

INDEX TO SUBJECTS

A

- Alcohol:**
The formation of lactic acid and, by the yolk (The relations between yolk and white in the hen's egg. IV) (NEEDHAM, STEPHENSON and NEEDHAM) 319
- Alimentary tract:**
Structure and function of the (Studies on the nutrition of blow-fly larvae. I) (HOBSON) 109
- Amoeboid movement:**
On the physiology of: VIII. A. The action of certain electrolytes (PANTIN) 365
— On the physiology of: VIII. B. A note on the iso-electric point of the proteins of a marine amoeba (PANTIN) 376
- Anatomy:**
and histology of the excretory system (The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae). II) (WIGGLESWORTH) 428

B

- Beta leaves:**
of different ages, the distribution of the insoluble nitrogen in (PEARSALL) 279
- Biological activity:**
of the anterior lobe pituitary, the phosphate content and the (SPAUL and MYDDLETON) 44
- Bispira voluticornis:**
The branchial filaments of the sabellid (Studies in the localisation of respiratory exchange in invertebrates. II) (ZOOND) 258
- Blow-fly larvae:**
Studies on the nutrition of: I. Structure and function of the alimentary tract (HOBSON) 109
- Book lungs:**
of the scorpion (Studies in the localisation of respiratory exchange in invertebrates. III) (ZOOND) 263
- Branchial filaments:**
of the sabellid, *Bispira voluticornis* (Studies in the localisation of respiratory exchange in invertebrates. II) (ZOOND) 258

C

- Calcium metabolism:**
and the ovarian function in *Xenopus*, the relation of the pituitary gland to (Studies on the pituitary. VIII) (HOGBEN, CHARLES and SLOME) 348

Colpidium:

- The effect of the H-ion concentration on protozoa, as demonstrated by the rate of food vacuole formation in (MILLS) 17

E

- Echinoderm ova:**
Permeability of, to indicators (Intracellular oxidation-reduction studies. III) (CHAMBERS, COHEN and POLLACK) 1
- Echinus esculentus:**
The spawning of, and some changes in gonad composition (STOTT) 133
— The oxygen consumption of suspensions of sperm of, and *Echinus miliaris* (Iodine compounds and fertilisation. II) (CARTER) 176
— The fertilisable life of the eggs of, and *Echinus miliaris* (Iodine compounds and fertilisation. III) (CARTER) 194
- Echinus miliaris:**
The oxygen consumption of suspensions of sperm of, *Echinus esculentus* and (Iodine compounds and fertilisation. II) (CARTER) 176
— The fertilisable life of the eggs of *Echinus esculentus* and (Iodine compounds and fertilisation. III) (CARTER) 194
- Eggs:**
of *Echinus esculentus* and *Echinus miliaris*, the fertilisable life of the (Iodine compounds and fertilisation. III) (CARTER) 194
- Electrolyte exchange:**
The (The adaptation of *Gunda ulvae* to salinity. III) (PANTIN) 82
- Environment:**
The (The adaptation of *Gunda ulvae* to salinity. I) (PANTIN) 63
- Epididymis:**
A study of the function of the: III. Functional changes undergone by spermatozoa during their passage through the epididymis and vas deferens in the guinea-pig (YOUNG) 151
— A study of the function of the: IV. The fate of non-ejaculated spermatozoa in the genital tract of the guinea-pig (SIMEONE and YOUNG) 163
- Excretion:**
The physiology of, in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae): I. Composition of the urine (WIGGLESWORTH) 411
— The physiology of, in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae): II. Anatomy and histology of the excretory system (WIGGLESWORTH) 428

Excretion:

The physiology of, in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae): III. The mechanism of uric acid excretion (WIGGLESWORTH) 443

Excretory system:

Anatomy and histology of the (The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae). II) (WIGGLESWORTH) 428

F**Fertilisation:**

Iodine compounds and: III. The fertilisable life of the eggs of *Echinus esculentus* and *Echinus miliaris* (CARTER) 194

Fish:

The growth of: IV. The effect of food supply on the scales of *Salmo irrideus* (GRAY and SETNA) 55

Food supply:

The effect of, on the scales of *Salmo irrideus* (The growth of fish. IV) (GRAY and SETNA) 55

Food vacuole formation:

in *Colpidium*, the effect of the H-ion concentration on protozoa, as demonstrated by the rate of (MILLS) 17

Functional changes:

undergone by spermatozoa during their passage through the epididymis and vas deferens in the guinea-pig (A study of the function of the epididymis. III) (YOUNG) 151

G**Gas exchange:**

in infertile eggs (The relations between yolk and white in the hen's egg. III) (SMITH) 312

