





Issue of the Hubrecht Laboratory
seat of the
„Institut International d'Embryologie”
(Embryological section of the I.U.B.S.)

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INTRODUCTION

Subscribers are now receiving the supplement to the sixth issue.

Since two years now elapse between the appearance of two successive full issues, it has become more difficult to trace the addresses of collaborators who have moved in the meantime. It is therefore desirable that everybody keep us informed about any changes of address.

This supplement is free of charge. We hope to be able to maintain the rule of a cost-free supplement also in the future without increase of the subscription price.

For practical reasons it is impossible to repeat data of the "*Supply and Demand Service*" from previous issues, when no new information has been received. Since with every new list all previous lists become invalid, this means that it is desirable that all Institutes interested in the Service send in their data every year. If there are no changes, it is sufficient to send a statement that the information is still valid.

This year for the first time data have reached us from the U.S.S.R., viz. from the *A. N. Severtzov Institute of Animal Morphology at Moscow*. With a view to keeping our information up to date we have, by way of exception, included the names with the subjects in the list of addresses, and have listed the staff separately on page 7.

P. D. NIEUWKOOP.

Changes of address, and new addresses of collaborators

New data from the U.S.S.R.

- ASTAUROV, B. L. Dr. Biol. Sci., Prof. (address see p. 7)
- Artificial parthenogenesis and experimental polyploidy. *Bombyx mori* L. (*Lepidoptera*)
 - Androgenesis, especially interspecific. *Bombyx mori* L., *B. mandarina* Moore (*Lepidoptera*)
 - Influence of high temperature on developmental processes; heat denaturation of proteins. *Bombyx mori* L. (*Lepidoptera*) and many other organisms
- AZOUBEL, R. M.B. — Dept 1 - Histol., Fac. de Med., Univ. do Recife, Inst. Alvaro Ozorio de Almeida, Caixa Postal 616, RECIFE, Brazil
- BEDNJAKOVA, Mrs. T. A. Cand. Biol. Sci. (address see p. 7)
- Influence of high temperatures on developmental processes. *Bombyx mori* L. (*Lepidoptera*)
 - Analysis of sterilizing effect of sublethal high temperature on eggs infected with *Nosema bombycis*. *Bombyx mori* L. (*Lepidoptera*)
- BERGQUIST, H. Ph.D. — Zool. Inst., Univ. of Gothenburg, Postgatan 35. GÖTEBORG-C, Sweden
- † BOEKE, J. F.I.I.E., Dr, Prof. (Emer.) — UTRECHT, Holland
(Deceased Sept. 12, 1956)
- BRIGGS, R. W. Ph.D. — Dept of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.
- BÜYÜKÖZER, Miss I. M.D. — Histol. ve Embriol. Enstitüsü, Tıp Fakültesi, Cebeci, ANKARA, Turkey
- † CELESTINO DA COSTA, A. F.I.I.E., Dr hon. causa, Prof. — LISBOA, Portugal
(Deceased April 1956)
- DETTLAFF, Mrs. T. A. Dr. Biol. Sci., Prof. (address see p. 7)
- Physiology of activation of the egg; the role of Ca-ions, the process of secretion. *Huso huso*, *Acipenser güldenstädti*, *A. stellatus* (*Acipenseriformes*, *Chondrostei*)
 - The fate of the polysaccharides in the period of fertilization. (*Acipenseriformes*, *Chondrostei*)
- FOOTE, Ch. L. Prof. — Zool. Dept, Southern Illinois Univ., CARBONDALE, Ill., U.S.A.
- GANGULY, D. N. Prof. — Dept of Zool., Calcutta Univ., 35 Ballygunj Circular Road, CALCUTTA 19, India
- GINSBURG, Mrs. A. S. Cand. Biol. Sci. (address see p. 7)
- Cytology of fertilization; experimental polyspermy. *Huso huso*, *Acipenser güldenstädti*, *A. stellatus* (*Acipenseriformes*, *Chondrostei*)
- GROENENDIJK—HUIJBERS, Mrs M. M. M.D., Lect. — Dept of Anat., Univ. of Saskatchewan, SASKATOON, Canada
- HARTE, Miss C. Dr, Prof. — Inst. für Entwicklungsphysiologie der Univ. Köln, Amsterdamerstr. 36, KÖLN/Riehl, Deutschland
- † HENKE, K. F.I.I.E., Dr Phil., Prof. — GÖTTINGEN, Deutschland
(Deceased Sept. 14, 1956)

