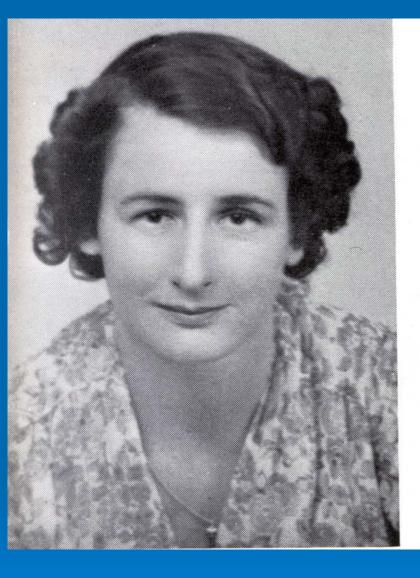
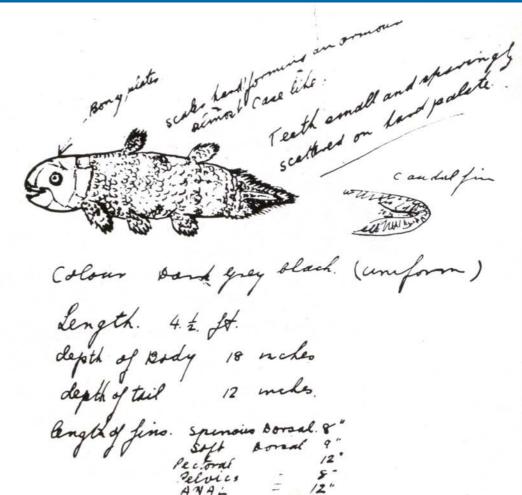
Rozprávanie o latimérii

"Beseda o podivnom starom štvornožcovi".

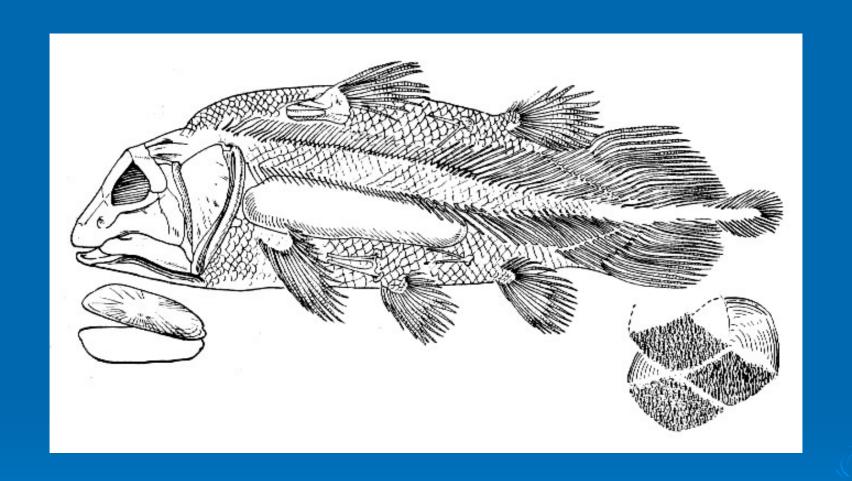










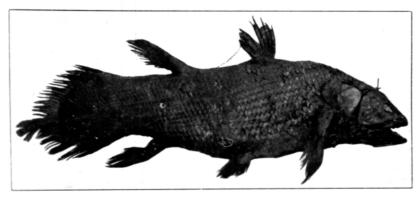


A Living Fish of Mesozoic Type

By Dr. J. L. B. Smith, Rhodes University College, Grahamstown

EX Africa semper aliquid novi. It is my privilege to announce the discovery of a Crossopterygian hish of a type believed to have become extinct by the close of the Mesozoic period. This fish was taken by trawl-net at a depth of about 40 fathoms some miles west of East London on December 22, 1938. It was alive when caught, and shortly after it died it was handed over to Miss Courtenay-

mounted specimen, a responsible citizen-angler of East London stated that about five years ago he had found precisely such a fish, only considerably larger (sic), partially decomposed, east up by the waves on a lonely part of the shore east of East London. When he returned with assistance, the monster had vanished with a risen tide. With regard to the present specimen, fortunately both



COELACANTHID FISH FROM EAST LONDON, SOUTH AFRICA.

The small arrow shows the position of the spiracle, and the dotted line indicates the position of a membrane behind the first dorsal fin.

Latimer, curator of the East London Museum.

Miss Latimer wrote to me, enclosing a sketch and
brief particulars of the specimen. Owing to the

casonal disorganization of the postal services, the

cuter did not reach me at Knysna, some four
hundred miles away, until ten days later. It was

obvious from the sketch and notes that the fish
was of a type believed long extinct. Immediate
elephonic communication with the East London
Museum revealed that, owing to lack of preserving
equipment at that Institution, the putrefied body
had been disposed of beyond any hope of redemption, and the fish had been mounted by the local
taridermist.

Since the fish was unquestionably alive when count, there is at least a possibility that this according tragedy may be ameliorated by the apture of another specimen. This is not so remote a might appear. After careful inspection of the

Miss Latimer and the taxidermist were drawn to observe details of the carcass very closely, so that exhaustive independent questioning has left me with at least some definite information about the missing parts. Fortunately also, the terminal caudal portion of the vertebral column and part of the pectoral girdle remain. The skull is of course intact.

The specimen is 1,500 mm, in total length, and weighed 127 lb, when caught. The colour was a bright metallic blue, which has faded to brown with preservation.

In major characters this remarkable specimen shows close relationship with the Mesozoic genus Macropoma Agassiz, of the family Celacanthida, order Actinistia. The gephyrocercal tail with protruding axial supplement, the normal first dorsal, the obtuse lobation of the remaining fins, the ganoin tubercle ornamentation on the scales and on some of the dermal bones of the head, the



REPRINT FROM THE

Granamstown,

South Africa.

TRANSACTIONS

OF THE

ROYAL SOCIETY OF SOUTH AFRICA.

VOL. XXVIII.

PART I.

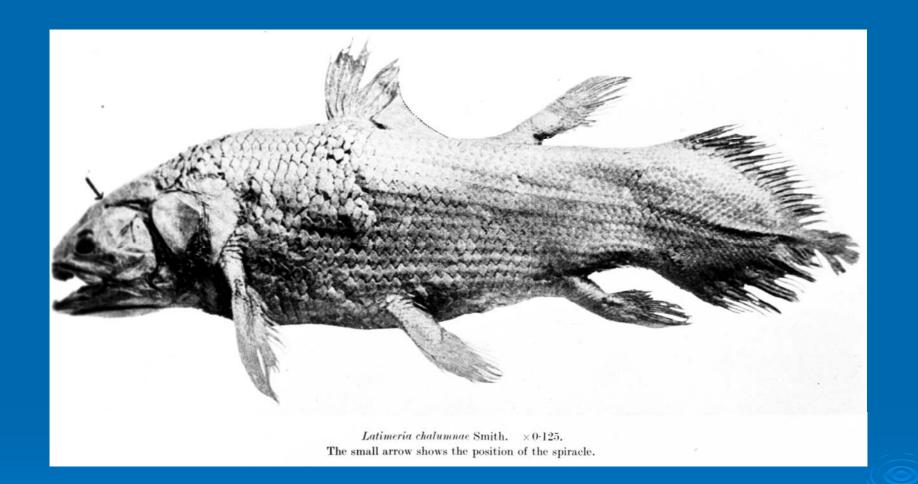
A Living Coelacanthid Fish from South Africa.