Gasterosteus aculeatus L.:

Detour experiments with sticklebacks (RUSSELL) 393

Genital tract:

of the male guinea-pig, the fate of non-ejaculated spermatozoa in the (A study of the function of the epididymis. IV) (SIMBONE and YOUNG) 163

Gonad composition:

The spawning of *Echinus esculentus* and some changes in (STOTT) 133

Growth:

of fish: IV. The effect of food supply on the scales of *Salmo irrideus* (GRAY and SETNA) 55

— (relative): Latitude and, in the razor clam (*Siliqua patula*) (WEYMOUTH, McMILLIN and RICH) 228

— in the larvae of Tenthredinidae (MILES) 355

— of *Sporotrichum carnis*, the influence of temperature (from -10° C. to $+30^{\circ}$ C.) on the rate of (HAINES) 379

Gunda ulvae:

The adaptation of, to salinity: I. The environment (PANTIN) 63

— The adaptation of, to salinity: II. The water exchange (WEIL and PANTIN) 73

— The adaptation of, to salinity: III. The electrolyte exchange (PANTIN) 82

Guinea-pig:

Functional changes undergone by spermatozoa during their passage through the epididymis and vas deferens in the (A study of the function of the epididymis. III) (YOUNG) 151

— The fate of non-ejaculated spermatozoa in the genital tract of the male (A study of the function of the epididymis. IV) (SIMBONE and YOUNG) 163

H**Hen's egg:**

The relations between yolk and white in the:

I. Introduction (NEEDHAM and SMITH) 286

— The relations between yolk and white in the: II. Osmotic equilibration (SMITH and SHEPHERD) 293

— The relations between yolk and white in the: III. Gas exchange in infertile eggs (SMITH) 312

— The relations between yolk and white in the: IV. The formation of lactic acid and alcohol by the yolk (NEEDHAM, STEPHENSON and NEEDHAM) 319

— The relations between yolk and white in the: V. The osmotic properties of the isolated vitelline membrane (NEEDHAM) 330

H-ion concentration:

The effect of the, on protozoa, as demonstrated by the rate of food vacuole formation in *Colpidium* (MILLS) 17

Histology:

of the excretory system, anatomy and (The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae). III) (WIGGLESWORTH) 428

Humidity:

The thermal death-point of *Rhodnius* (Rhynchota, Heteroptera) under controlled conditions of (BUXTON) 275

I**Indicators:**

Permeability of echinoderm ova to (Intracellular oxidation-reduction studies. III) (CHAMBERS, COHEN and POLLACK) 1

Infertile eggs:

Gas exchange in (The relations between yolk and white in the hen's egg. III) (SMITH) 312

Invertebrates:

Studies in the localisation of respiratory exchange in: I. The respiratory mechanism of the fresh-water crab *Potamonautes* (ZOOND and CHARLES) 250

