

INDEX OF SUBJECTS

A

- Abdominal ganglion:**
The efflux of sodium ions from the last, of the cockroach, *Periplaneta americana* L. (TREHERNE) 729
- Abdominal nerve cord:**
Sodium and potassium fluxes in the, of the cockroach *Periplaneta americana* L. (TREHERNE) 315
— The movements of sodium ions in the isolated, of the cockroach, *Periplaneta americana* (TREHERNE) 629
- Acclimatization:**
Effect of, to high temperature on the blood chloride, free amino acids and osmotic pressure in the freshwater field crab *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (RAO and RAMACHANDRA) 29
- Ageing:**
Two phases of, in *Drosophila subobscura* (CLARKE and SMITH) 679
- Aggregation centres:**
The cells founding, in the slime mould *Polysphondylium nolaceum* (SHAFFER) 833
- Alate alienicolae:**
Viability and fecundity of, of *Aphis fabae* Scop. after flights to exhaustion (COCKBAIN) 181
- Amino acids:**
Effect of acclimatization to high temperature on the blood chloride, free, and osmotic pressure in the freshwater field crab *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (RAO and RAMACHANDRA) 29
— The influence of sex and size on the osmotic pressure, the chloride and the free, of the blood of the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (PADMANABHANAI DU and RAMAMURTHY) 35
- Ammonia:**
The mode of excretion of, and urea in *Xenopus laevis* (BALINSKY and BALDWIN) 695
- Anemone:**
See Stomphia coccinea
- Anoxia:**
The response of the dogfish to (SACHELL) 531
- Antenna:**
Receptor potentials recorded from sensilla basiconica on the, of the silkworm larvae, *Bombyx mori* (MORITA and YAMASHITA) 851
- Antennal gland:**
The influence of water-loading and low temperature on certain functional aspects of the crayfish (RIEGEL) 291
— The role of the, in the osmotic and ionic regulation of *Carcinus maenas* (RIEGEL and LOCKWOOD) 491

- Aphis fabae Scop.:**
Fuel utilization and duration of tethered flight in (COCKBAIN) 163
— Water relationships of, during tethered flight (COCKBAIN) 175
— Viability and fecundity of alate alienicolae of, after flights to exhaustion (COCKBAIN) 181
- Arthropods:**
The waterproofing mechanism of. II. The permeability of the cuticle of some aquatic insects (BRAMENT) 277
- Assassin bug:**
See Platymeris rhadamanthus Gaerst.
- Auditory synapses:**
Pharmacological studies on the, in a grasshopper (SUGA and KATSUKI) 759

B

- Barnacle settlement:**
Territorial behaviour in (CRISP) 429
- Blood:**
Osmotic and ionic changes in, and muscle of migrating salmonids (PARRY) 411
- Blood chloride:**
Effect of acclimatization to high temperature on the, free amino acids and osmotic pressure in the freshwater field crab *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (RAO and RAMACHANDRA) 29
— The influence of sex and size on the osmotic pressure, and the free amino acids of the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel, *Lamellidens marginalis* (PADMANABHANAI DU and RAMAMURTHY) 35
- Blood trehalose:**
The physiology of, and its function during flight in the blowfly (CLEGG and EVANS) 771
- Blowfly:**
The physiology of blood trehalose and its function during flight in the (CLEGG and EVANS) 771
— *See Calliphora erythrocephala* (Meig.)
- Bombyx mori:**
Receptor potentials recorded from the sensilla basiconica on the antenna of the silkworm larvae (MORITA and YAMASHITA) 851
- Brown trout:**
See Salmo trutta Linn.