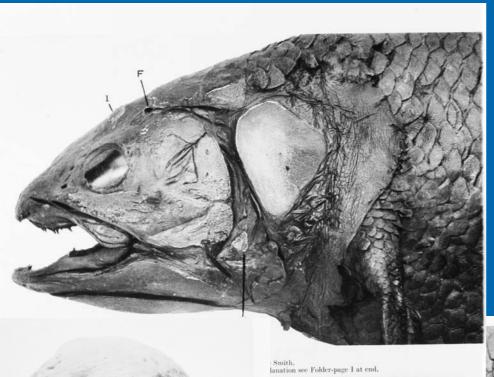
By J. L. B. Smith.

CAPE TOWN.

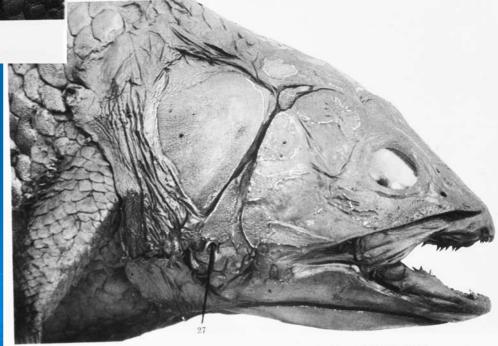
PUBLISHED BY THE SOCIETY

1939





Karol HENSEL



 $Latimeria\ chalamnae\ Smith.\quad Head,\ right\ side.\quad \times 0{\text{-}}45,\quad For\ explanation\ see\ Folder-page\ I\ at\ end.$







(Reprinted from Nature, Vol. 171, p. 99, January 17, 1953)

THE SECOND CŒLACANTH

By PROF. J. L. B. SMITH

South African Council for Scientific and Industrial Research, Fellow in Ichthyology, Rhodes University, Grahamstown

IT is my great privilege to announce the discovery of a second Cœlacanth. There are few biologists who do not remember the amazement engendered by the appearance of *Latimeria* Smith, 1939, as well as the acute disappointment in learning that all the soft parts of the fish had been lost.

For these various reasons it became a self-appointed task to endeavour to find a complete specimen, and for almost fourteen years I have constantly pursued that aim. There was overwhelming evidence that the fish was a stray, so that the first essential was to attempt to trace the habitat.

The only overseas scientist to venture an opinion on this matter was E. White, of the British Museum, whose statement that it was "almost certainly" from "the deeper parts of the sea, to which its kind have retreated in the face of fierce competition with the more active modern types of fish", scarcely took into account that numbers of successful modern fishes, some quite numerous, appear less well equipped for survival than the Cœlacanth, and a fish from the depths so well armoured would from our present knowledge indeed be a phenomenon.

From my study of fishes the Cœlacanth appeared to be a denizen of moderately deep water, living in and about rocks, presumably in an area not easily fished or commonly fished with efficiency.

My studies led me to regard the Mozambique channel about Madagascar as the most likely area, and plans for an expedition to search for more were well advanced, but fell through. I then decided on another method, and a leaflet, in English, French and Portuguese, was prepared, giving a brief account, and a photograph of the Cœlacanth, as well as offering a reward of £100 for each of the first two specimens caught.

By co-operation of the respective authorities, thousands of these leaflets were distributed throughout the coastal regions of the Western Indian Ocean, in such fashion that they reached and were explained to the native fisherfolk in even the most remote parts. During the past six years my wife and I have carried out expeditions along a considerable part of the East African coast, covering many otherwise





Old Fourlegs

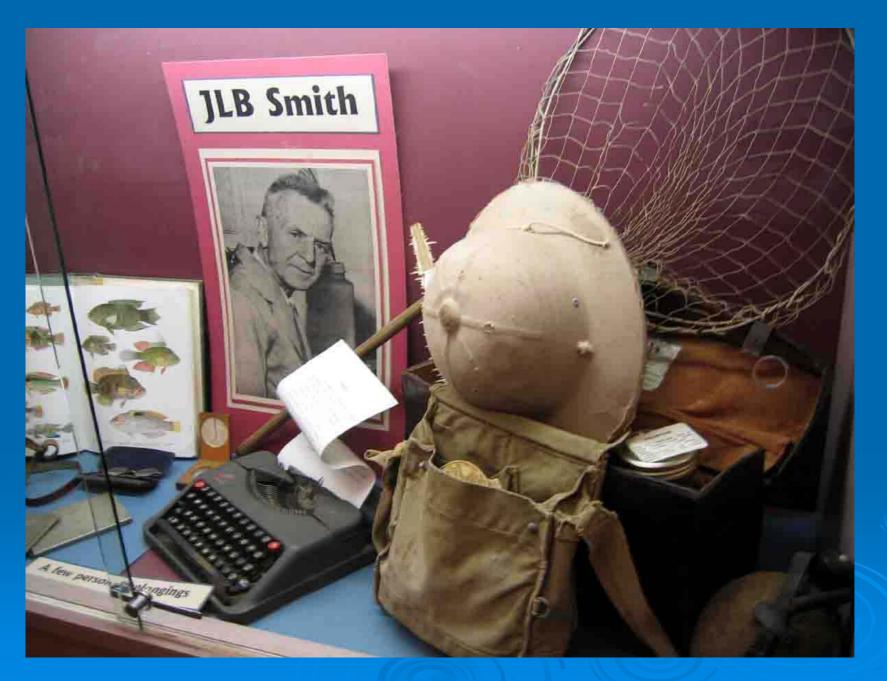
THE STORY OF THE COELACANTH

BY

J. L. B. SMITH



LONDON 1957 READERS UNION LONGMANS, GREEN







en souvenir de son passage-trop bref- au Laboration d'Anatomie Comparir ela Museum

