

British Society for Developmental Biology

SYMPOSIUM MEETING, UNIVERSITY OF SUSSEX: 29 MARCH - 2 APRIL, 1982

Organisers: B. C. Goodwin, J. R. S. Whittle, N. Holder, J. R. Hinchliffe,
H. Wallace and V. French

Local Secretary: C. C. Ford

The Meeting:

The meeting has two components: a 1½ day ordinary meeting starting at 2.00 p.m. on Monday, 29 March, followed by a 2½ day symposium meeting starting on Wednesday, 31 March. The scientific sessions will be held in Arts A, and accommodation will be in the Halls of Residence of the University of Sussex campus.

Registration:

Participants should register in the foyer of Norwich House before 2.00 p.m. on Monday, 29 March, or in the coffee area in the Arts A foyer during the meeting.

Meals:

Breakfasts (7.45-9.00 a.m.), lunches (12.30 p.m.) and dinners other than the conference dinner (6.30 p.m.) will be served in the Refectory Building (level 2). Breakfasts and dinners will be 'cafeteria style', while ploughmans lunches will be located at the north end of level 2.

Snacks can be obtained on a cash basis from the Gardner Arts Centre bar, the Falmer bar or the Coffee Shop. Pub lunches are available at The Swan, just off the campus.

The Conference Dinner will be held in the Terrace Restaurant in the Refectory Building at 7.30 p.m. on Monday, 29 March.

Poster Session and Trade Exhibition:

Members are encouraged to present their work in poster form. There will be an evening session on Tuesday, 30 March, from 8.00 to 10.00 p.m. for discussion of posters, when free beer will be provided. Posters should be put up in Room 110, Arts D, as soon as possible, but should be removed by lunch-time on Friday, 2 April. Sellotape and pins will be provided.

Transport:

Rail: Trains between Brighton and Falmer run every 20 minutes. The campus is directly opposite Falmer Station.

Bus: Buses (nos. 25, 128, 729) run between central Brighton and the campus.

Car: The campus is situated three miles from Brighton on the Lewes road (A27). Large car parks are located beside the Refectory Building and the East Slope residences.

General Facilities:

In the Refectory Building there is a shop, a newsagent, a travel agent, a bank, and a bar. Squash courts are located at the Sports Centre and Sports Pavilion (book via the Sports Centre).

Conference Address:

Mail for participants should be sent to the following address:

British Society for Developmental Biology
Norwich House
University of Sussex
Falmer, Brighton BN1 9QG

The telephone number of the Conference Office is 0275 606755 ext. 378

INSECT MORPHOGENESISMonday, 29 MarchParallel session

1. GROWTH AND MORPHOGENESIS IN IMAGINAL DISCS

- 2.00 - 2.35 p.m. M. Wilcox (Cambridge)
Cell markers for the analysis of imaginal disc growth and differentiation
- 2.35 - 3.10 p.m. R. Simpson (Strasbourg)
Cell proliferation and size regulation in imaginal discs
- 3.10 - 3.30 p.m. M. Weir (Pennsylvania)
Gap junctional communication compartments in the Drosophila wing disc
- 3.30 - 4.00 p.m. Tea
- 4.00 - 4.35 p.m. M. Milner and A.J. Bleasby (St. Andrews)
The morphogenesis of the eye-antennal disc: epithelial fusion and the role of the peripodial membrane
- 4.35 - 5.10 p.m. J. Tucker (St. Andrews)
Spatiotemporal integration of epidermal cell shaping and microtubule deployment during leg regeneration in Calliphora
- 5.10 - 5.30 p.m. P. Truby (Leicester)
Pattern of cell division during cockroach leg regeneration
- 6.30 p.m. Alternative dinner
- 7.30 p.m. Conference Dinner

Tuesday, 30 March

2. EMBRYONIC SEGMENTATION AND POLARITY

- 9.30 - 10.05 a.m. K. Sander (Freiburg)
Oogenesis and embryonic pattern formation: known and missing links
- 10.05 - 10.40 a.m. C. Nüsslein-Volhard (Tübingen)
Mutations affecting segment number and polarity in Drosophila
- 10.40 - 11.10 a.m. Coffee
- 11.10 - 11.45 a.m. G. Struhl (Cambridge)
Genes controlling segmental determination in Drosophila
- 11.45 - 12.10 p.m. P. Ingham (Strasbourg)
Mutations which affect the segment quality of differentiation in Drosophila
- 12.10 - 12.30 p.m. J. Mee (Edinburgh)
Segmentation in short germ band embryos
- 12.30 p.m. Lunch

3. DEVELOPMENT OF THE NERVOUS SYSTEM

- 2.55 - 3.30 p.m. P. Whittington (Tübingen)
Differentiation of an insect motor neuron in the absence of its target muscle
- 3.30 - 4.00 p.m. Tea