- HICKS, S. P. M.D. — Lab. of Pathol., New England Deaconess Hosp., 195 Pilgrim Road, BOSTON 15, Mass., U.S.A.
- HOLLANDER, W. F. Dr — Dept of Genetics, Iowa State Coll., AMES, Iowa, U.S.A.
- IGNATJEVA, Mrs. G. M. Cand. Biol. Sci. (address see p. 7)
- a. The hatching enzyme and the conditions of hatching. *Huso huso*, *Acipenser güldenstädti*, *A. stellatus* (*Acipenseriformes*, *Chondrostei*)
- KINDAHL, Miss M. E. Phil. Dr — Linnégatan 22, STOCKHOLM Ö, Sweden
- LOPASHOV, G. V. Dr. Biol. Sci., Prof. (address see p. 7)
- a. Complex analysis of conditions of embryonic development of the parts of the eye rudiment. *Triturus taeniatus*, *T. vittatus*, *Ambystoma mexicanum* (*Urodela*), *Rana arvalis*, *R. esculenta*, *R. ridibunda*, *Bufo viridis*, *Pelobates fuscus* (*Anura*)
 - b. Analysis of significance of intracellular components and of the composition of the medium on the development of embryonic cells (ectoderm, neural plate, eye rudiment). *Ambystoma mexicanum* (*Urodela*), *Rana arvalis*, *R. ridibunda* etc. (*Anura*), *Misgurnus fossilis*, *Cyprinus carpio*, *Nemacheilus barbatulus*, *Cyprinodontid* spp. (*Pisces*)
 - c. Artificial sources of sources and conditions of retina regeneration in tadpoles. *Bufo viridis*, *Rana arvalis* (*Anura*)
- MAY, R. M. Prof. — Lab. de Biol. Animale, Univ. de Paris, 12 Rue Cuvier, PARIS Ve, France
- † MELLANBY, Sir Edward — LONDON, England (U.K.)
(Deceased)
- MENSCHIK, Z. B.A., M.D., D.Sc., L.M.C.C., Prof. — Dept of Anat., School of Med., Georgetown Univ., 3900 Reservoir Road, N.W., WASHINGTON 7, D.C., U.S.A.
- MINA, E. Y. M.D. — Dept of Anat., Fac. of Med., ALEXANDRIA, Egypt
- OSTRJAKOVA—VARSHAVER, Mrs. V. P. Cand. Biol. Sci. (address see p. 7)
- a. Cytology of experimental heat androgenesis. *Bombyx mori* L. (*Lepidoptera*)
 - b. Cytology of experimental polyploidy. *Bombyx mori* L. (*Lepidoptera*)
 - c. Artificial parthenogenesis and androgenesis. *Bombyx mori* L. (*Lepidoptera*)
- PEPPER, Miss F. J. B.Sc., Ph.D. — Dept of Zool. and Comp. Physiol., Birmingham Univ., Edgbaston, BIRMINGHAM 15, England (U.K.)
- POHLEY, H.-J. Dr — Inst. für Entwicklungsphysiologie der Univ. Köln, Amsterdamerstr. 36, KÖLN/Riehl, Deutschland
- REXED, B. M.D., Prof. — Anat. Inst., Univ. Uppsala, UPPSALA, Sweden
- RICHTER, Miss W. E. Biol. Cand. — Afd. Zool., Biol. Lab., Vrije Univ., Rapenburgerstraat 128, AMSTERDAM, Holland
- SABBADIN, A. Dr — temporarily: Hubrecht Laboratory, Janskerkhof 2, UTRECHT, Holland
- SAMBUICHI, H. Dr — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashi-senda-cho, HIROSHIMA, Japan
- SENO, T. B.M. — Dept of Anat., School of Med., Gunma Univ., MAE-BASHI, Japan (until October 1957: Dept of Biol., The Johns Hopkins Univ., Charles and 34th Sts, BALTIMORE 18, Md, U.S.A.)

- STROËVA, Miss O. G. Cand. Biol. Sci. (address see below)
- Analysis of the capacity of the eyes of adult animals to regenerate the retina. *Bombina bombina* (*Anura*), *Rattus norvegicus* (*Rodentia*)
 - Analysis of the conditions of embryonic segregation of the eye rudiment. *Rattus norvegicus* (*Rodentia*)
 - The action of certain substances on the capacity of parts of the eye of transformations, especially of pigment epithelium into retina, in tadpoles. *Rana arvalis*, *Pelobates fuscus* etc. (*Anura*)
- THOMPSON, A. R. D. B.Sc., M.B., Ch.B. — Dept of Anat., Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England (U.K.)
- VEREJSKAJA, Miss V. N. Cand. Biol. Sci. (address see below)
- Influence of high temperatures on developmental processes. *Bombyx mori* L. (*Lepidoptera*)
 - Analysis of sterilizing effect of sublethal high temperatures on eggs infected with *Nosema bombycis*. *Bombyx mori* L. (*Lepidoptera*)
- WILLIAMS, J. B.Sc., M.B., Ch.B. — Dept of Anat., Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England (U.K.)
- ZOTIN, A. I. Cand. Biol. Sci. (address see below)
- Study of water metabolism in embryonic development. *Huso huso*, *Acipenser güldenstädti*, *A. stellatus* (*Acipenseriformes*, *Chondrostei*), *Salmo salar*, *Coregonus lavaretus* (*Clupeiformes*, *Teleostei*)

Institutes in the U. S. S. R.

Moscow, V-71, 33 Bolshaja Kalushskaja, A.N. Severtzov Institute of Animal Morphology of the Acad. of Sci. of the U.S.S.R.

CHROESJTSJOV, G. K. Prof.,
Dir.

DRAGOMIROV, N. I. Prof.

POLEZHAYEV, L. V. Prof.

D. P. Filatov Laboratory of Experimental Embryology

* ASTAUROV, B. L. Prof., Head
Senior Research Workers:

* DETTLAFF, Mrs. T. A. Prof.

* LOPASHOV, G. V. Prof.

* GINSBURG, Mrs. A. S.

* BEDNJAKOVA, Mrs. T. A.

* OSTRJAKOVA-VARSHAVER,
Mrs. V. P.

Research Workers:

* STROËVA, Miss O. G.

* IGNATJEVA, Mrs. G. M.

* VEREJSKAJA, Miss V. N.

* ZOTIN, A. I.