J. MILLOT ET J. ANTHONY

J. MILLOT ET J. ANTHONY

Anatomie de

LATIMERIA CHALUMNAE

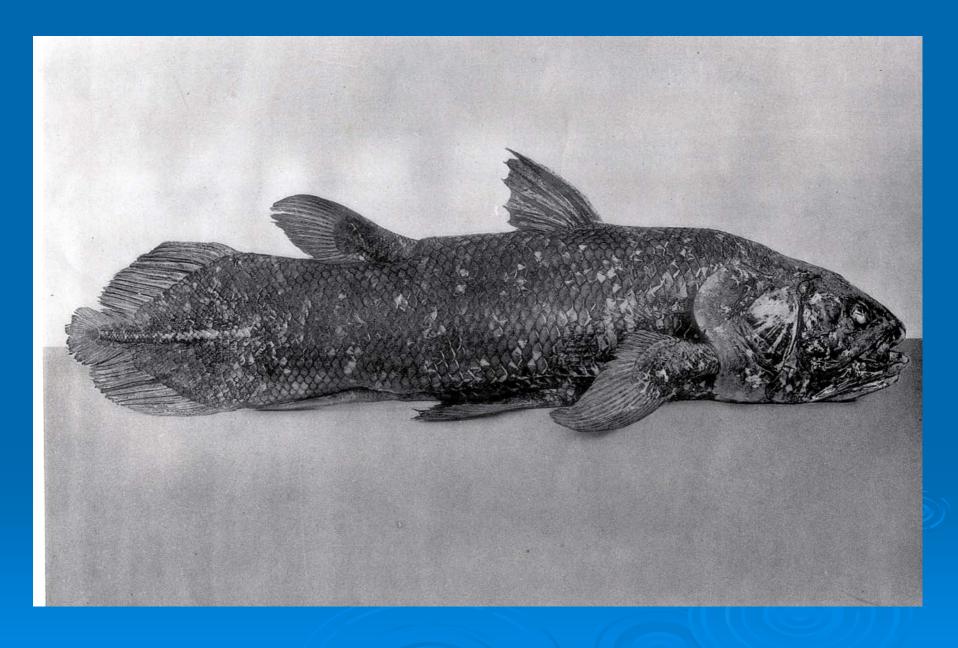
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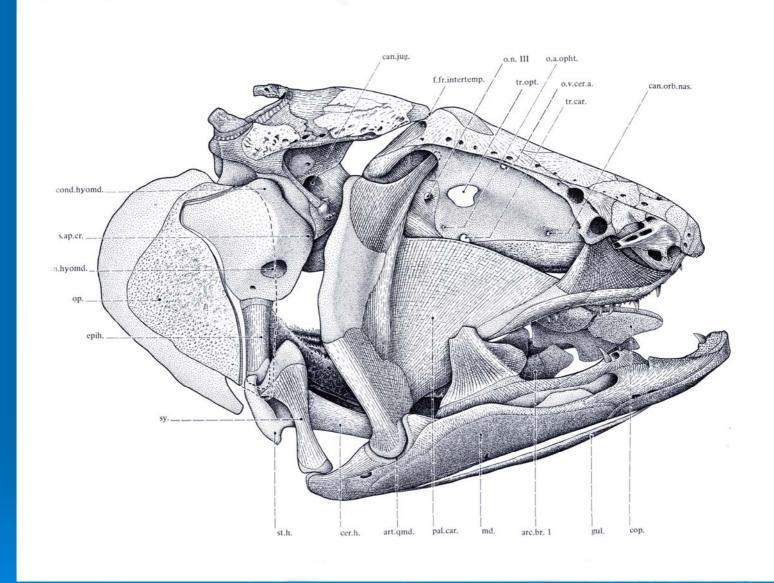
Squelette, Muscles et Formations de soutien

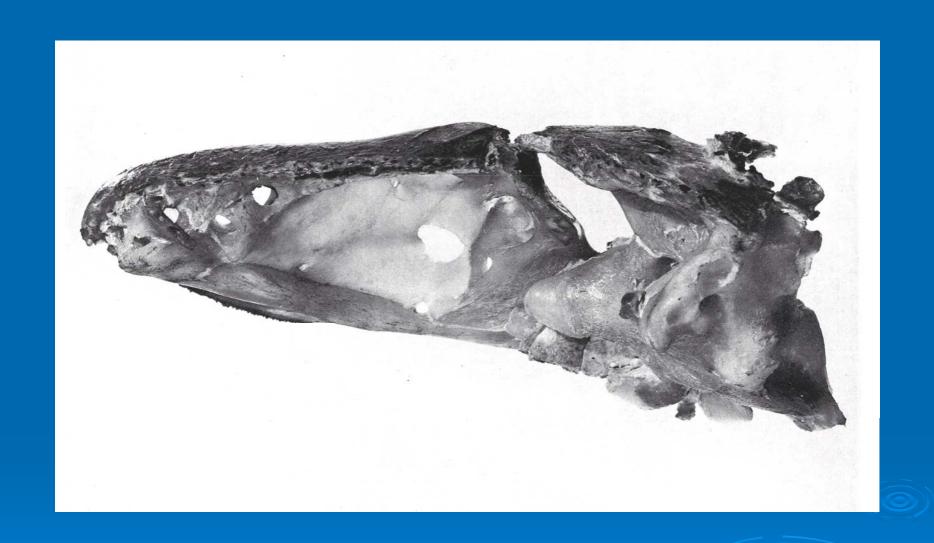
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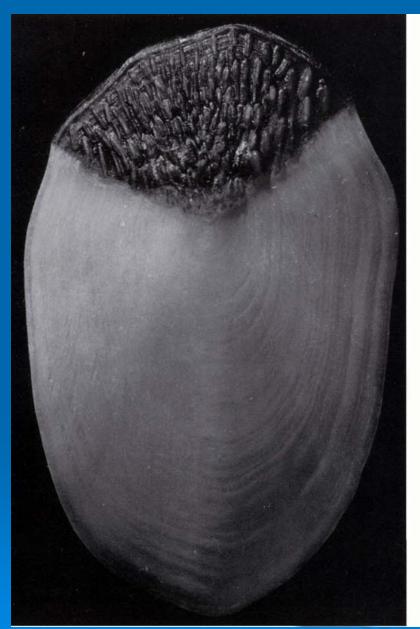
Publié avec le concours de l'INSTITUT DE RECHERCHE SCIENTIFIQUE DE MADAGASCAR TANANARIVE

ÉDITIONS DU CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE 13, quai Anatole-France,
Paris-VII°







