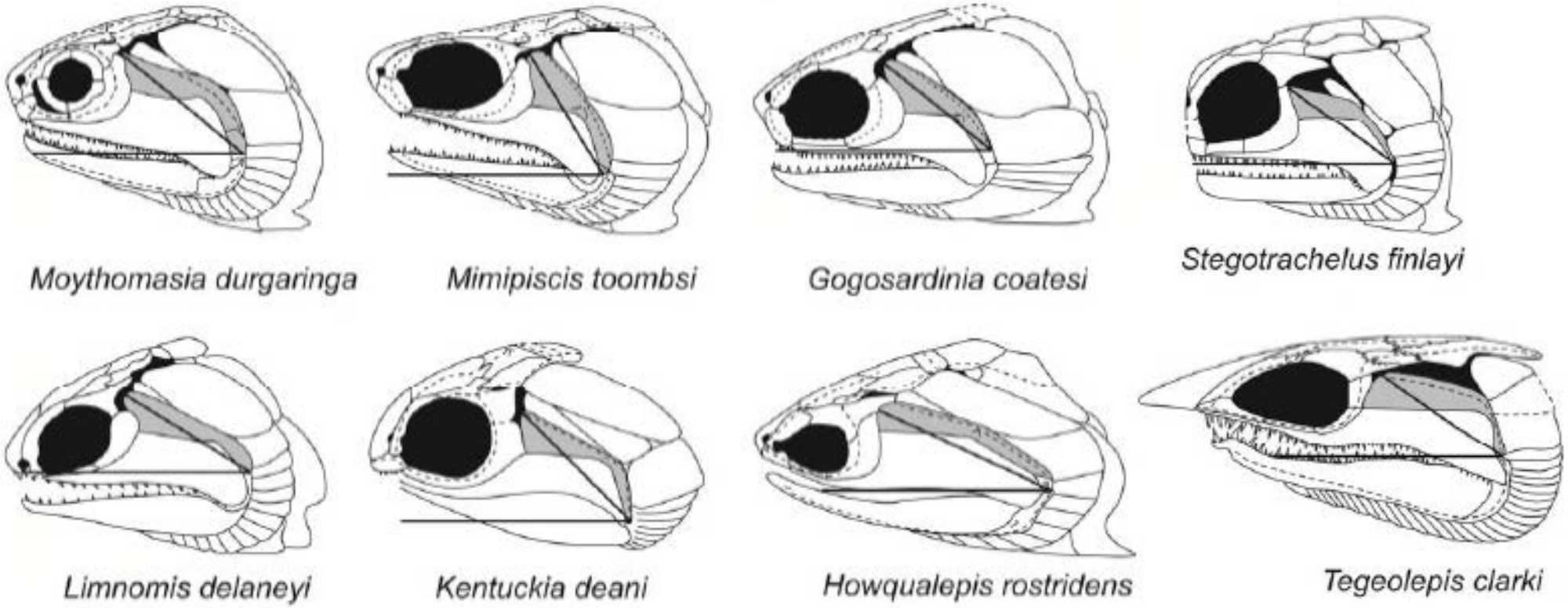
preopercular ossicles

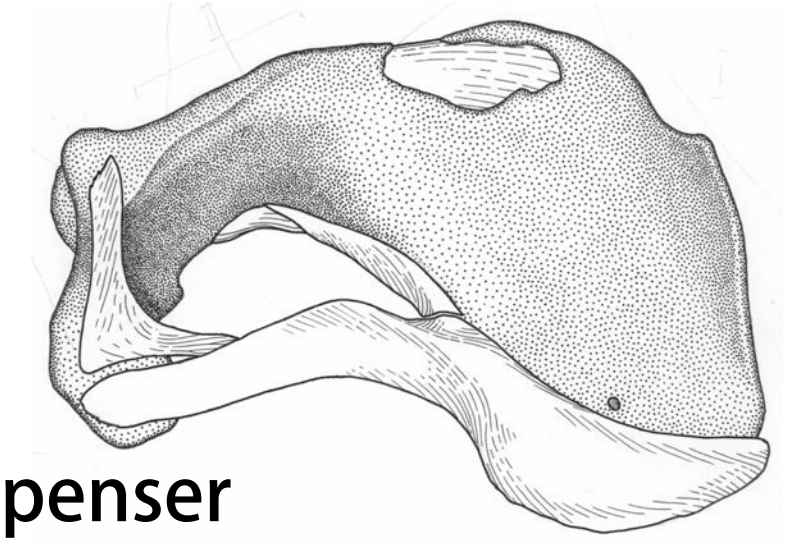


Acipenser brevirostrum
(Hilton et al., 2011)