Laboratory of Ecological Embryology

KRIŽANOVSKY, S. G. Prof.,
Head

Laboratory of Comparative Embryology

SMIDT, G. A. Prof., Head

Laboratory of General Embryology

MATVEJEV, B. S. Prof., Head

„SUPPLY AND DEMAND” SERVICE

for Laboratory Animals

Transactions should be carried out directly between the interested parties. We do not take any responsibilities either for the transactions themselves, or in matters relating to prices, in- and export regulations, animal protection regulations etc.

With each new list all previous lists become invalid.

A. LIST OF SPECIES AVAILABLE

with numbers referring to List B.

Unless otherwise indicated, most items available throughout the year.

GENERAL		VERMES	
Australian spp.	26 ¹⁾	Vermes (various spp.)	9
Embryological material (pres. specimens and slides; many spp.)	6	Annelida (10 spp.)	10
Embryological material (pres. specimens; all phyla)	9	Annelida (marine spp.)	15
Embryological material (pres. specimens and slides; all phyla)	10	Bdelloura candida	9
Marine animals	1, 32	Dugesia dorotocephala	10
Tumours (transplantable mouse-)	8	Dugesia gonocephala	21
Tumours (rodent-, many lines)	28	Dugesia tigrina	10
EVERTEBRATA		Nematoda (4 spp.)	10
Evertebrata	6	Planaria maculata	9
Evertebrata (from Whitstable Bay, many spp. from all phyla, fauna list available)	39	Procotyla fluviatilis	9
PROTISTA		Rotifera (4 spp.)	10
Protozoan cultures	6	ARTHROPODA	
Protozoa (several spp.)	9	Arthropoda (many spp.)	10
Protozoa (many spp., clone cultures)	10	Artemia salina (eggs)	9
COELENTERATA		Crustacea (marine spp.)	15
Coelenterata (various spp.)	9	Myriopoda	1
Coelenterata (marine spp.)	15	Scorpioles	1
Hydra (4 spp.)	10	Insecta	
		Insecta	1
		Calliphora erythrocephala (mutant "white-apricot")	31
		Drosophila hydei	33
		Drosophila melanogaster (many mutants)	9, 10
		Drosophila melanogaster	33
		Ephestia Kühniella (strains and mutants)	4
		Formica rufa rufopratensis Gössw.	30 ²⁾
		Lasius (diff. spp.)	30 ²⁾

¹⁾ on special request.

²⁾ in exchange for Attini.

Mantidae (eggs)	26 ³⁾	Teleostei (from Whitstable Bay, many spp., fauna list available)	39
Melanoplus diff. diff. Thomas (eggs in diapause and post-diapause stages)	5 ⁴⁾	Umbrina limi	16
Mormoniella vitripennis (mutants)	10	AMPHIBIA	
Myzus ascalonicus	30 ²⁾	Urodela	
Phasmidae (eggs)	26 ³⁾	Ambystoma spp.	7
Sarcophaga bullata	10	Ambystoma (7 spp.)	11
Zaprionus ghesquierei	33	Ambystoma maculatum (eggs and adults)	9
Zaprionus vittiger	33	Ambystoma maculatum	16
MOLLUSCA		Ambystoma opacum	16
Mollusca (marine spp.)	15	Ambystoma punctatum (eggs and embryos, Apr.-May)	14
Campeloma spec.	16	Ambystoma tigrinum (preserved eggs and larvae)	7
Gastropoda (giant land snails)	1	Ambystoma tigrinum	16
Gastropoda (several spp.)	10	Amphiuma spec.	10
Goniobasis spec.	16	Amphiuma means	11
Physa spec.	16	Aneides spec.	7
Planorbis spec.	16	Aneides aeneus	11
Watasenia scintillans (May-June, ripe ♀♀)	22	Batrocheus spec.	7
BRYOZOA		Cryptobranchus allemaniensis	11
Plumatella spec.	10	Desmognathus spec.	7
ECHINODERMATA		Desmognathus (8 spp.)	11
Echinodermata (marine spp.)	15	Eurycea spec.	7
Asterias spec.	9	Eurycea (6 spp.)	11
Echinarachnius spec. (preserved eggs)	12	Gyrinophilus (5 spp.)	11
PISCES		Hemidactylium scutatum	11
Ammocoetes	10	Hynobius lichenatus (eggs, March-Apr.)	23 ⁶⁾
Clupea pilchardus (Walb.) (Dec.-July)	25 ⁵⁾	Hynobius nigrescens (Apr.-Aug.)	20
Elasmobranchii	15	Hynobius nigrescens (eggs, March-Apr.)	23 ⁶⁾
Engraulis encrasicolus L. (Apr.-Sept.)	25 ⁵⁾	Leurognathus (2 spp.)	11
Gambusia spec.	10	Manculus quadridigitatus	11
Gasterosteus spec.	16	Necturus spec.	7, 9, 16
Onchorynchus spp. (developmental stages, Oct.-June)	2	Necturus (5 spp.)	11
Scomber scomber L. (eggs and embryos, April only)	25 ⁵⁾	Necturus maculosus (Nov.-May)	10
Selachii (from Whitstable Bay, several spp., fauna list available)	39	Plethodon spec.	7
		Plethodon (15 spp.)	11
		Pleurodeles Waltlii	27, 37
		Pseudobranchius (2 spp.)	11

²⁾ in exchange for Attini.

³⁾ on exchange basis.

⁴⁾ in exchange for Stenobothrus lineatus.

⁵⁾ in exchange for Sarda sarda (Bloch) and Temnodon saltator.

⁶⁾ in exchange for Ambystoma mexicanum (albino and normal).