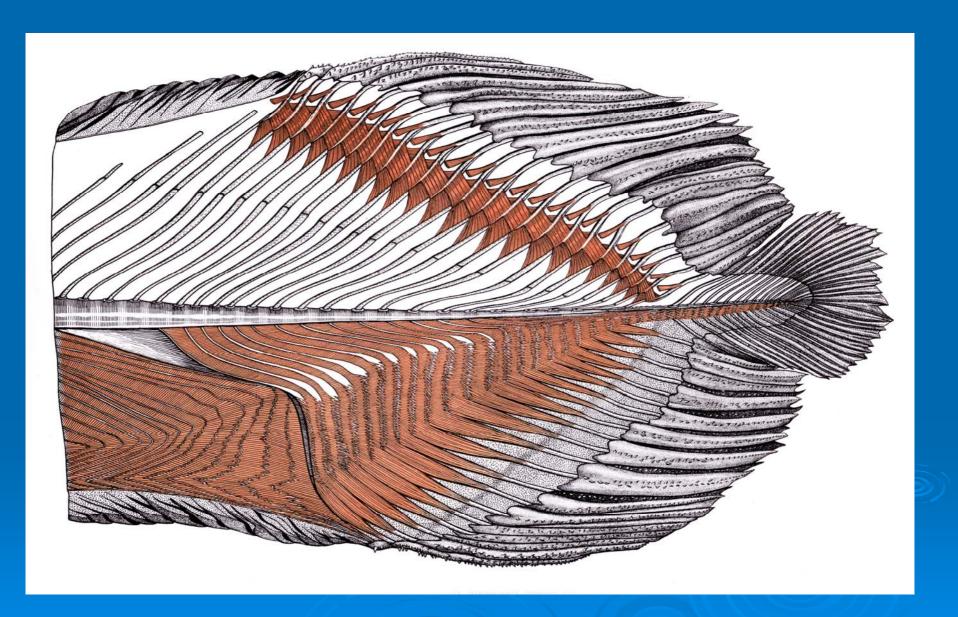


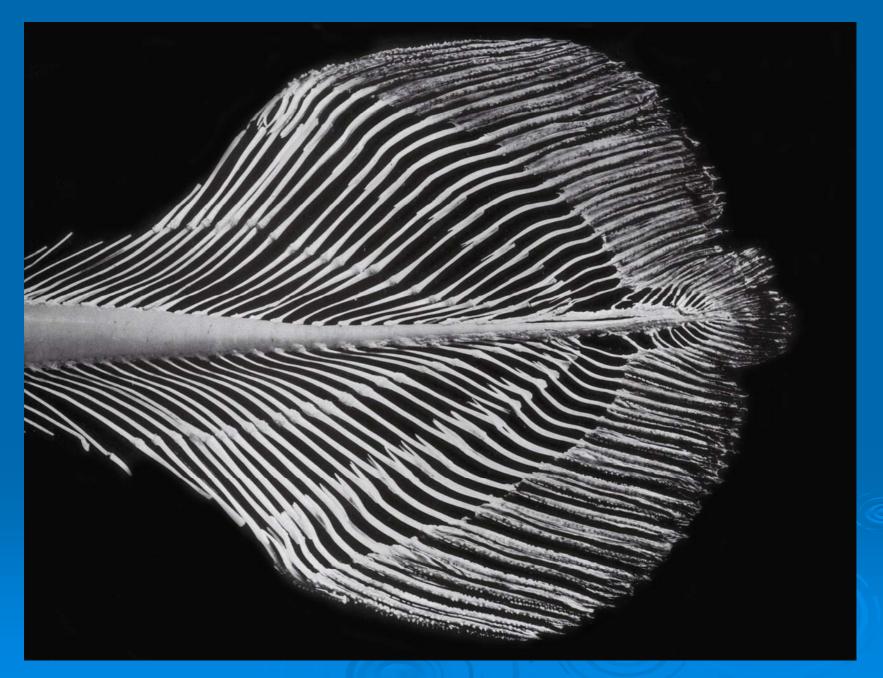




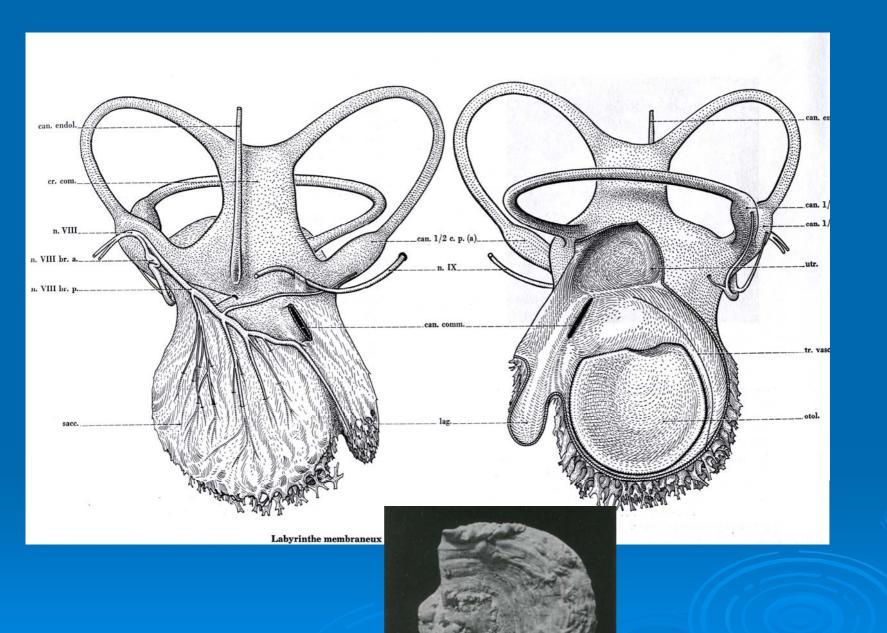




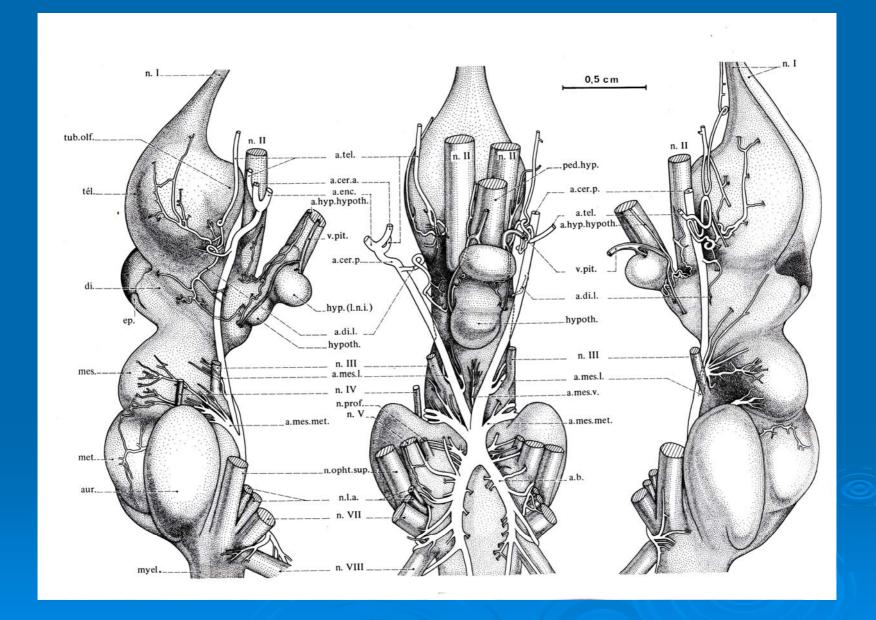


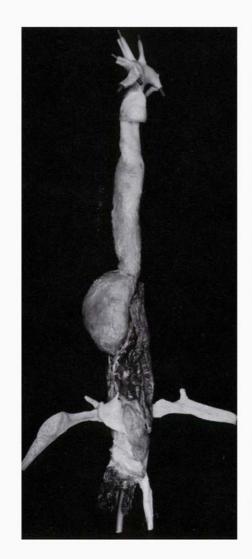


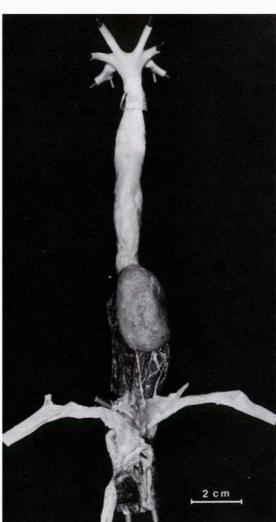


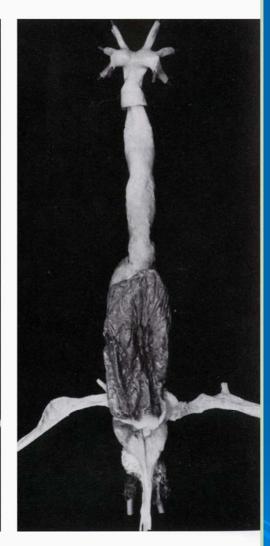


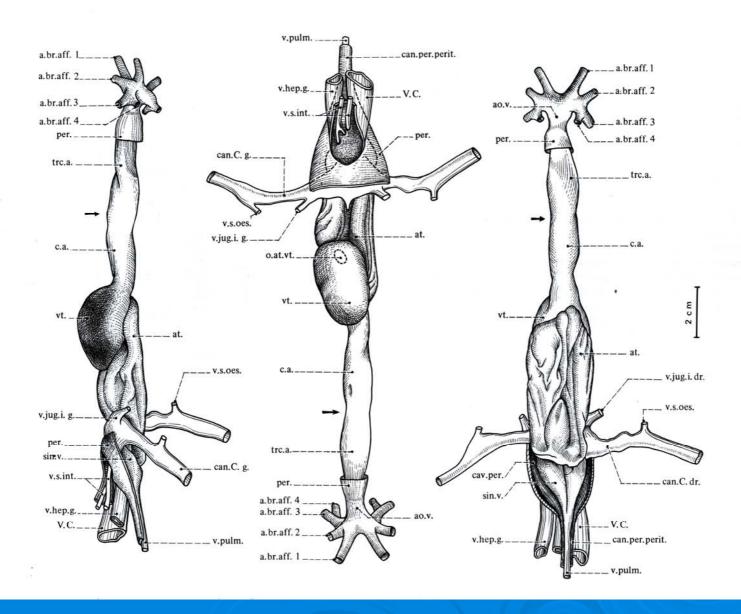