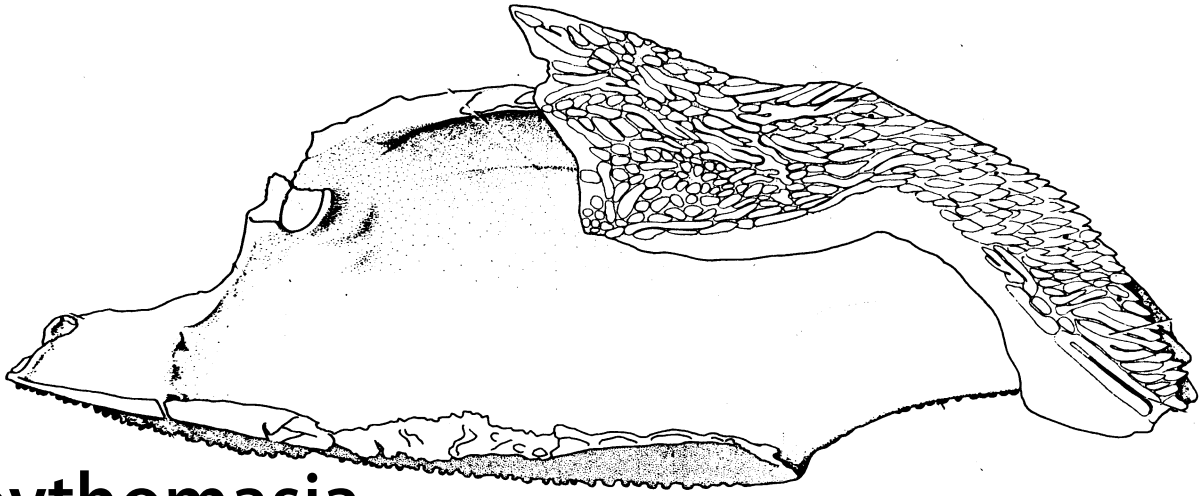


Moythomasia



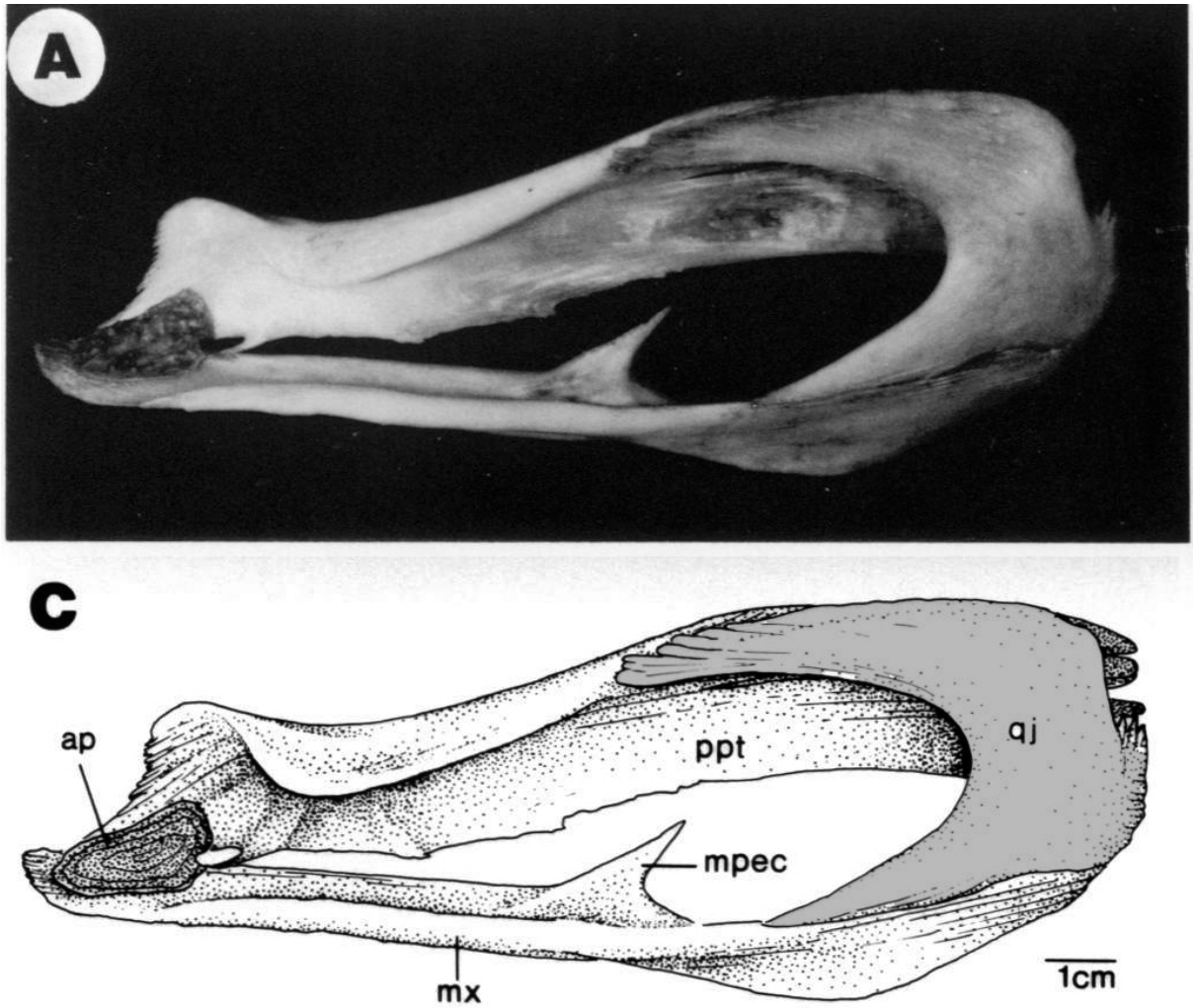


Acipenser

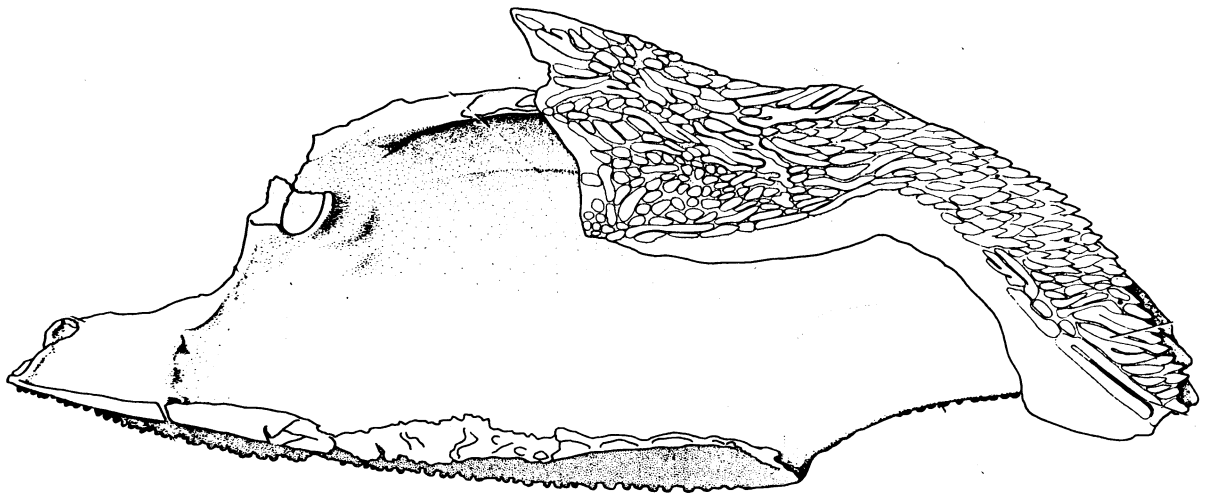


Moythomasia

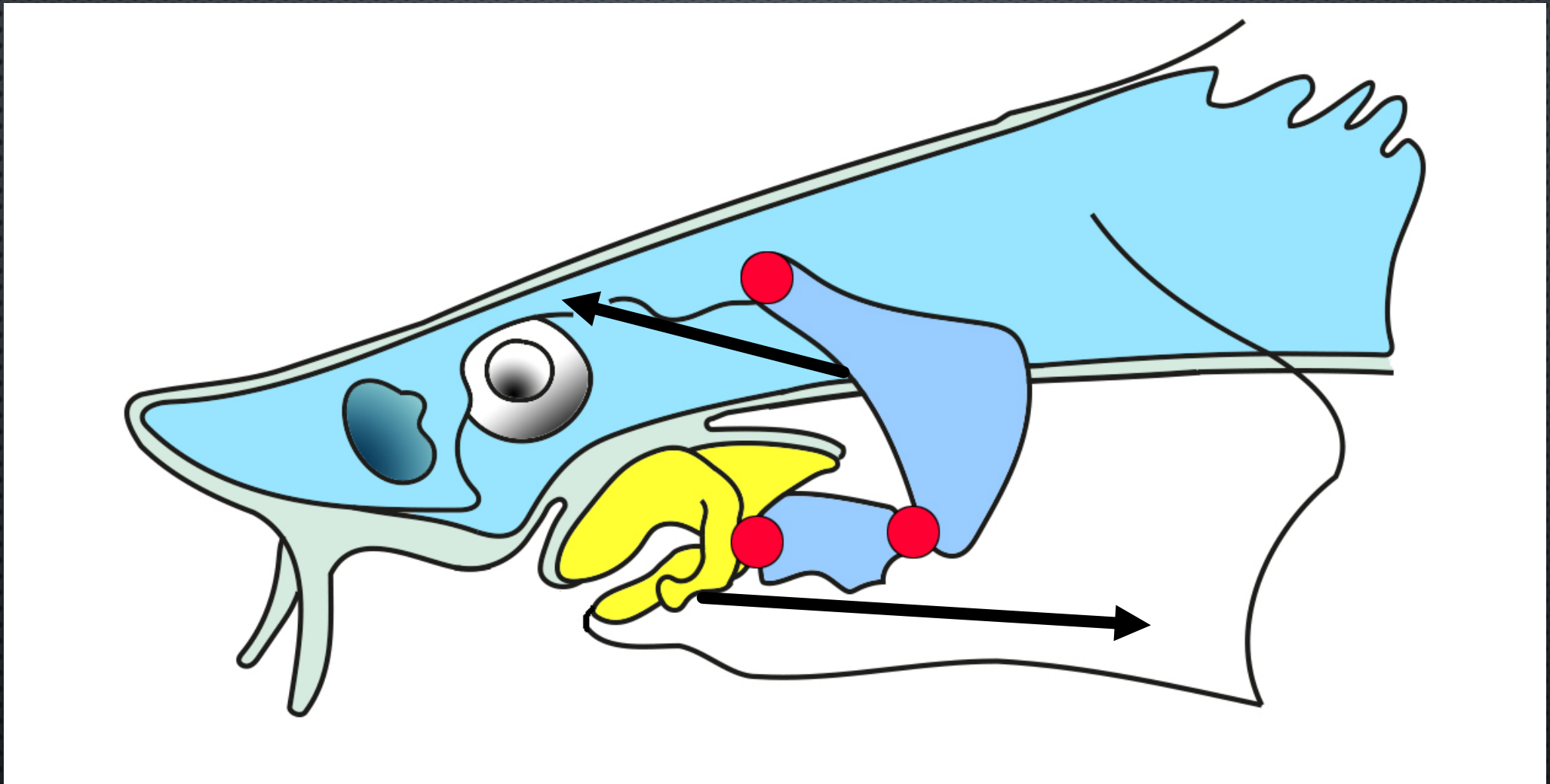
Praeoperculum *vs* Quadratojugale

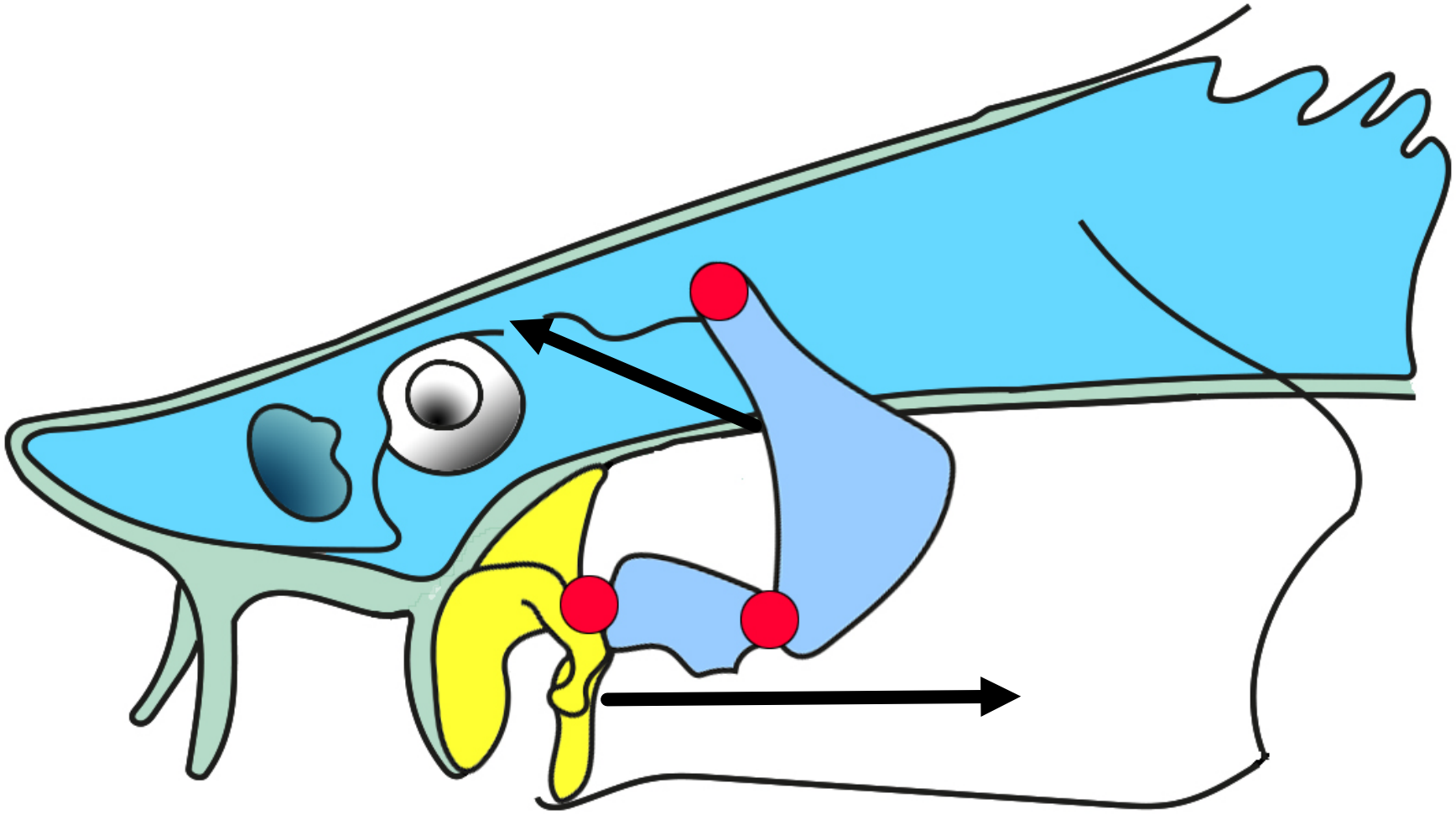


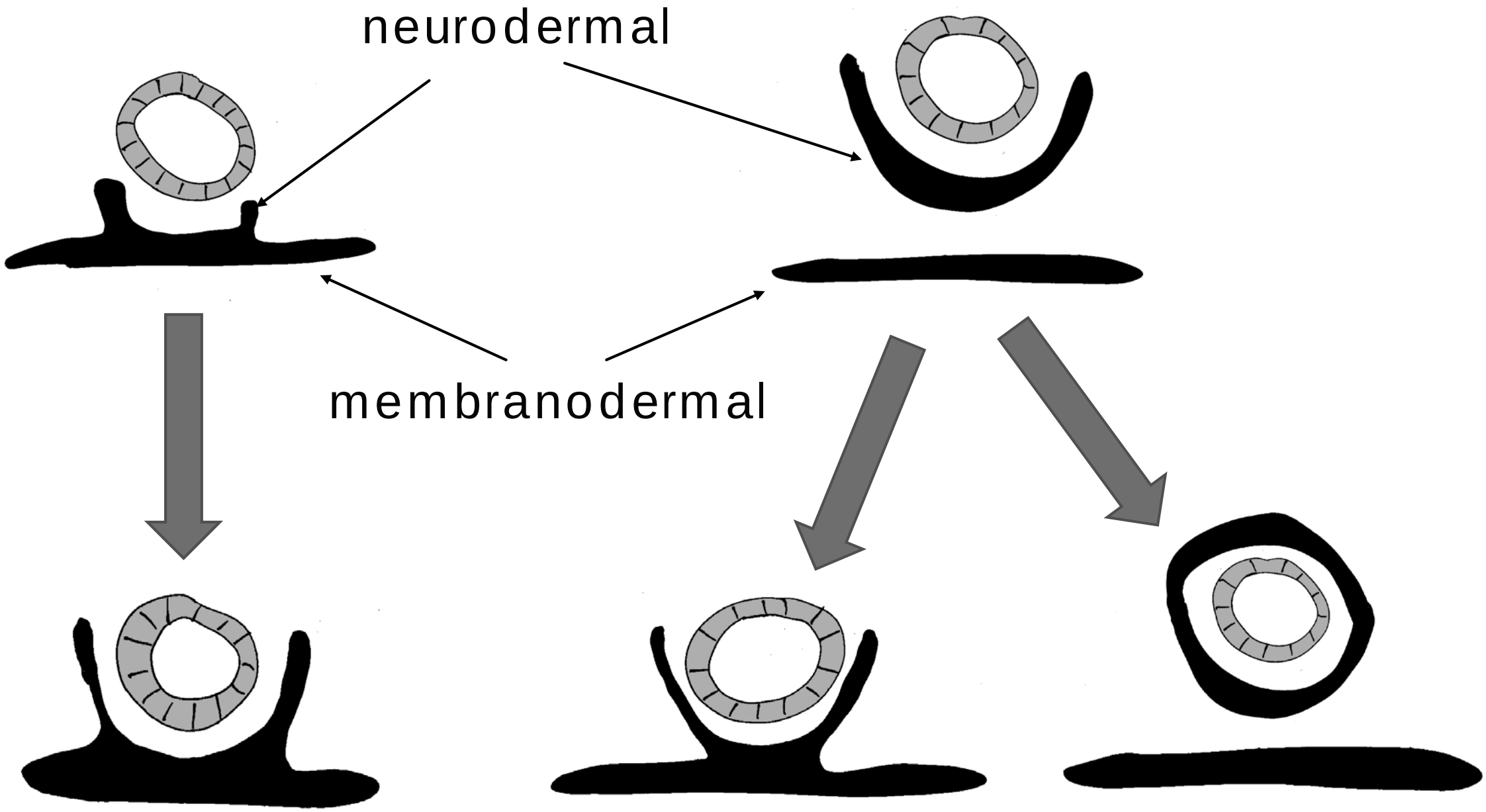
Psephurus

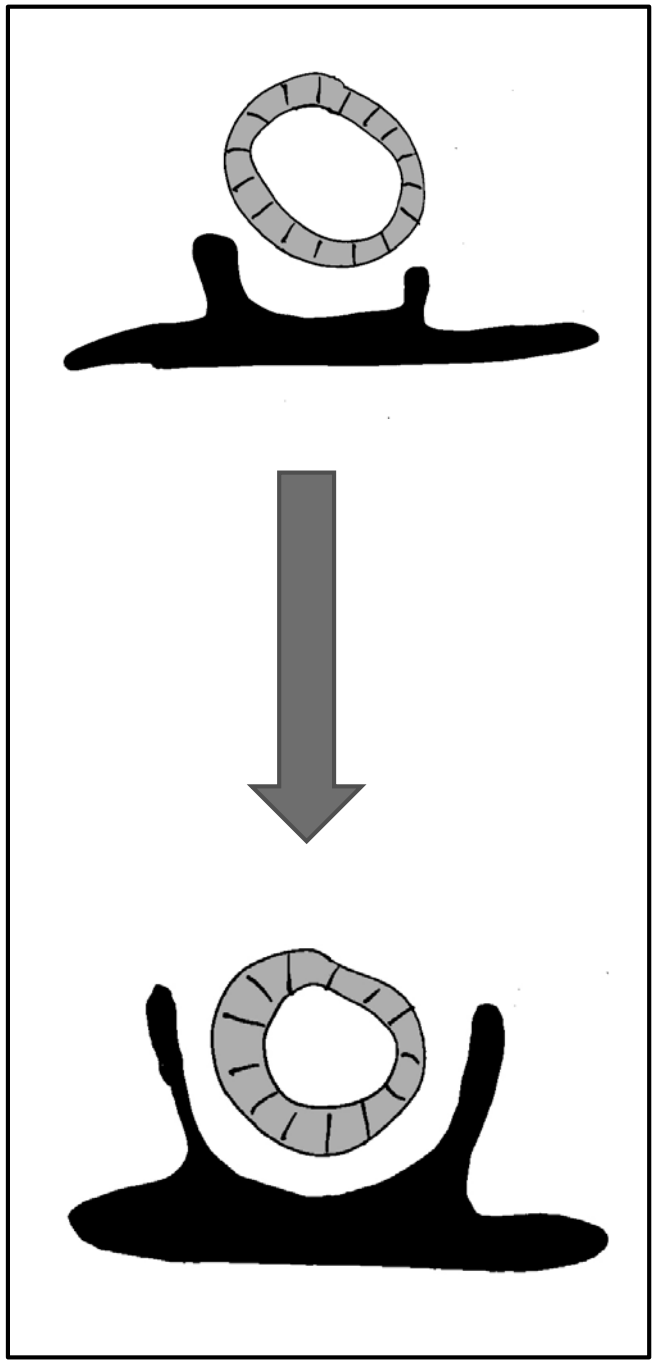


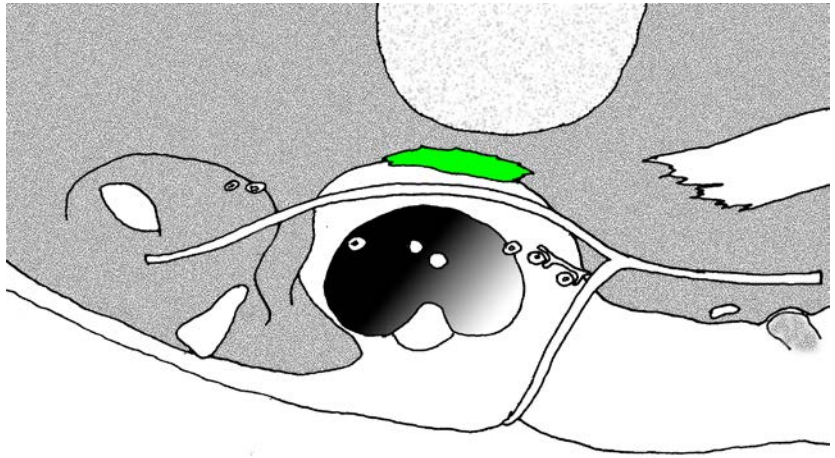
Moythomasia

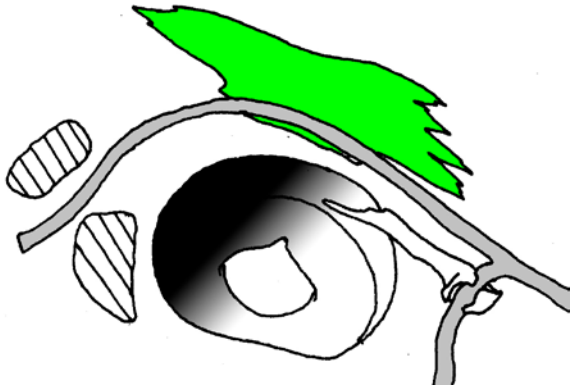


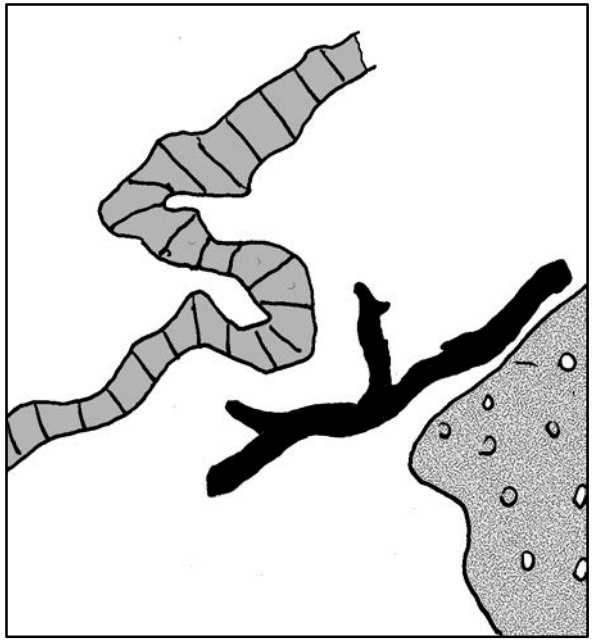


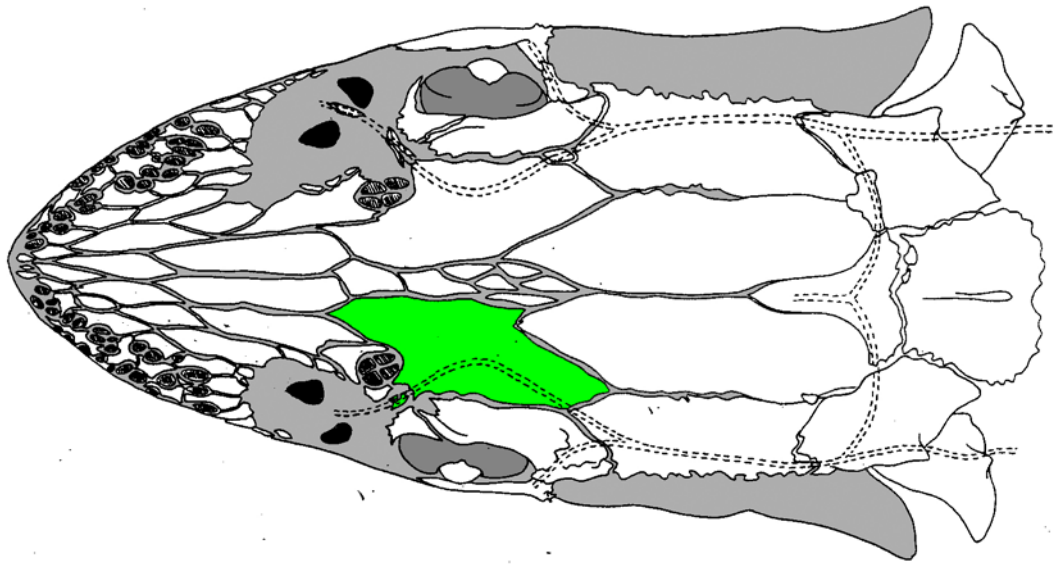

neurodermal
membranodermal

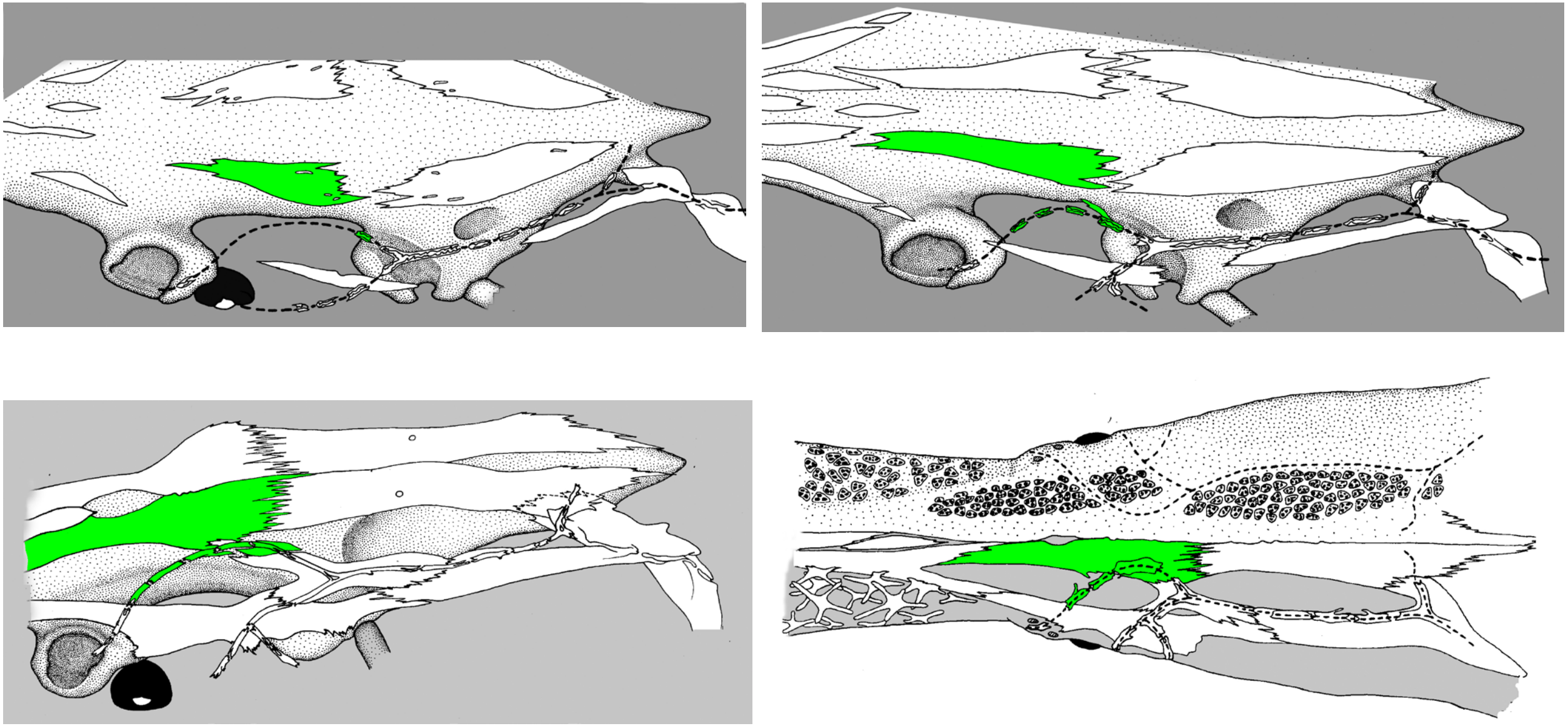




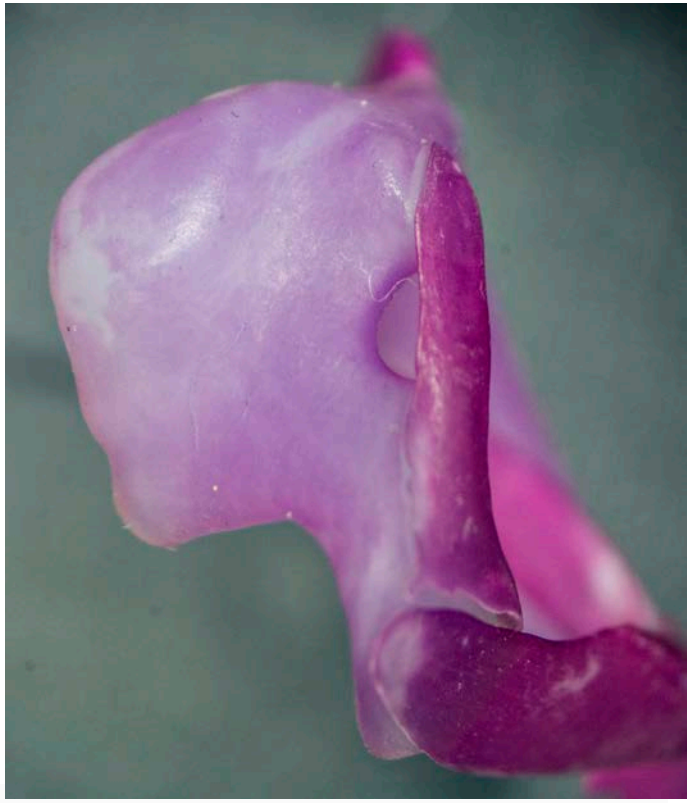




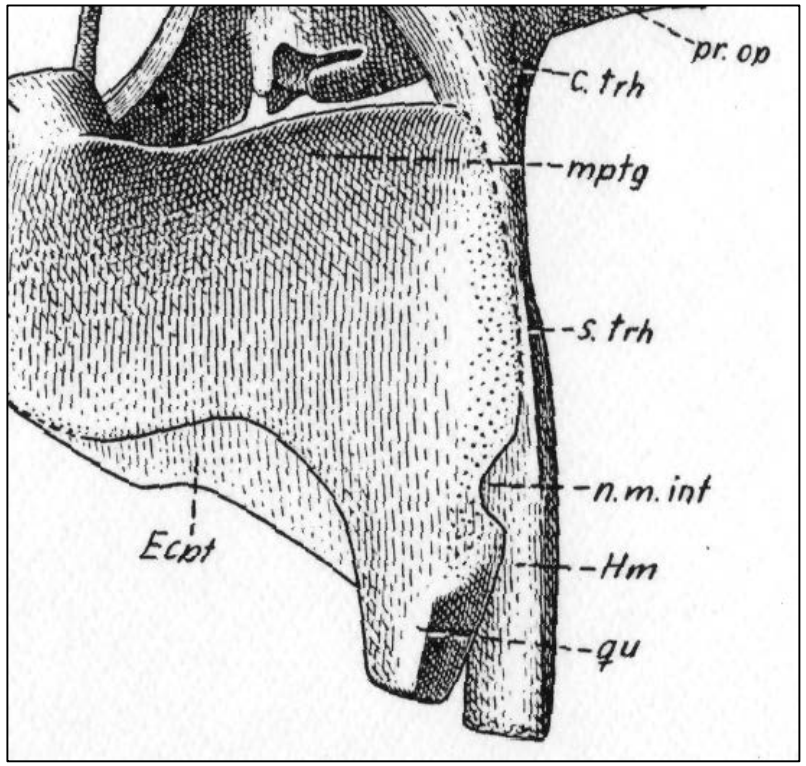


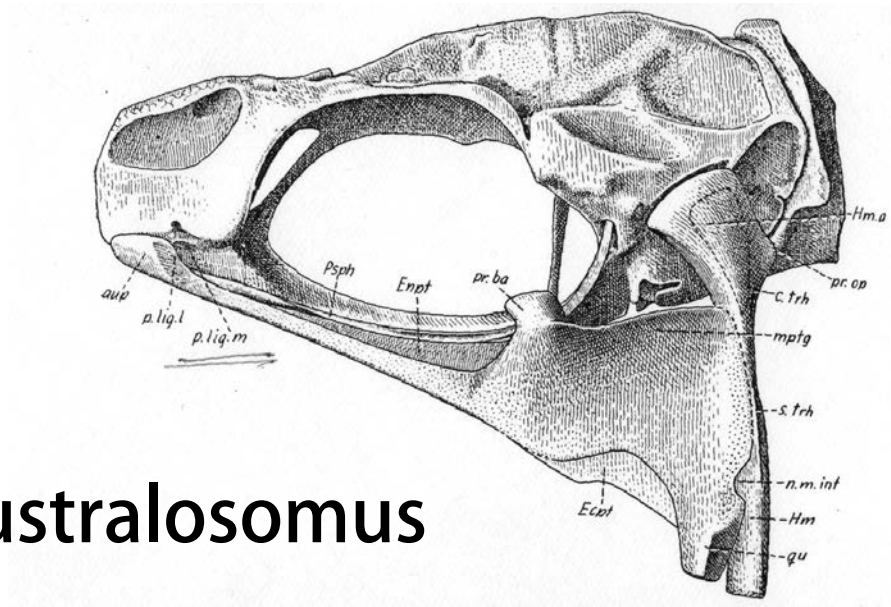


Polyodon

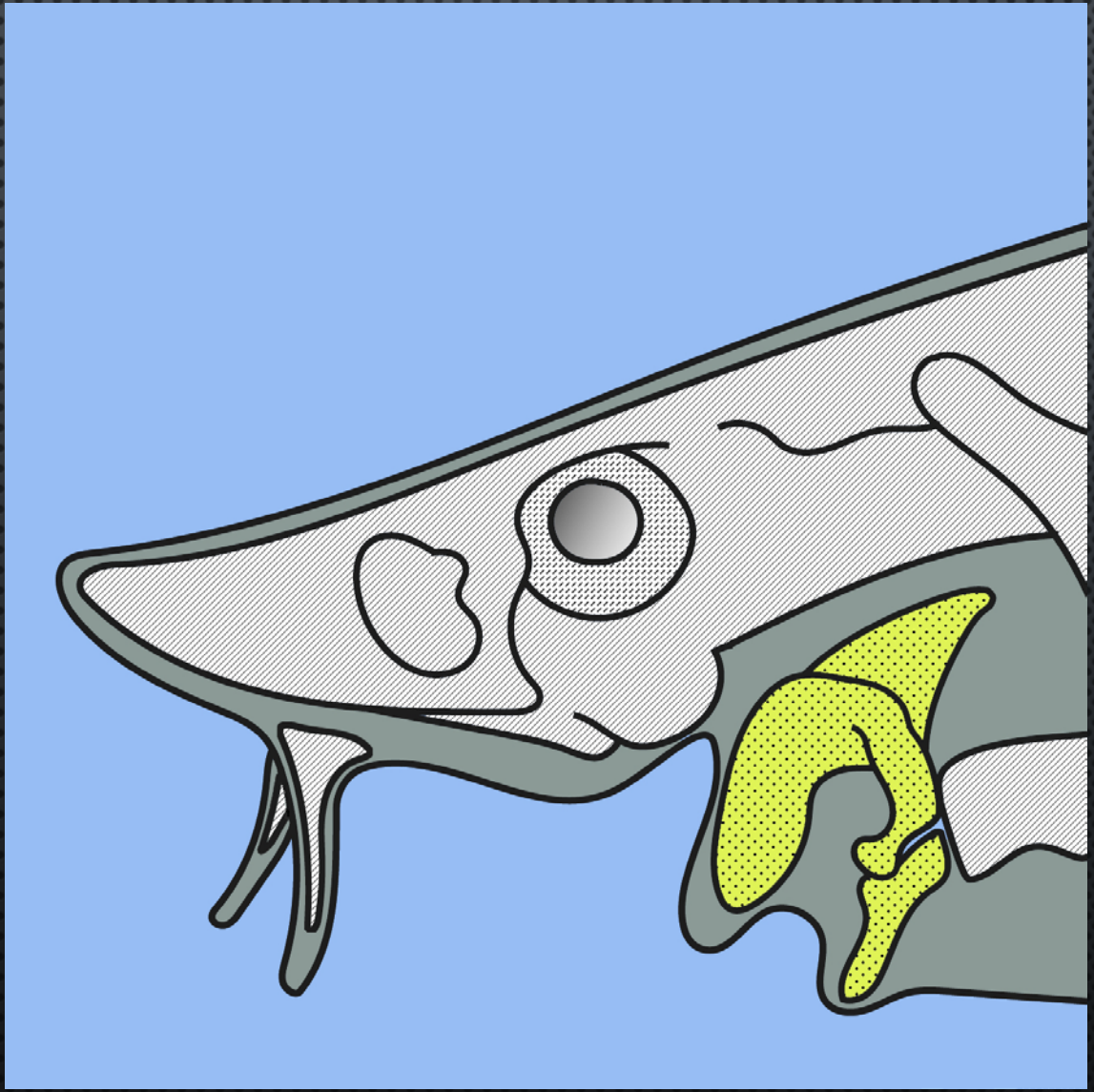


Acipenser

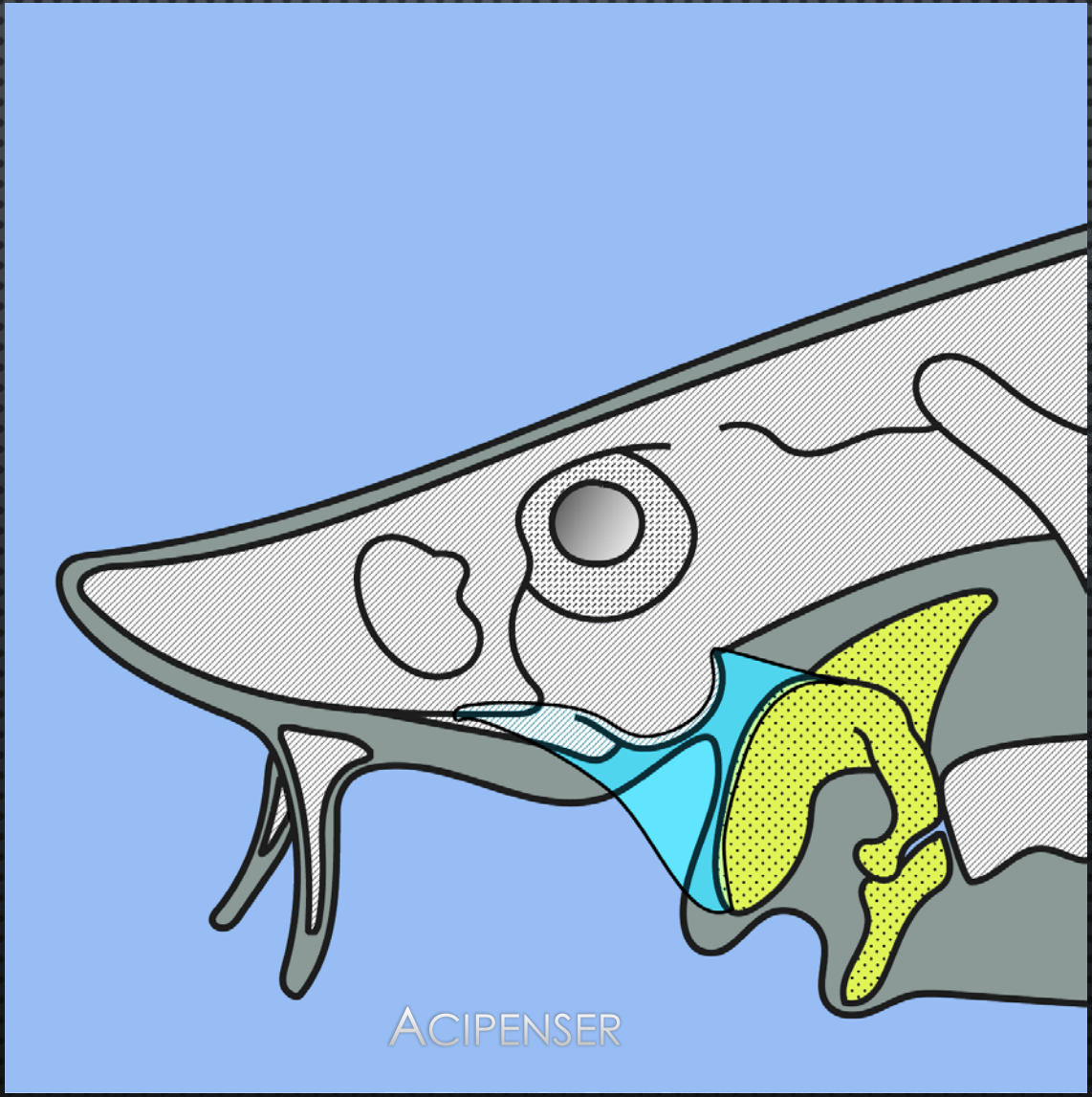




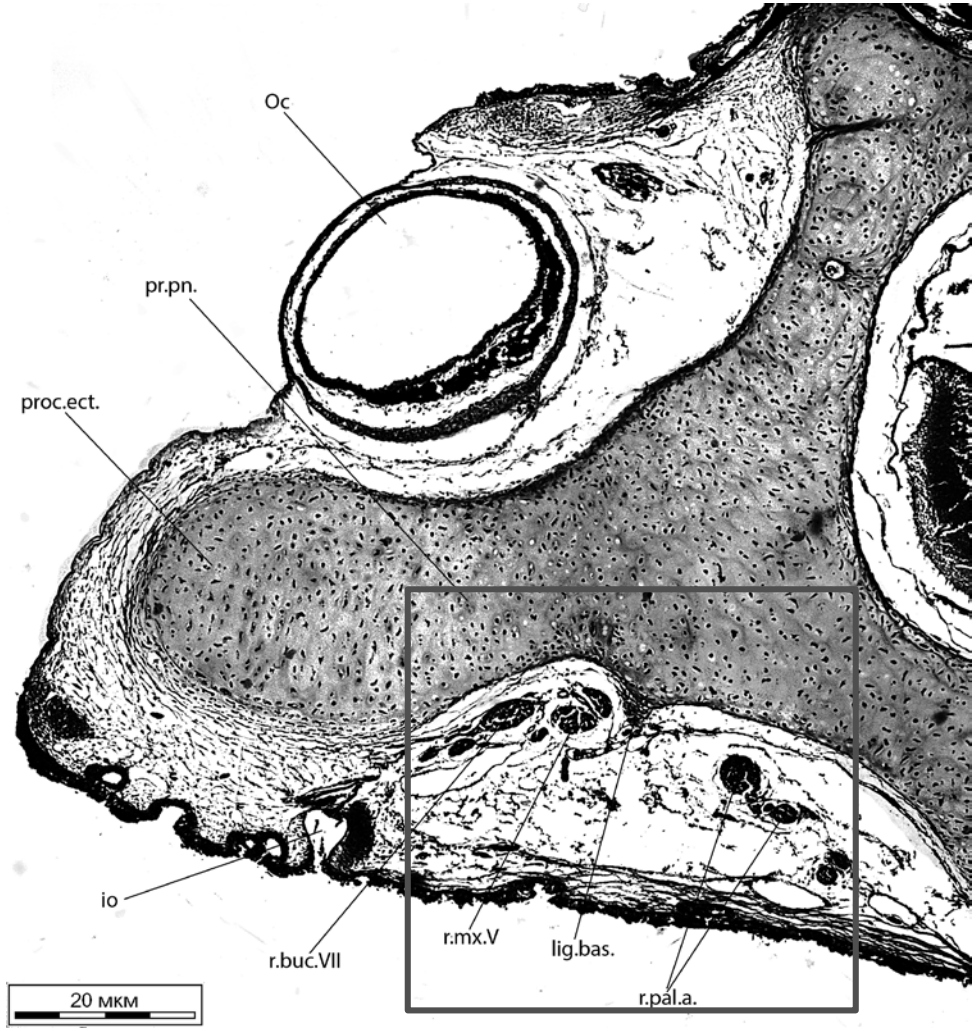
Australosomus

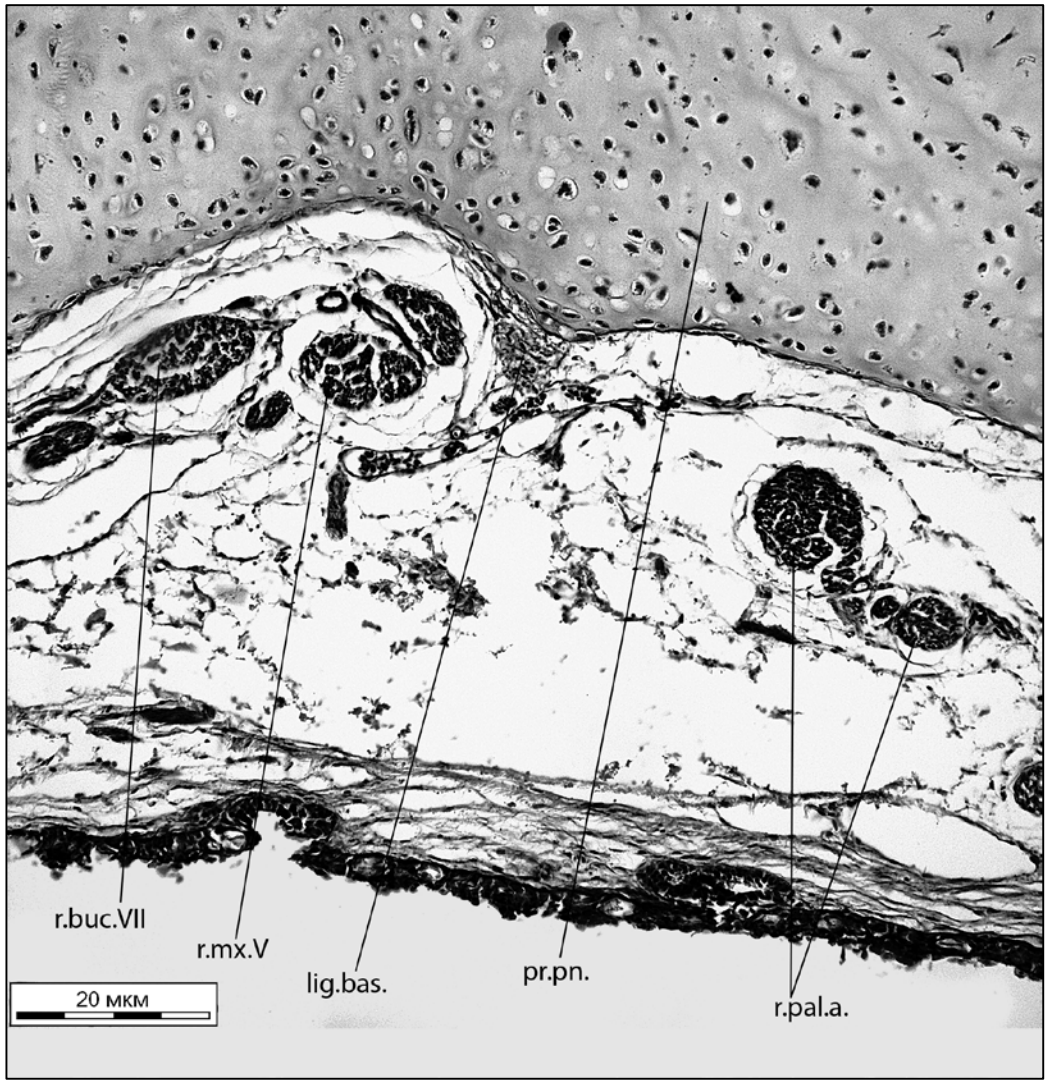


JAWS TO SKULL RELATIONS

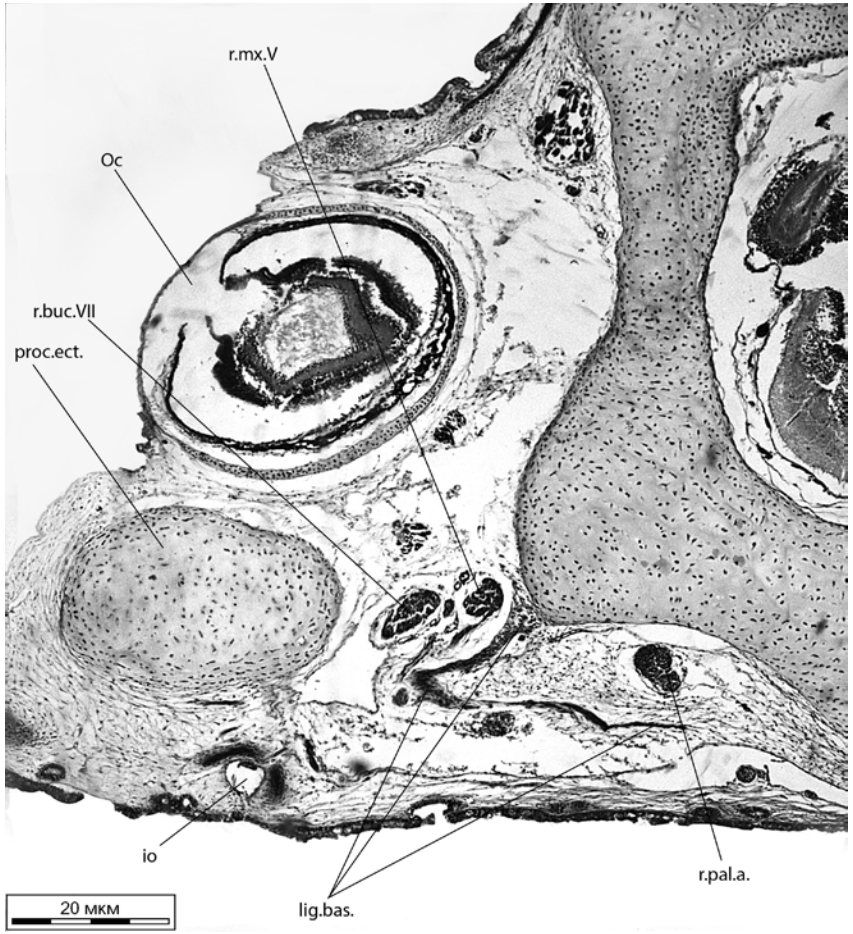


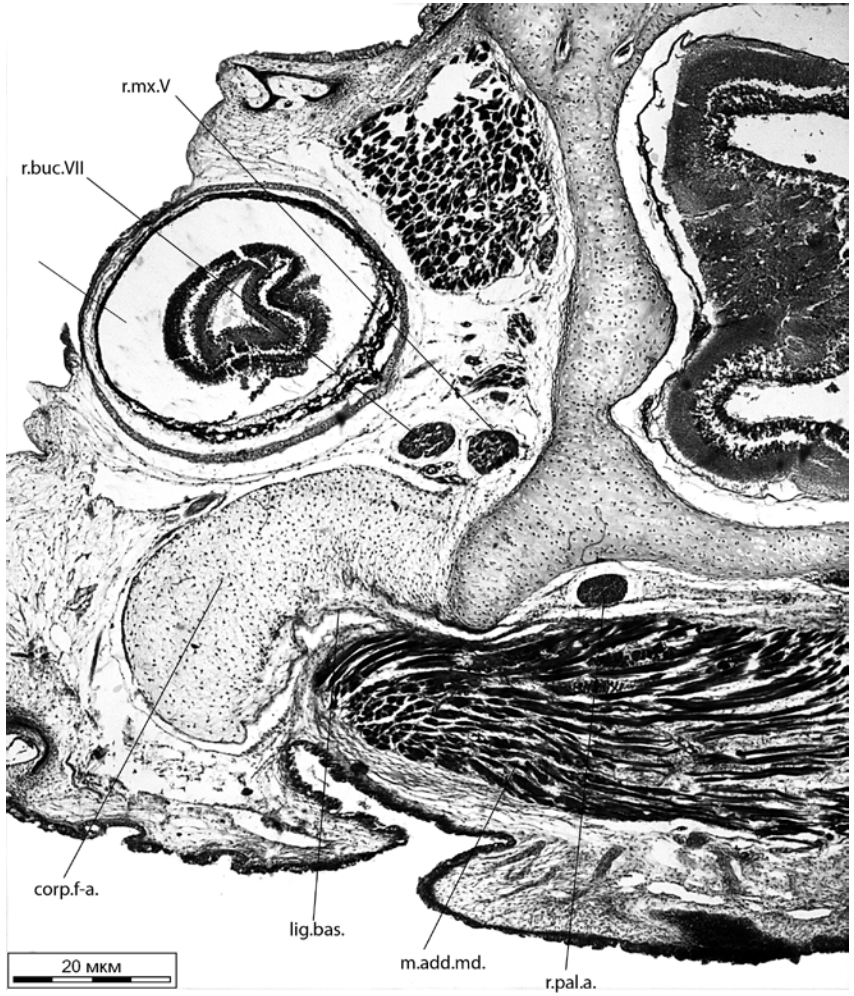
ACIPENSER, UPPER JAW





ACIPENSER, UPPER JAW





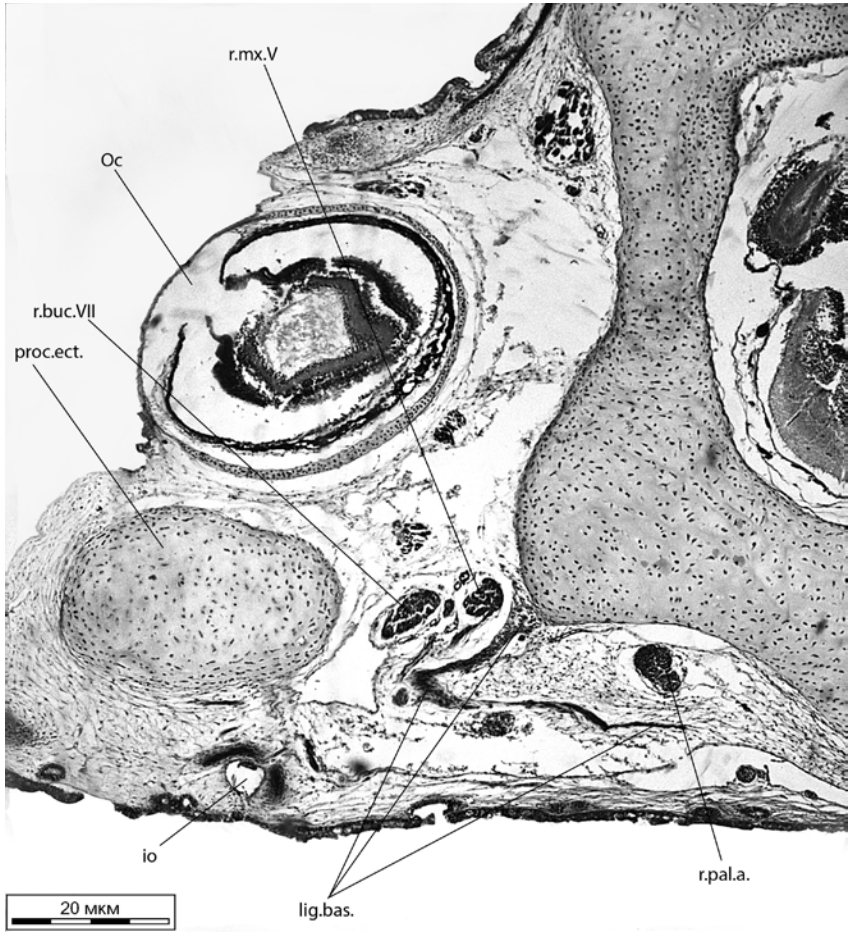
A. STELLATUS, 20 MM TL
FRONTAL SECTION

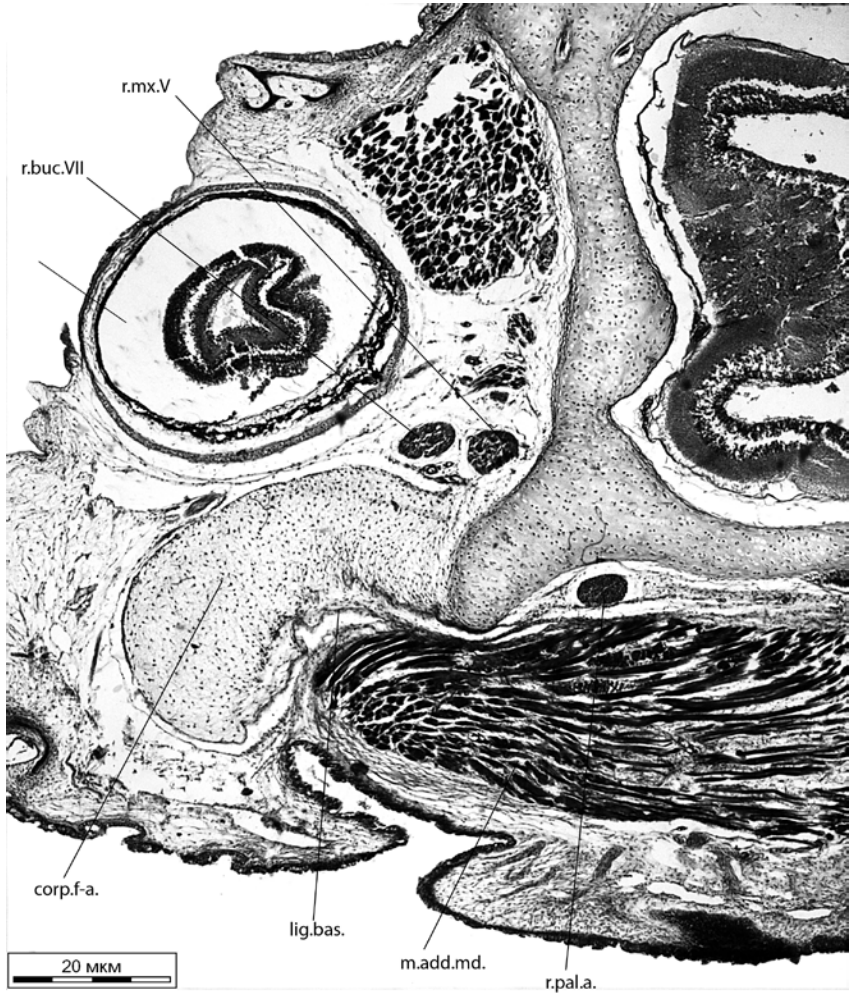
Lam. On.