Pseudotriton (6 spp.)	11	Ophidia	37
Salamandra spec.	7	Phrynosoma cornutum (pre- served eggs)	12
Siren (2 spp.)	11	Pseudemys (3 spp.)	10
Triturus spp.	7	Pseudemys elegans	9
Triturus (4 spp.)	11	Sceloporus spec.	16
Triturus alpestris	27	Trionyx ferox	10
Triturus cristatus	27	AVES	
Triturus cristatus carnifex	27	Columba spec.	16
Triturus pyrrhogaster 18. 23 ⁶⁾		MAMMALIA	
Triturus pyrrhogaster (Apr.- Sept.)	19 ⁷⁾	Marsupialia	
Triturus pyrrhogaster (Apr.- Aug.)	20	Dasyops novemcinctus (pre- served embryos)	12
Triturus viridescens 9. 10, 16		Didelphys virginiana (Nov.- March)	10
Anura		Didelphys virginiana (pre- served embryos, large)	12
Anura	37	Chiroptera	
Acris spec.	7	Corynorhinus macrotis	11
Bufo spec.	16	Eptesicus fuscus	11
Bufo (3 spp.)	11	Lasiurus borealis	11
Bufo americanus	3	Mvotis (6 spp.)	11
Bufo marinus	3, 7	Pipistrellus subflavus	11
Hyla spec.	7	Primates	
Hyla (4 spp.)	11	Rhesus monkeys (♂ and ♀, 3—6 Lb.)	17
Pseudacris (2 spp.)	11	Lagomorpha	
Rana (5 spp.)	11	Oryctolagus cuniculus 16, 38	
Rana catesbeiana 9. 10, 16		Oryctolagus cuniculus (inbred strains)	8
Rana clamitans 10, 16		Oryctolagus cuniculus (4 strains, one inbred since 1937; limited numbers, autumn and winter)	35
Rana grylio 10		Rodentia	
Rana nigromaculata (Apr.- Aug.)	20	Rodentia (different spp., many tumour-bearing lines)	28
Rana pipiens 9. 10, 13, 16		Cacia cobaya 16, 38	
Rana sylvatica 16		Cavia cobaya (pure strain)	10
Scaphiopus holbrookii 11		Cavia cobaya (some strains; limited numbers)	35
Xenopus laevis 27, 29		Cricetus spec.	16
Xenopus laevis (small amounts)	34	Cricetus auratus 10, 36 ⁹⁾	
REPTILIA		Cricetus auratus (♂♂ only)	35
Reptilia (various spp.)	7		
Anolis carolinensis 10			
Chelonia (eggs) 10			
Chelonia 16			
Hemidactylus platyurus (preserved embryos) 24 ⁸⁾			
Lacertilia (eggs, young ani- mals and adults) 27			
Lacertilia 37			

⁶⁾ in exchange for *Ambystoma mexicanum* (albino and normal).

⁷⁾ in exchange for any other spec. of *Triturus*.

⁸⁾ in exchange for pig embryos, 7 mm, 10 mm, and 15 mm.

⁹⁾ in exchange for mature *Xenopus laevis* or Wistar strain rats.

Meriones lybicus	40	Mus rattus (white, pure strain)	10
Mus musculus	38	Mus rattus (some inbred strains)	35
Mus musculus (BALB, C 57 BL, C 3 H, CBA)	4	Carnivora	
Mus musculus (inbred strains)	8	Felis domesticus	38
Mus musculus (pure strain)	10	Mustela putorius (autumn and winter)	35
Mus musculus (white)	16	Mustela putorius x Mustela putorius furo (hybrid; limited numbers, autumn and winter)	35
Mus musculus (several inbred strains and their F 1 bastards)	35 ¹⁰⁾		
Mus rattus	38		
Mus rattus (white)	16		

¹⁰⁾ to be ordered far in advance.

B. LIST OF NAMES AND ADDRESSES (geographical order)

A F R I C A

South-Africa

- 1.* EDUCA PRODUCTS (Pty.) Ltd., P. O. Box 3538, CAPE TOWN

N. A M E R I C A

Canada

2. DEPT OF ZOOL., Univ. of British Columbia, VANCOUVER 8, B.C.

United States

- 3.* J. V. MASSEY, Jr., Fairfield Laboratories, Main Street, BRIDGEPORT, Conn.
4. SHANKLIN BIOL. LAB., Wesleyan University, MIDDLETOWN, Conn.
5. DIV. OF BIOL. AND MED. RES., ARGONNE NAT. LAB., P.O. Box 299, LEMONT, Ill.
- 6.* GENERAL BIOLOGICAL SUPPLY HOUSE, 761—763 E., 69th Place, CHICAGO 37, Ill.
- 7.* QUIVIRA SPECIALTIES CO., 4204 West 21st Street, TOPEKA, Kan.
- 8.* SUPPLY DEPT, ROSCOE B. JACKSON MEM. LAB., BAR HARBOR, Me.
- 9.* SUPPLY DEPT, MARINE BIOL. LAB., WOODS HOLE, Mass.
- 10.* CAROLINA BIOLOGICAL SUPPLY CO., ELON COLLEGE, N.C.
- 11.* J. C. NICHOLLS, Jr., Zoological Collector, MURPHY, N.C.
- 12.* SOUTHWESTERN BIOLOGICAL SUPPLY CO., P.O. Box 4084, St. A, DALLAS 8, Tex.
- 13.* EARLE JARVIS, Zoological Collector, ALBURG, Vt.

