

# Index

*Page numbers in italics indicate illustrations.*

- Acanthamoeba* 56  
*Acanthodii* 327  
 Acari 216  
 acoustico-lateralis system 317  
 Actinopterygii 343  
 action potential 94  
 adaptations 19  
 advanced features 19  
*Aedes* 254  
*Aeolidia* 151, 201  
*Aeschna* 248  
 aestivation 389  
*Agelaius* 455  
*Agnatha* 302  
 albatross 444  
*Alces* 492  
 Alcyonaria 81  
*Alcyonium* 80, 101  
*Allogromia* 28, 29, 58  
*Amblyrhynchus* 415  
*Ambystoma* 410  
 amino-acid analyser 6  
 ammocoete 302  
 ammonia 190  
 amnion 409  
 amoebas 26, 29, 55  
     crawling by 57  
 amphibians 372  
*Amphibolurus* 421  
 amphioxus 299, 300  
 anchovy 346  
*Ancylostoma* 139  
 anemometer 13  
*Anemonia* 96  
*Anguilla* 354, 356  
 annelid worms 209, 214  
*Anniella* 421  
*Anolis* 421  
*Antedon* 285, 287  
 antelopes 477, 491  
 Anthozoa 78  
 antlers 491  
 ants 254  
*Apatosaurus* 424  
 aphid 248, 253  
 Apicomplexa 31, 44  
*Apis* 242  
 Apoda 374  
 Arachnida 215  
*Araneus* 216  
*Archaeopteryx* 431  
*Architeuthis* 154  
 Archosauria 402, 407  
  
*Arenicola* 222  
 arthropods 208, 212, 215  
*Artiodactyla* 477  
*Ascaris* 140  
*Asplanchna* 128, 133  
*Astacus* 226, 227, 232  
*Asterias* 284, 285, 286  
*Asteroidea* 287  
*Aurelia* 85  
 axolotl 410  
  
*Balaenoptera* 476, 477  
*Balanus* 231  
 bandicoot 469  
 barnacles 231, 243  
*Barosaurus* 422  
 bats 474, 496  
 bears 475  
 bees 242, 254  
 beetles 254  
 Békésy, Dr. G. von 465  
 biological control 255  
*Biomphalaria* 151  
 birds 431  
*Biston* 268  
*Bivalvia* 151, 171, 196  
 blackbird 455  
 blood and circulation  
     in amphibians 385  
     in amphioxus 300  
     in birds 450  
     in crustaceans 229  
     in fishes 334, 385  
     in mammals 450, 495  
     in molluscs 180  
 Bohr effect 183, 356  
 bone 233, 311, 343  
 Bone, Dr Q. 330  
 bony fishes 343  
*Bougainvillea* 81, 82  
 brachiopods 281  
*Brachiosaurus* 423  
 brains  
     of cephalopods 193  
     of tetrapods 427, 431, 462  
 Branchiopoda 230  
*Branchiostoma* 299, 300  
 brittle star 287  
 Bryozoa 279  
*Buccinum* 150, 151, 159, 185  
*Bufo* 386  
 bugs 253  
 buoyancy  
     of cephalopods 177  
     of fish 332, 352  
     of medusae 104

502 *Index*

- burrowing
  - by earthworms 220
  - by molluscs 171
- Buthus* 210, 215
- butterflies 267
  