- Invertebrates:**
 Studies in the localisation of respiratory exchange in: II. The branchial filaments of the sabellid, *Bispira voluticornis* (ZOOND) 258
 — Studies in the localisation of respiratory exchange in: III. The book lungs of the scorpion (ZOOND) 263
- Iodine compounds:**
 and fertilisation: II. The oxygen consumption of suspensions of sperm of *Echinus esculentus* and *Echinus miliaris* (CARTER) 176
 — and fertilisation: III. The fertilisable life of the eggs of *Echinus esculentus* and *Echinus miliaris* (CARTER) 194
- Iso-electric point:**
 of the proteins of a marine amoeba, a note on the (On the physiology of amoeboid movement. VIII. B) (PANTIN) 376
- L**
- Lactic acid:**
 and alcohol, the formation of, by the yolk (The relations between yolk and white in the hen's egg. IV) (NEEDHAM, STEPHENSON and NEEDHAM) 319
- Lamarckian experiment:**
 involving a hundred generations with negative results (AGAR) 95
- Living cells:**
 Observations on, made with the microscope-centrifuge (HARVEY) 267
- M**
- Marine amoeba:**
 A note on the iso-electric point of the proteins of a (On the physiology of amoeboid movement. VIII. B) (PANTIN) 376
- Marine invertebrates:**
 The effect of salinity changes on the water content and respiration of (BEADLE) 211
- Microscope-centrifuge:**
 Observations on living cells made with the (HARVEY) 267
- Mouse:**
 The effect of oestrin on the testis of the adult (ALLANSON) 389
- N**
- Nitrogen:**
 The distribution of the insoluble, in *Beta* leaves of different ages (PEARSALL) 279
- Non-electrolytes:**
 The action of certain (On the physiology of amoeboid movement. VIII. A) (PANTIN) 365
- Nutrition:**
 of blow-fly larvae, studies on the: I. Structure and function of the alimentary tract (HOBSON) 109
- O**
- Oestrin:**
 The effect of, on the testis of the adult mouse (ALLANSON) 389
- Osmotic equilibration:**
 (The relations between yolk and white in the hen's egg. II) (SMITH and SHEPHERD) 293
- Osmotic properties:**
 of the isolated vitelline membrane (The relations between yolk and white in the hen's egg. V) (NEEDHAM) 330
- Ovarian function:**
 in *Xenopus*, the relation of the pituitary gland to calcium metabolism and (Studies on the pituitary. VIII) (HOBGEN, CHARLES and SLOME) 345
- Oxidation-reduction:**
 Intracellular, studies: III. Permeability of echinoderm ova to indicators (CHAMBERS, COHEN and POLLACK) 1
- Oxygen consumption:**
 of suspensions of sperm of *Echinus esculentus* and *Echinus miliaris* (Iodine compounds and fertilisation. II) (CARTER) 176
- P**
- Phosphate content:**
 and the biological activity of the anterior lobe pituitary (SPAUL and MYDDLETON) 44
- Pituitary:**
 Biological and chemical studies of extracts of the anterior lobe (SPAUL and MYDDLETON) 30
 — The phosphate content and the biological activity of the anterior lobe (SPAUL and MYDDLETON) 44
 — Studies on the: VIII. The relation of the pituitary gland to calcium metabolism and ovarian function in *Xenopus* (HOBGEN, CHARLES and SLOME) 345
- Potamonauts:**
 The respiratory mechanism of the freshwater crab (Studies in the localisation of respiratory exchange in invertebrates. I) (ZOOND and CHARLES) 250
- Potential differences:**
 across natural membranes separating unlike salt solutions (BROOKS, GIESE and GIESE) 124
- Proteins:**
 of a marine amoeba, a note on the iso-electric point of the (On the physiology of amoeboid movement. VIII. B) (PANTIN) 376
- Protozoa:**
 The effect of the H-ion concentration on, as demonstrated by the rate of food vacuole formation in *Colpidium* (MILLS) 17
- R**
- Razor clam (*Siliqua patula*):**
 Latitude and relative growth in the (WEYMOUTH, McMILLIN and RICH) 228

- Recording (transpiration) balance:**
A sensitive, with a new form of electrically operated recorder (JONES) 9
- Respiratory exchange:**
Studies in the localisation of, in invertebrates: I. The respiratory mechanism of the fresh-water crab *Potamonautes* (ZOOND and CHARLES) 250
— Studies in the localisation of, in invertebrates: II. The branchial filaments of the sabellid, *Bispira voluticornis* (ZOOND) 258
— Studies in the localisation of, in invertebrates: III. The book lungs of the scorpion (ZOOND) 263
- Respiratory mechanism:**
of the fresh-water crab *Potamonautes* (Studies in the localisation of respiratory exchange in invertebrates. I) (ZOOND and CHARLES) 250
- Rhodnius prolixus (Hemiptera, Reduviidae):**
The physiology of excretion in a blood-sucking insect: I. Composition of the urine (WIGGLESWORTH) 411
— The physiology of excretion in a blood-sucking insect: II. Anatomy and histology of the excretory system (WIGGLESWORTH) 428
— The physiology of excretion of a blood-sucking insect: III. The mechanism of uric acid excretion (WIGGLESWORTH) 443
- Rhodnius (Rhynchota, Heteroptera):**
The thermal death-point of, under controlled conditions of humidity (BUXTON) 275
- S**
- Salinity:**
The adaptation of *Gunda ulvae* to: I. The environment (PANTIN) 63
— The adaptation of *Gunda ulvae* to: II. The water exchange (WEIL and PANTIN) 73
— The adaptation of *Gunda ulvae* to: III. The electrolyte exchange (PANTIN) 82
- Salinity changes:**
The effect of, on the water content and respiration of marine invertebrates (BEADLE) 211
- Salt solutions:**
Potential differences across natural membranes separating unlike (BROOKS, GIESE and GIESE) 124
- Scorpion:**
The book lungs of the (Studies in the localisation of respiratory exchange in invertebrates. III) (ZOOND) 263
- Senescence:**
of spermatozoa, II (GRAY) 202
- Siliqua patula:**
Latitude and relative growth in the razor clam (WEYMOUTH, McMILLIN and RICH) 228
- Spermatozoa:**
Functional changes undergone by, during their passage through the epididymis and vas deferens in the guinea-pig (A study of the function of the epididymis. III) (YOUNG) 151
- Spermatozoa:**
The fate of non-ejaculated, in the genital tract of the male guinea-pig (A study of the function of the epididymis. IV) (SIMEONE and YOUNG) 163
— The senescence of, II (GRAY) 202
- Sporotrichum carnis:**
The influence of temperature (from $-10^{\circ}\text{C}.$ to $+30^{\circ}\text{C}.$) on the rate of growth of (HAINES) 379
- Sticklebacks (Gasterosteus aculeatus L.):**
Detour experiments with (RUSSELL) 393
- Suspensions of sperm:**
of *Echinus esculentus* and *Echinus miliaris*, the oxygen consumption of (Iodine compounds and fertilisation. II) (CARTER) 176
- T**
- Temperature:**
The influence of, on the rate of growth of *Sporotrichum carnis*, from $-10^{\circ}\text{C}.$ to $+30^{\circ}\text{C}.$ (HAINES) 379
- Tenthredinidae:**
Growth in the larvae of (MILES) 355
- Testis:**
of the adult mouse, the effect of oestrin on the (ALLANSON) 389
- Thermal death-point:**
of *Rhodnius* (Rhynchota, Heteroptera) under controlled conditions of humidity (BUXTON) 275
- U**
- Uric acid excretion:**
The mechanism of (The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae). III) (WIGGLESWORTH) 443
- Urine:**
Composition of the (The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae). I) (WIGGLESWORTH) 411
- V**
- Vas deferens:**
in the guinea-pig, functional changes undergone by spermatozoa during their passage through the epididymis and (A study of the function of the epididymis. III) (YOUNG) 151
- Vitelline membrane:**
The osmotic properties of the isolated (The relations between yolk and white in the hen's egg. V) (NEDHAM) 330
- W**
- Water content:**
and respiration of marine invertebrates, the effect of salinity changes on the (BEADLE) 211