C

- Caddis larvae (Trichoptera):**
Studies on salt and water balance in. I. Osmotic and ionic regulation of body fluids in *Limnephilus affinis* Curtis (SUTCLIFFE) 501

Caddis larvae (Trichoptera):

- Studies on salt and water balance in. II. Osmotic and ionic regulation of body fluids in *Limnephilus stigma* Curtis and *Anabolia nervosa* Leach (SUTCLIFFE) 521

Calliphora erythrocephala (Meig.):

- The relationship between nutrition, hormones and reproduction in the blowfly. I. Selective feeding in relation to the reproductive cycle, the corpus allatum volume and fertilization (STRANGWAYS-DIXON) 225
- The relationship between nutrition, hormones and reproduction in the blowfly. II. The effect of removing the ovaries, the corpus allatum and the median neurosecretory cells upon selective feeding, and the demonstration of the corpus allatum cycle (STRANGWAYS-DIXON) 637

Calliphora maggots:

- The spectral sensitivity of (STRANGE) 237

Carbon monoxide:

- Survival of goldfish in presence of (ANTHONY) 109

Carcinus maenas (L.):

- Studies on ionic regulation in. I. Sodium balance (SHAW) 135

Central nervous system:

- The kinetics of sodium transfer in the, of the cockroach, *Periplaneta americana* L. (TREHERNE) 737

Chemical composition:

- Studies on the, of muscle tissue. II. The abdominal flexor muscles of the lobster *Nephrops norvegicus* (L.) (ROBERTSON) 707

Cockroach:

- See *Periplaneta americana* L.

Colonial responses:

- Of hydroid polypa (JOSEPHSON) 559

Control:

- The central neurons, of flight in a locust (WILSON) 471

Crab-eating frog:

- See *Rana cancrivora*

Crustacea:

- Sodium balance in *Eriocheir sinensis* (M. Edw.). The adaptation of the, to fresh water (SHAW) 153

Cyprinidae:

- Visco-elastic properties of the tunica externa of the swimbladder in (ALEXANDER) 747

Cypriniformes:

- The physical properties of some South American (ALEXANDER) 403

D**Desert locust:**

- See *Schistocerca gregaria* Forskål

Digestive secretion:

- Evidence for humoral regulation of, in the beetle *Tenebrio molitor* (DADD) 259

Dogfish:

- The response of the, to anoxia (SATCHELL) 531

Drosophila melanogaster:

- Nutritional requirements of anexically cultured adults (SANG and KING) 793

Drosophila subobscura:

- Two phases of ageing in (CLARKE and SMITH) 679

E**Electric stimuli:**

- Repetitive potentials following brief, in a hydroid (JOSEPHSON) 579

Eriocheir sinensis (M. Edw.):

- Sodium balance in. The adaptation of the Crustacea to fresh water (SHAW) 153

Excretion:

- The mode of, of ammonia and urea in *Xenopus laevis* (BALINSKY and BALDWIN) 695

F**Fecundity:**

- Viability and, of alate alienicolae of *Aphis fabae* Scop. after flights to exhaustion (COCKBAIN) 181

Flight:

- The central nervous control of, in a locust (WILSON) 471

Fluxes:

- Sodium and potassium, in the abdominal nerve cord of the cockroach, *Periplaneta americana* L. (TREHERNE) 315

Foot:

- Oriental movements of the, of *Littorina* species in relation to the plane of vibration of polarized light (CHARLES) 213

Fresh water:

- Sodium balance in *Eriocheir sinensis* (M. Edw.). The adaptation of the Crustacea to (SHAW) 153

Freshwater field crab:

- See *Paratelphusa* sp.

Freshwater mussel:

- See *Lamellidens marginalis*

Fuel utilization:

- And duration of tethered flight in *Aphis fabae* Scop. (COCKBAIN) 163

G**Gammarus duebeni:**

- And *G. pulex pulex* (L.). Studies on sodium balance in (SHAW and SUTCLIFFE) 1
- The urine of, and of *G. pulex* (LOCKWOOD) 647

Gammarus pulex pulex (L.):

- Gammarus duebeni* and. Studies on sodium balance in (SHAW and SUTCLIFFE) 1
- The urine of *Gammarus duebeni* and (LOCKWOOD) 647

Goldfish:

- Survival of, in presence of carbon monoxide (ANTHONY) 109

Goldfish blood:

