

**An Atlas of
CHORDATE
STRUCTURE**

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AN ATLAS OF **Chordate Structure**

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Preface

This book is intended for use at the laboratory bench, to guide the student in the interpretation of his own specimens: it is not a textbook and thus does not contain theoretical information. As an introduction to the study of chordate structure, this book should be used in conjunction with those on histology and embryology already published in this series.

All the photographs and drawings have been specially made for the book, and a wide variety of specimens has been included. Nowadays the student has to deal with many kinds of preparation in addition to the museum mount and permanent microscope slide, and we have used some commercial mounts as well as our own dissections. In some cases, especially dogfish as a basic chordate type, we have used dissections, commercial mounts, infrared photography of living embryos, flash photography of living embryos, permanent microscope preparations, freshly-cut steaks of preserved fish—all to elucidate that structure without which a knowledge of function cannot be acquired. This wide variety of material should also be investigated by the student, for no one kind of specimen can give adequate information. We have been fortunate in being able to augment our own range of specimens by borrowing from colleagues—Savile Bradbury, Frank Cox, Bill Freeman and Anne Terry have all been most helpful in this regard, and we owe them sincere thanks for their willingness to co-operate.

We have been equally fortunate in commercial sources. To Gerrard and Company we owe considerable thanks for providing on loan, often at considerable inconvenience to themselves, some of their superb specimens: numbers 48, 49, 50, 51, 67, 70, 71, 75, 76, 103, 104, and 106. To Philip Harris Biological we are equally indebted: specimens 27, 54, 55, 69, 72, 73, 87, 88, 90, 91, 93, and 96 came directly from them, as also did most of the animals we dissected for ourselves. There is no doubt that the student uses commercial preparations in wide variety nowadays, and we are most grateful for the chance to include these excellent examples from our friends in the biological supply houses.

To Bill Freeman we owe an especial debt of gratitude.

He has read the work in manuscript with his usual total thoroughness, and to him we give thanks not only for saving us from error, but also for encouraging us in the work.

January 1977

B. B.
P. H. M.

By the same authors

An Atlas of Plant Structure: Volume 1
An Atlas of Plant Structure: Volume 2
An Atlas of Chordate Structure

By W. H. Freeman and Brian Bracegirdle

An Atlas of Invertebrate Structure
An Atlas of Embryology
An Atlas of Histology
An Advanced Atlas of Histology

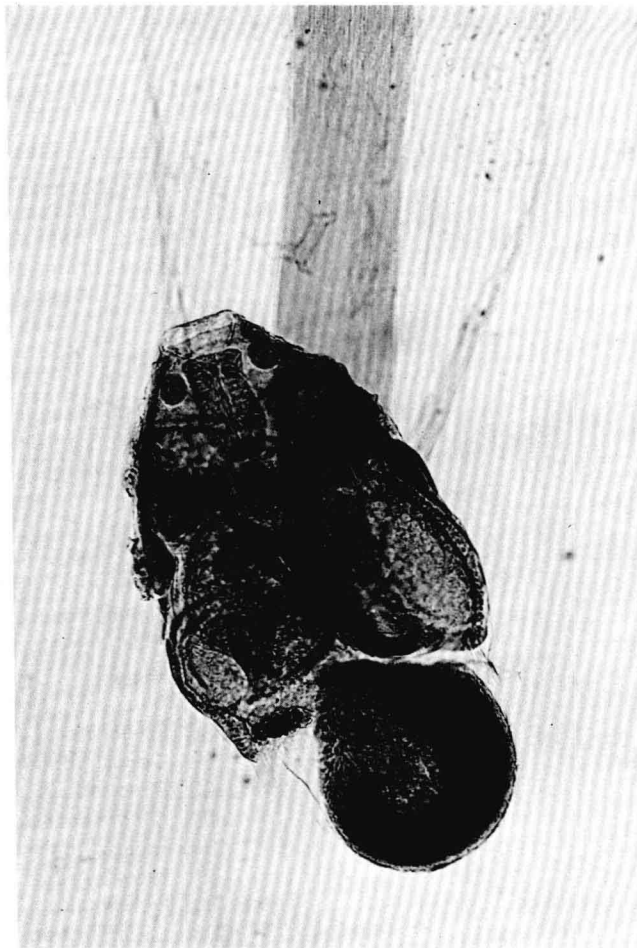
Colour Transparencies for Projection

Every photograph in this book is available as a 2×2 colour slide for projection from Philip Harris Biological Ltd., Oldmixon, Weston-super-Mare, Avon.