Tuesday, 30 March Insect Morphogenesis 3. Development of the Nervous System

- 4.00 - 4.35 p.m. A. Ghysen (Brussels)
Genetic control of sensory projections in Drosophila
- 4.35 - 5.10 p.m. P. Shelton (Leicester)
Development and regeneration of the insect compound eye
- 6.30 p.m. Dinner
- 8.00 - 10.00 p.m. Poster session

LIMB DEVELOPMENT

Monday, 29 March

Parallel session

- 2.10 - 2.30 p.m. A. Wood and P.V. Thorogood (Sotonhampton)
Experimental studies on teleost fin morphogenesis
- 2.30 - 2.50 p.m. C. Tickle (London)
Positional signalling across the antero-posterior axis of the developing chick wing
- 2.50 - 3.10 p.m. D. Summerbell (London) and L.S. Honig (Los Angeles)
Maps of the ZPA in the chick wing bud
- 3.10 - 3.30 p.m. B. Yallup and J.R. Hinchliffe (Aberystwyth)
Regulation along the antero-posterior axis of the chick wing bud
- 3.30 - 4.00 p.m. Tea
- 4.00 - 4.20 p.m. M. Kieny (Grenoble)
On muscular organogenesis in bird limbs
- 4.20 - 4.40 p.m. J. Smith (London) and L.S. Honig (Los Angeles)
The origin of additional structures in the chick limb bud after a polarising region graft
- 4.40 - 5.00 p.m. J. Cooke (London)
Does wing bud epidermis mediate the growth promoting effect of ZPA tissue?
- 5.00 - 5.20 p.m. D.J. Wilson (Aberystwyth and London)
The role of the ZPA in the inhibition of anterior mesenchymal cell death in the wing-buds of normal and wingless (ws) mutant chick embryos
- 5.20 - 5.40 p.m. C. Gribbin (London)
The origin of supernumeraries following axial rotation of the chick wing
- 6.30 p.m. Alternative dinner
- 7.30 p.m. Conference Dinner

Tuesday, 30 March

- 9.00 - 9.20 a.m. C. Archer and P. Rooney (London)
Cell shape and chondrogenic differentiation in the chick limb
- 9.20 - 9.40 a.m. T. Horder (Oxford)
Review of fate maps in limb development

REGENERATION

Tuesday, 30 March

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| 9.40 - 10.10 a.m. | J.M.W. Slack (London)
Non-equivalence in limb regeneration |
| 10.10 - 10.40 a.m. | R.N. Turner (London)
Supernumerary limbs following basal rotation: a case for the abandonment of deterministic explanations |
| 10.40 - 11.10 a.m. | Coffee |
| 11.10 - 11.40 a.m. | S. Reynolds (London)
Morphogenesis of the amphibian limb blastema |
| 11.40 - 12.10 p.m. | M. Maden (London)
Vitamin A and pattern formation in the regenerating limb |
| 12.10 - 12.40 p.m. | J. Baguna (Barcelona)
Planarian regeneration |
| 12.40 - 2.10 p.m. | Lunch |

DEVELOPMENT AND EVOLUTION

Tuesday, 30 March

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| 2.10 - 2.30 p.m. | D.A. Ede (Glasgow)
The concept of the developmental act in phylogeny and ontogeny |
| 2.30 - 2.50 p.m. | O. Flint (Macclesfield)
Mechanisms of limb and vertebral development |
| 2.50 - 3.10 p.m. | P.F.A. Maderson (New York)
Development, form and function in the amniote limb: an appraisal of the punctuated equilibrium model for evolution |
| 3.10 - 3.30 p.m. | P. Alberch (Harvard)
The role of paedomorphosis in amphibian evolution |
| 3.30 - 4.00 p.m. | Tea |
| 4.00 - 4.20 p.m. | C. Gans (Michigan)
Limb reduction in lizards: developmental <u>versus</u> functional constraints |
| 4.20 - 4.40 p.m. | S.C. Goel, A.R. Nerurkar and J.K. Pal (Poona)
Reptilian lens crystallins |
| 4.40 - 5.00 p.m. | J. Cohen (Birmingham)
Regulation, creodes and crosswords: how many developmental routes are available? |
| 5.00 p.m. | General discussion |
| 6.30 p.m. | Dinner |
| 8.00 - 10.00 p.m. | Poster session |

DEVELOPMENT AND EVOLUTION

Wednesday, 31 March

1. ONTOGENESIS AND PHYLOGENESIS

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| 9.00 - 9.50 a.m. | C. Patterson (London)
How does phylogeny differ from ontogeny? |
| 9.50 - 10.40 a.m. | G. C. Webster (Sussex)
Identity and continuity in biological forms |
| 10.40 - 11.10 a.m. | Coffee |
| 11.10 - 12.00 p.m. | J. Maynard Smith (Sussex)
Is development relevant to evolution? |
| 12.00 - 12.30 p.m. | General discussion |
| 12.30 - 1.30 p.m. | Lunch |
| 1.45 - 2.35 p.m. | L Wolpert (London)
The development of pattern and evolution |
| 2.35 - 3.25 p.m. | B. Goodwin (Sussex)
The ontogeny and phylogeny of the pentadactyl limb |
| 3.25 - 4.00 p.m. | Tea |