- The oxygen capacity of (*Carassius auratus* L.), in relation to thermal environment (ANTHONY) 93

Grasshopper:

- Pharmacological studies on the auditory synapses in a (SUGA and KATSUKI) 7

Growth-rate cycle:
The annual, in brown trout (*Salmo trutta* Linn.) and its cause (SWIFT) 595

H

Hearing:
Central mechanism of, in insects (SUGA and KATSUKI) 545

Hormones:
The relationship between nutrition, and reproduction in the blowfly *Calliphora erythrocephala* (Meig.). I. Selective feeding in relation to the reproductive cycle, the corpus allatum volume and fertilization (STRANGWAYS-DIXON) 225

— The relationship between nutrition, and reproduction in the blowfly *Calliphora erythrocephala* (Meig.). II. The effect of removing the ovaries, the corpus allatum and the median neurosecretory cells upon selective feeding, and the demonstration of the corpus allatum cycle (STRANGWAYS-DIXON) 637

Humoral regulation:
Evidence for, of digestive secretion in the beetle, *Tenebrio molitor* (DADD) 259

Hydroid:
The response of a, to weak water-borne disturbances (JOSEPHSON) 17
— Repetitive potentials following brief electric stimuli in a (JOSEPHSON) 579

Hydroid polyyps:
Colonial responses of (JOSEPHSON) 559

Hydrodynamical performance:
The, of migratory salmon (OSBORNE) 365

Hydrostatic pressure:
The responses of certain mysids to changes in (RICE) 391

I

Insects:
Central mechanism of hearing in (SUGA and KATSUKI) 545

Invertebrates:
A new system for continuous respirometry of small air-breathing, under near-natural conditions (MACFADYEN) 323

Ionic regulation:
Studies on, in *Carcinus maenas* (L.). I. Sodium balance (SHAW) 135
— The role of the antennal gland in the, of *Carcinus maenas* (RIEGEL and LOCKWOOD) 491

L

Lamellidens marginalis:
Effect of acclimatization to high temperature on the blood chloride, free amino acids and osmotic pressure in the freshwater field crab *Paratelphusa* sp. and the freshwater mussel (RAO and RAMACHANDRA) 29
— The influence of sex and size on the osmotic pressure, the chloride and the free amino acids of the blood of the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel (PADMANABHANAIKU and RAMAMURTHY) 35

Littorina littoralis (L.):
The mechanism of orientation of freely moving, to polarized light (CHARLES) 203

Littorina species:
The orientation of, to polarized light (CHARLES) 189

— Orientational movements of the foot of, in relation to the plane of vibration of polarized light (CHARLES) 213

Locust:
The central nervous control of flight in a (WILSON) 471

M

Maggots:
The spectral sensitivity of *Calliphora* (STRANGE) 237

Memory:
Rates of establishment of representations in the, of octopuses with and without vertical lobes (YOUNG) 43

Multiparasitism:
A study in insect. I. Host selection and oviposition (FISHER) 267
— A study in insect. II. The mechanism and control of competition for possession of the host (FISHER) 605

Muscle:
Osmotic and ionic changes in blood and, of migratory salmonids (PARRY) 411

Muscle tissue:
Studies on the chemical composition of. II. The abdominal flexor muscles of the lobster *Nephrops norvegicus* (L.) (ROBERTSON) 707

Mysids:
The responses of certain, to changes in hydrostatic pressure (RICE) 391

N

Nutrition:
The relationship between, hormones and reproduction in the blowfly *Calliphora erythrocephala* (Meig.). I. Selective feeding in relation to the reproductive cycle, the corpus allatum volume and fertilization (STRANGWAYS-DIXON) 225

Nutritional requirements:
Of anexically cultured *Drosophila melanogaster* adults (SANG and KING) 793

O

Octopus:
Weight discrimination by (WELLS) 127
— Centres for tactile and visual learning in the brain of (WELLS) 811

Octopuses:
Rates of establishment of representations in the memory of, with and without vertical lobes (YOUNG) 43
— Retinal orientation and the discrimination of polarized light by (ROWELL and WELLS) 827