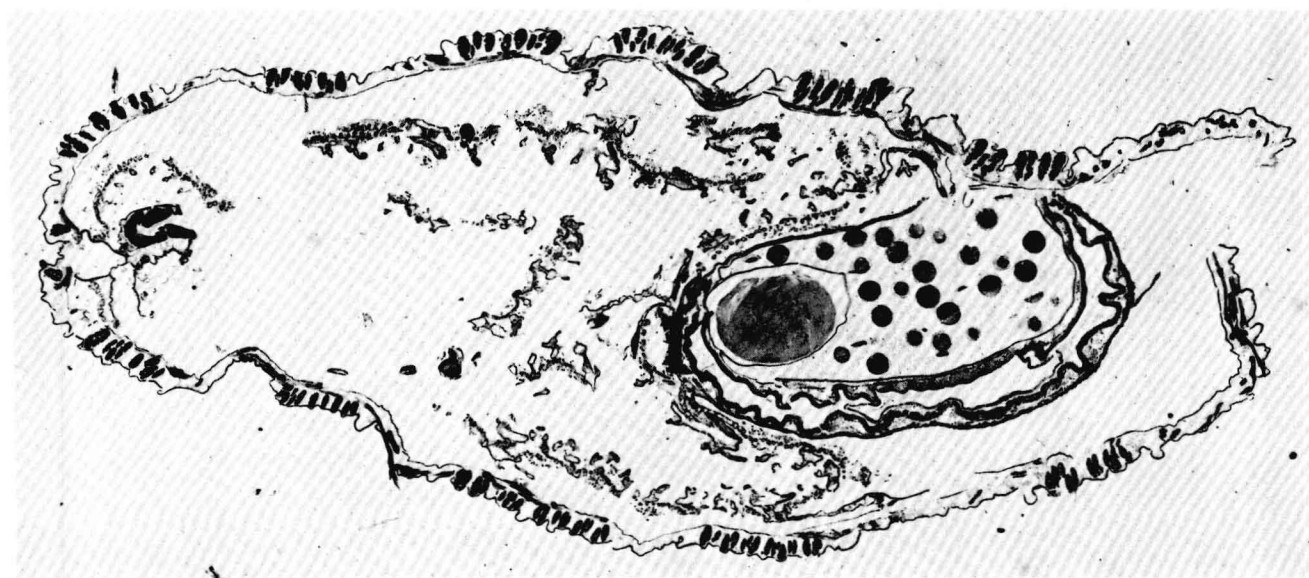
Each original master transparency was made at the same time as the negative for the corresponding picture in this book, exclusively for this Company. The authors recommend these slides for their quality and moderate cost for the teaching of chordate structure, especially in conjunction with this book.



1. *Clavelina*, E. (Mag. $\times 20$)



2. *Oikopleura* larva, anterior E. (Mag. $\times 75$)