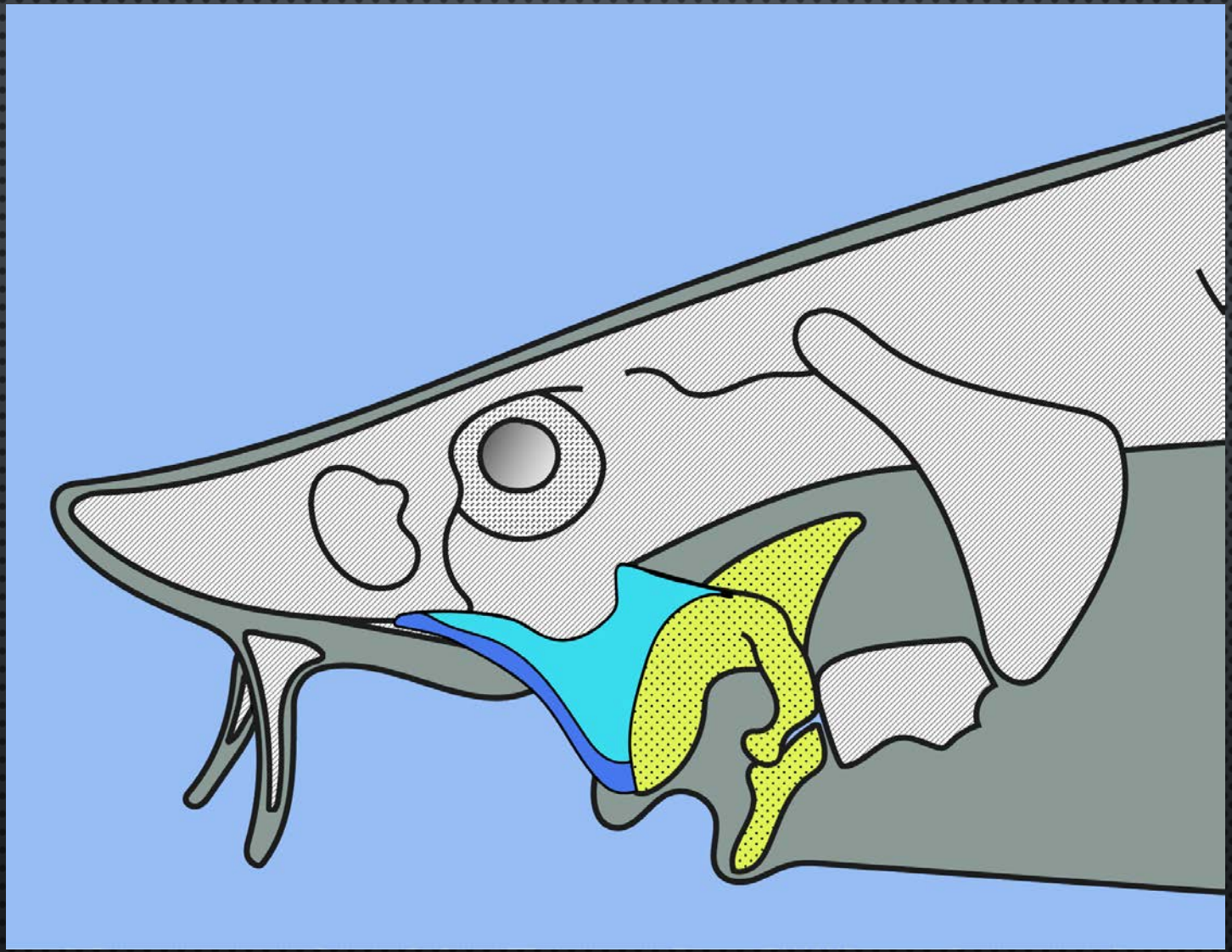
Pq

Lig. Bas.

ACIPENSER, UPPER JAW



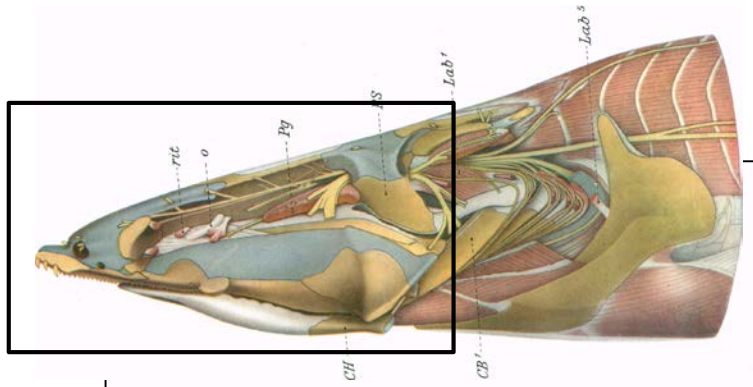


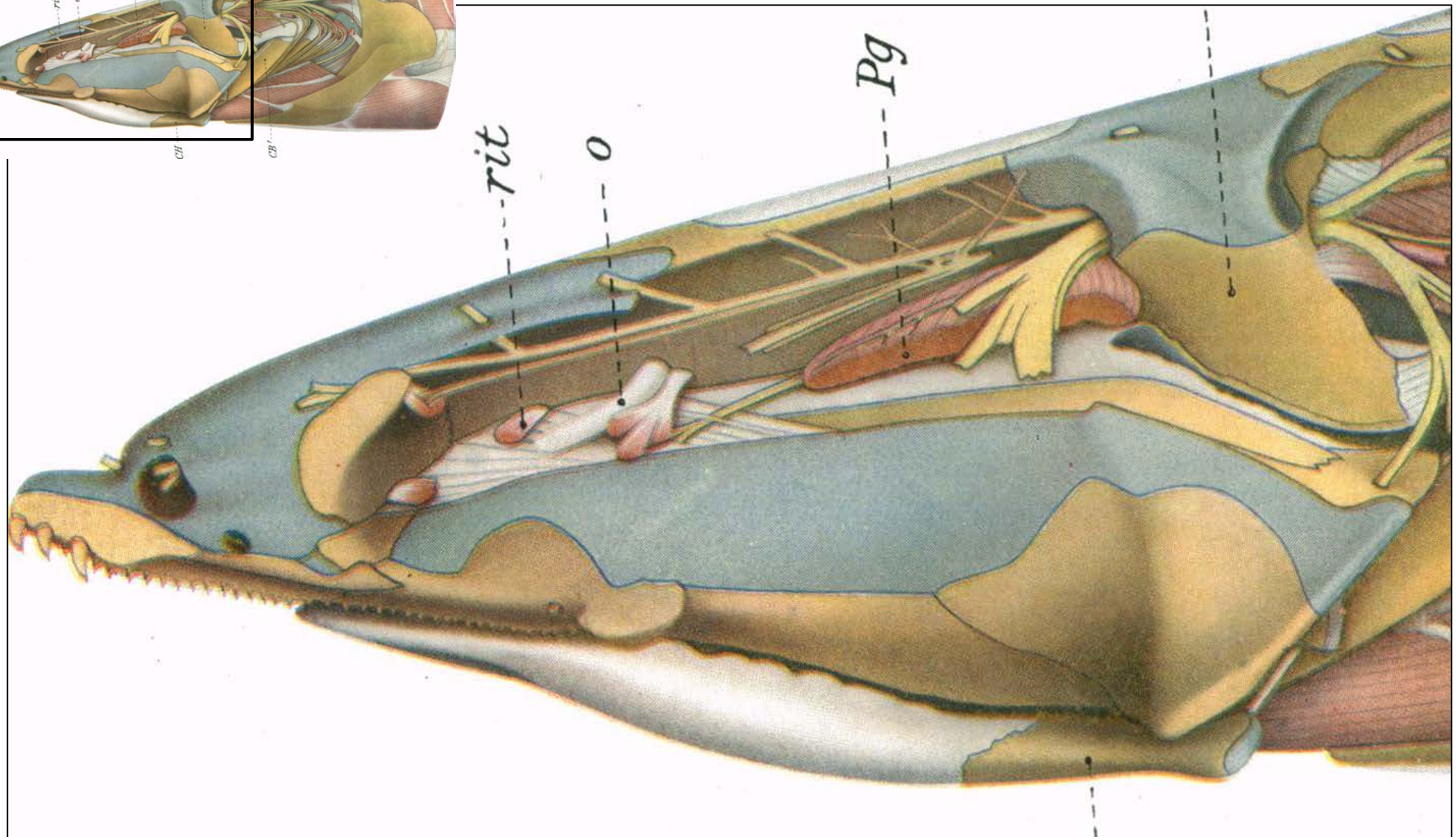


ACIPENSER

POLYPTERUS

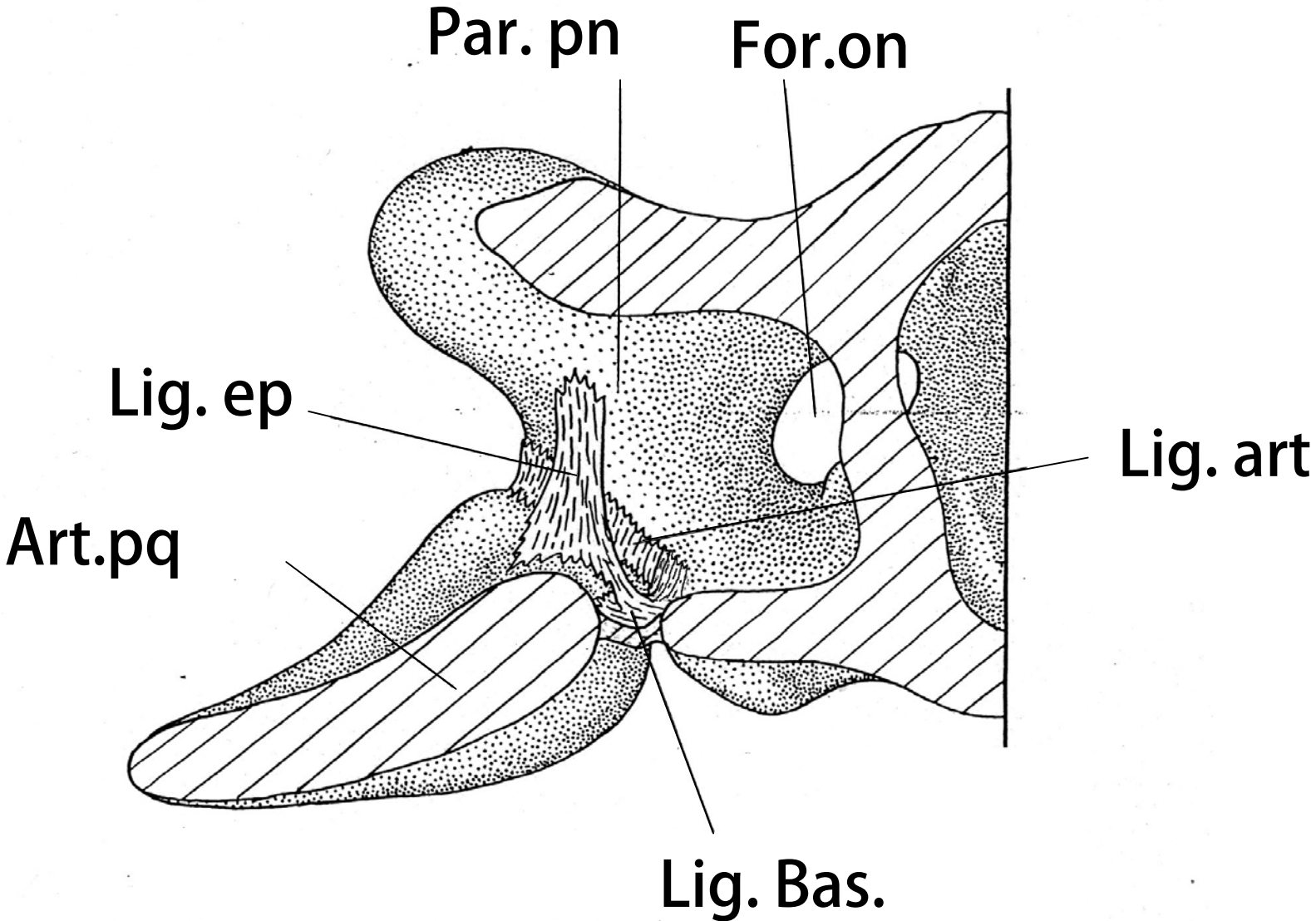
(ALLIS, 1922)



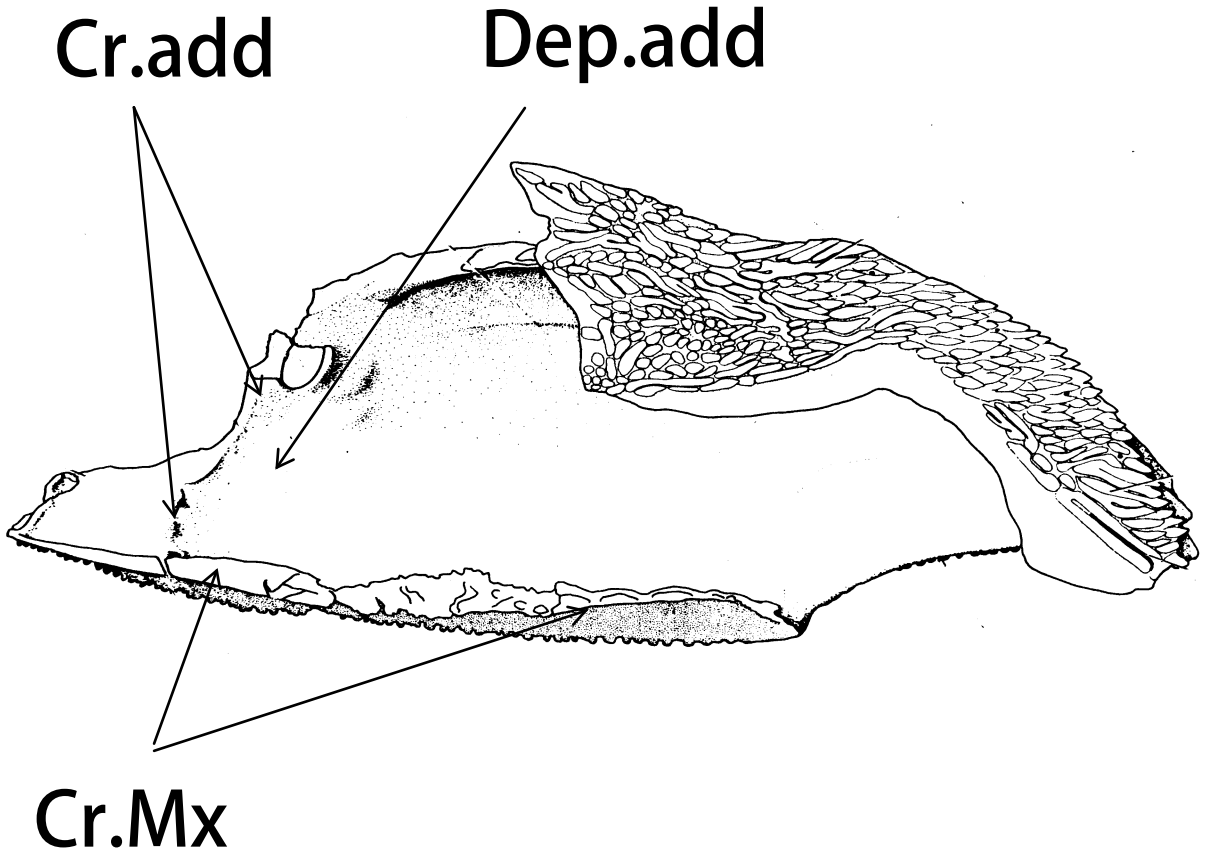


AMIA, ETHMOID REGION

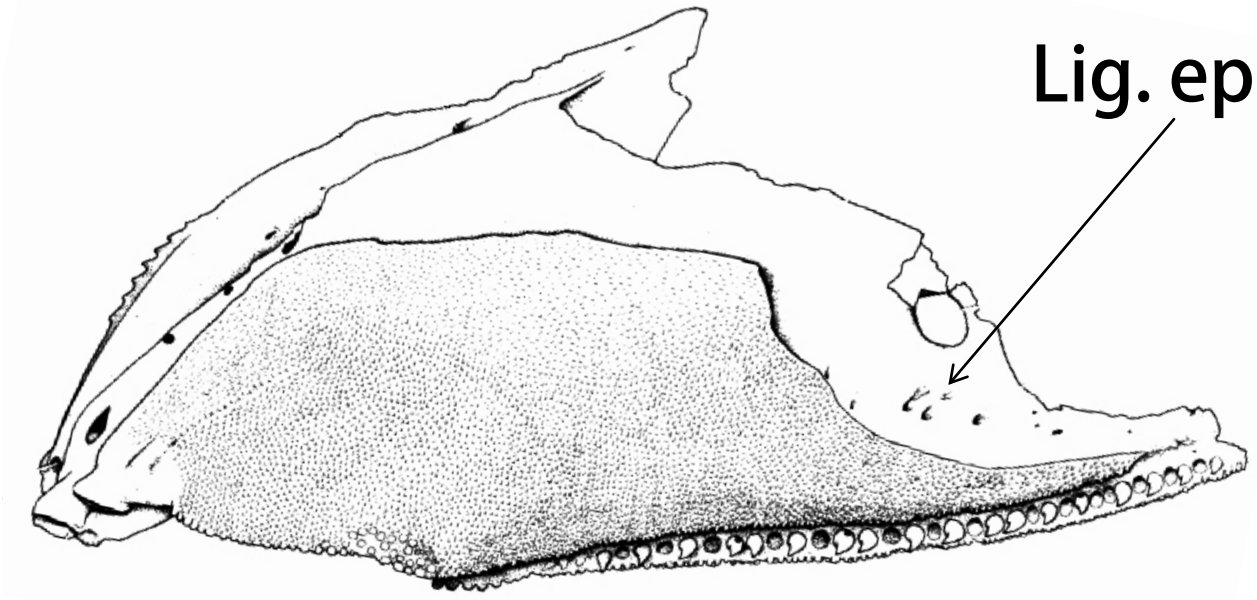
(IN POSTERIOR VIEW)



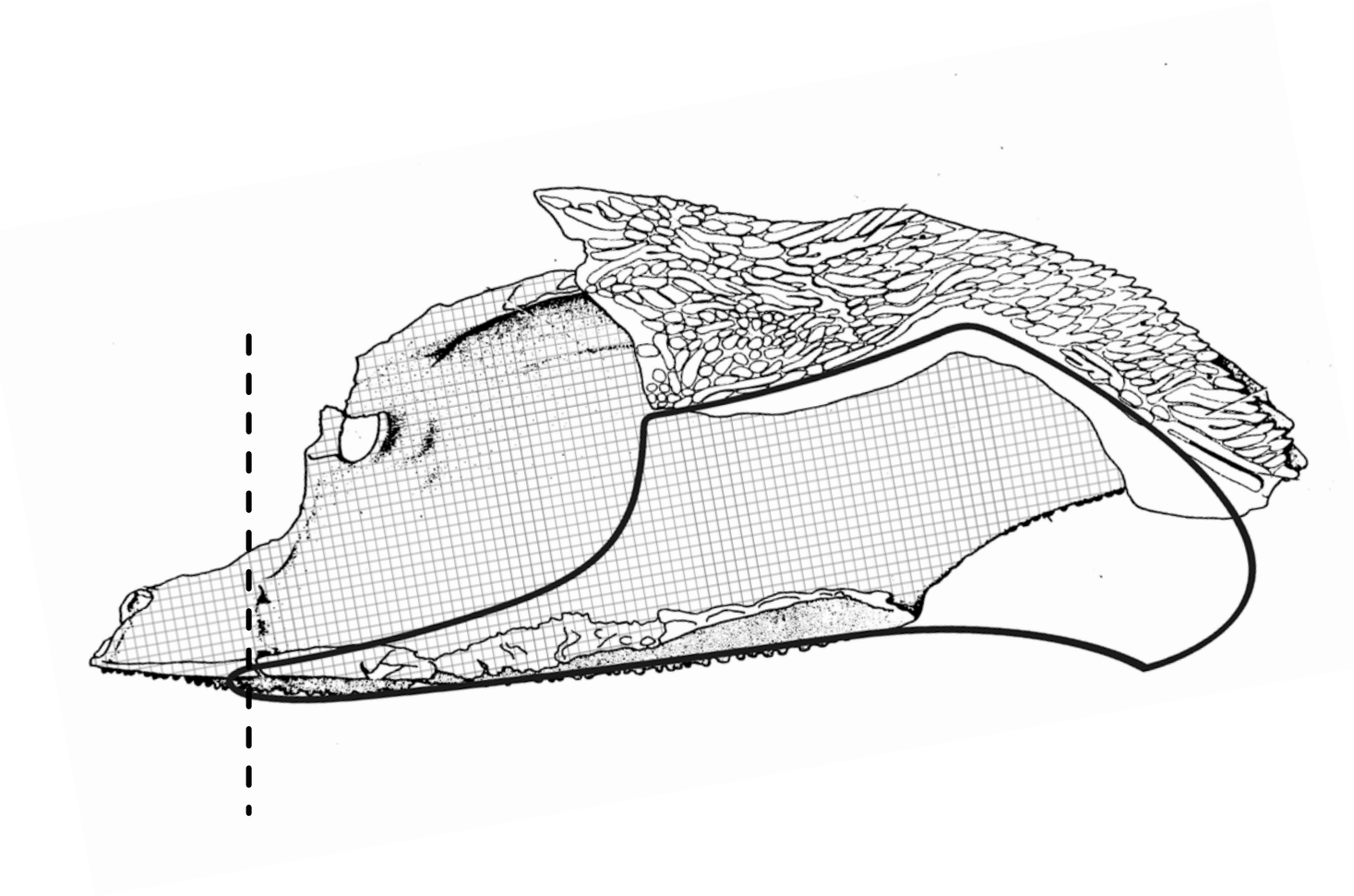
MOYTHOMASIA, UPPER JAW



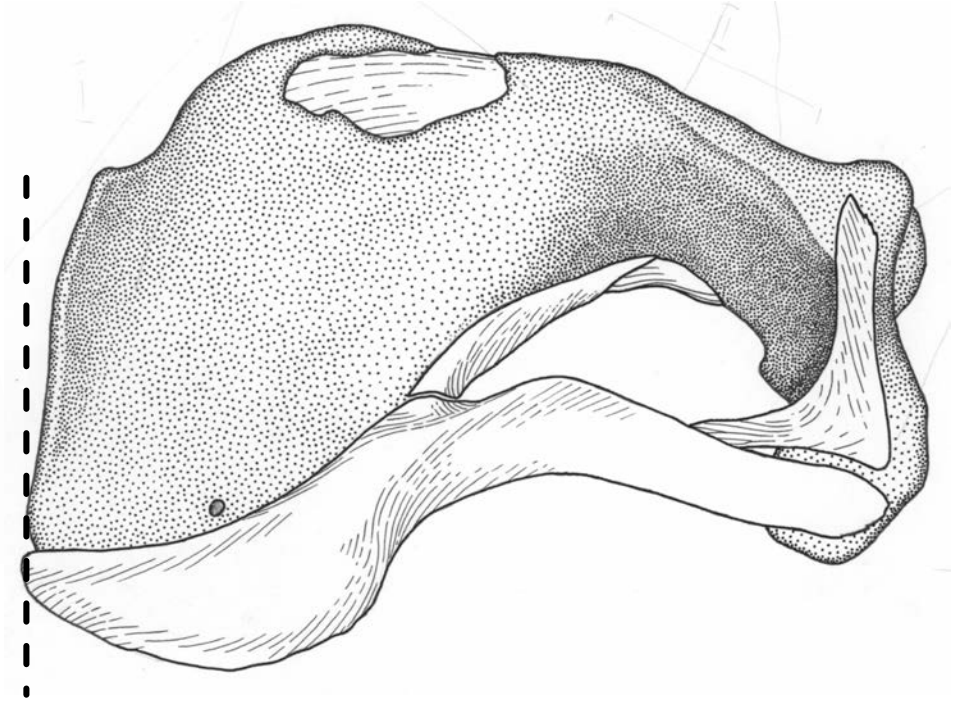
Lateral view



Medial view



Moythomasia

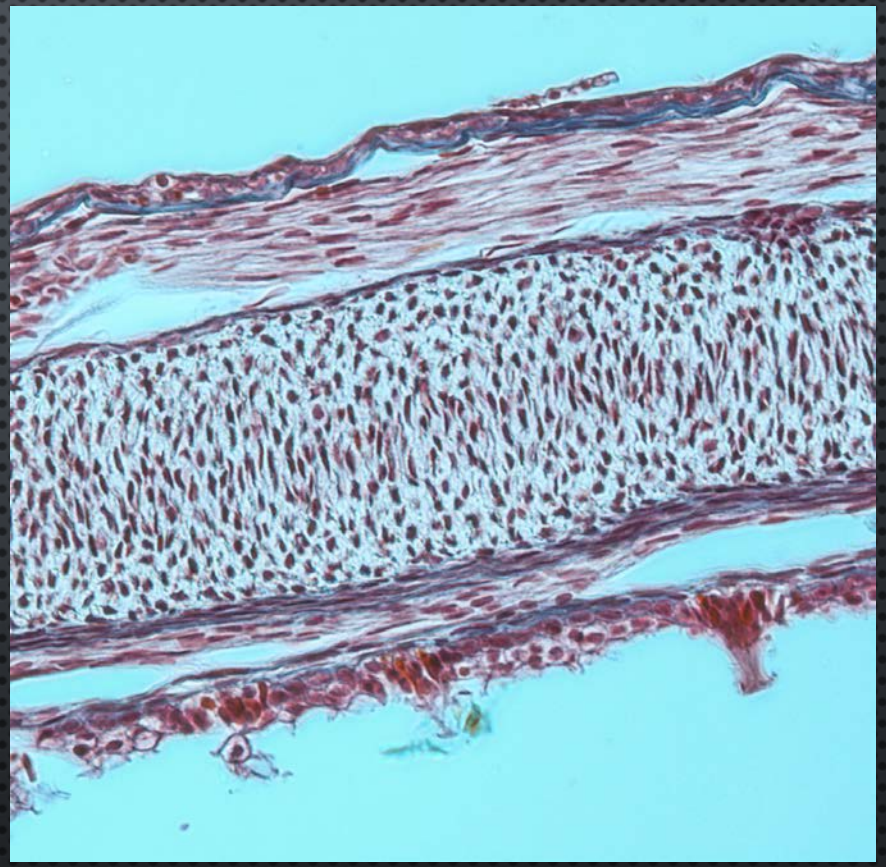


Acipenser

Huso dauricus

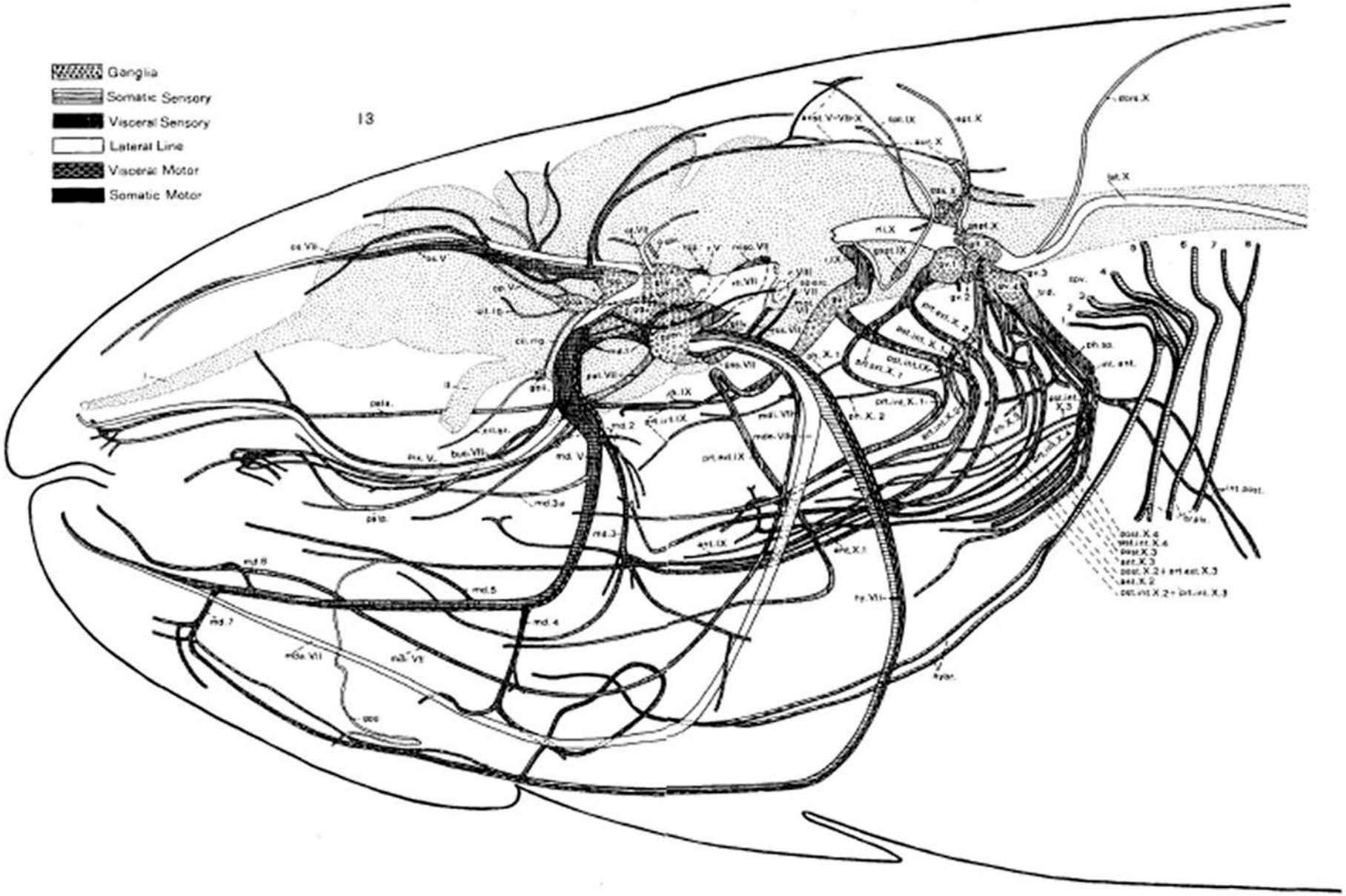
Acipenser sp.

