INDEX OF SUBJECTS

A

Activity cycles:
The integration of, in the behaviour of Arenicola marina L. (Wells and Albrecht) 41

Aerodynamics:
of flapping flight with application to insects (Osborne) 221

Apical meristems:
The distribution of electromotive forces in the neighbourhood of (Mcaulay, Ford and Hope) 320

Arenicola ecaudata Johnston:
The role of oesophageal rhythms in the behaviour of (Wells and Albrecht) 51

Arenicola marina L.:
The integration of activity cycles in the behaviour of (Wells and Albrecht) 41

Ascidians:
On the hormonal and neural control of the release of gametes in (Carlisle) 463

Axon system:
A bifunctional single motor, of a crustacean muscle (Wiersma) 13

Axons:
Giant, and synergic contractions in Branchiomma vesiculosum (Nicol) 22

B

Birefringence:
See Protoplasmic structure

Branchiomma vesiculosum:
Giant axons and synergic contractions in (Nicol) 22

Brown trout:
The growth of, (Salmo trutta Linn.). IV. The effect of food and temperature on the survival and growth of fry (Brown) 473

Bufo regularis Reuss:
Water uptake and moulting in (Ewer) 369
— The effect of pitressin and pitocin on water balance in (Ewer) 374

C

Carbonic anhydrase activity:
during embryonic development (Clark) 332

Chironomid larvae:
The function of haemoglobin in relation to filter feeding in leaf-mining (Walshe) 57

Colour change:
of the minnow (Phoxinus laevis Ag.). I. Effects of spinal section between vertebrae 5 and 12 on the responses of the melanophores (Healey) 258

Contractile vacuoles:
The physiology of. VII. Osmotic relations in a suckorian, with special reference to the mechanism of control of vacuolar output (Kitching) 203

Crustacean muscle:
See Axon system

Desert locust:
See Schistocerca gregaria

Diurnal rhythms:
Studies in. I. Rhythmic behaviour in millipedes (Cloudsley-Thompson) 165

Dolphins:
Wave-riding (Woodcock and McBride) 215

E

Electromotive forces:
The distribution of, in the neighbourhood of apical meristems (Mcaulay, Ford and Hope) 320

Embryonic development:
Carbonic anhydrase activity during (Clark) 332
— See also Mouse embryos and Foetal sheep

Evaporation of water:
from woodlice and the millipede, Glomeris (Edney) 91

F

Fat and glycogen content:
The variation in, of the bot-fly (Gastrophilus intestinalis) larva tracheal organ during development (Levenbook) 173

Fermentation:
in the rumen of the sheep. I. The production of volatile fatty acids and methane during the fermentation of wheaten hay and lucerne hay in vitro by micro-organisms from the rumen (Gray, Pilgrim and Weller) 74
— II. The production and absorption of volatile fatty acids during the fermentation of wheaten hay and lucerne hay in the rumen (Gray and Pilgrim) 83

Ferret:
Photoperiodicity in the female (Hart) 1

Fertilization reaction:
in the sea-urchin. The probability of a successful sperm-egg collision (Rothschild and Swann) 403

Filter feeding:
See Chironomid larvae

Foetal sheep:
The development of motor responses in the stomach of the (Duncan and Phillipson) 32

JEB. 28, 4
Index of Subjects

Frog: See Rana temporaria
Fry: See Brown trout

G
Gastrophilus intestinalis de Geer: The variation in fat and glycogen content of the bot fly larva tracheal organ during development (Levenbook) 173
— The effect of carbon dioxide and certain respiratory inhibitors on the respiration of larvae of the horse bot fly (Levenbook) 181

Glomeris: See Evaporation of water

H
Haemoglobin: The function of, in relation to filter feeding in leaf-mining chironomid larvae (Walshe) 57
Hen's egg shell: Radiographic studies on the formation of the (Bradfield) 125
Homing pigeons: The experimental investigation of navigation in (Matthews) 508
Hormonal and neural control: On the, of the release of gametes in ascidians (Carlisle) 463

I
Inorganic phosphorus: See Sheep
Insects: Aerodynamics of flapping flight with application to (Osborne) 221

L
Lampry embryo: Experiments on the neural crest of the (Newth) 247
Ligia oceanica L.: Body size in relation to oxygen consumption and pleopod beat in (Ellenby) 492
Lipids: of the nervous system of the squid, Loligo pealei (McColl and Rossiter) 116
Loligo pealei: Lipids of the nervous system of the squid (McColl and Rossiter) 116

M
Malpighian tubules: See Osmotic regulation
Medulla oblongata: Unit activity in the, of fishes (Woldring and Dirksen) 218
Melanophores: See Colour change