3. *Ciona*, TS oblique. (Mag. $\times 45$)

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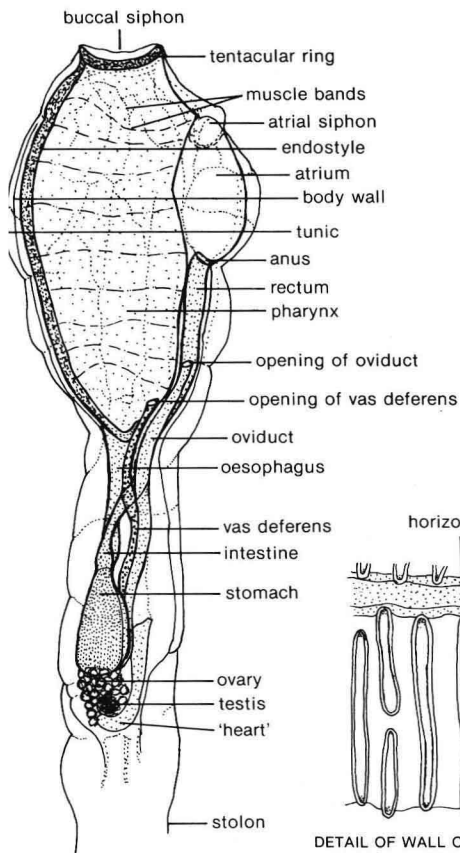
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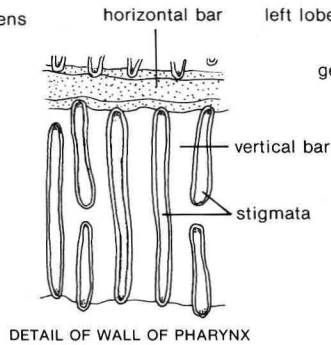
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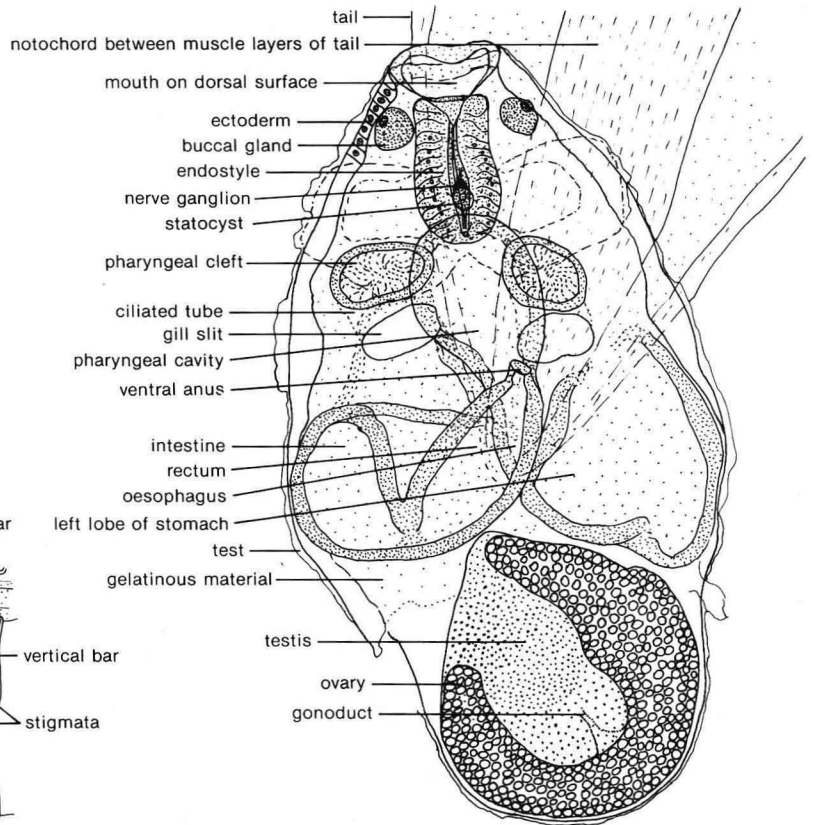
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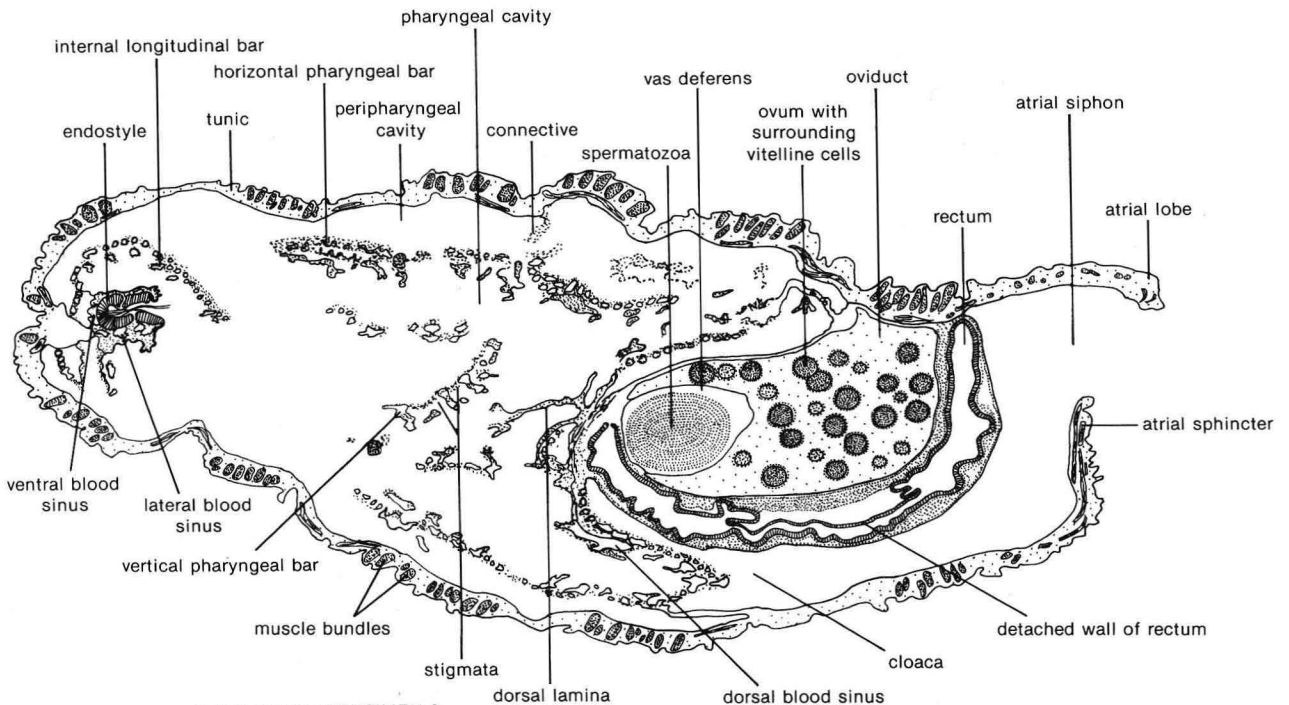
DRAWING OF SPECIMEN 1



