

SUBJECT INDEX 1931-1965

Bulletin of the Mount Desert Island Biological Laboratory

Numbers and volumes have appeared at irregular intervals, and a few numbers are missing. The index gives the volume (Roman numeral), number (arabic number, some of which are assigned, now, since there was no previous identification), and page, i.e., III-6-24. The following list shows the volumes, numbers, and years as they are used:

<u>Vol.</u>	<u>Number</u>	<u>Year</u>	
III	1	1931	(Missing)
III	2	1932	
III	3	1933	(Missing)
III	4	1934	
III	5	1935	
III	6	1936	
III	7	1937	(Missing)
III	8	1938	(Missing)
III	9	1939	
III	10	1940	(Missing)
III	11	1941	
III	12	1950	
IV	1	1953	(50-52)
IV	2	1956	(53-55)
IV	3	1959	(56-58)
IV	4	1962	(59-61)
V	1	1965	(62-64)
V	2	1965	(65)

A

- Acaulis primarius
study of III-6-23
- Acetazolamide
effects on urine and plasma IV-1-42, IV-2-29
- Acid
active transport by dogfish gastric mucosa V-1-55
-base changes in dive of Seal V-1-57
effect on Amoeba locomotion III-2-28
metabolism, Dogfish IV-4-64
transport by gastric mucosa of Dogfish V-1-35
- Acidification of
Dogfish urine IV-2-29
- Acmaea testudinalis
embryology of III-5-22
- Acoustical behavior
Chironomidae and Culicidae IV-3-45
- ACTH, commercial
effect on Chromatophore IV-2-34
- Actinomycin D
antimorphogenetic activity V-1-48
- Active transport
Dogfish gastric mucosa V-1-55
fish kidney IV-2-31
Lophius IV-3-43
- Adrenal glands
chick III-12-26
- Adrenalin
diuresis in Dogfish IV-2-38, IV-2-49
effect on Squalus acanthias III-2-22
- Aerobiosis
in fresh water turtle V-1-16
- Agarum turneri
life history III-4-32
- Aging
Tokophrya infusionum IV-1-33
- Albatrosses
in captivity IV-3-67
- Albumin
growth of cancerous cells III-4-32
- Aldosterone
on rectal gland of Dogfish V-2-11
- Algae
study of Mt. Desert Island III-4-32
- Alkaline gland
CO₂ accumulation, skate IV-4-59
secretion, skate V-1-12
skate IV-4-48
- Alveolar gas exchange
seal V-1-13
- Amblystoms punctatum
ectoderm and mesoderm III-11-31
- Ameirus nebulosus (hornpout)
hemoglobin excretion IV-2-33
- Amino acids
of blood of marine arthropods IV-4-77
- Aminobenzoic acid isomers
metabolism in marine fishes IV-4-41
- Amoeba
locomotion III-2-28
- Ammonia
and urea excretion via gills and

- kidneys of Dogfish IV-4-33
and urea, frog IV-4-29
- Ammonia excretion
and gill blood flow in Myoxocephalus scorpius V-1-34
gills Catfish IV-3-56
through gills of Sculpin IV-4-33
via gills of marine fishes V-1-6
- Ammonium acetate
metabolism IV-3-29
- Amphenone
on regeneration of the pectoral fin in Fundulus V-1-38
- Amphibia
carbonic anhydrase activity and inhibition V-2-26
- Amphibian
carbonic anhydrase distribution IV-3-72
- Amphipoda
esterase development IV-3-18
- Angiographic
arterial constriction in Seal V-2-6
- Anguilla rostrata
glutamic acid dehydrogenase V-2-24
- Antennae
butterfly IV-3-44
- Antimetabolites
and growth inhibitors on sand dollar embryos V-1-9
- Aqueous humor
and cerebrospinal fluid, elasmobranch IV-3-51
cerebrospinal fluid, electrolytes and carbonic anhydrase inhibition IV-4-47
- Aromatic amino acids
and sugar transport in intestine of salt and fresh water fish V-2-20
- Arterial constrictor response
seal IV-4-51
- Arthropod skeletons
calcification IV-4-75, IV-4-76
- Arthropods
amino acids of blood IV-4-77
reactions to sounds IV-3-22
- Ascidians
blood cells of III-9-28
- ATP-ase
Na⁺-K⁺ activated in Dogfish V-1-59
- Auditory organs
saltatory Orthoptera IV-4-32
- Autecology
ciliate Conchophthirus mytili IV-3-61
of ciliate Urceolaria spinicola V-2-2
- Avian salt gland
sea gull IV-4-23
- Azaserine
effect on sand dollar embryos IV-3-50
sand dollar egg IV-3-14

B

- Balanus balanoids
behavior as correlated with chemical stimulation of III-5-25
behavior as correlated with plankton III-5-24
cirral movements III-2-36

Barnacle
 behavior correlated with plankton III-5-24
 behavior of III-4-33
 cirral movements III-2-36
 response to light III-12-27
 stimulation with NaCl, Na₂SO₄, NaNO₃, glucose, glycerol, urea III-5-25

Bases
 active transport, Lophius IV-3-43

Batis maritima
 development of III-4-31

Beaver
 kidney function IV-3-76

Behavior
Clava leptostyla Agassiz IV-1-19
hermit crab IV-4-37

Bicarbonate
 and CO₂ excretion in catfish IV-3-48
 and Inulin movement across bladder of Lophius americanus V-1-16
 excretion across gill, dogfish IV-4-75
 excretion, catfish IV-3-26, IV-3-47

Bile
 dogfish IV-3-16
 pigment, dogfish and goosfish IV-4-17
 pigment metabolism, dogfish V-1-1

Bird
 carbonic anhydrase distribution IV-3-72
 semantics IV-3-20

Birds
 marine, extra-renal salt excretion IV-3-55
 marine, secretion of hypertonic salt solutions IV-3-30

Bladder
 bullfrog, reabsorption of water IV-2-62
Lophius americanus, inulin and bicarbonate movement V-1-16
 ultrastructure of frog V-2-34

Blastoderm
 formation in Marinogrammarus IV-4-55

Blood
Selachian in vitro III-4-27

Blood cells
 of Ascidians III-9-28

Body water
 total in dogfish IV-4-66

Bradycardia
 seal IV-4-49

Brain
 blood supply in cretinoid rats IV-2-57

Breathing rhythm
 of Fundulus as related to temperature III-5-24

Breeding seasons
 marine invertebrates V-1-27

Bullfrog
 dehydration and neurohypophysial extracts IV-2-62
 reabsorption of water from urinary bladder IV-2-62
 urea excretion IV-2-42

Butterflies
 feeding reactions IV-2-57

Butterfly
 wood nymph, antennal chemoreception IV-3-44

Butterfly (continued)
 wood nymph, reactions to sounds IV-2-55

C

Calcification
 arthropod skeleton IV-4-75, IV-4-76
 molluscs IV-2-12, IV-2-26
 sand dollar embryos IV-3-12
 teleost scales IV-4-19
 ultrastructure in marine organisms V-2-33

Calcium
 and chloride content of lobster serum III-11-22
 dissolution of kidney stones IV-2-40
 excretion in hagfish V-2-11
 transport, Sculpin and Fundulus IV-4-46

Campanularia flexuosa
 fluoride ion on longevity V-1-60
 regression, replacement cycle V-1-19
 respiratory rate and senescence V-1-61

Cancer
 chemotherapy on echinoderm embryo IV-4-41
 growth in albumin III-4-32
 spontaneous in mice III-2-30