ACIPENSER, TENTACULAR CARTILAGE

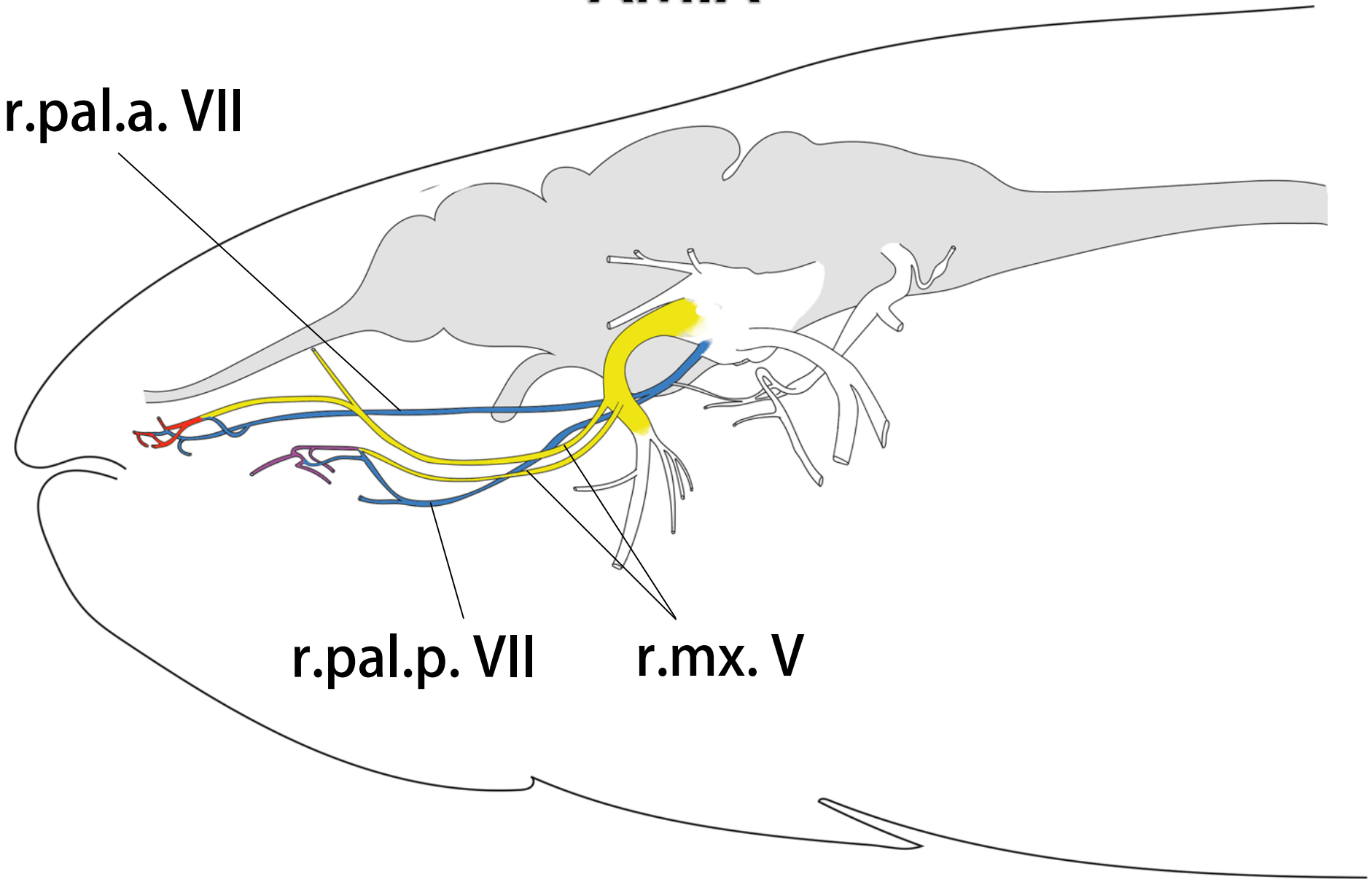


A. stellatus, 42 mm TL

A. stellatus, 10,3 mm


Ganglia
Somatic Sensory
Visceral Sensory
Lateral Line
Visceral Motor
Somatic Motor
13

AMIA



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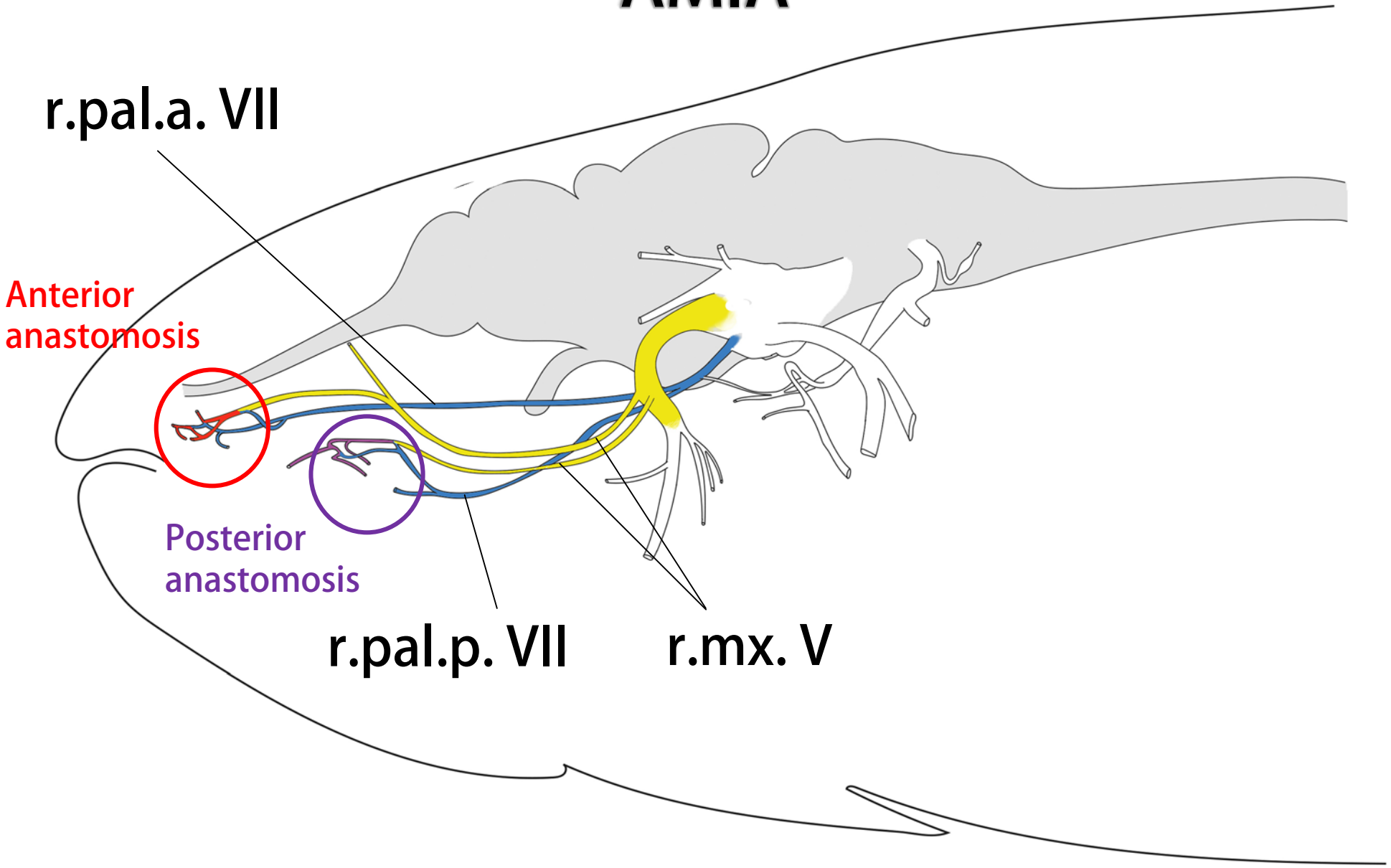
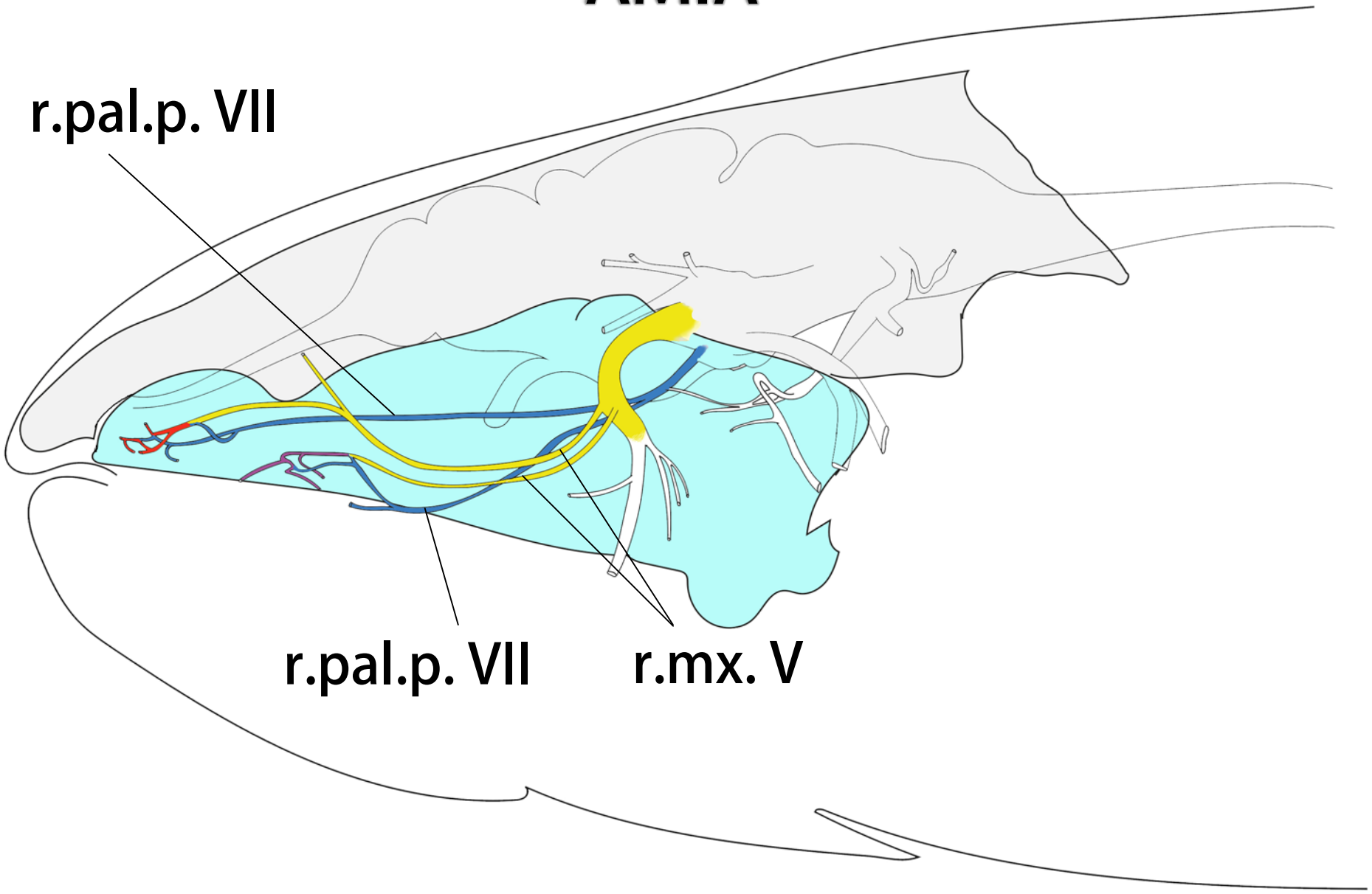

r.pal.a. VII
Anterior anastomosis
Posterior anastomosis
r.pal.p. VII
r.mx. V

AMIA



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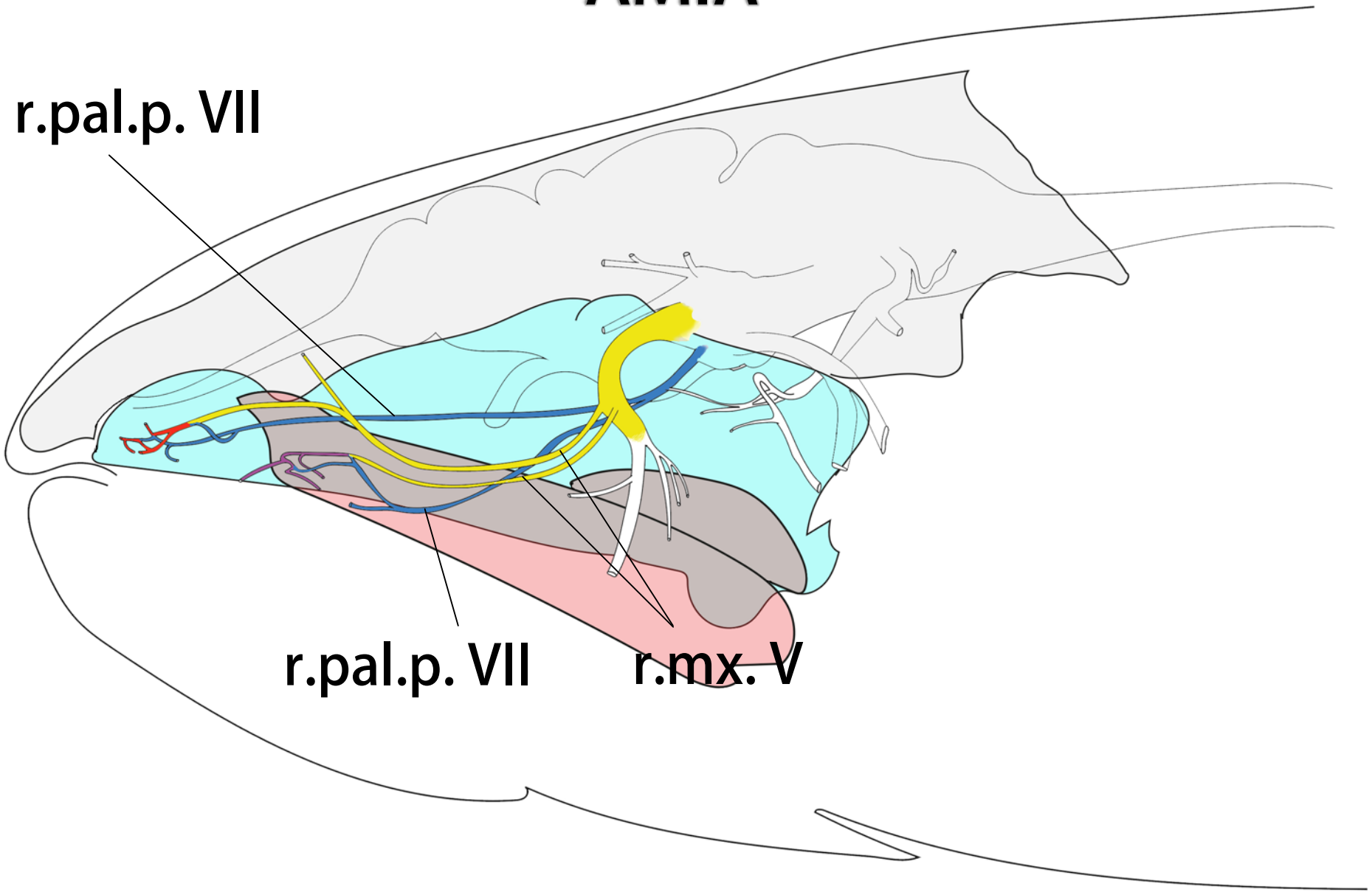
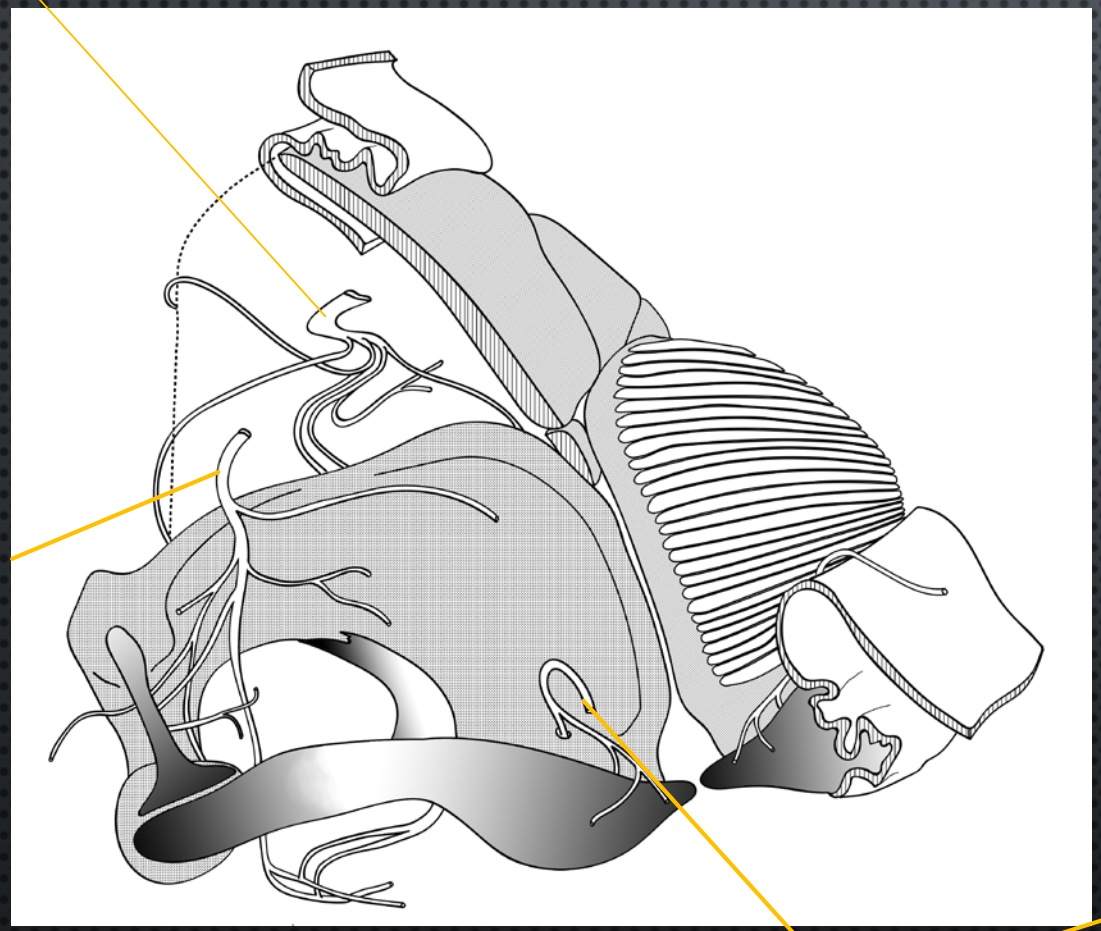