- Water exchange:
 The (The adaptation of *Gunda ulvae* to salinity. II) (WEIL and PANTIN) 73
- X**
- Xenopus:
 The relation of the pituitary gland to calcium metabolism and ovarian function in (Studies on the pituitary. VIII) (HOGBEN, CHARLES and SLOME) 345
- Y**
- Yolk:
 The formation of lactic acid and alcohol by the (The relations between yolk and white in the hen's egg. IV) (NEEDHAM, STEPHENSON and NEEDHAM) 319
- Yolk and white:
 in the hen's egg, the relations between: I. Introduction (NEEDHAM and SMITH) 286
 — in the hen's egg, the relations between: II. Osmotic equilibration (SMITH and SHEPHERD) 293
 — in the hen's egg, the relations between: III. Gas exchange in infertile eggs (SMITH) 312
 — in the hen's egg, the relations between: IV. The formation of lactic acid and alcohol by the yolk (NEEDHAM, STEPHENSON and NEEDHAM) 319
 — in the hen's egg, the relations between: V. The osmotic properties of the isolated vitelline membrane (NEEDHAM) 330

INDEX TO AUTHORS

- A**
- Agar, W. E. A Lamarckian experiment involving a hundred generations with negative results 95
- Allanson, Marjorie. The effect of oestrin on the testis of the adult mouse 389
- B**
- Beadle, L. C. The effect of salinity changes on the water content and respiration of marine invertebrates 211
- Brooks, S. C., Giese, A. C., and Giese, R. A. Potential differences across natural membranes separating unlike salt solutions 124
- Buxton, P. A. The thermal death-point of *Rhodnius* (Rhynchota, Heteroptera) under controlled conditions of humidity 275
- C**
- Carter, G. S. Iodine compounds and fertilisation: II. The oxygen consumption of suspensions of sperm of *Echinus esculentus* and *Echinus miliaris* 176
 — Iodine compounds and fertilisation: III. The fertilisable life of the eggs of *Echinus esculentus* and *Echinus miliaris* 194
- Chambers, Robert, Cohen, Barnett and Pollack, Herbert. Intracellular oxidation-reduction studies: III. Permeability of echinoderm ova to indicators I
- Charles, Enid. See ZOOND and CHARLES 250
 — See HOGBEN, CHARLES and SLOME 345
- Cohen, Barnett. See CHAMBERS, COHEN and POLLACK I
- G**
- Giese, A. C. See BROOKS, GIESE and GIESE 124
- Giese, R. I. See BROOKS, GIESE and GIESE 124
- Gray, J. The senescence of spermatozoa, II 202
- Gray, J., and Setna, S. B. The growth of fish: IV. The effect of food supply on the scales of *Salmo irrideus* 55
- H**
- Haines, R. B. The influence of temperature on the rate of growth of *Sporotrichum carnis*, from -10°C . to $+30^{\circ}\text{C}$. 379
- Harvey, E. Newton. Observations on living cells, made with the microscope-centrifuge 267
- Hobson, R. P. Studies on the nutrition of blow-fly larvae: I. Structure and function of the alimentary tract 109
- Hogben, Lancelot, Charles, Enid, and Slome, David. Studies on the pituitary: VIII. The relation of the pituitary gland to calcium metabolism and ovarian function in *Xenopus* 345
- J**
- Jones, W. Neilson. A sensitive recording (transpiration) balance with a new form of electrically operated recorder 9
- M**
- McMillin, H. C. See WEYMOUTH, McMILLIN and RICH 228
- Miles, Herbert W. Growth in the larvae of Tenthredinidae 355
- Mills, Sylvia M. The effect of the H-ion concentration on protozoa, as demonstrated by the rate of food vacuole formation in *Colpidium* 17
- Myddleton, W. W. See SPAUL and MYDDLETON 30, 44