Captivity
 albatrosses IV-3-67

Carbachol
 on gastric mucosa of dogfish V-1-43

Carbonic anhydrase
 activity and inhibition in fish and amphibia V-2-26
 content in Marshall's gland of skate IV-4-47
 distribution in non-mammals IV-3-72
 elasmobranch IV-3-51
 gas transport in dogfish V-1-66
 kinetics in cold and warm blooded vertebrates V-2-25
 measurement of intact RBC's by anion permeability V-2-29

Carbonic anhydrase inhibition
 effect on urine of marine teleosts IV-4-57
 on CSF and aqueous humor IV-4-47
 rectal gland of dogfish IV-4-58

Carcinoma
 effect of radium in mice III-2-31
 growth in diluted media III-4-26

Cardiac output
 and gill gas exchange in dogfish V-1-45
 seal diving V-1-44
 using dye indicator curve, dogfish V-1-58

Carinamide
 effect on sulfate and thiosulfate secretion in Lophius americanus IV-3-38

Carnitine
 acetylcarnitine, and carnitine transferase in spermatzoa of various species V-2-15

Castration
 box turtle III-9-24

Catecholamines
 on blood glucose and lactate in skate V-2-15

Catfish (Ameiurus nebulosus)
 ammonia excretion IV-3-56

- Catfish (*Ameiurus nebulosus*) (continued)
 excretion of sodium bicarbonate and CO₂ IV-3-48
 gill structure IV-4-62
 Na bicarbonate excretion IV-3-26, IV-3-47
- Cell membrane
 diffusion across in sand dollar eggs IV-4-44, 45
- Cells
 living malignant sarcoma III-4-26
- Ceramiaceae
 growth patterns IV-4-42
- Cercariae
 light intensity and response III-2-29
- Cercyonis pegala
 butterfly, reactions to sounds IV-2-55
- Cerebrospinal fluid and aqueous humor
 dogfish electrolytes IV-4-47
- Cerianthus
 fauna M. D. Island III-9_30
- Chemoreception
 butterfly antennae IV-3-44
- Chemoreceptors
 insects IV-3-21
Lepidoptera IV-2-57
- Chemotherapy
 cancer in echinoderm embryo IV-4-41
- Chick
 adrenal-pituitary function III-12-26
 cell deaths IV-3-22
 chorioallantonic membrane and mouse sarcoma injection IV-2-60
 development IV-2-35
 ganglia growth IV-2-13
 mesonephric and metanephric tubules IV-2-19
- Chironomidae
 acoustical behavior IV-3-45
- Chloromerodrin
 on gill permeability to urea in dogfish V-2-14
- Chlorphenol red
 carrier efflux from flounder renal tubules V-1-37
 PAH, accumulation in dogfish kidney IV-4-29
 transport in flounder tubules V-2-22
- Chlorthiazide
 effect on K⁺, Na⁺, and Cl⁻ in dogfish IV-3-37, IV-3-48
- Choroid plexus
 transport in dogfish IV-4-54
 transport of organic dyes in elasmobranchs V-1-50
- Chromatophore
 effect of ACTH on number of IV-2-34
 ultrastructure in fish V-2-35
- Ciliate
 autecology of Urceolaria spinicola V-2-2
Conchophthirus mytili, autecology IV-3-61
- Ciliates
 endocommensal of sea urchin V-1-2
 endocommensal-of Strongylocentrotus droe-
bachiensis-effects of food V-1-1
 various observations V-1-51
- Circulation
 in dogfish III-12-26, IV-1-13
 of gill in dogfish V-1-39
 lobster IV-1-25
- CL 11,366
 distribution and excretion in dogfish V-1-38
- Claspers
 and siphon sacs of dogfish IV-3-46
- Clava leptostyla agassiz
 behavior IV-1-19
 regeneration IV-1-14
- Cleavage
 and cell movement of Marinogammarus finmarchicus IV-2-59
 delay, Echinarachnius parma IV-4-63
 delay in sand dollar using ultra violet V-1-5
Echinarachnius eggs IV-4-56
Echinarachnius parma IV-3-75
Fucus V-1-47
Gammarus IV-2-20
 lipoic acid in sand dollar V-1-49
 relation of cleavage delay and mitotic cycle, E. parma IV-4-63
 sand dollar stimuli and furrowing V-1-43
 stimuli, E. parma V-1-21
 stimulus in sand dollar eggs IV-4-57, V-1-62
 unilateral furrowing in Hydractinia and Echinarachnius V-1-20
- CO₂ accumulation
 skate IV-4-59
- Coelomic fluid
 bicarbonate concentration sea urchin IV-2-30
 dogfish, acid-base characteristics IV-4-71
 dogfish, chemical anatomy IV-4-69
 fresh water turtle V-1-15
- Collecting
 at Mt. Desert Island Biological Laboratory III-5-19
- Commensals
 obligate ciliate in sea urchins IV-4-17
- Conchophthirus mytili
 and its host Mytilus edulis IV-4-18
- Coronary disease
 heart muscle and EKG III-12-28
- Cortisone
 effect on metastases, mice IV-4-84
- Crago boreas
 pigmentation III-11-27
 prevalence III-6-14
- Creatine and TMAO
 excretion in goosfish IV-3-12
- Creatinine
 excretion in dogfish III-9-34
- Crow
 calls as attractants or repellents IV-2-55
- Crown-Gall-tumour
 induction IV-1-17
- Crustacea
 embryology IV-1-47
- Culcidae
 acoustical behavior IV-3-45
- Cytidine
 and thymidine uptake by sand dollar eggs V-1-24

Cytokinetics
 inhibition by ultraviolet radiation V-1-21
 Cytosine arabinoside
 on sand dollar cleavage V-1-36

D

Development
 sand dollar egg IV-3-40
 DFP
 on sand dollar development IV-4-85
 Diamox
 effect on acid-base of dogfish IV-4-64
 Differentiation
 in cellular systems V-1-22
 Digestive glands
 transsulfurase in gastropods IV-4-22
 Dinitrophenol (2-4)
 and oligomycin on RBC's in dogfish V-2-5
 Diodrast
 and PAH, Lophius IV-3-66
 ^{131}I transport in flounder tubule V-2-7
 Diuresis
 in dogfish III-6-25, IV-2-38, IV-2-49
 postprandial and volume receptors of
 harbor seal IV-4-50
 water in seal IV-1-15
 Dive
 acid-base changes in seal V-1-57
 energy exchange in seal V-1-66
 reflex, seal IV-2-21
 Diving mammal
 ventilatory response to CO_2 in harbor seal
 V-1-17
 Dogfish, see also Squalus acanthias
 acidification of urine IV-2-29
 active transport in gastric mucosa V-1-55
 adrenalin diuresis IV-2-38
 aldosterone on rectal gland V-2-11
 aortic blood pressure III-12-26
 autonomic function IV-2-18
 bicarbonate across gill membrane IV-4-75
 bile pigment metabolism IV-4-17, IV-1-1
 blood-cerebrospinal fluid barrier permea-
 bility IV-4-53
 bromination of fluoresceins by uterus
 V-1-50
 bromination of phenol red IV-3-62
 carbachol and thiocyanate on gastric mu-
 cosa V-1-43
 carbonic anhydrase inhibition IV-4-47
 carbonic anhydrase inhibition in gill and
 erythrocyte IV-2-15
 carbonic anhydrase inhibition in rectal
 gland IV-4-58
 cardiac output V-1-58
 cardiac output and gill gas exchange V-1-45
 circulation IV-1-13
 claspers and siphon sacs IV-3-46
 coelomic fluid, acid-base characteristics
 IV-4-71
 coelomic fluid: chemical anatomy IV-4-69
 colorimetry of bile IV-3-16
 creatine excretion III-9-34
 Diamox effect on acid-base RC ations
 IV-4-64