- Caiman* 414
- camouflage 268, 361, 454
- capybara 478
- Carcharinus* 326
- Cardium* 152, 159
- Caretta* 410
- Carnivora 475
- carp 332
- catch 163
- cell division 88, 291
- cell junctions 86, 87
- cells, numbers of 86, 136
- Cellularia 75
- centipedes 216, 217
- Centroscyrnus* 334
- Cephalopoda 152
- Ceratium* 33
- Cervus* 492
- Cestoda 118
- Cetacea 476
- Cetorhinus* 327, 334
- Chagas' disease 40
- chela 238
- Chelonomorpha 402
- chewing 485
- chimpanzees 483, 484
- Chiroptera 474
- chitons 148
- Chlamydomonas* 27, 28, 49, 59
- choanoflagellates 38
- Chordata 295
- Chrysemys* 411
- cilia 64
- ciliates 31, 52
- Ciliophora 31
- cinematography 10
  - X-ray 11
- Ciona* 296
- Cirripedia 231
- Cladistia 344
- Cladoselache* 328
- classification 19
- cleavage
  - radial 291
  - spiral 131, 210
- Climatus* 328
- Clupea* 361
- cnidarians 75
- cnidoblasts 77
- coccidiosis 45
- Cocosteus* 328
- cochlea 465
- cockroach 248
- cod 358
- coelacanth 369, 371
- coelenterates 75
- coeloms 211, 230, 287, 293
  
- Coleoptera 254
- collagen 100
- Collembola 253
- colloid osmotic pressure 133, 187
- colonial animals 84
- colours
  - of birds 453
  - of insects 267
- Colpoda* 31, 32
- Columba* 442, 445
- composite materials 155
- conch 188
- conger eel 354
- conjugation 52
- contractile vacuole 55
- Copepoda 231
- coral reefs 104
- corals 78, 103
- countercurrent principle 366, 468
- crabs 232, 237
- Crassostrea* 163
- crawling
  - by amoebas 57
  - by earthworms 219
  - by *Eimeria* 59
  - by molluscs 169
  - by nematodes 146
  - by polychaete worms 217
  - by snakes 404
- crayfish 226, 227
- Crinoidea 287
- Crisp, Prof. D. 243
- Cristatella* 279, 280
- crocodiles 402, 407, 415
- Crossopterygii 368
- crustaceans 226
- cryptobiosis 138
- Cryptops* 219
- ctenidia 184, 196
- cuticle
  - of arthropods 232
  - of nematodes 142
- cuttlefish 154, 157, 167
- Cyanea* 84, 121
- Cyprinus* 332
  
- Daphnia* 230
- dead men's fingers 80
- deer 477, 491
- Dendrocoelum* 129
- Denny, Dr M. 170
- dentine 311
- Denton, Sir Eric 177
- desmosome 87
- development
  - determinate 131
  - of echinoderms 289
  - of flatworms 131
  - of vertebrates 409
- diaphragm 464
- Didelphis* 463, 468, 484
- Didinium* 36