Micro-organisms: See Fermentation
Millipede: See Evaporation of water and Diurnal rhythms
Minnow: See Phoxinus phoxinus (L.) and P. laevis Ag.
Mitosis: See Protoplasmic structure
Mosquito larvae: Osmotic regulation in: the role of the Malpighian tubules (Ramsay) 62
Motor responses: The development of, in the stomach of the foetal sheep (Duncan and Phillipson) 32
Moultin: See Bufo regularis Reuss
Mouse embryos: Cell number in haploid, diploid and polyploid (Bratty and Fischberg) 541

N
Navigation: The experimental investigation of, in homing pigeons (Matthews) 508
Neural crest: Experiments on the, of the lamprey embryo (Newth) 247

O
Oesophageal rhythms: The role of, in the behaviour of Arenicola ecaudata Johnston (Wells and Albrecht) 51
Oestrous cycle: The phases of the, in the adult white rat (Mandl) 576
Osmotic regulation: in mosquito larvae: the role of the Malpighian tubules (Ramsay) 62
Osmotic relations: See Contractile vacuoles
Ovariectomized rats: Cyclical changes in the vaginal smear of adult (Mandl) 585

P
Photodynamic action: The role of radiation in (Calcutt) 537
Photoperiodicity: in the female ferret (Hart) 1
Phoxinus laevis Ag.: The colour change of the minnow. I. Effects of spinal section between vertebrae 5 and 12 on the responses of the melanophores (Healey) 298
Phoxinus phoxinus (L.): The reactions of the minnow, to solutions of phenol, ortho-cresol and para-cresol (Jones) 261
Index of Subjects

**Protoplasmic structure:**
and mitosis. I. The birefringence of the metaphase spindle and asters of the living sea-urchin egg (Swann) 417
— II. The nature and cause of birefringence changes in the sea-urchin egg at anaphase (Swann) 434

**Radiation:**
The role of, in photodynamic action (Calcutt) 537

**Rana temporaria:**
The temperature-pulse rate curve of the isolated frog's heart (Smith) 141

**Rat:**
See Oestrous cycle and Ovariectomized rats

**Red cell structure:**
Fragmentation of red cell ghosts in relation to the problem of (Ponder) 567

**Release of gametes:**
See Ascidians

**Respiration:**
The effect of carbon dioxide and certain respiratory inhibitors on the, of larvae of the horse bot fly (Gastrophilus intestinalis de Geer) (LevNBook) 181

**Respiratory exchange:**
of the desert locust (Schistocerca gregaria) before, during and after flight (Krogh and Weis-Fogh) 344

**Salmo trutta Linn.:**
See Brown trout

**Schistocerca gregaria:**
The respiratory exchange of the desert locust, before, during and after flight (Krogh and Weis-Fogh) 344

**Sea-urchin:**
The probability of a successful sperm-egg collision (Rothschild and Swann) 403

**Sea-urchin egg:**
See Protoplasmic structure

**Sheep:**
Observations on the distribution of inorganic phosphorus, soluble calcium and soluble magnesium in the stomach of the (Garton) 358
— See also Fermentation and Foetal sheep

**Skin grafting:**
The technique of free, in mammals (Billingham and Medawar) 385

**Squid:**
See Loligo pealeii

**Suctorian:**
See Contractile vacuoles

**Swimbladder:**
and the vertical movements of teleostean fishes. I. Physical factors (Jones) 553

**Synergic contractions:**
See Branchiomma vesiculosum

**Teleostean fishes:**
The swimbladder and the vertical movements of. I. Physical factors (Jones) 553
— See also Medulla oblongata