Dogfish, see also Squalus acanthias (continued)
 distribution and excretion of CL 11,366
 V-1-38
 diuresis III-6-25
 dye transport in choroid plexus IV-4-54
 effect of chlorothiazide on NaCl and K^+
 IV-3-48
 effect of lipoprotein lipase in gill system
 IV-4-86
 effect of probenecid on PAH and urea
 IV-2-54
 electrical characteristics of stomach V-1-8
 electron microscopy of saline secretion
 IV-4-29
 embryo survival outside uterus IV-3-68
 excretion of inulin III-5-19
 excretion of phenol red III-9-37
 excretion of phosphate III-9-35
 fetal and adult thyroid glands IV-3-77
 fetal thyroid IV-3-55
 function of rectal gland IV-4-26
 gill circulation V-1-39
 gill permeability V-1-29, V-1-53, V-1-55,
 V-2-14
 gill water flow V-1-56
 gills and kidneys in excretion of ammonia
 and urea IV-4-33
 glucose distribution V-1-18
 glucose transport by intestinal mucosa
 IV-4-28
 H^+ and Cl^- transport by gastric mucosa
 V-1-35
 H^+ metabolism IV-4-64
 hepatic blood flow in IV-3-16
 hepatic excretion of inulin IV-3-65
 hypouricemic V-1-40
 intestinal motility V-2-19
 intracellular electrolyte patterns in muscle
 and brain V-1-14
 intracellular electrolyte patterns in RBC's
 V-1-13
 intracellular pH IV-4-65
 intraventricular and vascular pressures
 V-1-52
 inulin distribution in pregnant IV-3-41
in vitro cultivation of cells from marine
 organisms V-1-67
 lactate metabolism V-2-30
 lipoprotein lipase activity IV-4-38
 maternal-embryo relationships IV-3-40
 maternofetal accommodations V-2-20
 NaCl excretion IV-3-43
 NaCl flux in rectal gland V-1-35
 Na^+ - K^+ activated ATP-ase V-1-59
 Na^+ transport in RBC's V-2-4, V-2-39
 net Na^+ fluxes V-2-10
 oligomycin and dinitrophenol on Na^+ trans-
 port by RBC's V-2-5
 osmoregulation in hyperosmotic environ-
 ment V-2-3
 oxygen consumption of RBC V-2-40
 PAH and Sulfanilic Acid from Ventricular
 Fluid IV-4-53
 protein binding of 1- C^{14} -Palmitic acid
 IV-4-32
 quinine distribution IV-3-74

Dogfish, see also *Squalus acanthias* (continued)
 rectal gland and kidney roles V-1-32
 reflex regulation of ventilation V-1-59
 renal electrolyte control V-2-9
 skeletal muscle V-1-31
 sucrose space IV-4-66
 sulfobromophthalein V-2-1
 sulfobromophthalein and hepatic blood flow V-2-3
 thyroid-pituitary system IV-4-34
 TMAO excretion IV-3-17, IV-3-29
 TMAO excretion (identification) IV-3-16
 total body water IV-4-66
 unesterified fatty acids IV-4-86
 urea barrier of gill IV-4-24
 urea synthesis in liver V-2-37
 urine acidification IV-3-70
 ventricular fluid in vivo and in vitro V-1-42
 ventricular fluid production V-1-18, V-1-60

Don
 effect on sand dollar embryos IV-3-50

Drug metabolism
 by marine animals V-2-33

Dye
 indicator curve of cardiac output, dogfish V-1-58
 transport in choroid plexus of dogfish IV-4-54

Dyes
 hepatic metabolism by dogfish of IV-3-65
 transport in flounder and dogfish IV-2-16
 transport in renal tubules of flounder IV-3-25

E

Echinarachnius parma

carnitine, acetylcarnitine and carnitine acetyltransferase in spermatozoa V-2-15
 cleavage IV-4-56, V-1-21
 cleavage at different temperatures IV-3-75
 cleavage delay to mitotic cycle IV-4-63
 cleavage stimuli and furrow V-1-43
 effect of light on cleavage IV-3-32
 gamete collecting V-1-32
 inhibition of mineralization in embryo IV-4-20
 non mineralized skeletal components IV-4-19
 photorecovery in cleavage IV-4-28, V-1-63
 sensitivity of embryos to ultraviolet irradiation V-2-36
 skeletal development IV-3-38, IV-3-61, IV-3-62
 sperm, oxygen uptake IV-3-53
 thymidine uptake in eggs V-1-64
 toluidine blue on eggs and sperm IV-2-59

Echinoderm

cancer chemotherapy IV-4-41
 effect of viral nucleic acids IV-4-78
 metabolic inhibitors III-11-14
 respiration of gametes IV-2-47

Ecology

frog IV-1-48
 Hermit crab IV-4-37

Ectoderm

effect on limb mesoderm III-11-31

Eel

common hormonal stimulation III-9-25
 glutamic acid dehydrogenase V-2-24
 movement of oxygen across gill epithelium V-1-10
 potential difference across gill membrane IV-4-80
 salt transport by gill epithelium IV-4-80, 81, 82, 83
 sodium transport in gill V-1-10

Elasmobranch

carbonic anhydrase inhibition IV-3-51
 carbonic anhydrase on aqueous humor, and cerebrospinal fluid IV-3-51
 composition of body fluids IV-1-46
 electrolyte regulation V-1-4
 erythrocytes, ionic transport V-1-31
 fishes, renal function III-2-19
 gas transport by gill V-2-37
 and hagfish-plasma protein patterns IV-4-52
 intraventricular and vascular pressures V-1-52
 organic dye transport in choroid plexus V-1-50
 reflex cardiac inhibition III-2-20
 salt and water absorption and excretion III-4-31
 thyroid pituitary system IV-4-36
 urea transport in RBC's V-1-41
 ventricular fluid V-1-62

Electrical parameters

rectal gland dogfish V-1-35

Electrolyte metabolism

teleosts IV-4-39

Electrolyte regulation

elasmobranch V-1-4

Electrolytes

and carbonic anhydrase inhibition, dogfish IV-4-47

Electron microscopy

saline secretion, dogfish IV-4-29

Electrophoresis

serum IV-3-13

Embolus

tumor cell in mouse IV-2-43

Embryological investigation IV-1-47

Embryology

Acmaea testudinalis III-5-22
 chick kidney IV-2-19
 "morphogenetic death" IV-3-54