- diffusion 119, 125, 354, 410  
 Digenea 116  
 digestion  
   by bivalves 199  
   by insects 249  
   by mammals 487  
   by selachians 326  
   by turbellarians 122  
 dinoflagellates 27, 105  
 dinosaurs 402, 422  
 Dipnoi 368, 371  
 Diprotodonta 474  
 Diptera 253  
*Ditylenchus* 140  
 diving 494  
 dogfish 330, 337, 339  
 dolphin 477, 498  
*Donax* 171  
 Donnan equilibrium 54  
 drag 60, 201  
 dragonfly 248, 253  
*Drosophila* 213  
*Dugesia* 110, 111, 133  
 dysentery 40
- ears  
   of fishes 319  
   of frogs 394  
   of mammals 461, 465
- earthworms 209, 214, 219, 221  
 echidna 468, 473  
 echinoderms 284  
 Echinoidea 288  
*Echinus* 285, 288  
 echolocation 496  
 ectoderm 210  
 ectoparasites 38, 114  
 Ectoprocta 279  
 cel 354, 356  
 eggs  
   numbers of 128  
   of reptiles and birds 407  
   see also reproduction  
*Eimeria* 30, 31, 45, 58  
 elasticity 98  
 electric sense 339  
 electrodes 14  
   oxygen 8  
 electromyography 15  
 electron microscope 2  
   scanning 4  
*Eleodus* 263  
 elephantiasis 139  
 elephants 477  
*Emys* 402  
 enchytraeids 214, 221  
 endoderm 210  
 endoparasites 38, 116  
 endoskeleton 235  
*Engraulis* 346  
*Ensis* 152, 173  
*Entamoeba* 40  
*Entobdella* 114, 115
- Entodinium* 38  
 Ephemeroptera 253  
*Epiphanes* 136, 137  
*Eptatretus* 308  
*Eptesicus* 497  
*Equus* 476  
*Eretmochelys* 402  
*Erinaceus* 473  
*Erythrinus* 375  
 estuaries 223  
*Euglena* 27, 28, 33, 65  
*Euplectella* 75  
*Euplectes* 453  
*Euplotes* 32, 37  
 Euryapsida 402  
*Eusthenopteron* 372  
 eutherians 469  
 excretion  
   by insects 265  
   by molluscs 186  
   by reptiles 414  
   by tapeworms 127  
 exoskeleton 232  
 extinction of dinosaurs 428  
 eyes  
   of arthropods 237, 241  
   of molluscs 191  
 eye spots 271
- Falco* 443, 445  
*Fasciola* 116  
 feathers 435  
 fecundity 129  
 feeding  
   of amphioxus 299  
   of bivalves 196  
   of fishes 303, 306, 325, 344  
   of protozoans 35  
   of sea anemones 96  
   of turbellarians 122  
   of urochordates 296  
 filter feeding 37, 196, 296, 298, 303  
 fibreglass 155  
 fibres 99, 143  
 fins 333, 359  
 firebrat 265  
 fitness 129  
 flagella 59  
 flagellates 27  
 flame cell 131, 133  
 flame photometer 6  
 flatworms 108  
 flies 253  
 flight  
   of birds 441  
   of insects 255  
 flow  
   in fluids 60  
   through sponges 73  
 flowmeter 13  
*Flustra* 279, 281  
 foraminiferan 29, 58  
 force platform 12

504 *Index*

- fossils 16  
 freezing point 6  
 frogs 374
- Gadus* 358  
 games, theory of 493  
 Gans, Prof. C. 383  
 gastropods 149  
 gibbons 483  
 gills  
   of ammocoetes 305  
   of crustaceans 228  
   of molluscs 184  
*Globodera* 140  
 gorgonians 81, 101, 102  
 grafting 89  
 grasshopper 249  
*Gymnodinium* 27, 28, 105  
*Gyps* 444
- haemocoel 148, 181, 212, 230  
 haemocyanin 182, 230  
 haemoglobin 356, 378, 450, 495  
 hagfishes 308, 309  
 hair cells 317  
*Haliclona* 88  
*Haliotis* 150, 151, 184, 201  
 Hamilton, Prof. W.D. 50, 274  
 hands 478  
 heart  
   of amphibians 389  
   of birds 450  
   of crustaceans 229  
   of fishes 334, 387  
   of molluscs 181  
 heat balance 417, 439  
*Helicocranchia* 153, 179  
*Heliopora* 104  
*Helix* 168, 181  
*Hemicyclaspis* 309, 310  
 Hemiptera 253  
 Henle, loop of 467  
 hedgehog 473  
 herring 361  
*Heterodontus* 335  
 Hexapoda 247  
 Hirudinea 214  
 histochemistry 7  
*Holoptychius* 369  
*Holothuria* 285, 289  
 Holothuroidea 289  
*Homarus* 229  
 homology 17  
 hookworm 139  
*Hoploplana* 132  
*Hoplosternum* 375  
 hormones  
   of insects 267  
   of octopus 195  
 hornets 275  
 horns 491  
 Horridge, Prof. A. 237  
 horse 471, 476
- Hydra* 82, 86, 93  
*Hydrochoerus* 478  
 Hydrozoa 81  
 Hyla 369  
*Hylobates* 483  
*Hymenolepis* 118, 124, 128  
 Hymenoptera 254, 275
- Icerya* 255  
*Ichthyomyzon* 306  
 Ichthyopterygia 402  
 ichthyosaurs 402  
*Ichthyostega* 373  
*Iguana* 415  
*Illex* 175, 191  
 immune responses 41  
 industrial melanism 270  
 Insectivora 473  
 insects 247  
 ionic regulation  
   of fishes 313, 336  
   of molluscs 189  
   of protozoans 55  
 Isoptera 272
- jaws 323, 349, 369, 461, 489  
 jellyfishes 84  
 Jenkins, Prof. F. 480  
 jet propulsion 173
- Kaloterms* 272  
 kangaroos 468, 471, 474, 480  
 kestrel 443  
 kidney  
   of lamprey 314  
   of mammals 467  
   of mollusc 186
- Lacerta* 412  
*Lacuna* 203  
 Lagomorpha 478  
 Lamellibranchia 151  
*Lamna* 324, 364  
 lampreys 302  
 larvae  
   of amphibians 397  
   of crustaceans 231, 243  
   of insects 252  
   of lampreys 302  
   of molluscs 202  
   of urochordates 297  
 lateral line organs 317, 338  
*Latimeria* 369, 371, 392  
 learning 193  
 leeches 214  
 Lepidoptera 267  
 Lepidosauria 402, 403  
*Lepidosiren* 371, 375, 386  
*Leptonychotes* 494  
*Lethocerus* 259, 262  
*Leucichthys* 353  
*Leucosolenia* 72  
 lift 255