* Biological Supply Houses, Zoological Collectors, etc.

14. COLL. OF MED., Univ. of Vermont, BURLINGTON, Vt.
 15.* NORTHWESTERN BIOL. SUPPLY CO., Route 3, ANACORTES, Wash.
 16.* THE LEMBERGER CO., P.O. Box 482, OSHKOSH, Wis.

ASIA

India

- 17.* VITA LIMITED, 31 Ropewalk Street, Fort, BOMBAY

Japan

18. DR T. SHIN-IKÉ, Osaka Dental College, HIRAKATA CITY
 19. ZOOL. LAB., Fac. of Science, Hiroshima Univ., HIROSHIMA
 20. BIOL. INST., Niigata Univ. Fac of Science, NIIGATA
 21. PROF. H. SUGINO, Osaka Liberal Arts Univ., Higashisumiyoshiku, Hirano, OSAKA
 22. BIOL. INST., Fac. of Liberal Arts, Toyama Univ., Hasumachi 22, TOYAMA
 23. DEPT OF BIOL., Fac. of Lib. Arts and Sci., Yamagata Univ., Koshirakawa-machi, YAMAGATA-SHI

Thailand

24. DEPT OF ANAT., Fac. of Med. and Siriraj Hospital, Univ. of Med. Sci., THONBARI

Turkey

25. HYDROBIOL. RESEARCH INST., ISTANBUL

AUSTRALIA

Australia

26. DEPT OF ZOOL., Univ. of New England, ARMIDALE, N.S.W.

EUROPE

Belgium

- 27.* REPTILAMPHIBIA (Felix Vandevelde), Remerstraat, BAAL, Brabant

Germany

28. INST. FÜR EXP. KREBSFORSCHUNG, Univ. Heidelberg, Vorstrasse 3, HEIDELBERG
 29. ZOOL. INST. der Univ. Köln, Kerpenerstr. 13, KÖLN-LINDENTHAL
 30. INST. FÜR ANGEW. ZOOLOGIE der Univ. Würzburg, Röntgenring 10, WÜRZBURG
 31. ZOOL. INST. der Univ. Würzburg, Röntgenring 10, WÜRZBURG

Italy

- 32.* STAZIONE ZOOLOGICA, Villa Comunale, NAPOLI (101)

Netherlands

33. GENETISCH INST. der Rijksuniversiteit, 5e Binnenvestgracht 8. LEIDEN
34. ZOOLOGISCH LABORATORIUM der Rijksuniversiteit, Janskerkhof 3, UTRECHT
- 35.* CENTRAAL PROEFDIERENBEDRIJF T.N.O., Biltstraat 172. UTRECHT

Poland

36. BIOL. INST., Medical Academy, ul. Kopernika 7, KRAKÓW

Spain

- 37.* HERMANN GRÜN, Linares de Riofrio, SALAMANCA

Sweden

38. DEPT OF ANAT., Univ. of Uppsala, UPPSALA

United Kingdom

39. DEPT OF ZOOL., Queen Mary College, Univ. of London, Mile End Road, LONDON E. 1.
- 40.* THE NEW COLLEGE ANIMAL HOUSE, St. Bartholomew's Hospital Med. Coll., Charterhouse Square, LONDON E.C. 1.

General questions and announcements

I The Hubrecht Laboratory

From January 15th till August 15th, 1956 the second international team work on embryology was held in Utrecht under the direction of Dr. M. E. Rawles (Baltimore, Md., U.S.A.) and Dr. P. D. Nieuwkoop. The team consisted of eight members from seven countries of four continents, viz.:

Mr. R. Azoubel (B.M.), Recife, Brasil
 Miss I. Büvüközer (M.D.), Ankara, Turkey
 Mr. H. U. Koecke (Ph.D.), Cologne, Germany
 Mr. E. Y. Mina (M.D.), Alexandria, Egypt
 Miss I. Oikawa (Ph.D.), Kōchi, Japan
 Miss M. Richter (B.Sc.), Amsterdam, Netherlands
 Mr. T. Seno (B.M.), Maebashi, Japan
 Mr. P. H. S. Silver (Ph.D.), London, England

The topic of this team work was: "A causal analysis of the development and differentiation of the neural crest in Vertebrates."

Only a short joint note will appear, giving the distribution of the various subjects among the members of the team. The members will publish their work individually in due course.

A third international team work on embryology will be held from March 15th till September 15th, 1958 under the direction of Prof. Dr. Chr. P. Raven and Dr. P. D. Nieuwkoop (both at Utrecht, Netherlands). The topic of this team work will be: "A morphological and physiological analysis of regulative and non-regulative processes in the development of "mosaic" eggs of several terrestrial and freshwater invertebrates."

Postgraduates, interested in participation in this team work are kindly requested to send in preliminary applications at *their earliest convenience*. Preliminary applications must be sent in before May 1st, definitive applications before September 15th, 1957.

Applications should be accompanied by two letters of recommendation by well-known scientists, and should contain extensive information about scientific education and personal record.

Further details and information will be given in a general circular, which will be distributed in the beginning of 1957.

II The Central Embryological Library and the Central Embryological Collection

For data regarding these two institutions we refer to the sixth full issue, 1955, page 182—183.