Orientation:

- The, of *Littorina* species to polarized light (CHARLES) 189
 — The mechanism of, of freely moving *Littorina littoralis* (L.) to polarized light (CHARLES) 203

Orientalional movements:

Of the foot of *Littorina* species in relation to the plane of vibration of polarized light (CHARLES) 213

Osmotic pressure:

- Effect of acclimatization to high temperature on the blood chloride, free amino acids and, in the freshwater field crab *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (RAO and RAMACHANDRA) 29
 — The influence of sex and size on the, the chloride and the free amino acids of the blood of the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (PADMANABHANAIIDU and RAMAMURTHY) 35

Osmotic regulation:

- The role of the antennal gland in the, of *Carcinus maenas* (RIBGEL and LOCKWOOD) 491
 — In the crab-eating frog (*Rana cancrivora*) (GORDON, SCHMIDT-NIELSEN and KELLY) 659

Oxygen capacity:

The, of goldfish (*Carassius auratus* L.) blood in relation to thermal environment (ANTHONY) 93

Oxygen concentrations:

Effect of dissolved, on the toxicity of several poisons to rainbow trout (*Salmo gairdnerii* Richardson) (LLOYD) 447

P**Pacemaker system:**

The swimming response and its, in the anemone *Stomphia coccinea* (ROBSON) 685

Paratelphusa sp.:

- Effect of acclimatization to high temperature on the blood chloride, free amino acids and osmotic pressure in the freshwater field crab, and the freshwater mussel, *Lamellidens marginalis* (RAO and RAMACHANDRA) 29
 — The influence of sex and size on the osmotic pressure, the chloride and the free amino acids of the blood of the freshwater field crab, and the freshwater mussel, *Lamellidens marginalis* (PADMANABHANAIIDU and RAMAMURTHY) 35

Periplaneta americana L.:

- Sodium and potassium fluxes in the abdominal nerve cord of the cockroach (TREHERNE) 315
 — The movements of sodium ions in the isolated abdominal nerve cord of the cockroach (TREHERNE) 629
 — The efflux of sodium ions from the last abdominal ganglion of the cockroach (TREHERNE) 729
 — The kinetics of sodium transfer in the central nervous system of the cockroach (TREHERNE) 737

Physical properties:

The, of the swimbladders of some South American Cypriniformes (ALEXANDER) 403

Platyeris rhadamanthus Gaerst.:

The action and composition of the saliva of an assassin bug (Hemiptera, Reduviidae) (EDWARDS) 61

Polarized light:

The orientation of *Littorina* species to (CHARLES) 189

- The mechanism of orientation of freely moving *Littorina littoralis* (L.) to (CHARLES) 203
 — Orientalional movements of the foot of *Littorina* species in relation to the plane of vibration of (CHARLES) 213
 — Retinal orientation and the discrimination of, by octopuses (ROWELL and WELLS) 827

Polysphondylium violaceum:

The cells founding aggregation centres in the slime mould (SHAFFER) 833

Prothoracic spine:

The structure and function of the, of the desert locust, *Schistocerca gregaria* Forskål (ROWELL) 457

R**Rainbow trout:**

See *Salmo gairdnerii* Richardson

Rana cancrivora:

Osmotic regulation in the crab-eating frog (GORDON, SCHMIDT-NIELSEN and KELLY) 659

Receptor potentials:

Recorded from sensilla basiconica on the antenna of the silkworm larvae, *Bombyx mori* (MORITA and YAMASHITA) 851

Repetitive potentials:

Following brief electric stimuli in a hydroid (JOSEPHSON) 579

Representations:

Rates of establishment of, in the memory of octopuses with and without vertical lobes (YOUNG) 43

Reproduction:

The relationship between nutrition, hormones and, in the blowfly *Calliphora erythrocephala* (Meig.). I. Selective feeding in relation to the reproductive cycle, the corpus allatum volume and fertilization (STRANGWAYS-DIXON) 225