- Ligia* 230, 232  
 limbs  
   of crustaceans 226  
   of tetrapods 392  
 limpets 157, 168, 201  
*Lineus* 112  
 lion 475, 493  
 Lissamphibia 374  
*Littorina* 157, 203  
 lizards 402, 403  
 lobster 229  
 locomotion, *see* crawling, running, swimming  
   *etc.*  
*Loligo* 153, 173, 177, 180  
*Lolliguncula* 166  
 London–van der Waals attraction 87  
 lophophore 279  
 Lorenzini, ampullae of 341  
 Lowenstein, Prof. O. 319  
*Loxodonta* 477  
 lugworm 222  
*Lumbricus* 211  
 lungfish 356, 368, 371  
 lungs 376, 447
- Macrotermes* 272  
 malaria 44  
 Malpighian tubules 263  
 mammal-like reptiles 458  
 mammals 458  
 mammary glands 464  
*Manduca* 255, 256  
 manometer 12  
 mantle 149, 165  
 marsupials 469  
 Mastigophora 27  
 mayflies 253  
 medusae 76, 90, 103, 109  
*Meloidogyne* 140  
 membrane potential 53, 65  
 memory 195  
 mesenchyme 292  
 mesoderm 210  
 mesogloea 72, 98, 101, 103  
 metabolic rate 119, 257, 426, 437, 473  
 metabolism, anaerobic 126, 201, 495  
 metachronal rhythm 65, 217  
 metamorphosis  
   of insects 252, 266  
   of lampreys 308  
   of urochordates 297  
*Metridium* 85, 92  
*Miamiensis* 54  
 Michaelis–Menten equation 125  
 microbial loop 35  
*Microciona* 88  
*Micromonas* 26  
 microscope 1  
   electron 2  
   scanning electron 4  
 migration 446  
 milk 471  
 millipedes 216  
 mimicry 272  
 mites 216  
 modular organisms 84  
 molluscs 148  
 monkeys 478  
 Monogenea 114  
*Monosiga* 37  
 monotremes 468  
 moose 492  
*Morpho* 268  
 mosquitoes 254  
*Moythomasia* 344, 345  
 moulting  
   of arthropods 236  
   of nematodes 146  
 mouthparts 226, 249  
 mudskipper 375  
 multicellular structure 86  
*Musca* 254  
 muscle  
   aerobic and anaerobic 167, 330  
   fibrillar 259  
   smooth and striated 160, 239  
 muscles  
   of cnidarians 90  
   of crustaceans 237  
   of molluscs 160  
   pennate 238  
*Mustelus* 327, 338  
 musculo-epithelial cells 77, 90  
*Mya* 152  
*Myotis* 496  
 Myriapoda 215  
*Mytilus* 162, 197, 198, 201  
*Myxine* 308, 309
- Naegleria* 56  
*Nanomia* 83  
 nauplius larva 231  
*Nautilus* 152, 153, 154, 159, 177, 191  
*Necator* 139  
 nematocysts 77, 78, 96  
 nematodes 139  
 Nemertea 112  
*Neoceratodus* 369, 371, 375, 387  
 Neornithes 435  
 neoteny 298, 435  
*Neotragus* 477  
*Nereis* 208, 209, 214, 217, 218, 223  
*Nerita* 187  
 Nernst equation 53  
 neuromasts 317  
 nervous system  
   of cnidarians 93  
   of crayfish 227  
   of earthworm 211  
   of flatworm 111  
 neuron 93  
 newts 374, 391  
*Noctiluca* 26, 86  
 nomenclature, zoological 20  
 notochord 298, 301  
*Notomys* 466