**Temperature-pulse rate curve:**
of the isolated frog's heart (Rana temporaria) (Smith) 141

**Terrestrial arthropods:**
Factors determining the temperature of, in sunlight (Parry) 445

**Vacuolar output:**
See Contractile vacuoles

**Volatile fatty acids and methane:**
See Fermentation

**Water balance:**
The effect of pitressin and pitocin on, in Bufo regularis Reuss (Ewer) 374

**Water uptake:**
and moulting in Bufo regularis Reuss (Ewer) 369

**Woodlice:**
See Evaporation of water
# INDEX OF AUTHORS

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albrecht, Elinor B.</td>
<td><em>See Wells and Albrecht</em></td>
</tr>
<tr>
<td>Beatty, R. A. and Fischberg, M.</td>
<td>Cell number in haploid, diploid and polyploid mouse embryos 541</td>
</tr>
<tr>
<td>Billingham, R. E. and Medawar, P. B.</td>
<td>The technique of free skin grafting in mammals 385</td>
</tr>
<tr>
<td>Bradfield, J. R. G.</td>
<td>Radiographic studies on the formation of the hen’s egg shell 125</td>
</tr>
<tr>
<td>Brown, Margaret E.</td>
<td>The growth of brown trout (<em>Salmo trutta</em> Linn.). IV. The effect of food and temperature on the survival and growth of fry 473</td>
</tr>
<tr>
<td>Calcutt, G.</td>
<td>The role of radiation in photodynamic action 537</td>
</tr>
<tr>
<td>Carlisle, D. B.</td>
<td>On the hormonal and neural control of the release of gametes in ascidians 463</td>
</tr>
<tr>
<td>Clark, A. M.</td>
<td>Carbonic anhydrase activity during embryonic development 332</td>
</tr>
<tr>
<td>Cloudsley-Thompson, J. L.</td>
<td>Studies in diurnal rhythms. I. Rhythmic behaviour in millipedes 165</td>
</tr>
<tr>
<td>Dirken, M. N. J.</td>
<td><em>See Woldring and Dirken</em></td>
</tr>
<tr>
<td>Duncan, D. L. and Phillipson, A. T.</td>
<td>The development of motor responses in the stomach of the foetal sheep 32</td>
</tr>
<tr>
<td>Edney, E. B.</td>
<td>The evaporation of water from woodlice and the millipede <em>Glomeris</em> 91</td>
</tr>
<tr>
<td></td>
<td>— The body temperature of woodlice 271</td>
</tr>
<tr>
<td>Ellenby, C.</td>
<td>Body size in relation to oxygen consumption and pleopod beat in <em>Ligia oceanica</em> L. 492</td>
</tr>
<tr>
<td>Ewer, R. F.</td>
<td>Water uptake and molting in <em>Bufo regularis</em> Reuss 369</td>
</tr>
<tr>
<td></td>
<td>— The effect of pitressin and pitocin on water balance in <em>Bufo regularis</em> Reuss 374</td>
</tr>
<tr>
<td>Fischberg, M.</td>
<td><em>See Beatty and Fischberg</em></td>
</tr>
<tr>
<td>Ford, J. M.</td>
<td><em>See McAulay, Ford and Hope</em></td>
</tr>
<tr>
<td>Garton, G. A.</td>
<td>Observations on the distribution of inorganic phosphorus, soluble calcium and soluble magnesium in the stomach of the sheep 358</td>
</tr>
<tr>
<td>Gray, F. V. and Pilgrim, A. F.</td>
<td>Fermentation in the rumen of the sheep. II. The production and absorption of volatile fatty acids during the fermentation of wheaten hay and lucerne hay in the rumen 83</td>
</tr>
<tr>
<td>Gray, F. V., Pilgrim, A. F. and Weller, R. A.</td>
<td>Fermentation in the rumen of the sheep. I. The production of volatile fatty acids and methane during the fermentation of wheaten hay and lucerne hay <em>in vitro</em> by microorganisms from the rumen 74</td>
</tr>
<tr>
<td>Hart, D. S.</td>
<td>Photoperiodicity in the female ferret 1</td>
</tr>
<tr>
<td>Healey, E. G.</td>
<td>The colour change of the minnow (<em>Phoxinus laevis</em> Ag.). I. Effects of spinal section between vertebrae 5 and 12 on the responses of the melanophores 298</td>
</tr>
<tr>
<td>Hope, A. B.</td>
<td><em>See McAulay, Ford and Hope</em></td>
</tr>
<tr>
<td>Jones, F. R. Harden.</td>
<td>The swimbladder and the vertical movements of teleostean fishes. I. Physical factors 553</td>
</tr>
<tr>
<td>Jones, J. R. Erichsen.</td>
<td>The reactions of the minnow, <em>Phoxinus phoxinus</em> (L.), to solutions of phenol, ortho-cresol and para-cresol 261</td>
</tr>
<tr>
<td>Kitching, J. A.</td>
<td>The physiology of contractile vacuoles. VII. Osmotic relations in a suctorian, with special reference to the mechanism of control of vacuolar output 203</td>
</tr>
<tr>
<td>Krogh, Augustus and Weis-Fogh, Torkel.</td>
<td>The respiratory exchange of the desert locust (<em>Schistocerca gregaria</em>) before, during and after flight 344</td>