DETAIL OF WALL OF PHARYNX



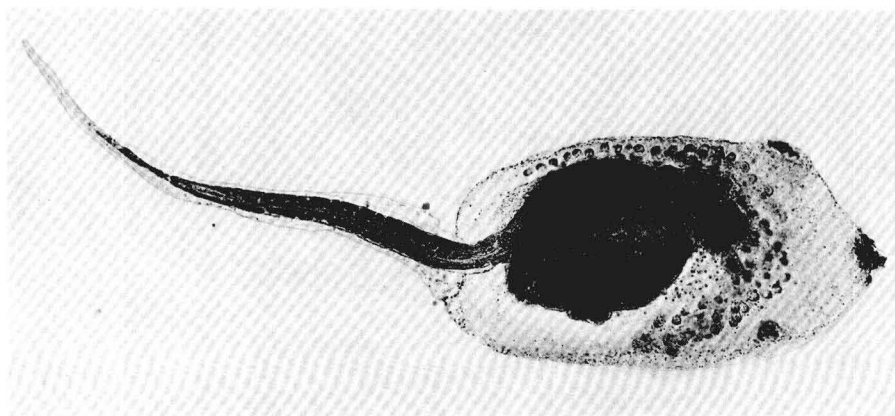
DRAWING OF SPECIMEN 2



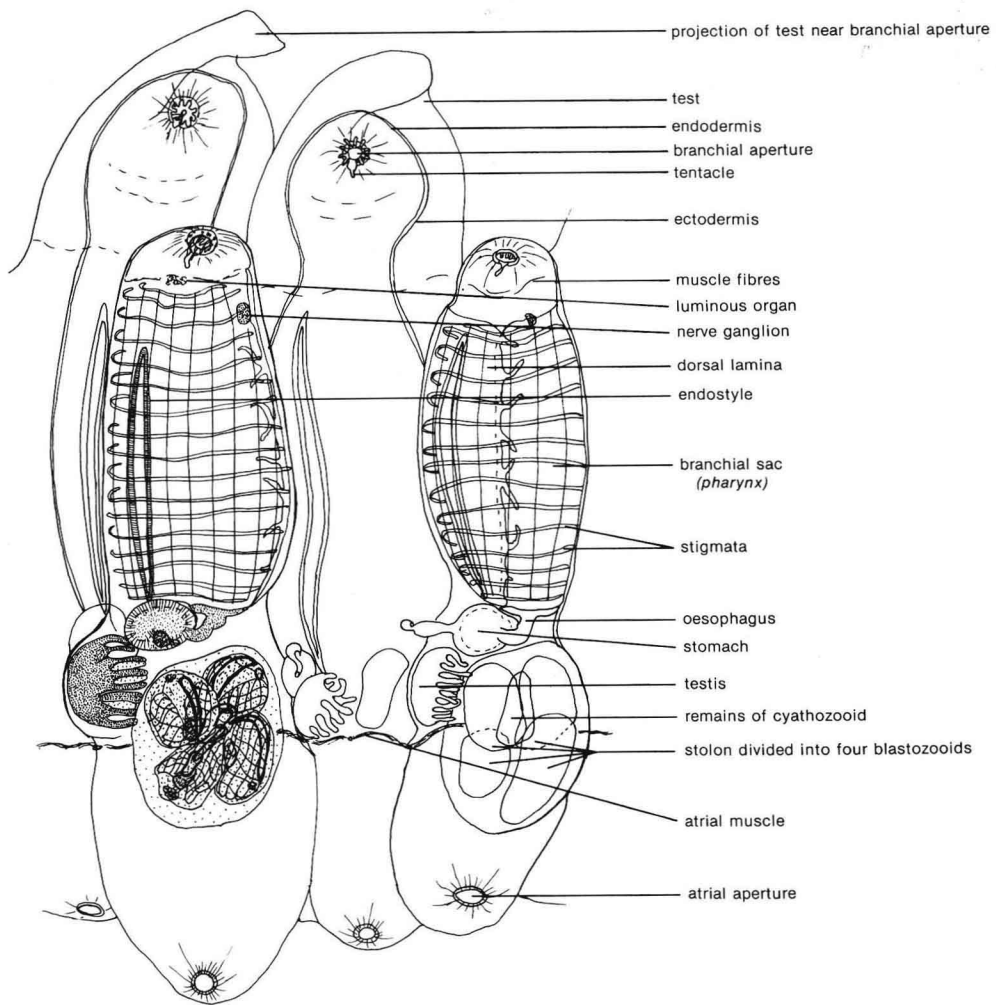
DRAWING OF SPECIMEN 3



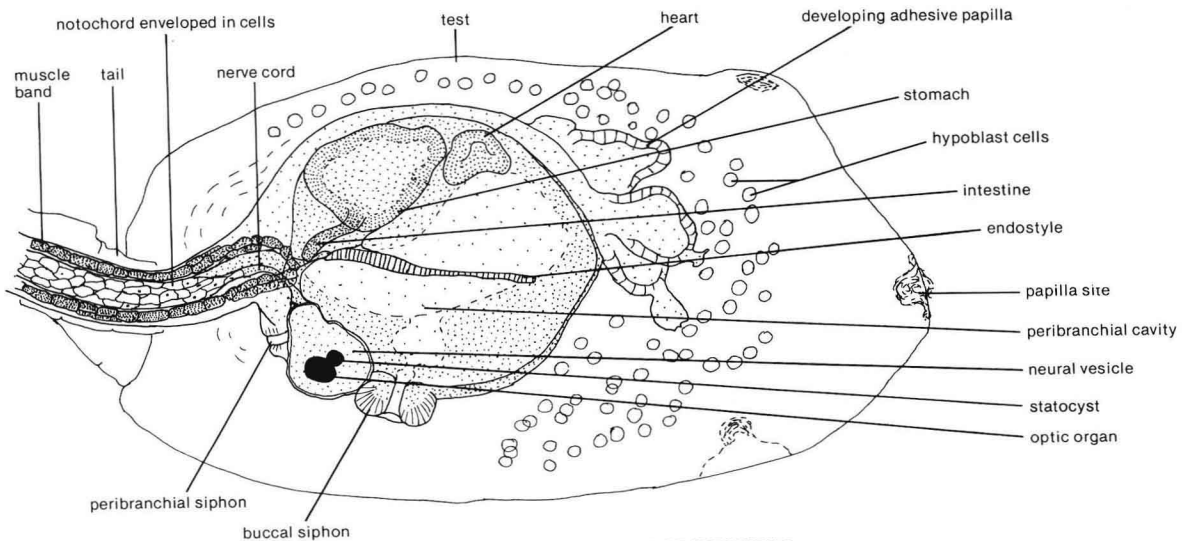
4. *Pyrosoma* colony, E. (Mag. $\times 30$)