506 *Index*

- Nucula* 151, 152  
 nymph 252  
  
*Ochromonas* 60  
 octopus 154, 173, 186, 193  
*Odonata* 253  
*Oikopleura* 297, 298  
*Oligochaeta* 214  
*Onchorhynchus* 175  
*Onychophora* 215  
*Onychoteuthis* 173  
*Ophiothrix* 285, 287  
*Ophiuroidea* 287  
 opossum 463, 468, 473, 474, 484  
*Orcinus* 498  
*Ornithorhynchus* 468  
*Oryctolagus* 491  
 osmotic regulation  
   of earthworms 222  
   of fishes 312, 336  
   of molluscs 189  
   of *Nereis* 223  
   of protozoans 53  
   of rotifers 133  
*Osteichthyes* 343  
 ostracoderms 309  
*Ostrea* 203  
 otoliths 320  
 oxygen analyser 9  
 oxygen consumption 119, 257, 306, 446  
 oxygen electrode 8  
 oyster 202  
  
 palaeoniscoids 344  
*Palythoa* 98  
*Pan* 483, 484  
*Panthera* 475, 493  
*Papio* 478  
*Paracentrotus* 289, 290  
*Paramecium* 52, 65  
 parapodia 214  
 parasites 38, 129  
 parasitic flatworms 113  
 parasitic nematodes 139  
 parasitic protozoans 38, 40, 44  
 parthenogenesis 139  
*Parus* 452  
*Passeriformes* 435  
*Patella* 157, 168, 201  
*Pecten* 152, 165  
*Pelagia* 104  
*Pelomyxa* 26, 57, 86  
 pelycosaurs 458  
 Pennycuik, Prof. C. 444  
*Perameles* 469  
*Peranema* 33  
*Perca* 344, 345  
 perch 344, 345  
*Periophthalmus* 375  
*Peripatus* 215  
*Perissodactyla* 477  
*Petaurista* 474  
*Phocaena* 498  
 photosynthesis 32  
  
*Physalia* 83  
 phytoplankton 33  
*Physeter* 179, 494  
 piddock 173  
 pigeon 442  
*Pinctada* 154  
*Pinnipedia* 476  
 placenta 338, 469  
 Placodermi 327  
 plankton 33, 243  
*Planorbis* 151, 159  
*Plasmodium* 31, 44  
 Platyhelminthes 108  
 platypus 468  
 plesiosaurs 402  
*Plethodon* 397  
*Polycelis* 124, 128, 129  
 polymers 98  
*Polyorchis* 93, 103  
 Polyplacophora 148  
 Polyprotodonta 474  
 polyps 76, 109  
*Polypterus* 344, 345  
*Polytoma* 64  
 Porifera 72  
*Porites* 85  
 Portuguese man-o'-war 83  
*Portunus* 230, 232  
 positional information 90  
*Potamopyrgus* 51  
 pressure  
   in burrowing molluscs 173  
   in earthworms 220  
   in fish feeding 350  
   in sea anemones 90  
   in squid mantle 176  
   of blood 182, 385, 424  
 primates 478  
 primitive features 19  
 Pringle, Prof. J. 259  
 production, primary 33  
 prosobranchs 149, 184  
 Protista 26  
 Protobranchia 151  
 protonephridia 131  
*Protopterus* 356, 371, 375, 386, 389  
 protozoan 26  
*Psammechinus* 291, 292  
 pseudocoel 137, 140  
 pseudopodia 58, 292  
*Pteranodon* 423  
 pterosaurs 423  
*Pteropus* 474  
*Pulmonata* 150  
 python 405  
  