Embryos

esterase and peptidase content IV-2-53

Endocrinology

skate pituitary IV-4-37

Endoderm

presumptive-*Fundulus* IV-2-47

Enzymes

proteolytic in lobster III-11-30

Epithelia

regulatory in marine organisms V-1-54

- Epithelia (continued)
 salt regulation in invertebrates V-1-33
 sea gulls, Fundulus IV-3-66
- Epithelial cell
 Na⁺ transport, turtle, V-1-4
- Epithelium
 movement of oxygen across eel gill V-1-10
 pulmonary IV-1-39
 tadpole IV-1-39
 transport of salt by eel gill IV-4-80, 81, 82, 83
- Erwinia
 pathogenicity IV-1-53
- Erythrocytes
 carbonic anhydrase inhibition in dogfish IV-2-15
 intracellular electrolyte patterns V-1-13
 Na⁺ transport in dogfish V-2-4, V-2-5, V-2-39
 oxygen consumption in dogfish V-2-40
 permeability to anions and carbonic anhydrase V-2-29
 urea transport in elasmobranchs V-1-41
- Esterase
 Amphipoda IV-3-18
- Esterases
 in marine invertebrate embryos IV-2-53
 and mucopolysaccharides histochemistry IV-2-39
- Excretion
 lobster IV-2-14, IV-2-51
 of urea in toads and frogs IV-2-65
 urinary of Na⁺, Cl⁻, and K⁺ in dogfish IV-3-37
 of urine in seal III-6-26
- Extra-uterine
 survival, dogfish IV-3-68
- ## F
- Fatty acids
 unesterified in dogfish IV-4-86
- Fauna
 freshwater protozoa at M.D.B.L. IV-2-36
 inshore Cerianthus III-9-30
 survey V-1-26
- Filming
 marine invertebrates III-11-24
- Fin
 regeneration, Fundulus IV-3-47, IV-4-43
- Fish
 carbonic anhydrase activity and inhibition V-2-26
 carbonic anhydrase distribution IV-3-72
 chromatophores V-2-35
 histology of pituitaries III-6-18
 respiration, gill perfusion V-1-19
- Flounder
 carrier efflux from renal tubules V-1-37
 chlorphenol red transport in tubules V-2-22
 diodrast-¹³¹I transport in tubule V-2-7
 tubules, chlorphenol red IV-3-72
 tubules, dye transport IV-3-27
 urea production V-1-54
- Fluoresceins
 bromination by dogfish uterus V-1-50
- Fluoride ion
 on longevity of Campanularia flexuosa V-1-60
- Fresh water fish
 intestinal transport V-2-20
- Frog
 chloride reabsorption III-11-38
 glucose reabsorption III-11-36
 renal function in metamorphosis IV-4-31
 skin ultrastructure V-2-35
 and toads-excretion of urea IV-2-65
 transpleural exchange rates IV-4-30
 urea and ammonia excretion IV-4-29
- Fucus
 and Ascomyllum-effects of growth substances III-12-27
 embryonic development V-1-47
- Fundulus heteroclitus
 acclimation of oxygen consumption to temperature IV-3-75
 actinomycin D and morphogenetic activity V-1-48
 Ca⁺⁺ and Fe⁺⁺⁺ transport IV-4-46
 chemical stimulation of III-5-22
 color change III-9-33
 differentiation in cellular systems V-1-22
 energetics of development V-1-33
 epithelia IV-3-66
 fin regeneration following spinal cord ablation IV-4-43
 homograft reaction IV-4-34
 hypophysectomy, gonadectomy, and effects of drugs on pectoral fin regeneration V-1-38
 hypophysectomy and implantations III-11-18
 hypophysectomy and urohypophysectomy IV-4-44
 illumination and sexual cycle III-9-39
 immunological reactions IV-4-35
 melanophoric responses III-9-31
 pectoral fin regeneration after hypophysectomy V-1-11
 pigment cell repopulation V-1-7
 presumptive endoderm IV-2-47
 regeneration of fins IV-3-47
 salt regulation V-1-5
 scale growth III-6-16
 scale regeneration IV-3-70
 stimulation with acids III-4-33
 stimulation by dicarboxylic acids III-4-35
 temperature related to breathing rhythm III-5-24
- Fungus
 herring III-11-33
- ## G
- Gadus callarias
Squalus acanthias, R. catesbiana, distribution of drugs IV-3-32
- Gamete collecting
Echinarachnius parma V-1-32
- Gammarus
 cleavage and cell movement IV-2-20

- Ganglia
chromatophorotropic substance in III-11-29
effect from mouse sarcoma transplantation IV-2-13
- Gas
exchange in biological systems V-1-64
patterns, diving seal's venous blood V-1-57
transport by Elasmobranch gill V-2-37
- Gastric mucosa
carbachol and thiocyanate in dogfish V-1-43
electrolyte metabolism IV-3-49
 H^+ and Cl^- transport in dogfish V-1-35
and swimbladder-electrolyte metabolism IV-3-71
- Gastropods
transsulfurase activity in digestive glands IV-4-22
- Germination
Fucus and Ascomyllum III-12-27
- Gill
ammonia excretion-catfish IV-3-53
ammonia excretion in marine fishes V-1-6, IV-4-33
bicarbonate excretion across membrane, dogfish IV-4-75
blood flow and ammonia excretion in Myxoccephalus scorpius V-1-34
blood-seawater barrier to urea in dogfish IV-4-24
carbonic anhydrase inhibition in dogfish IV-2-15
cardiac output and gas exchange in dogfish V-1-45
circulation in dogfish V-1-39
effect of lipoprotein lipase in dogfish IV-4-86
fish respiration V-1-19
gas transport in Elasmobranch V-2-37
and kidneys excretion of urea and ammonia IV-4-33
movement of oxygen across eel epithelium V-1-10
mussels IV-3-28
permeability in dogfish, V-1-3, V-1-29, V-1-53, V-1-55, V-2-14
potential difference across eel membrane IV-4-80
reflex regulation of water flow in dogfish V-1-59
sodium transport in eel V-1-10
structure in catfish IV-4-62
structure in various species V-1-44
transport of salt by eel membrane IV-4-80, 81, 82, 83
urea and thiourea excretion-dogfish IV-4-25
water flow in dogfish V-1-56
- Glomerular degeneration
Sculpin III-12-27
- Glomerulus
structure of IV-2-20
- Glucose (blood)
and lactate and catechol-amines in the skate V-2-15
- Glucose (blood) (continued)
distribution in dogfish V-1-18
excretion in Sculpin IV-1-69
reabsorption in frog III-11-36
transport, in dogfish intestinal mucosa IV-4-28
- Glutamic acid
dehydrogenase in eel V-2-24
- Gonadectomy
regeneration of the pectoral fin in Fundulus V-1-38
- Goosefish
blood O_2 , renal succinoxidase IV-3-69
electrolyte transport IV-2-17
excretion of Mg^{++} , Ca^{++} , SO_4^- , IV-3-11 (Lophius piscatorius), bile pigment metabolism IV-4-17
nephron permeability V-1-12
structure of nephron IV-4-61
urea production V-1-54
- Granules
jelly coat of sand dollar eggs IV-2-48
- Grasshopper (Neoconocephalus ensiger)
effect of temperature on chirps IV-2-56
- Growth patterns
in Ceramiaceae IV-4-42
- Gull (Larus argentatus)
auditory and visual communication IV-2-32
- Gulls
(herring)-regeneration in nasal glands V-2-1
- ## H
- Hagfish
excretion of phenol red, inulin Mg^{++} and Ca^{++} V-2-11
plasma protein patterns IV-4-52
thyroid tissue IV-4-84
- Heart
lobster and effect of ions on III-9-40
- Hemoglobin
excretion in hornpout IV-2-33
- Hepatic blood flow
dogfish IV-3-16
- Hepatic excretion of inulin
dogfish IV-3-65
- Hepatic metabolism
of various dyes by dogfish IV-3-65
- Herring
systemic fungus III-11-33
- Histology
teleost branchial epithelium III-4-38
- Homarus
circulation IV-1-25
excretion IV-2-51
excretion (inulin and phloridzen) IV-2-14
- Homograft reaction
Fundulus IV-4-34
- Hornpout (Ameirus nebulosus)
filtration rate and plasma flow IV-3-50
hemoglobin excretion IV-2-33
- Hydractinia echinata
carnitine, acetyl-carnitine, and carnitine acetyltransferase in spermatozoa V-2-15

Hydractinia and Echinarachnius
 unilateral furrowing in cleavage V-1-20
Hydranths
 fluoride ion of longevity V-1-60
Hydroid
 regression-replacement cycles and lyposome activity V-1-42
 tubularian-study of III-6-23
Hypophysectomy
Fundulus III-11-18
Fundulus pectoral fin regeneration V-1-11, V-1-38
 and urohypophysectomy in Fundulus IV-4-44
Hypophysis
 ADH and oxytocin in Selachians and teleosts III-6-21
 melanophore hormone of III-6-20
 separation into 6 lobes (Selachians) III-6-16
 tissue cultures of Selachians III-6-22
Hypouremia
 dogfish V-1-40
Hypoxia
 sand dollar V-1-6