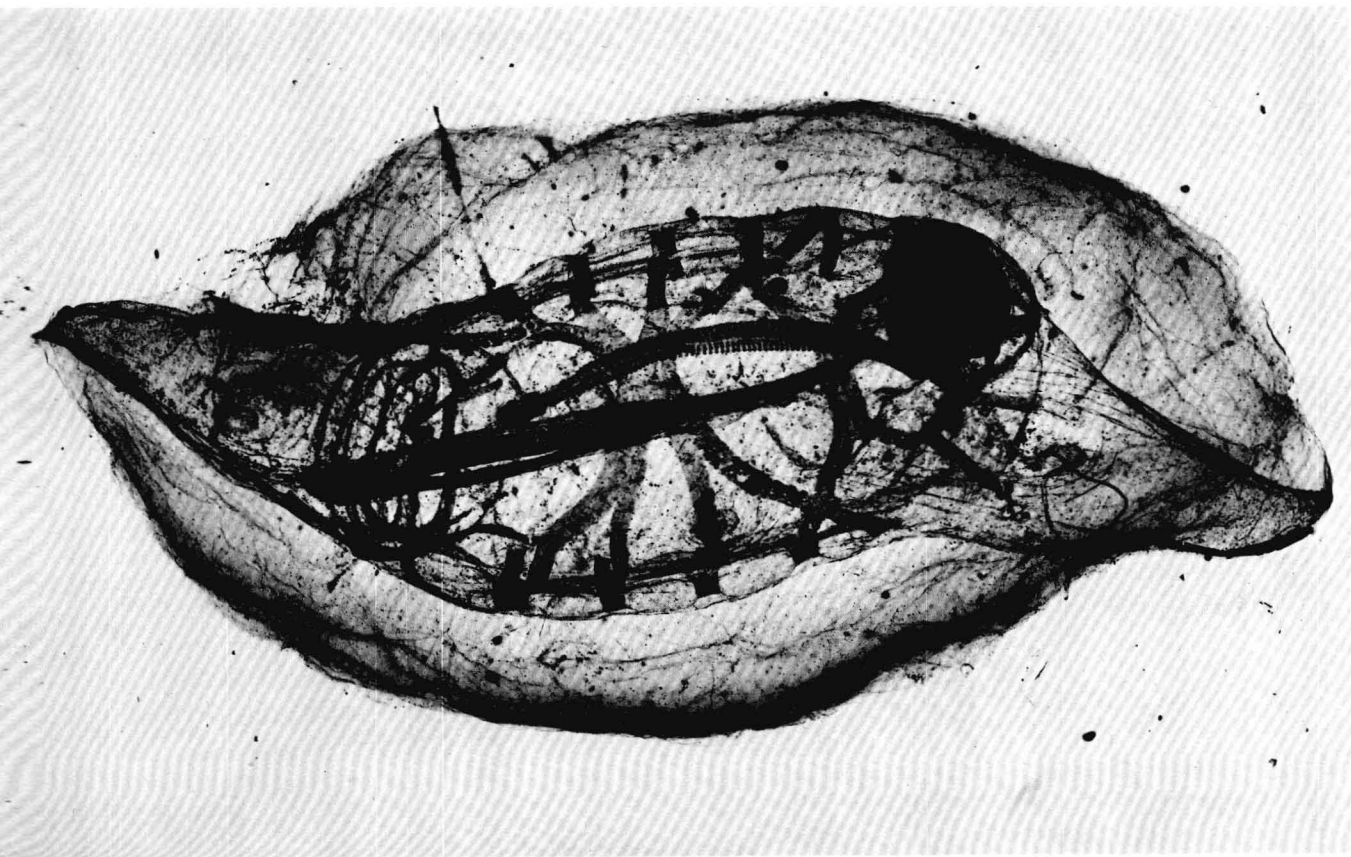
5. Ascidian larva E, anterior. (Mag. $\times 45$)