III The Normal Table of *Xenopus laevis*

We have the pleasure to announce that this composite work has now appeared under the title "NORMAL TABLE OF *XENOPUS LAEVIS* (DAUDIN). A systematical and chronological survey of the development from the fertilized egg till the end of metamorphosis", edited by P. D. Nieuwkoop and J. Faber. The book, which comprises 244 pages and 10 plates, is sold at a price of

Guilders 22.75 (\$ 6.00; 46 s.). Orders should be sent only to the publishers: North-Holland Publishing Company, Nieuwe Zijds Voorburgwal 68—70, Amsterdam-C., Netherlands.

The book consists of the following chapters: General Introduction; The Organization of the Normal Table Project; Material; The Taxonomic Position and Geographical Distribution of the Genus *Xenopus*; Some Ecological Data and Methods of Rearing of *Xenopus Laevis* under Laboratory Conditions; The Systematic Description of the Internal Development of *Xenopus Laevis* (146 pages); External and Internal Stage Criteria of the Development of *Xenopus Laevis* (27 pages); A Comparative Table of Anuran Normal Tables; A Bibliography of Anuran Development (Systematically Arranged) (46 pages); Index.

Reviews of recently published books on development and related subjects

Group A (books for instruction):

- BARGMANN, W., 1956 — "Histologie und mikroskopische Anatomie des Menschen" (second revised edition)
 WADDINGTON, C. H., 1956 — "Principles of Embryology"
 WITSCHI, E., 1956 — "Development of Vertebrates"
 WRETE, M., 1955 — "Die kongenitalen Missbildungen"

Group B (books for scientific workers):

- HADORN, E., 1955 — "Letalfaktoren"
 ROTHSCHILD, Lord, 1956 — "Fertilization"
 WINDLE, W. F. (editor), 1955 — "Regeneration in the central nervous system"

"HISTOLOGIE UND MIKROSKOPISCHE ANATOMIE DES MENSCHEN"

2nd revised edition, 1956

by W Bargmann
 796 pp. with 640 figs,
 partially in colour

Georg Thieme Verlag
 Stuttgart
 Price: D.M. 69.60

The first edition appeared in 1951. The author has tried to bring the reader into contact with the dynamic and functional aspects of histology and microscopical anatomy, and to bring these in connection with physiology and physiological chemistry, and with submicroscopical morphology. In this second edition, in particular the new fields of electron microscopy and cyto-chemistry have been incorporated.

This handbook, which is so well organized and so richly illustrated with carefully selected figures from handbooks and publications of other authors, and from the author's own work, can be recommended warmly to all students in and outside Germany who are able to read German. Text and figures actually lead to a dynamic and functional appreciation of this field of morphology, on the success of which we should like to congratulate the author. Each chapter closes with an extensive list of references, which also makes this work very valuable. We should like to suggest, however, that in future editions more developmental aspects be introduced (as is done e.g. for the formation of the teeth), aspects which will certainly facilitate the understanding and appreciation of the often very complex adult structures and structural elements, and which will more easily link histology and microscopical anatomy with macro-anatomy, for which an extensive knowledge of the development is indispensable.

P. D. NIEUWKOOP

"PRINCIPLES OF EMBRYOLOGY"

1956

by C. H. Waddington
510 pp. with 186 figs

George Allen & Unwin Ltd
London
Price: 45 s.

This textbook has been written for students specializing in this field as well as for research workers in other branches of biology, who want to become acquainted with the present state of knowledge in the field of development.

This textbook is however not intended to be the student's first contact with embryology, but has been written for the later university years.

In contradistinction to other textbooks of embryology in which the descriptive data usually form the main body of the book, the author has put the emphasis upon the results of causal analysis, results which have by now given us an insight into many developmental events. We completely agree with the author that it is of very great importance that students become well acquainted with descriptive as well as experimental embryology.

It is easily understandable that in the systematic part of the book those groups on which the author himself has carried out original work, have received some extra attention. We feel, however, that in a general textbook one should try to give each group equal attention as far as the actual facts are concerned. In this respect we differ in opinion from the author.

The second part of the book, in which the fundamental mechanisms in development are discussed, gives a very interesting survey of our present knowledge and understanding, showing the ever-increasing complexity of the problems concerned. It has been the great merit of the author to have synthesized the results obtained in the fields of genetics and embryology, for which we want to express our great satisfaction and admiration. It is evident that a similar synthesis of morphological and biochemical data is not yet possible, the latter still being much too fragmentary.

Not only students, but also many colleagues will be very thankful for the author's attempt to bring the various fundamental aspects of development together in this textbook. We sincerely hope that this book will find a wide distribution in biological as well as medical and veterinary institutions.

As a technical remark we must say that we feel it would have been better, notwithstanding a slight increase in the price, to print such a valuable work on better paper. This would also have allowed a much better reproduction of the figures, which are sometimes too much schematized.

P. D. NIEUWKOOP

"DEVELOPMENT OF VERTEBRATES"
1956

by E. Witschi
588 pp. with 370 figs

W. B. Saunders Company
Philadelphia, London
Price: ?

This textbook of embryology has been written for premedical students and zoology majors who have completed a course in general biology, and intends to show the reader that the process of development is widely open to scientific analysis.

After some general chapters on spermato- and ovogenesis, fertilization, and cleavage and gastrulation, the development of the amphibians, birds and mammals is treated extensively, using normal stages and stage maps as a basis for comparison, while some separate chapters are devoted to human development. In this textbook a little too much emphasis has been laid on reproduction and the role of the endocrine system, which is, however, something we can easily forgive the author, who has devoted a lifetime to these particular aspects of development.