I

Illumination
 effects on Fundulus sexual cycle III-9-39
Immunology
 molecular synthesis vs. mitosis in Fundulus IV-4-35
In vitro
 tissue studies IV-1-21
Inferior vena caval valve
 seal IV-4-51
Influenza virus and sialic acid
 in marine organisms IV-4-78
Insects
 chemoreceptors IV-3-21
Intestinal motility
 in dogfish V-2-19
Intestinal mucosa
 glucose transport in dogfish IV-4-28
Intestinal transport
 in marine and fresh water fish V-2-20
Inulin
 and bicarbonate movement across bladder of Lophius americanus V-1-16
 clearance in Sculpin III-6-25
 distribution in pregnant dogfish IV-3-41
 dogfish excretion of III-5-19
 and ferrocyanide: g.f.r. in dogfish and Sculpin III-12-26
 hepatic excretion by dogfish IV-3-65
 Mg⁺⁺, excretion in hagfish V-2-11
Invertebrate
 comparison of sulfurtransferases V-1-3
Invertebrates
 filming marine III-11-24
 marine, Rhodanese content IV-3-39
 Salisbury Cove IV-1-41
Ions
 inorganic, effect, on active transport IV-1-32

Iron transport
Sculpin and Fundulus IV-4-46

J

Jelly coat granules
 sand dollar eggs IV-3-15

K

Kidney
 blood flow, rabbit III-11-25
Catfish, in vitro phenol red tracing IV-2-17
Chick, phenol red transport IV-2-19
Chloride reabsorption, frog III-11-38
Chlorphenol red transport, flounder IV-3-23
Chlorphenol red, uptake in flounder IV-3-72
Creatinine, TMAO, Mg⁺⁺ transport, various fishes IV-2-31
Diuresis, mannitol rabbit III-11-25
Dogfish, accumulation of PAH and chlorphenol red IV-4-29
Dogfish, TMAO excretion IV-2-52
Dogfish, transport of various dyes IV-2-16
Dye transport, flounder tubules IV-3-27
Excretion of ammonia and urea, dogfish IV-4-33
Excretion, creatinine and PAH IV-1-54
Excretion of urea in the seal IV-3-54
Fish, and frog-mutarotase in IV-2-33
Fish, metabolism IV-3-30
Flounder, active transport of phenol red IV-1-32
Flounder, cellular transport kinetics IV-3-23
Flounder, chlorphenol red IV-3-25
Flounder, inorganic ions on transport IV-1-61
Flounder, phenol red transport IV-1-61
Flounder, transport of various dyes IV-2-16, IV-3-25
Frog, and fish-mutarotase in IV-2-33
Frog, renal function IV-1-48
Glomerular development IV-1-26
Glomerular filtration rate: dogfish and Sculpin III-12-26
Glomerular filtration rate, horned pout IV-3-50
Glomerular functions, Sculpin III-4-29
Glomerular function, seal III-11-21
Lophius americanus, effect of carinamide IV-3-38
Lophius americanus, tetraethyl-ammonium IV-3-52
Lophius piscatorius, glomerular development IV-1-26
Myoxocephalus octodecimspinosus, glomerular development IV-1-26
Myoxocephalus scorpius, glomerular development IV-1-26
NaCl excretion by dogfish IV-3-43
Nephron permeability in goosfish V-1-12
 osmoregulation and electrolyte regulation in dogfish V-1-32
 passage of lymphoma-leukemia cells IV-2-66

Kidney (continued)

- Rats-homotransplants IV-2-58
- Renal electrolyte control V-2-9
- Renal excretion of tetraethylammonium IV-3-52
- Renal excretion of TMAO and acid by dogfish IV-3-42
- Renal function during dive, Seal (Phoca Vitulina) IV-4-50
- Renal function, Elasmobranchs III-2-19
- Renal function in frog metamorphosis IV-4-31
- Renal functions, in harbor seal III-12-25
- Renal functions, marine teleosts III-4-37
- Renal transport of urea and carbohydrates in goosfish IV-4-46
- Renal tubules carrier efflux of chlorphenol red V-1-37
- Renal tubules, concentration of chlorphenol red IV-3-25
- Renal tubule, glucose reabsorption III-11-36
- stones, calcium and magnesium IV-2-40
- Structure of nephron, goosfish IV-4-61
- Tetraethylammonium excretion in Lophius americanus IV-3-52
- Transplant, effects of donor homogenates IV-2-58
- Transport of diodrast-¹³¹I in tubule of flounder V-2-7
- Tubular excretion, dogfish IV-1-54
- Tubular transport, goosfish IV-2-17
- Tubules, active transport IV-1-32
- Tubule transport of chlorphenol red in flounder V-2-22
- Ultrastructure-fish V-2-34
- Urea and salt concentration in Beaver IV-3-76
- Urea and thiorea excretion in dogfish IV-4-25
- Uric acid transport in aglomerular goosfish V-1-40
- Urine acidification, dogfish IV-3-70
- Klebsiella
pathogenicity IV-1-53

L

- Lactate
and blood glucose and catecholamines in skate V-2-15
- metabolism in dogfish V-2-30
- Larus argentatus
auditory and visual communication IV-2-32
- Leukemia
passage of cells in kidney liver IV-2-66
- Leukemia cells
removal from blood stream of mice IV-3-31
- transpulmonary passage in mice IV-3-31
- Lichens
study of Mt. Desert Island III-2-33
- Lipoic acid
on sand dollar cleavage V-1-49
- Lipoprotein lipase activity
dogfish IV-4-38, IV-4-86

Littoral polyclads

- New England, Prince Edward Island, Newfoundland III-9-15

Liver

- passage of lymphoma-leukemia cells IV-2-66
- sulfobromophthalein and hepatic blood flow in dogfish V-2-3
- urea synthesis in dogfish and lungfish V-2-37

Lobster

- Ca⁺⁺ and Mg⁺⁺ excretion IV-2-28
- circulation IV-1-25
- content of serum III-11-22
- excretion in IV-2-14, IV-2-51
- excretion of phosphate, TMAO IV-2-28
- heart and effects of ions on III-9-40
- proteolytic enzymes III-11-30

Lophius

- active transport of endogenous bases IV-3-43
- electrolyte transport IV-2-17
- K⁺ transport IV-3-44
- PAH and diodrast IV-3-66
- renal transport IV-4-46

Lophius americanus

- excretion of mercurials V-1-53
- goosfish, uric acid transport V-1-40
- inulin and bicarbonate movement across bladder V-1-16

Lungfish

- urea synthesis in liver V-2-37

Lymphoma

- passage of cells in kidney liver IV-2-66

Lysosome

- activity in hydroid V-1-42

M

Magnesium

- dissolution of kidney stones IV-2-40

Mammalian versus elasmobranch

- ionic transport in RBC's V-1-31

Mammary gland

- mice carcinoma III-5-16

Manganese

- role in sea urchin metabolism IV-2-49

Marine animals

- drug metabolism V-2-33

Marine birds

- salt secretion IV-3-76
- secretion of hypertonic salt solutions IV-3-30

Marine fishes

- aminobenzoic acid metabolism IV-4-41
- ammonia excretion via gills V-1-6
- intestinal transport V-2-20

Marine invertebrates

- breeding seasons V-1-27
- filming of III-11-24
- thiosulfate transsulfurase IV-4-22

Marine organisms

- calcification V-2-33
- in vitro cultivation of cells V-1-67
- tissue cultures and virological studies V-1-22, V-1-46