- The relationships between nutrition, hormones and, in the blowfly *Calliphora erythrocephala* (Meig.). II. The effect of removing the ovaries, the corpus allatum and the median neurosecretory cells upon selective feeding, and the demonstration of the corpus allatum cycle (STRANGWAYS-DIXON) 637

Reptiles:

On the regulation of the respiration in. I. The effect of temperature and CO₂ on the respiration of lizards (*Lacerta*) (NIELSEN) 301

Respiration:

Studies on the, of sea-urchin spermatozoa. III. Respiratory quotient (MOHRI and HORIUCHI) 249

- On the regulation of the, in reptiles. I. The effect of temperature and CO₂ on the respiration of lizards (*Lacerta*) (NIELSEN) 301

- Respiratory centre:**
The, in the tench (*Tinca tinca* L.). II. Respiratory neuronal activity in the medulla oblongata (SHELTON) 79
- Respirometry:**
A new system for continuous, of small air-breathing invertebrates under near-natural conditions (MACFADYEN) 323
- Retinal orientation:**
And the discrimination of polarized light by octopuses (ROWELL and WELLS) 827
- S**
- Saliva:**
The action and composition of the, of an assassin bug *Platyeris rhadamanthus* Gaerst. (Hemiptera, Reduviidae) (EDWARDS) 61
- Salmo gairdnerii Richardson:**
Effect of dissolved oxygen concentrations on the toxicity of several poisons to rainbow trout (LLOYD) 447
- Salmo trutta Linn.:**
The annual growth-rate cycle in brown trout and its cause (SWIFT) 595
- Salmon:**
The hydrodynamical performance of migratory (OSBORNE) 365
- Salmonids:**
Osmotic and ionic changes in blood and muscle of migrating (PARRY) 411
- Salt and water balance:**
Studies on, in caddis larvae (Trichoptera). I. Osmotic and ionic regulation of body fluids in *Limnephilus affinis* Curtis (SUTCLIFFE) 501
— Studies on, in caddis larvae (Trichoptera). II. Osmotic and ionic regulation of body fluids in *Limnephilus stigma* Curtis and *Amabolia nervosa* Leach (SUTCLIFFE) 521
- Schistocerca gregaria Forskål:**
The structure and function of the prothoracic spine of the desert locust (ROWELL) 457
- Sensilla basiconica:**
Receptor potentials recorded from, on the antenna of the silkworm larvae, *Bombyx mori* (MORITA and YAMASHITA) 851
- Sex:**
The influence of, and size on the osmotic pressure, the chloride and the free amino acids of the blood of the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel, *Lamellidens marginalis* (PADMANABHANAIU and RAMAMURTHY) 35
- Silkworm larvae:**
See *Bombyx mori*
- Size:**
The influence of sex and, on the osmotic pressure, the chloride and the free amino acids of the blood of the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel, *Lamellidens marginalis* (PADMANABHANAIU and RAMAMURTHY) 35
- Slime mould:**
See *Polysphondylium violaceum*
- Sodium balance:**
Studies on, in *Gammarus duebeni* Lilljeborg and *G. pulex pulex* (L.) (SHAW and SUTCLIFFE) 1
— In *Eriocheir sinensis* (M. Edw.). The adaptation of the Crustacea to fresh water (SHAW) 153
- Sodium ions:**
The movements of, in the isolated abdominal nerve cord of the cockroach *Periplaneta americana* (TREHERNE) 629
— The efflux of, from the last abdominal ganglion of the cockroach, *Periplaneta americana* L. (TREHERNE) 729
- Sodium transfer:**
The kinetics of, in the central nervous system of the cockroach, *Periplaneta americana* L. (TREHERNE) 737
- Spectral sensitivity:**
The, of *Calliphora* maggots (STRANGE) 237
- Spermatozoa:**
Studies on the respiration of sea-urchin. III. Respiratory quotient (MOHRI and HORIUCHI) 249
- Stomphia coccinea:**
Some observations on the swimming behaviour of the anemone (ROBSON) 343
— The swimming response and its pacemaker system in the anemone (ROBSON) 685
- Swimbladder:**
Visco-elastic properties of the tunica externa of the, in Cyprinidae (ALEXANDER) 747
- Swimbladders:**
The physical properties of the, of some South American Cypriniformes (ALEXANDER) 403
- Swimming behaviour:**
Some observations on the, of the anemone *Stomphia coccinea* (ROBSON) 343
- Swimming response:**
The, and its pacemaker system in the anemone *Stomphia coccinea* (ROBSON) 685
- T**
- Tactile learning:**
Centres for, in the brain of *Octopus* (WELLS) 811
- Temperature:**
Effect of acclimatization to high, on the blood chloride, free amino acids and osmotic pressure in the freshwater field crab, *Paratelphusa* sp. and the freshwater mussel *Lamellidens marginalis* (RAO and RAMACHANDRA) 29
— The influence of water-loading and low, on certain functional aspects of the crayfish antennal gland (RIEGEL) 291
- Tench:**
The respiratory centre in the (*Tinca tinca* L.). II. Respiratory neuronal activity in the medulla oblongata (SHELTON) 79
- Tenebrio molitor:**
Evidence for humoral regulation of digestive secretion in the beetle (DADD) 259
- Territorial behaviour:**
In barnacle settlement (CRISP) 429