N

- Needham, Dorothy Moyle. See NEEDHAM, STEPHENSON and NEEDHAM 319
- Needham, Joseph. The relations between yolk and white in the hen's egg: V. The osmotic properties of the isolated vitelline membrane 330
- Needham, Joseph, and Smith, Michael. The relations between yolk and white in the hen's egg: I. Introduction 286
- Needham, Joseph, Stephenson, Marjory, and Needham, Dorothy Moyle. The relations between yolk and white in the hen's egg: IV. The formation of lactic acid and alcohol by the yolk 319

P

- Pantin, C. F. A. The adaptation of *Gunda ulvae* to salinity: I. The environment 63
- The adaptation of *Gunda ulvae* to salinity: III. The electrolyte exchange 82
- On the physiology of amoeboid movement: VIII. A. The action of certain non-electrolytes 365
- On the physiology of amoeboid movement: VIII. B. A note on the iso-electric point of the proteins of a marine amoeba 376
- See WEIL and PANTIN 73
- Pearsall, W. H. The distribution of the insoluble nitrogen in *Beta* leaves of different ages 279
- Pollack, Herbert. See CHAMBERS, COHEN and POLLACK I

R

- Rich, Willis H. See WEYMOUTH, McMILLIN and RICH 228
- Russell, E. S. Detour experiments with sticklebacks (*Gasterosteus aculeatus* L.) 393

S

- Setna, S. B. See GRAY and SETNA 55
- Shepherd, James. See SMITH and SHEPHERD 293
- Simeone, Fiorindo A., and Young, William C. A study of the function of the epididymis: IV. The fate of non-ejaculated spermatozoa in the genital tract of the male guinea-pig 163
- Slome, David. See HOGBEN, CHARLES and SLOME 345
- Smith, Michael. The relations between yolk and white in the hen's egg: III. Gas exchange in infertile eggs 312
- See NEEDHAM and SMITH 286

- Smith, Michael, and Shepherd, James. The relations between yolk and white in the hen's egg: II. Osmotic equilibrium 293
- Spaul, E. A., and Myddleton, W. W. Biological and chemical studies of extracts of the anterior lobe pituitary 30
- — The phosphate content and the biological activity of the anterior lobe pituitary 44
- Stephenson, Marjory. See NEEDHAM, STEPHENSON and NEEDHAM 319
- Stott, F. C. The spawning of *Echinus esculentus* and some changes in gonad composition 133

W

- Weil, E., and Pantin, C. F. A. The adaptation of *Gunda ulvae* to salinity: II. The water exchange 73
- Weymouth, F. W., McMillin, H. C., and Rich, Willis H. Latitude and relative growth in the razor clam, *Siliqua patula* 228
- Wigglesworth, V. B. The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae): I. Composition of the urine 411
- The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae): II. Anatomy and histology of the excretory system 428
- The physiology of excretion in a blood-sucking insect, *Rhodnius prolixus* (Hemiptera, Reduviidae): III. The mechanism of uric acid excretion 443

Y

- Young, William C. A study of the function of the epididymis: III. Functional changes undergone by spermatozoa during their passage through the epididymis and vas deferens in the guinea-pig 151
- See SIMEONE and YOUNG 163

Z

- Zoond, Alexander. Studies in the localisation of respiratory exchange in invertebrates: II. The branchial filaments of the sabellid, *Bispira voluticornis* 258
- Studies in the localisation of respiratory exchange in invertebrates: III. The book lungs of the scorpion 263
- Zoond, Alexander, and Charles, Enid. Studies in the localisation of respiratory exchange in invertebrates: I. The respiratory mechanism of the fresh-water crab *Potamonautes* 250