ACIPENSER

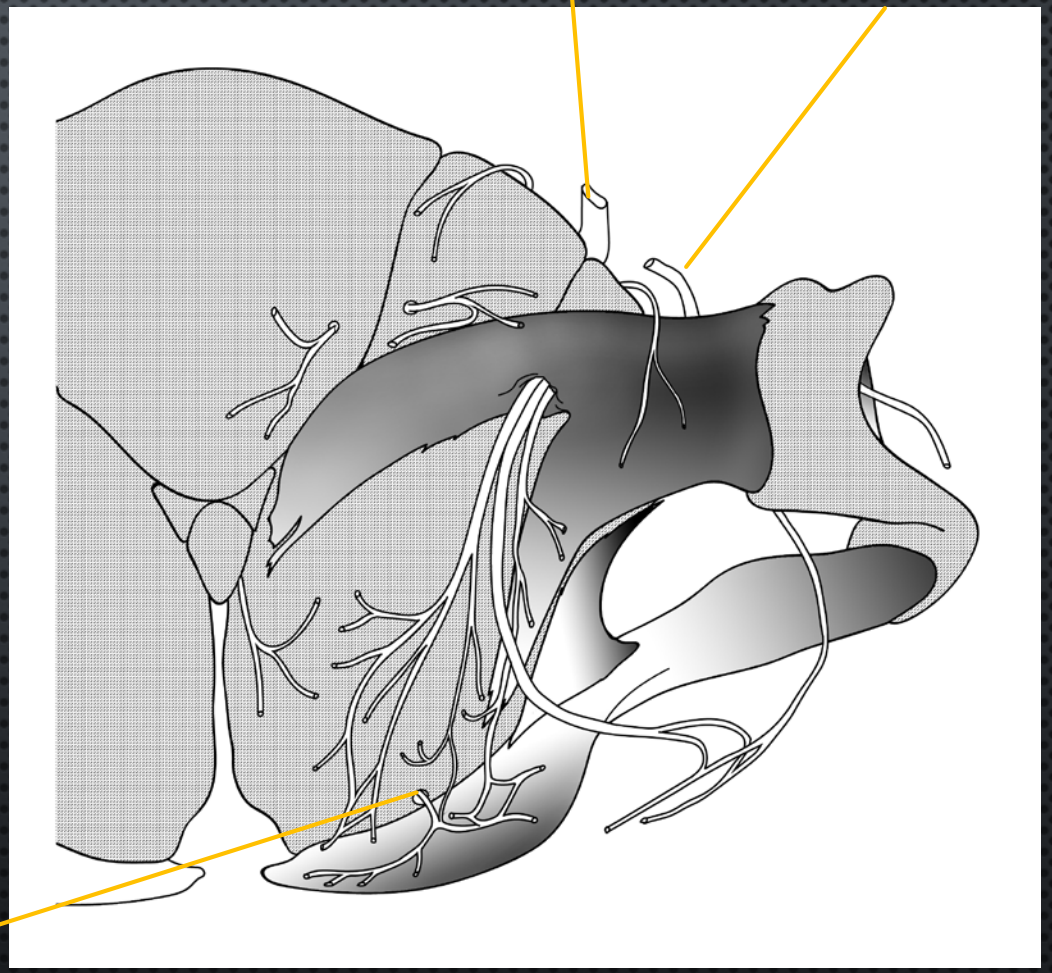
r.pal.p. VII

r.md. V



r.pal.p. VII

r.md. V

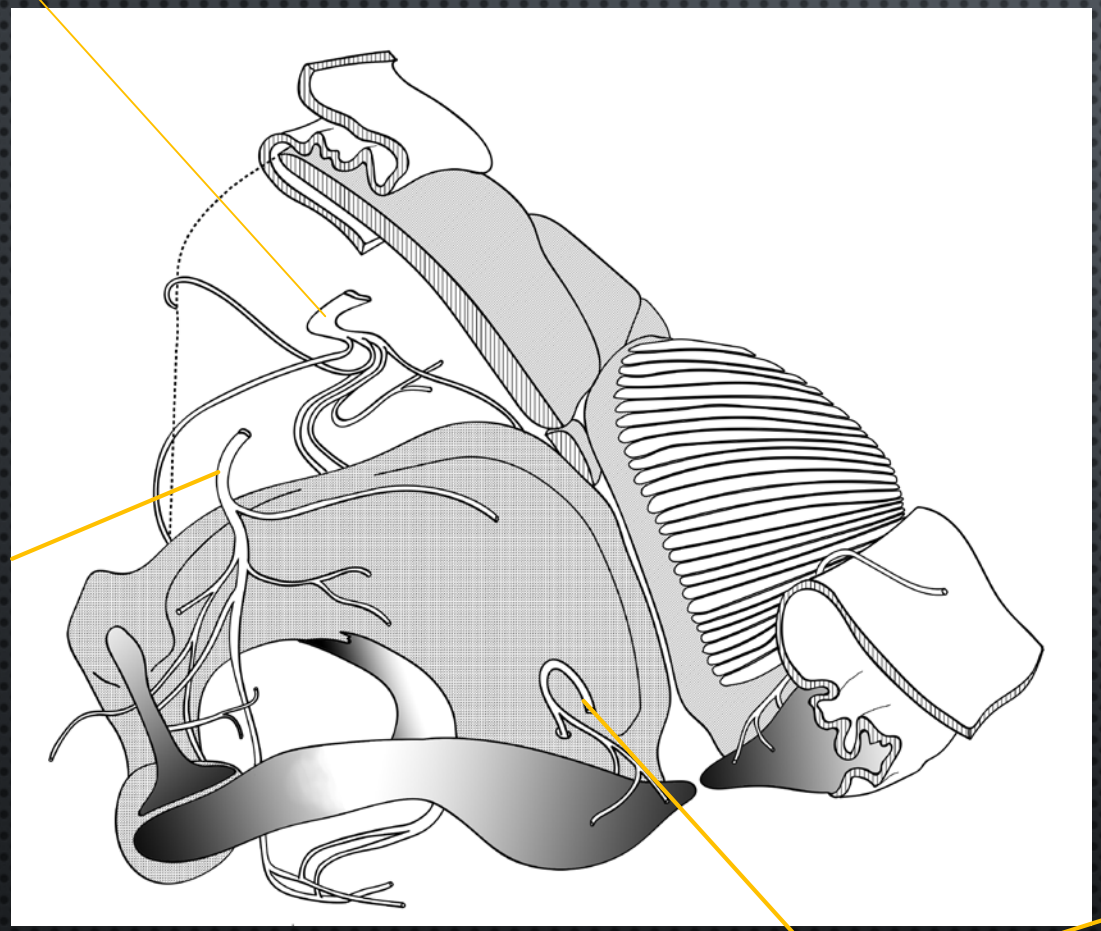


r.lab. V

ACIPENSER

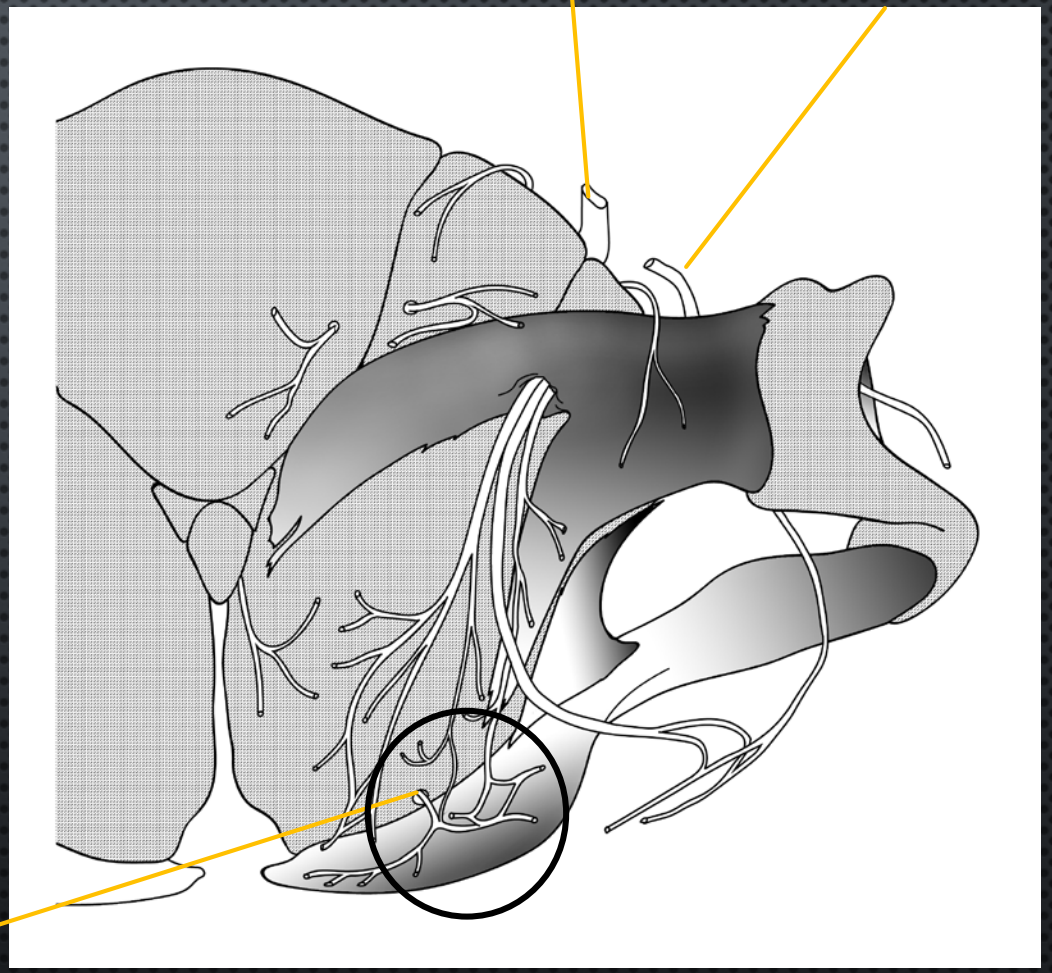
r.pal.p. VII

r.md. V

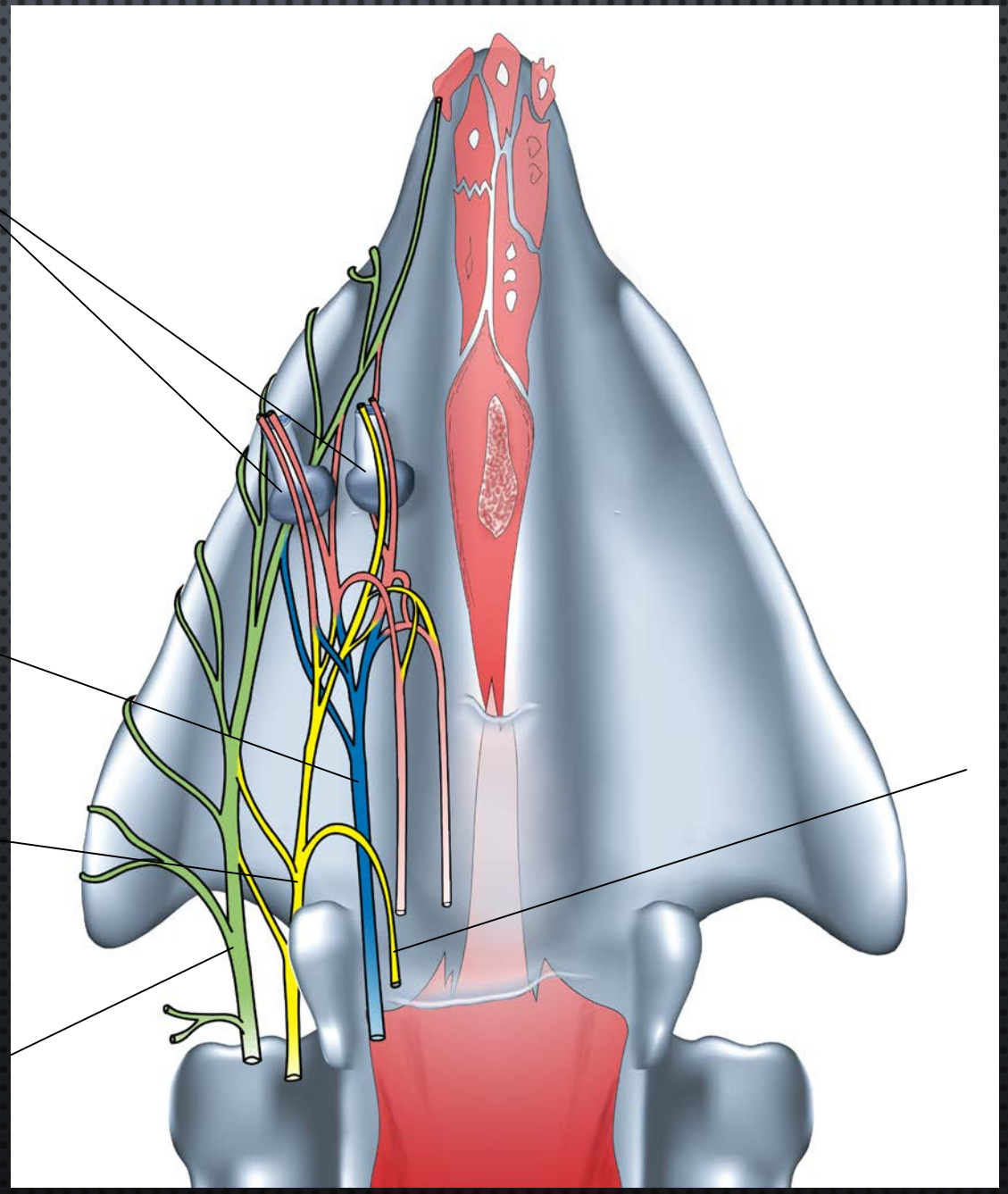


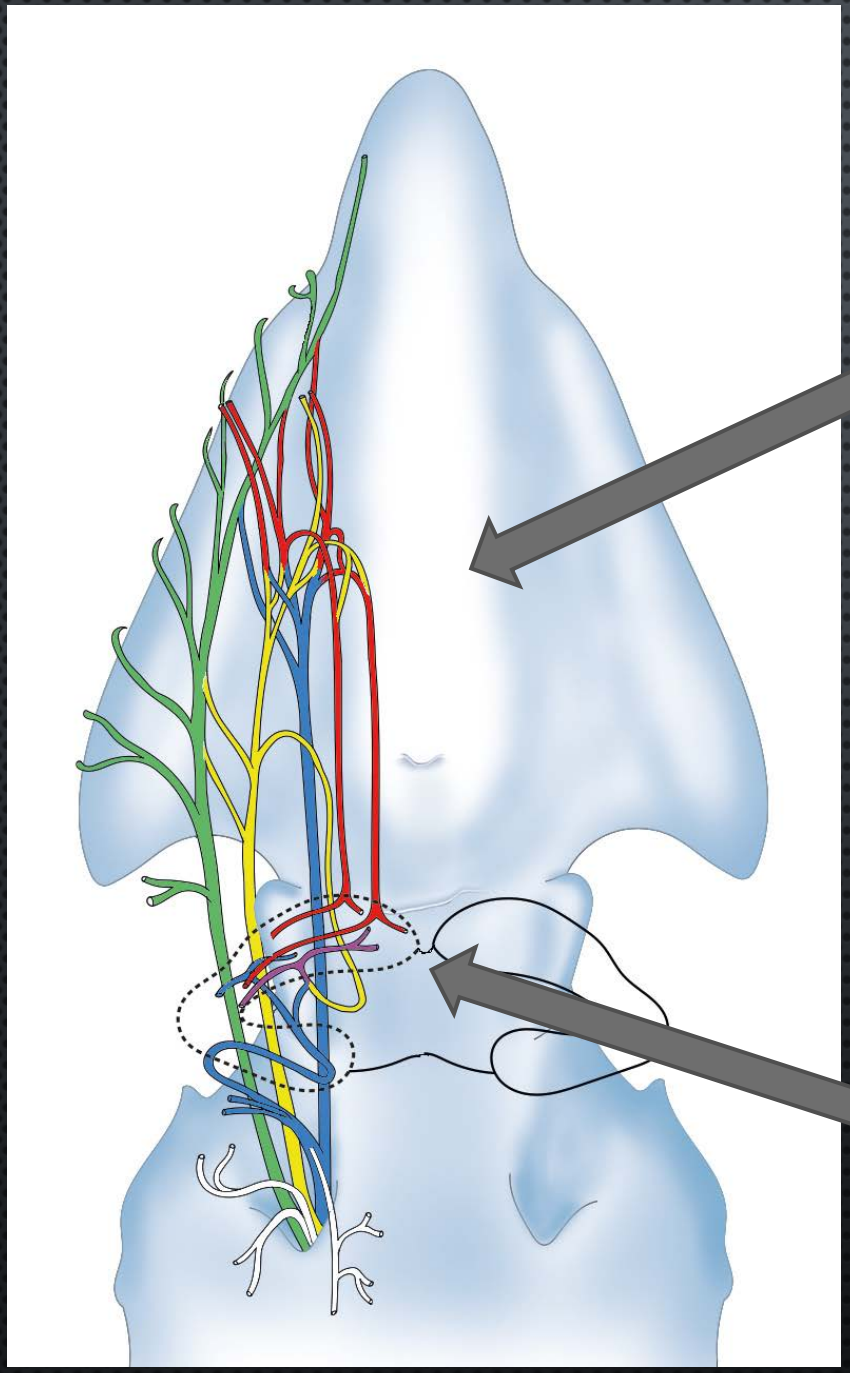
r.pal.p. VII

r.md. V



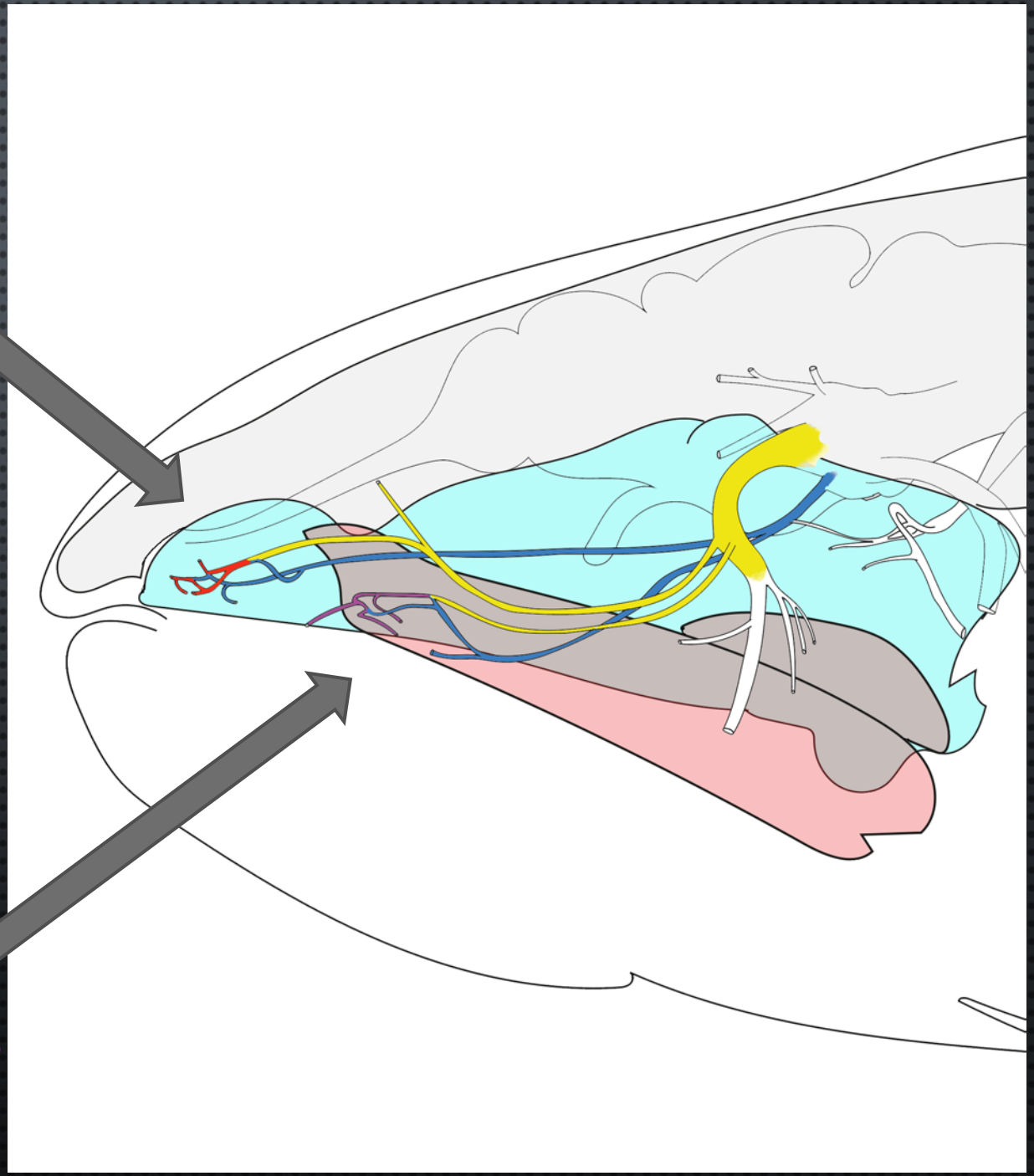
r.lab. V


Cart.tent.
r.pal.a. VII
r.mx. V
r.buc. VII
r.lab. V

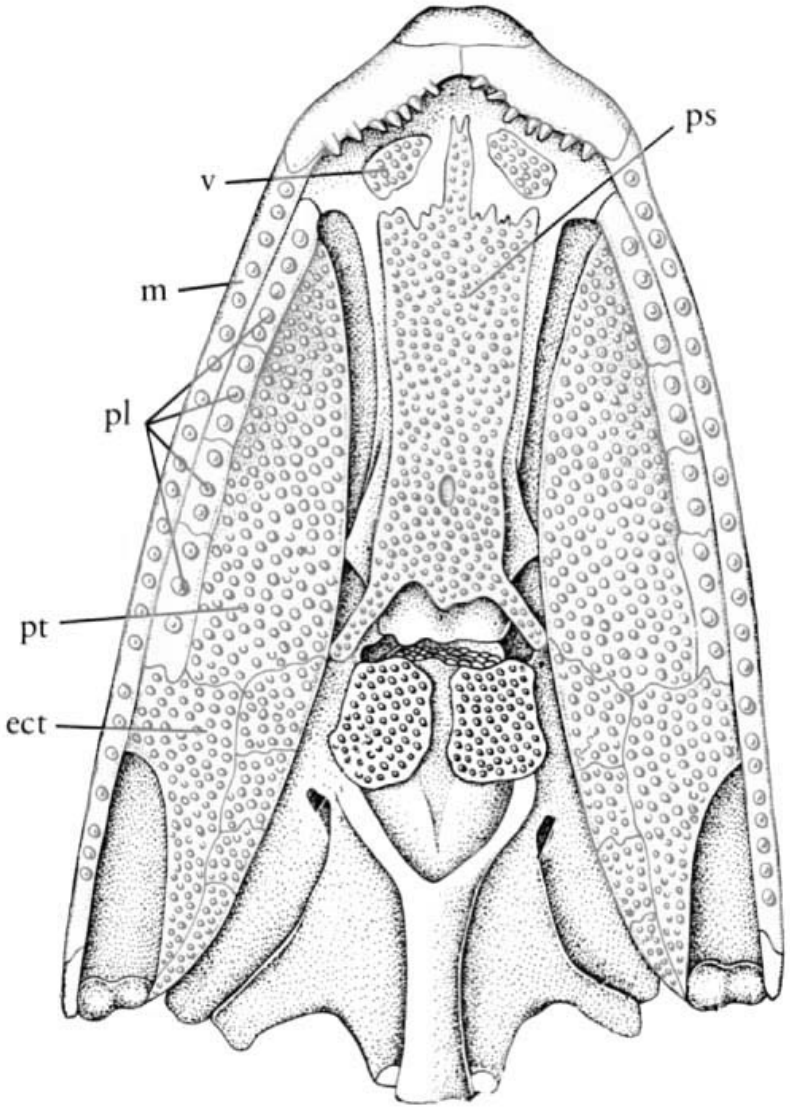


Передний анастомоз

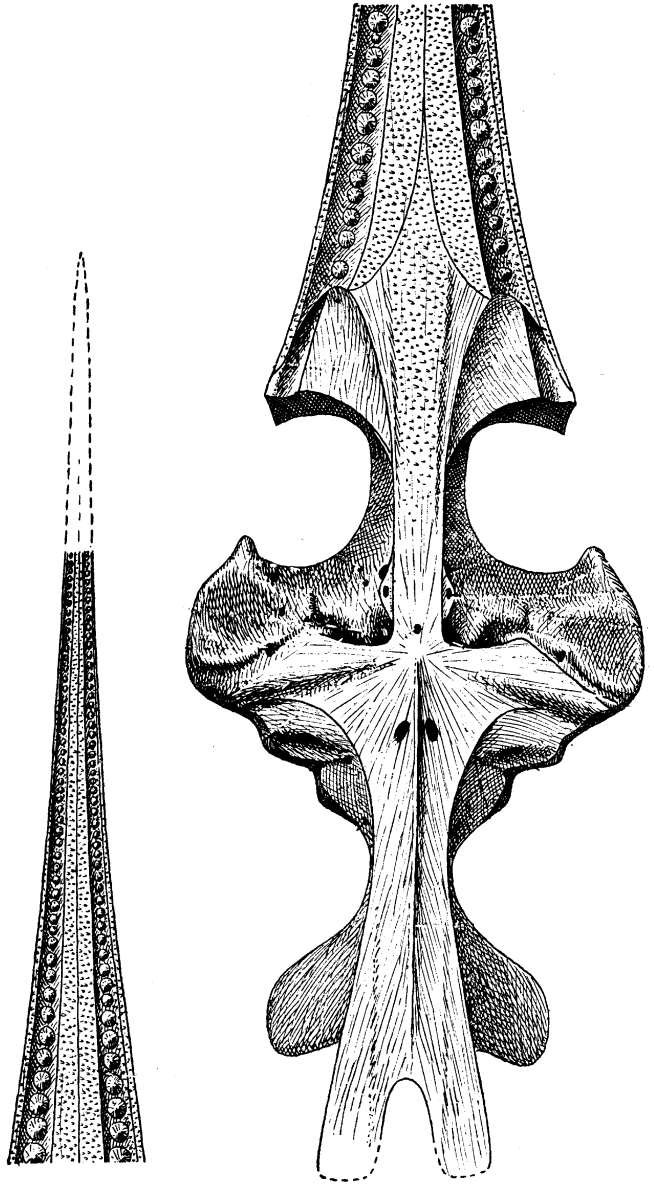
Задний анастомоз



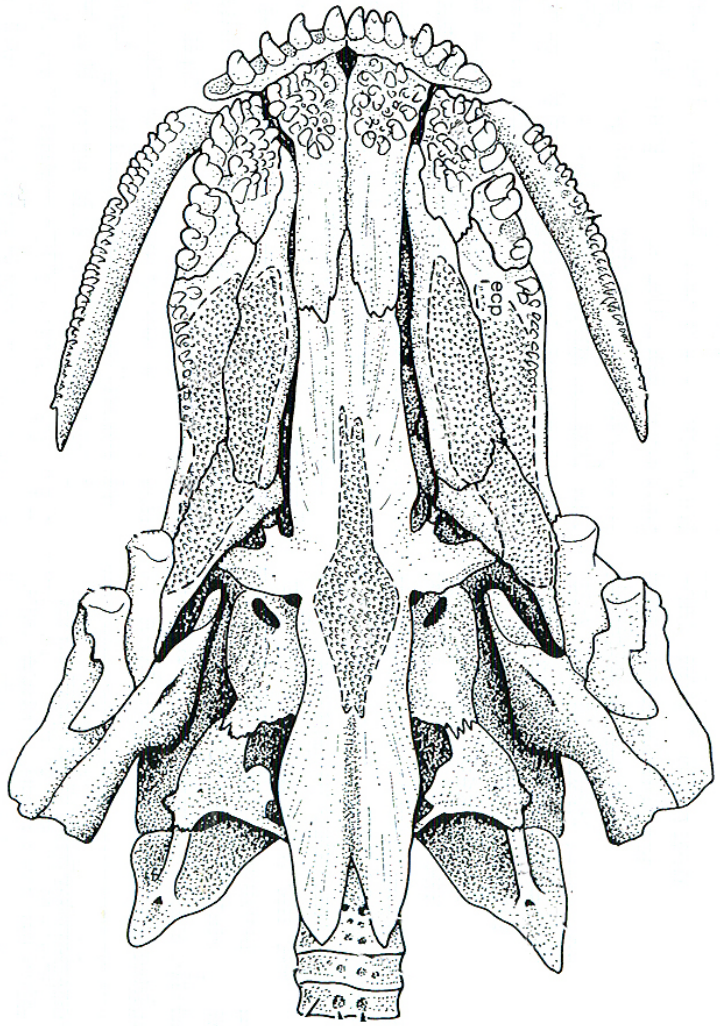
Mimipiscis



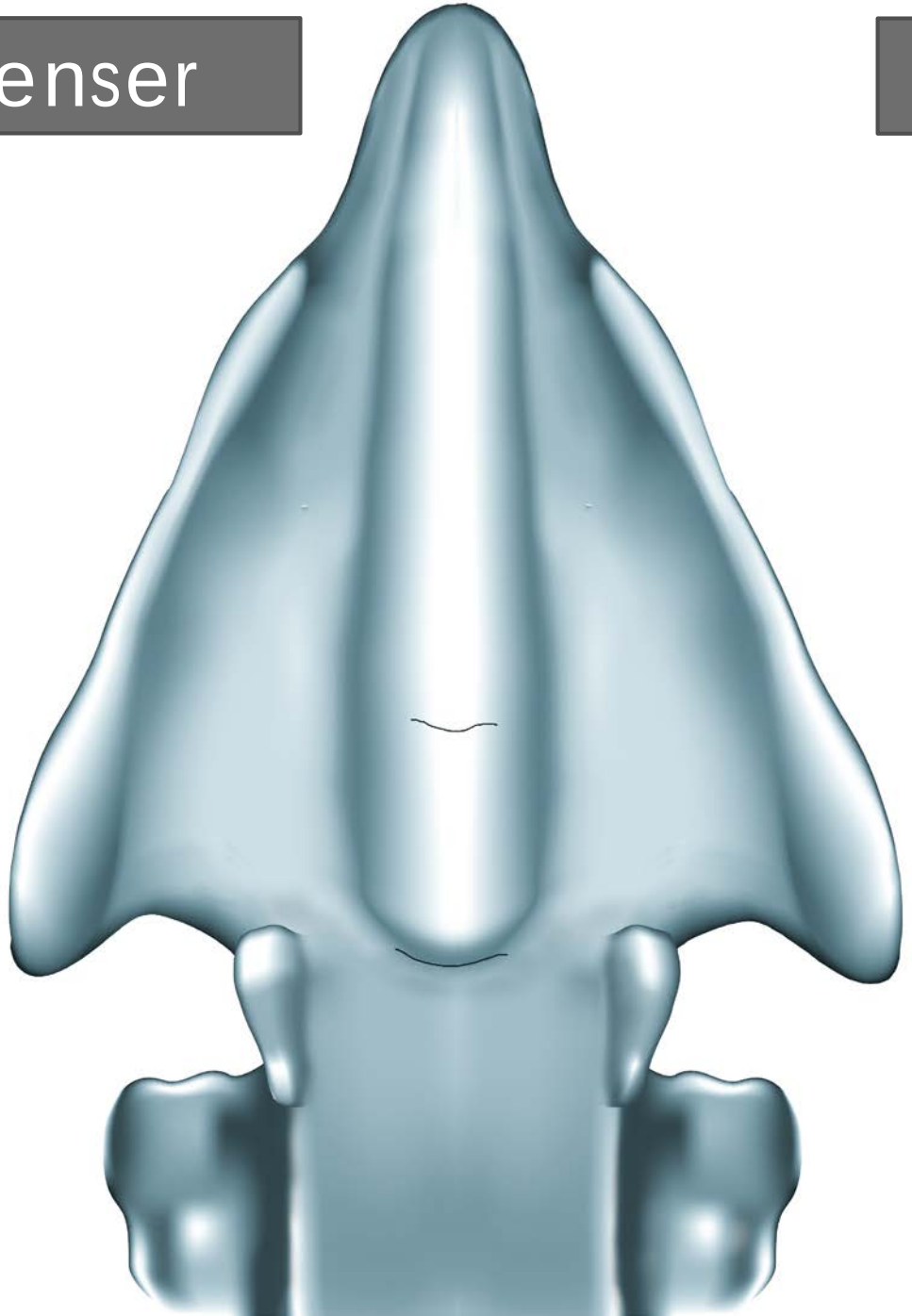
Saurichthys



Amia



Acipenser



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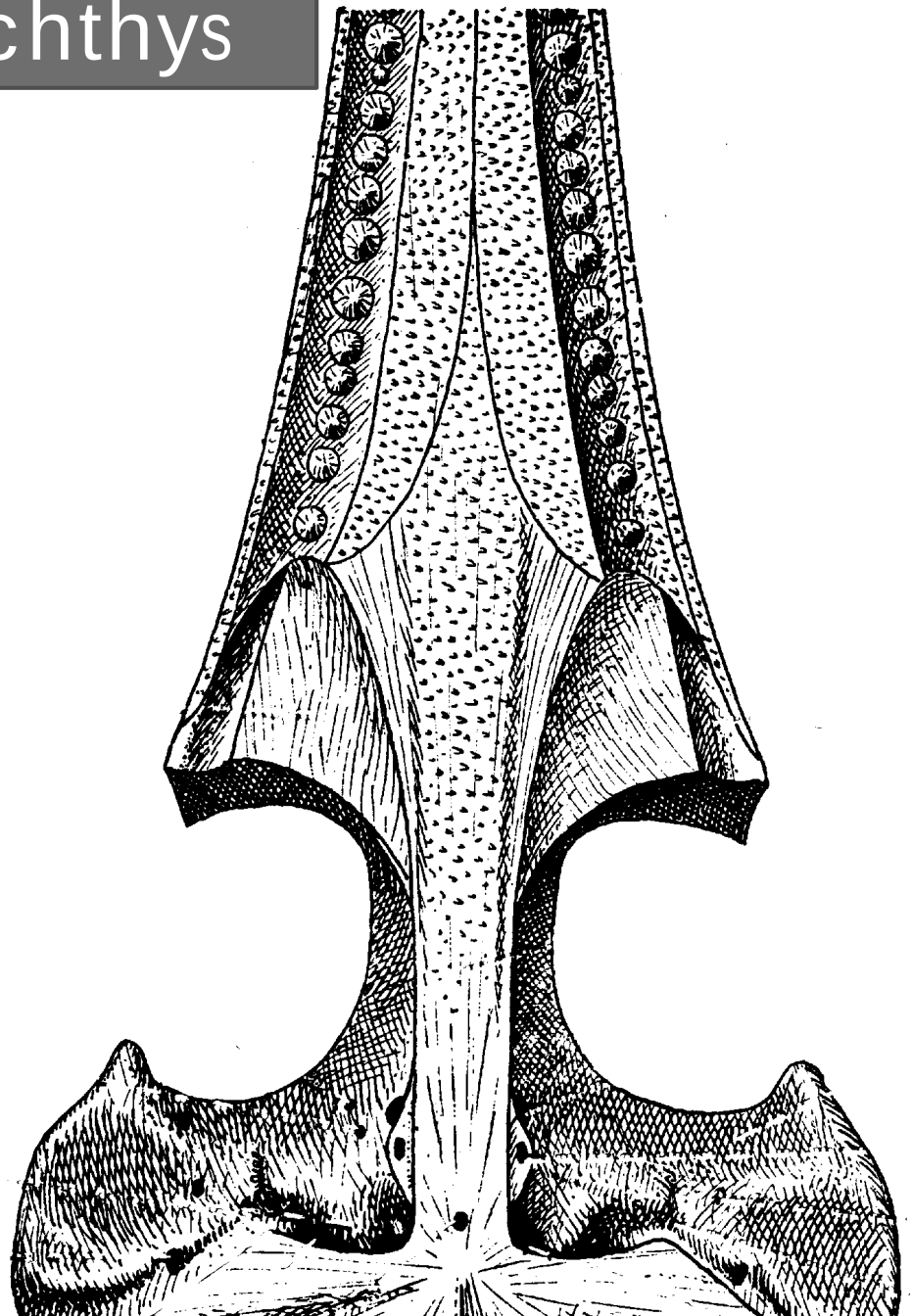

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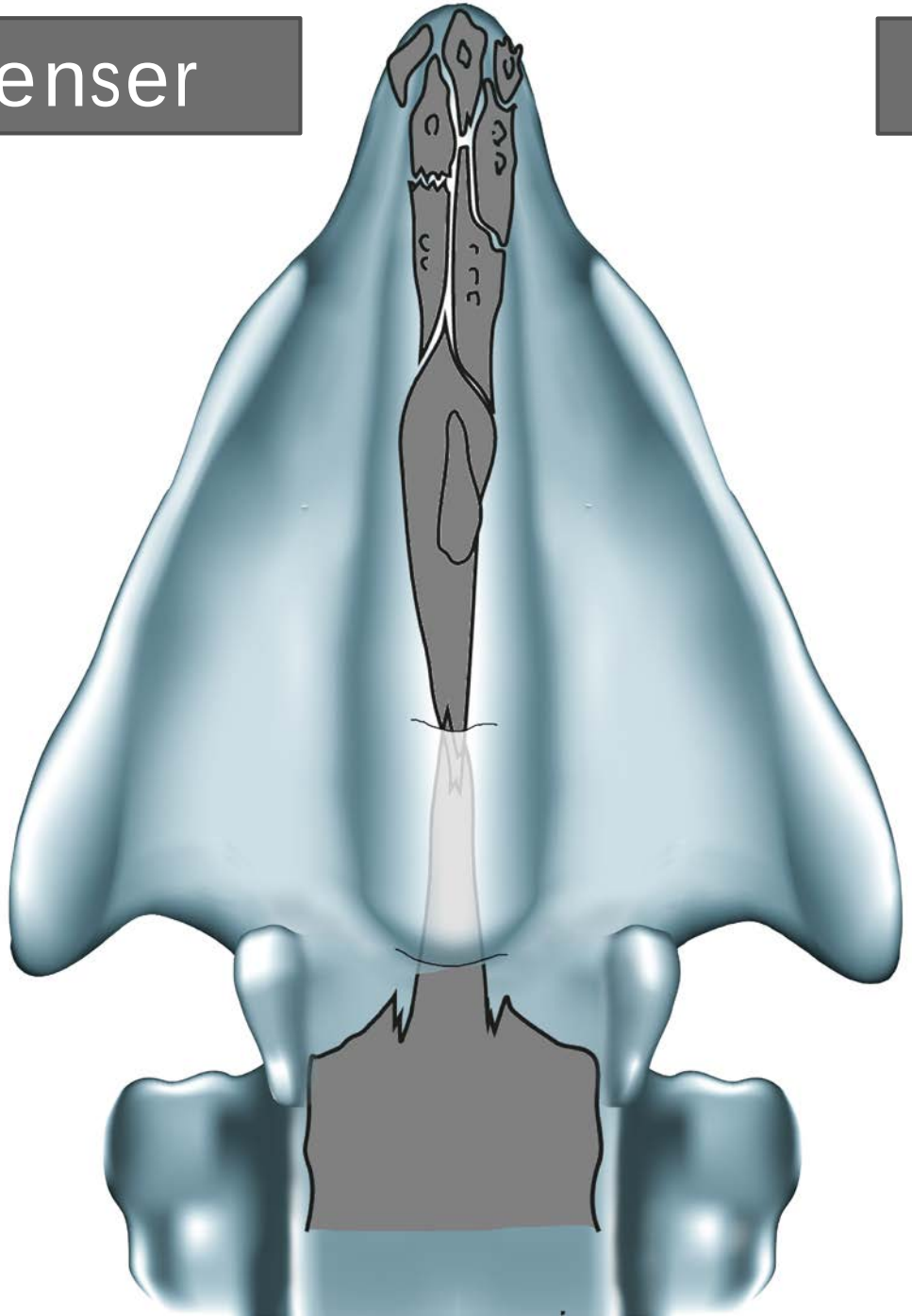

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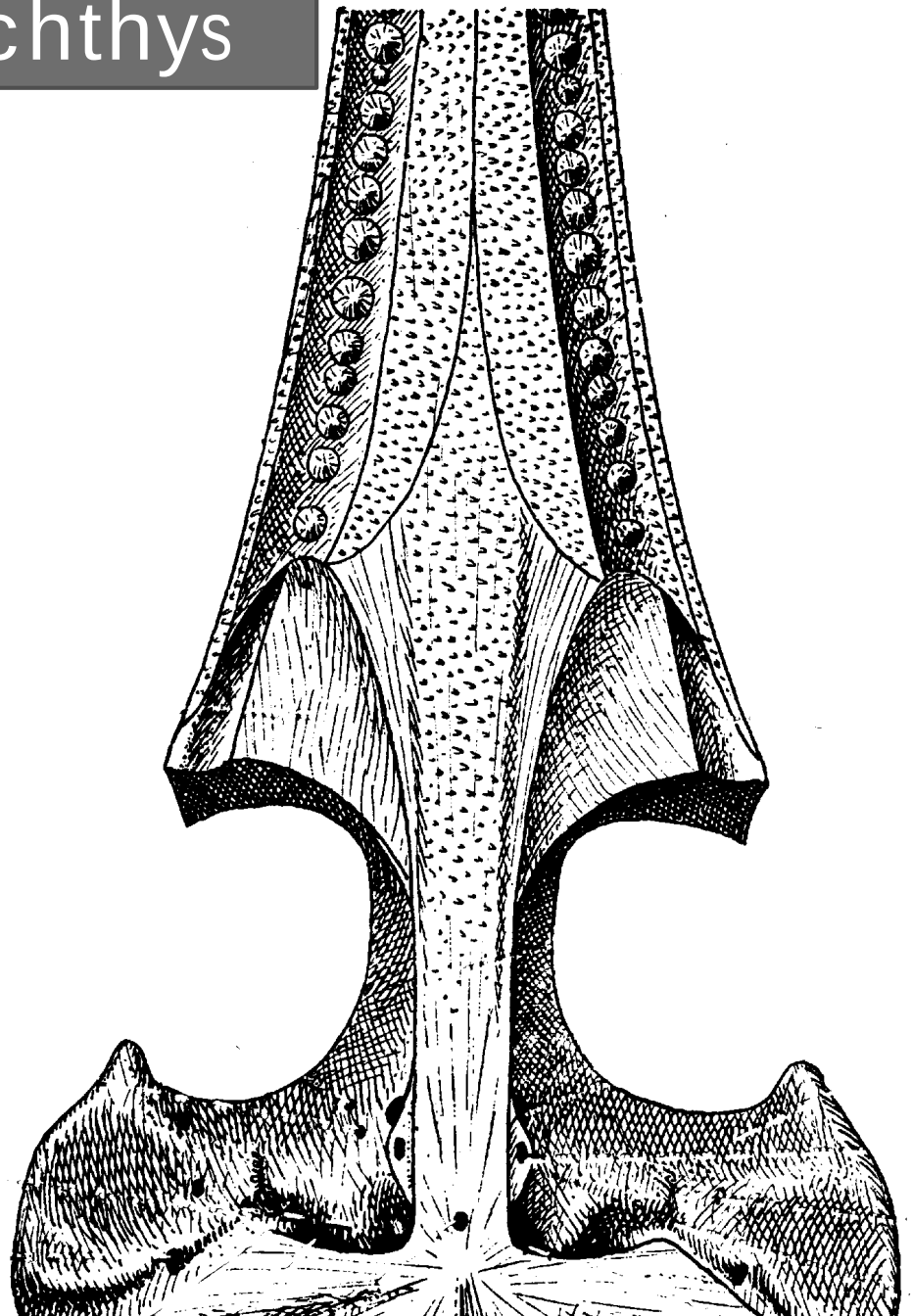