Tethered flight:

Fuel utilization and duration of, in *Aphis fabae* Scop. (COCKBAIN) 163

— Water relationships of *Aphis fabae* Scop. during (COCKBAIN) 175

Thermal environment:

The oxygen capacity of goldfish (*Carassius auratus* L.) blood in relation to (ANTHONY) 93

Toxicity:

Effect of dissolved oxygen concentrations on the, of several poisons to rainbow trout (*Salmo gairdnerii* Richardson) (LLOYD) 447

Tunica externa:

Visco-elastic properties of the, of the swim-bladder in Cyprinidae (ALEXANDER) 747

U

Urea:

The mode of excretion of ammonia and, in *Xenopus laevis* (BALINSKY and BALDWIN) 695

Urine:

The, of *Gammarus duebeni* and *G. pulex* (LOCKWOOD) 647

V

Vertical lobes:

Rates of establishment of representations in the memory of octopuses, with and without (YOUNG) 43

Viability:

And fecundity of alate alienicolae of *Aphis fabae* Scop. after flights to exhaustion (COCKBAIN) 181

Vibration:

Orientalional movements of the foot of *Littorina* species in relation to the plane of, of polarized light (CHARLES) 213

Visco-elastic properties:

Of the tunica externa of the swimbladder in Cyprinidae (ALEXANDER) 747

Visual learning:

Centres for tactile and, in the brain of *Octopus* (WELLS) 811

W

Water relationships:

Of *Aphis fabae* Scop. during tethered flight (COCKBAIN) 175

Water-borne disturbances:

The response of a hydroid to weak (JOSEPHSON) 17

Water-wading:

The influence of, and low temperature on certain functional aspects of the crayfish antennal gland (RIEDEL) 291

Waterproofing mechanism:

The, of arthropods. II. The permeability of the cuticle of some aquatic insects (BEAMENT) 277

Weight discrimination:

By *Octopus* (WELLS) 127

INDEX OF AUTHORS

A

- Alexander, R. McN.** The physical properties of the swimbladders of some South American Cypriniformes 403
- Visco-elastic properties of the tunica externa of the swimbladder in Cyprinidae 747
- Anthony, E. H.** The oxygen capacity of goldfish (*Carassius auratus* L.) blood in relation to thermal environment 93
- Survival of goldfish in presence of carbon monoxide 109

B

- Baldwin, E.** See BALINSKY and BALDWIN
- Balinsky, J. B. and Baldwin, E.** The mode of excretion of ammonia and urea in *Xenopus laevis* 695
- Beament, J. W. L.** The waterproofing mechanism of arthropods. II. The permeability of the cuticle of some aquatic insects 277