 quadrupeds 372  
 quinone tanning 101, 117, 152, 232, 251  
  
 rabbits 478, 491  
 radioactive isotopes 9  
 ragworm 214  
*Raia* 331  
 Ramsay, Prof. A. 222, 263

- Rangifer* 471, 475  
 rat 491  
 ratites 435  
*Rattus* 491  
 Raup, Dr D. 158  
 rays 330, 331  
 rectal gland 336  
 regeneration 89  
 reindeer 471, 475  
 reproduction  
   asexual 138  
   sexual 49  
 reproduction  
   of amphibians 397  
   of fishes 337  
   of insects 251  
   of mammals 468  
   of protozoans 48  
   of reptiles 407  
   of rotifers 138  
 reproductive strategies 128  
 reptiles 400  
 respiration  
   of birds 440, 447  
   of fishes 305, 307, 325, 380  
   of frogs 382  
   of insects 250, 260  
   of mammals 441  
   of molluscs 185  
 rete mirabile 356  
 Reynolds number 61  
*Rhincodon* 327  
*Rhinolophus* 476  
 Rhipidistia 368  
*Rhodnius* 263  
 rodents 477  
*Rodolia* 254  
 rotifer 133, 136  
 roundworms 139  
*Rousettus* 445  
 rubber 99  
 rumen 38  
 running  
   by centipedes 217  
   by tetrapods 425, 479  
  
*Sacculina* 232  
 safety factor 157  
 salamanders 374, 397  
 Saliencia 374  
*Salmo* 344, 345, 347, 356, 386  
 salmon 175, 344, 345  
 salt glands 415  
 Sarcodina 29  
 Sarcomastigophora 27  
*Sauromalus* 414  
 scales 312  
 scallops 152, 165  
 Scandentia 473  
*Scaphiopus* 390  
*Schistosoma* 116  
*Scolopendra* 216, 217, 219  
 scorpion 210, 215  
*Scutigera* 216, 219  
  
*Scyliorhinus* 330, 337, 339  
 Scyphozoa 84  
 sea anemones 78, 90, 96  
 sea cucumber 289  
 sea fans 81, 102  
 sea squirts 295, 296  
 sea urchin 287  
 seals 476, 494  
 segmentation 208, 226, 333  
 Selachii 323  
 semicircular canals 319  
*Serpula* 208, 209, 214  
*Sepia* 154, 157, 167, 178  
*Serranochromis* 349  
*Setifer* 473  
 sex determination 276  
 sexual selection 453  
 sharks 323, 327, 334, 335  
 shells  
   of brachiopods 282  
   of molluscs 154, 177, 233  
   of turtles 402  
 shipworm 173  
 shoals 363  
 shore life 200  
 silvery fishes 361  
 siphonophore 83  
 skeletons  
   of amphibians 373, 393  
   of arthropods 233  
   of bird 433  
   of cnidarians 98  
   of echinoderms 287  
   of turtle 402  
 skin 380, 412  
 skulls  
   of amphibians 373  
   of fishes 323, 347, 369  
   of mammals 461, 490  
   of reptiles 401, 405, 461  
 sleeping sickness 40  
 slugs 150, 171  
 Smith, Dr H.W. 389  
 snails 150, 168  
 snakes 404  
 social insects 272  
 soil fauna 221  
 song 451  
*Sphenodon* 402, 403, 421  
 spicules 101  
 spiders 215  
*Spirorbis* 202, 245  
*Spirostomum* 86  
*Spirula* 157  
 sponges 72, 90  
   glass 75, 92  
 springtail 248, 253  
*Squaliolus* 327  
*Squalus* 338  
 squids 152  
   ammoniacal 179  
 stance  
   of arthropods 216  
   of tetrapods 479