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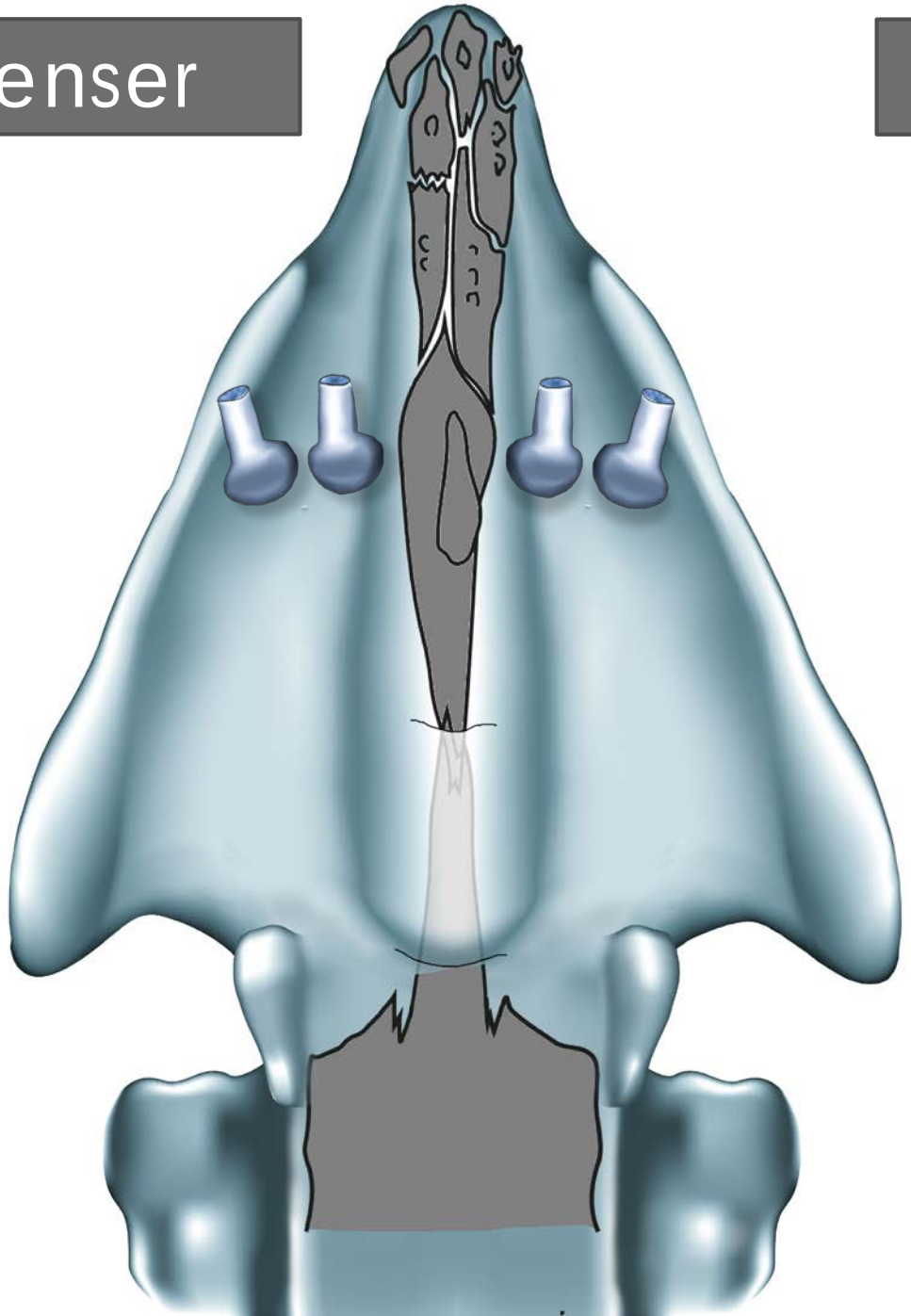

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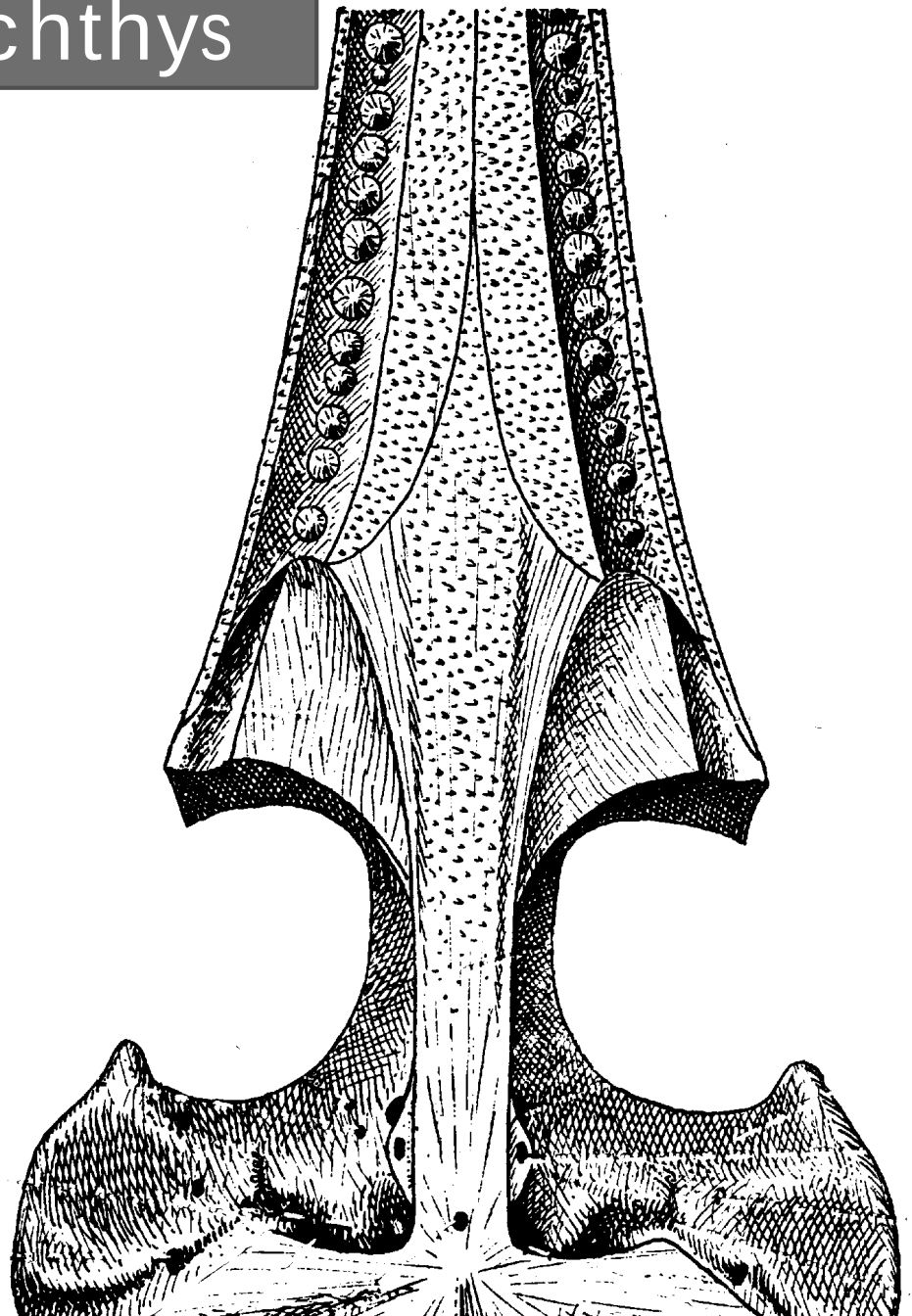

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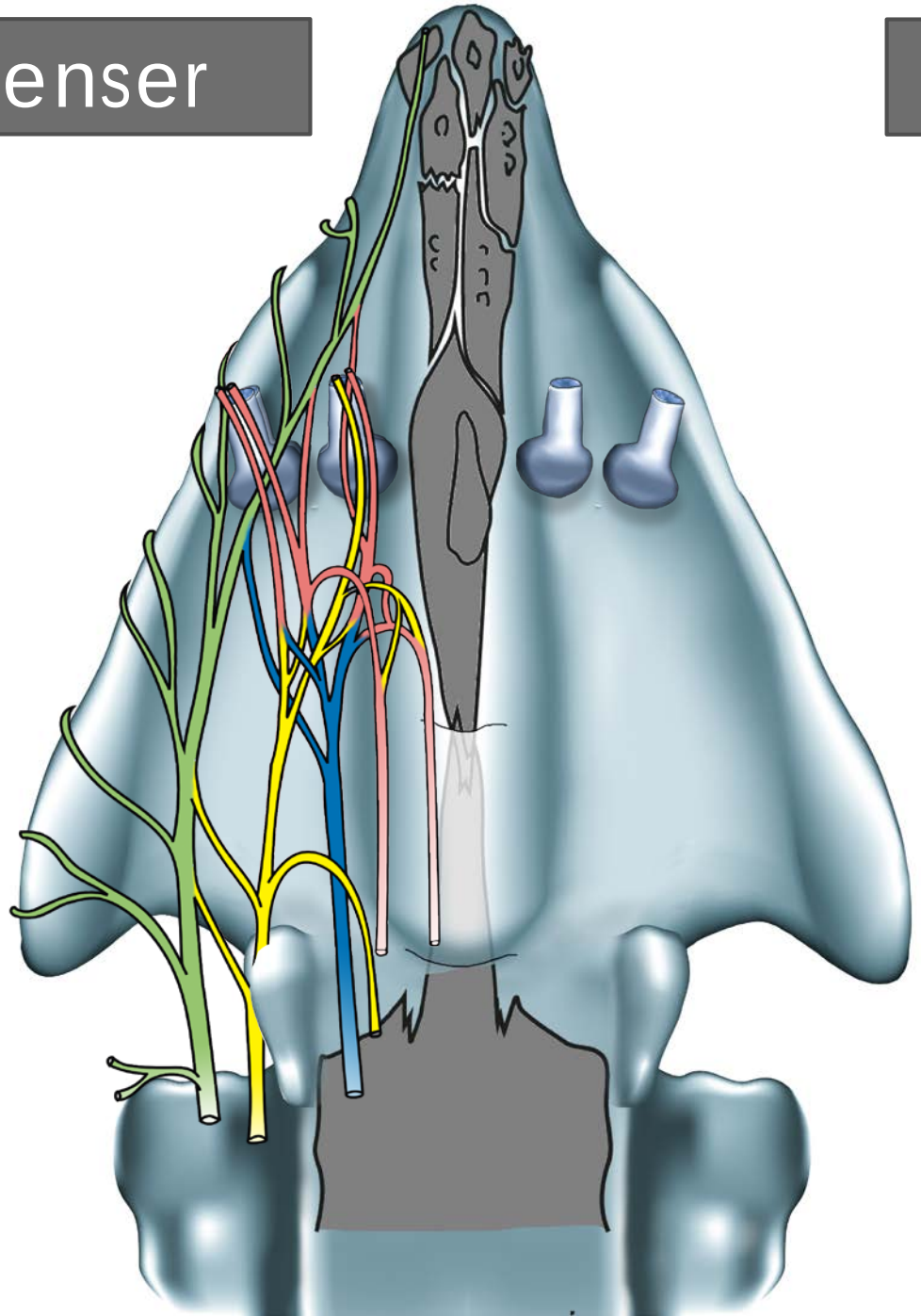

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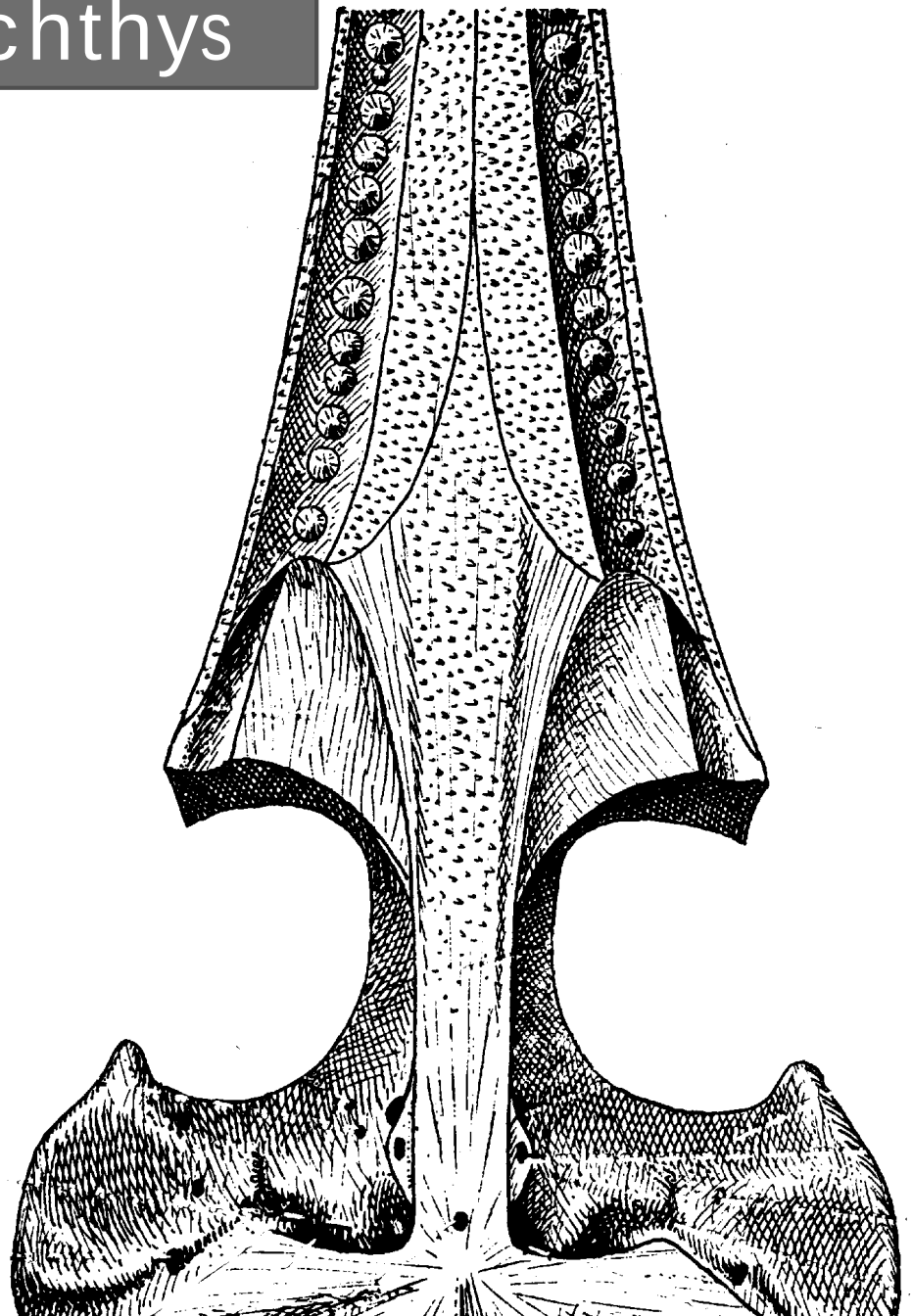
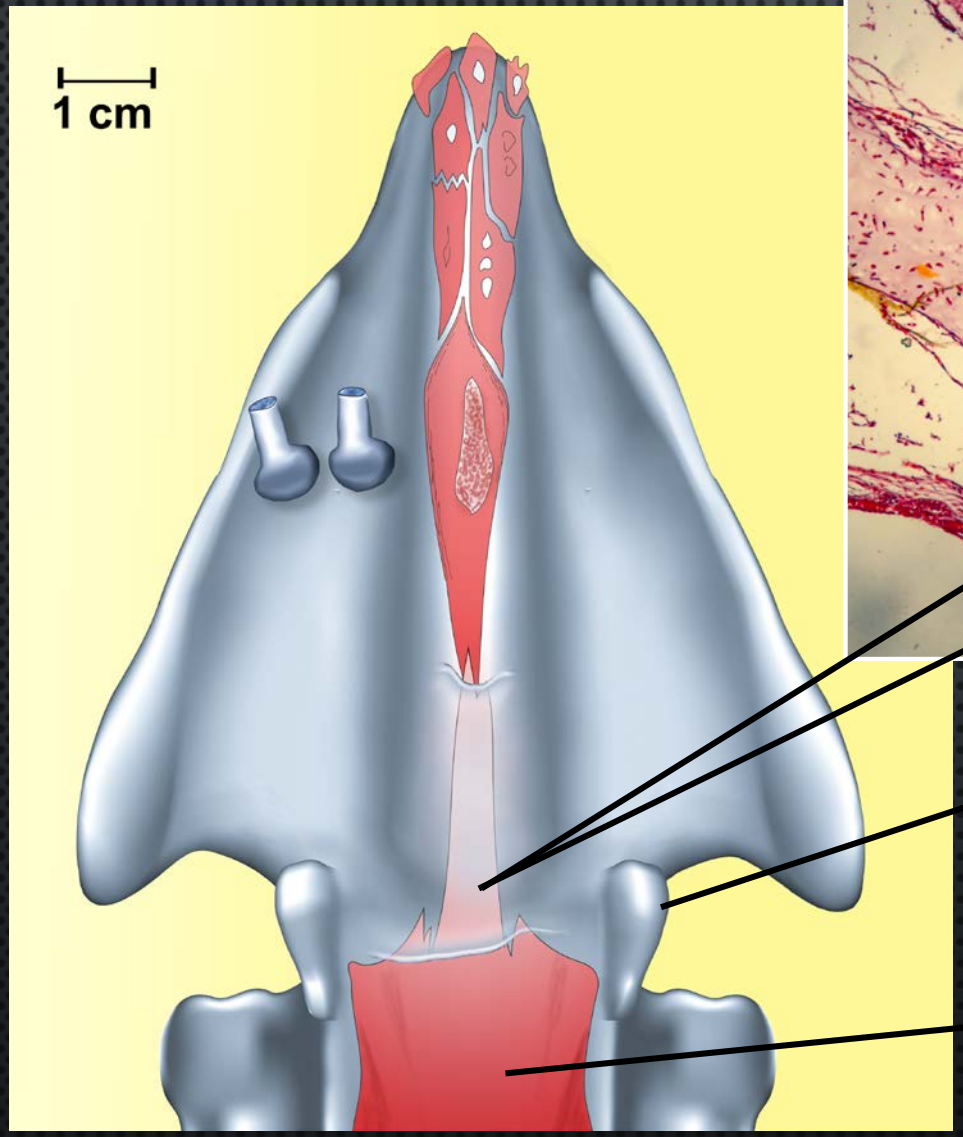
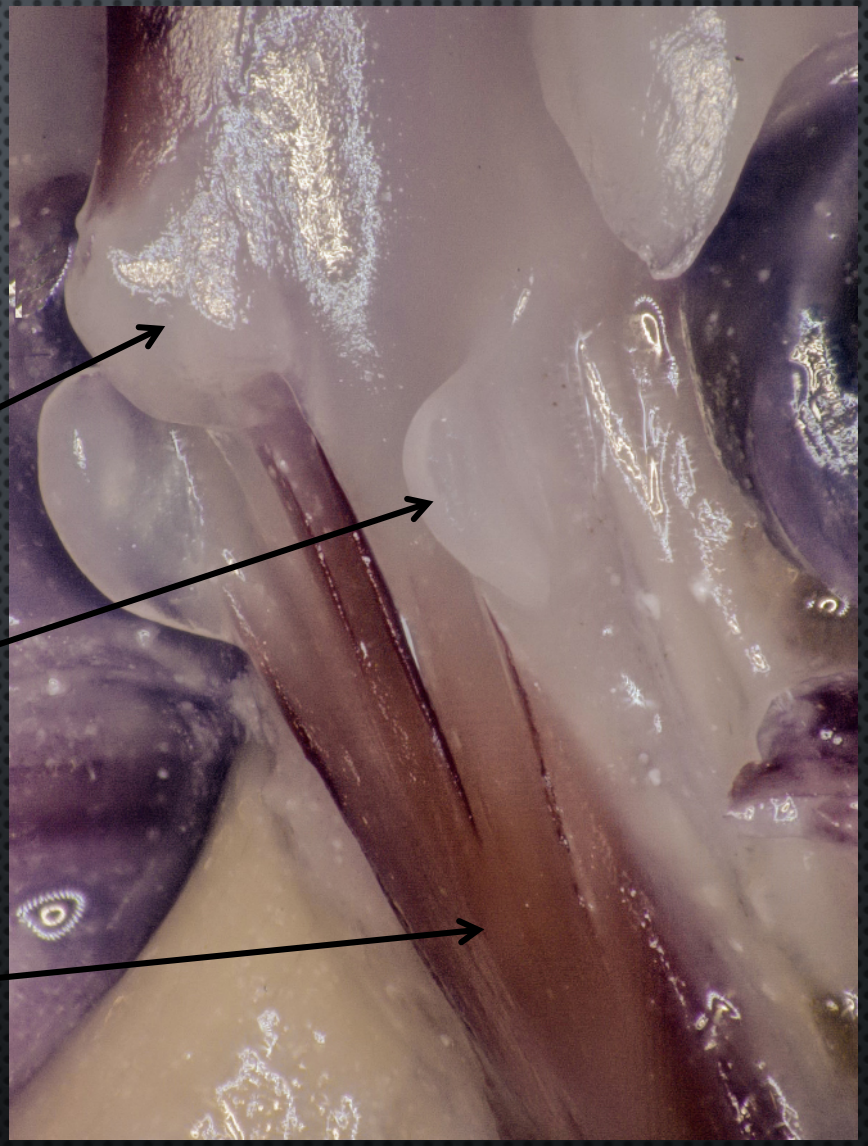
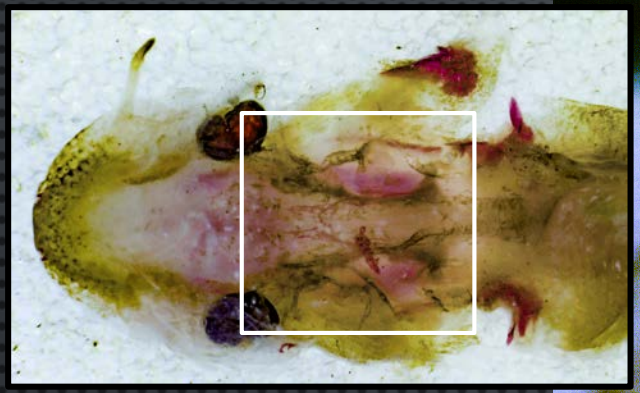