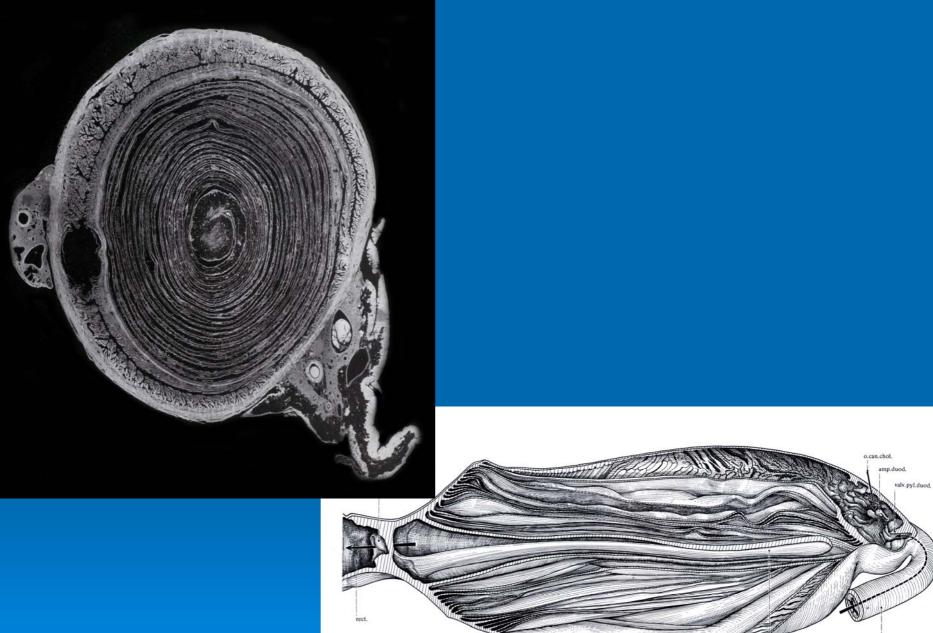




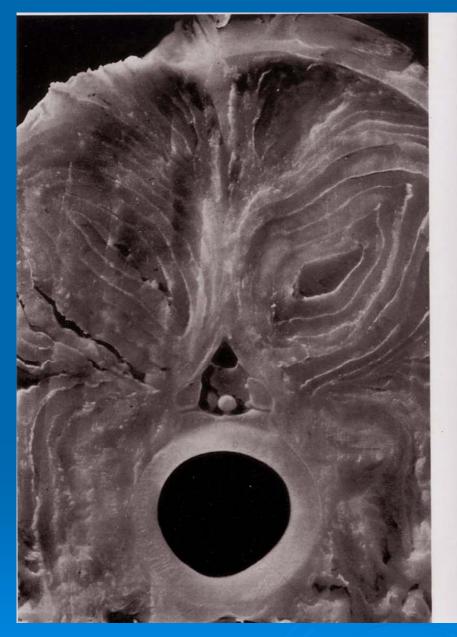




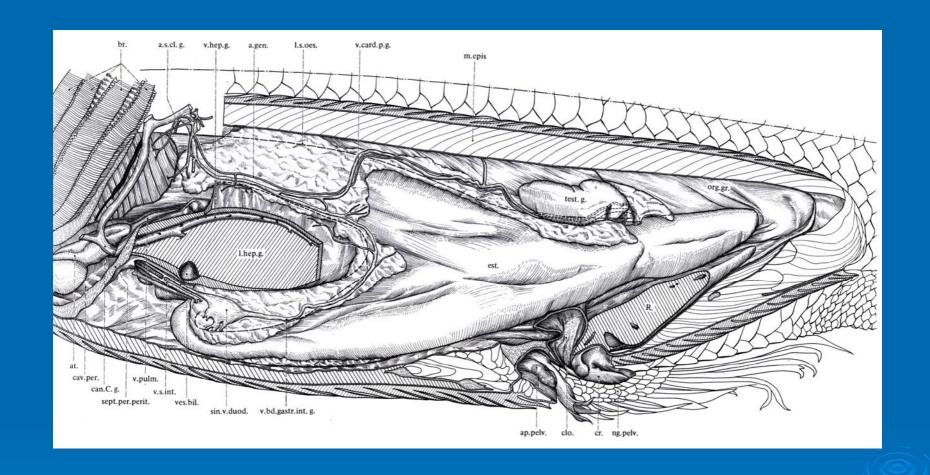


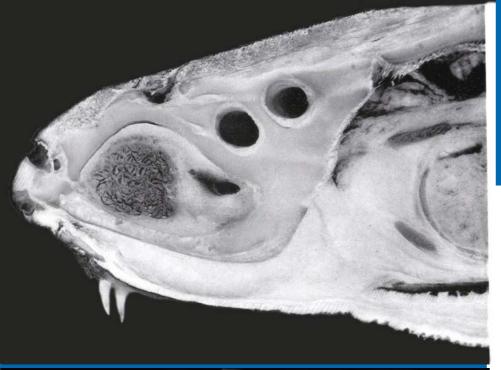


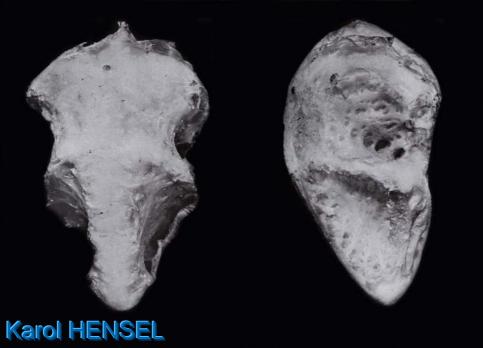
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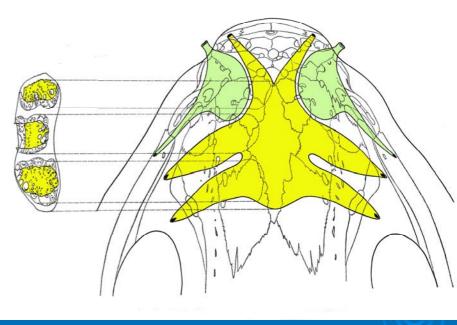


