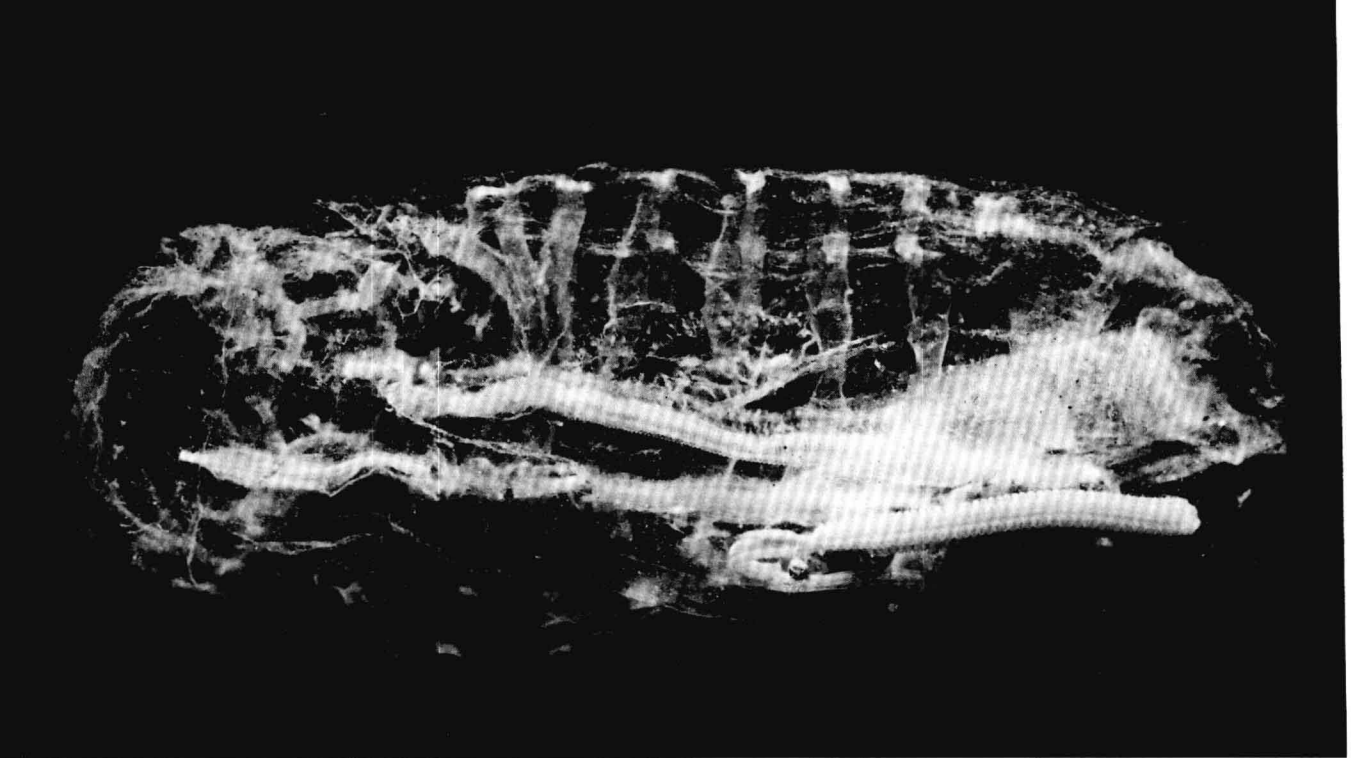
DRAWING OF PART OF SPECIMEN 4



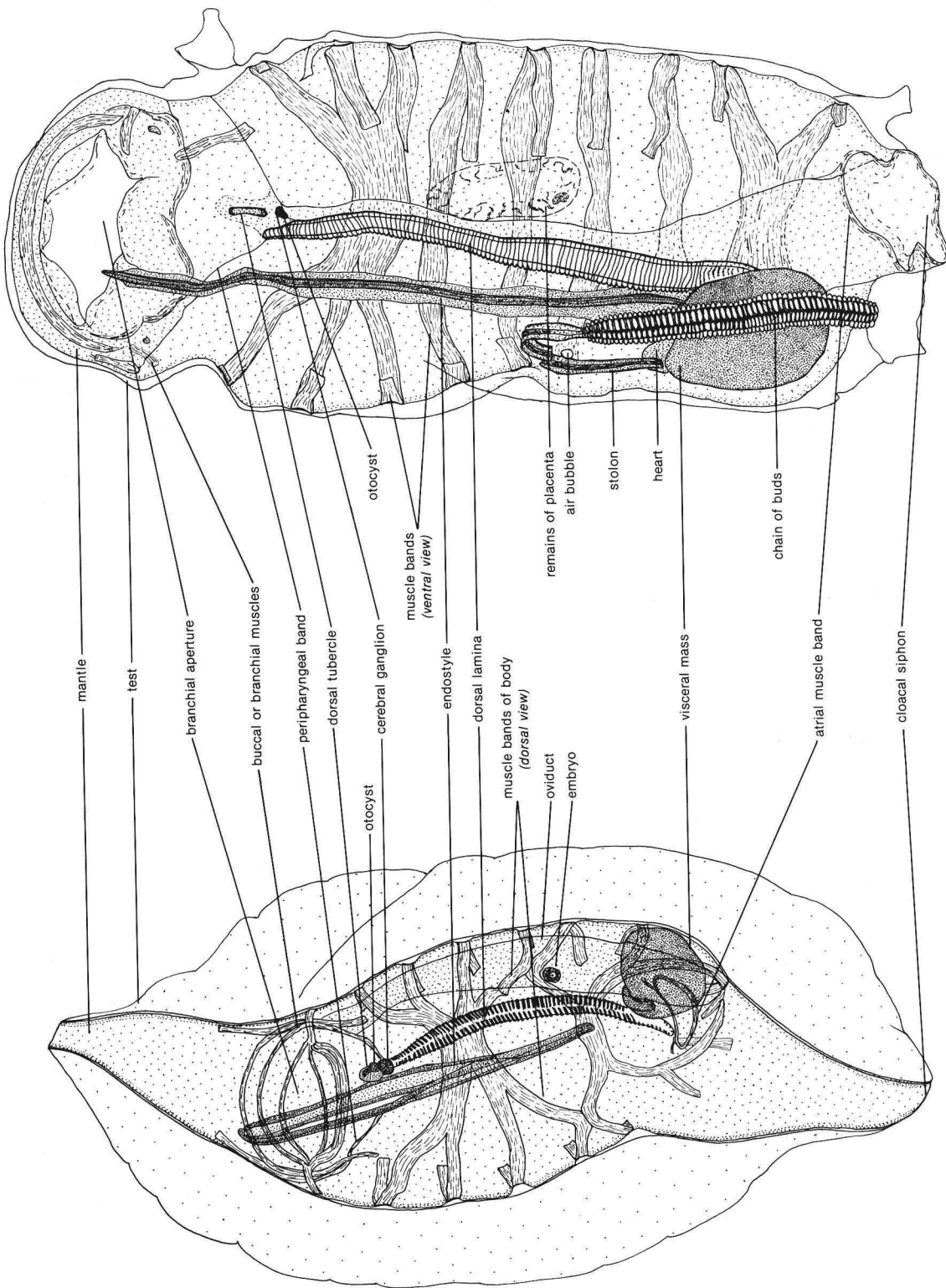
DRAWING OF SPECIMEN 5



6. *Salpa*, sexual form, E. (Mag. $\times 40$)