Marine teleost
 carbonic anhydrase on urine IV-4-57
 renal functions II-4-37

Marinogammarus
 formation of blastoderm IV-4-55

Marinogammarus finmarchicus
 cleavage and cell movement IV-2-59

Marshall's gland
 electrolyte and carbonic anhydrase content
 in skate IV-4-47

Maternal-embryo
 relationship in dogfish IV-3-40

Maternofetal
 accommodations in dogfish V-2-20

Melanophore
 hormone of Selachians III-6-20

Melanophoric responses
Fundulus III-9-31

Mercurials
 excretion in Lophius americanus V-1-53

Metabolism
 of acid in dogfish IV-4-64
 of ammonium acetate in various animals
 IV-3-29
 of bile pigment in dogfish V-1-1
 electrolyte of swimbladder and gastric
 mucosa IV-3-49
 hepatic, of dyes by dogfish IV-3-65
 of marine animals V-2-33
 sea urchin sperm IV-4-42

Metamorphosis
 renal function in frog IV-4-31
 tadpole skin V-2-18

Metastases
 effect of cortisone in mice IV-4-84
 and primary tumor cells in mice V-1-23

Metastasis
 effect of steroid, mice IV-4-85

Metopirone
 regeneration of pectoral fin in Fundulus
 V-1-38

Mice
 carcinoma of mammary glands III-5-16
 effect of cortisone on metastases IV-4-84
 effect of radium on carcinoma III-2-31
 effect of steroid on metastasis IV-4-85
 emboli (tumor cell) IV-2-43
 inhibition of sarcoma IV-2-60
 leukemia cells IV-3-31
 primary and metastatic tumor cells V-1-23
 removal of leukemia cells from blood
 stream IV-3-37
 spontaneous cancer III-2-30

Mitosis
 in immunological reactions in Fundulus
 IV-4-35

Molluscs
 calcification IV-2-26
 protein elaboration and calcification
 IV-2-12

Mollusks
 thiosulfate transsulfurase IV-4-21

Morphogenesis
 chick limbs IV-3-22

Morphogenetic death
 IV-3-54

Mucopolysaccharides
 and esterases histochemistry of IV-2-39

Mucosa
 gastric, active transport in dogfish V-1-55
 uterine-gravid dogfish IV-3-68

Muscle and brain
 electrolyte patterns in dogfish V-1-14

Mussels
 porosity and filtration rate of gills IV-3-28

Mutarotase
 in kidney of fish and frog IV-2-33

Mytilus edulis
 and Conchophthirus mytili IV-4-18
 regeneration IV-2-26

Myxine glutinosa
 excretion of phenol red inulin Mg^{++} and
 Ca^{++} V-2-11
 thyroid tissue IV-4-84

Myxocephalus scorpius
 gill blood flow and ammonia excretion
 V-1-34

N

Nasal glands
 regeneration in herring gulls V-2-1

Nasal salt glands
 sea gull V-1-54

Nephron
 structure in goosfish IV-4-61

Nephrons
 experimental cyto-physiology III-2-18

Nerve growth
 stimulated by tumors IV-2-27

Nitrogen metabolism
 tunicate (Halicynthia pyriformis) IV-4-67

Nucleic acids (viral)
 effect on Echinoderm IV-4-79

Nutrition
 pea root IV-1-60
Tokophrya infusionum IV-1-33

O

Oligomycin
 and 2-4 dinitrophenol on RBC's in dogfish
 V-2-5

Orthoptera
 saltatory-auditory organs IV-4-32

Osmoregulation
 and electrolyte regulation by kidneys and
 rectal gland V-1-32
 in hyperosmotic environment in dogfish
 V-2-3

Ostracoda
 fresh and salt water III-11-33

Ouabain
 on gill permeability to urea in dogfish
 V-2-14

Oxygen
 consumption of dogfish RBC V-2-40
 consumption and temperature, Fundulus
 IV-3-75
 required by dogfish embryos IV-3-68

Oyster
 mangrove, mineralization in embryo IV-4-20

- Pagurus acadianus
ecology and behavior IV-4-37
- PAH
chlorphenol red, accumulation in dogfish kidney IV-4-29
and diodrast, Lophius IV-3-66
and sulfanilic acid, dogfish permeability IV-4-53
ventricular fluid of dogfish IV-4-53
- Palmitic acid (1-C¹⁴)
protein binding in dogfish IV-4-32
- Pathogenesis
Klebsiella and Erwinia IV-1-53
- Pea root
nutrition IV-1-60
- Pecten magellanicus
distribution of carnitine, acetylcarnitine, and carnitine acetyltransferase in spermatozoa V-2-15
- Pectoral fin
regeneration in Fundulus IV-4-44, V-1-38
- Peptidase
in marine invertebrate embryo IV-2-53
- Perivisceral fluid
acid-base of turtle IV-4-71
- pH
mean whole body intracellular, dogfish IV-4-65
- Phenol red
active transport IV-1-32
bromination by dogfish IV-3-62
excretion in dogfish III-9-37
excretion in hagfish V-2-11
- Phlorozin
effect on oxidative metabolism IV-3-30
- Phoca vitulina
acid-base change in dive V-1-57
alviolar gas exchange V-1-13
arterial constrictor response V-2-6
carbon monoxide diffusion V-1-46
cardiac output in dive V-1-44
energy exchange in dive V-1-66
ventilatory response to CO₂ V-1-17
water diuresis IV-1-15
- Phosphatase
activity IV-1-14
- Phosphate
excretion in dogfish III-9-35
- Phosphorus
gravid dogfish IV-3-68
- Phosphorylation
aerobic in biological systems III-12-37
- Photodynamic action
on cleavage of Echinarachnius parma IV-3-32
Echinarachnius parma IV-3-53
- Photodynamics
Echinarachnius parma sperm and eggs IV-2-59
- Photoperiodic sexual stimulation
Fundulus III-11-19
- Photorecovery
cleavage in Echinarachnius IV-4-28, IV-4-68, V-1-63
- Photosensitivity
invertebrates III-12-28
- Phthalein dyes
bromination by dogfish uterus V-1-25
- Pigment cell repopulation
Fundulus V-1-7
- Pigmentation
types in Crago III-11-27
- Pituitaries
histology of fish III-6-18
- Pituitary
implantations, Fundulus III-11-18
skate IV-4-37
thyroid system in dogfish IV-4-34, IV-4-36
tissue culture study III-5-14
- Plankton
behavior of barnacle III-5-24
- Plasma
in fishes IV-1-42
protein patterns, hagfish and certain elasmobranchs IV-4-52
- Polyuridylic acid
cleavage of sand dollar embryos V-1-47
- Potassium
effects on neutral red and yeast IV-3-19
- Primitive duct
origin of III-2-34
- Probenecid
effect on PAH and urea in dogfish IV-2-54
- Protein
binding, 1-C¹⁴ palmitic acid in dogfish IV-4-32
elaboration, Molluscs IV-2-12
sand dollar development V-1-34
synthesis, polyuridylic acid on sand dollar embryos V-1-47, V-2-41
- Protozoa
fresh water, at M.D.I.B.L. IV-2-36
survey of Beaver Lake III-11-17
- Proximal tubule
function of III-2-18
- Pseudemys scripta elegans
acid-base of perivisceral fluid IV-4-71
anaerobic metabolism V-1-16
temperature and plasma pH and CO₂ tension IV-4-68
- Pseudopleuronectes americanus
effect of carbonic anhydrase on urine IV-4-57
- Pulse wave
Squalus acanthias IV-4-79
- Q
- Quinine
distribution in dogfish IV-3-74
- R
- Rabbit
renal blood flow, mannitol diuresis III-11-25
- Radium
effect on mouse carcinoma III-2-31
- Raja erinacea
catecholamines on blood glucose and lactate V-2-15