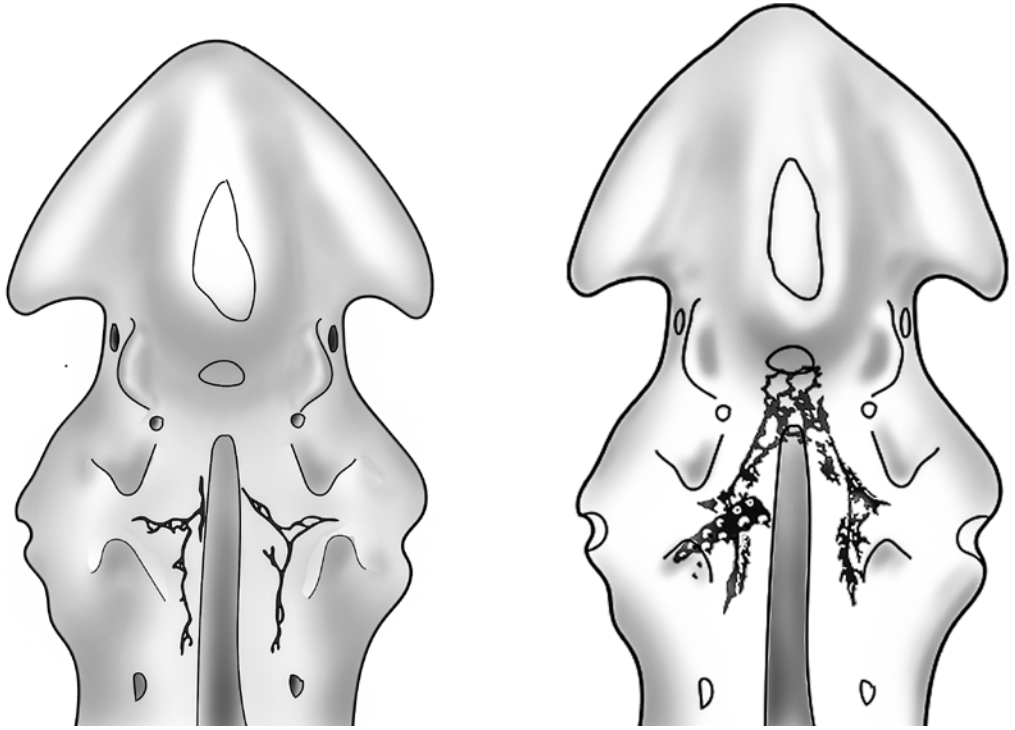
Acipenseridae

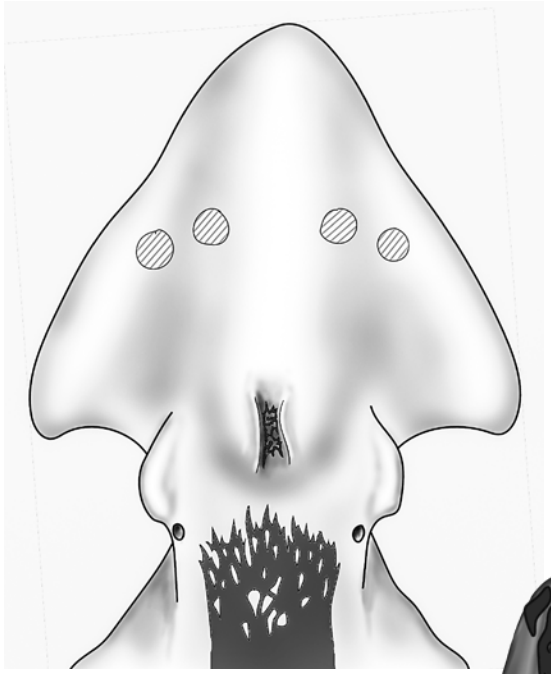


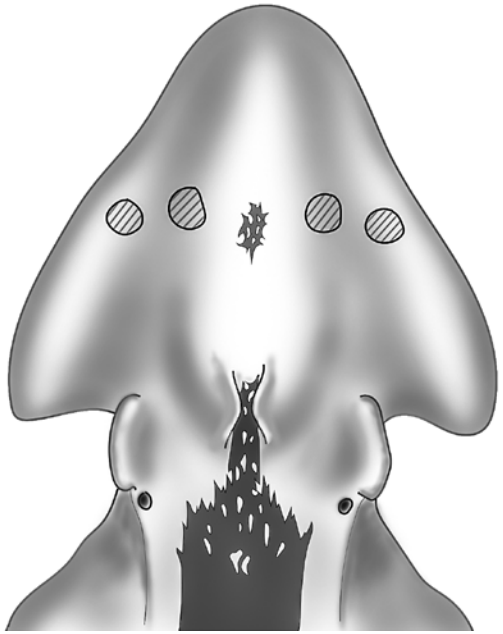


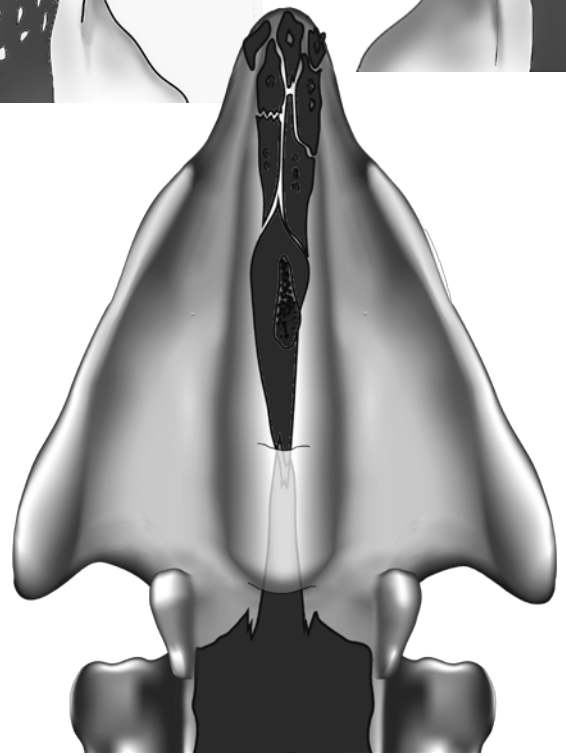


ACIPENSER BAERII,
29,5 MM

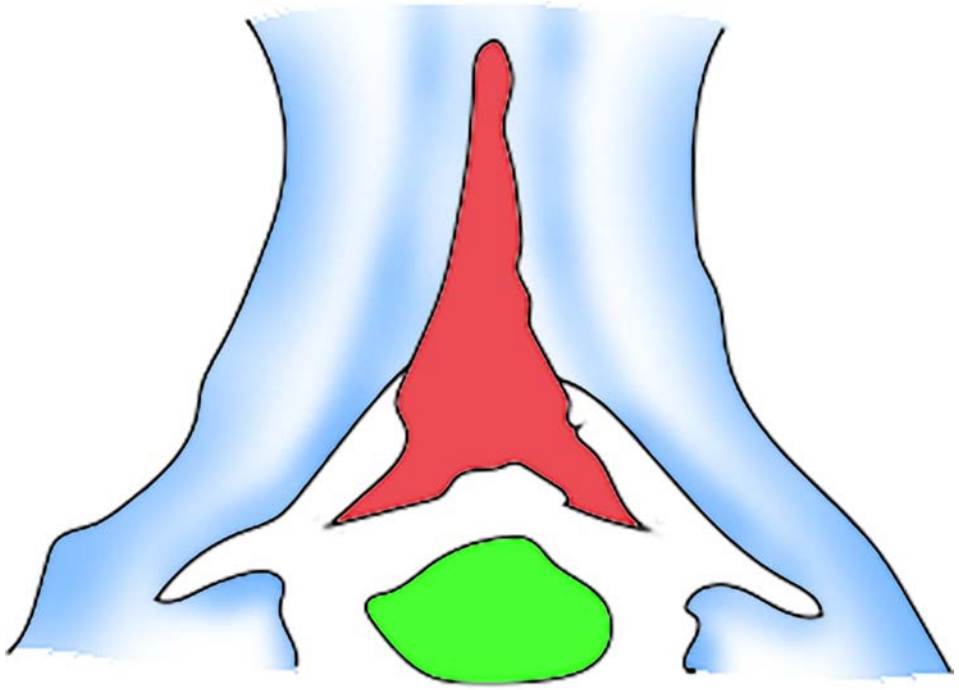


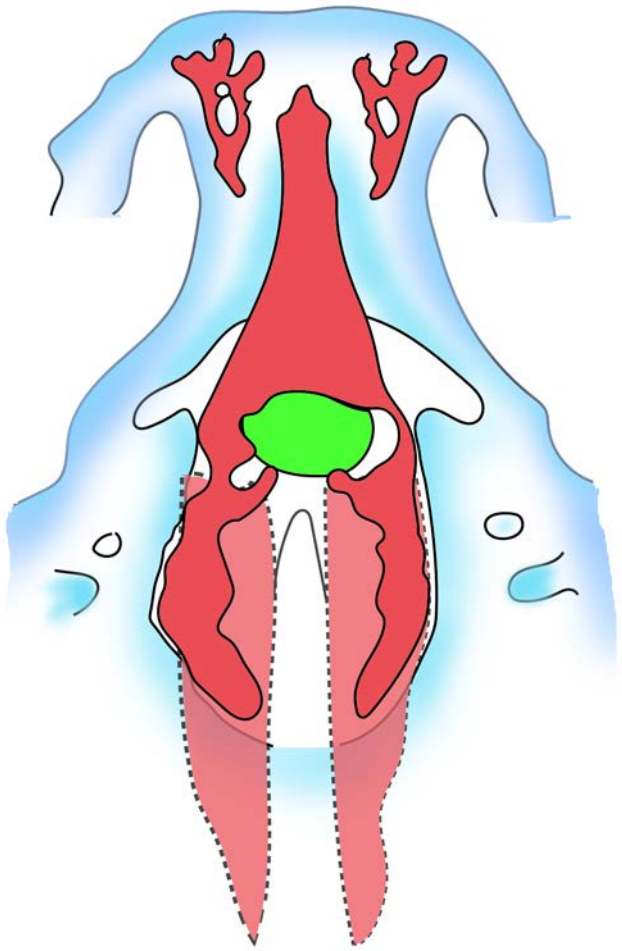




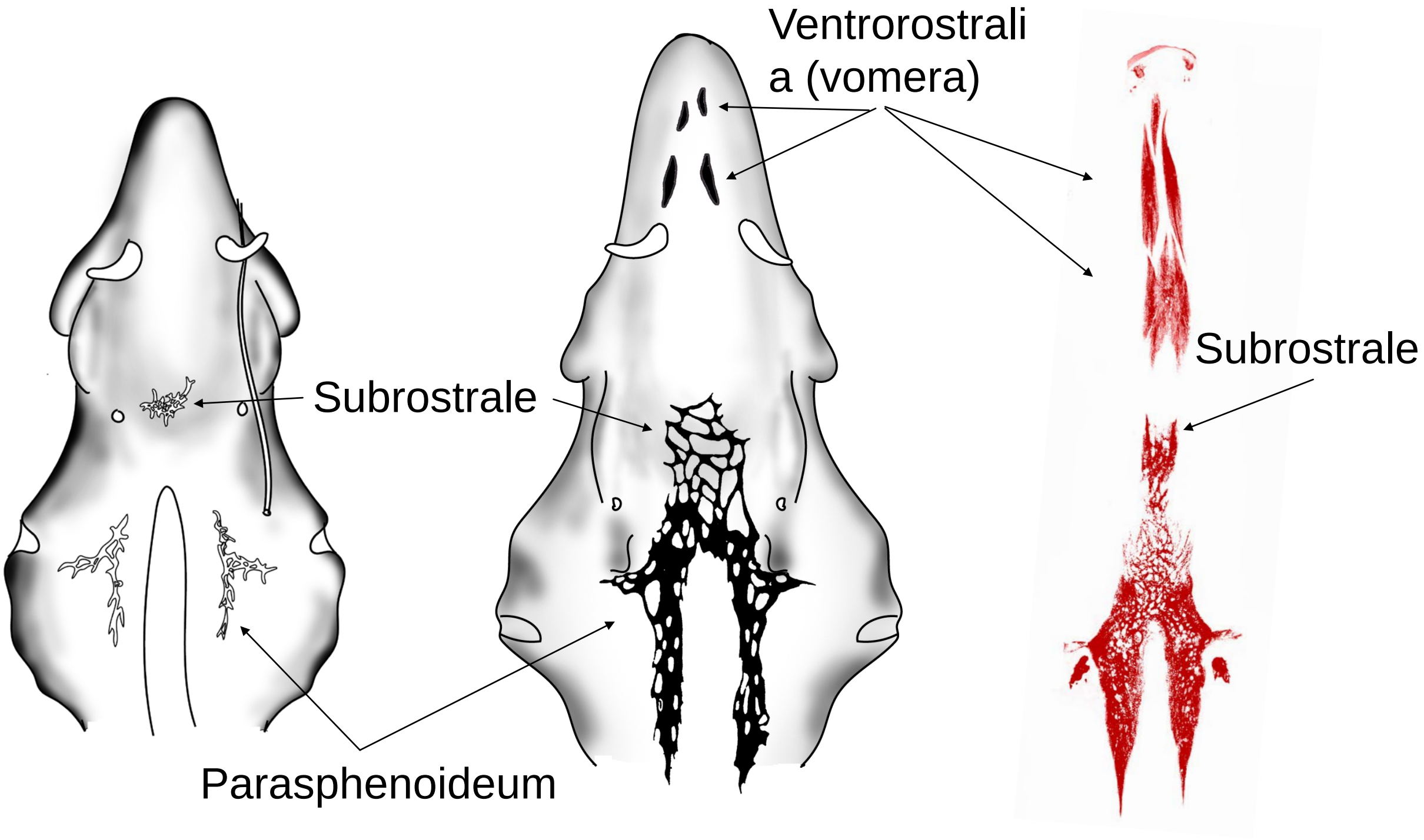


1. Parasphenoideum, задняя закладка
2. Subrostrale
3. Basirostrale mediale
4. Ventrorostrale (vomer)





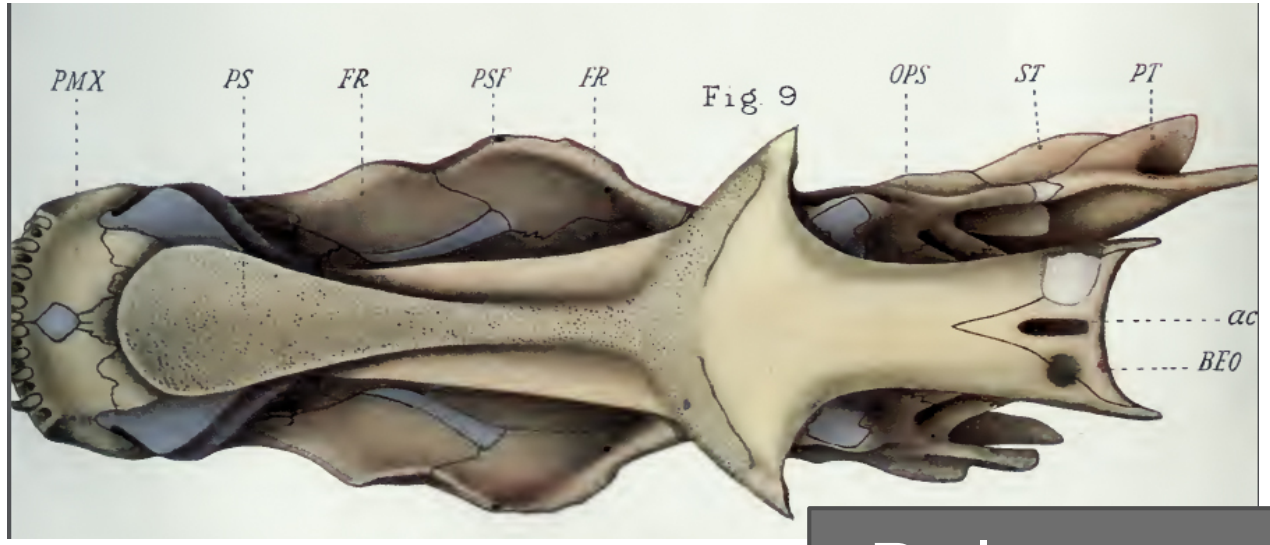
Amia calva


Ventrorostrali
a (vomera)
Subrostrale
Subrostrale
Parasphenoideum

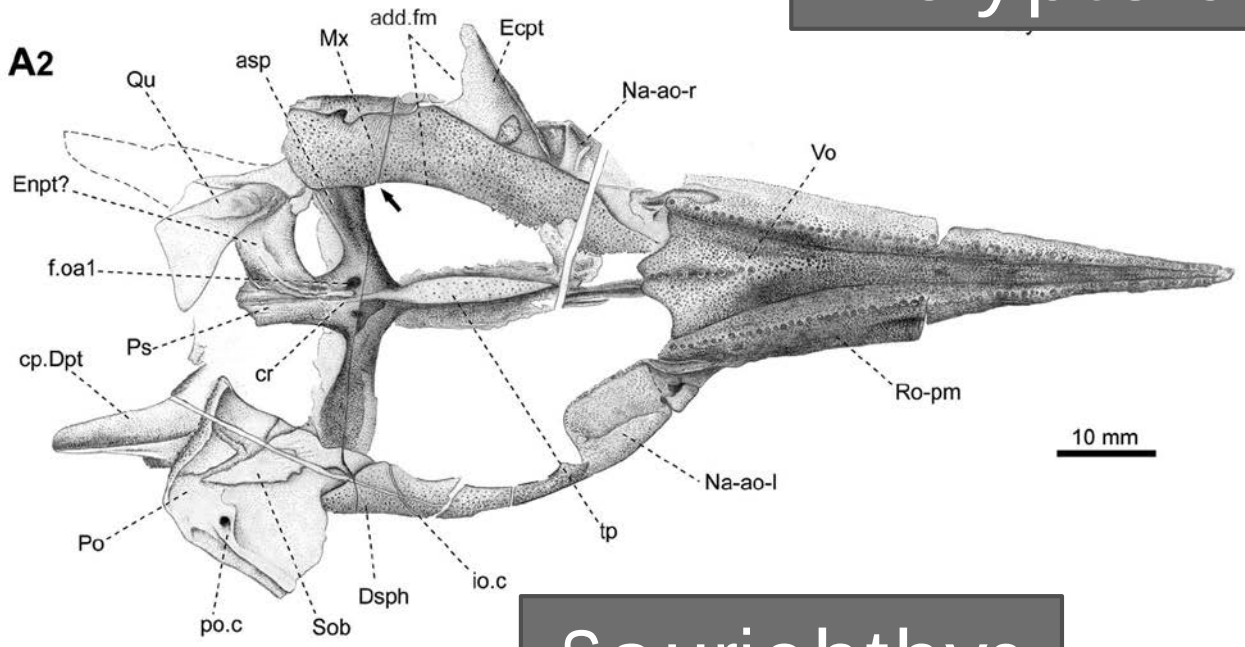
Вид снизу

Вид сбоку

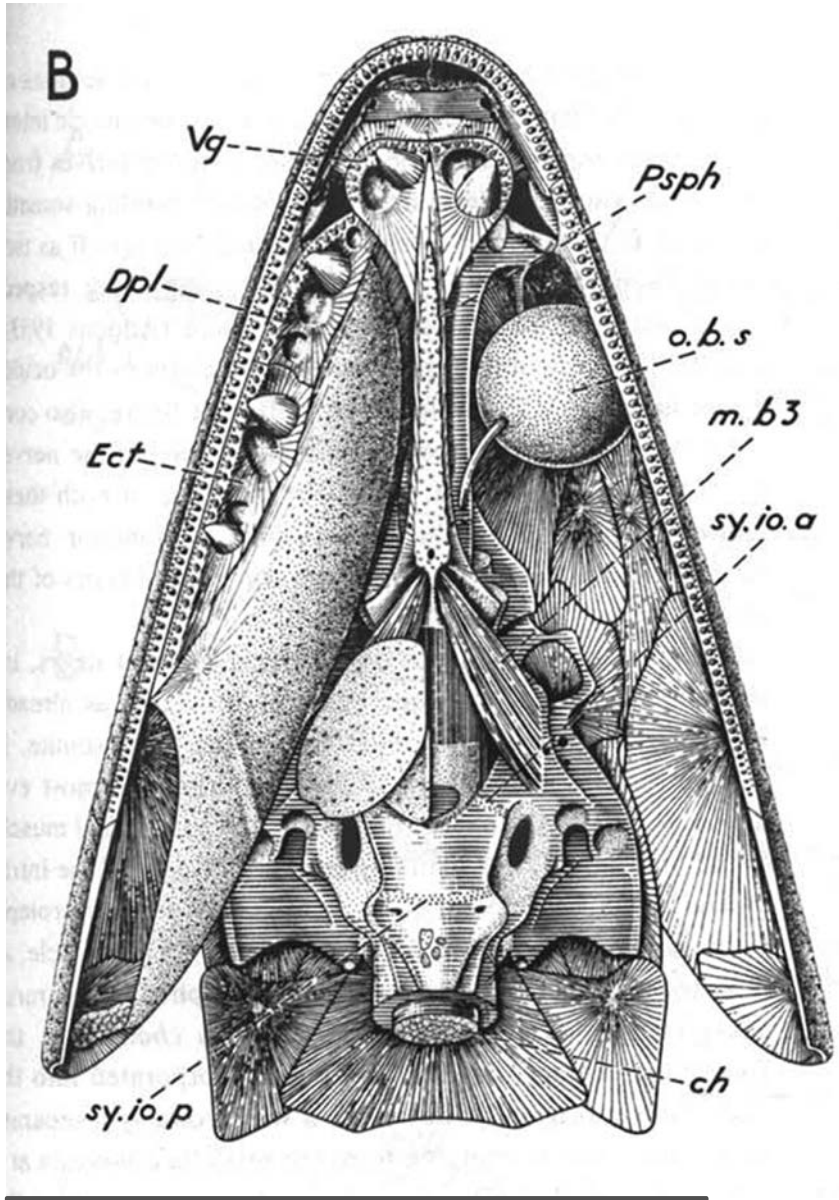
Acipenser ruthenus



Polypterus

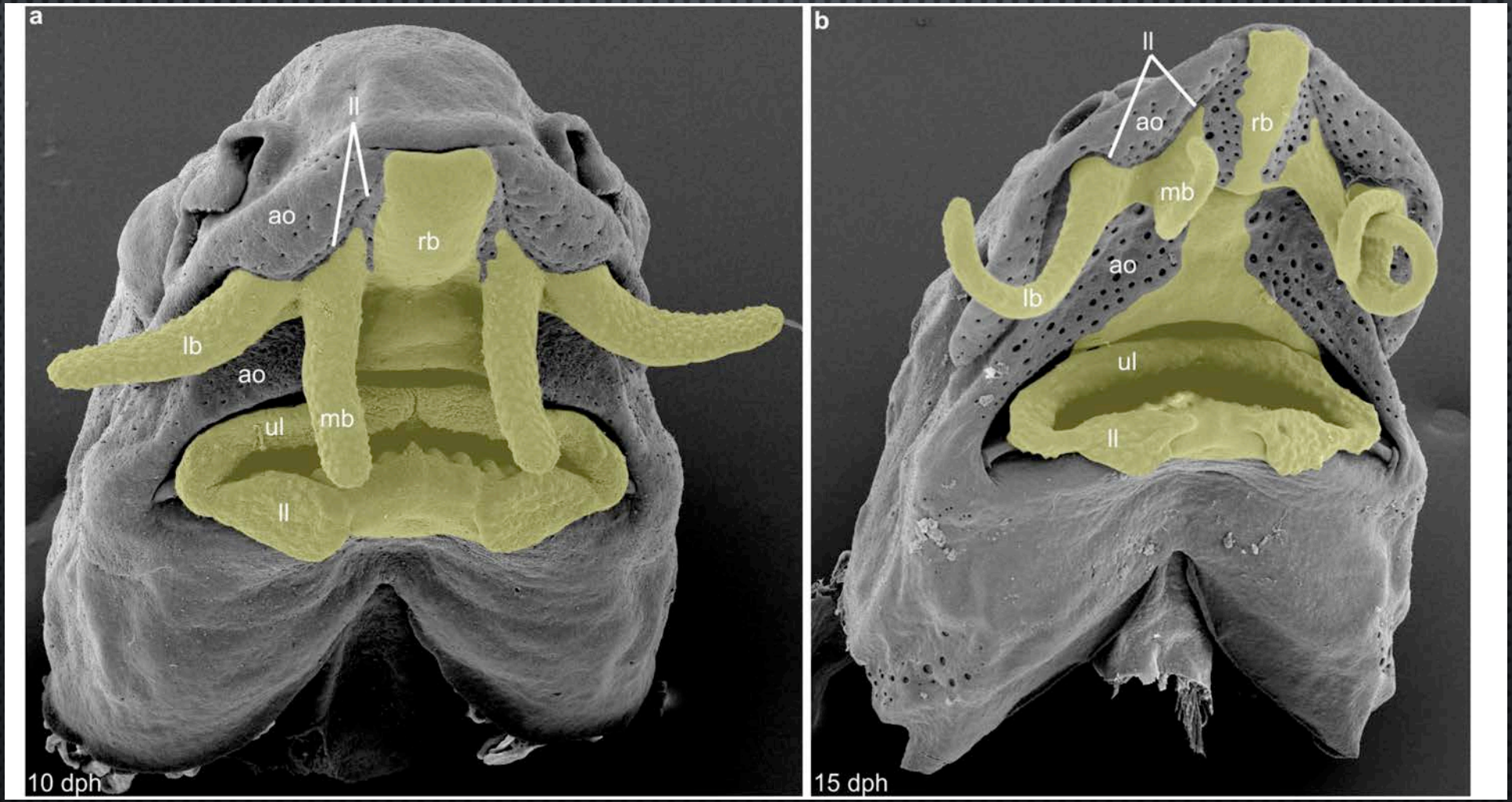


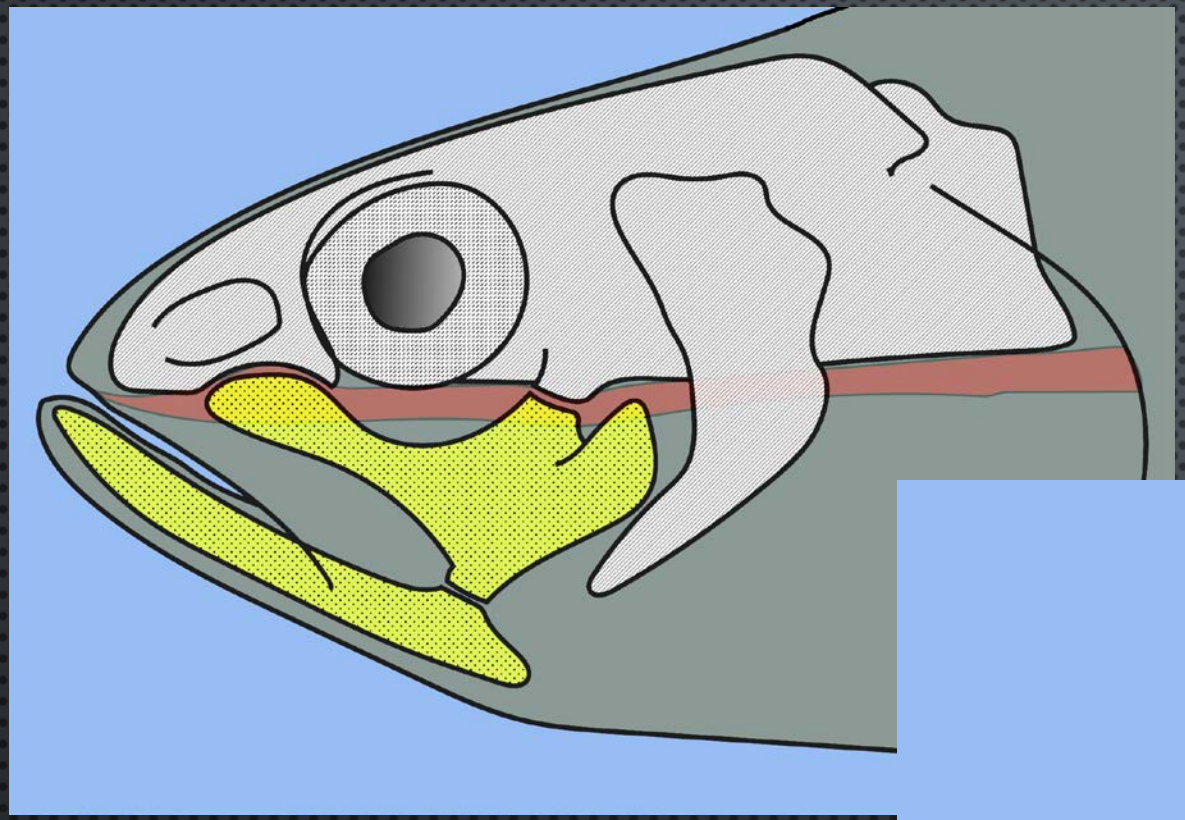
Saurichthys

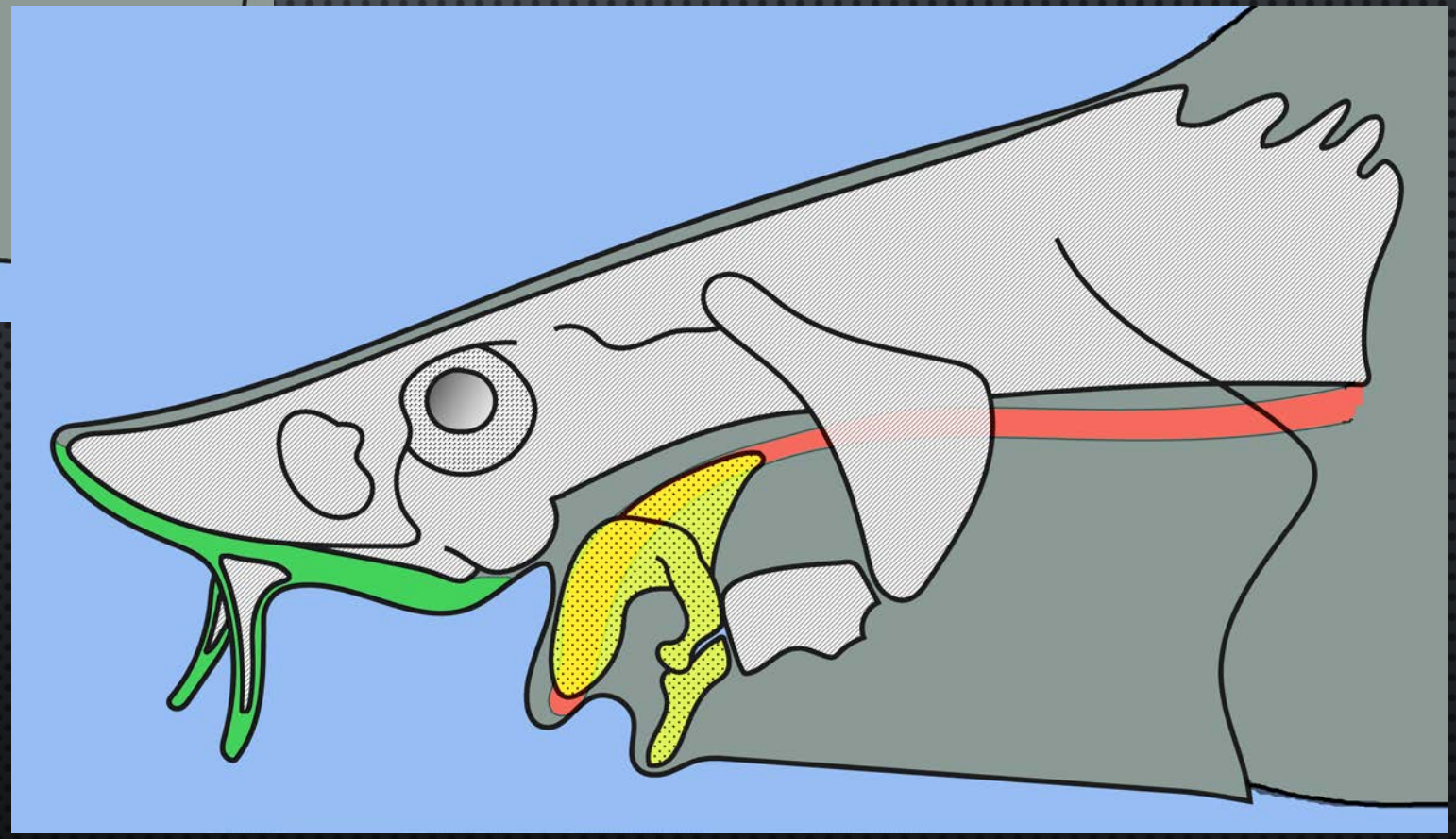


Eusthenopteron

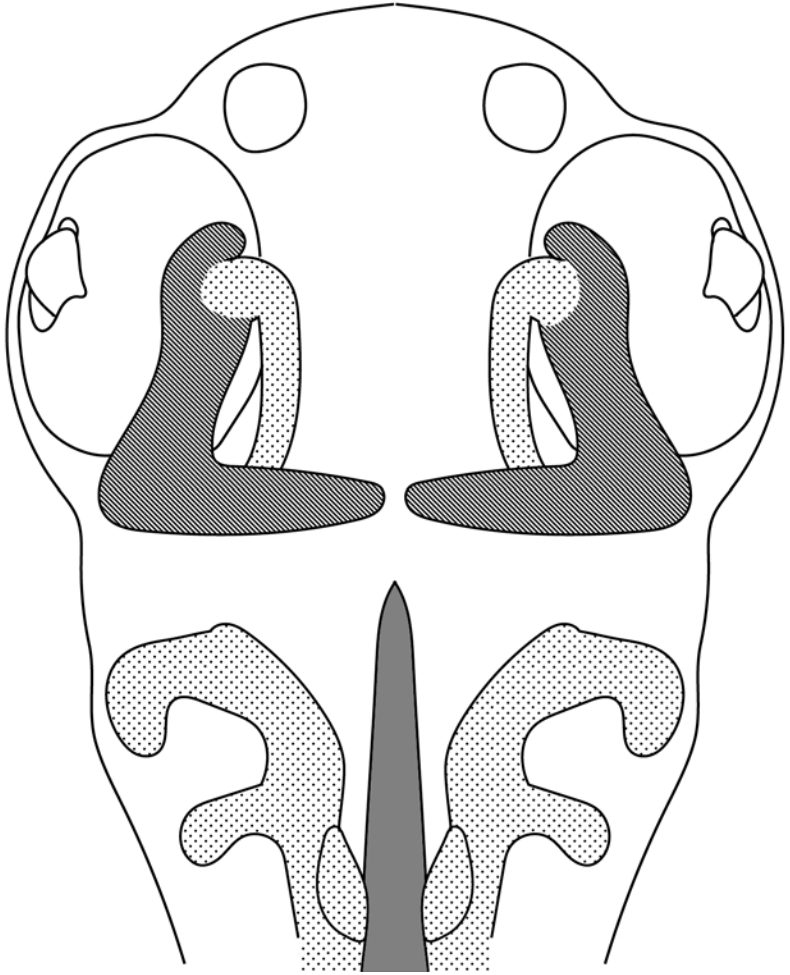
ACIPENSER HEAD IN VENTRAL VIEW
(FROM MINARIK *ET AL.*, 2017)