2. PROBLEMS OF HOMOLOGY

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| 4.00 - 4.50 p.m. | J. R. Hinchliffe (Aberystwyth)
The prechondrogenic patterns in tetrapod limb development and their phylogenetic significance |
| 4.50 - 5.40 p.m. | P. D. Nieuwkoop (Utrecht)
Embryological evidence for a diphyletic origin and development of the tetrapods |
| 6.30 p.m. | Dinner |
| 8.00 p.m. | Workshops (topics to be announced during the meeting) |

Thursday, 1 April

3. INSECT DEVELOPMENT AND EVOLUTION

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| 9.00 - 9.50 a.m. | K. Sander (Freiburg)
Insect egg types and the evolution of patterning mechanisms |
| 9.50 - 10.40 a.m. | V. French (Edinburgh)
The development and evolution of the insect segment |
| 10.40 - 11.10 a.m. | Coffee |
| 11.10 - 12.00 p.m. | S. Kauffman (Philadelphia)
Internal factors in evolution |
| 12.00 - 12.30 p.m. | General discussion |

Thursday, 1 April (contd.)

12.30 - 1.30 p.m. Lunch

4. CORRELATIONS BETWEEN GENETIC AND MORPHOGENETIC CHANGES IN EVOLUTION

1.45 - 2.35 p.m. A. Garcia-Bellido (Madrid)

Comparative anatomy of the wing chaeta patterns
in Drosophilidae

2.35 - 3.25 p.m. V. Walbot (Stanford)

Developmental mutants give clues about evolution in maize

3.25 - 4.00 p.m. Tea

5. PROTOZOAN DEVELOPMENT AND EVOLUTION

4.00 - 4.50 p.m. J. Frankel (Iowa)

Developmental underpinnings of evolutionary
changes in climate

5.00 p.m. ANNUAL GENERAL MEETING OF BRITISH SOCIETY FOR
DEVELOPMENTAL BIOLOGY

6.30 p.m. Dinner

Friday, 2 April

6. VERTEBRATE DEVELOPMENTAL MECHANISMS AND THEIR EVOLUTION

9.00 - 9.50 a.m. T. Horder (Oxford)

The evolution of embryology

9.50 - 10.40 a.m. B. K. Hall (Dalhousie)

Epigenetic control in development and evolution

10.40 - 11.00 a.m. Coffee

11.00 - 11.50 a.m. M. Maden (London)

Supernumerary limbs in development and regeneration
in the vertebrates

11.50 - 12.40 p.m. N. Holder (London)

Pattern formation and vertebrate limb evolution

12.40 - 1.00 p.m. General discussion

1.00 p.m. End of meeting

1.15 p.m. Lunch

BRITISH SOCIETY FOR DEVELOPMENTAL BIOLOGY

BOOKING FORM FOR MEETING TO BE HELD AT THE UNIVERSITY OF SUSSEX, 29/3-2/4/82

NAME TITLE

ADDRESS SEX

..... TELEPHONE NO.

..... BSDB MEMBER/NON-MEMBER *

.....

SPECIAL REQUIREMENTS

		<u>Cost (inc. service charge)</u>
Sunday, 28 March	Dinner	£3.25
	Bed and breakfast	£8.40
Monday, 29 March	Coffee and tea	£0.60
	Ploughmans lunch	£1.95
	Conference dinner *	£10.20 (inc. wine)
	Alternative dinner *	£3.25
	Bed and breakfast	£8.40
Tuesday, 30 March	Coffee and tea	£0.60
	Ploughmans lunch	£1.95
	Dinner	£3.25
	Bed and breakfast	£8.40
Wednesday, 31 March	Coffee and tea	£0.60
	Ploughmans lunch	£1.95
	Dinner	£3.25
	Bed and breakfast	£8.40
Thursday, 1 April	Coffee and tea	£0.60
	Ploughmans lunch	£1.95
	Dinner	£3.25
	Bed and breakfast	£8.40
Friday, 2 April	Coffee	£0.30
	Ploughmans lunch	£1.95
REGISTRATION FEE (for non-members of BSDB)		£10.00
<u>TOTAL</u>		<u>£ .</u>

* = please delete, as appropriate

Cheques (payable to British Society for Developmental Biology Conference Account) should be sent with this booking form by Monday, 1 March at the latest to:

Dr. C. C. Ford
School of Biological Sciences

(Tel: 0231 606755 ext 960)