- Raja erinacea (continued)
 temperature and blood sugar levels V-2-17
- Rana catesbiana
 pulmonary epithelium IV-1-39
S. acanthias, G. callarias distribution of
 drugs IV-3-32
 urea excretion IV-2-42
- Rat
 blood supply to brain IV-2-57
 tumor cells, roller tube cultures III-5-18
- Rectal gland
 aldosterone in dogfish V-2-11
 carbonic anhydrase in dogfish IV-4-58
 Elasmobranchs IV-4-26, IV-4-27, V-1-54
 in vitro perfusion in dogfish V-2-32
 NaCl flux in dogfish V-1-35
 osmoregulation and electrolyte regulation
 in dogfish V-1-32
 role of Na⁺, K⁺ ATP-ase in dogfish V-2-31
- Refractoriness
 sexual stimulation in male starling
 III-11-19
- Regeneration
Clava leptostyla agassiz IV-1-14
 fins in Fundulus IV-4-43
Fundulus scales IV-3-70
 nasal glands of herring gulls V-2-1
 pectoral fins-amphenone in Fundulus
 V-1-38
- Regression
 replacement cycle of Campanularia
flexuosa V-1-19
- Relicts
 post-glacial in tidal lakes V-1-28
- Renal excretion
 TMAO-dogfish IV-3-17
- Renal function
 seal III-12-27
- Renal tubules
 chlorphenol red, flounder IV-3-72
- Reproductive organs
 stimulation of hormones in common eel
 III-9-25
- Respiration
 of echinoderm gametes IV-2-47
 salt gland of sea gull IV-4-23
 and senescence in Campanularia flexuosa
 V-1-61
- Respiratory measurements
 oxygen electrode technique, sand dollar
 sperms IV-3-15
- Rhizocephala
 in Maine III-9-22
- Rhodanese
 in marine invertebrates IV-3-39
- Ribonucleases
 marine species IV-3-11
- Rotifera
 on Mt. Desert Island III-2-35
- S**
- Saline secretion
 electron microscopy dogfish IV-4-29
- Salt gland
 regeneration in herring gulls V-2-1
- Salt gland (continued)
 sea gull IV-4-23
- Salt regulation
 epithelia of invertebrates V-1-33
Fundulus V-1-5
 sea cucumber V-1-5
- Salt secretion
 marine birds IV-3-76
- Salt transport
 by eel gill IV-4-80, 81, 82, 83
- Sand dollar, see also Echinarachnius parma
 antimetabolites and growth inhibitors
 V-1-9, V-1-36
 calcification IV-3-12
 DFP on development IV-4-85
 egg, cleavage stimulus IV-4-57
 egg, diffusion across cell membrane
 IV-4-44, 45
 egg, effect of Azaserine IV-3-14
 egg, normal development IV-3-40
 egg, pigmentation IV-2-48, IV-3-15
 egg, stimuli and latent periods in cleavage
 V-1-62
 embryos, effects of Don and Azaserine
 IV-3-50
 embryos, polyuridylic acid on cleavage and
 protein synthesis V-1-47
 embryos, protein synthesis V-2-41
 hypoxia V-1-6
 lipoic acid on cleavage V-1-49
 protein components V-1-34
 sperm, respiratory measurements IV-3-15
 uptake of thymidine and cytidine V-1-24
 zygotes, ultraviolet cleavage delay V-1-5
- Sarcoma
 cells III-4-26
 inhibition in mice IV-2-60
- Scales
 growth in Fundulus III-6-16
 regeneration in Fundulus IV-3-70
 regeneration in teleosts IV-4-19
- Sculpin
 ammonia excretion via gill IV-4-33
 Ca⁺⁺ and Fe⁺⁺⁺ transport IV-4-46
 carbonic anhydrase activity and inhibition
 V-2-26
 glomerular function III-4-29
 glucose excretion IV-1-69
 inulin and xylose clearances III-6-25
- Sea colander
 life history III-4-32
- Sea cucumber
 salt regulation V-1-5
- Sea gull
 epithelia IV-3-66
 respiration of salt gland in various ionic
 compositions IV-4-23
- Sea urchin
 coelomic fluid IV-2-30
 feeding and endocommensal ciliates V-1-2
 metabolism IV-2-49
 obligate ciliate commensals IV-4-17
 occurrence of Urceolaria V-1-25
 oxygen electrode measurements on sperma-
 tozoa V-1-11
 sperm metabolism IV-4-42

- Seal
 acid-base change in dive V-1-57
 alveolar gas exchange V-1-13
 arterial constrictor response IV-4-51, V-2-6
 bradycardia IV-4-49
 carbon monoxide diffusion V-1-46
 cardiac output IV-2-21, V-1-44
 circulation time IV-2-21
 energy exchange in dive V-1-66
 gas patterns in extradural venous blood V-1-57
 glomerular function III-11-21
 inferior vena caval valve IV-4-51
 plasma volume IV-2-21
 renal function III-12-25, III-12-27
 renal function during dive IV-4-50
 urea excretion IV-3-54
 urine excretion III-6-26
 ventilatory response to CO₂ V-1-17
 volume receptors and postprandial diuresis IV-4-50
 water diuresis IV-1-15
 Secretion of rectal gland
 dogfish IV-4-26, IV-4-27
 Selachians
 ADH and oxytocin III-6-21
 hypophysis tissue cultures III-6-22
 melanophore hormone III-6-20
 separation of hypophysis into 6 lobes III-6-16
 Semantics
 bird IV-3-20
 Senescence
 and respiration in *Campanularia flexuosa* V-1-61
 Sensitized animals IV-1-21
 Sera electrophoresis
 dogfish, bullfrog, *Lophius*, and *Ameriurus melas* IV-3-13
 Serum
 lobster, content III-11-22
 Sialic acid
 in marine organisms IV-4-78
 Sinus glands
 chromatophorotropic substance in III-11-29
 Siphon sacs
 and claspers of dogfish IV-3-46
 Skate
 alkaline gland IV-4-48, V-1-12
 blood sugar levels and temperature in the skate V-2-17
 catecholamines on blood glucose and lactate V-2-15
 CO₂ accumulation in alkaline gland IV-4-59
 endocrinology of pituitary IV-4-37
 Marshall's gland-electrolyte and carbonic anhydrase content IV-4-47
 thyroid and blood sugar levels V-1-8
 Skeletal development
E. parma IV-3-38, IV-3-61, IV-3-62
 Skeletal muscle
 dogfish V-1-31, V-1-56
 Skeleton
 arthropod, calcification IV-4-75
 Skeleton (continued)
Echinarachnius parma IV-4-19
 Skin
 of tadpole during metamorphosis V-2-18
 Sodium
 of skeletal muscle in dogfish V-1-56
 Sodium chloride flux
 rectal gland of dogfish V-1-35
 Sodium flux
 in dogfish V-2-10
 Sodium permeability
 of dogfish gill V-2-14
 Sodium-potassium ATP-ase
 in dogfish V-1-59
 rectal gland in dogfish V-2-31
 Sodium transport
 in dogfish RBC's V-2-4, V-2-39
 eel gill V-1-10
 oligomycin and dinitrophenol on RBC's of dogfish V-2-5
 without oxidative phosphorylation, turtle V-1-4
 Sounds
 effects on arthropods IV-3-22
 high tensility, reactions of spider IV-3-45
 Spectrum
 effects on tubificid worm III-11-27
 Sperm
 carnitine, acetylcarnitine, and carnitine acetyltransferase of various species V-2-15
Echinarachnius parma IV-3-53
 oxygen electrode measurements in sea urchin V-1-11
 sea urchin metabolism IV-4-42
 Spider (*Araneus cavaticus*)
 reactions to sounds IV-3-45
 Spinal cord
 ablation in *Fundulus* IV-4-43
Squalus acanthias, see also Dogfish
 adrenalin diuresis IV-2-38, IV-2-49
 aldosterone on rectal gland V-2-11
 bile pigment metabolism V-1-1
 blood-brain, blood-spinal fluid barriers IV-2-21
 bromination of phthalein dyes by uterus V-1-25
 carbonic anhydrase activity and inhibition V-2-26
 carbonic anhydrase inhibition V-1-66
 cardiac output and gill gas exchange V-1-45
 carnitine, acetylcarnitine, and acetyltransferase in spermatozoa V-2-15
 circulation IV-1-13
 creatinine excretion III-9-34, IV-1-54
 drug distribution IV-3-52
 effect of adrenalin on III-2-22
 excretion of phenol red III-9-37
Gadus callarias, *R. catesbiana* distribution of drugs IV-3-32
 gill permeability V-1-3, V-1-29, V-1-55, V-2-14
 gill water flow V-1-56
 hepatic blood flow and sulfabromophthalein V-2-3
 intestinal motility V-2-19