C

- Charles, G. H.** The orientation of *Littorina* species to polarized light 189
- The mechanism of orientation of freely moving *Littorina littoralis* (L.) to polarized light 203
- Orientational movements of the foot of *Littorina* species in relation to the plane of vibration of polarized light 213
- Clarke, Jean M. and Smith, J. Maynard.** Two phases of ageing in *Drosophila obscura* 679
- Clegg, James S. and Evans, David R.** The physiology of blood trehalose and its function during flight in the blowfly 771
- Cockbain, A. J.** Fuel utilization and duration of tethered flight in *Aphis fabae* Scop. 163
- Water relationships of *Aphis fabae* Scop. during tethered flight 175
- Viability and fecundity of alate alievicolae of *Aphis fabae* Scop. after flights to exhaustion 181
- Crisp, D. J.** Territorial behaviour in barnacle settlement 429

D

- Dadd, R. H.** Evidence for humoral regulation of digestive secretion in the beetle, *Tenebrio molitor* 259

E

- Edwards, John S.** The action and composition of the saliva of an assassin bug *Platymeris rhadamantus* Gaerst. (Hemiptera, Reduviidae) 61
- Evans, David R.** See CLEGG and EVANS

F

- Fisher, Roderick C.** A study in insect multiparasitism. I. Host selection and oviposition 267

- A study in insect multiparasitism. II. The mechanism and control of competition for possession of the host 605

G

- Gordon, Malcolm S., Schmidt-Nielsen, Knut and Kelly, Hamilton M.** Osmotic regulation in the crab-eating frog (*Rana cancrivora*) 659

H

- Horiuchi, K.** See MOHRI and HORIUCHI

J

- Josephson, Robert K.** The response of a hychoid to weak water-borne disturbances 17
- Colonial responses of hydroid polyps 559
- Repetitive potentials following brief electric stimuli in a hydroid 579

K

- Katsuki, Yasuji.** See SUGA and KATSUKI
- Kelly, Hamilton M.** See GORDON, SCHMIDT-NIELSEN and KELLY
- King, Robert C.** See SANG and KING

L

- Lloyd, R.** Effect of dissolved oxygen concentrations on the toxicity of several poisons to rainbow trout (*Salmo gairdnerii* Richardson) 447
- Lockwood, A. P. M.** The urine of *Gammarus duebeni* and *G. pulex* 647
- See RIEGEL and LOCKWOOD

M

- Macfadyen, A.** A new system for continuous respirometry of small air-breathing invertebrates under near-natural conditions 323
- Mohri, H. and Horiuchi, K.** Studies on the respiration of sea-urchin spermatozoa 249
- Morita, H. and Yamashita, S.** Receptor potentials recorded from sensilla basiconica on the antenna of the silkworm larvae, *Bombyx mori* 851

N

- Nielsen, Bodil.** On the regulation of the respiration in reptiles. I. The effect of temperature and CO₂ on the respiration of lizards (*Lacerta*) 301

O

- Osborne, M. F. M.** The hydrodynamical performance of migratory salmon 365

P

- Padmanabhanaidu, B. and Ramamurthy, R.** The influence of sex and size on the osmotic pressure, the chloride and the free amino acids of the blood of the freshwater field crab, *Paratelpusa* sp. and the freshwater mussel *Lamellidens marginalis* 35
- Parry, Gwyneth.** Osmotic and ionic changes in blood and muscle of migrating salmonids 411