Notwithstanding the rather personal character of this textbook, the appreciation of which may vary among individual readers, we feel very satisfied as to the synthesis of experimental and descriptive data, which gives the reader a very good insight into the causal relationships which play such an important role in the development of the complexity of the organism. The carefully selected and newly prepared figures illustrate the text in a very pleasant and constructive way.

We feel, however, rather strong objections against the author's conception of the relationships between ontogeny and phylogeny. A direct comparison of certain developmental stages of higher vertebrates with adult forms of lower groups of animals (called "corresponding ancestors") is too great a simplification and popularization of the highly complex nature of phylogeny as well as development, for this to appear in a scientific textbook of this standard.

As a purely technical point we should like to suggest that the author should in future editions avoid the combination of figures of different magnification in one text figure, and the insertion of text figures into a text in which they do not belong.

Finally we should like to suggest that the author might, in future editions, insert literature references directly in the text of the various chapters instead of giving a bibliography at the end of the book with reference to corresponding chapters. We fear that otherwise very few students will find the rather difficult way to the original literature.

P. D. NIEUWKOOP

"DIE KONGENITALEN MISSBILDUNGEN, IHRE URSACHEN UND
PROPHYLAXE, ein kurzes Lehrbuch für Studierende und Ärzte"

1955

by M. Wrete
321 pp. with 284 figs

Almquist & Wiksell
Stockholm
Price: ?

This concise textbook has been written for preclinical students, but may also be useful for clinical students and physicians as a compact reference work in this rather neglected field.

Whereas in the past the operative correction of malformations formed almost the only practical interest, the progress in our knowledge of the genetical and environmental factors which can play a role in their formation has opened a wide field for prophylactic treatment.

In this work the author has restricted himself to those developmental disturbances, which are present at birth or which appear soon afterwards.

The second part of the book, in which the individual malformations, arranged according to organ systems, are described, comprises 5/6 of the entire work, whereas the general part, in which are discussed subjects like vitality, genetically and environmentally conditioned malformations, their causes, their frequency and their prophylactic treatment, takes up only the first 40 pages. The emphasis in this book therefore strongly lies on the descriptive part.

Although we appreciate the comprehensive character of the systematic part of this textbook, which is richly illustrated, we cannot conceal that a causal-analytical treatment of the various types of malformations with emphasis upon their genesis would have given the reader a much deeper insight.

We should also like to suggest that the author, in future editions, should either insert bibliographical references in the text of the various chapters, or arrange the bibliography in a systematic, instead of in the alphabetical order.

P. D. NIEUWKOOP

* * *

"LETALFAKTOREN in ihrer Bedeutung für Erbpathologie und
Genphysiologie der Entwicklung"

1955

by Ernst Hadorn
338 pp. with 129 figs

Georg Thieme Verlag
Stuttgart
Price: D.M. 39.—

Lethal factors form a rather arbitrary group among the Mendelian factors. They distinguish themselves from other factors only by the fact that they condition death at a developmental stage preceding that of sexual maturity. However, so much interesting and fundamental information has been accumulated regarding these factors during the last decades, that it seems fully justified to devote a special work to the discussion of this group of factors, particularly when this is done by a leading authority in the field.

The present book contains even more than the title suggests. Seen from the viewpoint of the developmental biologist one might say that the book has in

fact almost grown into a treatise on the principles of gene physiology, elucidated on the basis of examples furnished mainly by the group of lethal factors. Indeed, the only thing one is inclined to regret is the fact that the author has not proceeded to write a handbook covering the entire field of gene physiology. However, the theoretical basis of the book is so broad that one may safely say that it will be for many years to come one of the principal guides for everyone working in the field of gene physiology. The author deserves gratitude in particular for his clear terminology and for his careful and critical discussion of the fundamental problems and the scope of this field of science.

The book offers a wealth of information to the geneticist, the pathologist, and the embryologist. The latter will profit particularly by the chapters XI to XVII (128 pages), which discuss such subjects as phase specificity of lethal action, cell and organ specificity, pleiotropy, cell autonomy, phenocopy, and biochemical and physiological phenes.

The book is concluded by an additional glossary, to be used in conjunction with the alphabetical index. The bibliography covers 25 pages. The illustrations are excellent, not least because all figures taken over from other authors have been carefully redrawn, which has resulted in a pleasant uniformity of style. The appearance of the book meets the high standard common to all books published by this firm.

J. FABER

"FERTILIZATION"

1956

by Lord Rothschild

170 pp. with 5 pls and 30 diags

Methuen & Co. Ltd, London

John Wiley & Sons, Inc., New York

Price: 18 s.

Owing to the size limits imposed on this monograph on fertilization the following subjects had to be omitted: aberrant fertilization in the decapod crustacea and in sponges, aster formation and origin of the first cleavage amphaster, andro- and gynogenesis, merogony, parthenogenesis and fertilization in plants.

On the basis of the normal morphology of the fertilization process (chapter 1) and the metabolism of eggs (chapters 5 and 6), the metabolic and other changes at fertilization are listed in 25 main points and several sub-points in chapter 7, showing how complex the process must be. This becomes still more impressive when also the physical changes are discussed in chapters 8 and 10. The role of sperm-egg interacting substances is extensively discussed in chapters 2, 3 and 4, while the problem of polyspermy is finally treated in chapter 9. A separate chapter has been devoted to the specificity of fertilization. In the concluding chapter 12 the author indicates a number of subjects for further investigation, which seem of special interest for a better understanding of the process of fertilization.