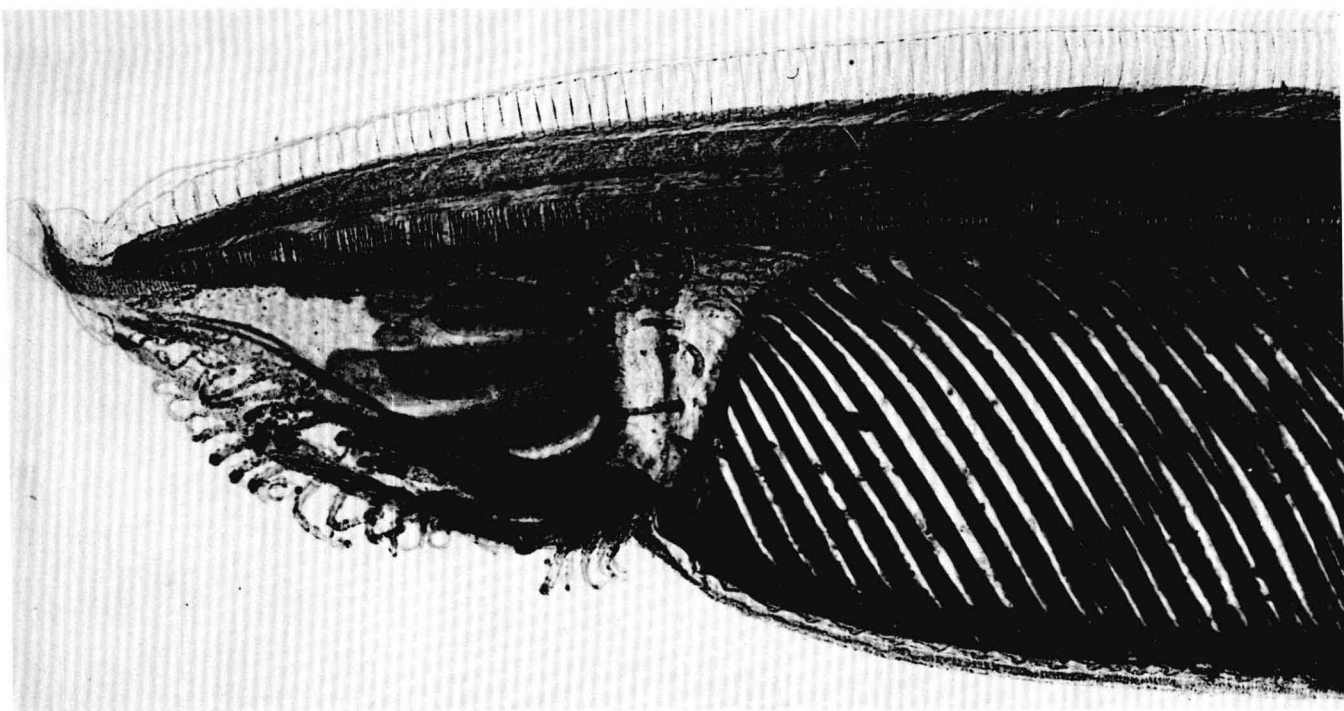


7. *Salpa*, asexual form with buds, E. (Mag. $\times 40$)