508 *Index*

- starfish 284  
 Steen, Dr J.B. 356  
*Stentor* 31, 32, 37, 86  
 stomach 326  
 strain gauge 11  
 strength of materials 233  
*Strigomonas* 60  
*Strombus* 188  
 swimbladder 352  
 swimming  
   of cephalopods 173  
   of fish 329  
   of nematodes 146  
   of protozoans 59  
   of scallops 165  
 symmetry 108, 281  
*Symplasma* 75  
 synapses 94, 241  
 Synapsida 401, 458  
 syncytium 75, 136  
  
*Tachyglossus* 468, 471, 473  
*Tadarida* 497  
 tadpoles 382, 388, 397  
*Taeniaryhynchus* 118  
 tapeworms 118, 124  
 Tasmanian wolf 474  
*Tealia* 90  
 teeth 326, 369, 484  
 tegument 113  
 teleology 19  
 teleost 344  
*Tellina* 152  
 temperature  
   of birds and mammals 437, 464, 473  
   of fishes 364  
   of insects 257  
   of reptiles 415, 426  
 tenrec 473  
 tentacles of squid 168, 169  
*Teredo* 173  
 termites 272  
 territory 452  
*Tetrahymena* 49, 65  
 tetrapods 372  
 therapsids 459  
 thermistor 13  
*Thermobia* 265  
 thermocline 34  
 thermocouple 13  
 Thompson, Sir D'Arcy 157  
*Thrinaxodon* 459  
*Thunnus* 364  
*Thylacinus* 474  
*Tigriopus* 230  
 timescale, geological 18  
*Tipula* 248  
 tit 452  
 titration 7  
 toads 374, 390  
 tongues 374  
 torsion 149  
 tortoises 402  
  
 tracheae 250, 260  
 transducer 11, 13  
 tree shrews 473  
*Triceratops* 426  
*Trichinella* 140  
 triclads 110  
*Triturus* 391  
 trochophore 202, 210, 212  
*Tropidonotus* 410  
 trout 347, 356, 386  
 trypanosome 28, 40  
 tuatara 402, 403, 421  
*Tubipora* 104  
 tuna 364  
*Tupaia* 459  
 turbellarians 108, 119, 122  
*Tursiops* 498  
 turtles 401, 402, 410, 415  
*Tyrannosaurus* 423  
  
 ultrafiltration 132, 187  
 ungulates 477  
 Uniramia 215  
 urates 414  
 urea 336, 389  
 uric acid 190, 265, 411  
 urine  
   of lampreys 312  
   of mammals 466  
   of molluscs 188  
   of rotifers 133  
 urochordates 295  
 Urodela 374  
*Ursus* 475  
  
*Varanosaurus* 459  
*Varanus* 403  
 veliger 202  
 Venus's flower basket 75  
 vertebrates 302  
*Vespa* 275  
 vipers 406, 412  
 viscosity 98  
 viviparous reptiles 412  
*Viviparus* 188, 203  
 vultures 444  
  
 walking  
   by centipedes 217  
   by tetrapods 390, 425, 479  
   human 483  
 warning coloration 271  
 wasps 248, 254, 275  
 water balance  
   of eggs 410  
   of insects 262  
   of reptiles 413  
   see also osmotic regulation  
 water tunnel 174  
 whales 179, 476, 494, 498  
 widowbird 453  
 Wigglesworth, Sir Vincent 266  
*Wuchereria* 139



*Xenopus* 317  
X-ray cinematography 11  
X-ray diffraction 6

Young, Prof. J.Z. 193  
Young's modulus 99, 233

*Zaglossus* 468  
*Zirphaea* 173  
Zoantharia 81