Squalus acanthias, see also Dogfish (continued)
 inulin excretion III-5-19
 in vitro perfusion of rectal gland V-2-32
 lactate metabolism V-2-30
 meternofetal accommodations V-2-20
 Na⁺ transport in RBC's V-2-4
 Na⁺, K⁺ ATP-ase in rectal gland V-2-31
 Net Na⁺ fluxes V-2-10
 osmoregulation in hyperosmotic environment V-2-3
 phosphate excretion III-9-35
 pulse wave IV-4-79
 reflex cardiac inhibition III-2-20
 renal electrolyte control V-2-9
 skeletal muscle V-1-31
 sulfabromophthalein V-2-1
 urea space V-2-30
 Starling
 sexual stimulation III-11-19
 Steroid
 effect on metastasis, mice IV-4-85
 Stomach
 electrical characteristics in dogfish V-1-8
Strongylocentrotus droebachiensis
 effect of food on endocommensal ciliates V-1-1
 Strophanthin
 and K⁺ Ringer's on ionic transport, mammals and Elasmobranch V-1-31
 Sucrose space
 dogfish IV-4-66
 Sugar
 and aromatic amino acids in marine fish and fresh water fish V-2-20
 (blood) and temperature in the skate V-2-17
 Sulfanilic acid
 ventricular fluid of dogfish IV-4-53
 Sulfobromophthalein
 in dogfish V-2-1, V-2-3
 Sulfur
 transferases, invertebrate V-1-3
 Survey
 faunal V-1-26
 Swimbladder
 electrolyte metabolism IV-3-49, IV-3-71
 IV-4-39

T

Tadpole
 skin during metamorphosis V-2-18
 Teleost
 histology of branchial epithelium III-4-38
 Teleosts
 ADH and oxytocin III-6-21
 calcification of scales IV-4-19
 energetics of development V-1-33
 Temperature
 blood sugar levels in skate V-2-17
 chemical stimulation of Fundulus III-5-22
 optima for carbonic anhydrase in vertebrates V-2-25
 on urea and thiourea excretion dogfish IV-4-25

Tetracycline
E. parma skeleton IV-3-61
 mineralization in oyster and E. parma embryos IV-4-20
 on teleosts scales IV-4-19
 Thiocyanate
 on gastric mucosa of dogfish V-1-43
 Thiosulfate transsulfurase
 marine invertebrates IV-4-21, IV-4-22
 Thymidine
 uptake in Echinarachnius parma eggs V-1-24, V-1-64
 Thyroid
 blood sugar levels in skate V-1-8
 dogfish IV-3-55, IV-3-77
 pituitary system in dogfish IV-4-34, IV-4-36
 Thyroid tissue
 hagfish IV-4-84
 Tissue culture
 rat tumor cells III-5-18
 study in III-5-16
 Tissues
 in vitro IV-1-21
 phosphatase activity IV-1-14
 TMAO
 excretion in dogfish IV-2-52, IV-3-29
 excretion in dogfish (identification) IV-3-16
 plasma levels in dogfish IV-3-29
 TmPAH
 goosefish IV-3-69
 Toas (Bufo marinus)
 dehydration of IV-2-61
 neurohypophysial extract IV-2-61
 water reabsorption IV-2-61
Tokophyra infusionum IV-1-33
Trachelomonas dangeardi
 a rare variety III-11-14
Trachelomonas urceolata
 a new variety III-11-15
 Transpleural exchange rates
 frog IV-4-30
 Transport
 K⁺ in Lophius IV-3-44
 Transsulfurase
 in gastropods IV-4-22
 Trichoptera (Caddisflies)
 sucrose sensitive IV-2-56
 Trimethylamine
 on renal excretion in dogfish IV-3-42
 Tumor cells
 primary and metastases, mice V-1-23
 Tumors
 nerve growth stimulating IV-2-27
 Tumour
 induction IV-1-17
 Tunicate
 nitrogen metabolism IV-4-67
 Turtle
 acid-base of perivisceral fluid IV-4-71
 anaerobic metabolism V-1-16
 (box) castration III-9-24
 function of alkaline coelomic fluid V-1-15
 Na⁺ transport V-1-4

Turtle (continued)
temperature, plasma pH, and CO₂ tension
IV-4-68

U

Ultrastructure
fish kidney, frog, bladder, V-2-34
frog skin, fish chromatophores V-2-35
Ultraviolet
cytokinetic inhibition V-1-21
effect on cleavage, Echinarachnius parma
IV-4-63, V-2-36

Urceolaria
autecology of ciliate V-2-2
occurrence on sea urchin V-1-25

Urea
and ammonia excretion via gills and kidneys of dogfish IV-4-33
and ammonia, frog IV-4-29
excretion in toad and frogs IV-2-42, IV-2-65
gill permeability in dogfish V-2-14
loading and hypothermia on gill of dogfish IV-4-24
seal IV-3-54
space in Squalus acanthias V-2-30
synthesis in livers of dogfish and lungfish V-2-37
and thiourea excretion in dogfish IV-4-25
transport in Elasmobranch RBC's V-1-41
uricolysis in aquatic vertebrates V-1-54

Uric acid
transport by goosfish V-1-40

Uricolysis
urea production in aquatic vertebrates V-1-54

Urinary excretion
Mg⁺⁺, Ca⁺⁺, SO₄⁼ IV-3-11
of NaCl and K⁺ by chlorthiazide in dogfish IV-3-48

Urine
excretion in seal III-6-26

Uterine mucosa
gravid dogfish IV-3-68

Uterus
bromination of fluoresceins in dogfish V-1-50

Uterus (continued)
bromination of phthalein dyes by dogfish V-1-25

V

Venous system
chick development IV-2-35
Ventilation
reflex regulation in dogfish V-1-59
Ventricular fluid
in vivo and in vitro in dogfish V-1-42, V-1-62
production, dogfish V-1-18, V-1-60
Vertebrates
carbonic anhydrase in cold and warm blooded V-2-25
Viral nucleic acids
on Echinoderm development IV-4-78
Virological studies
tissue cultures in marine organisms V-1-22
Viruses
on embryonic echinoderms IV-4-78
of marine organisms V-1-46
Volume receptors
and postprandial diuresis in harbor seal IV-4-50

W

Water
balance in marine fish III-12-27
total in dogfish IV-4-66

White cells
cultures in human blood III-2-32

Worm
marine tubificid, effects of various parts of spectrum on III-11-27

X, Y, Z

Xylose
and inulin clearance in Sculpin III-6-25
Yeast
effect of K⁺ on neutral red IV-3-19