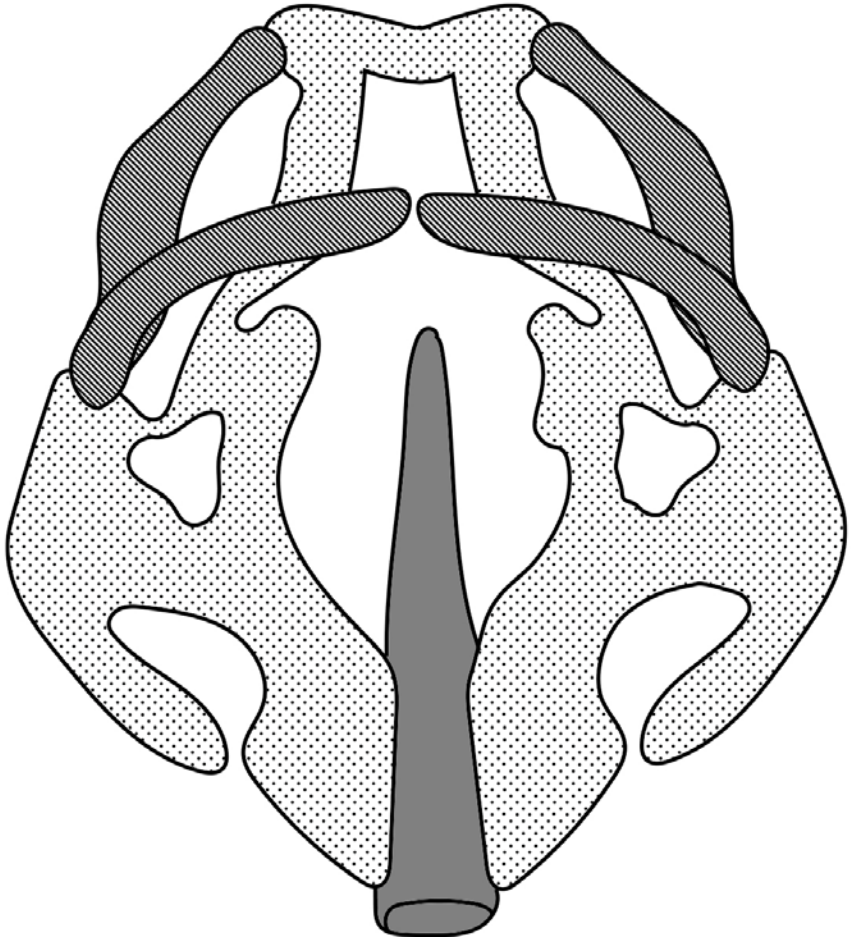




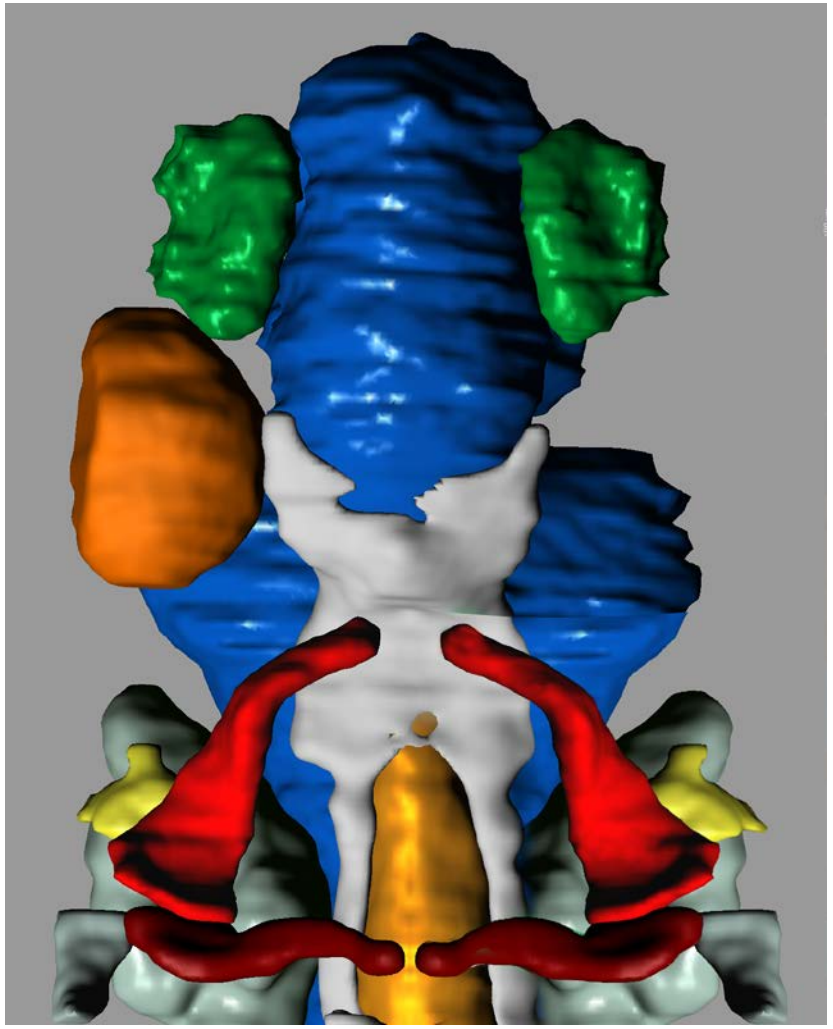
SALMO, 55 DPH

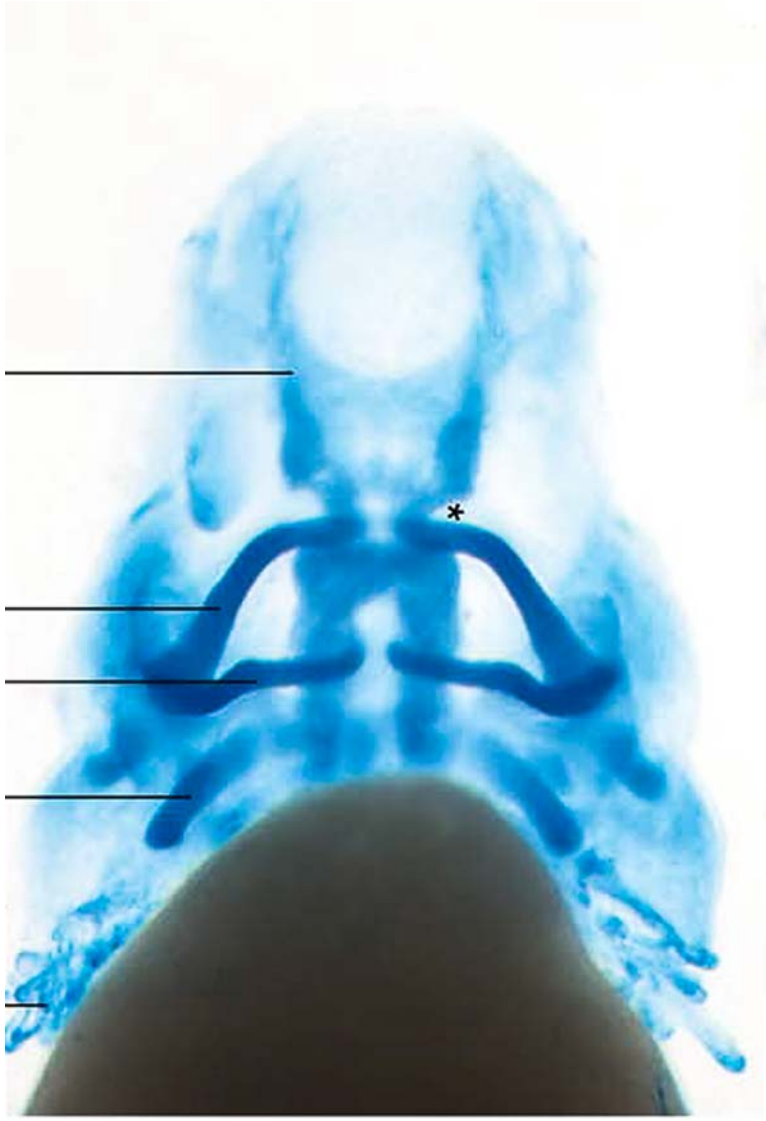


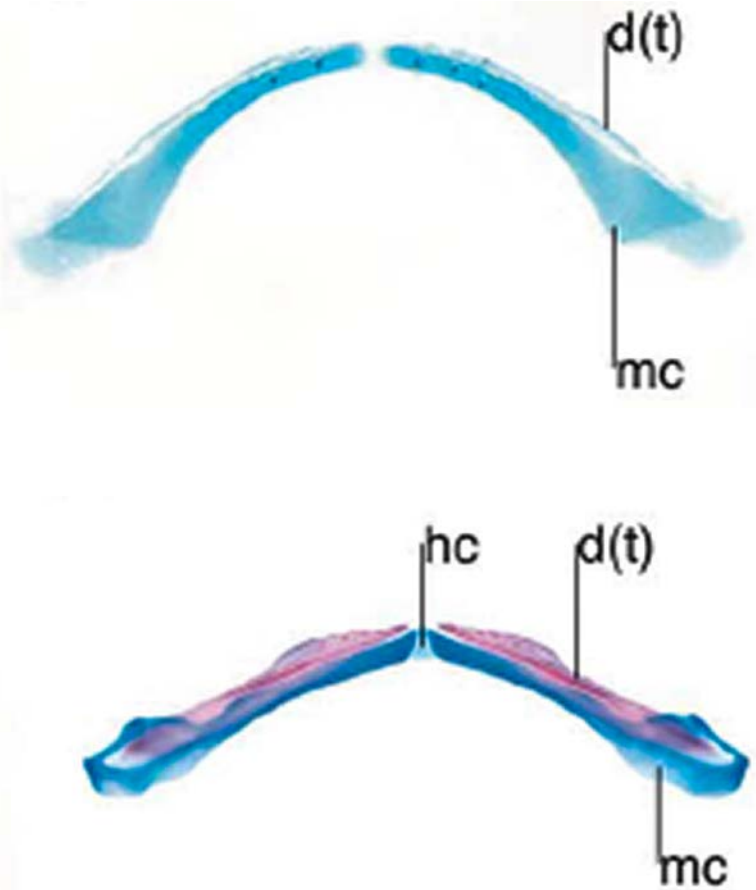
AMIA, 9,2-9,9 MM

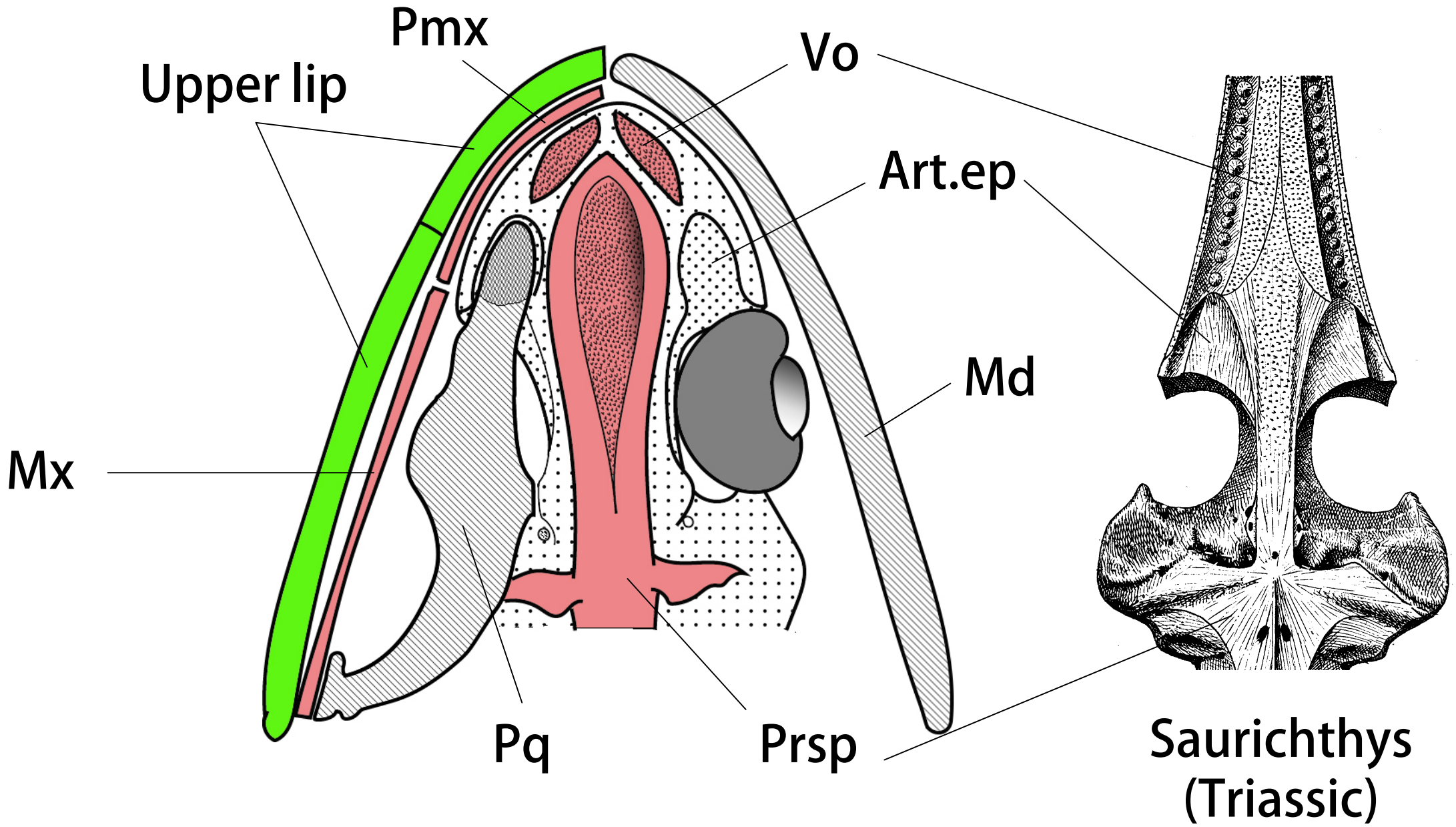


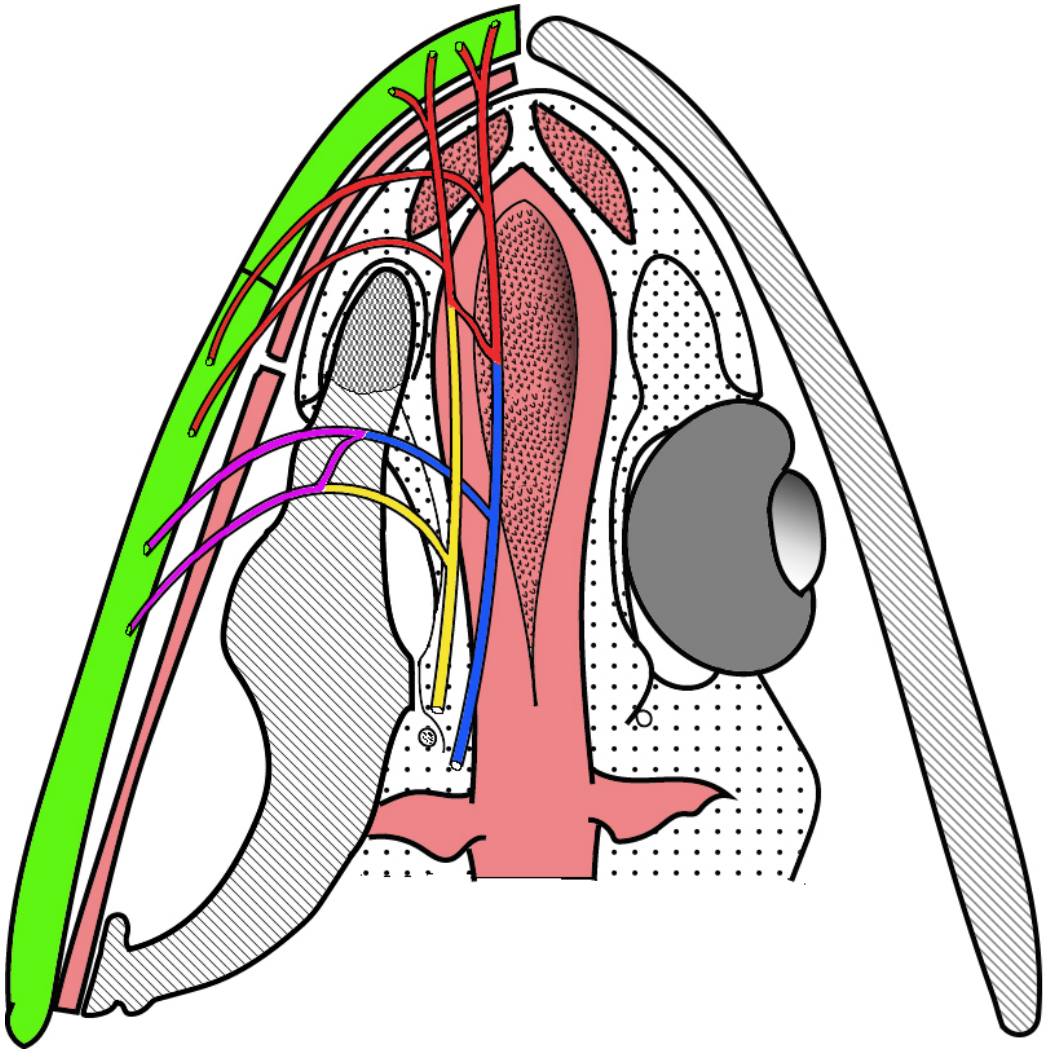
ACIPENSER

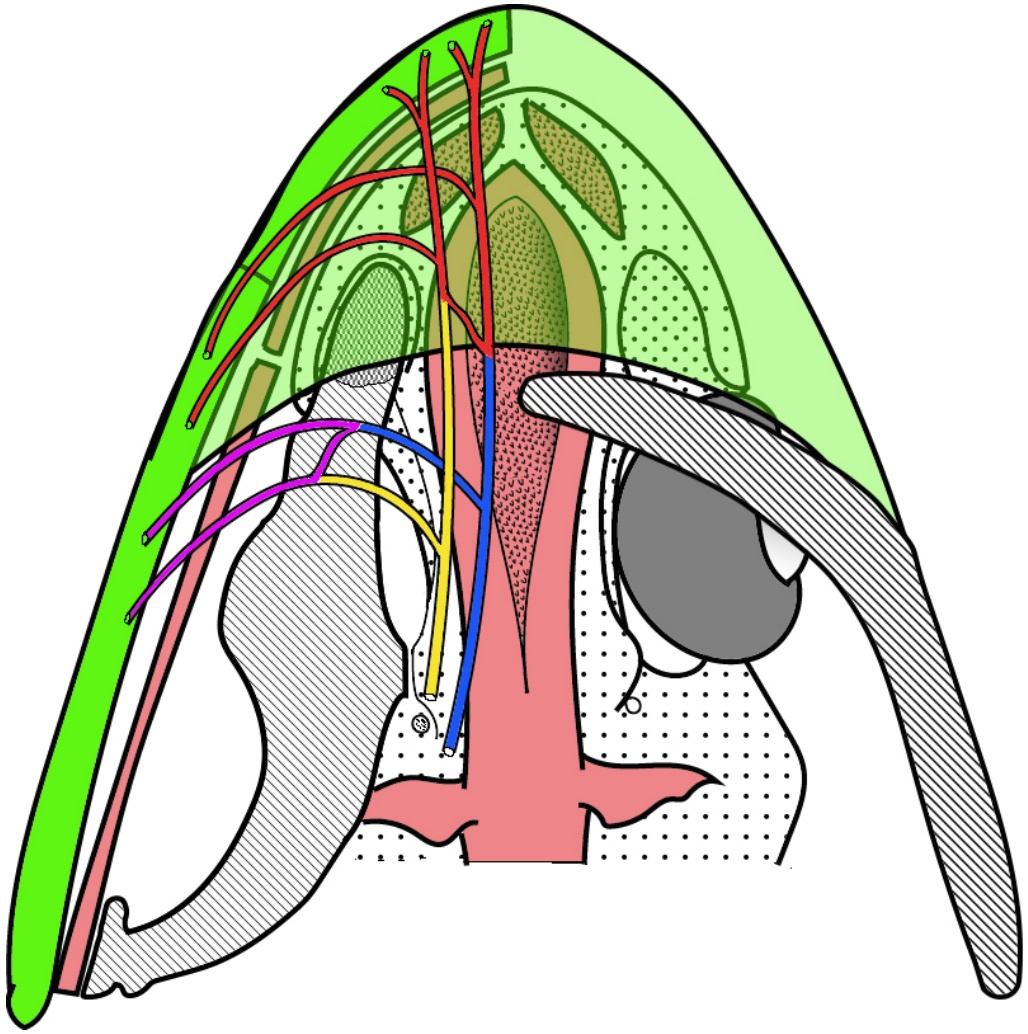


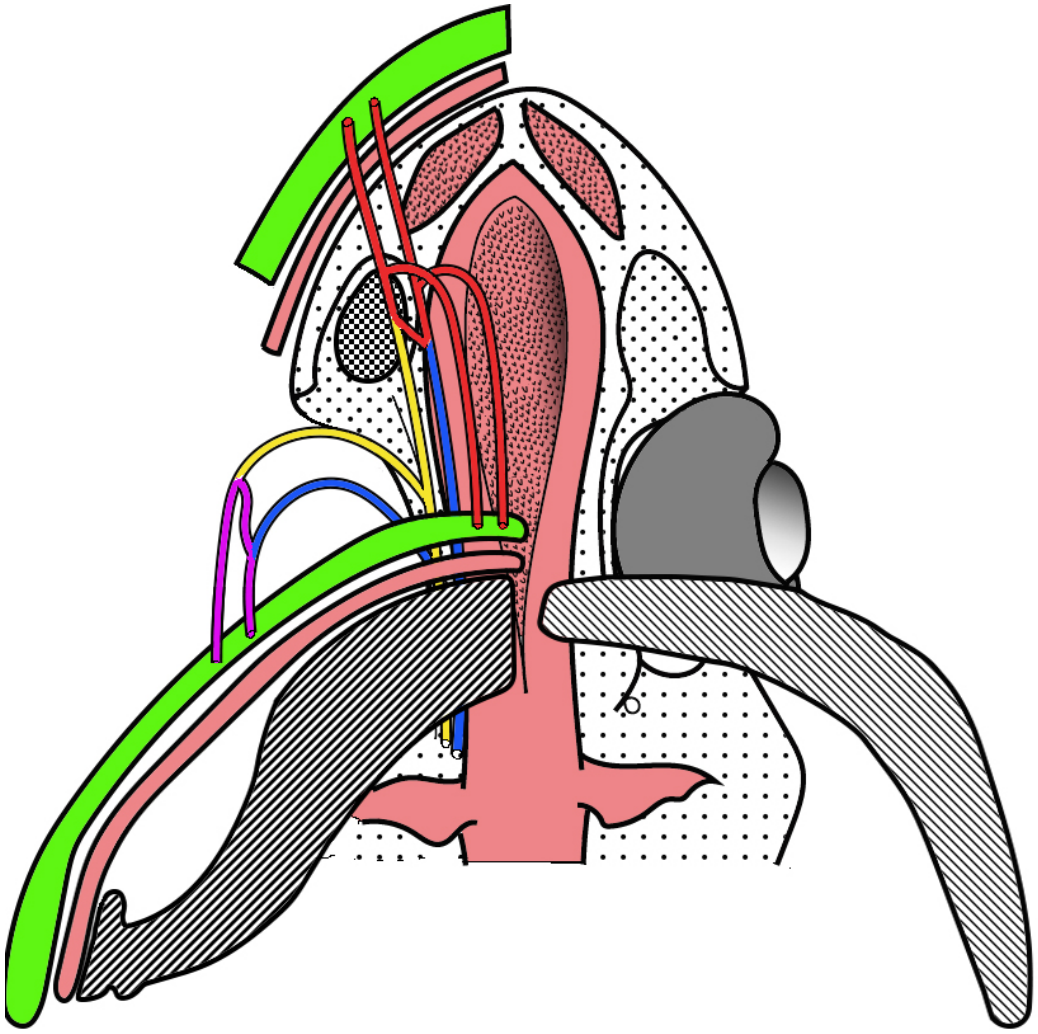


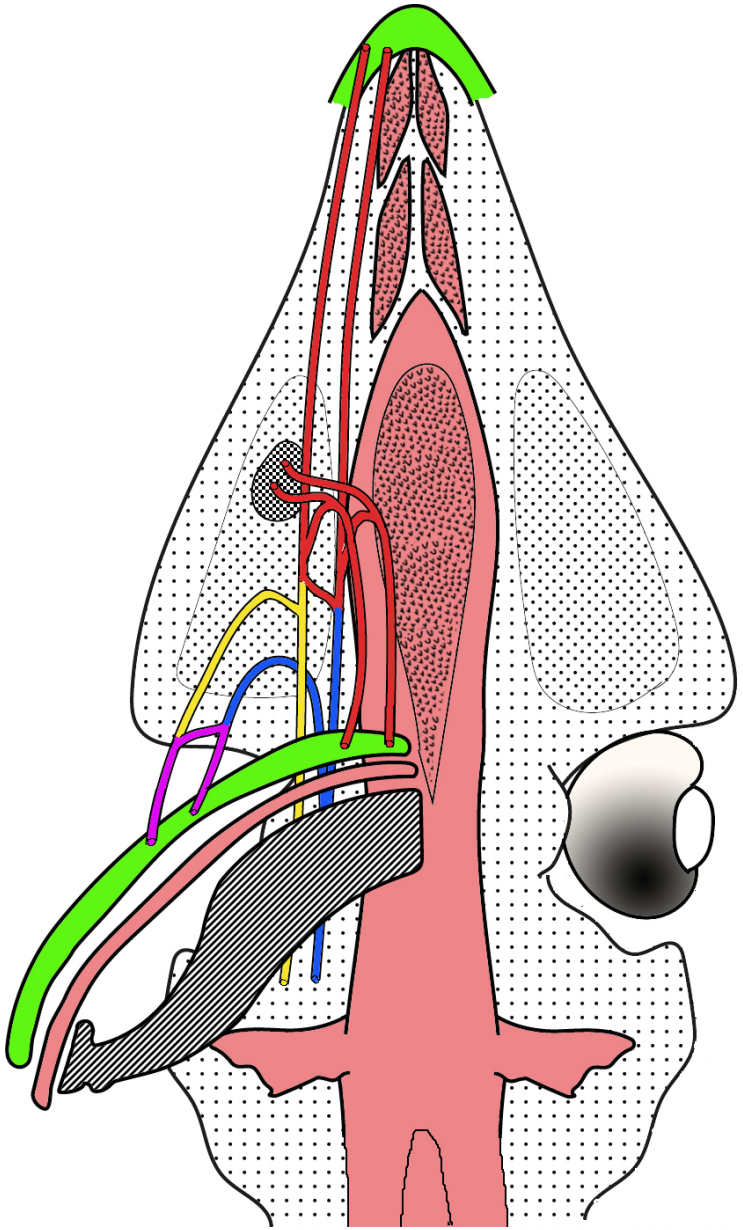



Pmx
Upper lip
Vo
Art.ep
Md
Mx
Pq
Prsp
Saurichthys
(Triassic)

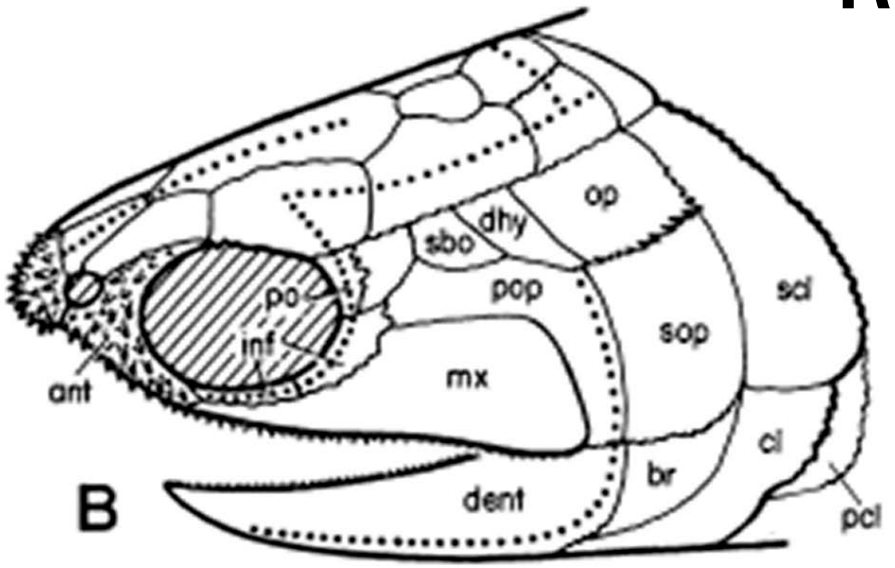


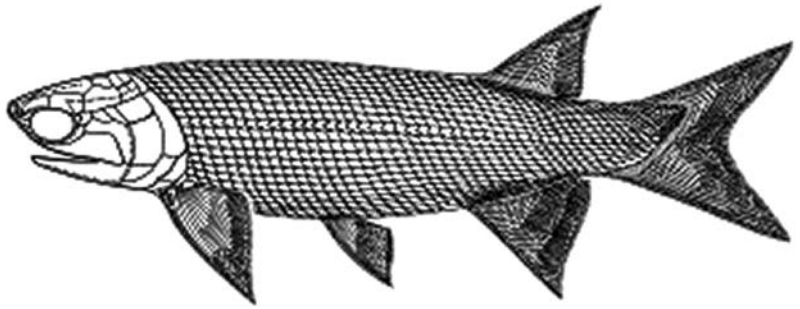


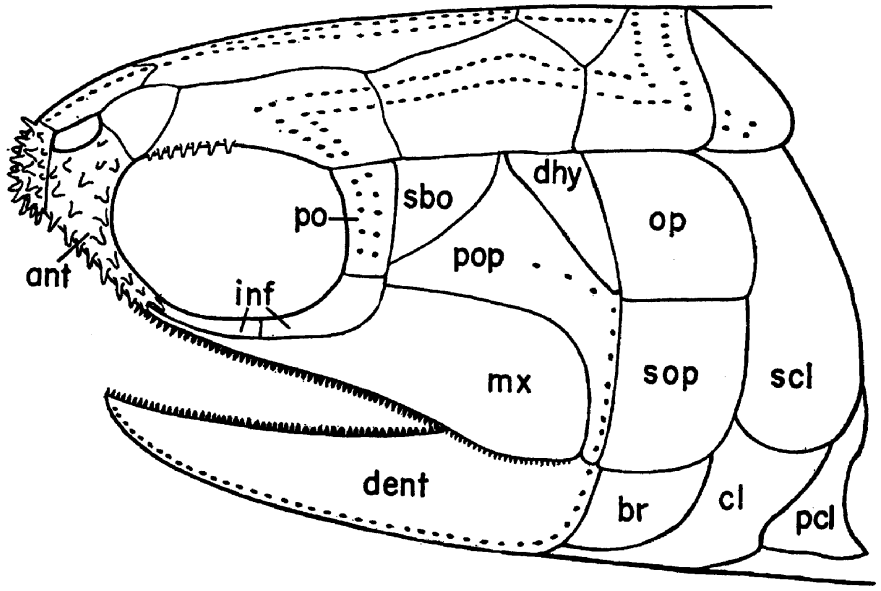


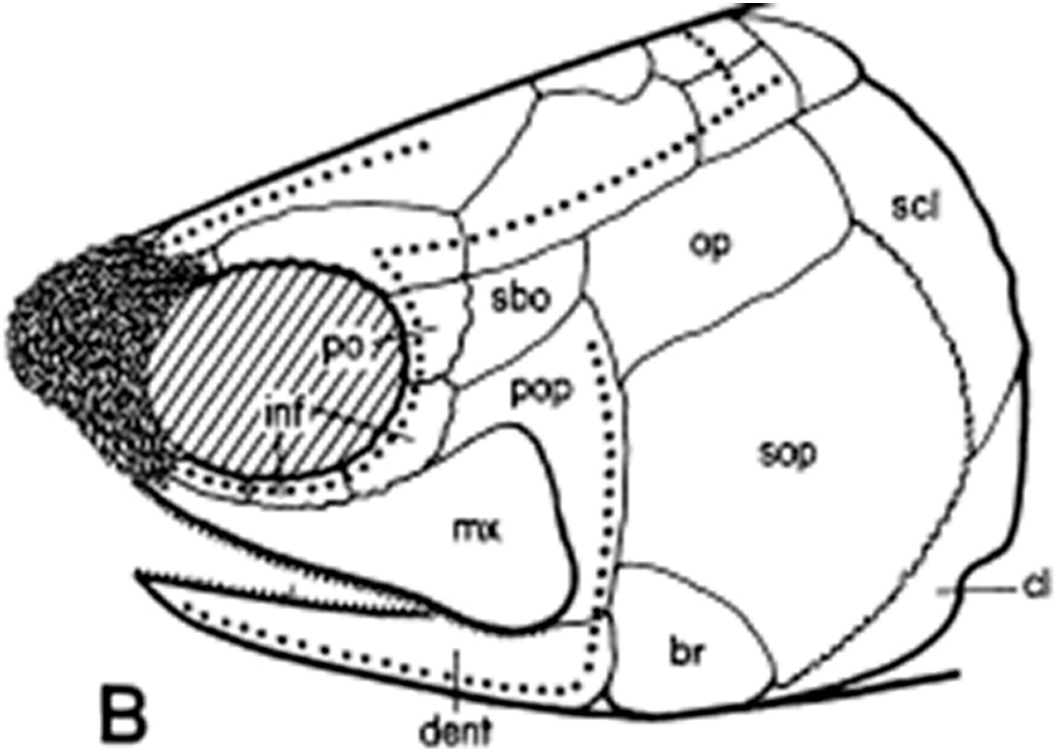


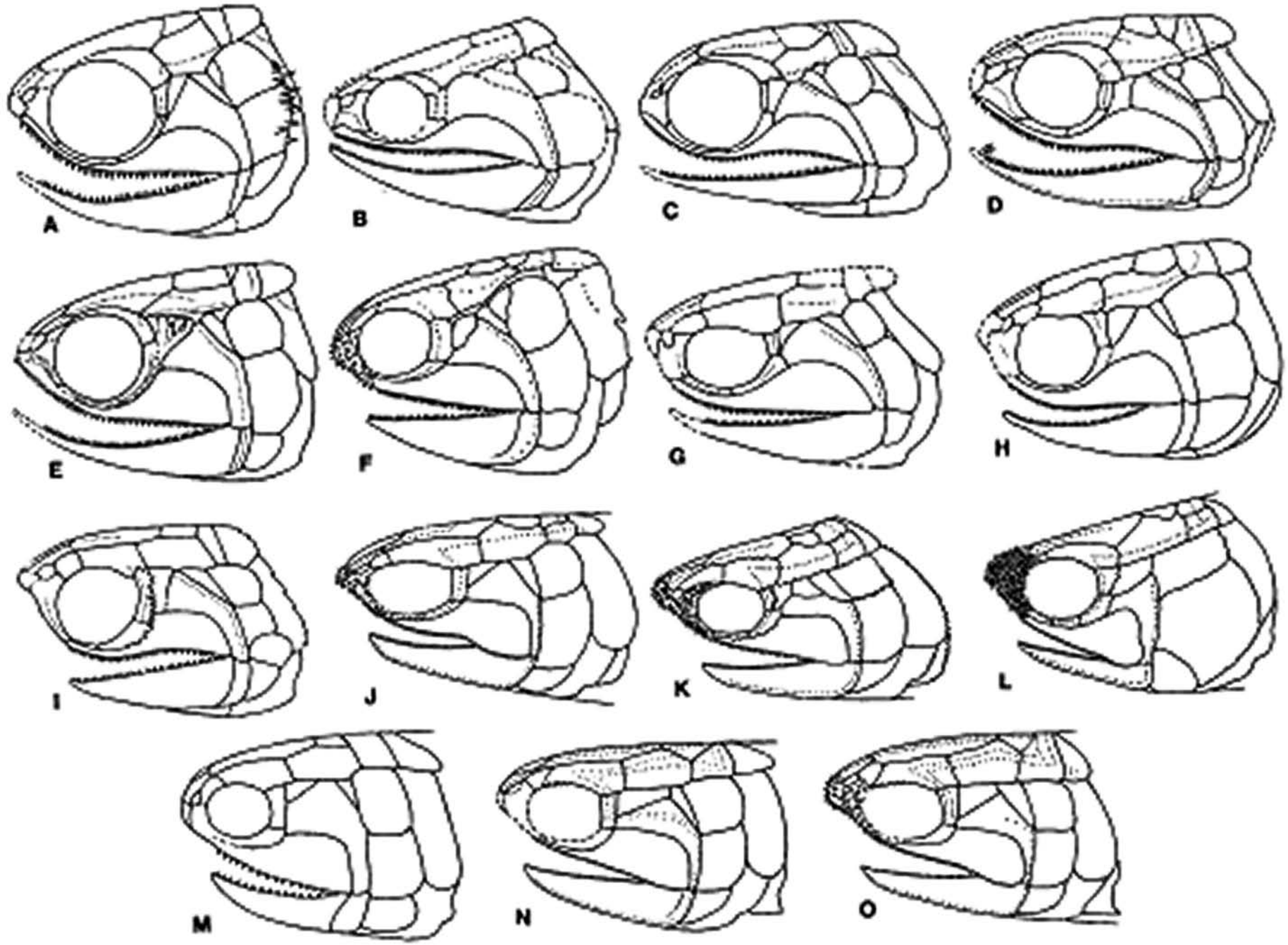
Redfieldiiformes










A
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