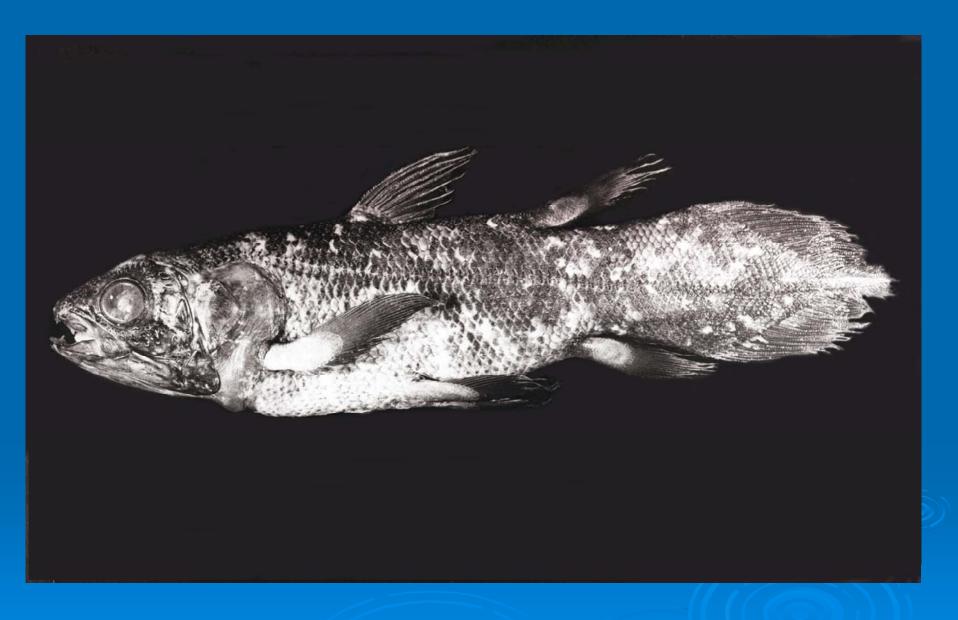




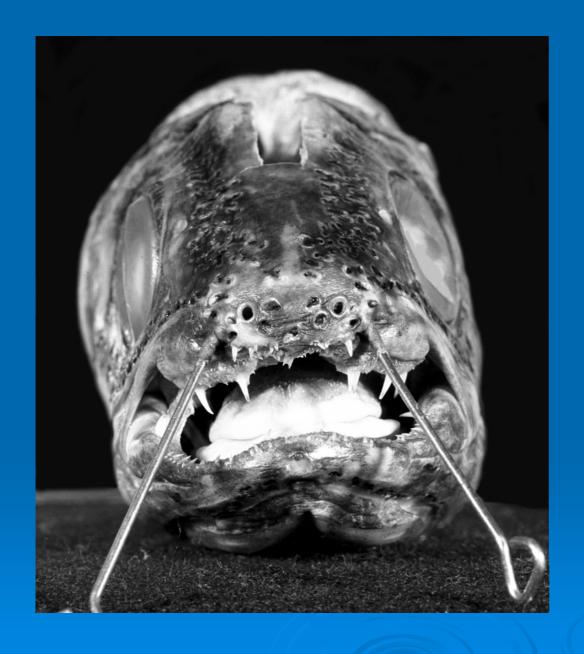




Latimeria chalumnae no. 29/2









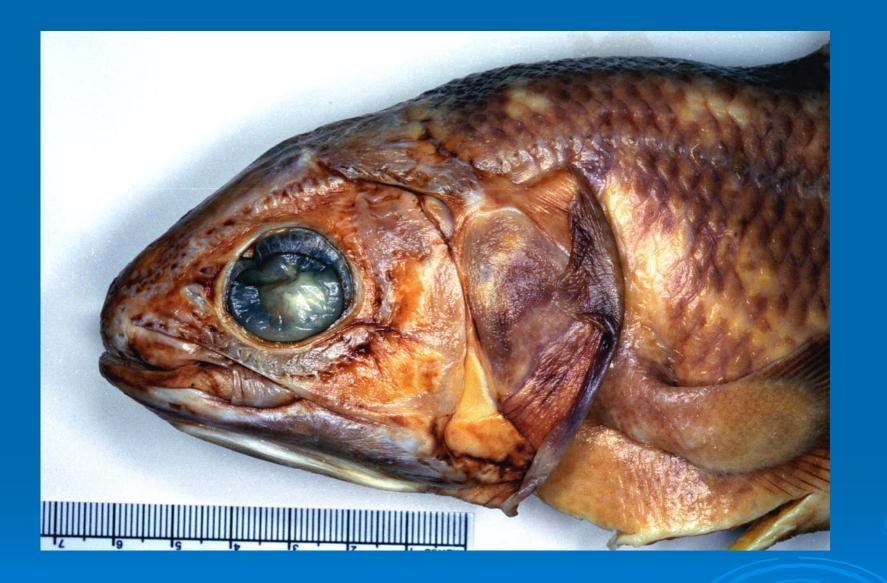






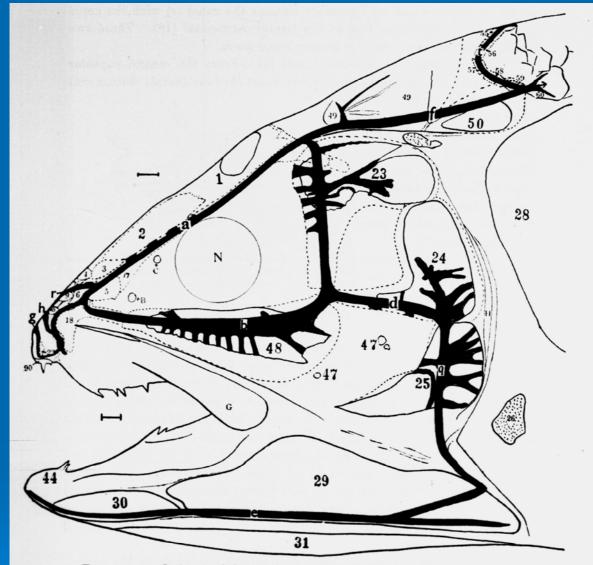




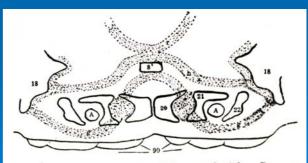




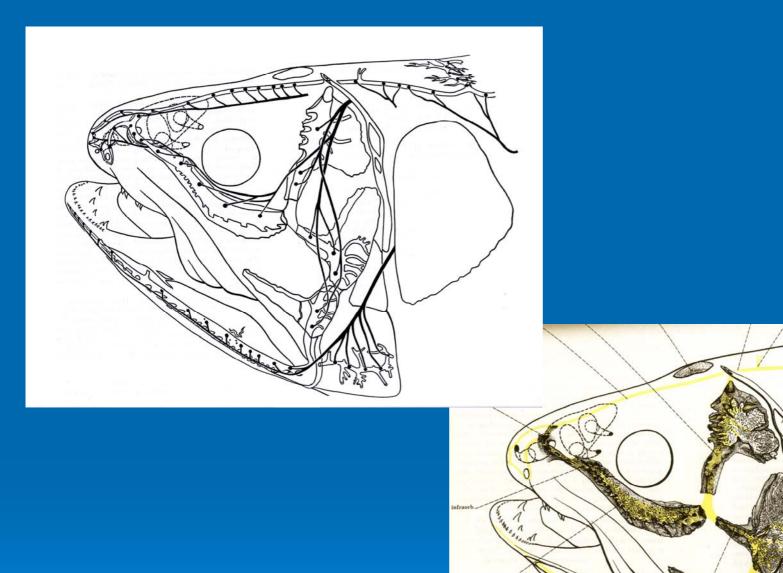


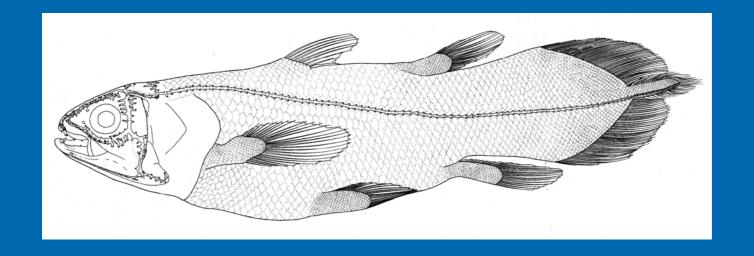


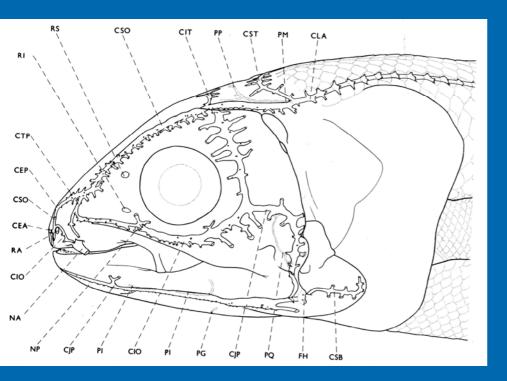
Text-fig. 5.—Latimeria chalumnae Smith. Left side of head showing main sensory canals in black. Bone surface above the skin outlined by unbroken lines, that beneath the skin by broken lines. Canals within bones not accurately to scale for size. The line represents 1 cm. For explanation see Folder-page I at end.

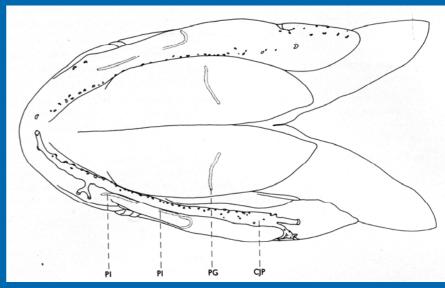


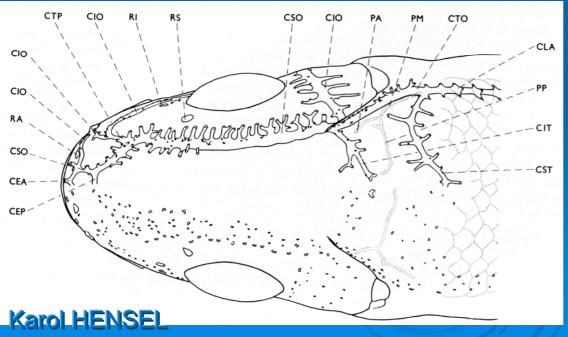
Text-fig. 4.—Latimeria chalumnae Smith. Sensory canals of rostrum shown bydotted courses. About natural size. For explanation see Folder-page I at end.