</tr>
<tr>
<td>Levenbook, L.</td>
<td>The variation in fat and glyco- gen content of the bot fly (<em>Gastrophilus intestinalis</em>) larva tracheal organ during development 173</td>
</tr>
<tr>
<td></td>
<td>— The effect of carbon dioxide and certain respiratory inhibitors on the respiration of larvae of the horse bot fly (<em>Gastrophilus intestinalis</em> de Geer) 181</td>
</tr>
<tr>
<td>McAulay, A. L., Ford, J. M. and Hope, A. B.</td>
<td>The distribution of electromotive forces in the neighbourhood of apical meristems 320</td>
</tr>
<tr>
<td>Name</td>
<td>Article</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>McBride, A. F.</td>
<td>See Woodcock and McBride</td>
</tr>
<tr>
<td>McColl, J. D. and Rossiter, R. J.</td>
<td>Lipids of the nervous system of the squid, <em>Loligo pealii</em></td>
</tr>
<tr>
<td>Mandl, Anita M.</td>
<td>The phases of the oestrous cycle in the adult white rat</td>
</tr>
<tr>
<td></td>
<td>— Cyclical changes in the vaginal smear of adult ovariectomized rats</td>
</tr>
<tr>
<td>Medawar, P. B.</td>
<td>See Billingham and Medawar</td>
</tr>
<tr>
<td>Matthews, G. V. T.</td>
<td>The experimental investigation of navigation in homing pigeons</td>
</tr>
<tr>
<td>Newth, D. R.</td>
<td>Experiments on the neural crest of the lamprey embryo</td>
</tr>
<tr>
<td>Nicol, J. A. Colín</td>
<td>Giant axons and synergic contractions in <em>Branchiomma vesiculosum</em></td>
</tr>
<tr>
<td>Osborne, M. F. M.</td>
<td>Aerodynamics of flapping flight with application to insects</td>
</tr>
<tr>
<td>Parry, D. A.</td>
<td>Factors determining the temperature of terrestrial arthropods in sunlight</td>
</tr>
<tr>
<td>Phillipson, A. T.</td>
<td>See Duncan and Phillipson</td>
</tr>
<tr>
<td>Pilgrim, A. F.</td>
<td>See Gray and Pilgrim</td>
</tr>
<tr>
<td></td>
<td>Gray, Pilgrim and Weller</td>
</tr>
<tr>
<td>Ponder, Eric</td>
<td>Fragmentation of red cell ghosts in relation to the problem of red cell structure</td>
</tr>
<tr>
<td>Ramsay, J. A.</td>
<td>Osmotic regulation in mosquito larvae: the role of the Malpighian tubules</td>
</tr>
<tr>
<td>Rossiter, R.</td>
<td>See McColl and Rossiter</td>
</tr>
<tr>
<td>Rothschild, Lord and Swann, M. M.</td>
<td>The fertilization reaction in the sea-urchin. The probability of a successful sperm-egg collision</td>
</tr>
<tr>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Segrove, F.</td>
<td>Oviposition behaviour in the two strains of the rice weevil, <em>Calandra oryzae</em> Linn. (Coleopt., Curculionidae)</td>
</tr>
<tr>
<td>Smith, C. L.</td>
<td>The temperature-pulse rate curve of the isolated frog's heart (<em>Rana temporaria</em>)</td>
</tr>
<tr>
<td>Swann, M. M.</td>
<td>Protoplasmic structure and mitosis. I. The birefringence of the metaphase spindle and asters of the living sea-urchin egg</td>
</tr>
<tr>
<td></td>
<td>— Protoplasmic structure and mitosis. II. The nature and cause of birefringence changes in the sea-urchin egg at anaphase</td>
</tr>
<tr>
<td></td>
<td>— See also Rothschild and Swann</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Walshe, Barbara M.</td>
<td>The function of haemoglobin in relation to filter feeding in leaf-mining chironomid larvae</td>
</tr>
<tr>
<td>Weis-Fogh, Torkel</td>
<td>See Krogh and Weis-Fogh</td>
</tr>
<tr>
<td>Weller, R. A.</td>
<td>See Gray, Pilgrim and Weller</td>
</tr>
<tr>
<td>Wells, G. P. and Albrecht, Elinor B.</td>
<td>The integration of activity cycles in the behaviour of <em>Arenicola marina</em> L.</td>
</tr>
<tr>
<td></td>
<td>— The role of oesophageal rhythms in the behaviour of <em>Arenicola eucaudata</em> Johnston</td>
</tr>
<tr>
<td>Wiersma, C. A. G.</td>
<td>A bifunctional single motor axon system of a crustacean muscle</td>
</tr>
<tr>
<td>Woldring, S. and Dirken, M. N. J.</td>
<td>Unit activity in the medulla oblongata of fishes</td>
</tr>
<tr>
<td>Woodcock, A. H. and McBride, A. F.</td>
<td>Wave-riding dolphins</td>
</tr>
</tbody>
</table>

**Note:** The index is extracted from a scientific journal and lists authors, articles, and references in a concise format. The entries include the names of the authors, the titles of the articles they have contributed to, and sometimes additional details such as page numbers or specific sections within the articles.