The fact that no book on fertilization has appeared in the last twenty-five years justifies the appearance of this monograph. The very extensive list of references, which represents only a selection from an even more extensive literature, demonstrates the great need for this short, but nevertheless comprehensive monograph, which will be welcomed by many scientists.

P. D. NIEUWKOOP

"REGENERATION IN THE CENTRAL NERVOUS SYSTEM"
1955

edited by W. F. Windle
311 pp. with 68 figs

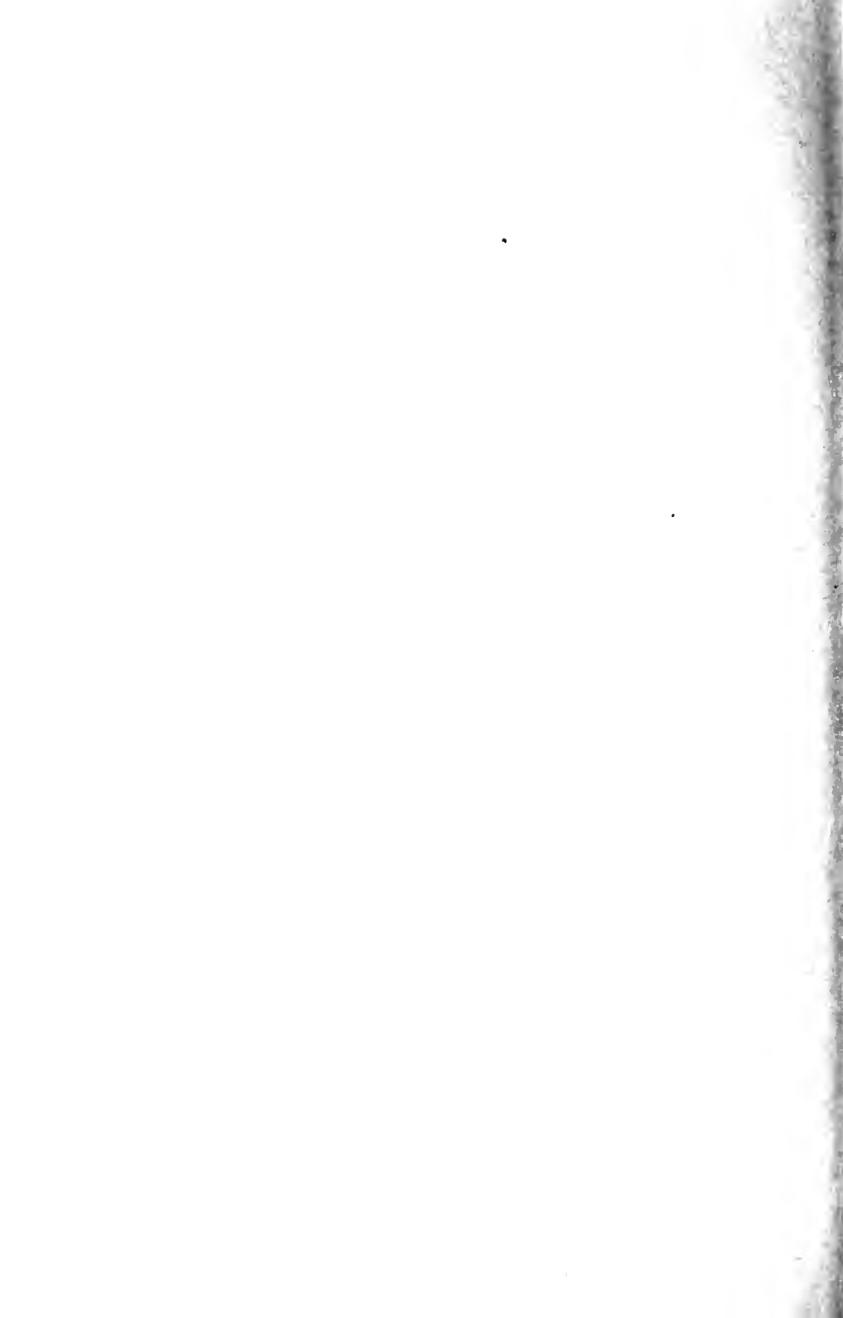
Charles C. Thomas
Springfield, Ill., U.S.A.
Price: \$ 9.50

In this composite work the editor has brought together contributions by 33 eminent scientists (30 from the United States, one from Canada and two from England), who have come together to discuss this interesting problem at the Medical Institute of Neurological Diseases and Blindness in Bethesda, Md, U.S.A., in May 1954, in order to find new evidence that regeneration can take place in the central nervous system in man, and may be effectively stimulated. This new attack on an old problem finds encouragement from the much more positive results which nowadays rehabilitation programmes have provided for paraplegic patients. The main results of this conference, laid down in this monograph, form an increasing body of evidence that regeneration can occur in the central nervous system of many different vertebrates including man, so that the time seems to be ripe to search for new ways of stimulating regeneration in such a manner that a true restitution of lost functions can be achieved.

Besides this very important main result the present monograph offers a very stimulating and comprehensive survey of the experimental work in the field of regeneration of the central nervous system, which also finds its expression in the very extensive bibliography. The editor has been very successful in organizing the various contributions and making them uniform, so that, thanks also to the excellent printing, this monograph will be an excellent and easy guide into this many-sided problem. We only regret — but understand very well the organisational and technical reasons — that so many european and asiatic scientists, whose names appear so often in the text of the various contributions, have not been able to contribute directly to this conference. We hope however that this monograph will also lead to a revival or intensification of their work.

P. D. NIEUWKOOP







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