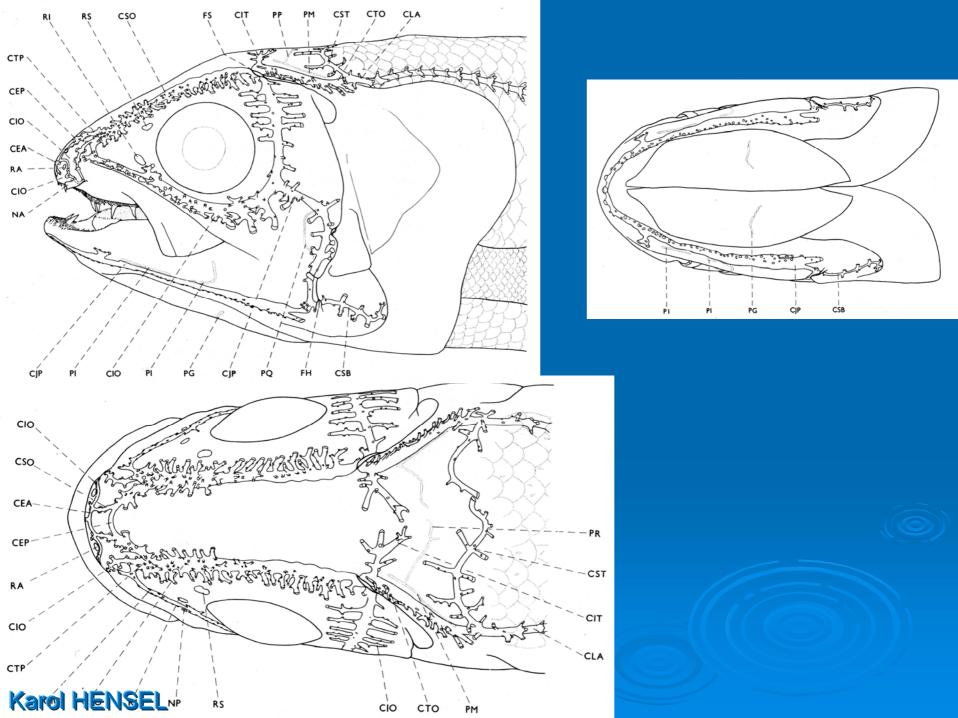


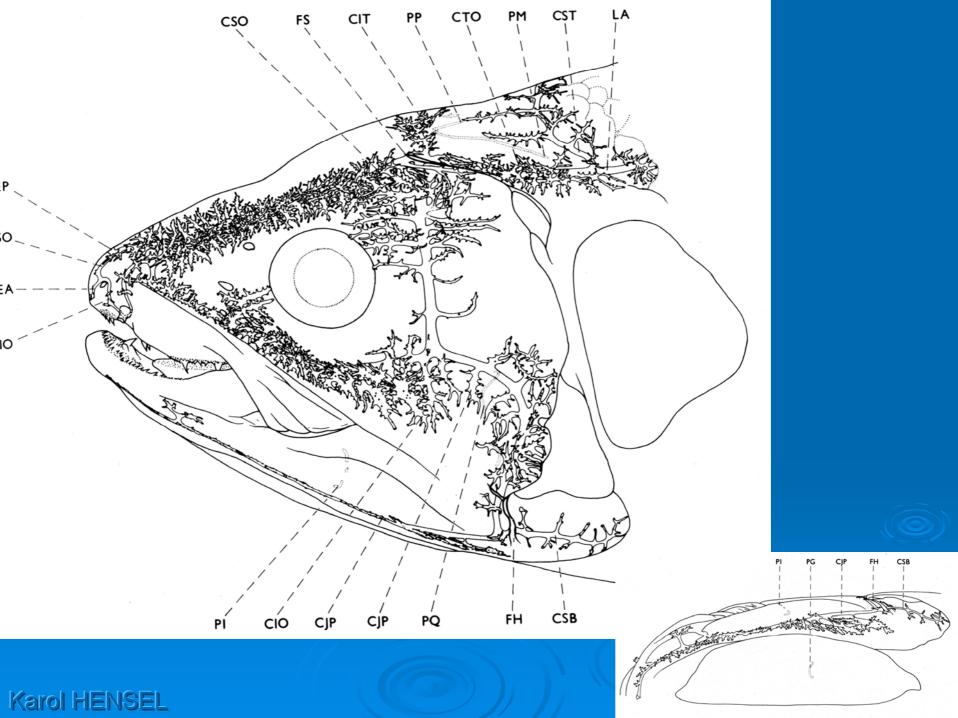


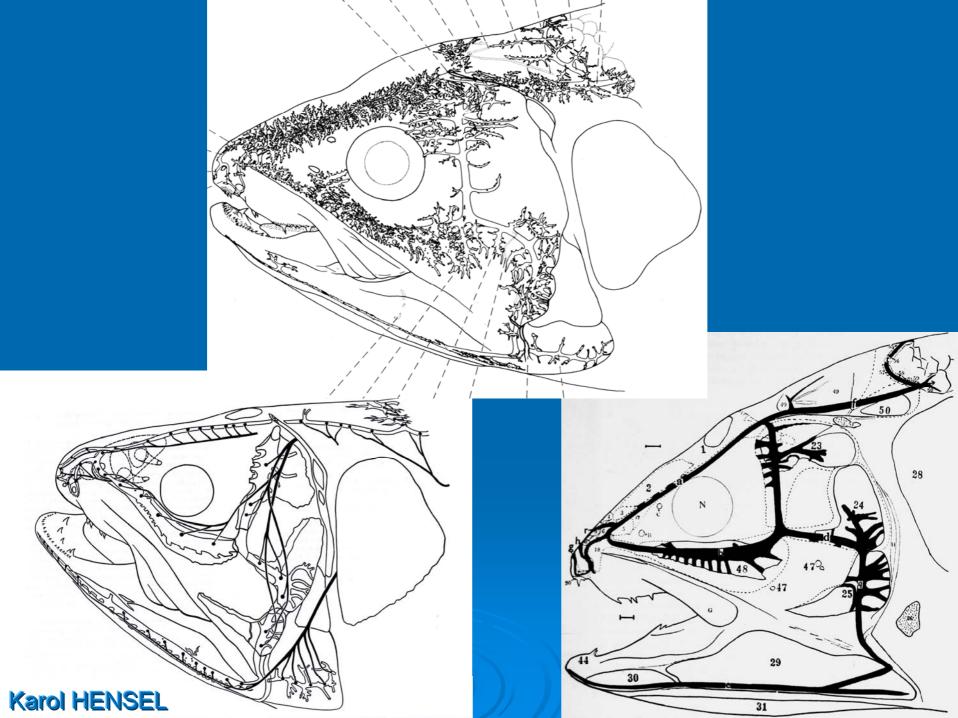






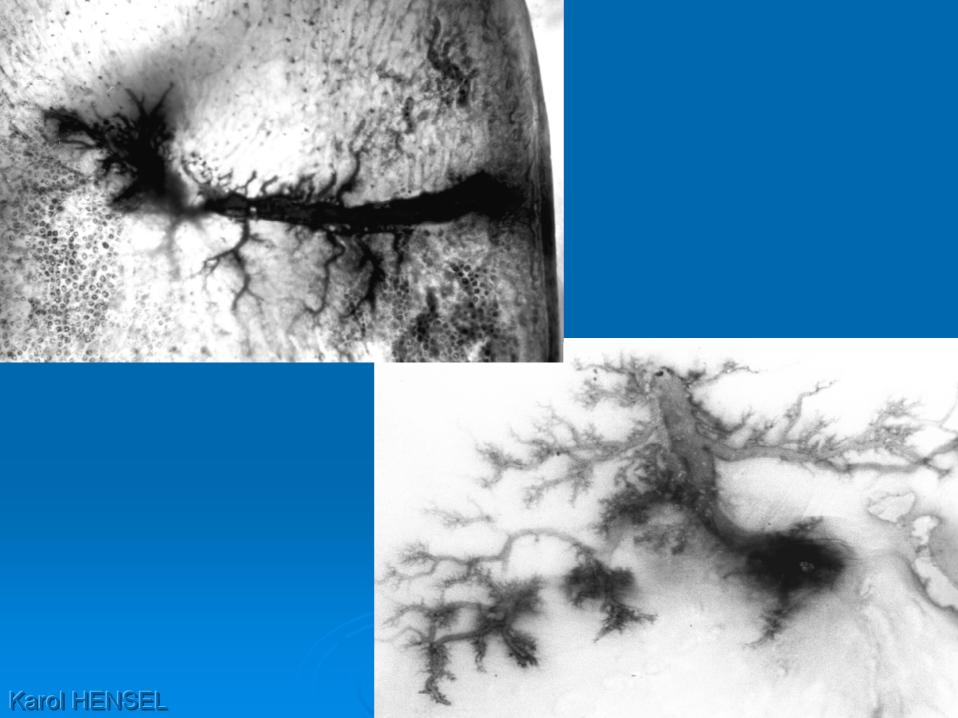












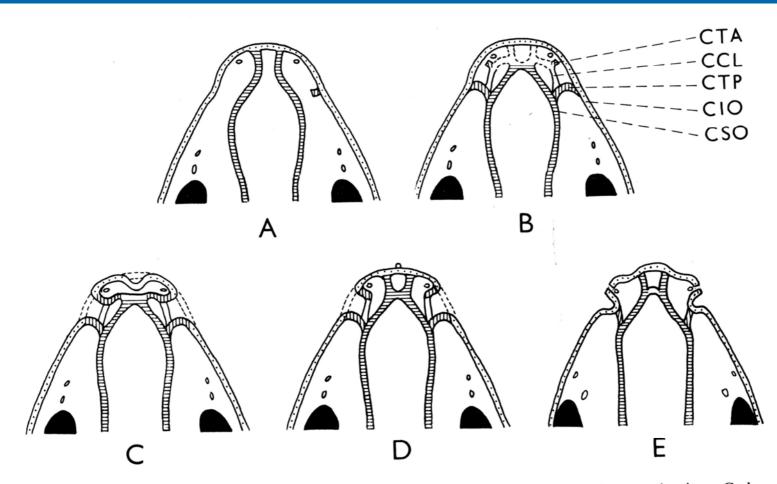


Fig. 7. — Schéma des canaux sensoriels dans la région ethmoïdienne chez les Crossoptérygiens Cœlacanthiformes : A, formes dévoniennes (Jarvik, 1942) ; B, Cœlacanthe indéterminé du Trias (Jarvik, 1942) ; C, Latimeria (Jarvik, 1942) ; D, Latimeria (Millot et Anthony, 1958) ; E, Latimeria (sur la base des résultats de cette étude).









Ontdekkers van die Selakant, 1938 J. L.B. Smith M. Courtenay J. atimer



Die lewende Selakant- Latimeria chalumnae



Coelacanth marine research



J.L.B. Smith Institute of Ichthyology, Grahamstown