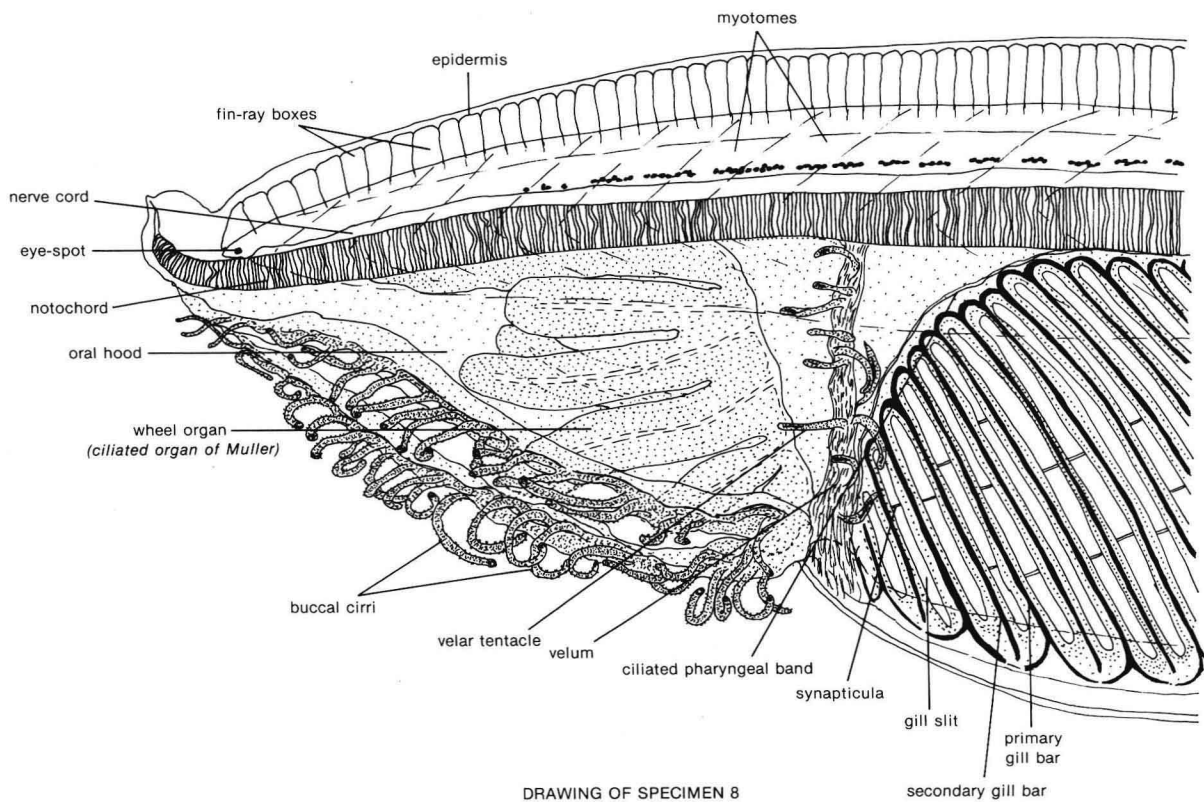


DRAWING OF SPECIMEN 7

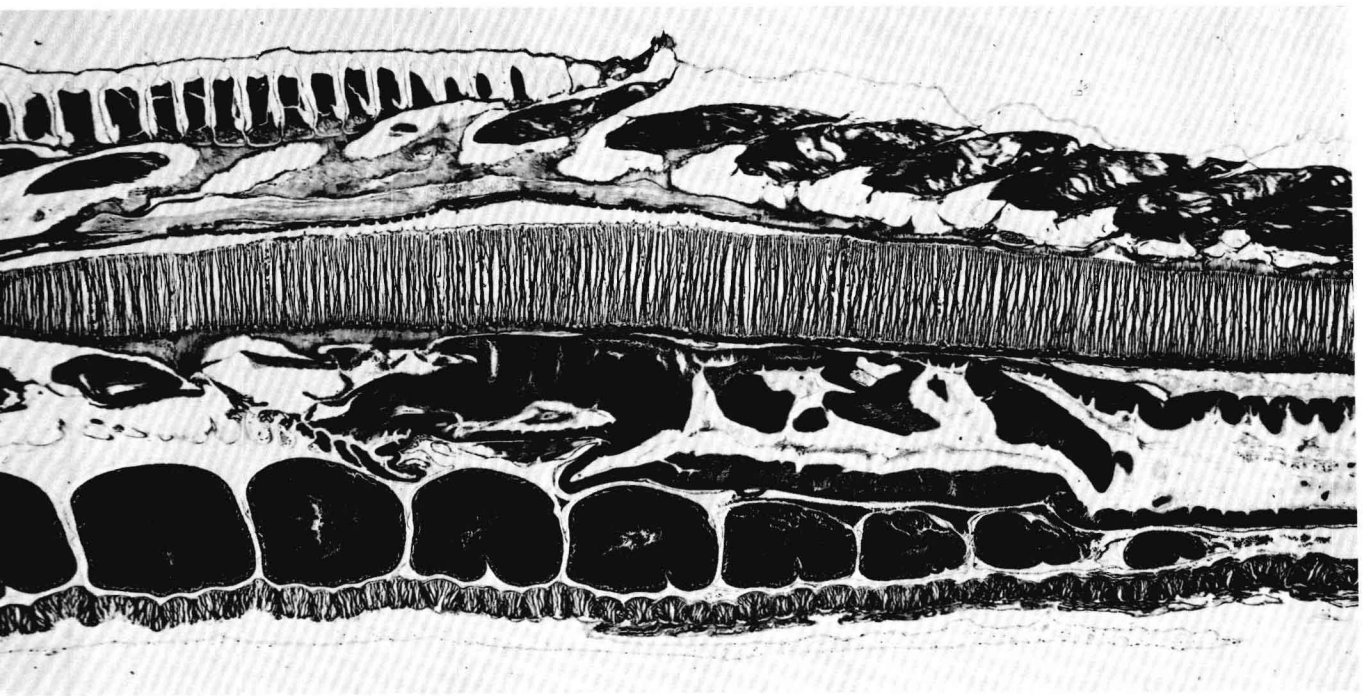
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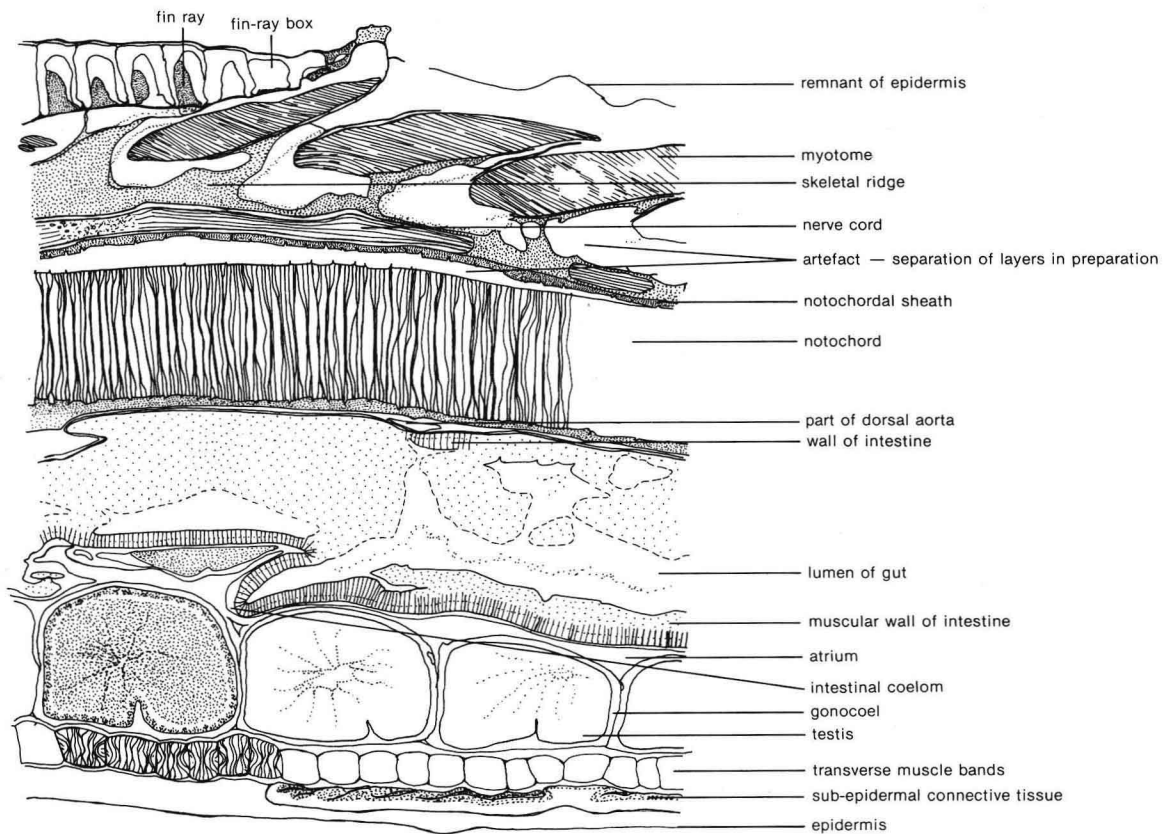
8. *Branchiostoma*, oral hood E. (Mag. $\times 42$)



DRAWING OF SPECIMEN 8



9. *Branchiostoma*, detail LS. (Mag. $\times 35$)



DRAWING OF SPECIMEN 9



11. Branchiostoma, gill bars TS, phase contrast. (Mag. $\times 125$)



10. Branchiostoma, pharyngeal region TS. (Mag. $\times 30$)