R

- Ramachandra, R.** See RAO and RAMACHANDRA
- Ramamurthy, R.** See PADMANABHANAIIDU and RAMAMURTHY
- Rao, Kandula Pampapathi and Ramachandra, R.** Effect of acclimatization to high temperature on the blood chloride, free amino acids and osmotic pressure in the freshwater field crab *Paratelpusa* sp. and the freshwater mussel *Lamellidens marginalis* 29
- Rice, A. L.** The responses of certain mysids to changes in hydrostatic pressure 391
- Riegel, J. A.** The influence of water-loading and low temperature on certain functional aspects of the crayfish antennal gland 291
- Riegel, J. A. and Lockwood, A. P. M.** The rôle of the antennal gland in the osmotic and ionic regulation of *Carcinus maenas* 491
- Robertson, James D.** Studies on the chemical composition of muscle tissue. II. The abdominal flexor muscles of the lobster *Nephrops norvegicus* (L.) 707
- Robson, Elaine A.** Some observations on the swimming behaviour of the anemone *Stomphia coccinea* 343
- The swimming response and its pacemaker system in the anemone *Stomphia coccinea* 685
- Rowell, C. H. Fraser.** The structure and function of the prothoracic spine of the desert locust, *Schistocerca gregaria* Forskål 457
- Rowell, C. H. Fraser and Wells, M. J.** Retinal orientation and the discrimination of polarized light in octopuses 827

S

- Sang, James H. and King, Robert C.** Nutritional requirements of axenically cultured *Drosophila melanogaster* adults 793
- Satchell, G. H.** The response of the dogfish to anoxia 531
- Schmidt-Nielsen, Knut.** See GORDON, SCHMIDT-NIELSEN and KELLY
- Shaffer, B. M.** The cells founding aggregation centres in the slime mould *Polysphondylium violaceum* 833
- Shaw, J.** Studies on ionic regulation in *Carcinus maenas* (L.). I. Sodium balance 135
- Sodium balance in *Eriocheir sinensis* (M. Edw.). The adaptation of the Crustacea to freshwater 153

- Shaw, J. and Sutcliffe, D. W.** Studies on sodium balance in *Gammarus duebeni* Lilljeborg and *G. pulex pulex* 1
- Shelton, G.** The respiratory centre in the tench (*Tinca tinca* L.). II. Respiratory neuronal activity in the medulla oblongata 79
- Smith, J. Maynard.** See CLARKE and SMITH
- Strange, Priscilla H.** The spectral sensitivity of *Calliphora* maggots 237
- Strangways-Dixon, J.** The relationship between nutrition, hormones and reproduction in the blowfly *Calliphora erythrocephala* (Meig.). I. Selective feeding in relation to the reproductive cycle, the corpus allatum volume and fertilization 225
- The relationships between nutrition, hormones and reproduction in the blowfly *Calliphora erythrocephala* (Meig.). II. The effect of removing the ovaries, the corpus allatum and the median neurosecretory cells upon selective feeding, and the demonstration of the corpus allatum cycle 637
- Suga, Nobuo and Katsuki, Yasuji.** Central mechanism of hearing in insects 545
- Pharmacological studies on the auditory synapses in a grasshopper 759
- Sutcliffe, D. W.** Studies on salt and water balance in caddis larvae (Trichoptera). I. Osmotic and ionic regulation of body fluids in *Limnephilus affinis* Curtis 501
- Studies on salt and water balance in caddis larvae (Trichoptera). II. Osmotic and ionic regulation of body fluids in *Limnephilus stigma* Curtis and *Anabolia nervosa* Leach 521
- See SHAW and SUTCLIFFE
- Swift, D. R.** The annual growth-rate cycle in brown trout (*Salmo trutta* Linn.) and its cause 595

T

- Treherne, J. E.** Sodium and potassium fluxes in the abdominal nerve cord of the cockroach, *Periplaneta americana* L. 315
- The movements of sodium ions in the isolated abdominal nerve cord of the cockroach, *Periplaneta americana* 629
- The efflux of sodium ions from the last abdominal ganglion of the cockroach, *Periplaneta americana* L. 729
- The kinetics of sodium transfer in the central nervous system of the cockroach, *Periplaneta americana* L. 737

W

- Wells, M. J.** Weight discrimination by *Octopus* 127
- Centres for tactile and visual learning in the brain of *Octopus* 811
- See ROWELL and WELLS

Y

- Yamashita, S.** See MORITA and YAMASHITA
- Young, J. Z.** Rates of establishment of representations in the memory of octopuses with and without vertical lobes